# Hannover Rueck SE 2017 Investors Day

# **Company Participants**

- Andreas Märkert, Unknown
- Claude Jacques ChÃ"vre, Member of the Executive Board
- Jürgen Gräber, Member of the Executive Board
- Karl Steinle, Head of Corporate Communications
- Roland Vogel, CFO and Member of the Executive Board
- Ulrich Wallin, Chairman of the Executive Board and CEO

# **Other Participants**

- Andrew James Ritchie, Partner, Insurance
- Daniel Bischof, Helvea Equity Research
- Edward Morris, Equity Analyst
- Frank Kopfinger, Research Analyst
- Guilhem Horvath, Research Analyst
- Ivan Bokhmat, CEEMEA Banks Analyst
- Kamran Hossain, Analyst
- Olivia Sylvia Brindle, VP
- Paris Hadjiantonis, Research Analyst
- Thomas Fossard, Co
- Unidentified Participant, Analyst
- Vinit Malhotra, Banca di credito finanziario S.p.A., Research Division

# **Presentation**

# Karl Steinle {BIO 1986424 <GO>}

Well. Good morning to all of you. Welcome to Hannover Re's Investors' Day 2017. I'm really delighted that so many of you were able to take up our invitation. This is the 20th Investors' Day that we held today. And although, it doesn't feel like a birthday party. But it's a great pleasure to have you all here and to mark with us this occasion. So a very warm welcome here in Frankfurt. I was also pleased that so many of you managed to attend yesterday evening's dinner at the Deutsche Film Museum. We had certainly hoped, that you might find the venue interesting. After all, there are some elements that you show in your own studies and have something in common with a good movie or a novel. Such as a compelling story, edge of the seats tension, colorful characters, striking originality. And last but not least a catchy title.

As if we could possibly forget just how creative you are, we need to only remind ourself of the titles of recently published notes on the industry or on Hannover Re, in particular. Just a few examples: Gone with the wind, was one of them or blame him, pricing the term or in the eye of the storm. And I don't mind admitting a special favorite of mine, which was, this time it's different. I only missed the word somewhat. I can only congratulate to you on the creativity you displayed in pursuit of your goal, namely, getting investors excited about the reinsurance business. That said, yesterday evening was truly unforgettable, a great atmosphere and a marvelous location. I certainly, won't forget some of the pictures we have taken nor will I be posting them on the social network. A very big thank you, to Katherine and Julia for their choice of the venue. You both devoted so much energy and care in putting everyone together. Even though, once again, we find ourselves in the presence of a stage, cameras and (lightening). And I'm very much aware that the contrast compared to yesterday could hardly be greater. Our program today is free of fictional elements. The content we are in no way fixtures nor are the cost actors. Quite the contrary, everything that we have to tell you today, asked to be taken seriously. And it will be presented live and in color by Hannover Re's A-list celebrities. Best of all, there won't be any commercial breaks, by the way.

The storybook, we have to assemble is, at least in our eyes, breathtakingly fascinating. In no small measure, it reflects the inspiration we have gained from your comments and feedbacks on previous occasions and in past conversations. And when the clapper board claps for the final time, this afternoon, we will look forward for your feedback and comments on today's program.

You will find the feedback form on your desk. I cannot emphasize enough, how highly value the -- your feedback and remarks are. Before I say action, I would like to make a few organizational remarks. The cameras are going to webcast all the presentations and the Q&A sessions, of course. Some colleagues have already locked in to follow the day's events online. The stream will be available on our Hannover Re website so that you can replay the best scenes, at a later date as often as you wish. But this in mind, during the Q&A, please wait for the microphones. So everybody gets to hear your question in the best high-fidelity sound quality. The access key for a free Wi-Fi is on our desk, as always, together with a modest gift. The boost from this power bar will hopefully leave you or at least your electronic devices feeling energized and reloaded. It also has a rather nice Bluetooth surprise built-in. But I'm sure you will find out. Please consider this as a token of our appreciation for the participation today and the support that you have shown to Hannover Re and the Investor Relations team in -- for many years.

On that note, I would like to welcome our CEO Ulrich Wallin to the stage. Ulrich, the floor is yours.

# **Ulrich Wallin** {BIO 4863401 <GO>}

Thank you, Karl. And thanks for reminding me that I should be serious, let me try it.

Yes. Well you see our new title. Or I should say good morning, first, I guess, because I was asked to be serious. And I will be. Yes. Good morning to all, warm welcome from me as well. And I appreciate you all coming. And I share Karl's views on the venue yesterday

evening, even though, I missed taking a picture of myself, let it be taken on the red carpet. But that's not so important, I guess. So we will start our strategy revision for the years 2018 to 2020. Because as you know, we have a strategic cycle, where every three years, we look at our strategy. And that of course, starts with a look at the market conditions as a whole. So what is the -- I mean pond we're swimming in? What's our universe of business we are transacting? And that is of course, the reinsurance business. And therefore, its, of course, for us it's important to understand, how the reinsurance business is developing? Who are the players? How are the markets look like? What you can see here is the P&C reinsurance market and its developments since 2012. And you can see that the market has grown not dramatically. But a little bit. You can also see that there is a kind of, I mean, fly to the larger reinsurers. So the top 10 reinsurers have increased their market share over time to the detriment particular of the -- all the smaller reinsurance companies. So their market share, actually, by premium has actually been reduced over time. But you can also see that the P&C market is still very fragmented. So you have very many players, hundreds of players in that market and that of course, includes all the facilities, is that under right on -- based on a collateralized basis so the ILS market. They are largely in the all as a category.

If it comes to Hannover Re, you can see that we managed over time to increase our market share. So in rough terms, we increased from 4% to 5%. And of course, we achieved that by growing faster than the market. And that is, for us, important because we feel that our position is one of the lead market. Over time, we should be able to increase our market share. This 5-year periods that are displayed here, of course, are -- is a 5-year period of a softening market. I mean. So the -- of those five years, the highest rating quality we had in 2012. And the lowest rating quality we had in 2016. But you can see that partly the growth of course, will also be driven by, I mean, more advantageous prices to the ceding companies. I mean, the fragmentation of the market also tells you, that the entrants hurdle into the P&C reinsurance market is not particularly high. I always say, you just need an office in Bermuda, you take a few gray-haired guys and take \$1 billion. And you are up and running to write P&C business through the brokers. At the same time, the set business model, it's not that easy to enter the top 10. It takes time. And therefore, there is a little bit more stability in this market, than you will assume from the low entrance hurdle. But at the same time, I mean, it is a structurally competitive market.

If you then come to the Life & Health business, the other field, where we are active. You can see that it has grown a little bit more pronounced, as that partly also has to do with the currency conversion. Because this is all measured in euros. And I think you probably remember that the euro gained in value quite a bit in 2015. And this is of course, part of the growth. But needless to say, the Life & Health market is growing at a slightly larger pace than the P&C market. You can also see that the market is a lot more concentrated than the P&C market. We see top 10 players having almost all of the business, apart from some local players, it was 94%. And the reason for that is that, contrary to the P&C business, which is driven by the new and renewal business, particularly, the life part of the Life & Health business is driven by the in force, due to the long-term duration of the underlying policies.

You can also see that, I mean, Hannover Re basically have grown pretty much with the market, maybe a little bit smaller than the market. But kept our market share unchanged. This on Life & Health is sometimes a good guide, sometimes a bad guide, because there are still quite a lot of herds of business in our financial solution practice, which is deposit accounted. And therefore, it's not visible in the top line, that has been displayed here. So this is a market by premium and by premium volume. But of course, even more important is the bottom line, rather than the top line. And if you look at the bottom line, this is the --what you see here is the EBIT of the top 5 reinsurers on the P&C side. These numbers are relatively easily to be collated because you just look at the balance sheet of the 5 largest reinsurers, which happened to be all publicly quoted. So you have information available.

I mean, the profit pool of the entire market that is estimated here is EUR 20 billion to EUR 25 billion. That is a little bit more difficult to assess. And in fact, the numbers that we have taken here is extrapolated from the top 5. And it assumes that the profitability of the entire market is similar to the profitability of the top 5, which tells you that the -- it's a profit pool, which we here estimate this EUR 20 billion to EUR 25 billion is rather an optimistic view, most likely. So you better look at the lower part of the bracket. And then you can see that we are in a EUR 20 billion business. And that's of course, what we try to grow, is our participation in that profit pool, that's what we consider to be -- what we consider to mean growth of market share. You can see that we've been at least as a percentage of their profit pool, relatively successful throughout the soft market years. If you look at our participation and the profit pool of the 5 largest reinsurers, we managed to increase that from 12% to 17%. And which is also quite reassuring, as that is, the growth of the bottom line, outpace the growth of the top line, which of course, is for us quite, quite important.

Well I mean, that's something, which for us, as I said is quite important. You can also see that due to the soft market environment, the overall profit development of the reinsurers on the P&C side has not been overly exciting. If you look at the Life & Health side, the situation is a little bit more favorable or quite a bit more favorable, when it comes to the development of the profits. Again, here we take the profits of the top 5 reinsurers. But of course, differently than with P&C on the Life & Health, that captures the majority of the business. And you can also see that the profit pool of the Life & Health is about 20% of the profit pool on the P&C side. You can also see that the EBIT margin that on average is achieved on P&C is around 10% to 12.5%, whilst on life & Health is more about 5% to 6%. So it is a Life & Health is a business, which is a slimmer margin as a percentage of premium. But of course, also the capital bound by that business is also lower than it is with the P&C side, because it is less volatile.

If you look at our numbers, I mean, we kept our participation of the profit pool of the top 5 reinsurers stable. And again, our profitability increased in line with the growth of the premium. And this is despite the fact that, particular in the more recent year, we saw some problems with our mortality solutions business in the U.S. and after the coffee break, I will give you some more insight into that.

If you look at the market, as a whole, you can see that both the insurance and the reinsurance market is growing. Don't be confused that we have different market sizes of the reinsurance and in the previous slides. This is just a different top-down assessment.

And the truth is presumably somewhere in the middle. But directionally, it's -- that's what's happening. The reinsurance market grows at a smaller pace than the insurance market. But it does grow. And the average session rate. So the percentage of the primary premium that is transferred to the reinsurers is around just under 10%. So around 1/10th of the premium is being ceded to reinsurers. I would say in and large, I mean, that is certainly, less than the primary markets pay for distribution. But that's where we are. So it's a much smaller market than the insurance market. And it's a slower growing market than the insurance market.

If I come to the Life & Health side. On the Life & Health business, you can see that, there is -- the growth is stalling a little bit on the primary insurance market. That of course, has to do with the low interest rate environments, that many of the savings products that are prevailing in the Life & Health business, particularly in the life business have become less attractive to the customer. And therefore, the growth has not been quite as pronounced as it was in the past. On the contrary, on the reinsurance side, there you see a slightly more pronounced growth. And the reason for that is, that on the reinsurance side in and large, we are not dealing with the savings part of the business. But we are dealing with the biometric risk. And therefore, we see somewhat more pronounced growth in the reinsurance market than in the insurance market. The cession rate, which on the P&C side was about 10%, on Life & Health is only about 3%. And the reason for that low cession rate, largely of course, is because we are not participating as a reinsurer in the savings part of the policies.

So that gives you a little bit on the universe we are working in. For us, of course, strategically, a basic question, is this a good business to be in? Or should we take our money and do something else with it? And I'll be coming on that in a minute. When we approached our strategy revision, this time, we were looking at the strategic alternatives, because there are always alternatives to everything. And of course, strategy is to decide, which option you want to go and to which option you don't want to go. There are things like, shall we, I mean, broaden our pond we are swimming in. So shall we like most of our competitors do, enter the primary market? Like question, shall we be the Ryanair of the reinsurance, a low-cost provider. I mean, Ryanair is quite successful until recently. So I can't say this with that much confidence any longer, or shall we just be more efficient? Those kind of questions, we are asking ourselves. And as that are depicted here. And I would come to those. This gives you our strategic cycle. I mean, the basis why we relook of our strategy every three years, of course, is the changes in our market environment. So time changes, market participant changes, market dynamics change. And of course, we have to adapt our strategy according to that.

And I should also dwell a little bit on our headline, which here is named our vision, which is creating value through reinsurance. As you know since the last 10 years, about we start to give our strategy cycles headlines, like we have to, I mean, being sustainable, successful in a competitive business. We are growing Hannover Re profitably. And this time, we say creating values through reinsurance. But that really should say, that we see reinsurance as an attractive field to be in. And that reinsurance is our core business. That's the message we want to give, in particular, to our clients. And therefore, we came up with this headline. But is reinsurance really an attractive business to be in? And there are few considerations. First of all, we feel that reinsurance is a valuable product for our clients. For many reasons,

one of course, is that you can improve as an insurer, your cost of capital by buying reinsurance. And reinsurance is the only way to do that with a 1-year contract. If you want to improve your cost of capital by taking out hybrid capital, you're at least bound for 10 years, any shorter duration would not give you the capital credit. And the other thing, which makes reinsurance attractive when it comes to capital management, it affects the capital required rather than the capital that we have. In Solvency II terms, it can reduce the SCR. And therefore, it's quite efficient, if you want to improve your cost of capital and the amount of profit stream, you can write this -- with this business.

Secondly, of course, you can, I mean, reduce the volatility of your earnings as the primary insurer. And this probably is the most common reason why reinsurance is being purchased, because stakeholders in insurance companies, like in other corporation, don't like volatile earnings. For the most part, they like to see rather stable development of the earnings and ideally going to the top right of the graph. And also, of course, you can benefit as an insurer from the experience of your reinsurer when it comes to enter into new products or into new lines of business where you haven't been before in. So we feel it's an attractive value proposition to the insurance industry. We also feel that the structure and the way reinsurance is being bought as a business to business. This professionals of the same profession so to say, is structurally quite different to the way insurance is being bought.

There is still growth in the market. And the growth in the market is of course, because it's an attractive proposition. And therefore, we are not in a shrinking market, if we are active in the reinsurance field. At the same time, due to the fact that writing a global reinsurance book is a lot less onerous from a regulatory point of view than writing a global insurance book. Reinsurance is structurally a competitive business. That's particularly true for the P&C business that the entrants hurdle is low. And distribution is easy through the reinsurance brokers. So we will have to live with the fact, that there will always be a directionally more supply than demand for the product. However, it's a rational competition. And the reason that the competition is rational in reinsurance is because, the players in the reinsurance field are largely publicly quoted on investment funds when it comes to the ILS markets. Therefore, none of us or hardly any of us, maybe some stateowned entity is a different story. But then see players that are most influential on the reinsurance markets cannot tolerate losses for an extended period. Because if earnings become unsatisfactory, as the management of the reinsurance companies and the ILS funds come under pressure from their stakeholders. And therefore, stakeholders and shareholders. And therefore, they have to do something about it.

As a consequence and we have seen that in the past, we can expect that reinsurance terms and conditions will increase after bad results in the reinsurance market. And of course, the question is, what does that mean for us? For market players that are -- can develop competitive advantages. So we being better in a competition, more successful in the competition than the average player in the market, reinsurance offers the opportunity for profitable growth. And due to that conclusion, we feel that reinsurance is a business we should be in and where we can be successful, like we have been in the past.

Of course, that basic question, as I said, you need to have competitive advantages in that business, to be sustainably successful. How are we, as Hannover Re, positioned in that

**Bloomberg Transcript** 

market? Are we positioned in that market, that we can be successful or not? And you will not be surprised, if I tell you that our conclusion has been, that we're well positioned in that market.

Firstly, we belong to the top 3 reinsurers worldwide. So we're top-tier reinsurer. And as you have seen at the beginning of my presentation, the growth of the top reinsurers outpaces the market. So there we are in the right place. And it is actually true to say that size matters in reinsurance. Because the ceding companies have a buyers wanting to place their business with the larger reinsurers. Also, the demands of the insurance companies towards their reinsurers is for more holistic coverage because it's more efficient, when it comes to capital optimization in solvency regimes, such as Solvency II or similar risk-based solvency regimes. Such multi-class multi-territory covers, of course, are easier to buy from the reinsurer that is active in all those classes and territories. And rather than buying from a number of smaller specialty niche players. Therefore, it's a value in belonging to the largest reinsurers.

Very tangible advantage that we have to our competitors, is our lower expense ratio, lower admin expense ratio, also lower total expense ratio, including acquisition cost that allows us to be competitive. More competitive than our competition. And still being able to create a good margin for our shareholders.

Being cost-efficient is not everything. But it's an important element of being competitive. We have consistent underwriting approach that also has to do with the fact that we have particularly in Hannover Re relatively low fluctuation ratio of our employees. And we have very long-standing client relationship, some of them date back decades. That helps, because reinsurance still is a people's business, it's a relationship business. And therefore, here we clearly have an advantage compared to any new entrant to the market.

Of course, we have certification between Life & Health and P&C business, which should allow us to write a larger profits stream on the same capital base compared to competitors that either write P&C only or Life & Health only. And we of course, compared to those, we have an opportunity to have better return on equities. And well, I mean, we have of course, we offer tailor-made solutions to our clients, we also of course, pride ourselves of being solution minded and execution-focused. All in all, we feel that Hannover Re is well positioned to compete successfully in the reinsurance market, which is our chosen field of activity. Of course, when we look at our strategy, we also have to look what our competitors do? What the other market participants do? Because we cannot assume that we are much more clever than them. Therefore, for us it's important to understand, how their business model looks. And in recent years in particular, we have seen that many of our competitors have broadened their universe of the business, they are in by being more active in the insurance, rather than in the reinsurance business. For us, of course, that begs the question, shall we go the same route? And shall we also see insurance and reinsurance as, I mean, business as which we give equal weight to in Hannover Re. Of course, by concentrating on reinsurance, we have -- we still see that we can generate good earnings, particularly with our position. And I think I have explained that on the previous slides. And if you concentrate on reinsurance, we also feel that we have 1 advantage, that we are not competing with our clients. And I also have to admit that being

part of the Talanx group, which I was told has some reinsurance, some insurance somewhere. We would not be well-suited to compete with them fiercely in the insurance field.

The fact that we are not competing with our clients, we see that little bit more in our business relationship with some of our major clients who are interested to work more with us as a reinsurer, not competing with them, compared to some of our peers. And that of course, is a good opportunity for us to increase our involvement with some of them, where we know the business and where we can see that the business is favorable for us from a profitability point of view. Conclusion of that is that, reinsurance remains a core business of Hannover Re. We have some involvement in the insurance field as well. But this is seen not as equally important than our reinsurance activity. But at seeing as a complement, complementing our core business and we write a limited amount of primary business in 2 areas. One would be coinsurance business on large commercial accounts, which is quite similar to our facultative business from a structure point of view. And we also write some niche business through partners, particular agencies and underwriting agencies. And distribution channels, which is business that is generally not reinsured.

What does that mean for our business model? It is our aim to expand our market share in the reinsurance field, which is our core business. We feel over the long to medium-term -medium to long-term we are in the position to do that. And if we are talking increasing market share, of course, the aim is to increase our share in the profit pool that the reinsurance market offers to us. Also, within the reinsurance business, we have a broad focus. We focus all lines, all territories. We want to write all the business that fulfills our margin requirements. The reason for that is, if we would have, which we also could do, the approach of a specialist reinsurer that would of course, narrow our focus in the reinsurance field, which already is only like 6% of the insurance market. And we feel, as a specialist, on parts of the reinsurance segment, focused reinsurer, he will not be able to be one of the leading reinsurers, which as I told you before, we attribute a value of -- in being one of the leading reinsurers. Therefore, broad approach on the reinsurance. And primary only in selective niche markets. We continue. And we will continue to write both Life & Health and P&C reinsurance to generate the diversification benefits. And as we see, profit opportunities for us in both business groups. We will maintain our cost advantage, despite the fact that it needs a constant effort. And we are solutionorientated reinsurer. So we want to create value with our clients by giving them innovative solutions that allows them to be more successful than they would be when they would not deal with us. And of course, we have developed a digital strategy, not only because it's quite fashionable to do that. But also because digitalization will have a major influence also on our business.

These are our strategic principles, which I will dwell on rather briefly looking at the time. First one is our profit goals. And economic growth targets. And of course, we crystallized those in the target metrics. And we have made some changes to the target metrics. Some realizing that the economic numbers are gradually becoming more important in relation versus the IFRS numbers, because up until recently, our stakeholders were mainly judging the success or failure of our activities based on the IFRS group numbers. But since Solvency II has been enacted. And we also publicizing the economic capital adequacy ratio or economic capital ratio, the economic numbers have become more to the forefront.

And we felt that we should also recognize that with our growth targets. So the value-creation, which previously we had based on the IFRS, we now base that on the change in the economic capital as depicted in our internal model plus the dividend. And we added, as a group target, the solvency ratio of 200% as a target, which is a threshold where the limit is 200%.

The return on equity target is unchanged. It's still the 900 base points over and above IFRS 3, since you see here a downward arrows is only due to the fact that the interest rates are continuing to decrease because it's an average interest rate over five years. And that is still coming down. The reduced interest rate is also the main reason why we took the earnings per share growth target down from 6.5% to 5%. The return on investment is stable at -- sorry, 7.5%, that would be great, 2.7% and Roland will tell you later that there is a stabilization in our expected return on investment despite the fact that we have a continued low-interest rate environment.

On the P&C side, all targets unchanged. And on the Life & Health side, we all now see IVC targets and growth target (inaudible). And instead of having an EBIT margin target, we changed it to an EBIT growth target. That has to do due to the fact that with deposit accounted treaties and some other particularities of the Life & Health business, we feel that the EBIT growth target is more telling than an EBIT margin target.

Second, of course, for us to be successful, it's quite important to be a preferred business partner of our client. And of course, here our credit rating helps and we pride ourself of best execution within our peer group. And this is also due to the fact that we have no matrix organization. But we give the power of decision to the client-facing underwriter. And that allows us to execute all the complex transactions more timely and with a higher certainties than some of our competitors.

Services we provide. But we are not providing unbundled services. But services that we provide should be strictly linked to business opportunities where we generate premiums and profit streams.

Being a service provider, our employees are most important for us. And we think we are best, best -- we have the best success as a company if our employees are successful. Therefore, we strive this in Hannover Re to have a corporate culture where the individual employee can experience success in their day-to-day business. And that also has to do with the fact that we delegate decision taking to the -- to our employees and not have a matrix organization. Of course, we have controls in place regarding that decision taking of our employees. You can also see that we have a wide variety of specialists that we need to write our reinsurance business, such as medical doctors, we have engineers, we have mathematicians and a few other professions. But what we feel that increasingly we will also need skilled profiles that allow us to be successful in a more digitalized world.

As far as our investment strategy, the broad questions that we asked ourselves when we set up the strategy: Shall we go to a hedge-fund-style reinsurance? To say, for us, the assets have a higher value than for our competition because we could generate higher return. Or should we continue with the conservative strategy where we say what if you

invest in Hannover Re, you get an insurance company rather than an investment fund. And we decided that we will stay with the traditional measured risk strategy and not trying to generate significant alphas through high-risk taking on our assets.

Risk management. Of course, we defined in our risk strategies the risk position that we want to take. And that, of course, defines all the distribution of our capital to the various activities and subsegments. And in the end, to the individual treaty is all based on the risk position that we define for Hannover Re. The risk position is defined by the solvency ratio of at least 180% versus 200% threshold. It is defined by a ruin probability of 0.03%. So 1 in every 3,333 years, we tolerate to be bankrupt. And it is also defined by a probability of having an IFRS profit in 9 out of 10 years. So that defines our risk position. And this is in line with a AA rating.

That is also then, of course, the starting point for our risk strategy and for our risk management activities.

Capital management is, for us, very important. Of course, we want to have sufficient amount of capital first and foremost that we fulfill the expectations of our clients. That's very important because only if the clients feel that we give them a secured promise to pay, only then they will place their long tail and also their best business. So that's very important for us. Second, we, of course, we need to fulfill the regulatory requirements and the rating agency requirements for our desired ratings. And we also need to have some more capital than just fulfilling those requirements because we want to have capital available to enlarge our use of capital in case that, let's say, our market opportunities.

On the other side, of course, we want to generate attractive ROEs. So we only want to have that much capital that is in line with the profit that we can generate so that we have an attractive ROE compared to our peers. And of course, that is achieved by below average cost of capital. And of course, if we have higher ROEs and higher rate of profitability, we are seen as a successful corporation, which for us is important. Of course, for our shareholders, it is important. But also for our clients and for all our employees. Because also for the employees, it's more attractive to work with a successful corporation than with an unsuccessful corporation. And also our clients preferred to place their business in successful corporations rather than unsuccessful corporations.

What are the tools that we are using in order to reduce the cost of capital we use? Hybrid capital and retrocessions. And in order to manage our capital, the size of our capital, we use special dividends. The use of special dividends has been newly introduced to our strategy. Here you can see it.

Then, on the expenses, you can see that our expense ratio is still significantly lower than the expense ratio of our peers -- the average expense ratio of our peers. And you can see that this is true both for the expense ratio, including distribution expenses as well as for the expense ratio -- the pure admin expense ratio. You can also see that the admin expense ratio of the industry is actually trending downwards. But the average commission ratios have trended upwards. And this, of course, has to do with the softening market. And also has to do with the fact that the demand for reinsurance in the soft market has

been more geared towards proportionate reinsurance rather than nonproportionate reinsurance.

That brings me to our IT strategy. We want to generate an efficient support of our business by sufficient IT. And I mean, here I would just want to mention that we use the same reinsurance administration system in most of our locations worldwide, in all the locations that write close to 80% of our premium. And this allows us to generate quite a lot of efficiencies, particular when it comes to the new and ever-increasing reporting requirements if we have to regulate us and other stakeholders.

We also have created a digital strategy, 2 goals there: one, generate new business, reinsuring start-ups of these so-called InsurTechs, supporting our clients along the value chain with digital solutions and writing the new risks, such as cyber and understanding the silent cyber as it is called more thoroughly. And of course, increase efficiencies of our own processes. And we have initiated a few projects to become even more efficient than in the past.

Sustainability and compliance, for us, very important. Again, for reasons, we want to be a good corporate citizen. We want to meet the requirements of our clients. There are more and more clients that have a sustainability strategy of themselves. They expect the same from their service providers. We want to be investigable for investors that look for environmental or socially responsible companies. And we want to be an attractive employer. And in order to achieve that, we are also prepared to forgo short-term profit to make sure that is actually a serious effort that we are doing in this respect. And the tool to put our strategy in action is our performance excellence management system where each of the units, each department, each subsidiary, each brand has to define the contribution to the strategy. They also have to define the KPIs for executing the strategy. All that is done through what we call a strategy cockpit, which is a nice IT system that also allows us to aggregate all these strategic contributions and see if they are successful and actually sufficient to achieve our strategic goals as a group.

With that, I would conclude my presentation and look forward to your questions. Thank you very much.

# **Questions And Answers**

# **A - Karl Steinle** {BIO 1986424 <GO>}

I'm sure you have some questions. But please wait for the microphone, which will be handed by (Andrea) and (Catherine). The first one from Frank Kopfinger.

# Q - Frank Kopfinger {BIO 16342277 <GO>}

My question would be on the additional strategy. Can you be a little bit more precise here in respect to how many InsurTechs you already back in this respect? Are we only talking about reinsurance capacity? Or are you also acting as a investor in these InsurTechs? Then on the other part, on the IT investments overall to digitalize your reinsurance business

model, can you provide us with a figure as to how much you have set in IT budget that you are going to spend towards this impact going forward the numbers?

#### **A - Ulrich Wallin** {BIO 4863401 <GO>}

Yes. Firstly, on the InsurTechs, I would say we reinsure a handful of them, maybe, 2 handfuls. That's, of course, one of our strategies. If there are new risk carriers, they are, of course, potential clients. And that's what we are looking at. We, of course, also support them with our know-how and our resources. We also invest in some of them. We have investments, for example, in the U.S., where we invest in one of the Silicon Valley InsurTechs, like, Sureify. We also, in Germany, for example, we work with (Finley), which is a business built in Berlin. And (is there) we have an investment. And we also have investments in specific startups. So it's a little bit of both. But always there's a few of improving, I mean, generating business and generating reinsurance business for Hannover Re.

Expenses. While for us as we -- where we improve our own systems that's part of our overall IT budget. But of course, there is an increasing number for digitalization. For example, we developed a point-of-sale system in Germany for the Life & Health business. And we invested in this EUR 20 million. But this will not increase our expense ratio dramatically. And one of the reason is that we are -- there's a difference between reinsurance and insurance, in particular personal lines insurance. Because in the insurance, of course, the number of transactions is very, very high. So complete automatization of the end-to-end processes is absolutely crucial to continue to be competitive in this business. In the reinsurance side, of course, the number of transaction is lot less. Therefore, the automation is easier to achieve. And is less, less competitive. It's a smaller competitive factor. That said, we, for example, are looking for our Bermuda nonlife company to see if we -- to what extent we can automate the entire end-to-end processes. And the reason that we took Bermuda, it's a relatively small organization with something like 27 employees. But they have all the processes. I mean, they have underwriting, they have pricing, they have modeling. And of course, then they have cash accounting, balance sheet accounting. And of course, technical accounting. So it is really like from an automation point of view -- I mean, it's really like a sandbox. So from that point of view, we have taken that.

# **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. Next question coming from Kamran. And then we follow with Vinit.

# Q - Kamran Hossain {BIO 17666412 <GO>}

Just 1 question on the target matrix, the EPS growth target for 2018 and onwards. Can you just talk us through what the starting point for that 5% or above greater is that 2017 adjusted for hurricanes or kind of what that says? Then in terms of your assumptions built into that, what are we thinking on premium growth and the kind of future opportunities going into next year? It seems like there might be some kind of change in the market. Is any of that baked into your assumptions on the 5%-plus EPS growth?

# **A - Ulrich Wallin** {BIO 4863401 <GO>}

Yes. I mean, the growth target is just developed by our premium growth targets and our margin requirements. And that, of course, is harmonized with the 96% target combined ratio or below 96%. And of course, in Life & Health not very simple because we have a 5% EBIT growth targets there as well. So that should, of course, translate in a 5% increase as well. But this is just taken out of the various numbers that you see in the target matrix and the idea is that they are to harmonize them so that if you achieve the premium growth targets plus the margin targets, that would result in a 5% increase of our EPS. Of course, if we have a higher interest rate that in itself taken -- if the technical targets are unchanged would create a larger growth of the EPS because the assets under management are about 2.5x the growth premium and, like, 3x the net premium. So from that point of view, it's just trying to harmonize the targets within the target matrix. Of course, I mean, if we would try for 10% increase in top line, keeps the same margin requirement, of course, we would then also have higher growth targets. Conversely, if we want to have no growth targets, there could also be no growth targets of the EPS if the profit margin generated is stable. Then when it comes to 2018 -- I mean, 2017, it's unlikely that we will achieve an EPS growth. And we, of course, we guided that already. Because with the hurricane losses likely to exceed the large loss budget that would, of course, mean that one of the preconditions for our profit guidance is in danger or may not be met, which is -- that the large losses remain within the budget. But if they are excess of the budget, it has a negative influence on the earnings per share. So that is something I have say for 2017. For 2018, of course, we are expecting, on the P&C side, a better trading conditions, which, of course, then should mean that the EPS growth in 2018. Again, if the large losses behave and the capital markets behave, we should, of course, for 2018, on a stand-alone basis, the EPS growth should be double-digit, partly also because 2017 will be below expectation.

## **Q - Vinit Malhotra** {BIO 16184491 <GO>}

Vinit from Mediobanca. Just clarifying again, all these downgraded matrix numbers, do they include any optimism from your side on what the hurricane opportunities would be or cat opportunities could be? Or are these just a base case. And then, we have to top it up with what we imagine you could do? So that's the first question. Second question is just on Slide 18. Again, it's linked to that. We know that you look at NatCat capacity as a percentage in terms of risk capital, which used to be 18%. Is that going to change going forward?

# **A - Ulrich Wallin** {BIO 4863401 <GO>}

First of all, you see the target matrix is a base case. That said, the target combined ratio is, of course, more a combined ratio over the cycle. We feel that we can achieve that combined ratio every year if the large losses behave because in those years where we are able to achieve better technical results -- at least, in the past, we have built up the redundancies and our loss reserves. And that allows us to keep the technical result stable even in a soft market. For 2018, of course, we feel that the market condition should be sufficient to generate our desired profits without resulting to taking out of the redundancy buffers. As far as the natural catastrophe budget is concerned, as we have excess capital, we're quite flexible on that. I mean, we could increase that as we feel fit. For the time being, we haven't changed the large loss budget and the national catastrophe budget for next year, mainly because it's an evolving situation. And we have to see 2 things. First of all, to what extent can we continue to place our retrocession contract. And to what extent

we are actually will be seeing rate increases on the property cat side. So later, we are pretty sure -- and therefore, it is relatively likely that by year-end, you will see that we have increased our national catastrophe budget to some extent.

### **A - Karl Steinle** {BIO 1986424 <GO>}

Well Paris, take the microphone.

## Q - Paris Hadjiantonis {BIO 19703051 <GO>}

Paris from Crédit Suisse. Sorry, I'm going again back to the target matrix and looking at EBIT growth for Life & Health, where you've changed that from an EBIT margin. Can you give some details on the split by sharp business, let's say. So I think you have alluded to the fact that financial solutions business, for example, are doing better. Are you expecting that EBIT growth is coming mainly from financial solutions rather than mortality or U.S. mortality? And the second question is on the dividend and specifically where you say that a special dividend is integrated into the new strategy. I'm not exactly sure how you define now an ordinary dividend versus a special dividend. So at what point would you be not willing to pay a special dividend? Basically, would that be a payout ratio above 100 or something else?

### **A - Ulrich Wallin** {BIO 4863401 <GO>}

Second question, first. We would not pay a special dividend if we cannot finance a dividend out of the IFRS profitability. So -- I mean, if IFRS profitability is below our dividend including special, then, of course, we would not pay a special. We would also if we don't make money or if you have a loss, we will not pay a special dividend. Because you need to see 2 things here: one is the continuity of the dividend. The continuity of the dividend should under all circumstances be the base dividend. And in most of the years, we should be able to pay a special dividend. The other thing is that we would also not pay a special dividend if there are extraordinary good opportunities to grow our business, like, for example, if we have opportunities like we have seen in 2002, the significant profitable growth opportunities. In that case, we would also not pay a special dividend. But we don't think that 2018 will be similar to 2002. Of course, when we go to the first question regarding the split of the EBIT growth on the various subsegments, it, of course, applies to all subsegments, admittedly if I look on U.S. mortality from a rather low base and if I look at U.S. financial solutions from a higher base. But I can tell you that our ambitions on the financial solution business is more a double-digit EBIT growth every year. Otherwise, of course, as it's relative target now, it's -- I mean, it applies to all subsegments.

# **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. Any further questions? If this is not the case, we will break now for a short coffee break. And we will resume at 10:30 for the next presentation.

(Break)

+++presentation

We will take a look at the current hurricane season and discuss our activities in relation to our ING portfolio. And with that, I hand over.

#### **A - Ulrich Wallin** {BIO 4863401 <GO>}

Okay. Thank you. First, one remark on the target matrix because this is not getting any better. And on the target matrix -- because the target matrix is not a guidance for next year. It's a mid-term target. It's our mid-term target. So the aim is, if we look back on a 10; or 15-year period or 5; or 10-year period and look at the development of our earnings and premiums, they should be within the targets of the target matrix. It's not a target that we expect to achieve in any given year but it's mid-term target. So I mean, if you have a soft P&C market, for example, we have no ambition to grow by 3% to 5%. If the market is very soft, we may as well shrink our P&C book. However, if the market is very favorable, we, of course, aim to grow more than 3% to 5%. So it's a mid-term target that I meant here. When it comes to 2018, of course, it remains what we set all along that the underlying profitability that we are able with our business model to generate is more than EUR 1 billion net income. That we already said that the last couple of years. And that hasn't changed. Again, this is not a profit guidance either.

So that brings me now to the issues. And I start with an update on the natural catastrophe losses, which have been much talked about. And of course, let's look at the losses of the Third Quarter. Of course, we have Hurricane Harvey, which was the first one in August. And you can see that the estimates on Harvey are quite wide ranging. I mean, the lowest estimate is from CoreLogic, \$7.5 billion and it goes up to \$40 billion on our math. And same is true with Irma that \$25 billion is the lowest number, \$55 billion is the highest number. And of course, the largest is currency we have on Hurricane Maria, where the numbers go -- anywhere from \$15 billion to \$85 billion. So you can see there is a lot of uncertainty in the final -- in those 3 numbers on all of these. That means that if you take it all together, we have a range here from \$49 billion to \$183 billion. The 2 sides of the equation have very, very different consequences for the market. If we are at \$183 billion, that would mean that assuming 50% of this being reinsured, we would have 45 additional loss ratio points to the P&C business, which, of course, clearly would be a capital event rather than an earnings event for the market. Because if you assume that the large loss -the expected large loss -- expected large losses for the market are just under 10%, it would add about 35, I mean, combined ratio points -- to the target combined ratios. And yes, I mean, that would not -- you would not be able to bridge that investment income. Conversely, the lower end of that bracket is \$49 billion. You are pretty much in the range, as I said, we have seen, say, in 2016 and in previous years. So then -- I mean, it would clearly be only an earnings event and pretty much the losses, if that's the case, would be covered within the large loss budget, the majority of the losses. So you can see there is a very high range of uncertainty in these. And also, this uncertainty gives you uncertainty about the market reactions.

What does that mean for us? We still feel it's a little bit early to give you concrete numbers. The only thing, which we already said and said remains true is that our profit target is under threat, under challenge. So to say, because of the combination of the large losses and particular about this potentially happening in the Fourth Quarter, I mean, could clearly result in the fact that our large loss budget is not sufficient to cover the actual large losses. And as I said before, that is one of the preconditions for our profit guidance.

We will, however, give you numbers when we report on our Third Quarter figures because we have to book numbers. Then if we book the numbers, we may as well give them to you.

Well I mean, we have comprehensive retrocession cover. And the way we currently look at the losses, the majority of those retrocessions will still be in place. What that means is our current assessment is very well safeguarded for further increase in future because if the losses increase further from our -- from the current assessment of the market or our assessment, then our retrocession cover would come into play to reduce the effect that, that would have on Hannover Re. And of course, we expect for us and we are pretty certain that this will be an earnings issue rather than a capital issue.

Then of course, the question is what does that do for the market? And how does this look in comparison to what happened in the past? If you look at this chart, you can see that you have had in the last 17 years, about every 5 to six years, you had a year with major cat losses. And it's also quite interesting. But this is just the chance that the large losses were normally preceded by a year with already losses that were slightly above the long-term average.

And so from that point of view, we can compare 2017 a little bit with 2011 and 2005 because the quantum of loss will be there or thereabouts if you look at all the losses, all the national catastrophe losses of the entire year. You can also see that following major losses normally these loses behave. But there is no guarantee that this will always be the case.

So what happened in case of these large losses? Look at 2005, the average ROE of the 10 largest insurance companies, which write at least 50% of their business through reinsurance, dropped to 2.2%. And that meant, that you saw a reaction on the market, which was actually as depicted with the Guy Carpenter Rate-On-Line Index for national catastrophe business. So you can see that following the losses in 2005 and the resulting unacceptably low ROE of the reinsurance industries, prices increased. But so did the ROE, which then, of course, in 2006, reached very attractive levels. And as even the 2005 hurricanes were not dislocated -- did not result in a dislocated market. You can see that the prices after that peaked relatively quickly, I mean, went sliding again. Then you have 2008. And 2008 is interesting, because 2008 was not a year where you had particularly high natural catastrophe losses. Nevertheless, the financial crisis resulted in a breakeven result for the industries. And that, of course, was an unacceptably low ROE for the industry. And it had an effect on the -- on all of the business, which you can see in 2009. This effect is a little bit larger than you look at it at the overall reinsurance business not just the natural catastrophe business. Because in 2009, the increases were rather broadbased. They were basically on all classes because a lot of the market players became very risk averse. Then, of course, 2009, again, the year ROE was very attractive. And so we saw the rates starting to slide from 2010 into 2011. And 2011, then we, of course, had the New Zealand earthquakes and the Japanese earthquake as well as the Thai floods. That, again, resulted in a rather broad-based increase in rates. And the 2012 level has actually been -- for the overall reinsurance market have been quite acceptable level. I mean, if you get that level, we would be very happy. And you could see that the market

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remained quite stable in 2013 only to start to slide, again, from 2014 onwards due to the fact that there was no volatility in the RoEs since 2017.

Of course, for 2017, depending where the losses end up in that bracket between EUR 49 billion and EUR 183 billion, the RoE of the industry will drop on the mid-term probably again below 5% and that should result in change in the market sentiment and that should result in rate increases in 2018. And we're already seeing some of that now, particularly on the facultative side and some of the London market business where you already see a much firmer markets than we had three months ago.

So this is as the U.S. -- so sorry, it is the worldwide catastrophe business and the facts of what we have seen in the Third Quarter. Still a lot of uncertainty. But we can expect overall to be -- to be more favorable trading conditions into 2018, which, of course, should allow us to deliver improved profitability on our 2018 fiscal and underwriting year on the P&C side. That brings me to the second issue I want to talk about, which is the U.S. mortality business. And we have reported, consistently, I would say, at least, over the last 36 months, is that we had worse-than-expected results from our U.S. mortality business, in particular relating to the business that we have bought from Scottish Re at the end of -- at the beginning of 2009, the so-called ING block. And of course, the question is why is that business underperforming and why it looks that the performance that our U.S. mortality business displays looks comparatively bad compared to our peers? I would first like to direct you to the left side of the slide. And the basic challenges that we have with the U.S. mortality business is twofold. One is higher-than-expected mortality at old ages, particular ages over 85. And secondly, is anti-selective lapse and anti-selective use of policyholder options, is that the policyholders have in -- in the primary policies and that have an effect on the emergence of the experience of the reinsurance.

And both phenomena realize themselves at the latest stage of the development of an underwriting year. Because if you write new business, let's say, if I write new business in 2017. So I write a block of mortality business based on the reinsurance rates. So-called YRT rate -- rate-driven facility, of course, in the early years, I mean, it's very unlikely that I will have higher-than-expected mortality. Because -- I mean the insurers that I cover with my reinsurance are relatively young. And they have just gone through a medical underwriting process. So I can assume that the probability that they survive the next 10 years is extremely high outside accidental death.

Also early on, the insurers have limited options in the policies that can negatively impact on the experience of the book of business. That changes over time, particular on business that is, in the end, permanent business. So it's a policy that remains in duration until the insured passes away. Because if it's a term policy that is being bought, at the end of the term, the policyholder has a variety of options. One of the options is that he can convert, in many cases, that policy to a permanent plan. If he does that, there is no new underwriting. So his classification addressed is still based on the underwriting performed like 10 or 20 years or 15 years ago. So if he was super preferred at that time, he still gets a super preferred risk rate 20 years later. That, of course, opens the portfolio for antiselection because if his health has deteriorated, the converting the policy to a permanent is clearly his best -- is his best option if he wants to continue to be covered.

The other option he has not to lapse the policy, the so-called post-level. I mean, avail himself the availability to have the post-level term coverage. Post-level term coverage, of course, there is an assumption of the market that it is anti-selective because the market assumes that it is anti-selective, you get a higher -- a much higher rate than you have been paying through the term period. Of course, you have to pay higher rates anyhow because you are lot older now. But also there's an assumption that if you are very healthy, you will not continue with your policy there. But you will lapse. And also, here the assumption of the market was that the post-level premiums may be profitable for the market because of the higher rate hike and that is not the case. I mean, if the market assumption for profitability is mainly stemming from the fact that the post-level term coverage was introduced into the life reinsurance market in order to bolster the profitability of the overall term-life business.

So here you can see that the problems that you have to foresee the U.S. mortality business, basically backloaded. And of course, they are larger than the -- and average age of the policyholders is higher. And of course, if you have block like the ING block, which is closed for new business for like 13 -- 13 years, the problems crystallize on that block more than it would, otherwise, be.

If you look at the right side of the graph, this is the new business volume and this is the new business volume, not by premium but by face value. So it's basically is a sum insured that has newly written by the reinsurers. And I think these figures are always publicized by Munich Re, therefore, we can take them. But you can see the dark blue line is the new business production of Hannover Re. And of course, you can see there is an absolute spike in 2004, which is one of the more difficult underwriting years due to -- due to poor underwriting of the primary companies at that time. And so we have really, really a unproportionately high proportion of our business in those difficult years. And we have a very low -- unproportionately low business from the years, say 2005 to 2012, which were pretty good years. And therefore, the problem is the U.S. mortality business crystallized in our portfolio earlier than in the portfolio of our peers, which have a more evenly spread issuance of new business. You can see that the cession rate has actually been coming down over time. Therefore, in the newer years, I mean the years in the new business written is coming down, anyhow. But that's important to understand if you compare our numbers to the numbers of our competition.

What does that mean? Or what are the initiatives we have taken? I mean, first of all, prior to 2016, we saw some impact of the negative developments in the U.S. -- the U.S. mortality business, largely on post-level terms and some based on -- I mean we saw some issues with suicides following the financial crisis. They've also alleviated a level of suicides. And those were addressed by enforced management actions. I mean, firstly, on the coinsurance business, reducing the collateral cost virtually to 0. I mean that on the modified coinsurance business means that, that is actually quite stable, most of that is term life anyhow. And so the problems that we have for that business are basically remedied by the fact that we reduced the collateral costs dramatically. The only problem we have is that business remaining is the conversions from term to permanent.

We also had some successful rate increases that we exercised over the years that mitigated the problem. From 2016 onwards, we saw the increasing trend of additional

mortality and that also initiated our projects -- we call our project reboot, which is the project that you see in the fourth bullet point, where we have an even closer and more granular look at the developments of that mortality solutions business. So we have come up by the end of the Third Quarter with a much clearer view on the future expected losses of that business.

On an IFRS basis, it's important to understand that the assumptions at the time of the purchase. So-called purchase GAAP are locked in and as long as the value in force of the U.S. financial solutions business as a whole being a unit of account are being positive, we will use the unlock -- we have to use the unlocked assumptions on our IFRS reserving, not on the Solvency II reserving. Solvency II technical provisions reflect the latest view. But on IFRS, it's the locked-in assumptions.

That, of course, on the new -- on the newer business normally provides us with good profitability, (actually) to expected is normally positive. But on the old block, it means that we would see negative IFRS earnings because the assumptions that are locked in such as lower mortality and lower benefits payout than our current best estimate and that, of course, conceptually would mean that we would have on the ING block, as long as it's not unlocked and there's no reason to unlock it because if value enforce is positive of the entire block, we will have negative IFRS results on that.

The problems are largely this -- was almost exclusively with YRT business on permanent plans. And therefore, whilst the situation is not perfect, we have the ability to remedy the situation that's enforce management actions, which basically resort to increased rates. We have the right to increase the rates on YRT. That has to do with the fact that this outset right, which is -- I mean single option that we have that we don't need to seek a consent of our client, is the reason that the reinsurers on YRT have set right for rate increases, is because, otherwise, we would have to put up XXX reserves. If we have had -- if you have to put up XXX reserves, we have to charge our clients for the collateral costs and therefore, this rate increases are -- the ability to increase rates by the reinsurer is in the interest of both the ceding company as well as the reinsurer. Of course, we can only increase rates where it is truly justifying. I mean there really need to be changes in the exposures, which have not been taken into account when the business was underwritten, because all things being equal, of course, the client can assume that we will not increase rates. That means that over time, the IFRS results will improve for 3 reasons: first of all, I mean the increased rates will, of course, improve the IFRS results; secondly, as we increase rates, normally, the right -- the client has the right to recapture the business or even if he hasn't got the right to recapture the business, we would still probably allow him to recapture the business. That means that we might have an IFRS in that particular year if we have a negative reserve on that business. But at the same time, of course, for the future, the expected losses from the recaptured business will not -- will not materialize, which would of course, means that the IFRS results will improve; and thirdly, the new business that we write, as you can see on the -- as you have seen on the first slide, is increasing. And also, the profitability of the new business is increasing. So the IFRS earnings of the block should actually improve for those 3 reasons in the medium term, starting this 2019, where you should start to see the fruits of these actions that we're undertaking.

This gives you a more granular explanation of the various issues and opportunities that we have in this business, most of that I already alluded to and that then brings me to one thing, which is the mortality trend in the U.S. The U.S. life reinsurers. And they price the business, they would normally price in mortality trend improvement of anywhere between 1% and 1.5%. So they expect that the mortality will improve, which was true for quite a while and the mortality improvement actually often were more pronounced as them being priced in by the reinsurers. But you can see that in recent years, they've also -- the trend of mortality improvements have actually stalled and variety of reasons for that -- one is that these trends are volatile anyhow over time and the other is there are certain -certain elements, just as increasing use of medicine in the form of drugs, which has an effect for this mortality trend. Of course, the stalling of the mortality trend, you only feel that and the actual to expected results if you have a high average age of your policyholder. If you have a lot of policyholders, say that are older than 85 years, is anywhere they've seen the effect. And of course, as the ING portfolio, that we required, is already closed for 2 business for a number of years and is -- I mean has been underwriting business for many years before. The average age of the ING insurers that we have is higher than the average age of, say of a reinsured life in the market. Therefore, you have the crystallization on the ING portfolio. It also allows us, of course, to take more proactive actions.

Conclusion. The majority of the problems, as I said, exist on YRT businesses permanent plans or conversions to permanent plans and the majority of those can be addressed by enforce management actions. That will be -- we plan to execute that we already have executed a number of those in 2016 and '17. But there is a plan of acceleration of this execution in 2018. We expect recaptures of that, which will create some volatility in the IFRS earnings, particularly in 2018 and maybe, spilling over a little bit in 2019. But after that we should be done with that because based on our project work, we feel that we are in a position to have a rather precise view on the expected mortality. So that we can tailor make the rate increase that we only need to do it once and not come back, say, some years later and hit the client again, with the rate increase, which contractually we could. But that's definitely not what we want to do. And that means that, as I told you, we expect from 2019 that the profitability of our U.S. -- of mortality business and the overall performance of the Life & Health business should improve. Because -- I mean the negative effect of the U.S. mortality business in recent years has been between EUR 100 million and EUR 150 million negative effect on the EBIT. So if you could bring that back to 0, which we should be in the next couple of years and the remaining business performs as it has been in the previous years, then, of course, you see that there is a lot of room for significantly improved EBIT from our Life & Health business in the medium terms.

With that, I would end my presentation. And thank you for listening.

# **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. And we'll start with the questions right on the left-hand side with Andrew.

+++qanda

# Q - Andrew James Ritchie {BIO 18731996 <GO>}

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I'm trying to judge how bullish you are or not on rate increases for, I guess, starting with general renewals. I mean if we say the industry losses and out of EUR 130 billion for the whole year. So EUR 100 billion for the hurricanes, what's your best guess at this point for rate increases in property cat U.S.? and are we talking broader beyond that or just really isolated property cat?

### **A - Roland Vogel** {BIO 16342285 <GO>}

Well our aim would be to bring it back to the 2015 rating levels then. But of course, on some businesses will mean significant increases like in Florida cat, you would probably need increases, I would say, 40% to 50%. On other businesses, the increases are -- can be a lot more modest because we haven't given the rate away to the same extent like on some of the Continental, European casualty business with a lot less also on the U.S. casualty business, we would probably more look for rate increases, I would say, around the 5% level because we haven't given it a raise that drastic.

### Q - Andrew James Ritchie {BIO 18731996 <GO>}

I mean, a lot of the large cedents that have reported losses so far haven't meaningfully drawn down their reinsurance. So why would they be willing to pay more for -- I know this is a negotiation game. But it strikes me as unusual that they want to pay more for the U.S. casualty business, for example?

## **A - Roland Vogel** {BIO 16342285 <GO>}

Well I mean they have caused us driving for rate increases themselves. And of course, they only pay a fraction of the premium to the reinsurance. And I mean, certainly, on the discussions that we have had in the U.S. on the CIB Conference, there isn't a change in sentiment both on the insurance side as well as on the reinsurance side towards rate increases. So there is no expectation at this point in time of the clients to fulfill the rate decreases and I would say you can convince them that you should have at least similar rate development as they have on their own business. I mean it's just a change in sentiment, I would say.

# Q - Andrew James Ritchie {BIO 18731996 <GO>}

Okay. Final question, the life EBIT guidance, which, I know, we've moved on from. But it used to be EUR 350 million or thereabouts. You are saying that would have included EUR 100 million, EUR 150 million negative drag. Is that how we should think about it? Or...

# **A - Roland Vogel** {BIO 16342285 <GO>}

More like EUR 100 million negative drag and now we more think about EUR 150 million.

# Q - Andrew James Ritchie {BIO 18731996 <GO>}

Okay. So all the things being equal, your 2019 guidance or maybe 2020, I'm not sure, is going to be EUR 450 million?

# **A - Roland Vogel** {BIO 16342285 <GO>}

That, if you do the math, that's at least the same math I did -- my colleagues are responsible for the life business listening to that and they have tried to achieve that.

#### **A - Karl Steinle** {BIO 1986424 <GO>}

Okay, we have another question from (Cameron).

# **Q** - Unidentified Participant

I was just wondering if you could give any comments around pricing in retrocession and kind of what you expect to, say obviously you expect some prices to go up and -- on kind of (inaudible) you are rising. But what do you expect to hear from your retro providers?

### **A - Roland Vogel** {BIO 16342285 <GO>}

Well I think they will probably charge -- starting to charge us more money. Maybe there is some success. But I would divert this question to Jürgen's presentation because I think he would give you some information on that. If you want to give an answer now, Jürgen, that's fine as well. But...

# A - Jürgen Gräber

Okay, do it now?

### **A - Roland Vogel** {BIO 16342285 <GO>}

Yes. The only thing, you need a microphone.

# A - Jürgen Gräber

Okay. Good. So when you look at retro prices, you have to consider the individual situation of every retro program. The market is divided by some retro programs, having been hit severely in 2005, then 2011 and maybe hit again, right now in 2017. They, of course, will have to expect price increases, I would say. But those who have not had massive hits, say for example in 2017, may have a very positive bank of yes unused premiums from the years 2012 to 2015 and '16. And therefore, they will try to negotiate unchanged retro prices. We are more in the latter group. And surely, I will challenge our teams not to accept higher retro prices. Whether we succeed, we have to wait and see, yes.

# **A - Roland Vogel** {BIO 16342285 <GO>}

It also remains to be seen how the ILS market will perform this season -- the losses that we have and how the ILS market will perform with the uncertainties that are in the market at this point in time. Because I mean the retro market is heavily driven by the ILS market, I would say, at least 50% of the retro capacity is provided by collateralized markets.

# **A - Karl Steinle** {BIO 1986424 <GO>}

Okay, Vinit has another question.

# **Q - Vinit Malhotra** {BIO 16184491 <GO>}

So just on the market pricing commentary, thanks for that. I know it is also a big, sort of, arranger in the ILS space where it helps to match supply and demand. From your role in that area in the market, where are you seeing -- what are you seeing happening at the moment because, obviously, ILS and how they behave and how (collateralized) structures behave, next three months will be very important to whatever happens to all of us.

## **A - Roland Vogel** {BIO 16342285 <GO>}

Well I would say the ILS players are in the process of accessing their position. I think they're not very many of them that already have concluded their assessment. So we will know that in three months' time, for sure. We will know it particularly well at Hannover Re because as you know, we work with a handful of partners in the ILS market where we act as a transformer for them. And of course -- I mean, they will have to give us new collateral if they want to continue that partnership. And for us, I mean, if we are willing to do that, we are continuing to be in business. If they're not willing to do it, then that's fine for us as well. That would then probably point to hotter market than otherwise.

### A - Karl Steinle {BIO 1986424 <GO>}

Okay. Next one is from Thomas Fossard.

### Q - Thomas Fossard {BIO 1941215 <GO>}

I have 2 questions. The first one would be on the life side and -- could you put some numbers behind the U.S. mortality book in terms of what is the size of the portfolio currently, how much business is running of every single year, just whether any kind of idea of how the numbers looks like behind the scene? Second question will be on the P&C side. You recently invested or made the acquisition of Argenta on the (light)market. Can you say you beat on what you intend to do with Argenta and where you are seeking in terms of planning process for '18 and '19? It seems to be that, maybe, large market could be much more dislocated than the insurance market as a whole in the coming quarters?

# **A - Roland Vogel** {BIO 16342285 <GO>}

Yes, I mean the size of the premiums that we get from the acquired book, it's still around \$1 billion of premium per year. That's gives you kind of the size there. And of course then, I mean, what we call the organic growth businesses, the new business, that will be around \$300 million this year, growing double-digit every year. Then we have some other legacy business from Hannover Re, which is performing largely along this expectation, that will be probably be another, I would say, \$300 million -- \$200 million to \$300 million. So that's roughly the size of the U.S. mortality business that we write. On the P&C side with Argenta, I mean we will -- I agree with your observation that may be the large market is affected by the losses little bit over-proportionately. And therefore, the reaction will probably also be more drastic in the large market.

(technical difficulty)

With Argenta, we will increase our exposure, our underwriting capacity with them, partly to stem capacity of them overall and partly by taking up some of the capacity that have been given up by some trade capital providers.

### Q - Thomas Fossard {BIO 1941215 <GO>}

On just capacity can you put -- can you put any provisional number? I mean your (inaudible) seeking almost 40%, is that the type of things you're willing to do as well?

### **A - Roland Vogel** {BIO 16342285 <GO>}

No. I mean not that much. Stamp is more like 15% to 20%, yes. I mean, of course, our own underwriting, we would more than double compared to what we currently have. Because Argenta, if you remember, I mean the managing agency that we bought, it only -- it only controlled 21% of the stamp and 9% of the stamp was provided by us already as trade capital. So that's 30% of the stamp and in -- for 2018, we are likely to have around 50% of the stamp. Is that correct?

# A - Jürgen Gräber

Maybe closer to 40%. But some of it has been 40% and 50%.

### **A - Roland Vogel** {BIO 16342285 <GO>}

Good.

### **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. Any further questions? If not, then we will continue with another presentation. So before we break for lunch, we will listen to what Roland has to say. Deciding on the title of his presentation is always the easy task because, we just take the one from the previous year. But coming up with the contents, however, it takes a little more work to do it as we saw this year. So thank you for all the colleagues who have contributed their support.

Seeing as the 2016 runoff result prompted widespread discussions this year and numerous assumption, Roland will focus on that topic. And needless to say that we can't get away with an update on the investment side as well. Well with that, I'll hand over.

+++presentation

# **A - Roland Vogel** {BIO 16342285 <GO>}

Yes. Thank you, Karl. Welcome also from my side. This is now a rather sharp cut from the strategy and market-moving events to the nitty-gritty on my desk. We -- this presentation has a little bit the tradition to have this title. I was asked already last night, what is really on the CFO's desk today? And we spoke a lot about IFRS '17. I'm sure this might be the topic of one of the preceding presentations here. As Karl mentioned this year, we have kind of runoff redundancy, combined ratio, underlying combined ratio of 2.1. I did a kind of representation for that already, I think, three years ago in London, with the discussion Karl has mentioned, early this year, we felt that we should be addressing that again.

I should do some expectation management and already say the disclaimer, you might not get all the answers you are waiting for clear-cut. This is how it works. This is -- there is a reason behind it. But I hope at least you will understand a little bit more clearly where the

uncertainties are, which we have to address and where the uncertainties are, which are the background of the way how we are communicating this Bermudian Triangle of the redundancy movements, combined ratios, as we have presented them as well as the runoff results, as we have to present them as part of our publications.

I did succeed or I should -- I did survive the presentation of the Germany equalization reserve two years ago. So I hope I will make that far technical -- a little technical presentation here as well. Moreover. And also Karl has mentioned that I will give you the usual update on reinvestment yields. And we always try to enrich that with some additional information, which might be useful for you as well. Also here we get a little bit technical. So I hope I will guide you through these presentations with enough clarification to really gain what we have intended to gain from that.

How to read the runoff result, I think, these were the 3 -- the Bermudian Triangle, as I mentioned it already, it is a combined ratio as we've published it. It was 94% for the year 2016. We had reserve redundancies and now I'm stealing a little bit of Andreas' powder. I hope you apologize for that. But I need -- I need the number. So in this regard, you could see that the redundancies, I think, at year-end, we had already indicated that we do not foresee an increase in redundancies as we had seen in the years before. But we see that the redundancies should at least have been stable.

Now we see a red 0, how we call it here in Germany with a very slight. If we saw -- the reserve redundancies had been kept stable by year-end 2017. And we were -- we will come to that forced or we were explaining in our accident year tables in the P&L -- sorry in the annual report that the runoff result was EUR 800 million, suggesting that the underlying combined ratio was not as good. We, by the year-end, commented that with large losses being below -- large loss budget last year, we had been in the position to also be conservative in the running year and that we felt that there were no really major runoff results and the combined ratio as presented, did reflect the business of the year plus the usual positive runoff, which we have. We should bear in mind already here that in the year before if you compare the two years or 2016 and 2015, in the year before, you might remember that we have added to redundant reserves EUR 350 million. So in that regard, the 2005 combined ratio might have intrinsically be -- have been better. But we would still try to present the 84% combined ratio as a rather normal combined ratio without any very extraordinary effect.

Let us -- some groundwork, not very breathtaking. But -- and it is, of course, not good if I stand here and disqualify my own numbers. But we have to bear in mind, what we have to present as part of our accident year tables in the annual report is derived from actuarial numbers. So we have an actuarial view. And then we translate that actuarial view into our accident year tables. And there is some transitional work in between, which can lead to volatility. So let's go through that quickly. The actuarial view is an ultimate view. We define the ultimate loss ratio per underwriting year. And that really then defines what has happened to this underwriting year within a financial year or an accident year. And the balance sheet view is really, you look at the runoff in the reporting period. And again, I think these numbers are combined and the balance sheet numbers are derived from the ultimate -- or from the actuarial numbers. But there is some transitional work in between. First of all, it is -- the one is net and the one is gross. So you also have to bear in mind that

IBNRs have to be allocated to retro sessions and accident years. We also see that here for the year. And the balance sheet view is based on an accident year basis. The actuarial view is derived from an underwriting year basis.

On view -- I think the most important thing is here also the last goal, the runoff result is really a change of the ultimate illustration from an actuarial point of view and then we have to translate it into the accident years. So I think this is just to be borne in mind. Rather trivial, still worth mentioning, I would say how is the runoff result determined. We have the opening balance claims reserves. We have the closing balance of the claims reserves for the previous years. And that is important. And of course, we have claims paid in between. And what results is the runoff result. Not very breathtaking, not very exciting. Still, please bear in mind, this does not affect the current year. So 2016, what has happened to 2016 has not -- or is not affected whatsoever.

On the right-hand side, you see that how we present the runoff result as part of our annual report. And I think we see that now a little bit easier because you won't be able to see the numbers anyway on the right-hand side. It's a little bit -- a better reflector. So the EUR 804 million, as you can see them on the screen, this is what we had published as the accident year runoff result in 2016. You see rather volatile numbers from accident year to accident year. And it is important to see that, for instance, 2015 is even negative. So why is it that the 2015 accident year is even negative? You should bear in mind, we do the math on an underwriting year basis. The underwriting year 2015 still produces lots of premium in 2016. If you look at your running book, the premium which you get paid on a rather conservative basis and you establish IBNRs on that business conservatively, which we did for the premium we have to show in 2016, that means that then the IBNR, which you established, needs to be allocated also to the accident years. And it has then to be calculated on a net basis. It has -- it would then include remarkable increase in our financial reinsurance business. We also -- there you have movement between accident years. So what I am trying to say here is that the allocation of IBNRs to accident years may have -may see remarkable movements. The on average number is a good guidance of what has happened. But you see volatile numbers between accident years based on the way you derive those numbers and how we do that, I think, Andreas will also have that in his presentation, how the actuaries come to these numbers. The EUR 804 million still. And this does not at all include any additional conservative view of the year 2016.

We will come to some numbers, I would say, here. If you just -- this then gives you the view, how did all of our underwriting years develop over the accident years or the financial years, which we've seen. We've also -- we do show 2 special years but the message, which we have here is true for each and every year. So we start with an ultimate loss ratio. If we, for instance, take the year 2010. So we have started with a combined ratio or the ultimate loss ratio of 81%. It -- also this here has increased one year later to 84% through the same effect which we have seen with 2015 on the previous page. Then it moves downwards. You also see that this is again true for all the years. If you go to 2006, we've started with 63% ultimate loss ratio. Then this ultimate loss ratio goes down until now in 2016, we have reached 54.6%. So there is a clear trend and that is true for each and every underwriting year, that we start conservatively and then it goes down. Still what I was also trying to say, the volatility in between these numbers is still remarkable. It's not a clear trend downwards. So the actuaries look at the numbers on a yearly basis. And also, the

redundancies within these numbers are migrating. That is one other aspect we will see on the next page. So the message here is, there is a clear proof that on an underwriting year basis, we start with conservative high combined ratios and then they trend downwards to higher numbers. And you also see that, for instance, for the year 2015, there is only one number. It has decreased slightly. So the newer years do not contribute as much to that trend as the older years.

That is the message I'm trying to show here. And I was of the opinion that the numbers could be seen better. Because I think that is really one important message. So you may look at your -- at the handouts, which we have been giving you, here on the left-hand side. The left-hand side displays the percentage of contribution of a single underwriting year to the loss reserve redundancies in a given -- or at the end of a given financial year. So -- and it's quite obvious that the loss reserve redundancies migrate downwards. So for instance, if you read it from left to right, let's again take the underwriting year 2010. In the year 2010, it has contributed to the loss reserve redundancies 3%, the next year 12%, then 14%. And it's still contributing remarkably.

Let's take another year, 2006, again. In 2009, which we see, it has still contributed 17%. But then it goes down. So you see the diagonal. So the redundant loss reserves are migrating downwards with -- from year-to-year. Quite clear they don't because after quite some time, you have enough claims being paid, the uncertainty goes down. And this is why it's no longer justified to have the loss reserve redundancies. That is one point.

So there are 2 ways how this migration works. First of all, you just keep your books' loss reserves where they were, although you have the chance to bring them down. This would increase the redundancy contributed by that one underwriting year. The other way would be to really increase the book reserves from one year to the other. And we see both ways happening. So on the one hand, we just keep our -- in those years, we start with a book reserve. In that regard, the uncertainty is still too high for our internal actuaries as well as for Towers Watson. They don't exactly know how much that year will be contributing. Then with the additional certainty, the contribution to loss -- to redundant reserves increases. And with the certainty of the year, it decreases again. So you see this migration. This is why the loss reserve redundancy contribution migrates down from the upper left-hand side to the lower right-hand side of that table.

One other important factor here is that if you look at the new years, they contribute to a very low extent, I mentioned that already, because we don't exactly know how much redundancy is in such reserves. It is just not taken into account. The result of that is that our actual redundant reserves should be higher. If you believe that the year 2015 on that table, which starts with 3% and then 5%, will 3 or -- 2 or three years down the road, also contribute 16% or 12%, 13% or 14%, then the consequence would be that our loss reserve redundancies are actually higher. We will only see it later on. So the unfortunate thing is, I have no proof to you that this will be the case. I have the history. And I can tell you that we have remained our conservative reserving policy. But not our internal actuary. But -- and also not Towers Watson will tell us that the reserves, which we have set up in 2016, will exactly migrate into higher loss reserve redundancies three years down the road. Still I think this is also why we then tell you by the end of the year with the reserving policy, which we have applied and we haven't changed that, also the year '16 and '15 should

migrate. So if we stop that tomorrow, if we just book the best estimate reserves for the running year, it would still mean that EUR 1.9 million, which we have published, will emerge, will kind of be migrated on. But then we would have not added additional loss reserves -- loss reserve redundancies. So that is -- that for me is important. So this is really the threshold. It should be more. So if we keep our reserving policy as it was, then also the years 2014, '15 and '16 will contribute to loss reserve redundancies in the future.

So we've just then on the right-hand side here added the development of booked ultimate loss reserves for underwriting years since 2009. So we look at the underwriting years since 2009 and what happened to these underwriting years, how have they developed. And you see here also that there is an additional graph to show what we've seen on the page before already. You see that there is a clear direction, not a single underwriting year moves into a different direction. But it is rather volatile. And it changes from year-to-year. Then I think the runoff profit per the financial year, this is as a percentage on the page down below.

I think this was also one example. And those who were at the presentation, I think, 3 or four years ago will remember that you have to bear in mind how do the actuarial best estimate reserves develop and how do the book reserves develop. Here we have shown one example, where we have the same deduction in actuarial best estimate reserves and book reserves. That means, we have a positive runoff and those loss reserve redundancies stay the same. So if we, for instance, have a improvement of the actuarial reserve and we stick with the book reserves, then you have no runoff result at all. But you have an increase in loss reserve redundancies. I think these are the mechanisms, which I had already explained, I think, three years ago. I just want to remind you that you have these effects in our book.

So the message which I would -- to summarize that, the actuarial -- or the accident table shows volatile result and is not always consistent with the actuarial computation based on underwriting results. The redundant reserves in newer years should even be higher than what we have published. But I have no proof for that because the actuaries will only dare to give us their opinion after these underwriting years have matured. The EUR 1.9 billion is the threshold, which we have, plus the information how we present it to you to give you each and every quarter the combined ratios as they are, an indication of the runoff result and the indication of the development of the loss reserve redundancies, is -- we still feel that this is the best information we could give you, even if some of that cannot be proved.

I think that concludes my remarks on that result. And we -- on the reserve developments and the presentation of combined ratios and runoffs and redundant reserves. And I come to the investment update. I think you know that the graph we usually show, the development of the ordinary yield from assets under own management. So we look at the full portfolio on that page. We came into the year with 2.7%. We've outperformed that based on the contribution from the private equity portfolios. We have an estimation for the next year of 2.7%. And we also have an expectation of 2.7% for the year '19 already. So we are brave enough to already mention that because, of course, it is based on assumptions, new cash flow reinvestment yields at that time. So there is some uncertainty with that. But everything equal, it is also 2.7% in 2019. And I will try to explain to you why that is. We've also added the usual sensitivity. So if we have a movement in current yields,

100 basis points upwards across the board or downwards across the board, you see the sensitivity. If we have it moving upwards, the ordinary income would increase to 3.0%. If we have it downwards, then it would be 2.6%. Looks a little bit irregular. So it's -- sensitivities has more space upwards than downwards. But I ask the question when I saw the numbers is really the numbers behind the points. So it's 2.69% or so. So this is rounded upwards. And the other numbers are rounded downwards. This is why you have this unequal distribution. So this is what we predict. This is what our scenarios gave us. And here is some information as to why that is the case.

Now we're changing to only fixed income. This is where the ordinary income comes from - to a large extent. And we'll look at the portfolio as it is and as we see it in the future per currency. So it's 30% euro, it is 47% U.S. dollar. And you see the other numbers as they are displayed. It is also important. And please bear that in mind, that we have shown here the government portion per currency and the government portion for the U.S. dollar. As you can see, the bright green part of the column is larger than, for instance, in the euros. We've tried to avoid negative interest rate. We've tried to move a little bit away from the very, very low-yielding assets. The U.S. dollar is quite the other way around. Here we have more govies and, of course, not that amount of covered bonds. So I think that is -- you should bear that in mind.

If we look then at the next pages. So 3 key figures to evaluate the fixed income return is the headline for that graph. We have what we call the portfolio yield of our fixed-income book that is what is here called the locked-in portfolio, 2.53%. This was what is locked in into the portfolio. We have 2 additional numbers here displayed, one of which is the current portfolio value. That is the reinvestment yield as we have referred to in the previous sessions. That assumes we sell the whole portfolio today and reinvest it also today, what would be the ordinary yield of that portfolio. Then there is another number, which is the 2.0%. This is the actual reinvestment yield. Now it gets a bit technical. So please imagine, I have in my books, a well-paid 5-year German government bond from the good old years. I need to go back further, I agree. But let's assume it's a 5-year bond, which has a remaining maturity of one year. So in my scenario, I would sell that bond and I would reinvest in a 1-year maturity government bond, again. This is not what I'm really doing. I would, of course, buy because the modified duration is rolling forward, I would buy another 5-year bond. And that defines the difference between the 1.95% and the 2% because I'm reinvesting actually in longer maturities as in that scenario that I sell everything and reinvest it today. This is -- this makes up the 5 basis points. We have not considered any changes in allocation. With the barbell strategy, our strategy was to keep the risk as it was. So we did not include in that scenario, for instance, that the actual locked-in portfolio includes a lot of German covered bonds. We're not investing in those anymore because somebody else buys them all. And they are no longer that attractive. So we've not included that in the scenario, just the maturity effect. So how can it be that we are at 2.7%, we reinvest at a lower yield than the locked-in yield? How can it be then that we remain at 2.7% for the overall portfolio? There is one other aspect you need to be aware here. And that is where is the big difference between the locked-in yield and the actual reinvestment yield? That is the euro.

Please compare the bright green and the bright blue line. This is where we lose more than 100 basis points from the reinvestment. That is also true for the sterling. We also

lose a lot between the current yield and the reinvestment yield. It's interesting enough in the U.S. dollar, we already invest at higher rates as compared to the maturing rate. And again, please bear that in mind because we need that information to then interpret the following slides.

Here you see now, I think this is really -- here you see the maturities, the expected maturities of the fixed-income portfolio up until 2023. And you see it per currency. And this is not proportional. So you see that in 2017 and in 2018 and also in 2019, we have lots of maturities in the U.S. dollar, where we reinvest in higher rates. And we have the modified durations on the right-hand side. And those tell you per currency, that the euro with six years -- or 6 point because modified duration, as far as I learned, has no dimension. And the U.S. dollar is -- the currency was the shortest, obviously -- one of the shorter modified duration. So the turnover in the U.S. dollar is higher. And if we look at the years here, which we see, we have the maturing U.S. dollars in the next years. We -- well everything equal, you'll invest them with higher rates. And this is why we have this resulting here. You see that in 2018, the maturing yield is around 2%. We reinvest with the high proportion of the dollar at nearly 2.5%. And this is why we can maintain the profitability of the book.

Same is -- still works in 2019. We see it changing a little bit in 2020. So you could argue as from these years onwards, everything equal, no changes in investment yields. The dilution, which we have seen over the last years, might start again. But this then is the explanation as to why we are quite confident that we will achieve the forecasted numbers, which we've seen before.

There's one more slide here that, now we are leaving the fixed-income space again. And that shows you that the contribution from private equity as well as from our real estate increasing portions are increasing. This is why then -- what makes a difference between the 2.5% as a reinvestment yield for the fixed income and the portfolio yield of 2.7%, which we predicted for the next years to come. Longer term, of course, this really depends on the development of the yields in, of course, our currencies. What can be seen here also that the changes. And you might remember that we had changed our reporting currencies of our Bermudian and our subsidiaries to the dollar that this, if we look at the numbers as they emerge here, was not a bad move with regards to this portfolio.

I think I've 5 minutes left for questions, is that good.

# **A - Karl Steinle** {BIO 1986424 <GO>}

There's even more time for questions.

# **A - Roland Vogel** {BIO 16342285 <GO>}

There is even more...

# **A - Karl Steinle** {BIO 1986424 <GO>}

You saved 5 minutes on your presentation.

### **A - Roland Vogel** {BIO 16342285 <GO>}

Okay.

#### **A - Karl Steinle** {BIO 1986424 <GO>}

Well we start.

## **A - Roland Vogel** {BIO 16342285 <GO>}

I think we should start with the Q&A.

+++qanda

#### A - Karl Steinle {BIO 1986424 <GO>}

So the first one I see here with Ivan. And then we continue with Vinit.

#### **Q - Ivan Bokhmat** {BIO 15378004 <GO>}

It's Ivan Bokhmat from Barclays. So I have a question on the reserve redundancies. You mentioned that for the recent years, it's not completely captured. And if I look at the Slide 7, it shows the average positive development of booked ULRs of 6.5% for the past 10 years. Is there any reason to think that for the recent years, it would be any different, bigger or smaller?

## **A - Roland Vogel** {BIO 16342285 <GO>}

No. There is no reason. I think there is -- we've kept our reserving policies as they were. We have not added to loss reserve redundancies in the year 2016. Well I've no idea what happened by year-end. But the scenario indicates that there is not a lot of desire or potential to increase the loss reserve redundancies by year-end 2017. But as the number is as high as it was. And it had been increasing -- of course, percentage-wise, it always also depends on the volume of the portfolio as such. But there is no indication why that should not be the case in the future as well.

# **Q - Ivan Bokhmat** {BIO 15378004 <GO>}

And the second question also on the reserving. I mean, seeing the large losses for Third Quarter may exceed your cap budget, would you be willing to use any of -- some of the redundancy to pad up the results? I'm sure you were expecting that question.

# **A - Roland Vogel** {BIO 16342285 <GO>}

Well we will have to make up our mind by year-end when we really know more. If you, for instance, look at the Ogden reserve situation in the first half year, this is a long-tailed line of business. This is where we had IBNRs. And such unforeseen circumstances, this is why you have IBNR. So it was an easy decision to say, well, we don't let that fall-through, this is why you have your IBNR for. So that was rather easy. Now with a cat event, which has some potential to change the market to give us opportunities, now to use the valuable reserves -- and the whole market is affected, we've sent out the profit warning and it was,

as far as I'm concerned, well received. The reaction was everybody understood that. And we are preparing for a harder market for gross also here now to take the one shot and, kind of, weaken your balance sheet in such a situation for that one single event, which everybody knows, which is, I think, that wouldn't make too much sense. Still, we have always said that these loss reserve redundancies are not quite there to be there all the time and increase up until eternity. So in this regard, yes, we might lose part of it. But due to -- well, you said scenario. So if we really come in remarkably below the EUR 1 billion and then to show another record result and use up all the loss reserve redundancies wouldn't make sense at all.

### A - Karl Steinle (BIO 1986424 <GO>)

Okay, Vinit, (snacks) and then we continue with Andrew.

#### **Q - Vinit Malhotra** {BIO 16184491 <GO>}

Yes, 2 questions for me, sorry. Just on the Slide four and Slide six of your pack, the 2015, is it a correct understanding that the actuarial ULR improved by 2 points. But the book to ULR was significantly worsened by management decision. And is that what you are trying to say or -- because the 4 and 6 are not consistent in the direction of travel, unless management action is taken and that was purpose of this slide.

### **A - Roland Vogel** {BIO 16342285 <GO>}

Vinit, please bear in mind, we -- what we see at -- on Page 4, we look at accident years as presented in the -- in our Annual Report, based on that format. I must admit I don't like it for quite some time. But this is the standard to show it. And on the -- and on Page #6, we show underwriting years. And as I mentioned, to translate from one to the other may have impact. So it is -- this is why I mentioned the difference in calculation.

## **Q - Vinit Malhotra** {BIO 16184491 <GO>}

So it's not deliberate, it just happened.

# **A - Roland Vogel** {BIO 16342285 <GO>}

Yes.

# **Q - Vinit Malhotra** {BIO 16184491 <GO>}

And the second question is, you spent a lot of time showing how running yield should stabilize. How -- the ordinary investment yield 2.7% stabilizes for three years now -- or 2 or three years. But equally target metrics took 6.5%, goes down to 5% blaming interest rates. Is that not -- is that fed into the target metrics? And is that consistent? How should we understand that?

# **A - Roland Vogel** {BIO 16342285 <GO>}

I think -- as Ulrich mentioned, I think we try to make it consistent. The 2.7%. And I showed the numbers, was already a migration downwards. So I think it takes into consideration that this is bottoming out already. And again, this is a long term -- a longer-term view. If I

even make it longer than the average, for my point of view, it doesn't make sense. I have cash flow assumption, I've reinvestment assumption for additional cash flows, then this is no longer a plan. But just a scenario. But of course, if everything stays equal, we will have to assume that a dilution from 2.7% downwards would be starting again. So now everybody suggests that also Mr. Draghi might change his point of view. And we get mixed messages from the Fed in the U.S. So I don't have my crystal ball with me for such a long time. This is why we also then stopped it. But the short answer to your question would be, yes, it is reflected in our target metrics.

### **A - Ulrich Wallin** {BIO 4863401 <GO>}

Well if I may add, I mean, if the return remains stable. So the absolute investment income can then only increase by increased volumes or, of course, change in the extraordinary investment and disregarding that, it can only be increased volumes. And we expect that the volumes due to the positive cash flow increase by around 5% a year, which is around EUR 2 billion positive operating cash flow.

#### A - Karl Steinle (BIO 1986424 <GO>)

Okay. We continue with Andrew and then followed by Frank Kopfinger.

#### Q - Andrew James Ritchie {BIO 18731996 <GO>}

Could I just, you mentioned Ogden, just return to that exciting subject. Obviously, you absorbed, I think the number was EUR 261 million or something like that in the first half, EUR 291 million. Obviously, we've had a potential change of legislation. Also the major insurers, the primary major insurers in the U.K. are saying that claims are settling actually above 0 discount rate. So they are anticipating releasing some of their reserve even without change in legislation. How do you view -- I mean, do you -- would you just reabsorb that back into your, kind of, IBNR? Or would you then say, well, actually we held it because we thought there was a change in, now there isn't a change in...

# **A - Roland Vogel** {BIO 16342285 <GO>}

No. The assumption would be that this money will go where it came from. So as I mentioned, we took the IBNR, accept it a decrease in loss reserve redundancy by yearend, potentially. Now if the money comes back -- so in our -- I shouldn't comment on our Q3 results because they are just being prepared. But up to now, up to today, the assumption had been that as long as we don't have a clear decision, we cannot change. And we will present the numbers according to the EUR 291 million, which we have been showing, although we know that this will most likely come down. But it will as the burden didn't hit the bottom line. So will the release not hit the bottom line.

# **Q - Andrew James Ritchie** {BIO 18731996 <GO>}

So it would be more reflected in when we get to this time next year. And you give us the new reserve redundancy number, it may not have gone down essentially. That's how we should think?

# **A - Roland Vogel** {BIO 16342285 <GO>}

Or at least about the number we took it down at that point in time. This would have added then again to reserve redundancies, right?

### Q - Andrew James Ritchie {BIO 18731996 <GO>}

Okay. I have one follow-up question actually from the previous presentation. But I think it's probably, Uli or yourself, would have a view on it. The -- am I right in thinking the life business from a Solvency II perspective already reflects the current state of the U.S. So there's no -- you can have IFRS hits. But very modest Solvency II hits. Is that how you think about it?

### **A - Roland Vogel** {BIO 16342285 <GO>}

Yes. That is. There was a movement in -- already in Q2, which we now have published our view. Always have to bear in mind that we are a quarter behind there. But it is fully reflected, yes.

## Q - Frank Kopfinger {BIO 16342277 <GO>}

I've -- I want to come back to your Bermudian Triangle on the runoff and the combined ratio and the redundancies. I would have argued that the better combined ratio of 94% was driven by lower major losses in 2016. Then, on the other side, we have this 10% impact on the combined ratio on the -- from the runoff result. And the question is, are you suggesting -- also, you showed different figures. But are you suggesting that upfront, you're putting in 9% to 10% in your reserving in combined ratio terms?

# **A - Roland Vogel** {BIO 16342285 <GO>}

I was -- and again, I think that was -- this is why I had the disclaimer at the beginning because I cannot prove to you how much did I add into the year 2016. You just can -- and by the end of the year, we had a positive large loss result. And we use that also to set up reserves again conservatively. This is what I was suggesting. So that the EUR 800 million, 10%, well, you would in any case have to deduct the regular normal runoff result, which we have already shown if you compare that to previous years. And there was also a 2%, 3% positive runoff result included in that as well. So we're now hoping for (the Top 10) but potentially 7% according to your math. But what I'm trying to say here is that the run-off as it's shown on the accident year basis, is not always reliable, especially when it comes to the allocation of IBNRs in the new years. So we have added. And what we were telling you is that we have added in the current years, additionally, set up loss reserves so conservatively that we felt that the 94% reflects it. The one thing, if you compare it to the previous year, we did not at EUR 350 million do redundant reserves. So it was the previous year's run-off. If I do the math this way, it could have been EUR 300 million better. This is what we were suggesting.

# Q - Frank Kopfinger {BIO 16342277 <GO>}

Then my second question would be on your other favorite topic, equalization reserve. If we have now a severity year in 2017, what is the impact then on the equalization reserve and the rev up going forward? And this is also on the local GAAP P&L.

### **A - Roland Vogel** {BIO 16342285 <GO>}

Well we haven't run it's -- sure, I think, we will have an update on the equalization reserve. And it was interesting to see that the potential relief by year-end will be lower than anticipated. This is from my point of view good news. This is why Jürgen wrote so much Advanced Solution business, which pumped up the maximum amounts again, especially in those lines where an equalization reserve is to be set up. And he did. That was good combined ratios and loss ratios. So we have -- we see the release in the fire and industrial business as I have explained. But we see additions in other lines because we have been growing so much, which I appreciate. This is not to say that we have a problem with the relief, which we see on the equalization reserve, is to be expected lower than we had anticipated. How do now the losses or the effect to equalization reserve? Funny enough, we don't have anything in store. This is why you don't have an equalization reserve. And I would assume that a lot of these losses are storm losses, there are others as well. So I wouldn't see that much of an impact on the numbers which we see. But this is really speculation. Now I haven't run it through. This is why I explained the 12 steps to have them two years ago. It is really complicated. And we have do it line by line. And we haven't done it yet.

#### A - Karl Steinle {BIO 1986424 <GO>}

Okay. Any further other questions? Okay. From Daniel and...

### Q - Daniel Bischof {BIO 17407166 <GO>}

Yes. (inaudible), Baader-Helvea. Just one question on the investment side. So last year at this time, you explained that you're going to increase the equity and real estate exposure. But also the CLO and leveraged loan portion and loan investment grade part. Could you provide an update on these 2 new sector? Were there any adjustments to that or they're not changed?

# **A - Roland Vogel** {BIO 16342285 <GO>}

I think we have invested up to the defined budget. So this really worked well exactly how we had planned and it was a step-by-step increase. Of course, the performance of these asset classes had been very, very positive. Some spreads have narrowed. That is true for the U.S. dollar as well as the euro. So you really have to think about which classes you still reinvest into right now based on these numbers. Still, with -- especially with the CLOs, it's interesting and well you might know or not that in these asset class, our -- the managers are in a position to refinance every second year, with the specs having narrowed that much, everybody will do that. And of course, then refinance at lower rate. As to whether these lower rates are then really still effective, we would have to see. And we will see some of these maturities, I think, especially next year. So there is a little bit of question mark as to whether all the rating classes of these 6 CLO buckets will still be attractive, especially when they are refinanced over the next two years. Right now -- up to now, they have been performing, I shouldn't say spectacular. But very well.

# **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. Another question from Vinit.

### **Q - Vinit Malhotra** {BIO 16184491 <GO>}

Sir, apologies for following up. In 2011, the equalization reserve was actually added into, from my memory. And you just alluded that it could probably happen again this year. But just to link it to Uli's comment that the specialty, we would be paid only if the net income supported the total. Shouldn't you have linked it to the German GAAP and the revenue reserve? Or you could just update us on where that is likely to be? Or what do you think about all that?

### A - Roland Vogel {BIO 16342285 <GO>}

Again, I think I indicated at the time when we were asked, does the German GAAP number limit your ability to pay dividends? This is when we said, shortly after that we had added to retain earnings, it's EUR 0.5 billion now, I would have to look at that. We have also a profit carried forward. And also this now amounts to around EUR 400 million. So there is a lot of potential. And if need be, I also indicated that. And I indicated that the addition or the lower amount, which are now going to be released based on Jürgen's success on the Advanced Solution markets. Well if need be, if we proceed that within the group outside Germany, that burden would be gone away. So in that respect, I would reiterate the German GAAP numbers do not limit our ability to pay special dividends.

### **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. I can't see any further questions, which is a pity, because it extends your lunch break by 5 minutes.

# **A - Roland Vogel** {BIO 16342285 <GO>}

Obviously, misinterpreted.

# **A - Karl Steinle** {BIO 1986424 <GO>}

Well then thank you for your questions. We will now break for lunch for about an hour. So we will resume at 1:20 to be very precise. And I trust you will enjoy your meal, which you will find outside of this room. Bon Appétit.

(Break)

+++presentation

Okay. Now it works. Thank you for being so punctual. Our group Chief Risk Officer, Andreas Märkert has the challenging task to keep us awake after lunch with this presentation. With all the bells and whistles he brings to this topic, he will take you on a ride through the shallow waters of risk management. Before we ascend to the dizzy heights of Hannover Re Solvency and reserving position, Andreas, take it away.

# A - Andreas Märkert

Thank you, Karl. The mic is working here. It's perfect. So I've got the pleasure to entertain you just after lunch, which is good. I have an exciting topic here. I will start with the

Solvency position, actually up to Q2, give a little bit on the movement analysis. And continue with some aspects on the risk position, stress test results, also from NatCat. Then expand a little bit on what Uli started to explain or explained this morning, NatCat events here with a focus of early, say, model validation and how it plays with -- together with our risk appetite that we have communicated for this NatCat events. And finally, I'll explain some additionally aspects on the development of the P&C claim reserves, which have not been mentioned by Roland in his talks. So get a little bit more into detail there.

You know that we measure our capital position at the 2 confidence levels 99.5% to compare it with the Solvency II, which is only a few steps away from Solvency II and 99.97% to also capture very extreme events and dependencies. We still maintain sufficient buffer over our internal targets of thresholds of 200%, respectively 99.5% confidence level and 110% of the 99.7% confidence level. So that is basically similar to year-end.

If we look at Solvency II figures comparison, we have actually 2 steps. The one is the haircut for minority interest, it was in the Solvency II and it brings down our available capital by about EUR 700 million for the Hannover Re Group. Then the other element is the Solvency II standard formula. You know that we measure on an internal model basis internally. But for Solvency II, we use a partial internal model and use the standard formula for operational risk. And so our current Solvency II ratio is 231% at Q2. And we've got this the third column Notional Solvency II because we have just got the approval for the operational risk model. And by year-end, we will be reporting on a full internal model. And that brings 15 to 20 percentage points depending on the due date (inaudible).

So of course, we are quite happy that we could conclude this major project of getting approvals for the operational risk model, which started actually in 2016. So it was really a large internal project involving many experts from our Hannover Re internal expert network across the globe from all operating entities that we have many operating entities, because some elements, of course of operational risk assessment are going to be assessed on a local basis based on the knowledge of the local processes and actually what can go wrong on a local basis there. So we involved many people. We have now a fully stochastic approach in place for operational risk so that follows the internal model that was more realistic than we are using before.

And yes, when we look at the results, the undiversified results actually are not so different between internal model and standard formula. So there is a difference from EUR 666 million capital requirements for a 200-year event, a new interest 99.5% to EUR 489 million. That's the internal model. But if you look at the diversified figures with all other risk categories like underwriting risk, market risk, then there is a substantial difference based on the 2 standard model. It doesn't have a -- sort of a diversification module for operational risk.

So even if we, of course, don't assume full independence between operational risk and other risks. So we have some correlation built in there. There are substantial diversification. And therefore, the sort of marginal impact of operational risk is only from internal basis, EUR 129 million.

If we look at the sort of this figure of EUR 489 million undiversified risk capital. So we can look at individual scenarios. The model is actually build up from quite a significant number of scenarios, which then are used to calibrate an annual loss probability. And the largest scenarios that we currently have identified are on our compliance risk, which reflects certainly increasing regulation in many areas, maybe market conduct. But also data privacy rules. And on the other hand, insufficient processes, very important processes could go wrong (that could lead to financial)...

#### (technical difficulty)

One of the topics that we have already covered today. Cyber risk is also something that we are dealing with an internal perspective, not only from an underwriting perspective, taking on cyber risk or looking at our cyber exposures by scenario analysis, also internally we are protecting ourselves against cyber attacks. But still of course, there is loss potential here and fraud potential from sort of known and sort of kinds of cyber attacks. So these 3 things actually identified as the largest scenarios. And here we have the 200-year loss potential for the Hannover Re Group that we have identified on that basis.

If you look at the development of the Solvency ratio starting at the end of 2015. So this is known to you part of the annual reporting, the transition from 2015 to 2016. It has a -- we had a slight increase of about 10 percentage points in 2016 mainly due to the positive results and favorable business development in that year which are in line with our IFRS results. In 2017, we had a stable ratio and several affects sort of moving up and moving down. The overall figures go down a little bit due to the fix development, the weakening of the U.S. dollar since year-end 2017 -- 2016 is the main effect here.

So as of Q2 2017, we have sort of 91% of Tier 1 capital on the Solvency II and 9% of Tier 2 capital and we have actually another about 30percentage points of Solvency ratio that could begin by unused Tier 2 and Tier 3 capital. So elements that we don't use at the moment. But which are eligible for covering capital requirements under Solvency II.

If you look at the sort of Solvency II ratio movement in 2017, then we have split that out here into 4 components. The economic variances, I guess, we're...

(technical difficulty)

Smaller impacts from interest rate and FX movements here. They are largely hedged, the largest part of this comes from spreads -- decreasing spreads on our investment portfolio. Then we have done some model changes and here they lead to decrease in the case of the overall Solvency ratio, which is sort of a typical thing that one can observe on the Solvency II that if you sort of strengthen your model on underwriting risk side, you have also hit on your eligible own funds due to the risk margin, due to the increased loan debt of that. So -- and that's what happened this year, although we didn't make any major changes since the inception of Solvency II. And all of these changes that we hear are individual changes are below 2% SCR impact. The overall impact was also a little bit -- a little bit larger.

Capital management is just a column that shows the buildup for dividend payments or for the dividends, which are deducted from available capital on a Solvency II basis. So that's the buildup in the first half of 2017. And the rest is, of course, in a sense most interesting operating experience. That's the business developer affecting the business development. And the new business value that we have taken up. But also experience variances from opt-in rates that we touched on earlier and also from U.S. mortality that are -- sort of want to run reflected in the Solvency II figures. But potentially not reflected in IFRS, if they're sort of in -- for opt-in rates in the redundant reserves and for U.S. mortality subject to locked-in reserves. So they are shown on a Solvency II basis immediate results. So overall the Solvency ratio kept stable, although in between and also in 2015 we certainly saw some ups and downs, 5% to 8% deviations. That's not unlikely from quarter-to-quarter, also depending on their variances which you book in each quarter.

If you move on to the risk profile of Hannover Re, I, of course, like to emphasize diversification here, which is a very important steering element for us. And here, again, this slide, what are the largest sort of contributors to overall capital loan on a standalone basis, we have shaded the different risks here in different colors depending on the value of risk. The SCR makes up more than 10% of available capital, more than 5% or less than 5%. But it also gives some indication how those risk categories are also treated in internal steering processes, how much attention we give to these individual categories. And also it gives an indication of course, that we think that we have substantial diversification between the largest risks that we have in our book, quite obvious between longevity and mortality. But also longevity and NatCat. Also, those things are thought to be largely independent, which emphasizes what we've said before that we can write more business on the same amount of capital, of course, we have more diversification in our book.

On this slide, if we look at this level of between Property & Casualty and Life & Health market, we have market risk, the largest risk in our book and Property & Casualty is second largest, a quite substantial diversification here. Here we have shown everything on an internal model basis. So that's operational risk from an internal model basis and also available capital from an internal model basis. And these are already standalone figures. You see the tax impact that we deduct and the diversification. And if you use a capital allocation approach and look at what the contribution of each of the individual risks is to overall after-tax, post-tax we applied capital, then it's about 50-50 between market risk and underwriting risk. So market risk absorbs quite a substantial capital.

So diversification is important at all levels. Here I'm going through all details. But you see also diversification between old and new business in P&C. And as said before, between longevity and mortality in Life & Health, although we certainly don't assume negative -- strong negative correlation here, because we typically insure different parts of the population in different countries and it also shows that those 2 figures, EUR 1.582 billion and EUR 1.393 billion for longevity, they don't equal out but represent a substantial part of the overall underwriting risk for Life & Health.

If we look at few stress tests, a few which are sort of also relevant in the current context, with the recent natural catastrophes and if you compare that to the overall available capital, you see that even if you look at this at a sort of point in time manner and neglect for a moment. So earnings that would also emerge over 1-year time horizon. So stress

test has typically evolved in point in time, thing you expected. Everything happens immediately. And sort of 1 second later, you set up in your balance sheet. So this is just a comparison of the magnitudes that large risks could -- of the impacts that large risk could have, too, on our balance sheet. And U.S. Caribbean hurricane is certainly one of the largest risks, every 100-year event, EUR 850 million. So let's say, over the past couple of years, or if you compare it -- if you can just compare it to the first with the overall NatCat budget that we have, it's a bit comparing with available capital of use -- a post-tax number, this is small pretax figure. So you would do a reconciliation to translate one into the other. But that's the overall annual aggregate NatCat budget that we have. Our current limit is about EUR 1.85 billion...

#### (technical difficulty)

14% of our available capital that we believe sort of a relation that we communicate for the business. So before diversification, of course, a relation that we communicate to compare our NatCat exposure changes in relation to available capital over time. And I think in 2009, we were over 20%. So that has decreased over time. And it's actually, at the moment, at a minimum, I would say, we're in a sort of time period where we're really considering -- consider that on that basis. And the current utilization is about 75% here of the overall limit.

I want to say that some of the largest contribution to this overall NatCat exposure, annual aggregate is U.S. hurricane. So that's by far the largest individual sort of scenario if you can call U.S. hurricane, which is, of course, U.S. is big. And U.S. Caribbean hurricane, one individual scenario. And yes, we will see that on the next slide, that is actually another one, individual. But of course, we can combine that into one figure if we do consider all scenarios, which are possible in NatCat.

If we look at sort of model relative to reality, let's say then this graph shows the large loss budget of the last 11 years and the model standard deviation for the NatCat large loss budget, I should say, the model standard deviation and the arrows, the gray arrows show the actual value. So what will you expect? I mean do you would probably expect that there are not so many years where it's far outside of one standard deviation, although, of course, NatCat is a volatile business. So it's more volatile than other types of business. But keep in mind that this is sort of global NatCat. So there is a substantial diversification here, which brings the volatility even of NatCat a little bit down. So we have seen in most years that it's moving along standard deviation. I'm glad to say that we would expect that for 2017 also, although, of course, we've heard that loss estimates is very early to really announce a real figure. And we don't do that today. But from that perspective, we would say that probably model performance hasn't -- there is no indication at least from this graph that the models didn't perform or that we had sort of losses not well covered in the models.

If you then look sort of zoom in a little bit and look into the recent natural catastrophes. So as for loss estimates, the ranges are large. Also for a model validation, it's very early. But we have started to look at that. And here we have -- we show the AIR loss, communicated or published loss estimates, which were market loss and then the model return period for these market loss estimates in our, sort of, models.

So what do we see? We see, of course, the Hurricane Maria looks like an extraordinary event here in that table. But I guess, most of us probably see that range of AIR model top-end of what it can really play out at the end. Anyway, we see that some really had some interesting -- some characteristics, which it will play out as sort of anticipated by AIR. It wouldn't be unreasonable to assume that it wasn't, say, 75 to 200-year or 350-year event. All the other events that we have on that table are well covered in the models between 10 to 20 years. So there is also from this comparison no indication that there is a lot missing in the model. At least if you look at sort of loss amounts, of course, we have a lot of learnings, if you look at the emerging of the -- emergence of the loss estimates from these 3 hurricanes because all are very specific. And I would say, none of those hurricanes we have, sort of, past example, which is very nice and similar to those.

And we have compiled a few of the event characteristics for you. Actually, Hurricane Harvey, a hurricane which had sort of large high wind speed in areas with low population and heavy rain areas with significant population. And of course, that means that the wind losses are not as big from Harvey or the -- actually the flood losses are larger than the wind losses here. And especially, for flood losses we have still some under insurance even in the U.S.. So only a portion of the economic loss for floods actually insured. So -- and of course, there is also sort of -- it's even harder to estimate flood to flood losses in such a short period after the event than actually the storm losses, where there's more experience in estimating those losses.

If you look at Irma, this is more sort of a typical hurricane, say, which has a path in the Caribbean and then hits Miami. It had sort of the potential to become a real big event, of course. But sort of, in contrast to sort of predictions, the hurricane finally in made landfall in Cuba and slowed down there a little bit. Then it was in Florida only a Cat 4 event and/or a Cat 3 event then later on. And given the good sort of building construction types in Florida, which are, of course, prepared for strong winds, this then created another a huge loss, a high loss. Of course, it was a severe hurricane. But let's say, this storm, 50 kilometers to the east would have been really a severe event, probably beating then Katrina in loss amount.

Very specific event, again, it's Maria, which in a sense is a typical hurricane, which is indicating, when I say typical, I mean, that's in the catalogs of the modeling firms of the models, of the standard models that are used for assessing the prices or for exposure management for such hurricanes. But here it's specific because it -- at its -- it hit Puerto Rico, it is also another Caribbean islands. But Puerto Rico has probably different infrastructure than typical Caribbean islands, as it is overseas territory of the U.S. with a lot manufacturing there as well. So -- and therefore, a much higher exposure than other Caribbean islands. I guess, it was also the reason why I was assuming much higher damage ratios to those exposures at a very beginning. And of course, we probably have impacts from demand surge here, because all the supply for rebuilding everything that has been destroyed or a lot of the supply needs to be coming from -- needs to come from mainland and it's been more expensive there. So from that perspective, the storm was sort of very extraordinary event for Puerto Rico. But not an event that was sort of completely out of scope. So it wasn't only that Puerto Rico had larger exposures than other islands and that Cat 5 storms can hit them, although this was at landfall of Cat 4. Of

course, the categories I should have said determined the wind speed that those storms have and they made landfall at the moment and it's recorded.

I would say, overall, we have a number of outlooks of midsize events. So this is a more frequency year for natural catastrophes. The overall loss potential seems to be rather reflected in the models, although I am sure that there are many specific counties that we need to build in, in the modeling in the next couple of years, maybe heavy rain and flooding from Harvey, also checking the frequency assumptions for large Cats in the Caribbean Sea. But it doesn't look very unusual and needless.

You can maybe also ask yourselves about this sort of related to climate change, of course, there is no evidence. But there is, of course, some probability and I would say the probability is not low that this is related to climate change and probably good risk management would require for some actions here. We try to include the learnings from those events. And also, the elements from climate change into our models in a gradually basis. It's as we have EUR 10 sort of risk appetite statements renewals, we can do that from year-to-year and sort of learn from past years' experience. So we think it's still a multiyear or a longer time horizon where we will actually see how this plays out. But the type of validation we do on those events will also take into account everything that this is related to climate change.

Okay. Now I turn to the P&C loss reserves, the property/casualty loss reserves. This is the numbers we are talking about. We have EUR 24 billion of property/casualty loss reserves in our book. See, about 50% from U.S. and Germany and increasing share from the rest of the world. That is growing more dynamically than other parts of the world. We -- from the EUR 24 million, the -- by far the -- the larger part of that, more than 50%, is originated by our own methods based on cedent-advised reserves and, of course, on our historical experience of how such losses will evolve. So that demonstrates the importance of our sort of internal actuarial analysis here. And yes, 55% of that is IBNR.

If you look at lines of business, typically, there is focus on the larger shares on long-tail lines, general liability, motor liability and also marine, which have a longer tail. This is typically because, yes, the other losses are paid out just earlier. So it's naturally that you have such a book dominated by long-tail lines.

So if you look at reserve redundancy, Roland has already disclosed the figure. We have -- thank you for that. So I don't have to do it now. We have almost stable, slightly decreasing reserve redundancy from year-end 2015 to year-end 2016. If you look in relative terms, it has actually decreased from 8.7% to 8.2%. The reserve redundancy and sort of I -- so when we look at the previous years, it was more natural that we would build up reserves. 2016 was the first year that has -- wouldn't happen. And I wouldn't expect that we have strong improvement in redundancy in 2017, although, of course, this depends on many things on -- that we have heard today already on the loss estimates for the losses, for the cat losses and the way we want to use redundancies there and on how often rate plays out, how this regulation would be put in place and as it is announced and also on few Q4 experience. So that probably -- that this is more sort of a level that we should also expect for year-end depending on what's going to happen in the rest of the year of the estimates.

Yes. This is a slide, which explains a little bit the -- which explains the volumes that we're talking to about. And when we published the loss-reserving triangles, you know that with Q2, we each year publish 9 loss-reserving triangles for these 9 lines of business. And those are the underlying volumes that are split by different underwriting years of really old reserves for some of the long-tail lines of business and the newer underwriting years 2016 through 2005. And the overall triangle resulting from this portion of our reserves the Hannover Re/E+ S. It means this is without branches and subsidiaries. So everything that is booked in the Hannover is Hannover. The -- we see -- let's say, you see, of course, not a lot on a very aggregated triangle. But you see some element of softening markets in 2015, 2016, although it is, of course, overlaid by large loss experience. And so the way we have more reserve for redundancies may be in more consecutive adjustments for younger years. And also, of course, 2016 is not fully developed here, as this is the year on premium in 2016 only. And a portion of the underwriting year premium will be earned in 2017 only.

Yes. This, again, on the table that Roland had already in his slide, I only want to emphasize that we typically have positive reserve developments. And that is the case for years where we don't have large losses as in 2006 and also in years where we have large losses, significant large losses in 2011. So it doesn't really depend on large loss and also shows me that also in large losses, we have more prudent approach typically at least overall.

This concludes my presentation. And I'm happy to take your questions.

### **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. Olivia, start with your questions, please.

# Q - Olivia Sylvia Brindle (BIO 17273762 <GO>)

Just a couple of questions trying to understand some of the solvency and disclosures. So first question, you used to talk quite a lot about the rating agency view and that as being the sort of binding constraint on the capital. But you've moved very far away from talking about that. And why is that? Is that still a relevant metric to look at? And maybe what is that number in terms of the surplus on a rating agency view? Then in terms of the economic disclosures, I mean, if you look at the second slide that you showed, there's 3 different metrics there, presumably your own view of your surplus is the 265% over the 200%. And that's, I guess, the -- and the way you look at it internally. And if that is correct, I was wondering if you could reconcile that with your statement that you wouldn't pay out more dividend than your IFRS earnings. Because it's clearly a very significant economic buffer if it is 65percentage points?

# A - Andreas Märkert

Yes. To your first -- sorry, I forgot your first question.

# **A - Karl Steinle** {BIO 1986424 <GO>}

It was about the rating agencies.

### A - Andreas Märkert

Oh the rating agencies, I'm sorry. Yes. So we still have a buffer above our target capitalization in the rating agencies, which was relevant for maintaining our target rating, say, with S&P. We have recently had seen quite a number of changes in the S&P model. One positive change to our side is that they recognize now our internal model to a larger extent in their model. But they've made also some adjustments in other areas. For longevity risk, they made some adjustments. And I would say, they have confirmed our rating this year. But in terms of the capitalization, we are in ongoing negotiations with S&P, how this is going -- all these changes that they've made over the first half of this year, how it is going to play out and what it really means for our buffer above our target AA level in their model. So that's ongoing work. At the end of the year, we had a substantial buffer, above AAA, actually, in their model at the end of 2016, with all the changes they've infused. We will still need to see how that plays out and how the end of 2017 figures is looking like. So that's still an important constraint to us. But of course, the main sort of steering model is the internal model, which also defines the risk budget for the individual risk categories. So that -- so for that reason, we will probably in the future present more on internal model in Solvency II metrics and only mention S&P as our constraint.

### A - Ulrich Wallin (BIO 4863401 <GO>)

I mean, on your second question, as far as the relatively comfortable solvency ratio on the Solvency II, should that not mean that we should think of returning more capital to shareholders. The way we see it, that's the -- the model outcome is still quite volatile and particular, I mean, changes in the spread and market risks can create quite some volatility, also, for example, changes in the expected mortality -- future mortality. So from that point of view, directionally, at this point in time, we have no upper limit for the Solvency II capital adequacy ratio. Directionally, we see it positive set number is higher rather than lower. And it's not guiding at this point in time our dividend policy.

# Q - Olivia Sylvia Brindle {BIO 17273762 <GO>}

So can I just follow up on the -- so if we look on Slide 2, which is the number that you think about really? I mean, presumably, you have a view of what your surplus is and the minimum target ratio for all those 3 columns is 200%. But -- I mean, 230% or 265% versus 200% is quite a different number. So -- which is, I guess, the most indicative of those to look at?

## A - Ulrich Wallin (BIO 4863401 <GO>)

From my point of view -- sorry for interrupting you, it's probably the 252% because that takes into account the operational risk model that has been approved by our regulator from year-end. And therefore, this is probably the current most precise regulatory view, I would say. And -- so we -- so when we think of how comfortable are we capitalized from Solvency II point of view, this is basically the number. Prior to the approval of the operational risk model, we would have looked at the 231%.

# **A - Karl Steinle** {BIO 1986424 <GO>}

Okay, Daniel, if you want to continue?

### **Q - Daniel Bischof** {BIO 17407166 <GO>}

I have 2 questions on Slide 5. So the first one, were there any variances in assumptions? And if so, what was the impact of those? And secondly, if we look at your target metrics, what would this mean in terms of normalized capital generation Solvency II points?

## A - Andreas Märkert

On first question, the 2 major elements that in terms of variances were certainly the optimum rate as mentioned, EUR 290 million. And the reserve strengthening in Q2 for U.S. mortality at the range of EUR 480 million. So that -- I would say, that were the main variances that we had here. On Solvency II capital generation, we have just seen that this has been included in the target metrics. And from the target metrics, I guess, that would be -- the return on Solvency II capital would be the target. But not necessarily the capital generation. Because, of course, that depends a lot also on FX rate movements and our interest rate movements.

### **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. We -- if you could hand over the micro to Vinit, just in front of you. Thanks.

### **Q - Vinit Malhotra** {BIO 16184491 <GO>}

So going on Slide 9, please. The EUR 850 million in the slide used to be EUR 659 million last year. I mean, the euro has probably strengthened. I don't know how you look at the currency. But that's quite a sizable shift for one year. Is there any comment that you feel that you should add to why that move happened? Is it just the definition of Caribbean as well? Or -- so that's the first question. And I can go to the second one, if you want. On the Slide 15, there is a significant shift in the U.S. gross loss reserves. I mean, this -- between last year and now, the EUR 2 billion shift in the slide. Of that, roughly EUR 500 million is U.S. and EUR 700 million is rest of the world. But where are these -- I mean, U.S., I can understand, maybe it's linked to this whole property cat exposure, also linked to the first question. But what is rest of the world? Or is it FX?

# A - Andreas Märkert

Okay. For U.S. hurricane, we have, indeed, increased the exposure over the year also intentionally. Because this was -- the rates were still sort of more adequate in the U.S. in some areas than they were in other parts of the world. So there has been an increase. But also, there is, of course, an FX effect. I'm not able to reconcile it now exactly due to larger figures which part is FX and which part is exposure. So I would say, those are the 2 main effects that bring these figures to each other.

On Slide 15, you were referring to the composition of the reserving book...

## **Q - Vinit Malhotra** {BIO 16184491 <GO>}

Yes, composition. Yes. The composition.

# A - Andreas Märkert

So -- and you're referring to the question why rest of the world has grown?

### **Q - Vinit Malhotra** {BIO 16184491 <GO>}

Has grown. Where is that? And because just if we stay on composition in the next few slides, 17, you said that general liability is 46% on the title. But it used to be 46%; it is now 42%. So clearly, there's been some kind of shift. So you have lower liability. I'm just trying to marry all these trends and see where the change is coming from.

### A - Andreas Märkert

I think the -- to mention just -- I mean, rest of the world is growing as our book sort of outside U.S. Europe is growing stronger than in the U.S. And Europe -- especially in Asia. And for the U.S., I guess, the largest contribution there. And also what decreases the U.S. liability share is probably the larger transactions to Advanced Solutions. (inaudible) also to Jürgen's presentation later on just after. So that should be the 2 main, I would say, aspects here.

### **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. We have a question on the left-hand side from Andrew. Then we continue with Thomas and Guilhem.

## Q - Andrew James Ritchie {BIO 18731996 <GO>}

I'm sorry to go back to Slide 5. It was inevitable you've got questions on this. The operating capital generation, did you say the EUR 567 million is after about EUR 800 million of negative variance?

# A - Andreas Märkert

Yes, EUR 800 million pretax. So that was a post-tax figure. Yes.

# Q - Andrew James Ritchie {BIO 18731996 <GO>}

This is post-tax on the EUR 800 million. Or it's EUR 770 or something like that is the variance?

# A - Andreas Märkert

Yes.

# Q - Andrew James Ritchie {BIO 18731996 <GO>}

Okay. So -- I mean, that's a very high underlying -- I guess, there was unusually positive large loss experience as well in that -- as a positive variance.

## A - Andreas Märkert

Yes. And there was -- yes, there were large loss experience in the first half of the year, then a new business value, of course, that comes in.

### Q - Andrew James Ritchie {BIO 18731996 <GO>}

Yes. And how much is the new business value?

### A - Andreas Märkert

I only have about EUR 230 million for Life & Health. I don't have the P&C figure with me.

### Q - Andrew James Ritchie {BIO 18731996 <GO>}

No. It's for Life & Health, sorry. It's EUR 230 million within that number. And again, the EUR 230 million is pretax, post-tax? Pretax?

### A - Andreas Märkert

That's pretax.

## Q - Andrew James Ritchie {BIO 18731996 <GO>}

Okay. Second question, longevity. People seem to be dying more now, again, in the U.K. You mentioned in the U.S.. But in the U.K., we've actually had a lot of pension schemes recently change their longevity assumptions. Are you looking at that, how it would affect you?

### A - Andreas Märkert

I mean, we are looking at that certainly, of course, also sort of in line with our investigations for U.S. mortality. Also this -- there's some learnings that we want to look at in the U.K. But we haven't changed our assumptions for longevity yet. So I've not introduced this new information in our reserves setting.

# Q - Andrew James Ritchie {BIO 18731996 <GO>}

Would you typically do it this early, because you're not really on risk fully for most of it?

# A - Andreas Märkert

I think we would be reluctant to do it sort of quite soon, I would say.

## **Q - Andrew James Ritchie** {BIO 18731996 <GO>}

And the final question. Why would you ever use that NatCat appetite? You're still a long way below it. Is that just a reflection the prices would have to be a lot higher for you to even consider getting near there? I don't know if you have ever been there. So I can't be really sure.

# A - Andreas Märkert

Yes. I mean, you have to keep in mind the worldwide, -- the sort of usage of the worldwide NatCat budget. So I guess, the utilization in the U.S. would be much higher because we think the rates are in some areas still adequate where we -- so that -- but --

or not as bad as in other parts of the world. So -- but there's significant underutilization in other areas of the world, which sort of brings this number down to only 75%.

## **A - Karl Steinle** {BIO 1986424 <GO>}

Okay.

### A - Andreas Märkert

Because still the products are the things you need to fulfill our margin requirements, of course. So they are not using the budget if they don't fulfill margin requirements.

## A - Karl Steinle {BIO 1986424 <GO>}

Okay. The next question comes from Guilhem.

### Q - Guilhem Horvath (BIO 18460437 <GO>)

Yes. Going back down on Slide five under capital management and buildup for foreseeable dividends. Are you building up for specialty -- I guess, this is 2017 foreseeable dividend. Are you building that for ordinary only? Or are you...

### A - Andreas Märkert

We're building up for special dividends as well.

## Q - Guilhem Horvath {BIO 18460437 <GO>}

Okay. And second question is on the NatCat's budget, which is EUR 660 million. Is the difference with the EUR 825 million going from the man-made budgets? Is the difference...

# A - Andreas Märkert

Yes. That's right. That's -- the difference is the man made. Yes.

## A - Karl Steinle {BIO 1986424 <GO>}

Okay. Thomas?

## Q - Thomas Fossard {BIO 1941215 <GO>}

Yes. Just one question on my side regarding the current risk profile of the group. I would like to get more disclosure from your side on how your retro has been used so far this year and how much is left until the end of the year? But eventually, if you've got some big opening in the remaining weeks before the end of the year, that's the type of questions that we have to (garner) just to better understand how much of the additional losses could be transferred to the retrocessionaire? So any sensitivity you could provide could be very helpful.

# A - Andreas Märkert

Yes. Of course, as said, it's very early to -- we have to bottom-up loss estimate. The ranges are huge. So also, for that reason, we would have arranged for possibilities how the retro program could be affected until the end of the year. At the moment, we still have substantial retro capacity in place, lot of the care facilities is still there and also the whole account facilities larger are still in place. And so we've also sort of checked whether we can sort of standby for backup covers that clients want to buy and have just (inaudible) Q4 risk budget is still in line with our risk appetite. And given the substantial rate that have still in place, we think -- still in place, according to current loss estimates ranges, we think that we can offer backup covers to our clients.

### Q - Thomas Fossard {BIO 1941215 <GO>}

Follow-up question. So -- just one more. So if we had another big claims coming up, should we expect your share of the losses to start to be significantly below your usual market share as a relief of (traditionals)? Or...

# A - Andreas Märkert

If you calculate the market share on net, I would say, it's more the usual the market share. But of course, it depends a little bit on the usage of the retro programs of all the other market participants. So I'm bit reluctant to answer that question.

### A - Ulrich Wallin (BIO 4863401 <GO>)

I would say if the loss is very large, then our retro program would respond very well. So if we get a very large loss, we will -- probably, our net loss will be certainly below our market share of the overall reinsurance market. But it might also be below our market share and cat business. If the losses are medium-size to smaller, then that's probably not the case.

## **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. Well thank you, Andreas. Thank you for your questions. We will continue with the presentation from Jürgen Gräber. He will give us some insights into the property and casualty reinsurance business. And without further ado, I hand over.

# A - Jürgen Gräber

Well thank you very much, Karl. Appreciate this. And it's my pleasure to, again, talk about growth. I have this kind of destiny and pleasure at the same time to always talk about growth. In the last years, I spoke about growth in the U.S. in agricultural business, cyber and China, you will remember these presentations. And this time, I will focus, of course, on the Advanced Solutions so that you understand more why is this driving our top line and what does it do to combined ratio to the bottom line and so on. But before I do so, of course, growth shouldn't be done without profit. So let's talk about how do we measure profits and how have we done in terms of profits in the past.

And if we look at this one note, it's the old 10 Deutsche Mark note. Not that I'm recommending we should reintroduce this currency. But this is the famous mathematician, Mr. Gauss. He invented the formula for the distribution curve. And still today, when we measure profitability, we allocate capital based on volatilities. And therefore, we need the

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distribution curve calculations, either the bar or the T-bar calculations. And I just wanted to remind us that this is critically important for us in measuring profit. Our system is called RORAC, return on risk-adjusted capital. And it follows elements of this mathematical calculation.

And if I then start to guide you into the guidance we give to you the outside world, you will know this formula where we guide you with arrows and with pluses and minuses. The arrows are on the volume. It's up or down. And of course, the profitability is measured by plus or minus. And I want to highlight in particular here the footnote, which we have zoomed out a little bit. And you see there, as far as the footnote is concerned, that we follow a very strict guidance. We call it plus/minus if we expect to earn exactly the costs of capital and, of course, get reimbursed for admin costs and retro costs. And if we expect to be above in one of these 10 segments, we would say it's plus or well above a double plus. Or if it's minus or significantly below, then we would indicate a minus or plus. That is what we have always done. So our external communication follows the internal assessment according to the risk-based capital methodology that we are using.

But let me now go into a few details about these calculations. And later on, I'll give you sample figures about how we have calculated. We have input parameter. We had some discussion about target capital. Of course, we have the requirements on the IFRS capital. We have the requirements on the economic capital. And we put in, of course, all the various capital models and the respective requirements. We are dividing the capital into the 3 large blocks of revenue, if I call it like this: it's P&C; it's Life & Health; and asset management. And of course, we are connecting this planning with individual plans with forecasts and, of course, with midterm outlooks.

We then look at what can be achieved risk-free, measured by the 5-year average of the 10-year govies. And of course, we look at what is the market expectation, i.e., what is the outside expecting from us, i.e., looking at the volatility of our stock, what kind of return does the investors community want. Then we have the output parameters. We're ending up with a weighted average cost of capital. And we eventually transfer all this capital management and margin requirement into a profit margin on every dollar of premium we write. So when we write a German motor quota share treaty or some life business or a cat business out of Bermuda, we would need to know what is the margin that we try to achieve.

So if I use some very well-rounded numbers for a minute and look at the input parameter, we would just take a figure of, say, EUR 15 billion of target capital, kind of an economic capital, orientated on the Solvency II capital. And we would then, by Executive Board decisions, split this into the various segments. So we would allocate 40% to Roland to define his risk appetite. We would give 25% to Claude and Klaus and the 3 P&C board members would take 35% of this capital. So if you do the math, 35% of EUR 15 billion. So we operate a bit more than EUR 5 billion in P&C in terms of capital at risk.

Then if we look at our plan, our premium volume, we are in the vicinity of round about EUR 10 billion gross premium, EUR 9 billion net. And we would then say, what additional internal costs do we have? We run our business at round about EUR 250 million of internal admin expenses. And we would add retro costs, because we have to assume that we have to

pay our retrocessionaires another EUR 100 million, i.e., EUR 0.1 billion. This then is all input into our capital model. Then, of course, as I said before, we look at the various values for the govie average, these days 50 base points. We would look at our individual Hannover Re hybrid costs. And of course, we would set the target for the return on equity. The IFRS target is 9%, 900 base points, about risk-free. And on the economic capital, 600 base points, this is a larger capital base. And we would take the higher of. So if one is fulfilled, we make sure that the other one is fulfilled, too. And of course, we look at the external calculation, i.e., your expectation at the unlevered or the levered beta and, of course, the market risk premium. And the factors are listed here.

If we then move to the output, what does actually go into our internal systems out of this stature? We're arriving at a calculation post-tax weighted average cost of capital of 4.6%. This is, of course, the external expectation in the hybrid costs brought together. And we also look at what kind of spread do we need to actually achieve the 900 base points on IFRS capital. So we calculate 7.5%, that's in our internal systems. And the weighted average cost of capital spread before tax works out to be in the vicinity of 4.7%.

Now the key to us is the next bullet point. It is, what do we expect to be the cost of running the business, costs of capital, admin cost and retro cost to write business? And the third bullet point, minimum margins, we call it, is the cost of capital, the admin cost and the retro cost as a percentage of premium. So that every underwriter knows if I write premium, do I need 8% margin? Or do I need 20% margin? Then we are crosschecking this. This figure is a present value figure. So we are discounting loss reserves with risk-free. And we calculate 7.5%. So in simplistic terms, you could say we break even at 92.5% combined on a present value basis. And if you then add our costs and if you add our retro cost, you are more or less around the 96% that you find in the target metrics. I mean, I'm mixing here underwriting year figures and financial year figures. But since our business is fairly solid over the years, it's more or less a statement that we can make.

Now what does that mean? And I'm giving you 3 segments here to highlight this. The first segment at the bottom is nonproportional property category 1. This is high risk, highly volatile. You can imagine for a minute, this is a book of U.S. cat writings. We need -- or we needed in 2017 a margin purely for cost of capital of 21.3%. Because of better diversification, this is going to come down to 19.6% for 2018. So we are better diversified going into 2018. Then, of course, this segment has to heavily pay for the retro costs, the whole account, the aggregate covers we are purchasing. So we need 12.2% for retro. And our allocated expenses are 3.2%. So adding altogether, when we are going to approach this segment into 2018, we would simply say, we need a margin of 35% on every dollar we write. Or on the figures here, for premium volume of EUR 175 million, we need EUR 61 million in profits to say we are breakeven, 35% profit, EUR 61 million to be breakeven in this segment. Highly volatile, extreme capital-intensive, therefore, a high margin required. And we have hundreds of cells like this. And we measure this very carefully.

The next example, a German motor quota share treaty. The costs of capital are and were 0.7%, very little administration, 0.8%, hardly any retro cost. German catastrophes don't make it to the whole accounts. They're not big enough from the motor account. And we are ending up with a 1.5% margin covering us for all the 3 segments. So for a premium volume of EUR 270 million, we are breakeven at EUR 4.1 million profit. That shows the big

variety we have in terms of measuring profit. And of course, aviation, marine, credit and bond, agriculture are all somewhere in this capital metrics. And on structured business, the later on emphasis of my presentation, we said, let's assume for a minute we have EUR 2 billion or slightly more than EUR 2 billion in premium. The costs of capital are coming down from EUR 1.5% to 1.4%. The admin is almost like a German motor quota share treaty, not very much to be allocated for admin, 1%. So we're ending up with a margin of 2.4%. So we would be breakeven in earning our costs of capital if we earn round about EUR 50 million on a EUR 2 billion block of business. It's in volatile business. It is diversifying. So it doesn't require much capital. So that is the way how we operate.

So how did we do in the last couple of years? And now I want to disturb you a little bit, lots of arrows and so on. But you can do a simple calculation. We have here the years '11 to '14. And you can see lots of arrows on the volume up. And you can see lots of pluses in terms of the profitability. So we were guiding you to expect growth. And we were guiding you to expect earnings above costs of capital. So when you look at this bottom chart, guided P&C growth, we were guiding you in terms of 2011 to expect growth. And we achieved 8.4%. We were guiding you to expect significant growth in 2012. There were lots of arrows up, 7 were actually up. And we achieved 12.3%. We were guiding you not to expect growth. There were arrows down in 2013. And we achieved, yes, a black growth, a marginal growth. And the same for 2014. As far as the profitability is concerned, we had between 6 and 5 pluses on the right-hand side per year. So we were guiding you to expect earnings above costs of capital. And the xRoCA, the return above the return on capital adjusted, was between 3% and 10%. A combination of steering, luck, absence of large losses. But basically what we say is, the true-up shows that our guidance from our internal system was more or less adequate.

If we go to the more recent years now, the years '15, '16, '17, of course, is yet open. We were guiding you to expect growth in '15 and limited growth, quite a number of arrows down in '16. And we achieved 18% growth in '15 and a marginal minus in 2016. So again, we think we got it right in terms of steering the expectations.

As far as the profitability is concerned, again, 5 pluses each in 2015 and '16. And we achieved an xRoCA, i.e., earned costs of capital above, 7.4% and 7.1%. Of course, this is not insignificantly contributed by the fact that we had an absence of large losses. So actual to modeled was a positive deviation. And that helped to fuel the outperformance.

If I go back now into a bit of history, our U.S. risk portfolio, on the left-hand side, you see all the volumes. We have constantly grown this portfolio. This is the typical Midwestern company. All these risk layers, the individual risk that get protected by treaty contracts. And on the right-hand side, you see various averages of the outperformance over and above the costs of capital.

If we go to the very right-hand side, you see we had an outperformance of 6% over 21-year cycle. I don't know why 21 years were chosen and not 20 years and later on 16 and not 15. But you can see if we go to the left-hand side, the 11-year average from 2005 to '15 and the four years from '12 to '15, do not indicate that we were not earning significant profits above costs of capital. So this is a rock-solid portfolio. We always explained that

this risk portfolio is very important for our earning's strengths and actually adds to move us away in terms of diversification from the cat portfolio.

But let's have a look at the next page, i.e., our cat portfolio. We grew this significantly, whilst at the same time, this has been discussed several times, the risk appetite came down. But the outperformance, i.e., what did we earn over and above costs of capital. And the costs of capital were quite high, was again significant and increasing. So on the right-hand side, 21 years, it is lower than the short-term average is, very much fueled by the absence of large losses.

Of course, on the model basis, this would -- result would have looked different. But because of actual-to-moderate was an outperformance, our cat portfolio also was quite accretive in terms of overcontribution, excess earnings relative to our cost of capital.

But let me now go and start my part of the Advanced Solutions presentation, with a little bit of history first and then I drill down deeper. This business, in our organization, has 40plus years of history. And it is a very uneven development. We called it breathing volumes. They are parts where there is lots of demand, they are areas where there is hardly any demand. But Hannover Re has constantly had that separate division working with Advanced Solutions. And there are very particular highlights in the past where this business saw significant development. The first one was with the introduction of the FASB 113 accounting rule and that was in 1993, because up until that time it was quite difficult to account these contracts and there were concerns about the accounting rules. And therefore, many reinsurance managers, many managements, in particular, in the U.S. didn't touch this business. Then 2001 saw a massive increase. Many of these structures had so-called loss-sensitive premiums. And because of the soft casualty markets in the years prior to 2001 at World Trade Center, huge amount of loss-sensitive premiums had to be paid to us. And how our premium volume moved to almost EUR 2.5 billion in that year, mostly driven by loss-sensitive premiums. Then, of course, it came down. And we had a low light with the investigations of the New York Attorney General and the SEC investigations around misuse of some of the structures. And it took a while. And of course, we were hoping that with more risk-based capital regimes in the world, eventually, we would have significantly more demand. And we saw this starting in 2014. And we are probably right now in the midst of a significantly increased demand environment.

Okay. But now into the details. Let me talk about the various contracts. But before I do so, Roland was so kind to mention Jürgen has produced so much successful business and that's leading to increases in the equalization reserve. It wasn't me. It was the team Advanced Solutions at Hannover Re, which we have, it's 15 people, they're very strong. And they are led by Silke Sehm, an experienced Managing Director. And we are harvesting right now the hard work of the last 10 years of marketing, which did not translate into production. Right now, it's translating into production. So they had to hold their breath for quite a while. And now we're seeing the production coming out of hard marketing work. There were times where different waves of products were in the market. T&D, which is Time & Distance discounting of loss reserves, not transmission and distributional lines. So T&D contracts people sold, they are loss reserves to discount losses. Then we have spread loss covers, then we had aggregate covers close to the risk. They were also -- they are to actually cede losses and realize the investment income. And

later on, we started contract types called LPT and ADC, Loss Portfolio Transfers and Adverse Development Covers, where people are selling large blocks of their reserves to alleviate their capital position. And lately, we have a blend of almost everything, ADC, LPT, surplus relief covers, aggregate covers. And the companies are blending these structures according to their needs to optimize 2 things; one, the capital position; and secondly, the cost of capital. So they are comparing these products with the cost of equity, they're comparing these products with the cost of hybrid financing. And of course, they're comparing it with traditional reinsurance. Then they take a judgmental call, which kind of product they prefer.

We have lots of contracts, I won't go into details. And you can surely call us if you want to have more details. Spread Loss, multiyear contracts to level off the volatility of P&L accounts. Stop Loss contracts, frequently purchased on motor and agricultural contracts. We have Surplus Relief Quota Shares. This is when people overshoot their premium volumes. And they want to steer their writing capital, they want to steer their solvency capital or their regulatory capital. We have Loss Portfolio Transfers and ADCs. This is a bit difficult at times because companies have to disclose their entire actuarial work. Are they reserved at best estimate? Or do they have sufficient reserve redundancies, like Roland and Andreas explained. So you look deeply into the heart of an organization when you do these covers. And therefore, not everyone is ready to buy these covers because they disclose almost like in a due-diligent situation. Very detailed information about their organization.

Then, as I said before, today, we have the structure and the combination of all these segments. What is the difference between traditional and structured? Let me highlight what structured reinsurance does. The first is, you don't talk to the reinsurance manager anymore. The reinsurance manager doesn't like it because actually who triggers the demand is the CFO and the CRO, because they can bear -- compare these products with financing via their contracts with banks. They look at the pre; and poststructure EP Curves, the Exceedings Probability curves. And therefore, there is a fundamental shift in whom do you approach. So the partner whom you approach for these products is the CEO, the CRO or the CFO. It's no longer the ceded (ring) manager. Yes. That's more on the traditional side. And of course, many of these transactions are privately placed. Many of our peers talk about private placements and so on. We don't talk about it because we just do it. These contracts are there. And they are done, in most cases, 100%. So they don't go to the public. Of course, later on, there is public disclosure in the U.S., in particular, via the various official publications and then, eventually, realized -- the public realizes what deals you have done. But it is not automatically known because this business is not transacted in the subscription market. The cost of capital and the margins are lower. But it's less volatile. The standard deviations on some of the businesses are 1 or 2 loss ratio points. So it's only to cover very narrow movements in the volatility. It's not there to cover volatility movements of 40 loss ratio points. It's for very solid, short-limit, large-volume transactions. And of course, it can be deposit accounted and reinsurance accounted. So sometimes we see it on the top line and sometimes you don't see it on the top line. Uli has explained that on the financial solutions business on the Life side, not dissimilar there.

These days, very high compliance requirements. Every single contract goes through a compliance list. So I would dare to say the reputation risk is probably in this segment

today the lowest of all the transactions we do, because the compliance requirements are the highest. And the traditional reinsurance you know. So it's an complementary product. And it's very much in demand these days. And let me give you, in a few minutes, a couple of examples of these contracts. But before, let me guide you how to read the impact on the Hannover Re combined ratio. This business, because of low margins, usually produces combined ratios between 97% and 100%. So if we are growing this business, means that the total P&C combined ratio it's actually increased. And to be able to demonstrate the impact, we drilled down into our historic data and said, what would it have been without this business and how would it look like if we adjust, including the structured reinsurance business. And you can see that the combined ratio goes up by 0.3% to 0.9%. And makes it more difficult to, of course, stay within the Board's guidance of a 96% combined ratio. Low-margin business, relatively high combined ratio is dilutive for the combined ratio of the P&C group. So if we grow this business rapidly into the next years, that would mean that there is a increasing impact on the combined ratio of the P&C book.

But now let me give you 3 particular examples how would these contracts be structured. These are real examples, a little bit denaturalized, if I call it like this. So that you can't draw conclusions who it is. The first one is a kind of a case study, a live case study on business we have in our books of U.S. auto business. And what I should highlight here is, it's on a net basis. So when companies are ceding this business, it's after they purchase the reinsurance to already take part of the volatility out. So it's already volatility-reduced business. Why do they buy it? They want to steer the increase in premium, because the U.S. auto market is hardening right now, the rates are going up. So their premium volume is growing too quick. So they took out and contacted us a quota share. And suggested a 15% cession to basically take away the load on the capital model as far as the regulatory capital is concerned. But also, not infrequently, this business is purchased to steer the A.M. Best rating model. You can see that these businesses are already stable. And what they do then is, we discuss with them a sliding scale commission. But the swing of the sliding scale is only 3 percentage points. Because if you would make it wider, there would be no risk transfer anymore. So you have to be very careful in looking at the volatilities and designing the terms. And you have to blend it in the right way to create a solution that serves the purpose, has risk transfer, secures mirror accounting and then, of course, creates a win-win. And of course, by being a net quota share, a contract like this benefits from all the proceeds from reinsurance purchased on a traditional basis. And contracts like this we have in our portfolio are between EUR 100 million and even more sizable 3-digit numbers. And they offer margins of 3%. The capital you require is probably 15% to 20% of the premium, you're right. So it's fairly ROE accretive, even though it is EBIT margin dilutive. ROE accretive, EBIT margin dilutive. One thing I also should highlight is if you have a limited number of larger contracts that having 3 more or having 3 less has quite an impact on the top line of the P&C group. So whereas, in the past the steering of the guidance on the growth was easy, it is involving a larger deviation these days, depending on are we going to get 3 contracts? Are we going to lose 3 contracts? So there is a wider range on our forecast. But we've tried to guide you as much as is possible and in a correct way. Then, of course, we sometimes have options to increase the cession, which gives additional flexibility, no hybrid financing could do that easily. So we can scale up these transactions without any additional workload. And it's easy for the customer, it's easy for us. And it doesn't create any admin burden at all.

The second case is a study from Europe, a Solvency II situation. Our customer has still the standard formula. So no internal model -- no improved internal model. Let's argue it's a U.K. motor insurer. And of course, they also want to steer their capital requirements. They don't want to call their shareholders to digest more premium volume. They want to steer it by the means of reinsurance. They enter into us with a 2-year quota share, not a single year. There must be a planning horizon. And it's, again, a net quota share. But U.K. motor is much more volatile. So of course, the sliding scale has a wider swing to again maximize the requirements and the return and the cost of capital requirements. And of course, what we also add here is a particular feature that if, for example, somebody doesn't want to commute after 2 or three years, where such a quota share is not used anymore in the capital model, we have a feature in that they would have to pay us a maintenance fee. Because if they want us to still retain reserves on our balance sheet, they must serve our reserves with a margin. This is usually structured as a penalty. So that they are encouraged to commute, which makes it short tail-ish and not long tail. And you remember Andreas saying, well, why do we have less liability reserves? We have increases in U.K. motor. But because of this feature, the reserves don't sit on our balance sheet for a long time. So they get commuted early on. And they are not running off for 9 or 15 years.

And the third case is a study from APAC. It's an aggregate cover. And many of our customers. And I think very soon there will be more demand in the U.S. too, realized that they've moved their retentions too high up. And if you have a number of frequency losses, the P&L is hit badly. They may not be big enough to go straight into the cat covers. And if you have a Third Quarter like the Third Quarter we all shared this year, then, of course, you have the need for protecting your company against the aggregate of all the cat losses. And we have structured these contracts on a multiyear basis. But for us it's very important that they cannot be hit by a single loss, because they are not meant to replace vertical cat covers. But only protect frequency. And by having this strict requirement, this business is diversified. If there is one big loss, these covers don't get it. If there is a frequency of smaller losses and the vertical covers don't get it. Again, there is diversification. So this business helps us actually to diversify positively. And because it's multiyear, allows the customers to plan their reinsurance budget. So very much in demand in countries where you have multiple exposures of wind and earthquake. And they want to protect against frequency.

Okay. So to sum up, we see a significant demand increase. And I would not be surprised if we can, at the end of 2018, report, again, it was a successful year. In the end, it requires the seller and the buyer to be successful. But the probabilities are high. It's xRoCA accretive. But it has got a deteriorating impact on EBIT margins in P&C. It's probably behind the comma for the time being because it's not big enough yet, EUR 2 billion to EUR 10 billion. But if it becomes more then, at one point in time, we have to make up our mind, are we still able to reduce the 10% EBIT margin in our target matrix? So we will carefully steer the growth here. And of course, the combined ratio goes up a little bit, yet it pays us well for the capital deployed. It's diversifying, because it's lower risk and it's only correlated to NatCat if you have a frequency and large losses. Then, of course, there is a positive correlation. And what we also like is the communication to the top management of all our customers, because once we get a reputation tick. And Hannover is regarded as a suitable partner that opens up the doors for the traditional reinsurance business too. And we get a favorable treatment for our traditional colleagues as well.

So that concludes my presentation on growth. It's always just a selected summary of some segments. Of course, in other segments, you were so kind to ask all the questions about what will happen post these events to my colleagues before. So that I don't have to answer any of these anymore.

And well -- but I'm ready to start the Q&A session.

+++qanda

### A - Karl Steinle (BIO 1986424 <GO>)

Okay. Well thank you for that detailed presentation. We start on the left-hand side with Andrew.

### Q - Andrew James Ritchie {BIO 18731996 <GO>}

Two -- one quick question. Did you say there was EUR 2 billion of premium income now altogether?

# A - Jürgen Gräber

It's moving towards.

### Q - Andrew James Ritchie {BIO 18731996 <GO>}

Maybe, because the table has -- there was a big billion in '16. And the second question, really, it all sounds a bit too good to be true as in this business is arranged on sliding scale. So that essentially the cedents benefiting and you can't lose money. So where can it go wrong? When has it gone wrong? Just an example in the past.

# A - Jürgen Gräber

Well you're probably right in saying that it's too good to be true. But please bear in mind that the capital benefit that cedents' getting is also limited. So they don't get full benefit like they would get on traditional reinsurance. It's just another product line. Where has it gone wrong? Usually, if somebody would buy a surplus relief contract to branch out into a new line of business. And one assumes the past experience from that core business will also apply to the new line of business. We have lately had some losses where this additional new lines of business did not deliver according to plan. So it's quite advisable to do these structures only on established codebooks. And that is a lesson we had to learn the hard way.

# **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. Any further question? That doesn't seem to be the case. Oh, Vinit? Well try it.

## **Q - Vinit Malhotra** {BIO 16184491 <GO>}

Just a very data-check question, sorry. Slide 14 says that there is 80 basis points uplift from combined ratio points in 1H, because I distinctly remember in the call, in the results it

was meant to be 30 basis points. Is there some change in that, just to check?

### **A - Roland Vogel** {BIO 16342285 <GO>}

Vinit, you are right in mentioning the study, it was 30 basis points. But we were only referring to the -- because of the difference between, I think, the additional business, which we have -- had (inaudible). And not the ones we would be able to report (inaudible).

# A - Jürgen Gräber

And of course, secondly, some part of the answer is in Andrew's question about the volume. Of course, to the extent that the volume is going up, the impact gets more severe. You will recall that on -- I don't know, was it the renewals call? We said, we can't quantify. But we will go deeper into the assessment. And then a larger volume plus Roland's explanation maybe is the best possible answer.

### **Q - Vinit Malhotra** {BIO 16184491 <GO>}

And can I follow a second question? Last year in the renewals call in January, I remember there was a lot of attention on your comments as well on the slides as well, that the cat XL was being written below cost of capital. And the idea was that because the budget was not being met. So it was okay. But this year with the budget clearly being met and exceeded, would you say that the cat excess of loss, cost of capital, obviously, you've taken down a bit. But would you still be writing that aggressively and that will be the plan, just a confirmation, please?

# A - Jürgen Gräber

First, we're not taking down the cost of capital on cat business. In this particular category 1, just an impact of a minor reduction of cost of capital. We're not taking down the cost of capital per definition. It's always the impact of the internal, full-model calculation. I would dare to say that if the costs of capital are fully paid in cat business, then, of course, we will use the headroom available in the budget and go to a high utilization. That is what we would always have said and should it go beyond. And now we probably know when we have seen all the Third Quarter releases, then, of course, should it be raining cream, then we would even contact the Executive Board for a wider risk allocation. That we haven't done yet, because we have enough headroom in the utilization frame. But that remains to be seen and, probably, it will be a late renewal. So some will be waiting as long as possible, maybe, not to pay higher prices. More we know after all the conferences, more we know after the Third Quarter releases. And right now, as Uli highlighted, the range is too wide to draw conclusions of what happens in the market. We have said our underwriting teams not to accept at all reductions. And then to test the market, to go as high as possible without losing the business. Doesn't sound like-like it. It sounds like a regular wisdom. But many underwriters have never seen a hard market.

# A - Karl Steinle (BIO 1986424 <GO>)

Okay. We have another question. So on the very left side. (Charles)?

## **Q** - Unidentified Participant

Just a quick question. I mean, if you go back long enough, once upon a time, you used to split up the alternative risk transfer business as a separate segment. Is that something you might contemplate doing again in order to, sort of, preserve the purity of the P&C numbers?

# A - Jürgen Gräber

No. I would -- we haven't discussed it in the Executive Board. But I remember those times. I am one of the old, gray hair guys at the Executive Board. When we had that separated, yes. And there was a time, too, when we had primary activities separated for another reason. Ever since Uli's took over, we merged as much as we could to have 1 big P&L. And the only natural division we have is really between P&C, Life & Health and investments. So I doubt that we would split it further as far as P&C is concerned. Rather, we would create a bit more transparency in the external communication. But not starting a separate P&L where there's full set of separate reporting requirements. I can't see that at this point in time.

# **Q** - Unidentified Participant

So this is just a slightly different tool in the toolbox, not a difference in the way in which you manage the business?

# A - Jürgen Gräber

Yes, has always been. Yes.

## **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. Another one from Andrew.

# Q - Andrew James Ritchie {BIO 18731996 <GO>}

Sorry, just a quick follow-up. Just to understand the capital allocation. You are allocating diversification to each business line gets some of the diversification credit for the group. Is that how it works?

# A - Jürgen Gräber

The answer is yes. And the mechanism is the T-bar.

# **Q - Andrew James Ritchie** {BIO 18731996 <GO>}

Okay. So it's looked at as a whole. Then, second, typical structure. And I guess, it's going to be a fashionable thing to talk about in the next six months, the cat aggregate excess of loss multiyear cat aggregate. Typically, is that -- do you -- can you adjust that within the 3-year period? Will the client come back to you and say, well, we've eroded quite a large part of our deductible? Can we have a bit more? Or is it -- that's it, three years locked in? What was the typical kind of structure?

# A - Jürgen Gräber

Let me split the answer into 2 parts. The first one is, it will not be the only demand, aggregate covers. We will also see demand then that is what Uli brought back from the CIAB meetings, more demand for sub-layers, because some of the customers realized they actually have a too high retention. So there will be demand into sub-layers and buying further down on vertical covers. And the second then is frequency. And here, it depends on structures. You can have multiyear flat premium for all the years. You can have loss-sensitive premium in. For argument sake, if there is no -- if there is a massive loss in year 1 on a 5-year contract that you then have a step-up premium for the further four years, or you can have a very high upfront premium. And a PC at the very end if there were no claims. So you have all sorts of structures. This depends on which companies overpay and like P&C. Those who stay closer to the wind go for the lower-priced version and accept loss-sensitive premium if unexpected claims come very early. So it depends on the behavior of the customer.

### A - Karl Steinle {BIO 1986424 <GO>}

Okay. Any further question? This does not seem to be the case. It's almost coffee time. Before we go into the break, I'd like to remind you about the questionnaire and the feedback form, which is on your table. So as I said at the beginning, we really highly value your comments and feedback.

We will resume at 3:30 with the presentation of Claude Chà vre. Thank you.

(Break)

+++presentation

(technical difficulty)

it's at least according to current applicable and international accounting standards. And yes, you have guessed right, it's Claude's turn now.

# A - Claude Jacques Chãvre {BIO 21916781 <GO>}

Okay. Thank you very much. Close the door. Yes. The title of my presentation is since of -- our presentation, Klaus and myself's presentation is since four years the same. It's insights into life and health reinsurance. And if you go back into the history a little bit, what we presented four years ago, remember, four years ago, we changed our target metrics on the life and health side. And we had -- at that time, we had an EBIT margin target for the whole of life and health's business, which was 6%. And four years ago, while I was explaining you why we changed the EBIT margin target into different EBIT margin. So we had 6% for the whole of the life and health business. And then we changed it and we said, let's make it differentiated. And let's take 6% for mortality and morbidity solutions, let's take 2% for longevity and financial solutions. And I explained to you where these different EBIT margins came from. And you remember, we looked into the different types of business. For those of you who have been here, we looked into stochastic simulations, we looked into economic capital that you need for each type of business. And we said the more volatile the business is, the more economic capital you need, we have want to have

900 bps on top of a risk-free return on this economic capital. So we take this value, we add our admin expenses. And we take this value, we divide it through the premium. And we divide from that the EBIT margin. And that's the way we were presenting these different EBIT margins. It's pretty much the same as Jürgen explained in his first section this morning on the P&C business -- sorry, this afternoon, sorry, JAWrgen, on the P&C business. So that was four years ago. Then, three years ago, we said, okay. But there is another thing in our target matrix, which is the value of new business. And we realized that nobody really understood exactly how we derive this value through business. And remember, it was a whole hour where we discussed about how we derived the value through business, present value of future profits that we take and then we deduct the cost of capital, we deduct the expenses and that's the value of new business. That was three years ago. two years ago, Klaus was presenting some of our interesting things that we have in the life and health environment. Remember that in 2013, if I remember well, we had to increase our reserves for the DII business in Australia. So we took this as an opportunity for Klaus, then we explained how the DII business works. He explained also how the mortality solutions business works. So these were the kind of things that we did and the longevity business, one year ago, that was last year, Klaus explained the financial solutions business. Because we realized that financial solutions becomes the more and more important. But all this each time under the same topic, which is insights into life and health reinsurance.

And now you have heard from Uli this morning that we have changed again our target matrix on the life and health side. And we decided to get rid of this EBIT margin, because we realized that EBIT margin, even though we had different EBIT margins, 2% and 6%, is not really a good measure for our business, because on the financial solutions business, given that you book only the results. So it's -- so you don't have any premium. So you will end up with very high EBIT margins, which is very clear. On longevity, you still have the EBIT margins that we were disclosing, which is 2%, 3%, 4%. So even this mix did not make too much sense. And the morbidity and mortality, you have the same situation. You have morbidity business, which needs a lot of EBIT margin, because there is a lot of volatility. You have morbidity business, which needs much less EBIT margin, because there is much more stability. So even this, at the end we decided, makes not too much sense. So we said, we have now in the target matrix a global EBIT growth target. So we look into the full EBIT. So let me start, maybe, with this first slide, which is trivial. These are the figures that you know already. So here you see our value of new business that we have been showing over from 2012 to 2016, which is the blue bars. Then you see the EBIT that we have been showing. Now still whenever I discuss with you guys, be it in roadshows, be it in those Investors' Day, I -- there was always a kind of a wish which came from you guys which said -- just said, that's very nice. But can anybody explain us how you -- or we can and you can translate the value of new business that we were showing here? Which is a very nice figure. And look at this, it's more than EUR 800 million that we showed in 2016. How can we translate this into future EBIT? So I thought now that we changed the target matrix. And we're really looking to VNB. We have a VNB target. Are we looking to an EBIT? I think it will be interesting now to show how we can -- how you can derive, from the VNB that we write, our EBIT into the future. And this is the topic of today's presentation.

So these are figures you know already. And in order to do this, this link from VNB to EBIT, we need to make detour via cash flows, because the point is that VNB is a Solvency II measure. And I'm going to explain this afterwards quickly, whereas EBIT, EBIT is an IFRS

measure. And for us, for Hannover Re Group, IFRS is U.S. GAAP. So in order to get this link between the 2 of them, we need to go via the cash flows. So let me start maybe with the first part, which is, how do we get from VNB into cash flows? Well maybe just another slide on the VNB. Like the first time when we looked into VNB a few years ago, VNB was still based on the MCEV reporting, as you see on the left side here, which is local statuary results, which is post-tax, 4.5% cost of capital. You see that this was the case until 2015. That's -- that was the case when I first talked about value of new business. This definition has changed. And the new definition of value of new business, you see it in the middle, is that it's based on the Solvency II reporting. It's based on cash flows. And that's the reason why we look into cash flows. It's a pretax basis. And you have this famous 6% cost of capital, which is called the risk margin under Solvency II. So you have a totally new definition of the VNB. And by the way, in 2021, don't ask me what the definition of the VNB is. This is IFRS 17. So I am going to look into the future. But I'm not going to look further than 2021 in this presentation, definitely not, because we don't know what's going on. So this is the VNB that we're showing. That -- so let me take an example -- let me take 2016 as an example, quickly. And this is the VNB that we have been showing. It was something like -- you see this on the upper-right hand of the slide, you see EUR 893 million. Now how did we get to this VNB? Let's make now a retroactive engineering, if you want. Well what we did is, well, if you add to this VNB the risk margin, the cost of capital, then the value, that the way you get to this is the following: Well you look into the future cash flows, that's the business -- the new business that you are writing in 2016 is going to generate. And you see these cash flows here. These are the gray bars. Then you take the present value of these future cash flows, you discount them back, you deduct the cost of capital, which is the red bar. And you get to the VNB. So it's a little bit the other way around that I showed it to you now. What you see on this slide. And that's quite interesting, you see -- I think like this, yes. You see that in the -- and this is five years. So you have -- you're 5, 10, 15. So be careful, it's not every single year. You see now the cash flows that this value of new business that we have been writing in 2016 is going to generate. And if you look at it, you see that in the first 10 years we will generate a positive cash flow, which is above EUR 1 billion, out of this value of new business that we have been generating. Okay? So this is very interesting.

Now this is the whole of the VNB, the whole of the life and health portfolio. Very difficult to interpret. So what I suggest now is that we try to segment this VNB and take 4 different typical life and health segments and have a look into them. So let's segment this and let's take 4 segments, which is on the one hand side, on the left top side you have the financial solutions fee deals, then you have the longevity RPATs, a regular premium annuity treaties. Previously, we called them longevity swaps. Then you have the U.S. mortality standard business. And you have the whole rest. Now you cannot take the size of these bars. Don't take them, for the time being, into account. I just normalized them so that they look all the same size. Of course, they are not all the same size. But if you go now quickly into each of these types of business. And we look into the cash flows that these types of business represent. And I will show it afterwards, cash flows are not equal to results, of course. But let's have a look into the cash flows. And let's start with the financial solution fee deals. A financial solution fee deal. And you know what it is, Klaus explained it for 1 hour a year ago. Very little risk. And you see the risk margin, which is the small red bar block there, it's very, very small. So very, very little risk. A very high VNB that we generate. And you see that the cash flow that these deals are generating into the future are pretty

high. So you see very high flat cash flows over the next 10 years. So that's kind of a short-term business for the life and health treaties. So that's the financial solution business.

Now if we go a different one, which is a longevity's business. A longevity business, you see it's much more longer term. So you're sitting on these longevity blocks for 50-plus years. So you see it's generating -- longevity deal is generating a positive cash flows for 50-plus years. You see, longevity, a little bit more risk involved. That's why you see that the red bar block there, which is a little bit higher than on the financial solutions side. But still not very, very risky. So that's the reason why 2% EBIT margin, as we said as a minimum EBIT margin previously is enough for longevity. But you see here, cash flows, at the beginning, a little bit lower. Why? Because we deduct from these cash flows the admin expenses. So when you write a deal, most of the costs for writing the deal is when you price it, when you look into that. So at the beginning, we have higher cost. We have to set up all the systems, the monitoring systems. And once it's in, it generates positive cash flows. And by the end when the treaty runs off, when the portfolio runs off, when you have less -- much less risk in the portfolio, the costs are going to be higher than the cash flows. And that's why you have the negative cash flows at the very end. But that's 50-years plus. So this is the cash flow pattern of a longevity swap.

That next one is a financial -- is a U.S. mortality business. It's a typical, typical mortality solution business, where you see, very risky, well, it's mortality, we have talked about it. So you see the red bar, which is very, very high. And you see then here a typical cash flow pattern of a risk premium mortality business from the U.S. Risk premium means that the premium that you get becomes at the beginning, becomes the bigger and bigger, because people get older and older. So the older you get, the higher the risk premium. So that's why the cash flows are going up. And at the very end, again, when the portfolio becomes smaller, the cash flow might even get negative. But again, what I wanted to say what I showed before, if you discount all these cash flows, you will get to the full bar, which is this blue plus red bar in every single of these cases, of course. So this is mortality solutions.

And if I take the less -- the last one, which is the whole rest. The whole rest is made of different types of business. This looks a little bit like a P&C cash flow by the way, I would say. You have some nonproportional business, where -- you have some single-premium business. So you get a very high cash flow at the beginning. And you pay the claims later. You have -- take the typical kind of DII business, which would also fall into this chapter, Latin American short-term business, single premium, et cetera, et cetera. This is the rest. So I just wanted to show you the different cash flows that we have on the life and health book.

So this concludes the first bit. So we know now how we get from VNB to cash flows, or in principle what we're doing we're getting from cash flows to VNB. The second bit, of course, is the next. I mean, how do you get from cash flows into EBIT? And I already told you, cash flows are not equal to EBIT. So let me take a very trivial, easy example of a level-premium treaty. So a level-premium treaty mortality business means that the consumer and we were getting the same premium for 10 years, in this example, the same premium. Now it's very clear that the person who buys this policy, his mortality goes up, which means that the premium that he pays at the beginning is higher than what we need. And

at the very end, of course, the premium is too low. What means that the cash flows that we see was the same premium in year 1 are very positive, because the premium is a level premium. So we get more premium than what we need. Then they become slightly negative until the very end, the cash flows become negative. But this is not the pattern of the results that we would show for this type of treaty. So let's have a look into that quickly. So these are the cash flows, again. Just a little bit smaller.

So what comes into my mind, is to following. And let me go back, maybe, here. Right here, we have a very positive cash flow. It's clear that we're not going to show this positive cash flow as a result. So what we're going to do is we take a bit of this cash flow and we reserve it for the days where we expect negative cash flows under IFRS. You know that we set up the reserves in order to have a kind of a stable IFRS EBIT (inaudible) result. This is due to reserving methodology of IFRS. So we try to stabilize the result through the whole duration of the treaty. So the way we do it in this treaty is easy. We set up the reserves. You see this here, the blue bar. So the blue bar, we set it up in the first year. We continue to set it up as long as the cash flows are positive. And then we start to eat into the reserves as soon as the cash flows become negative. And the result of this can be seen here, you see. These are the positive cash flows. This is the reserve -- this is the fact that we set up the reserves. So it goes negatively down and then -- and we can't continue here. When you have a negative cash flow, then we release reserves, et cetera, et cetera, et cetera. Of course, on these reserves, we're on interest. So this is again another -- and look at this another positive impact. So this is not a positive impact for our results. And the results that we show at the end is the delta. And you see under IFRS, if you do the reserving right, yes, you will see that the IFRS profits very nicely -- nice and stable over the whole duration of the treaty. Okay, you see, I just wanted to demonstrate to you that cash flow is not equal to reserve -- is not equal to EBIT in principle. Now there are certain treaties where cash flows are pretty much equal to the result. If you take a longevity swap, where all you do is you swap premium and you pay it every year, you might say that the cash flow minus the other expenses are pretty much results. But in a standard life treaty, cash flows are not equal to results. Okay. So just to clarify that.

Now I want to just to make and open a short bracket before I go to VNB EBIT. And the bracket is really to show you the difference quickly between IFRS reserving and Solvency II resolving. And there are some basic differences. I mean, IFRS, as I told you before, U.S. GAAP standard Solvency II, Solvency II standard. Now the profit realization, as I showed you in the previous example, in IFRS is over time. So you try really to make sure that you have a nice stable profit stream. Whereas on the Solvency II reserving, it's all the way different. You show the profits at the inception of the treaty. And you show that the full VNB. And we will see this afterwards. The full value of new business is shown as a positive result at the inception of the treaty. And afterwards, you're not going to show any results apart from the risk margin, totally different way of looking to this. Then you have locked-in assumptions under IFRS. You have heard about that many times already, which is not the case under Solvency II. Under Solvency II, you always go on the best estimate basis. And you will see this afterwards in some examples. When you see that the business is better than foreseen you really realize the profits as soon as you see it. When it's worse, you realize the loss as soon as you see it, which is not the case under IFRS. And you will see that. Then you have, of course, on the IFRS what we call provisions for adverse deviation. And this is an old system based upon U.S. GAAP when you still didn't have any computers. So people needed to have some easy system to add some security. Today with the

computers, you have Solvency II, you have an explicit risk margin. This is Solvency II risk margin. And with (constant) simulations you know it better than me. This is much more complicated on the right than on the left. The concept is same. But the way you calculate it is much more different -- much different. Then you have a DAC. So deferred acquisition costs, which is a concept you know under IFRS, which is a concept we don't know under German HGB, for example. That's also something, which is very typical, because if you did not have the concept of a DAC, you will show a very negative reserve in the first year of writing a treaty. Given that under IFRS, you want to have nice profit streams, you -- we introduced -- they introduced a DAC, which allows you then again to defer all these acquisition costs over the whole duration of the treaty. This is not needed under Solvency II.

On day 1, you show the full VNB of your treaty. And the full VNB includes that, includes all the costs that you will have in the future so you have the DAC for under Solvency II. Then, of course, you have interest rates locked in and floating interest rates. So these are the main differences. But let me maybe, take an example. A few example of few scenarios, this is purely theoretical to show you a bit what's going on. The cash flows under both regimes, let's suppose they are the same or we can suppose they are the same, under IFRS and Solvency II. So now what is not the same is this reserve pattern. We have seen this reserve pattern before for the example of this level-term treaty, okay? So this is reserve pattern for an IFRS accounting. And this is the reserve pattern for Solvency II. When you see at the beginning of a Solvency II treaty, you book a negative reserve, which has the value of the -- value of new business, the VNB. So this year is nothing else than the VNB. So you book the VNB as a negative reserve and then you have to reserve changes so that you earn just the risk margin. I don't want to go too much in detail. But this is -- there are really fundamental differences in the way you set up the reserves under both regimes.

So let's have a look now at the combination. So this one, you know it already. You have seen it before. That's the IFRS way of looking into the business. Now this is the way you will show profits under Solvency II. Under Solvency II, as I said before, shown this very positive profit in year 1 or year 0, which is the VNB. And all you show in the future years under Solvency II is the risk margin, tiny, tiny risk margin. Whereas you will see -- you show nice profits every single year.

What I would like to do now with you is show a few examples of what's going on when we realize in the life section, that's maybe the business is going less well than what we thought. And if the business is going better. So let's go into -- here we have the bigger. So we have the bigger screen, I forgot that. We focused on that one. So you see, again, the same picture I showed you before. Now let's go into one scenario here, which is you take the scenario where we write the business under year 5. As a %, we see, Jesus we got it wrong. We need to -- the business is not as good as we thought. What happens under IFRS reserving? You see what happens is that under IFRS, as long as your reserves are big enough to take the hit, that means as long as your provisions for adverse deviation, or your PADs, your future profits that you have within your reserves are big enough, you trust it into these reserves. And you just -- nothing happens in principle you see. Nothing happens -- let me maybe make it a little bigger. Yes, here. Yes, nothing happens. Your future reserves as of year 5 -- sorry, profits as of year 5 are simply a little bit less than

what you expected. So that's all what happens under IFRS. Under Solvency II, as I told you before, you realize in year 5, Jesus, the treaty is not performing well. You need to take the hit. You're going to take this hit completely, because you don't have any reserves. You don't have any PADs. You don't have any future profits that you can eat into it. So you take the hit completely. And you continue to book into the future your risk margin. That's a totally different way of looking into that. Now that's an easy way under IFRS, super. Everything is fine. We take another example, where we assume in year 5, you have even more losses and let's assume that our loss that we have in year 5 is so big that our reserves are not enough. So we have to unlock this treaty, this business. Yes. So we unlock this business, which means we take a hit in IFRS. And the hit we take is defined in a way that we don't make any future profits from that moment on into the future. You see, there is no profit that you're going to make into the future. You take the full year and you assume that the treaty will be neutral, no profits anymore. That's IFRS unlocking event.

Now under Solvency II, exactly the same as before. Under Solvency II, the hit you take is again just a little bit bigger, because the hit was bigger, you see that. Yes? Then you continue to show the risk margin. A totally different way of looking into it.

Now let's take another example. I think that's also an interesting one, where you have a positive assumption and that also happens within the life business. And you will understand now why we don't talk about positive assumption changes, okay? Some of you -- I have explained it to you 100 times, okay. But the thing is, if you have a positive assumption change in year 5 under IFRS. And that's where we are today. What happens is, nothing. You see that all you do is you increase the future profits by a tiny little bit because, again, under IFRS you want to have a nice standard profit stream. So these positive assumption changes are not seen. You don't talk about. We have seen the negative ones, yes. The positive ones, no. You will see them. But over the whole duration of the treaty. Whereas under Solvency II, again, totally different. Under Solvency II, you see positive assumption change in year 5. You take the hit, the positive hit. So you have to show the additional VNB, if you want to call it like that, that you're going to make. So you show it in year 5. And you continue to show the risk margin. Again, totally different ways of looking into it. Yes.

Okay. So much more details in this report. I do admit, I haven't read it. But you can read it. There are much more details on how this works. I came with a very simplified way, as usual, okay, on these things.

Now let's go to what I wanted to show you at the end. So now I close the brackets. That's what I wanted to show you and what we wanted to show you since years, is how does the VNB. And now I take you 2016, now we go then afterwards then backwards. How does this EUR 800 million or close to EUR 900 million VNB in 2016 translate into EBIT, into IFRS EBIT? Okay. And here you see the figures. So the EUR 900 million translates into '17, into these figures are between EUR 140 million and EUR 160 million. So approximately EUR 160 million. And then it goes down, of course, it runs off. But that's the way the 2016 VNB is come in Europe. We're going to go a little bit more into detail. Now let me add another year, 2015. So 2015, we had EUR 500 million -- more than EUR 500 million VNB. And you see the emergence of the VNB here, every single year, an additional EUR 40 million also, of course, running off, which is the expected EBIT we get out of this business. And I

continue without going into detail to 2014, 2013, 2012. And I stop there. And I went only to 2020, because in 2021, I have no clue what's happening, okay. So you see here, if you look at it, you see the total VNB that we have been writing from 2012 to 2016, this is new business. I always told you, you have to measure us on the new business that we write, that's important. It is going to generate an EBIT in 2017 of EUR 300 million. And then it goes down to EUR 250 million in 2020. This is guaranteed EBIT. You get that, okay, according to our calculations. Of course, you can always have assumptions changes. But I can tell you one thing that on the new business we have been writing since 2012, the assumption changes have been minor, very small assumption changes in both directions. So you can believe these figures, okay.

Now let's have a closer look into this EBITs here. And let's make it more explicit at this time, where we say -- but the same figures that you have here, okay. So I take these figures here, I forget about VNB now. VNB it's off, yes, EBIT. And I take the same figures while I'm looking into the year when they from where they came. I look into the type of business and we have looked into 4 segments that is providing us with these EBITs. And you see the most important part is related to financial solution fees. You see, the financial solution fees are expecting to give us close to EUR 200 EBIT in 2017. And then you see these EBITs, they are massive. And remember, I showed you the cash flows of the financial solutions deals. And you remember the cash flows are pretty short. So you made the cash quite quickly. It's not very long term. And you see this here, that means the VNB write translates quite quickly into EBIT. And that's why you have those white bar -- those blue bars, which are quite massive, very important.

Now if you take the next moment to U.S. mortality, the new business that we're writing, you see the EBIT contribution is slightly going up. I don't know if you can see that. That's because of what I told you before. The risk premium given that people get older is increasing slowly at the beginning and then afterwards, the portfolio runs off. So that's why you expect higher EBITs from the U.S. mortality business into the future. So that's why you see this pattern. Then the longevity, very stable, of course. And don't forget that this year is continuing for another 50 years, okay. I didn't show it to you. I have to see how we account for it under IFRS '17. But this continues on longevity. So longevity creates a big VNB. But it emerges very slowly into EBIT. But that's the reality and then you have the other business, which is just up here. So that's quite interesting, I guess. Yes.

This maybe -- this is also an interesting slide, where we show now, again, how much EBIT we have been producing. And we're expecting from these businesses from 2012 to 2016. And you see here the total EBITs that we have been showing in the past, these are the figures I showed you in the very first slide. And you see here that you have a run rate of, let's say, about EUR 300 million with some special effects. And remember this year is our special reserving exercise. We had, in Australia, it was something like EUR 100 million. This is to be communicated that long. This is under DII business. And this year was where 2 financial solution deals, which were recaptured by the client and the client had to pay a recapture fee. So we cashed in everything that we've expected to get over the next 10 years, we cashed it in, in one single year. So these are the 2 different -- the 2 elements that I wanted to mention on that one.

Now, of course, now look at this graph. And -- I mean, what you have to add to this graph, is before me. If you want to have an idea what's going on with life in the future. Of course, you need also to think that we're not sitting here and now sitting on a run-off, because if we didn't do anything, it will continue like this, more or less, plus anything we have written the past. But of course, we're writing new business. So in your assumptions, you need also to think that new business is coming in. And the new business that is coming in is probably having a pattern, which could be -- now I'm just guessing, okay, which could look like this. So the new business we're writing in 2017 might give us that much EBIT in 2018. And this one in 2019, this one in 2020. So you could imagine here a dotted line, which goes up like this, slightly. Yes. This is the business out of -- this is the EBIT that we generate out of new business. Now what you have to add and what you have to deduct, of course, is any influence of the rest of the portfolio, because we have looked into the portfolio as of 2012. Of course, mortality solutions and all the issues you know, they are part of the portfolio. And they might have a positive or negative impact. And you know that better than me. But that's the way you could look into that. Okay? Good.

Now what's I wanted to tell you now is, of course, well can you believe me that we're going to do these EBITs into the future? This is a bit of where do we think on the life mortality side that EBIT is -- that the VNB is going to be generated in the future? And for that, I would like to show you this slide that you all know this is a slide from our standard pack. We show this slide since four years. This is our strategy. Let me just have -- do I still have a minute? Or yes, I still have some minutes. So let me just quickly go through this slide. So what you see here is very nice. You see what the activities are that we are having on the life and health reinsurance side. So we have on the one hand, we have traditional reinsurance. This is traditional. This is the quota share, surplus, Stop Loss, cat XL, excessive loss, very standard risk solutions, that's clear. The second part we have is the financial solution side. It is the U.S. financial solutions. But also financing goes into financial solutions. Then, of course, we have the third part, which is services. Because on the life and health side, you need to provide services to get the business. So these are the activities we have. And our strategy that we have on the life and health side, the same as on the P&C is that we say, out of all the possibilities that we have within the reinsurance side, I'd love whatever we could do, we want to concentrate on these things, which provide us positive economic value, which provide us a positive value of new business. And this is what we show here, it is triangle, I don't know if you see this gray triangle. This is the attractive part of the whole reinsurance business that we can write. Of course, the road is not black and white. And sometimes, we accept maybe a small business out here, because we get a big, big chunk of business within the profit of the business. So we look into that in a commercial view. But the goal is really to increase our share within this triangle, which is the share of attractive business, which means business with a positive value from business VNB. That's the way we look into it. And in order to decide and to explain what we do on the life and health side, we try to put a little bit of structure into this market. And what we introduced and you know this already, we introduced 5 dimensions. It's totally trivial. We said that reinsurance landscape is made of markets. Within these markets, you have insurance companies. These insurance companies, they use distribution channels to access their end consumers. And what they sell to these end consumers is risk protection at the end. Yes. So these are the dimensions. And what we did is we defined for every single of these dimensions we defined, where we think the sweet spot is for us, for Hannover Re, life and health. And these are the sweet spots. And what I would like to tell you right now quickly is where we think out of these sweet spots,

we will get the positive VNB into the future. So let me start with this box here. Risk solutions, we see plenty of possibilities right now still in the U.S. mortality market. So the new business, the new mortality solutions business that we're writing is VNB positive, is good business and we continue to write it. And we expect positive VNB out of the U.S. mortality assumptions. The financial solutions, we expect positive VNBs out of the financial -- U.S. financial solutions business. We have a huge pipeline. These are not always as big as we have seen in the past. But there are lot of opportunities we see out of financial solutions business into the future. They are going to generate positive VNB.

Talking about high-growth markets. We see plenty of opportunities on longevity, which is a high-growth market for us. And I'm not focusing on the U.K., I focus on the rest of the world. So plenty of possibilities on longevity. And we see also plenty of opportunities in China, high-growth market. It's a huge opportunity. If we look into the Chinese market, these are just volumes, which are incredible. So the opportunity is there. But we need to tackle this opportunity correctly. Then if you look into companies in transition, that's the second dimension. We see huge opportunities in block transactions, in big deals, value-enforce deals, where companies want to get rid, either of their insurance business, if it's a bank or where they want to cash in the future positive cash flows that they're expecting. So we see plenty of opportunities. And we have seen plenty of deals in Europe but also in Australia. And we see a pipeline, which is still there. And we think that we're going to have positive VNBs out of this business too.

Then if you look into alternative distribution channels, we see plenty of possibilities to work with Fintech companies, be it in the U.S., be it in South Africa, be it in China, who provide us with a very alternative distribution channel and new digital distribution channel and where we combine our services. And here I get to this block here of automated underwriting systems, which are state-of-the-art. And we -- as we mentioned it, we spend quite some money on that state-of-the-art automated underwriting system, where we combine our automated underwriting system, our risk knowhow with their distribution capability, we're looking in offers for an insurance company who has a license, okay. So that's pretty big.

Then let take the last one, underserved end consumers. Today, we see a huge opportunity for end consumers. So clients of our clients, who take care of their health, who are interested in their lifestyle, who want to live longer, who want to live healthier. And this is the whole concept around that you know our collaboration with Vitality, all these variables and all these kind of things. And this is a boom. And we have been writing a lot of VNB in the past out of these initiatives. And we're going to continue to write this. And with this, I would say, I stop, even it's 6 minutes before my scheduled time. Thank you.

+++qanda

## **A - Karl Steinle** {BIO 1986424 <GO>}

Thank you, Claude, for your presentation. And we go right into your questions. Kamran, start it.

## Q - Kamran Hossain {BIO 17666412 <GO>}

Just one question about, I guess, it's recognition under Solvency II. So we had earlier -- actually you've seen -- I never know that it's favorable or unfavorable mortality trends in the U.S. Seen a similar thing in the U.K. I know it's been asked -- we've asked it a few times in conference calls. But within your Solvency II capital, have you included kind of any assumption change about U.K. mortality? Or is it up to you when you decide to take that assumption change?

## A - Claude Jacques Chãvre {BIO 21916781 <GO>}

Okay. I don't want to say anything, which is wrong. Anybody who can help me on this. Roland, maybe?

### **A - Roland Vogel** {BIO 16342285 <GO>}

The one thing we have observed, our experience in new business in contrast to the U.S. mortality, that's we expected to deviate -- it does deviate positively slightly. But this, as you know, is not the reasons to change the assumption as such and I don't think that according to the accounting rules we have -- this has materialized in a fashion longer that we would be forced to reflect it in (inaudible).

### **A - Ulrich Wallin** {BIO 4863401 <GO>}

And if I may add, we could, of course, reflect is a higher mortality on the U.K. and higher, they would force on the U.K. longevity business. We haven't done it up to now because we are not sure that it is -- that this trend will continue or as you also expect in the U.S. mortality that it will go back to the mortality improvement trends that we have experienced over so many years. So it is -- we felt it premature to put it in. I mean, for us it would be fortunate, favorable to put it in because in the U.K., we have a lot more longevity business than we have mortality business.

## Q - Kamran Hossain {BIO 17666412 <GO>}

Can I just follow-up? At what point I know in the past, you've had discussions with auditors around when to put things through in the accounts. And is there any kind of similar process in the Solvency II capital that means that at some point people that are looking at your Solvency II capital say, "Hang on, you're using what it seem like overly conservative assumptions to count on your Solvency II capital?"

## **A - Ulrich Wallin** {BIO 4863401 <GO>}

Well basically, Solvency II, of course, is best estimate. It's also best estimate assumptions for future mortality. But of course, I mean, there are reports on reduced policy improvement in the U.K.. But that is an experience, which we have seen in a few years, say, the last couple of years. So trend for the future on that is up to debate. And I think, there're different views what to expect is the mortality trend for the future. And therefore, I mean, we have to form an expert opinion on that. And of course, that has been validated against the facts presented you see and against the opinions that are voiced by other experts. But of course, there is no clear-cut, unfortunately. I mean, there's no truth in this. There is probabilities and also the probabilities are quite blurred, I would say. You have no clear probabilities either on these trends. And maybe, Andreas, you want to add something to that? But that's the way I see it.

### A - Andreas Märkert

Just one thing. The Solvency II balance sheet is audited as well. So we also have to convince the financial auditor for the balance sheet that these assumptions are best estimate in the sort of allowed range of Solvency II.

### **A - Ulrich Wallin** {BIO 4863401 <GO>}

Directionally, it is Solvency II that optimistic assumptions are challenged more than pessimistic assumptions, I would say.

### **A - Karl Steinle** {BIO 1986424 <GO>}

Well the next question comes from Edward.

### **Q - Edward Morris** {BIO 16274236 <GO>}

Same question really for the U.S. mortality, I would say. I mean, you mentioned earlier that this year, I think, to address over the course of 2018 and maybe might just flow over into 2019. Looking at these charts, you can see that the hit to VNB is quite significant in Solvency II terms. Have we seen that yet? Or we will see that hit in the Solvency II regime over the course of 2018?

### **A - Ulrich Wallin** {BIO 4863401 <GO>}

Well you have seen it, seen already. In 2018, there should be no additional hit. There should clearly be an improvement with every rate increase that we are able to achieve or any recapture that we see as a result of rate increases. Because all of them would increase the future cash flow adjusted for risk margin and discounted because they would take -- they would reduce the hit of the currently negative expected cash flow under the ING portfolio.

## A - Karl Steinle {BIO 1986424 <GO>}

Okay. Any further question -- ah, from Andrew.

## Q - Andrew James Ritchie {BIO 18731996 <GO>}

Just a point of clarification. The contribution to recently written new business into EBIT is much higher than it has been. And you're showing that on your chart.

# A - Claude Jacques Chãvre {BIO 21916781 <GO>}

Which chart are we showing?

## Q - Andrew James Ritchie {BIO 18731996 <GO>}

I think, it's Slide 19.

# A - Claude Jacques Chãvre {BIO 21916781 <GO>}

19, yes, let me just move.

### Q - Andrew James Ritchie {BIO 18731996 <GO>}

It composed total EBIT with the contribution from recently written new business. I understand we know the drag from the U.S. you've clarified that earlier. And we talked about it. I still -- my head seems to, it seems to be implying other parts of the back book are less profitable than historically as well.

### A - Ulrich Wallin (BIO 4863401 <GO>)

You mean, less profitable than expected?

### Q - Andrew James Ritchie {BIO 18731996 <GO>}

Well contributing less to EBIT. I know the back book is running down over time. So that happens. But is there any -- are there any other back books that are a bit below expected besides U.S., I mean?

## A - Claude Jacques Chãvre {BIO 21916781 <GO>}

Yes. One of the issues we had was the issue in Australia, which is the DII business. The DII business is typically a back book, which is underperforming. And we took the hit at that moment. So we increased reserves by about EUR 100 million, as I told you. And since then, the book is running as expected. So there is no negative deviation from this or, let's say, more negative than what we expected. And apart from that, Klaus I'm looking at you, I'm not aware of any negative back book within our portfolio.

## Q - Andrew James Ritchie {BIO 18731996 <GO>}

So the back book is essentially breakeven. I mean, if you take U.S., the back book is generating EUR 150 million or something?

## **A - Ulrich Wallin** {BIO 4863401 <GO>}

Well I mean, of course, for 2017, I mean, we will have a negative effect from the ING block, which is close to EUR 200 million. Of course, it's mitigated a little bit on the mortality solutions by the new business. So-called organic growth business. And of course, you see the very high realization of the value of new business and that is the reason that at that time we increased our expected EBIT from the life and health business from EUR 300 million to EUR 350 million, more than EUR 350 million. If the ING block would have developed as expected at the beginning of -- at the end of 2016, that would have happened with quite a bit of margin in it. But you have to say that this is rather, I mean, it's only taking into account the business from -- the new business from 2012 onward. I mean, there is some...

# Q - Andrew James Ritchie {BIO 18731996 <GO>}

It kind of assumes you stopped witting new business, isn't it?

## **A - Ulrich Wallin** {BIO 4863401 <GO>}

That's right, yes. And we, of course, would not be writing new business as well.

### Q - Andrew James Ritchie {BIO 18731996 <GO>}

The same question, you shown longevity in your scenario of VNB to cash flow out of 50 years duration. I mean, the average age of a pensioner at retirement life expectancy is 23 years. So I thought most longevity business is written for annuities in payment...

# A - Claude Jacques Chãvre {BIO 21916781 <GO>}

Of course, yes.

### Q - Andrew James Ritchie {BIO 18731996 <GO>}

So you're writing a lot of deferred annuities?

## A - Claude Jacques Chãvre {BIO 21916781 <GO>}

No. We don't write lot of deferred annuities. We do write some. But very limited ones. But this is, of course, the extreme scenario and I'm just trying to find this slide.

### Q - Andrew James Ritchie (BIO 18731996 <GO>)

It's the Slide 5.

# A - Claude Jacques Chãvre {BIO 21916781 <GO>}

Yes. Yes. Exactly, exactly, I'm just coming to this one.

## Q - Andrew James Ritchie {BIO 18731996 <GO>}

That one.

## A - Claude Jacques Chãvre {BIO 21916781 <GO>}

Yes. This is the one. These are the cash flows we're expecting. But if you take somebody who is 60 or 65 and takes out the annuity, I mean, the probability that he lives up to 100 or 105 still exists. So we don't have deferred annuities of people who are 20 years old, yes definitely not. But this definitely is possible. Yes. Some differs for people above 50, let's say, a 50-year old guy, he can easily live up to 100 and then you get into these graphs.

## **A - Karl Steinle** {BIO 1986424 <GO>}

Okay. Another question from Vinit.

## **Q - Vinit Malhotra** {BIO 16184491 <GO>}

Just very basic thing, obviously, cash flow that discounted and how do you think of interest rate. And I mean, you don't necessarily rely too much on the long and most of your EBIT's coming from the first 10 years currently. But is that with -- but if risk moves or, I mean, that's something that how do you -- it shouldn't be a concern right?

## A - Claude Jacques Chãvre {BIO 21916781 <GO>}

I mean, that interest rate move is simply concern for us?

### **Q - Vinit Malhotra** {BIO 16184491 <GO>}

Should not be probably because you're trying -- I just want your thoughts on that because discount rate is one of the most important things in life insurance, generally.

## A - Claude Jacques Chãvre {BIO 21916781 <GO>}

I mean, of course, there is a discount rate that you use when you calculate by VNBs. So if the interest rates go down, the VNBs tend to go up. This is what you referred to. And the other way around, if the interest rates go up, the VNB goes down. But the VNB is simply a theoretical figure at the end. It's your interest and EBIT that you generate. And I don't think there is a huge impact on the EBIT that we generate at the end. It's just the VNB, which is a discounted figure, which is going up and down with the interest rate moves.

### **A - Karl Steinle** {BIO 1986424 <GO>}

Any further question, ah, from Daniel.

### **Q - Daniel Bischof** {BIO 17407166 <GO>}

Just a very simple one, on Page 17. So if you take the 2016 VNB of EUR 893 million. So how much -- into how much EBIT to it would roughly translate? Is that rule of thumb? Or anything?

# A - Claude Jacques Chãvre {BIO 21916781 <GO>}

Yes. We have a rule of thumb. I think, it translates into more or less twice as much EBIT. Uli, correct me if I'm wrong. But I think it's 1.5x, 2x twice the VNB. So you can double it or, yes, I think this is the sum of EBIT...

## **A - Ulrich Wallin** {BIO 4863401 <GO>}

Yes. It depends a little bit on the mix of business, we knew we have a very long-duration business. Of course, the -- I mean, risk margin as well as the discounting is the higher figure. I mean, on the financial solution

(technical difficulty)

It can be short or maybe only five years-or-so. Of course, it translates less. But in and large, I think, 1.5x to 2x is probably quite a valid figure.

## **A - Karl Steinle** {BIO 1986424 <GO>}

Any further questions? Doesn't seem to be the case. Well thank you for the questions. Without further ado, Ulrich will now summarize the day and take a brief look forward. After this, I'd like to invite you to join us outside of this room for a snack and drinks. And in doing so, I certainly would like to thank you for participating today and your lively questions. And

it's -- as I've said, it's really gratifying for us that so many of you came today and showed such a lively interest. On that note, over to you, Ulrich.

### **A - Ulrich Wallin** {BIO 4863401 <GO>}

Thank you very much. That brings us to, let's call, the key takeaways. That's what we want for you to take away. And you can see it's a nice picture that I've taken this one. And the sun is shining kind of. And blossoms are blooming. Yes, I mean, if you turn to the individual takeaways, first of all, I mean, Hannover Re is well capitalized, the Solvency II ratio is the way we look at it, including the operational risk model fully integrated in excess of EUR 250 million. So if opportunities are there and they could be some on the P&C side is a hardening market, we can increase our risk appetite without running into problems this year's solvency ratio. Secondly, we have introduced a special dividend into our strategy. And currently, the expectation is and that's, of course, subject to what happens between now and year-end. It's also subject to the decision of the AGM as well as the supervisory board, we would expect to pay a special dividend also for 2017. At least, we have taken that into account into our internal capital model.

We think that the low interest rate environment is manageable for us, as Roland alluded to. The ROI should be stabilized at around 2.7% give or take, which would mean that we could generate this expected positive cash flow of continued value in excess of EUR 1 billion. And returns from assets under management around the EUR 1.1 billion to EUR 1.2 billion mark. On the P&C side, we still have significant redundancy buffers, as Andreas showed you. They have not been depleted in 2016 despite the fact that it was already the fourth year into the soft market. 2017, we make it some out of it depending on outcome. But we see better trading conditions that we expect in 2018. We would think that there is a good opportunity maybe to add a little bit again in 2018 to those kind of buffers. We expect growth in Property Casualty, of course, as Jürgen alluded to on the Advanced Solutions business. But also on the more traditional business where we see rate increases, we will grow both bottom and top line. So we look very positive, even though I have to add cautiously positive into the P&C world into 2018.

On the Life and Health, I think, Claude very clearly showed you the underlying growth of our EBIT value of new business translating into EBIT. And therefore, whilst we expect that we will see some negative effects due to the recaptures in 2018, from 2019 on, we should see growing EBITs from our Life and Health business. On provider year that would depend that the modeling that we now do is on a more granular basis on our ING block, actually holds into 2018 and the following years.

With that, we think we can continue to create value for our clients, our shareholders and our employees. And we feel that we are well positioned to put our new strategy, which I explained to you into practice for the benefit of all our stakeholders.

With that, that concludes our Investors Day, our 20th Investors Day. And of course, as Claude mentioned, there are drinks and food outside. And I would thank you for coming. And when you leave here, safe travels wherever you go to. And all the best. Thank you very much.

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