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Artemis Monte Carlo Executive Roundtable

2018



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FOREWORD

Welcome to the third Artemis Monte Carlo Reinsurance Rendezvous Roundtable, in which insurance, reinsurance, and insurance-linked securities (ILS) market participants discussed the response of the capital markets to 2017 catastrophe events, where ILS growth might come from, and emerging risks such as cyber, as well as other industry trends.

After the trio of Atlantic hurricanes, devastating wildfires in California and two powerful earthquakes in Mexico, the reaction of the ILS space was always going to be a hot industry topic. Roundtable participants underlined the impressive response of both the investor and sponsor base, suggesting that regardless of potential improvements in other alternative investments, 2018 has shown that allocations to the asset class would be maintained.

But while the ILS sector is perhaps unquestionably here to stay, its focus remains heavily skewed towards the peak U.S. perils. Market experts and executives noted this trend and discussed the huge opportunity that exists for ILS to help close the protection gap in both mature and emerging markets.

The influence of governments and entities such as the NFIP and FEMA was explored during the roundtable, as was the potential for parametric trigger structures to broaden the reach of ILS capacity.

Looking to the future, roundtable participants discussed the growing cyber market and whether the ILS community can play a role now, or if the inherent complexity of cyber risk and uncertainty surrounding correlation means convergence capital will be influential, just further down the line.

The ILS market has showed its resilience in 2018 and put to bed any doubts about its permanence and appetite for insurance and reinsurance-linked business. As the marketplace looks to expand its remit, it will be interesting to see its ongoing evolution and influence across the risk transfer industry.

Steve Evans

Owner and Editor in Chief, Artemis





FROM LEFT TO RIGHT, BACK ROW:

Rob Bredahl - *Third Point Re*, Steve Evans - *Artemis*, Eric Schuh - *Swiss Re*, David Flandro - *JLT Re*, Dennis Mahoney - *RFIB*, David Priebe - *Guy Carpenter*

FROM LEFT TO RIGHT, FRONT ROW:

Richard Lowther - *Hiscox Re*, Joanna Syroka - *Fermat Capital*, Rob Newbold - *AIR Worldwide*, Tom Johansmeyer - *PCS*



PARTICIPANT INDEX

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Eric Schuh, Global Head of P&C Solutions, Swiss Re

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Richard Lowther, COO, Insurance-linked-Strategies, Hiscox Re

Joanna Syroka, Director of New Markets, Fermat Capital

Rob Newbold, CEEM, Executive Vice President, AIR Worldwide



Let's begin by talking about the performance of the marketplace so far in 2018. How do you think it has performed following the 2017 loss events and how do you see the rest of the year panning out?



The great thing is, I think we have a really stable market, a really sound market, and it's a tribute to this industry that, post the 2017 events, the business continued to carry on, relatively unchanged. Capital came back into the business to support the risk, and if you look at what has transpired in 2018, pricing changes have been moderate, client demand for capacity has continued to be met, reinsurers have been responsive in addressing client needs with covered solutions. And as we look to 2019, I don't see much change happening from where we are right now.



Last year was actually more eventful than this year, because in the middle of Monte Carlo the debate changed [with Hurricane Irma approaching Florida], which was interesting. So, we think it is not going to be unified, in terms of what we've seen at renewals. We call it a heterogenous trend, which means, some should go this way and some should go that way. That's what we're observing from here. It's a stable market, it's not a market in disarray at all.

**Eric Schuh –
It's a stable
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Cat activity was very benign in the ten years leading up to 2017, and cat profits, in many cases, were more than all profits at reinsurance companies. So, although the cat market didn't really react to the losses, we saw light being shined on this underpriced business, and the pricing got a little bit better. When I say a little bit, net 200bps. And so we saw ceding commissions come down on renewals, at least half on half of our deals and we saw improved underlying pricing although now loss trends are going the other way in some cases. You really have to push back on these chronically underpriced pieces of business.



I think that's an appropriate observation, that the blanket came off and some of the non-cat business clearly showed that it was more challenged than previously thought, and as such, reinsurers and insurers really started refocusing their discipline around those lines.



There's a short-tail / long-tail dichotomy starting to emerge in the sector. If you look at long-tail, it's clear that reserving trends are shifting in some lines, with the number of structured deals, such as ADCs, stop losses, and legacy deals increasing quite markedly.



We focus incessantly here at Monte Carlo on cat. We talk all day about changes in cat capacity and about rate-on-line indices. And this is important. But it isn't hard to guess which way rates are going to go at 1/1 if nothing happens. By contrast, on longer-tail business and with certain specialty lines, things are beginning to change. For example, there are areas where you can see that the petrol in the tank is depleted in terms of reserve releases.



I always laugh when people talk about reserve releases, I've been in the insurance market since 1968, placing U.S. casualty business for the likes of Marsh and other major US retail brokers. I have never seen a long-tail account that actually turned out to be truly over reserved. We have seen the lowest interest rates for the longest period of time during my life. With the long-term yield curve potentially inverted the ability for carriers to earn much by way of investment income is extremely limited. We tend to focus on cat sometimes to the exclusion of all other issues.

How many people in this room did not use talcum powder? The recent substantial award against Johnson and Johnson should make us think about the fact medical technology is changing. The activities we human beings have been engaging in for years have the potential to link us to the past in terms of long term exposure such as pollution, GMO foods and electromagnetic fields.

It's interesting to me that the industry has all these issues, and yet still we obsess over short term events such as winds and earthquakes. How long before cyber demonstrates that none of us really fully understand the potential risk.



All it takes is a little bit of wind blowing to fundamentally change the industry's conversation, because that's where the money is and that's where the risk is, right. Even if you want to try and grow into something new and evolve this space, when the big bucket is threatened, obviously that's where conversation and effort is going to go.

The tough part is, as we try to evolve this space to more than that concentration, we just need to make sure the wind isn't blowing.



All of this said, there is still plenty of excess capital out there, and it is still driving pricing in many areas outside of cat. It's forcing people to examine their business models in a world where we have so much capital.



For some years I sat on the investment committee at an insurance firm where we celebrated making a 2% return on billions invested. When you go back to the fundamental issues, the yield curve and historically low interest rates should we be surprised at how thin margins have become? We cannot make much money out of investment income and we certainly do not historically get the rating right on the longer-term risks such as asbestos.



We never talk about investment income. For the U.S. P&C industry over the last 22 years, 115% of operating profit came from investment income, so more than all profits. Over the last four years, for reinsurance companies, and this is done on contribution to ROE, just to take out skew from bigger companies, 72% of income came from investment income. We go on and on about underwriting results and that is not the driver of P&Ls for P&C insurance and reinsurance companies.



Moving away from the traditional side, what about the ILS market balance sheet?

I think it's widely accepted that equity markets reward lower volatility businesses with improved valuations. Capital markets investors with large diversified investment portfolios are often better suited to absorb the volatility of catastrophe event driven ILS.

My concern is that ILS is increasingly making inroads into parts of the traditional market that it may not be so well equipped to do. While the underlying risk might



be attractive, low correlating and short-tail in nature, it is no longer purely an X over Y binary cat product supported by independent models. This requires not only a very specialised underwriting skillset but also very sophisticated valuation techniques. It would seem to us that some ILS funds did not do a particularly great job on valuations of 2017 events and the result has been some negative monthly H1 2018 returns from loss creep they didn't count on. It looks like 2018 is shaping up to have some complicated losses of its own, and it will be interesting to see investor reaction to managers that reloaded based on 2017 valuations which may not have been particularly stable.

We estimate that around \$7 billion of new capital came into the sector in the last four months of 2017. The question is, if we get into an environment where, for argument's sake, inflation spikes and the ten-year goes to 6% or something and you're a big pension fund with 2% of your portfolio in ILS, do you re-balance?

Does this mean that at some point, if the rates weren't 3% but were say 7%, it would have a dramatic effect in terms of the appetite of these markets? In other words are the benefits from non-correlated risk outweighed by the higher interest rates available from low risk investments?

I would posit that the non-correlative aspect of insurance-linked investments, including collateralised structures, means that people would remain in the asset class. They just wouldn't grow their portfolios in the way they did between 2009 and 2014. Basically, I believe positions would be maintained.

It's a continuous evolution of investors as their sophistication and understanding of the asset class increases. We were not surprised in the wake of 2017 losses that the ILS market reloaded for loss impacted capital.

In general, investors such as pension funds and other institutional investors are under-allocated to alternatives compared to their ideal targets, and as such are always seeking ways to increase their allocation to alternative assets classes. This desire to increase alternative allocations becomes greater during periods of market volatility, which often accompany rising rates, so for many of these institutional investors there's a long way to go before allocation limits are saturated let alone reduced and the factors driving these decisions go way beyond prevailing interest rates.

Simply put, at the highest level investors are interested in ILS as they offer the three valuable characteristics: liquidity, low correlation with traditional asset classes, and a positive expected

Richard Lowther –
We were not surprised in the wake of 2017 losses that the ILS market reloaded for loss impacted capital

return. Of course the relative amount of each of these factors will vary from one ILS opportunity to another, but an opportunity that scores less on one of these factors should be compensated for by an increase in another of the factors to satisfy investor requirements from the asset class overall.



RICHARD LOWTHER



STEVE EVANS



JOANNA SYROKA

Once investors become interested in our investment thesis, the next question is invariable about the scalability. And that's also scalability post-event. With our ILS funds, a key appeal for investors is our trade allocation rules that protect access to positions in the portfolio on renewal. So, you are not going to get thrown under the bus if you were, for example, in a more opportunistic ILS strategy that may or may not be there next year, depending on the net appetite of the ceding reinsurer.

What about growth in the ILS market, where are people seeing the current set of opportunities?

In terms of future growth, let's start with just looking at organic growth in the US property cat market. It's significant. I believe AIR estimates that every ten years insured values in the peak peril zones of the U.S. double. The only way that those risks are going to be met with adequate risk capacity, I believe, is by bringing capital markets to bear.

Growth is going to come from three main areas: filling the reinsurance gap, the difference between risks that are actually insured but are not reinsured, filling the protection gap, economic risks that aren't insured in the first place – these are large and growing and as people continue to concentrate and build in coastal areas and on seismic zones – and then new risks and ILS applications.



Joanna Syroka –
The only way that those risks are going to be met with adequate risk capacity, I believe, is by bringing capital markets to bear

Other than a decrease in rates overall so that people can buy more insurance with the same budget, I think growth is going to be mainly driven by government action, be that through programmes like the NFIP and initiatives to increase insurance take-up, governments de-risking their own balance sheets, including more transactions like those from the World Bank, and, of course, eventually the regulatory and ultimately rating pressures will mean more reinsurance limit purchases are going to be required.



Don't forget that in 2013 there were a lot of numbers getting thrown around. People were saying things like, by 2020 upwards of 40% of all cat capacity will be provided by third-party capital. We are still nowhere near that, we're closer to a percentage in the low 20s.

I would expect ILS growth to be faster than the traditional market going forward. For example, let's look at the California Earthquake Authority (CEA). They want to go from the current \$17 billion of claims paying capacity to \$48 billion I believe in the next ten years, and my understanding is that is just business as usual, with modest growth projections and taking into account reconstruction cost inflation. I think the CEA can only realistically contemplate that organic growth with the knowledge that capital market capacity will be there to support that growth.

We've all seen asset prices go up, well, I'm not sure real wages have gone up quite as much as the asset prices have. In that scenario it is quite natural that that protection gap exists. My point is that, to me it is quite natural that that protection gap still exists if this is the reality. So, I think as well as regarding who is going to pay eventually, are we going to tax people more?

We have actually had insurance rate deflation for quite a while. In other words, the rate of increase has been less than general inflation, so there's a lot of catch up to go for most people out there in the world.

I think that [protection] gap exists and it will take everyone's effort to fill it. However, it will require wages and so on to grow, and by the way, business earnings as well. It's not all retail purchases, and we know what business earnings have done over the last few years, like economic earnings, real earnings, sustainable earnings. So, I think this is a problem we are going to work on for quite some time, and it will require capacity from everyone.

Yet if you want to close the protection gap, if you want to close it from an economic point of view, that means people have to buy more insurance, or the insurance has to be more efficient. I mean, a lot of the reasons people talk to us about solutions is about efficiency of their business, it's not always about growth, sometimes it is also about digitalisation. But that alone will not close the protection gap, it will only close if people spend more money on protecting themselves, and the reality is that over many years, as an industry we've tried new products collectively, and we've done this and we've done that, but so far we have apparently not created enough additional demand for protection. This means the work has to continue.



Having capacity doesn't solve the problem, and the one thing I've been hearing from all of you is that what's missing here is someone being willing to sell that protection. What does that require? We as an industry need to do a better job of communicating the value of what we provide, and as part of that, need to make sure what we're providing is valuable.

We as an industry do a great job of developing capital efficient solutions, solutions that are designed to provide earnings growth, basically all things that are done in contemplation of needs of our shareholders or end investors. But at the same time, if we build products that are too favourably accommodating the end customer, well it threatens the value you provide to the end investor or shareholder. You've got to balance this out. You need something that's a value to your client, but still allows you to provide value to your shareholder. On top of that, you need to communicate effectively that you're delivering value to that end client.



We should communicate that social value much better than we do. Insurance has an incredible social value and I think that the brokers will agree that we work really hard, both in terms of reinsurance broking and in terms of specialty and retail broking, to create products that are really valuable to our clients, otherwise, they wouldn't buy them. But at the same time, carriers have to be able to make money in order to continue to offer that value, there is a balance.



We've made the point that someone has to pay, but the reality is that people are paying already. Taxpayers are paying through costly, late and inefficient ex-post disaster assistance, individuals are paying and businesses are paying for uninsured risks that they have to manage alone, which ultimately will impact not only their livelihoods but the greater economy in the impacted area.



Tom Johansmeyer – **We as an industry need to do a better job of communicating the value of what we provide**



But this is why I do believe that governments will be a key driver in closing that "protection gap", because at the end of the day, taxpayers are paying for things that aren't insured by the market.

In some ways, I think governments have to be careful not to create inadvertent negative externalities. For example, when you live in California or Utah where you probably should buy earthquake insurance, or if you are on the Gulf Coast without flood insurance, you may think, you know what, even though I don't have insurance and even though there's not necessarily a state catastrophe fund, the federal government will probably take care of it if something really bad happens.

I don't know how to get around this, other than making coverage mandatory, and I am not a huge fan of that either. These externalities are one of the main reasons the protection gap has persisted in developed economies. The problem is different in developing economies where coverage is often simply unaffordable. Either way, the gaps persist.

Closing the protection gap means defying human nature, humans like to roll the dice.



Insurance isn't the only answer to the protection gap. Take cyber for example, if I'm a big company and I've got digital infrastructure, I've got tech infrastructure, I've got a dollar that I can spend on improving my IT security, or I can spend it on insurance. Investing in that IT security instead of insurance might perpetuate the protection gap, but it's going to close the gap relative to my own risk. Would you put locks on your house or buy homeowners insurance? Would you look both ways before crossing the street or get health insurance?



Rob Bredahl –
Closing the protection gap means defying human nature



The protection gap in absolute terms will shrink as a result of these resilience and prevention measures, absolutely, and governments are doing a lot on this. We have a business unit called Global Partnerships that works with governmental entities at all levels, and often these discussions are somewhat related to insurance, typically. But very often they are actually about measures that are not insurance in nature, they are preventative and so on. So, this is also key for the insurance industry, to find a way into more prevention as opposed to paying claims.



Interestingly, I think the current FEMA director is the first one to actually talk about the domestic protection gap and wanting to close that gap through insurance. The NFIP has a target to double the number of flood policies in the country in five years' time. They are agnostic as to if it's a doubling of NFIP policies or by an increase in private sector flood coverage.

Using the NFIP plan to double the flood insurance policy count in the US as an example, I would say that this can only happen realistically with the ILS market in place and taking a sizable portion of that cat risk.



Do people expect the continued advancement of technology to accelerate efforts by the NFIP and others in closing the world's insurance gaps?



The technology has improved and is now enabling the private market to proactively provide flood cover. That's a big difference from five years ago. The technology wasn't there or it wasn't good enough, and quite frankly, there wasn't enough capability for the private market to step in and provide meaningful coverage, and today there is. And it seems the NFIP and FEMA are committed to making that happen. They're also restructuring their own risk financing with the utilisation of reinsurance capital and ILS capital.

So, I think we are stepping slowly towards an improvement in the situation, and quite frankly, it's a topic that needs to continue to be discussed year in and year out to raise awareness and to continue to focus on how to improve the overall situation. It is going to take time because there are a lot of push and pulls, give and takes in this equation. There's a number of different constituents that have different agendas.

In order to support the emerging markets it is going to have to start from more of a macro solution, and those efforts are taking place.



From a modelling perspective, the value that we can provide is to continue to invest in the models that will support growth into new lines and new markets. To support all of this, we want to grow the pie, we want to close the protection gap, we're continuing to invest not only in those core nat cat areas to provide the analytics to support growth, but at the same time looking at things like cyber, and other new perils. And this includes parametrics, too.

STEVE
EVANSERIC
SCHUHDAVID
PRIEBETOM
JOHANNSMAYER

So, it's evolving the model to the point where you can be comfortable structuring a deal using a modeled output and know you're getting a robust view of the risk and contingency.

It would be interesting to hear what other areas of the insurance structure you believe will develop and offer avenues for future growth?

What do people think about the topic of parametrics, which we would consider a big growth area. Completely aware of the regulatory differences from market to market. As a standalone topic or for example as a component of a programme that is indemnity for some part but has a parametric component for fast cash?

Parametric solutions are simple, clear and easy. So, I think they will certainly have a role, particularly in emerging markets because they are very much definable around the client or the people who can get their heads around them.

I like parametrics for reputational risks. Be it your reputation post-cyber, post-terror, post any of the other bad stuff. When you think about what goes into post-event remediation, you've got IR agencies charging a fortune, PR agencies charging a fortune, the lawyers aren't going to be discounting, and if you've got your IT security



forensics, be it cyber or terror, you're paying top dollar at a not-discounted rate. You need cash coming in very quickly if you're going to keep everything else in your company on strategy and not impact the next five years' earnings. After an event like that, parametric is pure genius.

RICHARD
LOWTHER

Just because it is short-tail doesn't mean that it's not opaque, or it's slow to report. That's one of the biggest concerns about getting outside of peak zone cat, that noise of valuation uncertainty is much greater.

STEVE
EVANSTOM
JOHANNSMAYERROB
BREDAHLDAVID
FLANDRO

We've been talking to a lot of people about parametric cyber for reputational type risks, and there's a learning curve on the parametric element, but the challenges and the issues resonate almost immediately.

I think it's a great way for reinsurers to raise capacity, in an index form, whether it's parametric or whatever, and then run the basis risk. It's much more complicated; it's higher value added, raising more capacity in an index form and then providing indemnity protection. I see the insurance market potentially going that way.

ROB
BREDAHL

One of the things you can do with the valuation argument is franchise value analysis. You can show how a parametric product for cyber, for example, would perform in different return periods – both in terms of the effect on earnings and the effect on franchise value. You're right, it is a sophisticated pitch and it's only the most sophisticated buyers, both on the specialty side and on the reinsurance side, who are receptive to it right now. But that is changing as we become more able to quantify cyber exposures.

DAVID
FLANDRO

One of the attractions of nat cat to investors is, it's uncorrelated. What do you think about cyber? Because big events are likely to be terrorism. So is there a lot of correlation with cyber in an investment portfolio?

It isn't hard to envision how an economically significant cyber-attack on a big corporation could be correlated to other equity, bond, commodity or real estate investments.

If you talk to fund managers and say, why do you buy ILS? The returns are going down, and while the correlation may be low, aren't there other investments which are not correlated that you could buy with a higher yield? They struggle to come up with anything. Actually, cat bonds are pretty unique because in fact, there aren't many other securities which really, truly have such a low correlation, and that's the context in which you have to think about cyber correlations.



We talk to a lot of people about cyber in a lot of different ways. And what's really interesting and what I would like to see come out of the market more, is more discussion around cyber and technology and the threat. Cyber underwriting in this day and age has more to do with underwriting than it does to do with cyber, you're more about exclusions and event limits and all the other parts of underwriting. I hear more about that in cyber discussions than I do actually cyber. When I look at some of the big accounts out there and I look at who is getting what amount of cover, to me it is ultimately backward. I see some of the companies out there getting cyber cover to a really high layer, and I'm seeing some really good ones not getting nearly enough protection. And, it's a head-scratcher for me.

I think, as an industry we need to talk about the underlying risk and less about the policy form, quite frankly. Because there is a lot of opportunity out there right now, if we change how we look at this.



We are getting interest from investors. The issue is that many are used to property cat where there are independent models based on the science of a physical phenomenon. Investors will also want answers on how correlated cyber is to both cat and other investment strategies they may allocate to. They also want to a level of valuation certainty to know that the tail is capped out during the risk period.

I think for us, it would be part of a broader portfolio to add as an attract diversifier. Our ILS funds access the market via Hiscox rated balance sheets. The security for this is a very conservative amount of modelled of collateral but sourcing appealing diversifiers that don't drive the tail can increases the capital efficiency for investors.



Cyber risk has all the hallmarks of becoming another peak peril, if it's not already. We were talking about where ILS can grow earlier and of course new markets and new frontier risks is one area of growth ahead. I think it makes fundamental sense for ILS to continue to focus on peak perils in the reinsurance market, and cyber therefore will most likely need ILS capacity in the future.



That's what I was alluding to when I talked about it being part of a more diversified ILS portfolio, if you've got some level of capital efficiency. There is enormous potential in cyber and maybe in the future it could be a stand-alone fund strategy.



Nobody has anything against cyber as a business, it's a business that has been around for a long-time, actually, if you think about affirmative cyber. And, it's governed by the same economics as everything else, if the premium is not enough to pay more than expected losses it is a problem. But I think a lot of players in the market would agree that the accumulative nature of cyber is maybe not remunerated in the same way as for some other lines of business.

So, therefore for me, the question is, for an ILS investor for example, would there be enough margin in this business for them to be interested in the same way as nat cat. Because I think this is the core of the issue why also in reinsurance, everyone likes the business, it is growing and it is not as correlated as some other things, but, if the big event risk is not paid for, it's strange, right?



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