Artemis SIFMA Executive Roundtable 2016

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FOREWORD

Welcome to the first Artemis SIFMA IRLS Roundtable, in which our participants explore the potential for ILS features, structures and capacity to play a greater role in the evolving risk landscape and increase market efficiency.

The ILS asset class has continued to expand its global reach and depth, becoming a more significant influence on insurance and reinsurance market trends, which, has seen alternative capital claim a larger slice of the overall reinsurance market pie in recent years.

With rates in the global reinsurance industry being under pressure for some time, efficiency of both capital and business models have been at the forefront of industry discussions. Prominent executives and representatives of the global ILS space came together with Artemis to discuss the potential for ILS capacity to have a more meaningful impact on emerging, and existing risks.

Advances in technology and other market trends continue to create a wealth of opportunities and issues for global financial markets, and participants were keen to discuss where ILS could play a role in vast global exposures, such as cyber and terror.

The changing risk landscape has driven a need for improved risk modelling capabilities for both underdeveloped regions and underserved risks around the globe, and Roundtable participants were eager to explore the benefits and limitations of models, with a focus on emerging peril regions.

Furthermore, Roundtable speakers explore the potential for the ILS community to play an increased role in the world of corporates, which, could be assisted should the sector expand outside its current scope and move beyond named natural perils.

The ILS sector has become an important and influential part of the global insurance and reinsurance market, and, as the global risk landscape continues to evolve and reshape the industry, the ILS community appears willing and able to add efficiency, innovation, and capacity where it's needed most.

Steve Evans
Owner and Editor in Chief, Artemis

CLOCKWISE FROM LEFT, LEFT-HAND PAGE: Cory Anger - *GC Securities*, Kevin Mahoney - *Venbrook Insurance Services*, Brent Poliquin - *AIR Worldwide*, Susan Lane - *Tokio Solution Management Ltd.*, Steve Evans - *Artemis*

CLOCKWISE FROM LEFT, RIGHT-HAND PAGE: Jean-Louis Monnier - *Swiss Re Capital Markets*, Tom Johansmeyer - *PCS*, John Butler - *Twelve Capital*, Hilary Paul - *LGT ILS Partners*, Herve Castella - *PartnerRe*

PARTICIPANT INDEX

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Brent Poliquin, Assistant Vice President of ILS, AIR Worldwide

Susan Lane, co-Chief Executive Officer, Tokio Solution Management Ltd.

STEVE EVANS

Let's start by discussing efficiency of capital and business models. How is ILS playing into the value chain of risk through to capital, and where might that trend take the sector in the future?

JOHN BUTLER

My personal view, and I think also the view of Twelve, is that we will gain efficiency and we will improve the efficiency of the market by bringing retail distribution of risk as close as possible to the wholesale provision of capital.

Ultimately, what currently exists in the traditional market is a fairly inefficient tiering of various structures between the retail distributor, the insurance company, the reinsurer and the retrocessionaire, with everyone taking their margin from the business and some of those pretty inefficient, pretty expensive ways of managing capital into the business.

Structures are starting to be developed now, which are allowing proximity of end investor to primary risk. Twelve is certainly interested in pursuing this as an entity, and it seems that other funds and fund managers are interested in doing the same thing, however it could slowly be the end of the traditional tiered capital structure that has been prevalent for the last century or so, in this business.

JEAN-LOUIS MONNIER

I think at the moment we are seeing the limits in ILS efficiency versus reinsurance. There are times where capital markets are more efficient and can be used and certain types of products or layers. I think there's still a big place for reinsurance so far, and I can't see this changing.

CORY ANGER

At the end of the day, I think the primary hope of the introduction of the capital markets is diversifying funding strategy, lowering cost to capital. Hopefully, the lowering of cost to capital translates all the way down to the end user so that they feel like they want to better protect themselves or are not going to just retain insurable risk if they are able to or if their mortgage company doesn't require them to buy the insurance, but actually that they're actually going to better protect themselves.

JOHN BUTLER

A point that I disagree with is the comment that we're introducing capital to the market. I don't think we are; this is the same investor base that has been investing into the insurance market for years and years now. What they're doing is moving from, maybe, only being able to invest in the equity of (re)insurance groups into a much more proximate means to invest directly in the risk.

The more there is an extensive and clear understanding of particular risks which are being invested, then the more likely those investors are to bring capital to distinct types of risk, increase their potential comfort, and, therefore, increase their allocations to these classes of risk, and allow for innovation as we move along.

It's a new and more efficient route for the same end investors, the same pension funds, and the same banks.

CORY ANGER

When we're talking about efficiency, we're talking about bringing increased transparency so that people can reduce their margins. The only way that you're able to do it is to better explain the risk or 'parameterize' what the risk is that you're taking on. Otherwise, if you're not willing or able to do that, then compensation like an equity investor may be required to take the unknown risks.

Cory Anger – **When we're talking about efficiency, we're talking about bringing increased transparency**

As we start to parameterize and provide modelling risk profiles, I agree with the point, not all of the investors are new to this space, but you are asking them to incrementally take on funding opportunities, in essence, of insurance risk, whether it is via your equity portfolio or translating into a different segment within the fund manager.

Investors may be actually doing both, so they may have actually expanded the amount of risk that they're actually taking from the insurance and reinsurance industry because you've created segmented products where previously there have been more limited opportunities for them to gain exposure on the fixed-income side of the investor.

HILARY PAUL

One thing I think we've also seen develop is that with the increase in alternative players everybody has their own way of valuing risks. I think concerning risk assessment everybody has a pretty similar view of the expected loss, but what they're willing to take as a price or compensation for that risk really depends on the investor or the reinsurer.

Our capital model is different from the traditional reinsurer's capital model and how much we then can accept as compensation thus also differs. Our price for specific risks is different because of that. This is something I think we've really seen develop in the past few years, which has allowed for price efficiencies to take place - people have different values for the risk that they want to take.

HERVE CASTELLA

When looking at capital efficiency, it is important to make the distinction between types of insurance risk. With natural catastrophes, there is a clear case for capital efficiency. Institutional investors with fixed income portfolios can clearly benefit from capital efficiencies derived from catastrophe risk, which is uncorrelated to financial market risks.

In long-tail lines however, the losses are driven by inflation and other economic factors and here, the argument for non-correlation starts to disintegrate. Business interruption, for example, often found in corporate buying property covers, is a longer tail risk, not necessarily well covered by collateralized reinsurance.

TOM JOHANSMEYER

It comes down to that standard question of do we innovate to strip away another fraction of the basis point on a Florida deal, or do we bring more Florida to the table, more emerging risk as well?

I think when you look at each of these layers of – quote, unquote – 'inefficiency' in the process, it's not inefficient if that frictional cost adds value, getting more people covered, getting more companies and people protection, that sort of thing.

Tom Johansmeyer – **I think the reality is the more risk we can bring to market, the more every link in that chain earns its keep**

I think the reality is the more risk we can bring to market, the more every link in that chain earns its keep. Then over time, as the market matures, you strip away some of those layers and try to increase the efficiency, John, that you're talking about.

JEAN-LOUIS MONNIER

If we take a step back, we've come from a time where there were sometimes capacity issues, especially on US perils, where the retro market was highly inefficient because, ultimately, when you really needed capacity, it was not there.

I think when we compare where prices are today compared to some years back the ILS market is efficient.

You can improve the efficiency of the mechanism in between, but what counts is really how much capital is being provided and at what price. At the moment, I think this is fairly efficient. It went in two steps; first it was the demand for

capacity driving corresponding innovation in order to access these new pockets of capital. Now we are in a second phase, where the abundance of capital means there's a bit less innovation but more of a loosening of the terms. It's probably then a good time for buyers, but a balancing act for the market.

CORY ANGER

I think that the role of some of the intermediaries in the system has become more important as the capital funding sources have changed, because that's really what the instigator has been of alternative capital for the last 20 years, i.e. how do we fund our assumption of risk more efficiently? Now it's a question of whether there are further operational efficiencies, but I actually think it increases the role of certain intermediaries in the process.

The consumer is always going to need a broker to help navigate the market on who gives the best terms, at what price, and how to evaluate the relative value of available solutions, in the same way that you a corporation is still going to need to know that "Do I want to concentrate risk with a particular party? What are the risks dealing with that and how do I navigate with these types of entities?"

KEVIN MAHONEY

I'd like to piggyback off a few comments. One is, going back to what you had said about the buyer's market; it's without a doubt favourable to insureds right now. I think that's unfavourable for alternative risk solutions because you have a crew of risk managers, you have companies that are seeing their cost of risk transfer go down anyway, so what is their willingness to entertain a more sophisticated conversation about risk transfer? That's really where the intermediaries come into play. If you can have somebody articulate a different thought pattern of approaching a risk and risk transfer, then you're already kind of halfway there.

JOHN BUTLER

I think it was probably fair in the very, very early days in some cases to level that criticism at the ILS market, but these days it's not the case; it's just the same people handling capital in a more proximate manner. At the end of the day, that assists to increase the education of the end investor. We are questioned by investors to a degree which really they never had the ability to before if they were just an equity, or a fixed income investor into a re-insurance group, part of a much broader portfolio.

The understanding and education of risk is key, and I think it's actually not leading to more naïve capital coming to the market or a lack of service; it's leading to a backfilling of the education to the end investor.

STEVE EVANS

Going back to corporates, is this an area where the ILS community can play a greater role and what opportunities do you see here?

KEVIN MAHONEY

Edison is our large municipality that provides power for us. Any time there is a wildfire triggered, they do not have enough capacity and they go bare excess probably 250m, maybe even 500m.

The key part of that is the business interruption component of that. You have hospitals out there that are being serviced and they can't buy enough limits that make economic sense, so they are always hunting for additional capacity.

The capacity at those excess levels is becoming less expensive, so they're more open to buying it, but it's not efficient; they just don't see the reason for it. Again, if you could have backfill of an ILS excess, say 250 excess, 500m, and they could share that limit with the others, the PG&Es that are out there and the other power suppliers that are out there, it would be a no-brainer for them.

I think first party this is a no-brainer; I think the third party, though, to have investors in there with a six-year tail or just a harder way to fence in what the risk would be, the potential risk. You're on the hook for a longer period of time too, so that's really where I can't see it.

STEVE EVANS

Do people think there's a reason this has failed to happen, is it maybe an education, or awareness issue?

CORY ANGER

I think it's twofold. Having led the last three significant ILS solutions on the corporate side, as well as doing collateralised re placements with these folks, there is further integration needed.

Many times a risk manager reports into the treasury or the CFO area. The bridging of communication between these two areas, that they're not just a cost centre but this is a form of capitalisation and could be thought of within your capital planning models that, as you remove some risk for the system, do you need as much equity support to buffer you from the shocks that can happen to the system.

It's probably an education and evolution that happens within the corporates, but I'm going to be pretty frank on this point. The reality is that pricing in the corporate market, as I have seen in many placements, insurers and reinsurers had been more efficient from a pricing perspective than where the capital markets is.

JOHN BUTLER

Traditional reinsurers have Return on Equity targets, which these days they're struggling to meet. They're fighting their way down.

CORY ANGER

I understand that; I'm not saying it is for everyone, but we tend to find, even in this current market, even with pressure on equity returns, that the traditional market has continued to be efficient from a pricing perspective and there can be a gap at times between where capital markets is versus the traditional reinsurance.

I feel like we've hit a bit of a plateau at this point in the market. At a minimum, this market needs to move to all natural perils if you're going to compete within the natural perils risk transfer bucket, but then to see meaningful expansion of risk opportunities, you have to see growth into non-natural peril risk, and then eventually it would evolve into multi-line risk and potentially whole account coverage.

Many on the corporate side don't buy whole account coverage; they still buy a separate workers' comp program, a separate liability program, a separate casualty program and a separate property programme. But I think as the alternative capital market can expand – and let's just start with as simple as going to non-natural peril property risk and then expand from there – once you hit that point, you'll then tip over into the other lines.

HERVE CASTELLA

There is a natural synergy between ILS and traditional reinsurance. At the end of the day, a corporate client wants an insurer who can mitigate the various risks in its enterprise. Some of these risks can be better financed through capital market products while others require permanent capital from a rated balance sheet.

Herve Castella – **There is a natural synergy between ILS and traditional reinsurance**

Institutional investors have a variety of options available to them: they can participate as equity investors in an insurer or reinsurer, or as a fixed income investor directly in cat bonds or ILS funds. Our job as an industry is to use our expertise and deep understanding of risk, to advise which risks are best financed through equity, fixed income or a combination of the two. It's about providing our clients with coverage for all their needs as efficiently as possible.

JEAN-LOUIS MONNIER

I think at the policy level there could be potentially improvements in terms of efficiency, like is the insurance industry selling the right products to bridge the protection gap? Is it a question of offer or demand? At the moment prices are lower; why isn't there more demand for insurance protection? Are individuals and companies getting the right products? It's not really a question for all markets, but it could be that some of the ILS innovations could be used, particularly in the corporate sector.

TOM JOHANSMEYER

I keep coming back to where Kevin and Cory were a moment ago, and that really is focusing on the client side, the insured side or the reinsured side, the folks who have the risk, who would need the protection, not the capital piece of this.

I think that the key to growing our global market is going to be to go to that original insured or reinsured and find out what sorts of protection they need that aren't currently being addressed by the existing product.

If it is a casualty product, for example, going to a property retro fund is probably not going to be your answer. It's still a capital markets play, but you're taking a client need; you're filling it with the right form of capital, rather than looking at the current form of capital and saying, "How can I shoehorn this into marine liability?"

JOHN BUTLER

I think it's a structural thing as well. From my point of view the end ambition of the ILS market is not to securitise everything and produce it into a liquid format; but how you introduce that risk between the retail purchaser and the end investor as efficiently as possible.

Outside of this market, even if you look at where the general credit market is going at the moment, there are as many investors now gravitating away from the bond market into private debt; it's a move of the moment across a lot of industries.

You see institutional investors willing to invest in 10 years, 20 year-plus instruments because there's a certain return there and they feel that they have a specialist understanding of that risk and that market. Therefore, they're prepared to do it.

KEVIN MAHONEY

I think a healthy sign of the tail, the casualty or the liability component of it, the third-party pay-out, is the secondary market that's starting to hit. If the initial bond holder wants out of the risk in three years, or whatever the statutory requirements are to carry on the tail, they can trade off that risk in the secondary market.

Thomas raised a good point about how is it being underserved now. It's extremely bifurcated right now; you have your cyber coverage and how does that cyber coverage relate to your directors and officers coverage? It will just drive any buyer crazy when the claim actually hits: "Where is the recovery? We're buying this insurance, but it's not going to come through for us."

JEAN-LOUIS MONNIER

I think long tail remains tricky, unless you introduce some element of innovative structuring, some element of commutation and the ability to, if an ILS investor is not putting additional collateral if things go wrong, the ability to ultimately penalise and capture the replacement cost of the coverage for the cedent.

STEVE EVANS

What other risks, like cyber, could you see alternative capital expanding into?

JEAN-LOUIS MONNIER

I think this is an area where you have growing demand. You still have uncertainties in terms of modelling, and maybe you can touch on that, but modelling is advancing.

I see it as having massive accumulation risks, so really an area where you need ultimately additional capacity, and you will need it fairly soon. I'd be interested to hear from a modeller's point of view what is AIR's take in terms of the risk?

BRENT POLIQUIN

I guess before we go on down that road, just to hit on a point you brought up before – I don't think we'd discussed it enough, actually – was the role of technology in creating a more efficient market, the way it touches everything from data accumulation, data management. If you don't know where exposures are, there are satellites; find them.

SUSAN LANE

I think that data quality and harnessing the power of that data is essential to getting deals done and to grow the market. If you think about what Cory touched on earlier in terms of broadening the risk we're bringing to the market, so expanding territories and perils beyond traditional property cat, there are many markets that are under and/or uninsured the requisite underlying data is not there. If we can get more reliable data, we can build on that to be able to bring these risks to market and broaden our service offering and match capital with risk, which in this soft market is very important.

> Susan Lane – **Data quality and harnessing the power of that data is essential to getting deals done and to grow the market**

BRENT POLIQUIN

Being able to leverage that information provides comfort. Once you have comfort, you can make better decisions, whether that's creating better models, whether they're statistical actuarial models, or whether they're catastrophe models. To me, technology is crucial to making the markets more efficient.

Specific to cyber, yes, we're certainly going down that road; we're exploring it full bore. Managing accumulations of cyber risk is one aspect, as well as the ability to assess and evaluate the risk of individual contracts. Also, what data should you collect to use in the models to provide a better understanding of the financial implications of cyber attacks?

TOM JOHANSMEYER

I'm curious about cyber. When you look at terror, for example, that's not accidental; it's not nature, right? It's somebody making a decision to do something bad.

Cyber seems to be the same way: it's not a mistake; it's a bad guy doing a bad thing for bad purpose. How does that factor into the way you look at this sort of risk; does it change things at all at the start with malicious intent?

BRENT POLIQUIN

Yes and no. I think it's the way we're looking at it. If we think about terrorism modelling, we'll pull from a team of experts, a red team, if you will, of ex-CIA and other industry experts. They'll identify threats and they'll help you identify landmarks and identify types of technologies that would potentially lead to future terrorism attacks.

STEVE EVANS

So you adopt a similar approach with cyber, to get enough clarity around the data to make reinsurance and ILS markets comfortable?

BRENT POLIQUIN

Yes, exactly. It's more about we're approaching it from finding gaps in data and collaborating with companies like BitSight and RBS to fill in data from the cyber supply chain.

JOHN BUTLER

To differentiate cyber from terrorism, I suppose, which is a market in which we're actively involved, terrorism is a man-made peril, no question, so there are all sorts

of questions. One can observe, and one can make assumptions, and one can study, and there are experts available who can talk about the proliferation and the mind-set at the point in time, but at the end of the day, if we write a terrorism risk, we know exactly what's covered if we're writing first-party terrorism. It's a set of properties with a specific value, and we can monitor accumulation.

HERVE CASTELLA

Cyber risk or terrorism models are very useful in terms of assessing severity and aggregation of risk. Frequency is much more difficult to assess. Thus the models may be less useful for pricing.

CORY ANGER

You're predicting human behaviour; you can't currently robustly model human behaviour. You can't do it whether it is terrorism or cyber, but they can at least go off the incident record to estimate such frequency as a starting place.

I would be curious on how capital markets' investors would view cyber risk. Is it that positioning in the conversation at this point? Is there growth opportunity there, and where are their concerns?

SUSAN LANE

I would agree and support that with cyber because it is such an unknown. As more models are released I would expect we will get more comfortable with the data and I would expect more interest from Investors. One of the more immediate needs or perhaps the biggest opportunity for ILS markets in regard to cyber risk is property damage that can be caused by a cyber-trigger. For example a large pure property damage loss such as a cyber-attack on a utility plant, where cyber terrorists gain access to the systems that cause a fire or explosion. There is more comfort around that kind of cyber structure/coverage for the ILS market, as opposed to cyber coverage for systems and data security.

KEVIN MAHONEY

Before we touch upon the capital markets, I think cyber is a good example and it's a really evolving coverage. What you need to look at is really – and this is where, again, insureds get very frustrated – what triggers the claim? What triggers the event happening and then ultimately how do you quantify that?

Oftentimes the losses are now coming up six months/a year later, so it's a complicated coverage. What you have is this influx of capacity to the cyber community, but really what's the ultimate pay-out? Is it a viable – really a viable – risk transfer? What are you getting for that? As the pricing comes down, so does the coverage.

Cyber is an interesting part of it because of the evolution of the product. It's by no means to where it's going to be a year from now, three years from now, or even five years from now, because ultimately the losses are tough to wrap your arms around. Is it first party coverage? Is that policy willing to pay out the third-party component – i.e. banks?

TOM JOHANSMEYER

It could be the gift that keeps on giving, because I can steal 80 million consumer records right now, cause you reputational damage, cause you a little bit of expense on a relative basis, and five years from now I could wind up using those records.

HILARY PAUL

I think from our side, exactly to Kevin's point, that's the reason why we're watching this space, and we are not getting involved yet, because it's not defined and there are too many open questions. If it's malicious, is it then terrorism or is it cyber? There is too little specification contractually and legally at this point.

STEVE EVANS

From the modeller perspective then, Brent, are you focusing more on the property damage, or is it more the cyber attack side currently?

BRENT POLIQUIN

Yes, that's the model being built right now. Actually, I was going to write down that point down about the property; I then thought of that. To put it back on Cory's questions that still remain open. I'm excited to hear your answers.

My understanding of the value proposition of ILS funds is that you offer to the money a diversifying fund, of sorts. To the extent that you involve cyber into your risks that you manage, are you then further correlating yourself with more traditional asset classes?

JOHN BUTLER

I think that the base point is not the correlation at this point; it's the fact it's an uninsurable risk, given the level of data that we have in the market. I think, honestly, it's a mark of desperation and softness in the market that people are even offering capacity for this at this point in time.

The thing that's lacking for me for now, particularly for third-party elements of cyber but really across the board, is any ability to track any form of accumulation whatsoever. As a collateralised market, we could offer something which has a

collateralised backstop, so we can quantify the total sum insured. I think on a more leveraged basis I'm petrified of the concept of broader quota shares, particularly of this type of risk, which don't really have a capacity cap associated with them if there's no way to monitor underlying accumulations.

Yes, with a level of education, it should be an insurable risk one day if we know more, maybe, but we don't have that information. Yes, all of the technological improvements should carry on. It's a need; it's a need that the consumer has, so we should, as a market, be able to do it, but we've got to understand it, be able to price it and stop taking a fly on this.

John Butler – **I think, honestly, it's a mark of desperation and softness in the market**

I'm curious. When you talk about severity on what's in this liability stuff, like cyber, like D&O, is the appetite for the really severe stuff, the really remote stuff, does cover become relevant at that point? Are you only looking to assume risks so severe that, if there's a loss, the original insured won't recover anyway?

Two points to that. I think, one, to your, the non-correlation part of this, it's extremely profitable business. We run composite ratios with all of our carriers and by far they're winning the bet, especially in D&O carriers, so it's extremely profitable from the insurer perspective.

Would you agree with that necessarily? Again, your question ultimately was: what else can we pitch besides the non-correlated aspect of the risk? The other one would be the profitability of this space, without a doubt.

Correct. I think there are lines of businesses that are man-made exposed and let's not just look at fire; let's look at property liability risk just in a corporate market, not even D&O. It's highly profitable. You get a couple of severity events that can cause loss individually, but generally over a long term they're very profitable businesses; it is a question of when you get into the scenarios of the losses.

I think there's tremendous profit in the system for some of these risks; it seems that we've slowed (and/or stopped) at named natural perils right now.

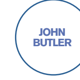
So what techniques are going to help the ILS market expand beyond the named natural perils?

But sometimes, actually, a defined peril actually works quite well. If you take the example of parametric triggers, they were initially used and developed, actually, by the ILS market and used by reinsurers mainly to access protection. It's interesting that now they are being more and more used by corporations as an alternative to business interruption cover.

I think we all look at parametrics as, yes, clean, smooth, fast, but I think, especially looking at Mexico this year, a little more structure – and I've talked about it, I think, a bit – around how the reporting agent works in that context I think would be parametric 2.0. I think that really would be the next logical and necessary step in advancing that market, and then really supercharging how it grows the pie.

So could parametric or index triggers be a potential solution for new types of risks like cyber, or perhaps terror?

I would think the cedent would need to feel comfortable with what it's actually protecting. I'm not sure how one could do that just yet.



You need enough data to price that trigger as well, which I think is also missing from cyber.

You just need to make sure you've got enough reporting discipline and consistency around a parametric.

We're looking at parametrics for terror right now. I think if you kind of reimagine how you look at a parametric, if you're thinking building destruction, or blast size, or some sort of physical measure of destruction, that doesn't necessarily work as well for something like cyber or terror. On the terror end what we're looking at are things like, obviously, location of a perpetrator group, incident or weapon type, obviously casualty count and fatality count.

If you look at the parameters of an event, be they terror or cyber, and wrap them into a view of the event, that could then be used as a trigger or a partial trigger. I think you overcome a lot of what the barrier has been so far. In addition to having the trigger, you're kind of defining the sort of event you're trying to secure protection for, which provides opportunity for some sort of scenario modelling or something more sophisticated.

It was used on a similar mechanism; it was used on aviation, on a few transactions where the index value depended on the number of fatalities and the nationalities of the carrier and individuals.

Yes, I think that's a solid first step in that space, and I think terror you could actually move in as well. If you're looking at 10 fatalities, minimum 20 casualties, it's an ISIS triggered incident involving 3 coordinated RPG attacks in 3 cities, you can understand the damage that does and you can understand probably the BI and the CBI that comes from that. You can start to build something from it. It's not going to be perfect; you're accepting some basis risk, but you're getting protection where you had none.

JEAN-LOUIS MONNIER

What could be the role of ILS investors, service providers, and the ILS community ultimately, in increasing demand? I am asking this, because to me, this is also a demand issue. I think it's likely, when you see periods where you have increased need for protection; it tends to be after an event where you have a reaction.

It would be good, though, if then there are certain areas where we know that the market is under-covered. You mentioned, Kevin, California. It would be good, though, that the level of awareness – I think we are dealing with sophisticated buyers – be such that there is a move, a push for more protection before an event takes place.

KEVIN MAHONEY

Talking about your parametrics that would be a really simple way to cluster the risks, right? You have the epicentre in a certain place, there's magnitude, and really the modelling would justify all of that, or could support all of that.

It's getting there, more importantly, to the comfort level of the buyer to where you could say, "Here are the parametrics of the risk." If it hits downtown LA, or if it happens to hit San Diego or San Fran, and it hits this radius and so on and so forth, then the bond will be triggered.

I think that will be very appealing to buyers out there, particularly if you can take a lot of the claims adjustment afterwards, because what happens then is what we call 'surge demand'. You have everybody wanting to get in there and repair their buildings quickly. Therefore, it's going to be more expensive, materials are going to be more expensive, so we try to build that into the modelling somewhat.

The potential coverage is there, depending on what your risk is. So, it really depends on the buyer, but it would definitely be something that people would be interested in California to buy. That is an extremely underserved market right now, as well as wildfire; wildfire is what they cannot get coverage for.

TOM JOHANSMEYER

I like what you've laid out here, because it really explains what we should be doing to grow the pie. It's like, "Go talk to your client, find out what your client wants, build the solution for your client." You don't have to wait for an event if you've got that sort of committed client relationship which, if you're providing any sort of frictional cost to the process, that's how you justify the fee. You're no longer frictional; you're enabling.

HILARY PAUL

I think this is exactly the kind of risk that the capital markets are there for. If it's somebody (a large, established corporation) like Edison, and if you can employ a parametric trigger, California earthquake is obviously a risk we're not going to have too much conflict with it. Edison may also have some experience from Northridge, and the impact of that event; thus, maybe they can deal with the parametric trigger and are more likely to understand their basis risk better than other companies.

Hilary Paul –
This is exactly the kind of risk that the capital markets are there for

JEAN-LOUIS MONNIER

It's also a question of incentives to buy coverage. If you look at the insurance industry, there are regulatory and rating capital incentives. After Katrina: changes in models, and also the rating agencies created a need for capacity as insurance companies had to buy more coverage.

If you consider more the retail side in California, for instance, I believe 12% of homeowners have earthquake insurance. Then the question is who actually holds the risk? Obviously, homeowners have a portion of the risk, but even if they bought coverage, how much retention would they have? If they have a mortgage, ultimately a lot of the risk initially lies with the ultimate lenders.

CORY ANGER

It's federal government, because that is the lender of choice now. Then we've got the US government and the business of regulating property insurance.

Flood is a great example. Then you have a tension between local state and federal government, whereas you've got a provider of capacity who can't control where and when housing is built – and is it appropriately built? – but is offering such insurance at subsidized rates that are lower than what, as I understand, is lower than actuarially sound rates.

Really, it's a political and legislative issue on where to take this forward, and I think it's one that's going to get exacerbated. I think that's the opportunity for the insurance and the reinsurance space, because, with every tax dollar increasingly

going to pay for entitlements, we don't have the budgetary wherewithal to deal with the volatile nature of these types of insurance losses.

HERVE CASTELLA

Flood insurance is an area of growth internationally, not only in the US. In Canada for example, the Québec government has been paying for uninsured flood losses on a regular basis and is looking to the insurance industry for a solution.

JEAN-LOUIS MONNIER

I think this is an area where brokers or insurers can help in raising awareness of the risks.

Whether it's at federal level in the US, or outside the US in countries, where sudden events would severely impact the economy, and really put forward the benefit of pre-event protection versus post-event financing and who would bear the cost after an event.

I think the degree of awareness of where the risk lies is sometimes not that great, along with the available options to bring in the private market. Once again we may be in a situation where it takes an event for things to change, but I do think that we have a role to play in terms of raising the awareness.

TOM JOHANSMEYER

Sometimes it's an event, sometimes it's momentum. We don't have to wait for the event to hit before we respond to it; if you've got the right story put together, the right value prop put together, you can get an audience with the right folks and you can make change happen.

CORY ANGER

When you look at what the World Bank efforts – and I applaud them – for example, they were a key contributor in getting the Turkish Catastrophe Insurance Pool set up by working with the Government of Turkey and separately establishing their capital at-risk program. They have recognised one of the biggest disrupters of the effectiveness of their financing is natural peril risk. While we want to go beyond natural peril risk, the World Bank's efforts are a textbook example of where there can be great opportunities to help sovereigns around the world more effectively use alternative capital to manage the impact of natural disaster risks to their countries.

HILARY PAUL

I think, the biggest problem there is on the demand side. I think the capacity is probably available - from the traditional reinsurers and the capital markets. There's probably capacity available; the difficulty there is these cedents / government entities finding the budget to buy the insurance cover.

HERVE CASTELLA

It is important to look at the drivers. By better understanding the risk we can help broaden the cover and provide the right price to a client. As an industry however, we must be wary of broader coverage as a result of market dynamics such as excessive competition. In these cases, we need to push back whether as a fund manager, insurer or reinsurer.

JEAN-LOUIS MONNIER

I think that with the tools that were created, if you look at the last 10 years, or even more, 10 to 15, capacity was found – sometimes at a price, but ultimately the market grew tremendously after Katrina, and then again also in recent years.

More recently, interestingly, the market continued to grow at a time of tightening spreads, but that was a question of relative value and relative attractiveness, and the fact that the market had demonstrated its ability to perform as a non-correlated asset. I'm convinced that the ILS market would be able to respond to further demand growth.

When you consider that the ILS market, which is complementary to reinsurance has been readily available, flexible and scalable – sometimes at a price – and has provided the industry excess capacity when most needed. Here we talk about real efficiency. When demand grows, sending more of the risk away to capital markets makes a lot of sense, rather than raising equity capital. So, it's likely that, as demand for capacity grows, the ILS market would grow in a greater proportion than reinsurance.

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