

Bermuda: Re+ILS

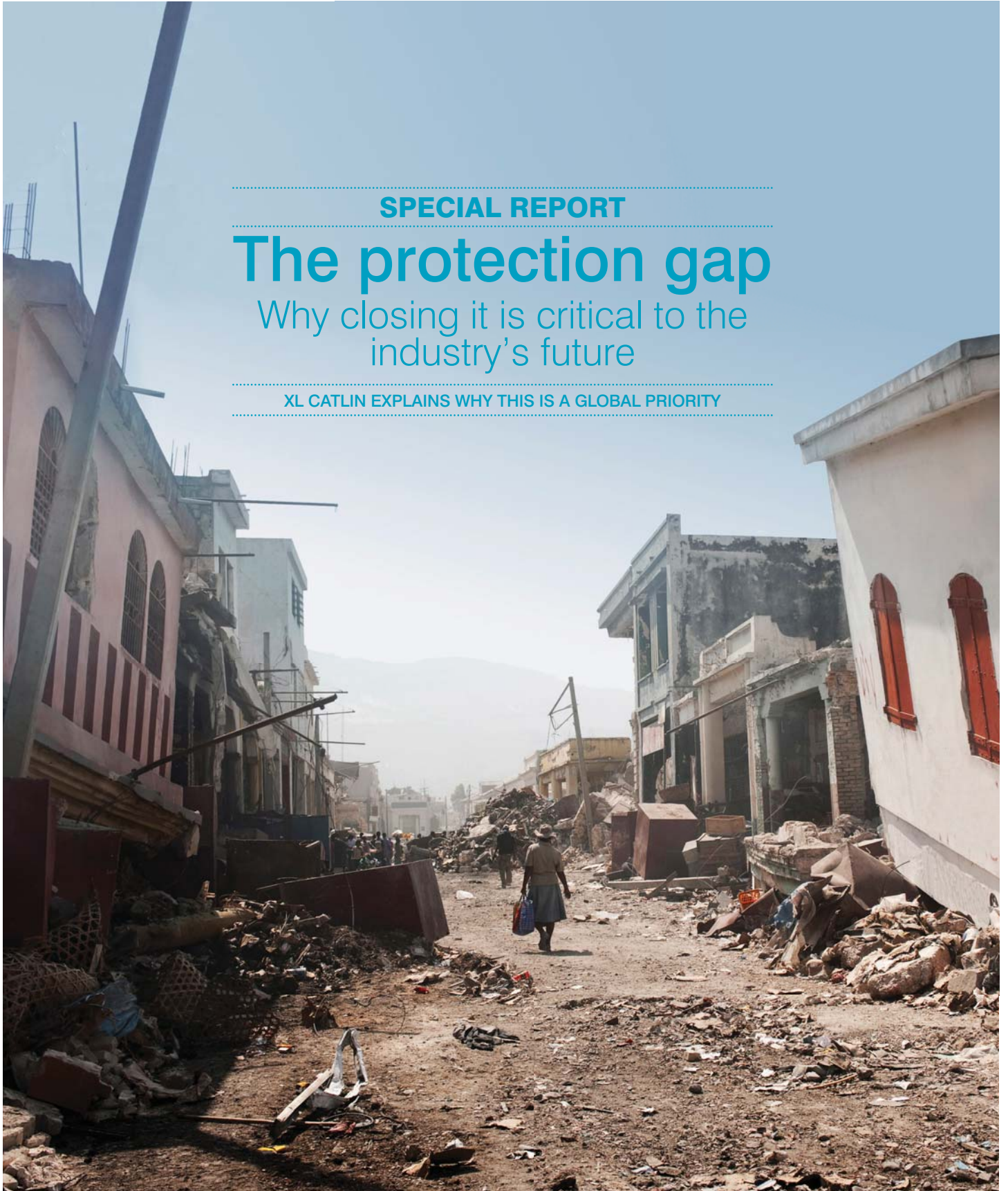
GLOBAL RE/INSURANCE AND ILS FROM A BERMUDA PERSPECTIVE

SPECIAL REPORT

The protection gap

Why closing it is critical to the
industry's future

XL CATLIN EXPLAINS WHY THIS IS A GLOBAL PRIORITY



Bermuda:Re+ILS

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Bridging the great divide

This special report examines one of the biggest challenges facing the insurance industry and, more broadly, the world—the great divide between economic losses and insured losses, commonly called the protection gap.

In a world fraught with ever evolving risk, including frequent catastrophic events, an industry offering protection in the form of insurance products and solutions should be attracting increased interest.

However, according to the Insurance Development Forum, it is estimated that 70 percent of economic losses from natural hazards remain uninsured and in middle/low-income countries, the uninsured proportion of economic losses often exceeds 90 percent.

Globally, there were 327 disaster events in 2016, of which 191 were natural catastrophes and 136 were manmade. In total, the disasters resulted in economic losses of \$175 billion, almost double the level in 2015. Of that total, only \$54 billion were insured losses.





“The widening protection gap is a global issue that cannot be solved overnight or by one individual company or group.”

In some of the places most prone to regular disasters, such as parts of Africa, Asia, and Central America, insurance barely exists. Year after year governments, businesses and residents in these places are faced with enormous economic losses as manmade and natural catastrophes strike.

Perhaps more surprising than this is the fact that millions of people in some of the most developed parts of the world, including the US, choose to go without insurance coverage.

This special report examines one of the biggest challenges facing the insurance industry and, more broadly, the world—the great divide between economic losses and insured losses, commonly called the protection gap.

In the report, some of XL Catlin’s leading experts frankly discuss this growing problem, and what is taking place and still needs to be done to address it.

They highlight how and why XL Catlin is taking a strategic approach that includes committing time, funding and resources to the issue and participating in government-sponsored insurance pools covering a range of risk. The company is also working with Cambridge University on a two-year study to understand and quantify the impact of insurance penetration on a country’s recovery time from a disaster.

While XL Catlin is actively involved in a variety of initiatives in pursuit of solutions, those featured in the report all agree that the widening protection gap is a global issue that cannot be solved overnight or by one individual company or group. They stress that it will take the continuing collective effort and will of a broad group, including those in the industry, governments, academic world and beyond.

The insights shared in this report are timely. The impact of Hurricane Harvey in the US underscores the importance of insurance and the severity of the protection gap. Early reports by RMS have projected overall economic losses of up to \$90 billion, of which the majority will be uninsured.

With more of the best minds and resources sharply focused on the importance of closing the protection gap, it is to be hoped that the disparity between economic and insured losses will shrink significantly before the next major disaster. ■

The protection gap: working with governments

XL Catlin's expertise and resources are being channelled into the development of a coherent strategy to help understand and close the protection gap and make a significant difference to the lives of the world's most vulnerable people.

Jonathan Gale, chief executive, Bermuda Reinsurance and managing director at XL Catlin, is passionate about the issue of the protection gap as he understands just how much the risk transfer industry could help developing countries' populations and their governments prone to costly natural disasters.

After seeing the aftermath of Typhoon Haiyan which devastated the Philippines in 2013, Gale was moved to write to ministers in the UK government and its Department for International Development (DFID) to suggest a shift in focus by such bodies and aid agencies. Instead of simply releasing funds post-disaster to help with clean-up costs, Gale proposed that efforts instead be geared to pre-disaster risk mitigation and risk management strategies.





“For the reinsurance industry to play a significant role in rebuilding impacted communities to a higher standard is an enticing prospect and one we think worth pursuing.”

"I felt we had to do something. The historic reliance on post-disaster financing led to delay in funding and uncertainty about the amount because of reliance on the public and governments. The ability to pre-plan and also to deliver substantial funds quickly seemed to me to be missing and as a consequence the same stories of inefficiency and waste were repeated over and over in the news media," he says.

"Our business is built on pre-disaster financing with a well-won reputation for building meaningful capacity (the world's largest catastrophe programmes are in excess of \$6 billion) and when there is a claim we pay quickly, as has been seen time and again.

"Initially I thought the emphasis should be on logistics—water, blankets, temporary housing—but the aid agencies are excellent in this area and they just want money, plenty of it and quickly so they can do their jobs, save lives and make a miserable situation better."

The idea was really fourfold:

- 1) A shared aggregate across named countries with a limit scaled to magnitude of disaster. By sharing limits between countries, the amount of reinsurance capital at risk would be reduced and the combined premium charge from multiple, uncorrelating events and countries would generate a significant enough balance to ensure the world's reinsurance markets were interested in providing substantial capacity.
- 2) Parametric trigger: the buyers of these contracts would most likely be governments or municipalities without insurable interest in the underlying assets but with a high level of duty to provide essential subsistence to the populations they served.

This would also allow companies to access more easily alternative capital providers such as XL Catlin's affiliated investment manager, New Ocean Capital Management (NOCM), to help build capacity.

- 3) Develop a system of trusted or accredited third parties to ensure:
 - a. The reinsurance market was both fair, and seen to be fair, in its pricing of risk. Understanding low frequency/high severity event pricing is not easy and external validation is needed to ensure that counterparties understood the pricing and profitability in advance of any transaction;
 - b. The body or bodies who established and measured the event for the parametric trigger were well respected, eg, RMS, AIR and others; and

c. The funds released by the reinsurance market following an event were used appropriately

- 4) The beneficiary governments/countries would agree to enhance rebuilding codes to ensure greater resilience and also develop a comprehensive disaster recovery plan to include risk mitigation strategies in readiness for future events.

"The concept is that we would make available substantial capacity with speedy claims payment tied to a well understood and validated trigger with the goal of helping people recover more quickly and their housing built to a better standard than before," says Gale.

"No-one wishes for losses, but for the reinsurance industry to play a significant role in rebuilding impacted communities to a higher standard is an enticing prospect and one we think worth pursuing."

Working with governments

It has been clear for some time that climate change has been affecting the world's weather patterns and the impact has been most keenly felt in the developing world and in populations unlikely to buy insurance. The losses sustained by the reinsurance market in places such as the Philippines, Haiti, Bangladesh, are negligible. The same is true for earthquakes in countries such as Nepal or the countries impacted by the Boxing Day tsunami in 2004. Even in developed countries the amount of loss covered by insurance is unlikely to exceed 50 percent.

Insurance is still a low priority in the hierarchy of needs of populations in developing economies. The shift in demand has to come from responsible governments partnering with the reinsurance community and bodies such as the World Bank, or government departments such as DFID.

"We are conscious that as one of the world's largest catastrophe reinsurers we need to approach head-on the issue of the insurance gap and working with governments," says Gale.

"To this end, we have established a small group within XL Catlin combining expertise from enterprise risk management, insurance and reinsurance underwriting, regulatory, emerging markets and research and development (R&D).

"Its aim is to tie together all the various disciplines and initiatives worldwide and provide focus to XL Catlin in this important and growing area."



“We are determined that XL Catlin will lead the way in helping to close the protection gap.”

This group is already involved or represented in several projects, including the Insurance Development Forum (IDF) of which Stephen Catlin is currently co-chair. The IDF was formed in 2016 with the aim of pooling expertise and resources to help close the protection gap and to work side by side with the World Bank and governments.

DFID, led by Priti Patel, has announced the formation of the Global Centre for Disaster Protection, which provides funding to leverage UK risk analytics, science, insurance and reinsurance expertise and innovation to help developing countries with disaster planning. In addition to the IDF, Lloyd's of London, XL Catlin and prominent managing agencies have created the Disaster Risk Facility (DRF) at Lloyd's.

The DRF provides meaningful syndicated capacity drawing on Lloyd's well-established network of country offices and managers, all of whom have ready access to ministries of finance and are ensuring the work is visible and understood. The beauty of a syndicated approach in developing markets ensures that no single carrier is adversely impacted by an event, thereby guaranteeing a more resilient product for the future.

Current efforts

Specifically regarding research and development, XL Catlin is actively working on two areas:

1) Compiling a comprehensive catalogue of the world's government-sponsored risk pools. XL Catlin already has significant involvements throughout the world but it is determined to use its institutional intelligence to demonstrate what works and what doesn't; how risk pools are funded; the coverages they offer and the reinsurance they buy.

The aim is to push this work out over the next year to highlight best practice and hopefully ensure the new pools of risk benefit from lessons learned from the old ones.

2) Building on XL Catlin's long-term relationship with UK-based University of Cambridge's Centre for Risk Studies, a two-year study has been commissioned to understand and quantify the impact of insurance penetration on a country's timeliness to recover from a disaster. By looking in detail at a significant number of worldwide case studies, the aim is to talk to governments with more certainty on what insurance penetration means to the populations they serve.

It aims to show, through scenarios, how quickly the country would recover at the current level of insurance penetration and how quickly they would recover at enhanced levels. This work on government-sponsored insurance pools, could help shape the size and operation of future pools.

The political and social stability following an event to understand the impact insurance penetration has on society will also be studied.

“XL Catlin already has a significant participation in government-sponsored insurance vehicles from terror, earthquake, wind, flood and increasingly financial risk,” says Gale.

“In the developed world, we are seeing an increase in demand from governments to export specific risk for their country to the world's reinsurance markets. It's a trend we see continuing but we need the developing world, with assistance from the developed world, to start exporting their risk as well.”

He describes XL Catlin's motivation for wanting to make such ideas a reality as “a mixture of corporate social responsibility and business development”. He believes that the company has a moral obligation to help given its expertise and that the sale of more insurance and reinsurance in low penetration markets would be a good thing for the industry.

“Given the relatively small insurance loss from so many disasters in places like the Philippines, Haiti, Cuba, Nepal, and even in the developed world, we could, in the foreseeable future, shift from thinking we are overcapitalised as an industry to being undercapitalised. We are determined that XL Catlin will lead the way in helping to close the protection gap,” he concludes. ■

Closing protection gap: the right thing to do

XL Catlin is well positioned to make a big difference in tackling the protection gap globally. This would be good for the company but it is also the right thing to do, says Charles Cooper, chief executive, Reinsurance at XL Catlin.

The key to tackling the protection gap will be innovation, which is partly why XL Catlin is so focused on making a difference in this space, says Charles Cooper, chief executive, Reinsurance at XL Catlin and a member of XL Group Ltd's leadership team.

"Insurance in developed countries is a very mature, slow-growing business. In emerging markets it is a much higher growth business, driven by an increase in the penetration rate of insurance. Given our innovative origins, we believe XL Catlin is well positioned to help close the insurance gap, but the problem is too great for any one company to solve on its own," he says.

"We are looking to work with governments, policymakers, other insurance and reinsurance companies to help increase the take-up rate for insurance around the world in both developed and developing countries."

He notes that the company is also uniquely positioned because it has an insurance and a reinsurance platform. The insurance gap is an area of business where there can be growth opportunities for both sides of XL Catlin's business.

"Beside all this, it is the right thing to do," Cooper says. He notes that XL Catlin is working with University of Cambridge in the UK on a paper looking to illustrate how following a disaster, areas with a high take-up rate and utilisation of insurance have a quicker rate of recovery than those with a low take-up rate of insurance.

"It is much more effective to have pre-disaster event financing than post-disaster event financing. The latter can drag the growth rate of an economy or region down following a major event," he adds.





Not just developing markets

Cooper stresses that, although it is largely associated with developing markets, the lack of insurance is far from exclusive to them. In California, for example, the take-up rate of homeowners' insurance for earthquake protection is around 10 percent. "Therefore 90 percent of California's homes go without any earthquake protection at all. It is the most egregious example of the protection gap in the developed world," he says.

He adds that the National Flood Insurance Program (NFIP) in the US has seen a steady decline in take-up rates over the past decade. Properties in high-risk flood areas with mortgages from federally regulated or insured lenders are required to have flood insurance and under Freddie Mac/Fannie Mae rules any house on a flood plain must carry flood insurance—but the current estimate is that only 53 percent of those homes actually buy that insurance. "That's another big gap," Cooper says.

He offers another example. In Japan after the 2011 Tōhoku earthquake, the estimated insured loss was about \$30 billion. The total insured loss and the economic loss was somewhere between \$200 billion and \$300 billion, depending on whether you exclude the nuclear event at Fukushima. "Clearly there are huge gaps in the developed world, such as these in the US and Japan," Cooper says.

He explains that the developing world is driven by a slightly different dynamic: the low insurance penetration rate—insurance premium divided by the GDP of the country—is the biggest challenge. In India it is less than 1 percent, more like 0.5 percent. In the developed world this varies by country, but it's typically between 4 and 5 percent.

"There's a huge opportunity in India and we've just opened an office in Mumbai," he says. "The growth rate in the emerging markets is around 5 percent per year, versus growth rates that are pretty much stagnant in the developed world."

Worse not better

The problem is also getting worse where you might least expect it, Cooper adds. Total gross written premiums as a percentage of GDP in the developed world, including the US, are dropping.

"That tells you that insurance is becoming less relevant in the global economy. The insurance industry should worry about this, because it is a problem that's getting worse instead of better," he says.

"We look at this huge opportunity where the insurance penetration rates are very low, and in some places where they're getting low. We believe that insurance is the most effective way to provide financing for these types of events."

He says the reasons for low insurance penetration—and thus large protection gaps, vary widely.





“The problem is that the insurance gap is on such a great scale that it requires a broad approach.”

“In some places insurance is not a cultural norm. There are economic reasons. In some places it’s just not affordable, and there are also governmental, regulatory reasons. In certain countries, there are classes of business that are required, such as workers’ compensation in the US which is mandated,” he notes.

Another reason is that there are many perils for which the government steps in and assumes all the risk. “There are numerous examples, but we are starting to see that it is driven partly by innovation, and partly by the emergence of alternative capital into the insurance space,” Cooper says.

That has reduced the cost of risk transfer to the private market. However, governments are starting to retain less risk than they used to, and they are starting to transfer some of the risk back to the private market. One example of this is the NFIP, which has just bought some reinsurance.

“That’s a very good thing for a lot of reasons,” says Cooper. “Any time the government gets involved, politics can trump sound economic decisions which is one of the biggest reasons that governments don’t make good risk-takers.

“The other important reason is that insurance can act as a powerful financial disincentive for irresponsible behaviour. Risk-based insurance premiums will penalise people who participate in high-risk activities.

“For example, if you’re a bad driver you’ll pay a high insurance premium. If you’re a good driver you’ll pay a lower premium.

There’s a societal benefit to that—insurance is charging the bad driver more.

“It’s the same thing if you build a house that’s on a flood plain, or right on the coast. You should pay a higher premium than the person who has built his house 400 feet above sea level.”

An industry-wide solution

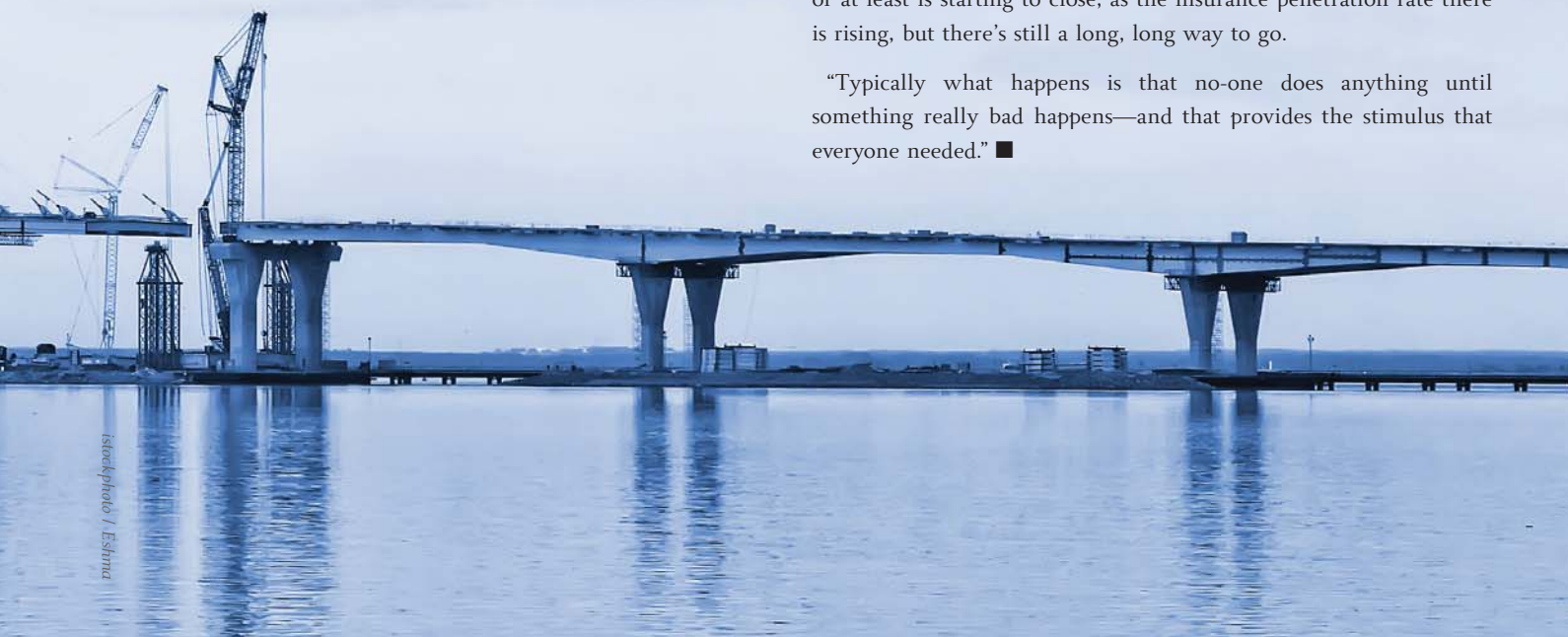
Cooper is optimistic about the industry’s ability to reverse this trend for the benefit of all. The key is that the industry works together and pools expertise, talent and capital.

He believes reinsurers, brokers and governments all have an important part to play in solving this problem. “Quite often it’s a broad group of people who get involved, including consumer advocates and special interest groups whose interests are aligned with re/insurance companies. There are opportunities for the industry to work with a broad range of groups: governments, the Insurance Development Forum (IDF), and the World Bank,” Cooper says.

“The problem is that the insurance gap is on such a great scale that it does require a broad approach. No one insurance or reinsurance company is going to solve it and it’s not going to be solved in the short term. This will take a continuing push.”

He adds that the challenge is not just about closing the gap. It’s also about making sure that the gap doesn’t get any wider. “It is getting wider in places—the insurance penetration rate is going down in many developed countries. In the developing world the gap is closing, or at least is starting to close, as the insurance penetration rate there is rising, but there’s still a long, long way to go.

“Typically what happens is that no-one does anything until something really bad happens—and that provides the stimulus that everyone needed.” ■



A photograph of a disaster site, likely after a hurricane, showing a large pile of rubble including broken concrete, wood, and debris. A person in a bright orange protective suit is visible in the upper center, working amidst the wreckage. A green tarp is partially visible under the debris. The scene is chaotic and shows significant structural damage.

Better working together

The efforts of the Insurance Development Forum epitomise the increasing understanding that the best way to address the global protection gap is through collaboration, says Fielding (Fid) Norton, deputy chief enterprise officer and managing director at XL Catlin.



Some of the most influential players in the risk transfer world globally have realised that they cannot reduce the global protection gap on their own and that their best chance of making a difference lies in a strategy of partnering with governments, NGOs and industry peers for the common good.

That is the view of Fid Norton, deputy chief enterprise officer and managing director at XL Catlin, who is heavily involved with the Insurance Development Forum (IDF), the body formed in 2016 with the aim of pooling expertise and resources from the industry, the United Nations, the World Bank, and others to help close the protection gap, thereby helping developing nations globally.

XL Catlin, as this report demonstrates, has identified closing the protection gap and focusing resources on this aim as one of its umbrella strategic objectives. On this basis, it is a big supporter of the efforts of the IDF with executives such as Norton very much involved in its activities.



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“Having formally met for the first time in mid-2016, the IDF is now crystallising its objectives through a number of different projects and objective strands,” he says. At its last meeting in April 2017 the IDF’s steering committee, chaired by Stephen Catlin, set out some of its aims and objectives to members.

“One of its main goals is to get some 400 million more people insured by 2020. That is only three years away and, as such, it is quite a target,” Norton says.

“The IDF’s aim is to help and support people in vulnerable economies and get them benefiting from insurance capabilities in any way we can.”

Strategic aims

This goal will be achieved through the delivery of several strategic projects. The biggest is a ‘top-down’ approach advising governments in the form of a Technical Assistance Facility.

This effectively takes the form of a pool of expertise and resources (most of whom, including XL Catlin, are giving their time and advice for free) which can be made available to governments in need of help and advice around how they manage—ie, identify, measure, mitigate, protect against and insure—large-scale natural catastrophes.

Funding to help this body’s efforts was recently announced by the UK’s Department for International Development (DFID) and Germany’s equivalent. The body will target holistic solutions for governments, encompassing both risk mitigation/management and risk transfer solutions.

Norton explains that during the April meeting of the IDF, the steering committee made the progression of this body and its efforts a strategic priority and a near-term focus for members.

“It will be demand-led to a certain extent,” he says. “Governments will be able to request assistance on risk management, mitigation and also the insurance side of things and we will help them to understand, quantify, and manage their risk.”

Other companies involved in the initiative include Swiss Re and Willis Towers Watson.

“The aim over the next two or three years is to complete projects that genuinely help governments to reduce the economic and



“The IDF aims to help and support people in vulnerable economies and get them benefiting from insurance capabilities in any way we can.”

humanitarian impacts of large climate-related natural catastrophes and also to design insurance solutions that help the recovery process after an event,” Norton says.

He also notes that the groups participating in the initiative include humanitarian groups, some of which are starting to understand that they could be better served investing resources in developing economies before a large event, thereby mitigating its impact, rather than simply focusing on helping after a catastrophe occurs.

“Some humanitarian organisations are increasingly willing to flip the use of money into risk management solutions as opposed to post-event relief and clean-up efforts. This willingness to help with funding can help close the affordability gap for risk transfer solutions.

“It is not always attractive to consider paying up front for something that has not happened yet but that can be a much better approach,” Norton says.

Of the 400 million target the IDF has set in terms of the number of individuals it wants to help globally by 2020, this top-down approach is tasked with achieving threequarters of that.

More microinsurance

A second strand of the IDF’s efforts is designed to focus on the development of microinsurance globally. This is tasked with helping 100 million people by 2020.

A working group looking at the issue includes the CEOs of the International Cooperative and Mutual Insurance Federation (ICMIF) and Blue Marble Microinsurance, a specialist in this space of which XL Catlin is a founder.

Norton explains that the aim of this group is to encourage and help accelerate microinsurance projects globally, helping them grow and achieve their stated aims more quickly than they might otherwise have done.

A final initiative that Norton has been involved with is the firm seeking a way for risk modelling platforms and technology to be made freely available to the scientific community via an open source platform—something that would allow them potentially to develop and share risk models for perils and countries not previously covered by such technology.

“This would potentially leverage the work of academics for the common good,” Norton says. “Many countries have risks that remain largely or completely unmodelled and this may go some way towards rectifying that. It is early days for this initiative but I am optimistic about the difference it could make.”

Before he joined the insurance world, Norton was a scientist whose PhD research was in earth and planetary sciences with a focus on the climate system. He believes that climate risk, as he calls it, is an increasingly important issue for the risk transfer industry.

“We talk about climate risk as opposed to climate change because the climate system is becoming more unpredictable and that means the uncertainty, or risk, is increasing. It is our industry’s job to help the world manage risk and that means we need to understand climate risk and ensure we have the ability to respond,” he says.

He stresses that the work of the IDF is important if the risk transfer industry is to remain relevant in the world. Central to this is closing the protection gap which, he says, is different from the insurance gap since it can also be addressed using risk mitigation measures.

He notes that collaboration is the best way of tackling what is now a global problem. “Many companies have realised that, after years of trying to make a difference on their own, the protection gap has actually increased. Collaboration and working together is our best chance of making a real difference in the long term,” he concludes. ■



Creating regulatory capacity

Key to ensuring that efforts around closing the protection gap deliver tangible results in the real world will be educating and working with regulators to help and encourage them to embrace and enable risk transfer strategies and outcomes, says Sean McGovern, managing director, chief compliance officer and head of regulatory & government affairs at XL Catlin.



istockphoto / Alasdair James

Sean McGovern, managing director, chief compliance officer and head of regulatory & government affairs at XL Catlin, is the former general counsel and chief risk officer at Lloyd's of London. Although he is relatively new at XL Catlin, the issue of the protection gap has been on his agenda for a long time thanks to his time at Lloyd's and he makes the point that it is essential to engage and work with regulators around the world.

Coining the phrase 'regulatory capacity', McGovern believes that the risk transfer industry must focus on helping governments in countries vulnerable to large natural disasters understand the different types of disaster mitigation techniques and risk transfer that can be available. Only by doing this, he says, do schemes such as those proposed by the Insurance Development Forum (IDF), the body formed in 2016 with the aim of pooling expertise and resources to help close the protection gap, stand a realistic chance of success.

"I was involved in work of this nature while at Lloyd's and this is an issue the industry is increasingly focusing on. My role working with governments and regulators is particularly important in helping to close the protection gap.

"This is a global problem faced in developed and developing economies but clearly certain economies are more fragile than others. The best approach is where industry partners with governments. That leads to the greatest success but the importance of regulation cannot be underestimated," McGovern says.

There are several ways regulatory capacity can be developed, he argues. One is through dialogue with the International Association of Insurance Supervisors, which is very engaged in helping build good regulatory frameworks and structures globally.

Another is through the work of the IDF, which has working groups looking specifically at this issue and how to make resources and tools available to countries that need them.

"In an increasingly protectionist world, it is especially important that bodies like the IDF tackle this issue with regulators and explain the methods by which the true power of insurance and reinsurance can be harnessed," McGovern says.

"Protectionism is counterproductive when it comes to risk. It is in the interest of most national economies to spread the risk out into the international reinsurance industry. Closing the door on what the international risk transfer world can bring is not in their interests. Countries such as China and India have taken steps to open up but this remains a problem in some places."

He says that on a day-to-day basis he is in dialogue with regulators while also working through trade associations, including the Reinsurance Association of America and the Association of Bermuda Insurers & Reinsurers, to help articulate the vision of "what good



“Protectionism is counterproductive when it comes to risk. It is in the interest of most national economies to spread the risk out into the international reinsurance industry.”

regulation looks like” and the benefits it can bring to economies and populations.

A good example of what can be achieved is the African Risk Capacity, the risk pool in Africa established by the African Union, with the support of the UK and German governments, which is designed to cover severe catastrophic events in the region.

“It shows what is possible when governments and industry work together,” McGovern says. “It is about helping and educating nations to understand what they do to ensure economies are resilient and build contingency planning. Insurance has an important role to play in support.”

He notes that money from the UK government’s overseas aid budget has been used to form such programmes, illustrating the point that aid money can be deployed to build resilience and encourage insurance capacity rather simply responding with international aid when disaster strikes. The African Risk Capacity insurance pool has paid out, showing what is possible when governments and industry work together.

“It is a good example of such an initiative,” he adds.

Joining forces

XL Catlin is a key player in the Lloyd’s disaster consortium, an initiative whereby a number of Lloyd’s syndicates have joined forces to develop new solutions to help developing economies tackle underinsurance and improve their resilience against the economic impact of natural catastrophes.

The syndicates have committed capacity of \$400 million towards solutions that address natural catastrophe risks in emerging and developing economies. Key to its effective deployment will be well designed risk-sharing initiatives and the diversification of risk. The group has issued an open invitation to work with international organisations including, but not limited to, the World Bank and the UK government’s Department for International Development (DFID). It will also look to strengthen its existing ties with several current global initiatives, such as the IDF.

“This is another good example of the industry being proactive to tackle the issue. The opportunity to do good by closing this gap is one that the London Market has been trying to respond to for some time. This is not easy work but by harnessing the knowledge and skill from the whole industry we can find innovative ways to address this problem,” McGovern says.

In terms of creating regulatory capacity, he stresses that an important part of this is the sharing of knowledge between governments around what is best practice and good advice in this sector.

“It is important to build relationships and trust in these economies; helping them own the solutions rather than believing you can go in and simply tell them how it should be done.

“If we achieve that, it is something of a virtuous circle. If we can help countries better manage and recover from disasters, we create the conditions for more risk capacity to be deployed and so in the longer term the risk transfer business will also benefit and grow, and we do good in the world,” he concludes. ■



A three-pronged approach to tackling the insurance gap

The protection gap is a complex issue that must be tackled from three angles: top down, bottom up and by recruiting the right talent, says Brendan Plessis, executive vice president, emerging markets and managing director at XL Catlin.

From the top

The growing disparity between economic and insured losses globally is alarming. The industry must take a new, multifaceted approach in working with non-insurance market influencers to close the problem, says Brendan Plessis, executive vice president, emerging markets and managing director who has responsibility for finding and expanding insurance and reinsurance opportunities for XL Catlin in emerging markets.

He notes that between 1980 and 2015, economic losses stemming from natural catastrophes globally were somewhere in the region of \$3 trillion. While some events will hit highly insured areas, as was the case when Hurricane Sandy hit the US in 2012, costing insurers approximately \$30 billion (versus economic losses of more than \$70 billion), other parts of the world are barely covered. The March 2017 floods in Peru, for example, may cost \$3.5 billion in economic losses with insurance estimated to pick up \$300 million of losses.

“It is essential we collaborate as an industry to find solutions to this growing problem,” Plessis says. “The insurance industry provides an incredible societal safety net but sadly there has also been a marked rise in losses in countries that are the most vulnerable and where insurance protection is at its lowest.”



“We need to solve a very complex problem. The youngest minds with the keenest understanding of technology are helping enormously in this battle.”

He applauds the many initiatives that are under way to promote awareness of the benefits of insurance advocated by bodies ranging from the Geneva Association and more recently the Insurance Development Forum (IDF), the body formed in 2016 with the aim of pooling industry and policy expertise and resources to help close this protection gap, to the work of the World Bank and local governments.

“We have to do a better job of education and I can see that happening,” Plessis says. “It is about promoting resilience in all senses: from underpinning of the economic infrastructure through capital, both traditional and alternative available to transfer risk, to the actual physical construction of risk reduction measures.

“We actively seek to engage in public-private partnerships while also engaging many other influencing bodies: non-government organisations, lawyers, regulators, the aid agencies and academia. Only by getting buy-in at all levels can a real difference be made.”

He describes this as the top-down approach the industry should use, implementing the best learnings of reinsurance structuring for natural catastrophe risk and, in so doing, creating new public-private partnerships. With further enhancements in analysis of collected and future modelled data, the opportunity to create tangible solutions for countries can only improve. Such pre-event defined, built and executed re/insurance protection surely has to be a better alternative to a mix of post-event recoveries from the public purse and donor aid.

Looking up

There is another angle the industry should embrace in the form of developing platforms and companies to boost microinsurance at all levels in developing countries. Plessis calls this the “bottom up” approach, focused on those most in need.

XL Catlin is one of the founders of Blue Marble Microinsurance, a consortium of eight companies in the insurance industry which are collaborating as a for-profit social enterprise to provide socially impactful, commercially viable insurance protection to the underserved.

Blue Marble Microinsurance is committed to launching 10 microinsurance ventures over the next 10 years and will deliver solutions to address the risk management needs of the underserved. It has identified several potential strategic partners and is in advanced discussions to establish these relationships. Those partners will include companies with expertise in distribution, technology, and social impact issues, as well as donor organisations, and government and quasi-government entities.

Third approach

The third issue Plessis believes the industry must consider is the talent gap.

“This is significant in several ways in relation to the protection gap,” he says. “First, the challenge of closing the protection gap is so great that the industry must ensure it is attracting the very best talent.

“Such is the social value of closing the protection gap that the challenge can help the industry appeal to Generation Y or Millennials, the industry’s youngest recruits, who often have very different values and motivations driving their career choices.

“We need to solve a very complex problem. The youngest minds with the keenest understanding of technology are helping enormously in this battle,” Plessis says.

“Putting to one side the proliferation of insurtech startups in western financial centres, let’s look further afield: in many developing countries, owning a mobile phone is more common than having a bank account and young people who form the largest demographic in these economies run their entire lives using their handheld devices.

“By working proactively with this generation in explaining the benefits of insurance, and then enabling insurance to be distributed electronically, we naturally see the wider reach of insurance penetration.”

The second aspect of this, however, relates to job creation in developing economies. “Globally, we are also talking about job



creation and empowering the next generation with the new language of why insurance makes sense societally,” Plessis adds.

“Whether we are considering it when explaining best farming practices at the microinsurance level or in terms of developing quantitative risk analyses, the talent and jobs that could be created are something we should not ignore.”

In conclusion, Plessis emphasises the importance to society of closing the protection and talent gaps globally. “It is a question of protecting those most at risk and simply put: doing what is right,” he says.

“Inside and outside the insurance industry we have the skills and the tools available, which are improving every day through rigorous and constant learning, to make a difference in our lifetime.” ■

Blue Marble Microinsurance is helping smallholder farmers in Africa by insuring against seasonal drought and rainfall uncertainty.

Blue Marble: building resilience



Photo courtesy Blue Marble Microinsurance

Blue Marble Microinsurance is a consortium of eight leading companies in the insurance industry collaborating to innovate solutions that protect the underserved. Blue Marble aims to narrow the global protection gap through collaborative innovation by designing and executing ventures that enable risk protection for the emerging middle class.

Companies involved are AIG, Aspen, Hamilton Insurance Group, Marsh & McLennan Companies/Guy Carpenter, Old Mutual, TransRe, XL Catlin and Zurich

What is Blue Marble doing in Zimbabwe?

Objective: Introducing an innovative insurance solution that builds the nascent agriculture microinsurance market in Africa by insuring against seasonal drought.

Approach: Before taking the solution to various countries in Africa, a pilot programme has been launched in Zimbabwe.

The solution: Blue Marble offers farmers protection through insurance on their largest investment—agricultural inputs, such as seeds and fertiliser—through:

- A low-cost and accessible insurance solution to protect against uncertainty of timing and amount of rainfall;
- A simple and seamless customer experience through their mobile phone; and
- Valuable farming education based on climate data to inform planting decisions and ultimately build resilience.

The customers: Zimbabwean farmers using one to two hectares of land, primarily to grow maize for subsistence in order to feed themselves and their immediate families.

Current status and timeline: The drought cover product was designed and launched for the 2016 maize planting season in Zimbabwe. From 2017 onwards the Zimbabwean operation will be expanded.

How is Blue Marble going to innovate?

Partnerships are key to delivery of the programme. These include farming contractors, suppliers, weather technology partners, community leadership structures, farmer associations and NGOs. Two examples are:

Engagement through mobile phones: Two-way communication with farmers will allow Blue Marble to use their recorded experience to calibrate the data; and

Customised index design: Blue Marble is working on incorporating remote sensing technology such as ground, aerial and low Earth orbit sensors; and using sensor technology to supplement satellite data, potentially a low-cost innovative way of reducing the basis risk.

What impact does Blue Marble want to make?

- To enable better access to credit;
- To improve yields of maize farmers; and
- To enable climate-smart agriculture, improve nutrition and protect of natural resources.

What research questions does Blue Marble want to answer?

- Which of the two models of aggregating farmers (contract farming and government and aid-funded farmers) is more effective in scaling up insurance over a three-year period?
- Can complementing satellite data with Pulsepod sensor technology reduce basis risk at a reasonable cost?
- Does bundling the insurance with an education programme incorporating weather information increase the uptake of the insurance?
- Does the use of a mobile network-agnostic mobile payment solution increase individual farmer insurance purchases over a three-year period?
- Can two-way communication with farmers (via a mobile platform) replace physical site visits as a means of reducing basis risk? ■

To find out more visit <http://bluemarblemicro.com/> or contact: hello@bluemarblemicro.com

The bigger picture

XL Catlin reinsurance executives were asked for their insights and experiences of programmes and aspirations towards closing the global protection gap



John Welch



Rob Littlemore



David Watson



Peter Schmidt



John Welch

Chief executive, North America Reinsurance
and managing director, XL Catlin



Growing the private market

What has been your involvement in finding ways XL Catlin can help tackle the global protection gap?

Flood insurance is the primary focus for our North America Reinsurance region with respect to the protection gap. We were one of the 25 reinsurers to provide flood reinsurance protection to the US Federal Emergency Management Agency (FEMA) on January 1, 2017 when it expanded its National Flood Insurance Program (NFIP) reinsurance programme.

We believe that working with government entities such as FEMA to manage and finance insurance risk in partnership with the private market will result in increased capacity, better risk modelling, fairer pricing, broader coverage and a greater penetration of the uninsured market.

In addition, we are actively working through the Reinsurance Association of America, as well as other US trade associations, on the reauthorisation of the NFIP to encourage more avenues of participation for the private market. There are a number of potential changes to the legislation that will remove hurdles for current NFIP policyholders to find additional coverage at potentially a more attractive price.

We also believe that the growth of the private market will result in additional investments in mapping and modelling, which will allow for better risk management by both public and private participants. The new insights into risk and price, along with attractive coverage, should assist in reducing the number of uninsured.

In addition to participating in the flood market from a reinsurance perspective, Climassure, a subsidiary of XL Group's insurtech venture capital fund XL Innovate, is developing a cutting-edge analytical approach to underwriting standalone flood insurance for small commercial insureds.

What are the biggest examples of the protection gap in your regional market?

I would say the biggest examples are flood and California earthquake. For example, the NFIP in the US has seen a steady decline in take-up rates over the past decade. Properties in high-risk flood areas with mortgages from federally regulated or insured lenders are required to have flood insurance and under Freddie Mac/Fannie Mae rules, any house on a flood plain must carry flood insurance—but the current estimate is that only 53 percent of those homes actually buy that insurance. When Hurricane Sandy hit the US in 2012, it cost insurers approximately \$30 billion, but economic losses ranged from \$50 to more than \$70 billion.

In terms of California, the take-up rate of homeowners' insurance

for earthquake protection is only around 10 percent. That means 90 percent of California's homes do not have earthquake protection.

How has this touched your day-to-day job?

As mentioned above, we are actively providing capacity to FEMA. In addition, we are seeing a number of private flood opportunities that are being brought to market with a need for reinsurance.

We are also actively assisting Climassure with bringing its product to market.

Does this have a personal resonance for you? How can it make a difference?

It will be very important going forward for private insurers to work with governments around the world to manage and absorb the financial consequences of shared insurance risk.

There are a number of areas in the US where Federal and State governments participate in the insurance market. Insurers and reinsurers should work in partnership on these opportunities to provide solutions with the appropriate coverage at a fair price.

In addition, the investments into risk modelling, predictive analytics and more efficient delivery of product by the private sector should be shared with government entities to reduce waste and reduce the cost of their products.

What are your long-term objectives around this issue and why is it so important?

The long-term objective is to improve availability and affordability with respect to markets that have protection gaps, as well as improve the speed and efficiency of helping the affected citizens to return to their normal lives and reduce the uncertainty that exists now after an event. Markets with greater private insurance penetration are provided with a very effective mechanism to address the financial consequences of unpredictable events.

We have participated in the crop insurance industry for many years. This public-private partnership has succeeded in virtually eliminating the insurance gap for farmers and has been extremely effective in helping them recover after floods, droughts and freeze events. Moving other markets with existing protection gaps to a framework as effective as that established by the US Department of Agriculture would be a very worthy long-term objective. ■

“The long-term objective is to improve availability and affordability with respect to markets that have protection gaps.”

Rob Littlemore

Chief executive, London Reinsurance and managing director, XL Catlin



The role of public-private partnerships

What has been your involvement in finding ways XL Catlin can help tackle the global protection gap?

From a London Market perspective, we are involved in business from multiple territories and participate on a number of flood and terror pool programmes around the world, originating mainly from developed economies. Alongside our US colleagues, we supported the FEMA NFIP expanded reinsurance programme on January 1 and have had a much greater focus on the flood peril in the US as a result.

Roy Foster, head of property treaty London, will be presenting on a panel on the subject of “closing the gap” around US Flood at the Insurance Conference on Financial Reporting (INCON) in Florida (September 20/21).

XL Catlin is among a group of eight syndicates that make up the Lloyd’s Disaster Risk Fund and we are working with the Cambridge Centre for Risk Studies on an extensive piece of research on “The Impact of Re/insurance on the Economic Recovery from Natural Disasters”.

What are the biggest examples of the protection gap in your regional market?

There are limited protection gaps in the UK economy, but as the London reinsurance market is a centre for worldwide risk, there are clearly significant protection gaps across the world where we are trying to help governments reduce risk and reduce the burden on taxpayers.

We are the Lloyd’s lead providing aggregate catastrophe cover for Flood Re (UK). Flood Re (UK) provides affordable flood cover for UK homeowners living in a flood risk zone.

What efforts are underway to close this?

We took a participation in 2016 on the African Risk Capacity (ARC) which is Africa’s first sovereign catastrophe pool with its own insurance affiliate, ARC Insurance Company. ARC Insurance issues parametric weather insurance policies to governments and uses Africa RiskView to estimate the impact of weather events on vulnerable populations.

In the case of drought, index-based insurance payouts are triggered at or before harvest time if the rains are poor, or as soon as a severe flood

or cyclone has occurred. By allowing ARC member states to capitalise on the natural diversification of weather risks across the continent and access the international markets as a single pool, ARC Insurance reduces transaction costs and premiums to the lowest possible level.

How has this touched your day-to-day job?

We participate on many of the public-private partnerships that governments have worked with insurers on to transfer their catastrophe exposure to insurers and reinsurers. These include participations on a wide variety of flood, terror, earthquake and nuclear pools from North America, Europe and Asia-Pacific territories.

Does this have a personal resonance for you? How can it make a difference?

Yes. We have a social responsibility as an industry to help provide appropriate risk transfer, to help highlight the benefits of pre-disaster planning and resilience, and to help in quickly rebuilding impacted regions and economies.

I have family working in Kenya and while visiting I have taken time out to investigate how insurance products are sold and administered and the distribution challenges. I believe that there is huge potential for improving insurance penetration via education and using mobile devices across rural Africa.

What are your long-term objectives around this issue and why is it so important?

Re/insurers clearly have a vital role to play in strengthening governments’ risk management capacities, allowing budgetary certainty and helping to release capital to alternative investments, eg, flood walls and other resilience infrastructure investment.

We need to provide our experience, expertise alongside actuarial and modelling to help governments build their resilience frameworks and reduce their disaster risk. Raising awareness of our capabilities as an industry is central to this and the research we are completing with the Cambridge Centre for Risk Studies will provide further evidence of how we can help. ■

“Re/insurers clearly have a vital role to play in strengthening governments’ risk management capacities.”

David Watson

Chief executive, Europe, Middle East and Africa
Reinsurance and managing director, XL Catlin



Agricultural industry initiatives

What has been your involvement in finding ways XL Catlin can help tackle the global protection gap?

In general, Europe is a mature and developed market with only a few areas where there is a significant insurance gap.

On property, we have seen some initiatives but it is difficult to change the habit and the market practices. Examples include:

- Italy, where the three last earthquakes, which took place in 2016, had an economical effect of €23 billion but the insurance loss was around €500 million. The household earthquake penetration is less than 5 percent in Italy. On our side, we are trying to encourage our clients to sell more of this product. For example, we are talking with one client about specific covers for religious risks which are a large part of the recent losses (along with the municipalities). We also have done a quota share for another client.
- In the past, we have been part of the Romanian initiative to have in place the Insurance Pool Against Natural Disasters, also known as PAID, which is now fully functioning.
- The same for the Morocco cover where a few years ago we developed our own model that we shared with brokers and clients.

Currently, we are trying to influence the French market, so that the Caisse Centrale de Réassurance (France public reinsurer) would buy some retrocessions to reduce the French State's exposure.

What are the biggest examples of the protection gap in your regional market?

Italy, as mentioned above. In terms of Africa, natural disasters will continue to impact the uninsured in most of Africa and an expectation/reliance on international aid and emergency World Bank funding will continue to be the risk transfer strategy of choice for many countries for years to come.

What efforts are underway to close this?

There are a number of initiatives, mostly focused on the agricultural industry, which are ultimately being driven by private enterprise. They are labelled as public-private enterprise (PPE) initiatives. This includes the Green Morocco plan which massively subsidises agriculture development and insurance in Morocco. Morocco is also considering

a disaster relief fund/bond or pool for natural catastrophe exposures which could be brought to market in the next six to 18 months.

Morocco has the scale, being second in economic size and insurance industry to South Africa, but there is still work to be done locally and state insurance and reinsurance companies will no doubt need to be involved.

A reinsurer or select number of reinsurers will need to form a partnership with the local industry, as with Mamda Re (a joint venture formed in 2015 with local insurer Mutuelle Agricole Marocaine d'Assurance, PartnerRe and French reinsurer La Mutuelle Centrale de Réassurance). Mamda Re is a reinsurance company dedicated to agricultural risk in Africa.

Does this have a personal resonance for you? How can it make a difference?

Yes, it does. The protection of Africa's agricultural industry is increasingly seen as mission-critical considering the growing population's food consumption requirements, the creation of employment and the export cash crops that support the economy.

South Africa is probably the most high profile of these initiatives and we have had some involvement with the working group set up in South Africa to address this, which comprises the Insurance Association of South Africa and the Department of Treasury.

South Africa's Department of Treasury has produced a consultation paper on the susceptibility of the South African agricultural industry to natural perils and disasters, the lack of agricultural insurance products to small scale farmers and the increasing lack of capacity for most perils, even for large commercial agricultural operations, given the historical market loss experience.

The intention is to establish both a subsidy fund for micro and emerging small commercial farmers to assist them with risk transfer purchase as well as a government-funded disaster fund to cover all natural perils, including drought and hail, with reinsurance provided on both a stop loss and catastrophe basis.

The Department of Treasury is now moving forward to engage the insurance industry on the creation of a pool, managed and run by the Treasury Department along the same lines as the South African Special Risk Association. ■

"The protection of Africa's agricultural industry is increasingly seen as mission-critical considering the growing population's food consumption requirements."

Peter Schmidt

Chief executive, Asia-Pacific, Latin America & global credit/surety reinsurance and managing director, XL Catlin



Overcoming the threat to economic development

What has been your involvement in finding ways XL Catlin can help tackle the global protection gap?

The protection gap is particularly pronounced in the emerging markets, such as Latin America or emerging Asia. In 2016, the insurance penetration rate was at 2.6 percent in emerging markets while the global average rate stood at 6.3 percent. People still lack cover for the most fundamental risks, such as provision for natural catastrophes or property in general. However, as emerging economies expand, new values are created.

As a broader middle class emerges, demand for health, life and the specialty classes of business accelerate rapidly. Also, as technology and habits of consumption change, new types of risks emerge and, therefore, further gaps are created and we, XL Catlin, seek to provide suitable insurance and reinsurance protection.

As reinsurers, we work closely with our cedants and in combination with public and private institutions to provide capital, share ideas and experiences from other markets where we operate. We also work to jointly develop innovative solutions, which ultimately help to stabilise the economic conditions for a large part of the world's uninsured population.

For example, as a team, we have been actively involved in developing a 'technical assistance facility' as part of our involvement with the IDF. The facility is a platform that helps governments in emerging markets to assess and understand their risks and to also develop and deploy insurance solutions targeting the specific needs of individual markets.

What are the biggest examples of the protection gap in your regional market?

As far as emerging Asia is concerned, the protection gap for all major perils (storms, floods, earthquakes) exceeds 95 percent, ie, less than 5 percent of all economic disaster losses are insured.

Japan also exhibits major natural catastrophe protection gaps, with about 90 percent of all earthquake and flood losses remaining uninsured. This primarily reflects the reluctance of the corporate sector to take out insurance. It is also as a result of a significant self-retention capability. At 50 percent, Japan's protection gap for storm risk is closer to the global average.

In Latin America, flood risk remains largely uninsured, with the protection gap reaching 95 percent. The situation is less severe for storm and earthquake risks where at least about 20 percent of disaster losses are covered by insurance.*

What efforts are underway to close this?

The spectrum of activities is very broad. It ranges from government and industry-sponsored awareness programmes, public-private partnerships, mandatory and non-mandatory pooling schemes to premium subsidies. Here are some examples:

- The Thai National Catastrophe Insurance Fund (NCIF) is a voluntary national pooling scheme. Established after the disastrous flood events of 2011, it provides additional reinsurance capacity at subsidised rates in order to enable domestic insurers to continue offering coverage against natural disaster risks at affordable rates to households, SMEs and the industrial sector. Under the NCIF, domestic insurers can cede a part of their disaster risk to the fund. The fund insures values of close to \$20 billion, although disaster risk insurance and domestic insurers' participation in the fund is not compulsory.
- MAIPARK is a compulsory pooling scheme, set up by the government of Indonesia in 2003. It addresses the fierce competition among domestic non-life insurance companies in providing earthquake insurance covers. Following the deregulation of the insurance sector in the 1980s, an increasing number of insurers started to offer earthquake insurance without charging risk-commensurate premiums.

This behaviour raised concerns that in case of a major disaster, the insurance industry might not be able to meet its obligations. In response, the government of Indonesia required all primary insurance companies to pool their earthquake liabilities in the Indonesian Earthquake Reinsurance Pool which, in 2004, was transferred to a special-purpose company, Asuransi MAIPARK Indonesia.

- One of the most impressive examples of premium subsidy schemes is the Chinese government's agricultural insurance programme, aimed at making agricultural insurance affordable for farmers. Today, nearly 80 percent of China's agricultural insurance premiums are

"Solutions have to be both effective and economically viable. We also need to remain focused as there are a myriad of ideas and initiatives."

funded through subsidies. On the back of this successful public-private partnership, China has become the world's second largest agricultural insurance market (the US, where public subsidies also play a major role, is number one). The protection gap in crop insurance has been effectively narrowed.

- In Latin America, there is FONDEN—a fund for natural disasters—set up by the Mexican government in cooperation with the World Bank. The fund was established in 1996 as a response to the government's continued need for ex-post budget reallocations, following average losses from natural disasters of annually \$1.5 billion. The fund enabled the government to allocate budget ex-ante for post-disaster response, thereby improving its budgetary management and facilitating the rapid reconstruction of infrastructure and low-income housing. Recently, the Mexican government returned to the capital markets to raise another tranche of \$290 million to source a reinsurance risk transfer for FONDEN.

How has this touched your day-to-day job?

One example is from South America, which experienced persistent heavy rainfalls in winter 2016 and spring 2017. Multiple countries suffered substantial losses, with Colombia and Peru being particularly hard hit. In early April, we participated in the 'Lima Workshop on Peru Disaster Risk Insurance', which was a timely event to find suitable solutions tailored to the specific needs of the region, ie, its exposure to natural catastrophes, its values at risk, but ultimately also the economy's ability to finance the premiums.

As reinsurers of Latin America and Emerging Asia, there are a multitude of opportunities to address the protection gap, but solutions

have to be both effective and economically viable. We also need to remain focused as there are a myriad of ideas and initiatives. We have to concentrate on those efforts which can make a real difference.

Does this have a personal resonance for you? How can it make a difference?

How to address the protection gap is a very important topic to me. The insurance industry and we as professionals within our industry have an important role to play in protecting people against the impacts from insurable events. We have to develop and implement new approaches which widen the scope of insurance and protect more people against natural and manmade disaster—particularly in light of rising risk concentration of the world's growing population and the effects from climate change.

What are your long-term objectives around this issue and why is it so important?

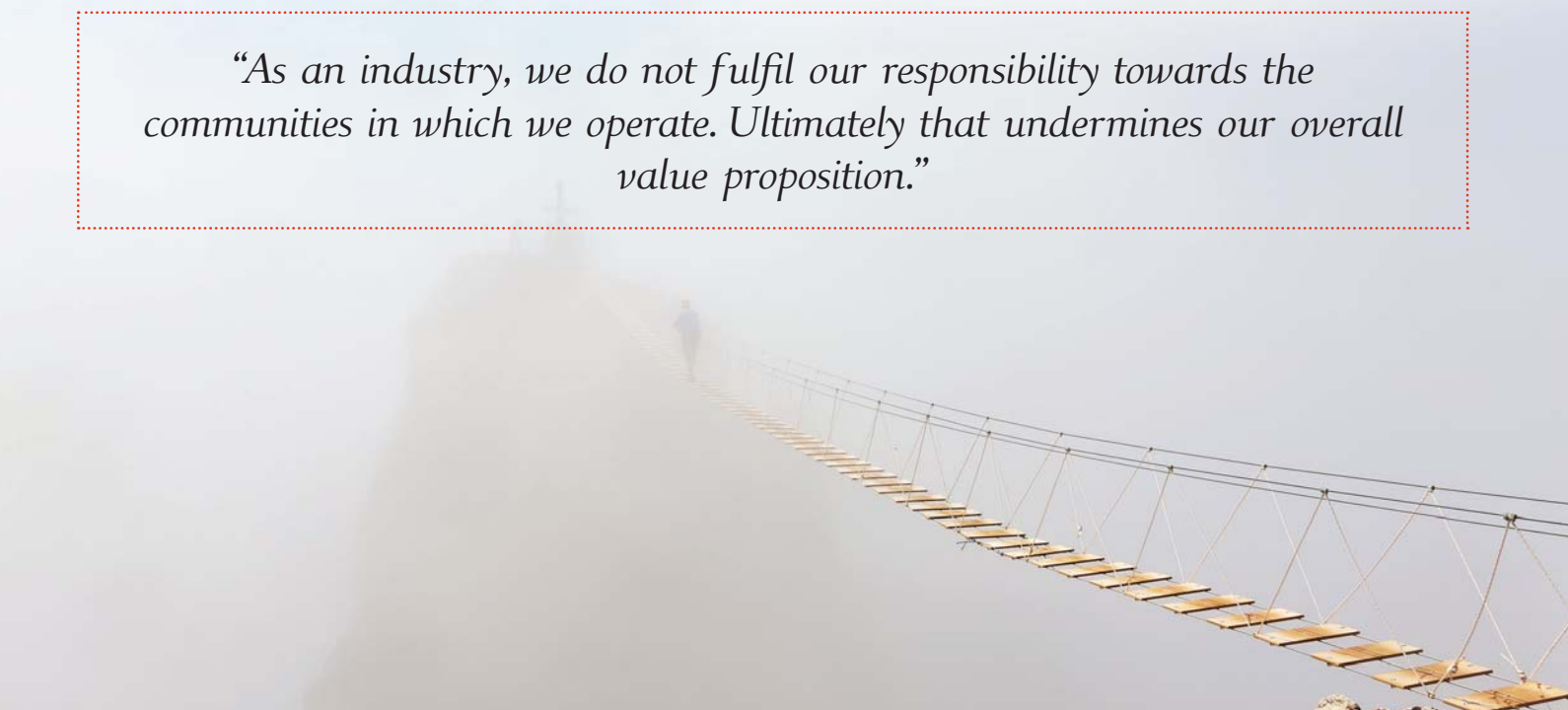
Protection gaps imply that the insurance industry has not yet achieved its full potential in serving economies and societies. This is an obstacle or even a threat to economic development and the wellbeing of society.

For the insurance industry, therefore, protection gaps go beyond the missed commercial opportunity. As an industry, we also do not fulfil our responsibility towards the communities in which we operate. Ultimately that undermines our overall value proposition.

As XL Catlin we work closely with our clients and also public and other private institutions to develop suitable solutions to address these gaps and thus facilitate further economic and possibly societal progress. ■

** Figures sourced from the Swiss Re Institute*

“As an industry, we do not fulfil our responsibility towards the communities in which we operate. Ultimately that undermines our overall value proposition.”





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