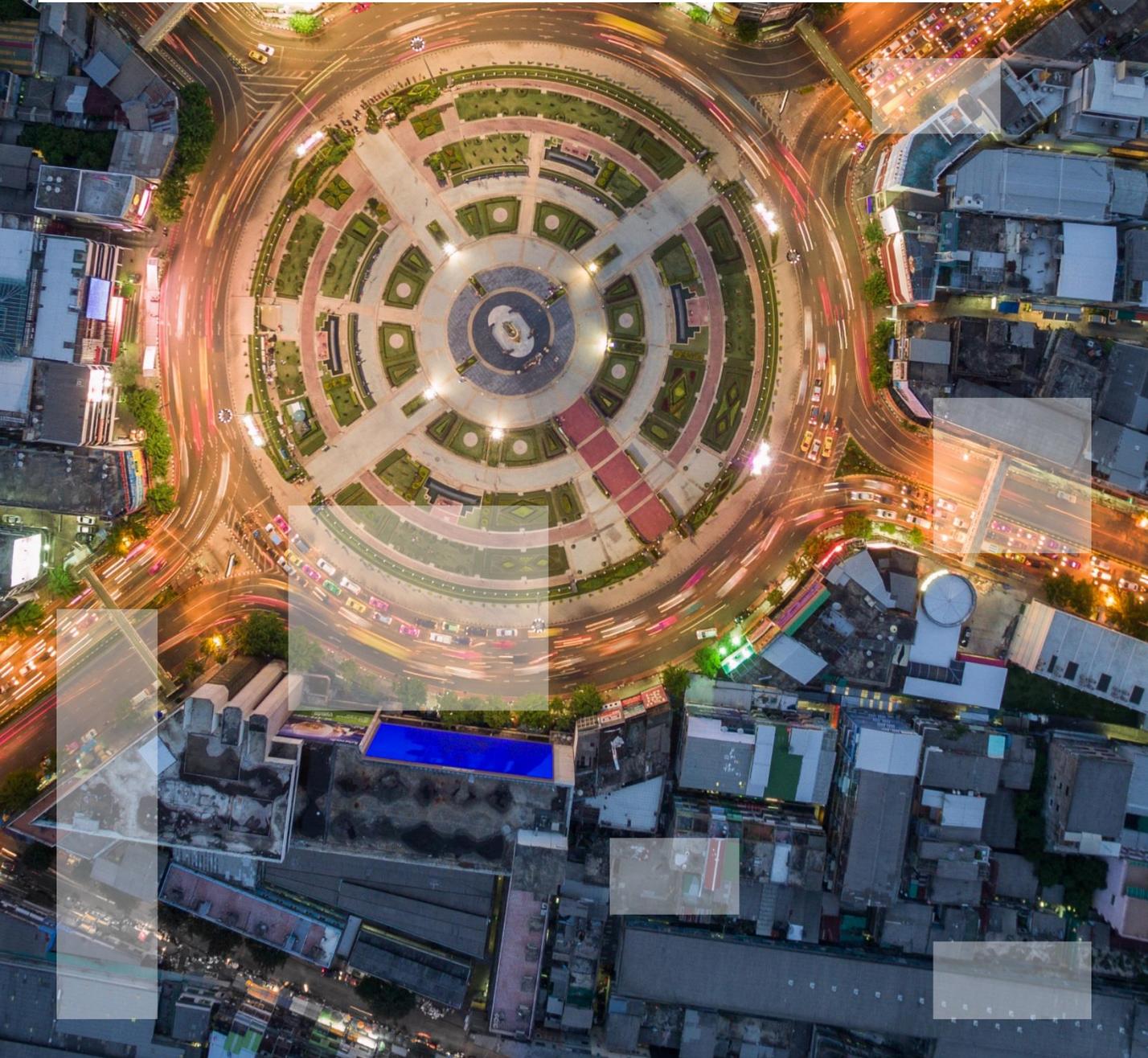


ILS Market Update

ILS Market Update: ILS Achieves Dynamic Equilibrium

November 2019



ILS Market Update

Q3 2019 market outlook

Going into Q4 and with 2020 just around the corner, the Insurance Linked Securities (ILS) market is in dynamic equilibrium and positioned well. Alternative capital in all different forms is clearly growing again, notwithstanding the losses and related loss creep of the last several years. This is not a rising tide raising all ships. Far from it - some managers, sectors, and strategies outperformed the past few years and are benefitting now as a result. Others remain under some stress. For example, capacity remains restricted for UNL retro with only limited interest so far from new investors. Along with reduced loss creep, the higher premiums and the associated improved risk/return profile have provided a tailwind.



Short-term outlook

Concretely, starting in Q4, but with more effect in 2020, we expect growth in the more liquid forms

“Concretely, starting in Q4, but with more effect in 2020, we expect growth in the more liquid forms of ILS. In addition, some investors are realigning their portfolios toward more risk remote investments.”

of ILS. In addition, some investors are realigning their portfolios toward more risk remote investments. The turn toward seeing increasing relative value at the more remote end could potentially bode well for cat bonds within the more liquid ILS space. Sidecar interest has picked up as well; however, the extent to which this interest will translate into completed deals will depend very much on the specific opportunities presented to investors, as not all deals will meet investor criteria.

In addition to the surface market dynamics, we have identified two other trends to watch, one subtle and one headline grabbing that may impact the near term.

Regulatory change: a trend to watch

First, on the subtle side, choice of legal entity and domicile is not usually near the top of the list of key factors influencing ILS market activity, but this year could be different. There is an unusual amount of innovation and change in this area around the world. The change creates interesting options for market participants.

Guernsey explicitly permits collateral gaps

One important trend to watch in this area is the impact of the changing collateralized reinsurance regulations in Guernsey. Guernsey has invented a new type of cover, where sophisticated parties can agree contractually to up to a 30-day gap in collateral to accommodate, for example, rollovers between years. You might call this “uncollateralized collateralized re.”

It is undoubtedly favorable for investors - as collateral providers can promise the same collateral twice. Whether cedants (or their regulators) will use this option remains to be

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seen. This approved practice effectively acknowledges the status quo, a not very well-kept secret that much collateralized reinsurance activity is not actually fully funded at all times.

Activity elsewhere

Guernsey is not alone in moving forward. The U.K. and Bermuda seem to be moving firmly the other way from Guernsey to make sure collateralized reinsurance is always fully funded (as required by Solvency 2, for example), or where gaps exist, the gap is bridged by a financial guaranty or similar mechanism. Specifically, the U.K. is fine-tuning their ILS rules based on several years' experience, and Bermuda has taken a more substantial step, creating a new class of hybrid entity providing a cross between a special purpose collateralized insurer and a regulated and rated entity. At the same time, Bermuda is tightening up enforcement of its existing rules for Special Purpose Insurers (SPIs), so SPIs are used as originally intended.

To the extent the U.K. and Bermuda approach becomes the new status quo for collateralized reinsurance, it will put all deals on essentially equal footing and better protect cedants. Better protection will mean that collateralized vehicle performance and cedants' expectations will nearly always line up, which was not true in the past few years in a small number of cases. On the other hand, it will reduce investor leverage as they will be prevented from using the same capital twice and need to price for this additional cost.

Beyond the U.K. and Bermuda, Singapore, France, and other places are also moving forward with new initiatives. Singapore's grant scheme has, thus far, achieved some modest success with at least three ILS deals of various forms completed. Singapore has a sophisticated financial sector coupled with a vibrant regional reinsurance hub offering a natural home for ILS activity. France also has opportunities in the ILS space, and not just because of Brexit, as evidenced by the completed 157 Re deal earlier this year. It also has local lawyers, administrators and regulators with the proper skill set to support sophisticated ILS activity, if they can achieve a reasonable scale.

New risks and cedants: another trend to watch

A second trend to watch is market participants' hunger to discover and transfer new risks. This hunger comes from a desire to see and accomplish something new, from a concrete desire to satisfy an unmet need such as closing the disaster gap or helping pensioners and retirees further diversify their investment risks, and sometimes solely from compelling economics for both sides of a new type of trade.

Consistent with Michael Bennett's interview below, there is a growing awareness that governments and related institutions can play an important part in facilitating risk transfer, especially to ILS investors, where private markets fail to do so on their own.

Historically, much of this optimism was wishful thinking ungrounded in actual economics – pie in the sky, if you will. At present, though, the optimism around new risks and cedants seems relatively more justified. This is not only because of the role of institutions like DFID and the World Bank, but also because the economics themselves are getting better.

The reasons for improvement include the rise of a new source of capital from ESG and Impact investors. This is really an emerging trend in 2019. We are also seeing better

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risk modeling and valuation approaches building on both scientific advancement and lessons learned from recent loss and reserving history.

We also see a growing appreciation of the benefits of risk transfer by cedants, especially countries, coupled with the constraints of the traditional (re)insurance capital structure to efficiently solve really big problems (e.g., tail aggregations of terror or cyber risk) without ILS capital partnerships. None of these new risks can overcome flawed economics to come to the market but they can close the gap quite effectively when the gap is not large.

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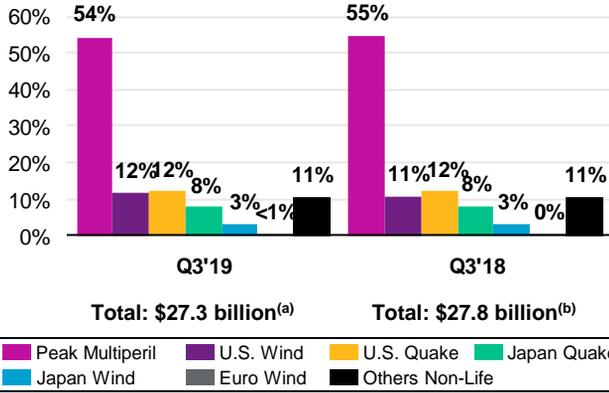
The promise of ILS to policyholders is to indirectly make insurance more available and affordable in conjunction with the broader industry. We are at an inflection point, where ILS is once again poised to grow and support this objective.

By William Dubinsky, managing director and CEO, Willis Securities, Inc

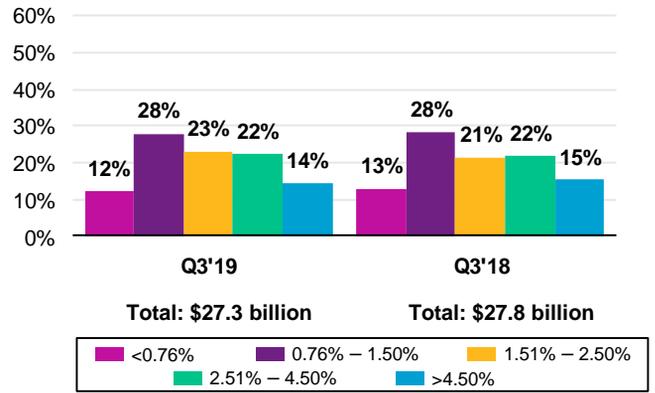
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Q3 2019 ILS market statistics

Par outstanding by risk peril



Par outstanding by expected loss at issuance

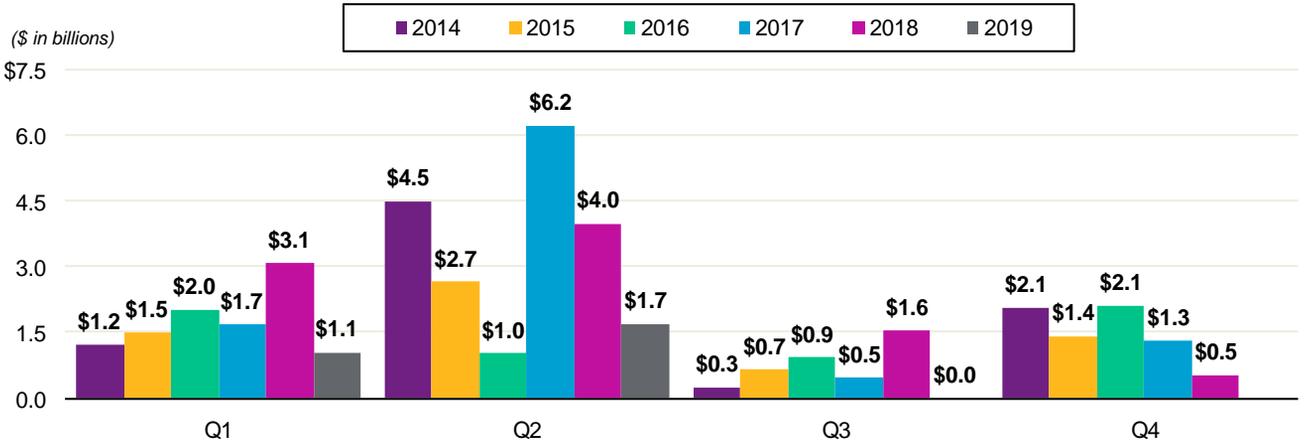


Source: Willis Re Securities Transaction Database as of 09/30/2019

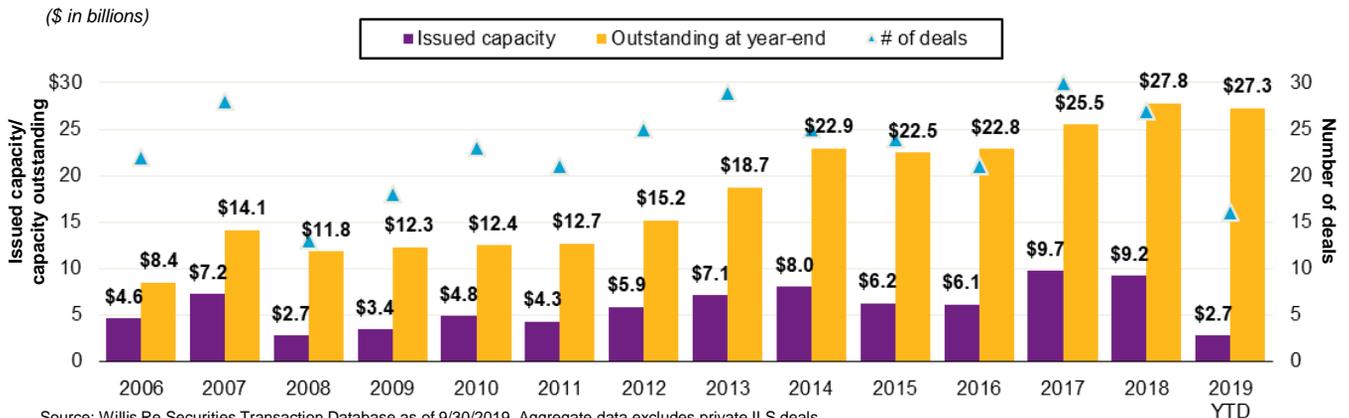
(a) In aggregate, 66% of all capacity outstanding exposed to U.S. Wind.

(b) In aggregate, 66% of all capacity outstanding exposed to U.S. Wind.

Non-life ILS issuance by quarter (2014 – 2019)^(c)



Non-life capacity issued and outstanding by year^(c)



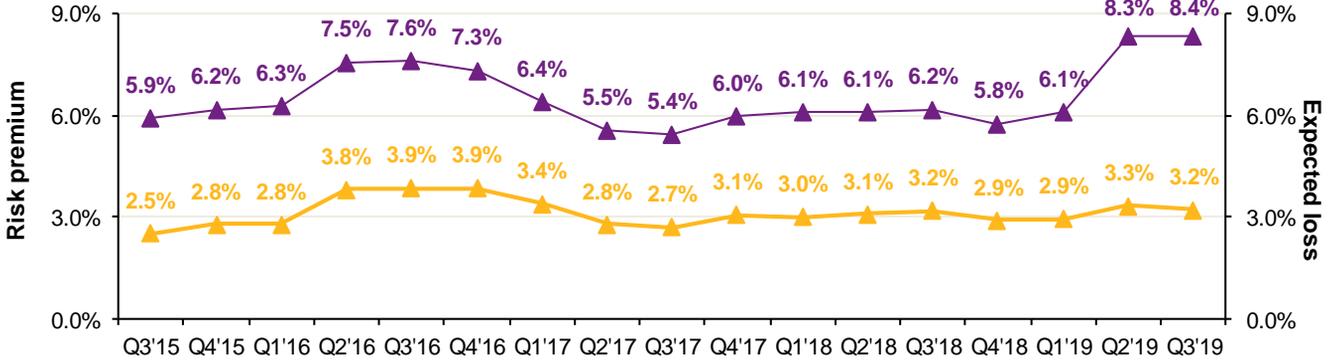
Source: Willis Re Securities Transaction Database as of 9/30/2019. Aggregate data excludes private ILS deals.

(c) All issuance amounts reported in or converted to USD on date of issuance. Outstanding amounts adjusted for actual principal losses.

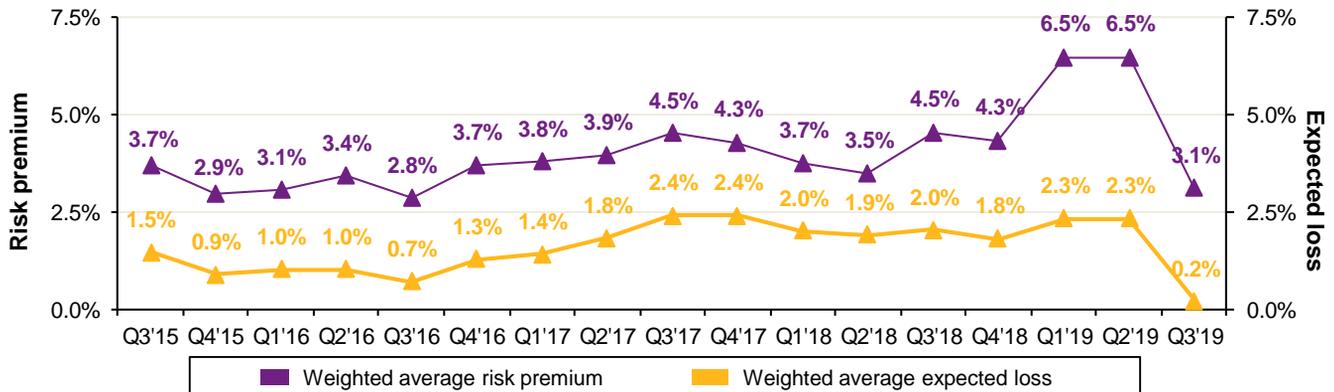
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Q3 2019 ILS market statistics

Quarterly LTM U.S. wind exposed weighted average risk premium and expected loss



Quarterly LTM non-U.S. wind exposed weighted average risk premium and expected loss (a)



Source: Willis Re Securities Transaction Database as of 9/30/2019. Aggregate data excludes private ILS deals. LTM = Last 12 months. Aggregate data are for primary issuance and do not reflect secondary trading.

Secondary market trading overview

“With most portfolios fully invested for the wind season, it was no surprise to feel the nervousness of the market as Dorian approached the Florida coast.”

With most portfolios fully invested for the wind season, it was no surprise to feel the nervousness of the market as Dorian approached the Florida coast. When coupled with the Faxai event in Japan, it prevented the jump in pricing that usually comes at the end of August.

As the storms dissipated, seasonality helped rally the notes in September with a new bid tone supporting the market. We finished the quarter with funds anticipating primary issuance season, which will likely come towards the end of Q4

a) Note that the sharp decline in Q3 2019 expected loss and risk premium is caused by a lack of non-U.S. wind issuances since Q4 2018. Of those that were issued, size, expected loss and spread were relatively low, causing the drop-off in measurement.

ILS Market Update

Interview: Michael Bennett, Head of Derivatives and Structured Finance, World Bank Treasury

How did you first get involved with ILS?

For decades, the World Bank has been providing various advisory services to our member countries with respect to disaster risk management, helping countries assess and manage their vulnerabilities to natural catastrophes. Starting in 2007, this work grew to include executing risk transfer transactions with the market. That is when my team in the World Bank Treasury started to get involved. We were given the responsibility of structuring and executing these transactions, because of our experience with other types of complex transactions.

Since then, we have executed more than US\$4 billion of risk transfer transactions for various member countries from Latin America to Asia. Over that time, we have placed risk with approximately 60 different risk takers around



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the world, including insurance-linked securities funds, reinsurance and insurance companies, asset management companies and pension funds.

What challenges have the World Bank faced in attempting to improve insurance penetration in developing markets?

In the World Bank Treasury, our work has been focused on governments insuring their national budgets, and our biggest challenges stem from the complexity and time-consuming nature of these transactions. Government ministries in our member countries tend to be thinly staffed, and those officials have many competing responsibilities. While we do whatever we can to make the process easier and more streamlined for our clients, ultimately, it is the governments themselves that need to make the key decisions about the coverage. As a result, it is often difficult for a government to devote the time and resources needed to undertake such a complex transaction.

How do you expect the recent activity to impact ILS investors, access to capital and ability to trade forward effectively? Does it depend on premium movements?

We access both the traditional insurance market and the insurance-linked securities market, sometimes placing the same risk simultaneously in both markets. By doing so, we try to reach as large and heterogenous pool of risk takers as possible. We also bring highly diversifying risks to the market. Thus far, this combination of transactional characteristics – a large pool of risk takers for truly diversifying risks – has resulted in our transactions pricing extremely efficiently for our member country clients. However, we are not immune from market dynamics, and if insurance conditions harden significantly, we may see less appetite from our clients to transfer risk.

ILS Market Update

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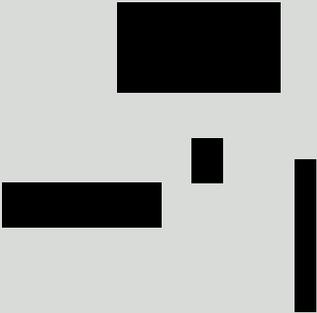
How exactly does the World Bank issue cat bonds sponsored by its member countries?

We intermediate cat bond transactions for our clients by performing a role similar to that of a special purpose vehicle (SPV) in a conventional cat bond structure. We provide insurance or reinsurance to the country sponsor and, in turn, we lay off that risk to cat bond investors through the issuance of a World Bank insurance-linked bond. The biggest differences between us and a SPV are: 1) we are an international organization in which the sponsoring country is a member (which provides a high level of trust and security for the sponsor); and 2) we have our own independent, triple-A rated credit strength, and thereby we do not need to hold collateral for the issue. As a result, we can use the proceeds of the issue to fund our sustainable development work around the world – which makes World Bank cat bonds a uniquely sustainable investment proposition for cat bond investors.

It is also important to note that we are not competing with the private sector by performing this role. We do not retain any of the risk, and we work with private sector structuring agents, brokers, lead managers and modeling firms to bring the risk to the market. Therefore, we see ourselves as a business enabler for the private sector, bringing deals to the market that, in most cases, would not have been possible without us.

How do you see the expansion of ILS into other lines of business other than property cat? Is such expansion likely to benefit the countries the World Bank engages with?

Although we have executed over \$4 billion of risk transactions to date, obviously that amount represents only a tiny percentage of the natural disaster risk faced by our member countries. Therefore, we have only scratched the surface of the work we can do in the property cat space. Within property cat, we anticipate that climate change may result in our bringing more extreme weather transactions to the market (such as drought and flood). Outside of property cat, some of our member countries are interested in pursuing the insurability of other risks as well, including cyber and health risks (both human and livestock).



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