The Future of Terrorism Insurance:
Fostering Private Market Innovation
To
Limit Taxpayer Exposure

Subcommittee on Housing and Insurance,

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Testimony of

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1. Introduction

I thank the Subcommittee on Housing and Insurance for inviting me to testify at this hearing on the potential role of the so-called Insurance-Linked Securities (ILS) market to privatize a greater part of the terrorism insurance market in the United States. The most commonly known part of the ILS market is the catastrophe bond (cat bond) market. The other, less-well known part of the ILS market is broadly termed collateralized reinsurance, which encompasses a broad array of reinsurance activity. What collateralized reinsurance has in common with cat bonds is that risk capital from outside the traditional insurance and reinsurance market are used to back up promises to pay for insured catastrophe losses. In my testimony today, I will speak broadly about the ILS market, with details and evidence taken largely from the cat bond market.

My name is John Seo. I am a co-founder and managing principal along with my brother, Nelson Seo, of Fermat Capital Management, LLC, which is believed to be the largest investment manager of cat bonds worldwide. Fermat Capital today has $4.5 billion of assets under management, all of it in ILS with a majority in cat bonds. Over the last 15 years, in addition to my "day job" of being a cat bond portfolio manager, I have also been privileged to serve as a state-appointed advisor to the Florida Hurricane Catastrophe Fund and as a bank-appointed advisor to The World Bank's Global Facility for Disaster Reduction and Recovery. In these additional roles, I was asked to help explore mechanisms to privatize catastrophe risks held directly or indirectly by the State of Florida and The World Bank.

I have been asked by the Subcommittee to testify on the current state and outlook of the ILS market, to discuss common misunderstandings about the ILS market appetite for terrorism risk, and to discuss ways to increase the efficiency of ILS coverage for terrorism risk. Before I get to that, I am afraid I must give a brief history of the ILS market because this market is still so new and its role in insurance markets is still not widely understood. I also think the Subcommittee will find the history of the ILS market relevant to the current situation in terrorism insurance.

2. A Brief History of the ILS Market

The ILS market had its beginning in the mid-to-late 1990s in the aftermath of Hurricane Andrew in 1992 and the Northridge Earthquake in 1994. These two events brought about insured losses of approximately $15 billion each. While such losses unto themselves were somewhat manageable by the insurance market, they were approximately 10 times larger than expected. This had two implications for the insurance market in the mid-1990s.

The first implication was that, as things stood, insurance companies were potentially "broke", in the sense that they likely did not have enough capital to weather worst-case loss scenarios — they were potentially under-reserved by up to 10 times for the "Big One" in hurricane and earthquake. The second implication was that insurance companies were potentially "blind", in the sense that their traditional actuarial methods provided no reasonable indication of worst-case loss scenarios. Not surprisingly, being potentially broke and blind in regard to hurricane and earthquake, the insurance market for these risks collapsed in the mid-to-late 1990s, and state governments had to step in. Although significant progress has been made since then to bring private markets back into the U.S. hurricane and earthquake insurance markets, that progress has been the greatest on the commercial side of the market. Even today, almost 20 years later, in Florida the state owns over 70 percent of homeowners' hurricane risk on the beach; and in California the state owns over 70 percent of homeowners' earthquake risk on the fault-line.

In response to this dire situation in the mid-to-late 1990s, a relative handful of enterprising professionals on Wall Street created the ILS market. Two key visions drove the early formation of the ILS market.

The first vision is the most well known: that capital markets had the potential to easily absorb the worst-case losses of hurricanes and earthquakes. Vast as it is, the insurance market only has a capital base that, depending on how you measure it, is 50 to 100 times smaller than the capital base that backs ILS markets. With an appropriately sized capital base, ILS markets were expected one day to restore the insurability condition to hurricane and earthquake risks and create a "win-win" situation, between insurers, on one hand, and reinsurers and ILS investors, on the other. Note ILS investors are alongside reinsurers because they both perform similar roles, each in a complementary way. ILS and traditional reinsurance help insurers shoulder their greatest risk burdens. ILS does this with global capital diversification; reinsurance, with global risk diversification.

The second vision driving the early formation of the ILS market is less well known: capital markets would make cutting-edge catastrophe models ("cat models") more mainstream in commercial usage. Though in much wider use today, cat models were only being used by a small handful of pioneering insurance and reinsurance companies 20 years ago. By putting the promise of vast amounts of risk capital behind the latest technologies for risk estimation, it was believed that ILS markets could accelerate insurance industry adoption of modern cat modeling techniques. This would eventually make catastrophe insurance markets more transparent, which would increase the efficiency of catastrophe risk financing in all forms.

These two elements, the promise of a huge capital base and the adoption of cutting-edge cat models, were together intended to solve the "broke and blind" problem that afflicted the insurance industry in the aftermath of Hurricane Andrew and the Northridge Earthquake. The jury is still out on whether these two visions of the ILS market will ultimately materialize, but progress to date has been excellent by most anyone's measure.

While investment activity on the non-cat bond side of the ILS market bears a close resemblance to traditional reinsurance activity, the cat bond side of the ILS market has become a distinct and well-accepted sub-sector of the corporate bond market. Just like corporate bonds, cat bonds are typically rated, listed with public exchanges, and are actively traded in the over-the-counter market. Unlike traditional corporate bonds, however, cat bonds collectively provide explicit coverage for hurricane, earthquake, tornado, hail, wildfire, disease, flood, terrorism risk and potentially any other quantifiable risks that would be called a catastrophe by the insurance market. In return for bearing these risks, cat bond investors receive a high coupon, higher typically than those of comparably rated corporate bonds. This high coupon acts as a kind of insurance premium for ILS investors.

3. Current state and outlook of the Insurance-Linked Securities (ILS) market

From its beginnings in the mid-to-late 1990s, the ILS market has grown to $45 billion this year, with $20 billion of that coming from the cat bond market. The non-cat bond side of the ILS market is typically a "buy and hold" market with annually renewed contracts, while the cat bond side of the ILS market is actively traded on a daily basis. The cat bond market is expected to see over $7 billion in secondary market trading volume this year. ILS investors are found on every habitable continent in the world and range from high net-worth individuals, family offices, foundations, endowments, insurance companies, private banks, hedge funds, specialty ILS managers, money managers, mutual funds, pension funds and sovereign wealth funds. Specialty ILS managers collectively have several hundred distinct investors from among all the investor classes just mentioned, who pool their money in ILS fund vehicles, some of which are onshore, listed, and regulated in the UK, Europe, or Australia. New ILS investment vehicles are announced every month now.

As has always been the case, high levels of innovation continue to characterize the ILS market. It is not unusual for a risk to be considered "a bridge too far" in one year, then commonplace a few years later. For example, a cat bond covering the New York Metropolitan Transportation Authority

(MTA) for flood risk was successfully placed in the market this year in July. ILS professionals now believe the MTA cat bond to be the first of many such flood bonds that will be issued in coming years; yet, even a few years ago, many of those same ILS professionals considered a burgeoning market for flood bonds to be improbable. This is not an unusual experience in the ILS market.

Regarding the coverage of terrorism risk specifically, I report to the Subcommittee that the cat bond market alone currently covers only $1.4 billion in terrorism risk. If we extrapolate that to the non-cat bond side of the ILS market, we could reasonably estimate that the ILS market in total covers roughly $3 billion in insured terrorism risk today.

From its current base, some market observers expect the ILS market to triple in size over the next five years and create $150 to 200 billion in total risk capacity before the end of this decade. Using only simple extrapolation from our current state, this expected growth trend would take ILS capacity for terrorism risk to $9 to $12 billion by the end of this decade. If the ILS market should more widely adopt coverage of terrorism risk, the ILS market capacity for terrorism risk could easily rise to $20 to $30 billion by the end of the decade. There are the usual caveats that must surround this rosier projection, but it is definitely not out of the realm of future possibility.

4. Common misunderstandings about the ILS market appetite for terrorism risk

Unless a particular part of the ILS market is growing by leaps and bounds, it is common for misunderstanding to arise around the market appetite for the risk or risks in question. Some of these misunderstandings stem from a lack of information, and some of these misunderstandings come from mixing and confusing the preferences expressed among different investor classes. I would like to address one of each kind of misunderstanding now.

The first common misunderstanding is that ILS markets have shown no appetite for terrorism risk to date. I assume that such a view is largely due to a lack of information, so I will simply lay out the numbers on this issue now. The ILS market for terrorism risk began with Golden Goal Finance, Ltd., a $250 million cat bond deal brought to market in October 2013. Golden Goal provided terrorism cancellation coverage to FIFA for the 2006 World Cup. At the time, merely two years after 9/11, Golden Goal was 7 percent of the outstanding cat bond market, quite large for a single cat bond issue. As such, Golden Goal at the time of issuance was the third largest cat bond issue in the market out of 25 outstanding issues. In the ten years since the issuance of Golden Goal, terrorism risk has remained at 7 percent of the cat bond market, growing from $250 million to $1.4 billion in cat bond coverage over the last 10 years, which comes out to a 19 percent compound annual growth rate. Admittedly, these figures do not indicate an overwhelming trend of historical growth, but they certainly do not support the conclusion that ILS markets have exhibited no appetite for terrorism risk to date. Given the proper information, it seems clear that ILS markets to date have kept an open mind on terrorism risk—nothing more and nothing less.

Another common misunderstanding is that ILS investors strictly avoid correlation risk. This very common misperception about ILS investors deserves careful discussion. Confusion around this issue is understandable.

Without getting into too much detail here, ILS markets are supported by a mixture of so-called fast and slow money. Fast money typically comes from hedge funds; slow money, from pension funds. According to the latest figures from Swiss Re Capital Markets, hedge funds make up less than 5 percent of the ILS market. Pension funds are more difficult to track directly because they tend to invest through specialty ILS managers. As one such manager myself, I would gauge pension fund participation in the ILS market to be 60 percent.

Fast money is the most vocal about correlation risk in ILS. Part of this concern is sincere. Fast money often runs highly leveraged positions, in long-short pairing as well. Even a relatively small and brief departure from correlation assumptions can cause big trouble for fast money. This

makes fast money naturally sensitized to the possibility of minute flaws in correlation assumptions. Nonetheless, part of the concern expressed around ILS correlation by fast money is a codified way of asking for a higher yield. Fast money reasons that slow money, which I will discuss soon, keeps ILS yields low on the assumption of non-correlation. Fast money goes on to reason that any potential correlation is uncompensated; and, therefore, greater than normal yield is required for ILS with any potential correlation issues. By the way, this concern applies to most earthquake bonds as much as it would to terrorism bonds.

Armed with this kind of reasoning, which borders on militancy at times, fast money can stay on the sidelines for years at a time, waiting for what it perceives as distressed yields before entering a particular part of the ILS market. Perhaps the incorrect view that all ILS investors are hypersensitive to correlation risk comes from the fast money side of the market, but fast money, as already noted, is only a small part of the overall ILS market capacity.

Slow money is clearly enamored with the general low correlation of ILS to stocks and bonds. Perhaps this, too, could mislead a market observer. By incorrectly combining slow money declarations of love for the low correlation of ILS with the non-correlation militancy of fast money, it is possible to come up with the false, composite picture that all ILS investors are a tough bunch when it comes to ILS correlation risk. Yet, this is simply not true.

Slow money likes ILS and believes ILS offer returns that have a low correlation to stock and bond returns. There is no doubt about this, but the sentiment is more declarative than prescriptive. First of all, slow money defines correlation on a much longer time scale than does fast money—years as opposed to days, weeks or months. Does a prolonged economic recession increase the risk of an insured loss event? Does an insured loss event increase the risk of a prolonged recession? Measured on such long time scales, to my knowledge, no significant correlation between ILS and traditional markets has ever been found. Low correlation with traditional investments is desired by slow money, but the insistence is not so strict that zero correlation is required. Furthermore, the long time scale used to gauge correlation washes out most short-term effects usually associated with, or defined as, correlation.

Perhaps just as important as the long time scales on which slow money operates, slow money is also thoughtful about its approach to alternatives markets like ILS. Even if there were some possibility that an insured loss event might cause longer term damage to stock and bond returns, slow money would ask: is that risk, already borne by stock and bond investors, better compensated in ILS than in stocks and bonds? The answer to that question is almost universally: “ILS pays better for the risk.” This is because stock and bond investors are almost never compensated for bearing extreme event risk, whereas ILS investors are almost always paid for the extreme event risks they cover. As you might hope and expect, with slow money, any lack of correlation with stock and bond returns is icing on the cake, but fair compensation for the risk is of the greatest importance in the end.

5. Ways to increase the efficiency of ILS coverage for terrorism risk

I would like to end my testimony by briefly describing two ways to increase the efficiency of ILS coverage for terrorism risk, which could help the ILS market get to a higher adoption of terrorism risk coverage than might be expected at the current pace of progress.

Greater efficiency of ILS coverage is generally achieved by bundling of coverage with risks that are better understood or exclusion of risks that are less well understood or both. Let me explain while being more specific.

ILS coverage for terrorism risk in the cat bond market has never occurred on a pure, standalone basis. ILS coverage for terrorism risk in the cat bond market is typically bundled with so-called extreme mortality risk, which includes mass threats to human life from disease and earthquake.

This bundling is natural and unsurprising, but the bundling of terrorism risk with other risks likely occurs because risk coverage generally becomes more efficient the more risks are put together in a single contract. I am leaving out a great deal of technical details, but the intuition here is simple: risk bundling reduces the negative effects of transaction costs and economic rents for capital. Ideally, the new risks that are being brought into the bundle are better understood, improving the average quality of the risk bundle. Sometimes, other competing market inefficiencies can come into play to counter the benefits of risk bundling, so this is not always a cure all. Nonetheless, if terrorism risk were bundled with natural catastrophe risks such as hurricane and earthquake, the efficiency of ILS coverage for terrorism risk could potentially be improved.

Finally, ILS coverage for terrorism risk in the cat bond market currently includes nuclear, biological, chemical, and radiological (NBCR) causes of loss. Cat models attempt to take into account both conventional and NBCR sources of terrorism losses, but the ILS market believes that NBCR risks are much less well understood than conventional terrorism risks. If NBCR were excluded from ILS coverage, the efficiency of ILS coverage for the remaining conventional terrorism risk would be improved greatly.

6. Closing

Thank you for this opportunity to testify to the Subcommittee today. I look forward to answering any questions you may have.