Aon Benfield

Insurance-Linked Securities

Year-End 2015 Update

Risk. Reinsurance. Human Resources.

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Third and Fourth Quarter 2015 Catastrophe Bond Transaction Review

Catastrophe bond issuance for the 2015 calendar year totaled USD6.9 billion, contracting from the prior year in response to the prevailing competitive landscape within the (re)insurance market. The 2015 year was marked by a strong initial level of issuance, with a record setting first quarter, as momentum continued from the all-time high in property catastrophe bond annual issuance set in 2014. However, issuance was more tepid the rest of the year due to increased competition from traditional and collateralized reinsurers as well as an industry focus on mergers and acquisitions activity.

Nevertheless, total catastrophe bonds on-risk reached USD24.4 billion as of year-end 2015 representing a new all-time market high, as has been the trend every year since 2012. Maturities for the 2015 year totaled USD6.8 billion, also a market high, resulting in a net market increase as annual issuance continues to outpace maturities.

The table below summarizes the terms of the deals that closed during the second half of 2015.

During the second half of 2015, ten catastrophe bond transactions closed totaling USD2.2 billion. Of note, four of the transaction included parametric triggers, which until recently has been a more unique feature in the market. Parametric triggers are particularly useful for non-insurance corporations, a key market segment for potential growth,

Third and Fourth Quarter 2015 Catastrophe Bond Issuance

Beneficiary	Issuer	Series	Class	Size (millions)	Covered Perils	Trigger	Rating (S&P)	Expected Loss[1]	Interest Spread
Third Quarter									
China Property and Casualty Reinsurance Company	Panda Re Ltd.	Series 2015-1	Class A	$50	China EQ	Indemnity	Not Rated	N/A	undisclosed
Hannover Rück SE	Acorn Re Ltd.	Series 2015-1	Class A	$300	West coast EQ	Parametric	BB (Fitch)	0.74%	3.40%
Turkish Catastrophe Insurance Pool	Bosphorus Ltd.	Series 2015-1		$100	Turkey EQ	Parametric Index	Not Rated	1.50%	3.25%
California Earthquake Authority	Ursa Re Ltd.	Series 2015-1	Class B	$250	CAL EQ	Indemnity	Not Rated	2.55%	5.00%
Fourth Quarter									
National Railroad Passenger Corporation	PennUnion Re Ltd.	Series 2015-1	Class A	$275	US HU (Storm Surge and Wind), EQ	Parametric	BB- (S&P)	1.99%	4.50%
Everest Reinsurance Company	Kilimanjaro Re Limited	Series 2015-1	Class D Class E	$300 $325	US, CAN, PR HU and EQ	Industry Index	Not Rated	5.25% 3.00%	9.25% 6.75%
United Services Automobile Association	Residential Reinsurance 2015 Limited	Series 2015-II	Class 3	$125	US HU, EQ, ST, WS, WF, VE, MI	Indemnity	Not Rated	3.65%	7.25%
National Mutual Insurance Federation of Agricultural Cooperatives	Nakama Re Ltd.	Series 2015-1	Class 1 Class 2	$100 $200	JP EQ	Indemnity	Not Rated	1.16% 0.86%	2.875% 3.25%
Swiss Reinsurance Company Ltd.	Vita Capital IV Limited	Series 2015-1	Class A	$100	AUS, CAN, UK mortality	Mortality Index	BB (S&P)	0.99%	2.90%
Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft	Queen Street IX Re dac			$100	US HU, AUS CY	Multiple	Not Rated	2.82%	6.15%
Total Closed During Q3 and Q4 2015				$2,225					

1 *Annualized modeled expected loss; sensitivity cases if U.S. hurricane is a covered peril*

Source: Aon Securities Inc.

Legend

AUS – Australia
CAL – California
CAN – Canada
FL – Florida
EU – Europe
JP – Japan
PR – Puerto Rico
US – United States
CY – Cyclone
EQ – Earthquake
HU – Hurricane
MI – Meterorite Impact
ST – Severe Thunderstorm
WF – Wildfire
WS – Winter Storm
VE – Volcanic Eruption

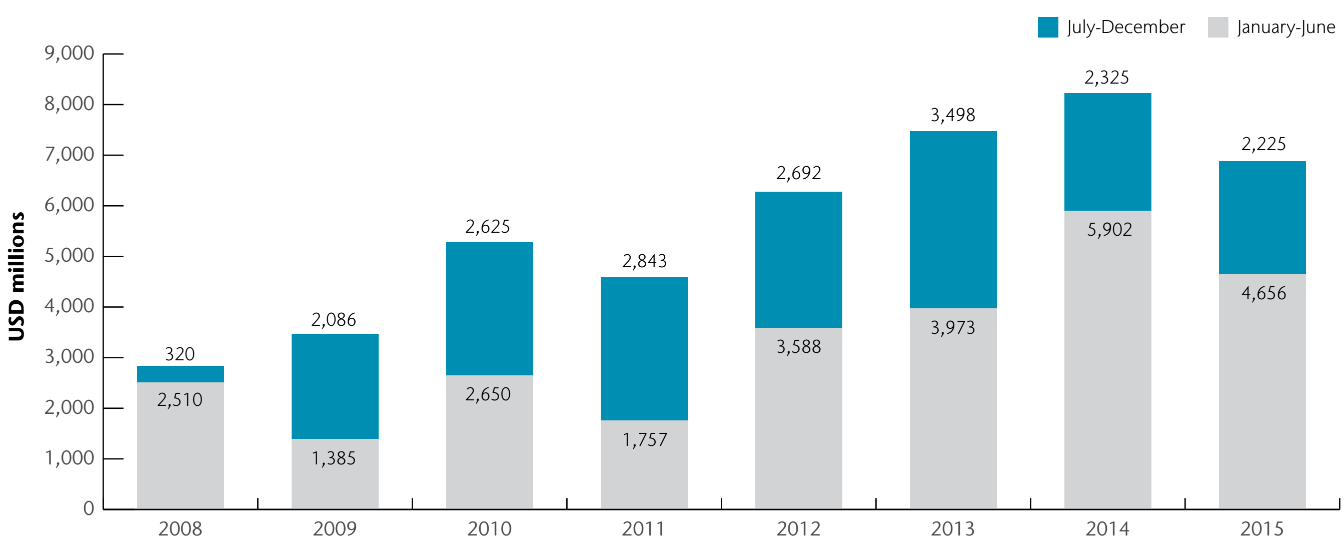
where loss reporting and investor acceptance of indemnity triggers is more limited. Additionally, a broad array of perils and geographies were covered by the transactions including the first China-exposed catastrophe bond in market history, Panda Re Ltd. Series 2015-1, which provides earthquake coverage. The more typically covered perils of U.S. nationwide, regional and state specific coverages were placed, in addition to Turkey and Japan earthquake. One life and health catastrophe bond closed covering Australia, Canada and United Kingdom extreme mortality (including deaths caused by terrorism events).

The National Railroad Passenger Corporation (known as "Amtrak") secured through its subsidiary Passenger Railroad Insurance, Ltd., USD275 million in parametric index per occurrence cover for earthquakes, as well as storm surge and wind resulting from named storms. The parametric index is based on data collected from calculation locations within regions of the New York City metropolitan area and Delaware for storm surge as well as select Northeast and Mid-Atlantic states for earthquake and wind. This footprint aligns with the centerpiece of the network's passenger rail transportation system, Amtrak's Northeast Corridor. PennUnion Re Ltd. was the second transaction to benefit a non-insurance corporation through use of a parametric trigger in the second half of 2015. It followed Acorn Re Ltd., a transaction fronted through Hannover Rück SE on behalf of Oak Tree Assurance, Ltd., a Vermont captive insurance company owned by the Kaiser Foundation Health Plan, Inc.

Everest Reinsurance Company ("Everest Re") returned to the catastrophe bond market with its third transaction under the Kilimanjaro Re Limited program. The Series 2015-1 Class D and E notes provide North America named storm (expanded to include the entire U.S., Canada and Puerto Rico) and earthquake coverage on an industry index per occurrence basis. The USD625 million issuance brings total catastrophe bond capacity secured by Everest Re to USD1.58 billion and ranks the property and casualty (re)insurer second overall in total outstanding limit as at year-end 2015, all in just two years of issuance.

Swiss Reinsurance Company Ltd. ("Swiss Re"), the historic largest sponsor of catastrophe bonds as based on issuance volume since market inception, issued via Vita Capital IV Limited its first catastrophe bond transaction since 2013. The USD100 million extreme mortality transaction combines with two prior life and health transactions placed earlier in the 2015 calendar year to bring life and health annual issuance to USD610 million, representing the second highest level for the life and health catastrophe bond sector in a single year in market history and the most since the 2007 financial crisis.

Catastrophe Bond Issuance by Half Year



Source: Aon Securities Inc.

Aon Securities expects prevailing catastrophe bond market trends to persist into 2016, with a continuing privatization of public risks through residual market transactions, further utilization by non-insurance corporate sponsors, and an increasingly diverse and expanding covered area and exposure base. In addition, our firm anticipates an increase of issuance by reinsurers during 2016.

We expect U.S. property peak peril risks, such as Florida hurricane and California earthquake, to continue to dominate the catastrophe bond market in 2016, in alignment with the global (re)insurance market.

Property catastrophe rates have generally stabilized from the absolute lows of 2014, particularly for lower rate-on-line deals as investors have shown stronger demand for higher yielding transactions. Investors are generally not seeing the same magnitude of capital inflows as 12 months ago. Aon Securities estimates the size of the alternative market increased 8 percent to USD68.8 billion for the nine months ending September 30, 2015 compared to 28 percent for the full year 2014.[2] Although property catastrophe rate compression has motivated some investors to pull back, many still see significant and continued value in the asset class. As overall asset allocation to insurance-linked securities ("ILS") remains relatively low in the global capital markets, the upward potential for the catastrophe bond market still remains high despite year-over-year contraction.

The maturity of the market, however, continues to fuel growth, as many ILS funds are now regularly tracked by the global institutional investor market (i.e pensions and endowments). With that said, as managers demonstrate consistency in returns, expected losses and controlled tail risk, we will continue to see both new entrants and reinvestment in the sector. Our firm expects 2016 to be slightly higher, with regards to inflows, than 2015 due to aforementioned attractiveness of the asset class, likely global interest rate increases and continued volatility in the equity markets.

Aon Securities' preliminary view for 2016 primary catastrophe bond issuance is USD6 to 7 billion.

2 *Aon Benfield, Reinsurance Market Outlook January 2016*

Third and Fourth Quarter 2015 Secondary Trading Update

Secondary markets were relatively quite in the third quarter of 2015. Few new issues in the quarter combined with an expected light fourth quarter pipeline reduced investors' need to rebalance portfolios. According to FINRA's Trade Reporting and Compliance Engine (TRACE) there were 180 trades totaling USD176 million in the period.[3] Investors saw strong gains in the pricing of U.S. hurricane-exposed transactions driven by seasonality, with the U.S. hurricane season passing without incident.

There were more sellers than buyers overall during the fourth quarter, which put downward pressure on catastrophe bond prices. Many investors utilized the secondary market to make room for new issues and January 1 traditional renewals. Exiting positions in short-dated off-risk bonds was slightly more difficult in 2015 than in previous years, given weaker demand for catastrophe bonds with low discount margins. Throughout the fourth quarter TRACE reported 244 trades totaling USD277 million.[3]

On October 23, Hurricane Patricia made landfall near Cuixmala in Jalisco state of southwest Mexico as a Category 5 on the Saffir-Simpson Scale. Hurricane Patricia became the strongest tropical cyclone ever recorded in the Western Hemisphere when its maximum sustained wind speeds reached 200 mph and its central pressure decreased to 879 millibars. Initial reports from the National Hurricane Center ("NHC") indicated that Patricia could lead to a full loss of principal on the MultiCat Mexico Limited Series 2012-I Class C notes. The notes utilize a parametric trigger whereby a 50 percent payout occurs if the central pressure falls between 920mb and 932mb; a full payout occurs at 920mb or below lower. According to the NHC's real-time data the central pressure was estimated at 920mb at the time of landfall; however, the Class C notes utilize NHC's "best track" data within the covered area to determine payout. As of the time of publication, this "best track" information has not been reported. There were several trades of the Class C notes in the secondary market throughout the fourth quarter. The notes initially changed hands a few days after landfall, trading at a level of 4.35 on October 26th. Throughout November and December, however, the notes increased in value with several trades occurring in between 20.00 and 21.25.

3 *Note that this is an underestimate of total market volume as trades in bonds rated below investement grade are capped at USD1 million and foreign trades as well as trades by non-U.S. broker dealers are excluded.*

Aon ILS Indices

The Aon ILS Indices are calculated by Bloomberg using month-end price data provided by Aon Securities.

In 2015, all Aon ILS Indices posted gains. The All Bond and BB-rated Bond indices posted returns of 3.51 percent and 2.00 percent, respectively. The U.S. Hurricane and U.S. Earthquake Bond indices returned 5.01 percent and 2.85 percent, respectively.

Ending 2015, the Aon ILS Indices outperformed comparable fixed income benchmarks, all with positive returns (with the exception of the 3-5 Year BB U.S. High Yield Index which ended the year down 0.16 percent). U.S. equities were also outperformed by the ILS sector for the year as the S&P 500 Index produced negative returns, down 0.73 percent.

The annual returns for all Aon ILS Indices underperformed the prior one year returns, as keeping pace with the historic Aon ILS average annual returns remains challenging, given the current market environment without a major catastrophe loss or an increase in the overall level of risk ceded to the market. Returns for all catastrophe bond indices were affected by mark-to-market losses for the year, as spreads in the underlying bonds widened.

Aon Benfield ILS Indices[4]

Index Title	Return for Quarterly Period Ended December 31		Return for Annual Period Ended December 31	
Aon Benfield ILS Indices	2015	2014	2015	2014
All Bond Bloomberg Ticker (AONCILS)	0.45%	0.88%	3.51%	4.96%
BB-rated Bond (AONCBB)	0.31%	0.05%	2.00%	2.44%
U.S. Hurricane Bond (AONCUSHU)	1.17%	1.63%	5.01%	8.01%
U.S. Earthquake Bond (AONCUSEQ)	0.73%	0.76%	2.85%	3.46%
Benchmarks				
3-5 Year U.S. Treasury Notes (USG2TR)	-1.02%	0.88%	1.60%	2.21%
3-5 Year BB U.S. High Yield (J2A1)	-0.45%	0.75%	-0.16%	2.99%
S&P 500 (SPX)	6.45%	4.39%	-0.73%	11.39%
ABS 3-5 Year, Fixed Rate (R2A0)	-1.03%	0.89%	1.93%	2.90%
CMBS 3-5 Year, Fixed Rate (CMB2)	-0.95%	1.03%	1.72%	3.24%

Source: Aon Securities Inc., Bloomberg

[4] *The 3-5 Year U.S. Treasury Note index is calculated by Bloomberg and simulates the performance of U.S. Treasury notes with maturities ranging from three to five years*

The 3-5 Year BB U.S. High Yield index is calculated by Bank of America Merrill Lynch (BAML) and tracks the performance of U.S. dollar denominated corporate bonds with a remaining term to final maturity ranging from three to five years and are rated BB1 through BB3. Qualifying securities must have a rating of BB1 through BB3, a remaining term to final maturity ranging from three to five years, fixed coupon schedule and a minimum amount outstanding of $100 million. Fixed-to-floating rate securities are included provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transactions from a fixed to a floating rate security.

The S&P 500 is Standard & Poor's broad-based equity index representing the performance of a broad sample of 500 leading companies in leading industries. The S&P 500 Index represents price performance only, and does not include dividend reinvestments or advisory and trading costs.

The ABS 3-5 Year, Fixed Rate index is calculated by BAML and tracks the performance of U.S. dollar denominated investment grade fixed rate asset backed securities publicly issued in the U.S. domestic market with terms ranging from three to five years. Qualifying securities must have an investment grade rating, a fixed rate coupon, at least one year remaining term to final stated maturity, a fixed coupon schedule and an original deal size for the collateral group of at least $250 million.

The CMBS 3-5 Year, Fixed Rate index is calculated by BAML and tracks the performance of U.S. dollar denominated investment grade fixed rate commercial mortgage backed securities publicly issued in the U.S. domestic market with terms ranging from three to five years. Qualifying securities must have an investment grade rating, at least one year remaining term to final maturity, a fixed coupon schedule and an original deal size for the collateral group of at least $250 million.

The performance of an index will vary based on the characteristics of, and risks inherent in, each of the various securities that comprise the index. As such, the relative performance of an index is likely to vary, often substantially, over time. Investors cannot invest directly in indices.

An Interview with Brad Adderley, Partner at Appleby (Bermuda) Limited

Brad Adderley is a partner in the corporate department of Appleby's Bermuda office and has been a member of the insurance team for 20 years

1. Please provide an overview of Appleby and your role within the firm

Appleby is one of the world's largest providers of offshore legal advice and services. The Group has offices in the key offshore jurisdictions of Bermuda, the British Virgin Islands, the Cayman Islands, Guernsey, Hong Kong, Isle of Man, Jersey, Mauritius, and the Seychelles. Appleby has been ranked as one of the world's largest providers of offshore legal services by number of lawyers in The Lawyer's 2015 Offshore Survey.

Appleby delivers sophisticated, specialised services, primarily in the areas of Corporate, Dispute Resolution, Private Client and Trusts and Property. The Group advises public and private companies, financial institutions, and high net worth individuals, working with these clients and their advisers to achieve practical solutions, whether in a single location or across multiple jurisdictions.

I am a partner in Appleby's Bermuda office, specifically in the corporate practice group and specialise in the (re) insurance sector. I've been at Appleby 20 years. Our corporate lawyers in Bermuda are an integral part of the island's international financial and regulatory landscape. The team advises on all aspects of Bermuda and international corporate and commercial matters involving banking, (re) insurance, trusts, funds, structured finance, ship and aircraft registration, telecommunications and technology and listings on the Bermuda Stock Exchange.

Appleby's insurance team is the only Bermuda insurance team ranked No. 1 by Chambers Global since 2011. Our first-rate insurance team specializes in advising on the establishment, regulatory compliance and business operations of insurance and reinsurance companies.

Appleby is also the official law firm of the America's Cup 2017 which we are very excited will be held in Bermuda.

2. Bermuda has been an established (re)insurance hub for some time. However, we witnessed significant growth in Bermuda compared to other domiciles since 2010 for ILS products and fund managers. For example, almost two thirds of outstanding cat bond issuance has been issued from Bermudian SPIs. What do you attribute this to? In addition, how have the ILS investors' and fund managers' use of Bermuda entities changed over the last five years?

Prior to 2010 Bermuda had always been a center for sidecars and collateralised segregated account structures. The Bermuda ILS sector started to distance itself from other offshore centres around 2010 when it started to attract cat bonds and the advent/growth of ILS fund structures. The roots of this success can be found in Bermuda's introduction of "special purpose insurer" (SPI) legislation in 2006. SPIs are fully funded (re)insurance vehicles, which are established for a limited period and for a specific purpose. SPIs can only be used by sophisticated cedants and sophisticated investors and the particulars of the structures and transactions have to be fully disclosed to all parties. As a result, SPIs often experience a quicker approval process and are subject to prudent regulation based on the attributes of the transactions and structures involved. This allows the SPIs to be subject to very competitive regulatory fees, particularly when compared with other commercial insurers and other offshore centres (the annual insurance licence fee is currently USD6,180)

The use of SPIs has gathered momentum and evolved as market participants grew more familiar with such vehicles and the products that they could offer. Examples of this evolution can be seen through the use of SPIs with "bolt-on" features (such as the ability to utilise Bermuda's segregated accounts legislation), as well as SPIs with an unlimited life.

In addition, we have seen a marked increase in the use of collateralised reinsurance (or "cat bond lite") programs in recent years. Such programs (which are often bespoke reinsurance structures that utilise an SPI or a more traditional "transformer" vehicle, often with segregated accounts) offer sponsors a faster, more cost-effective access point to the ILS market, particularly when compared with more traditional cat bond transactions. Appleby is at the forefront of these transactions and is passionate about developing innovative solutions for our clients and the marketplace to solve their ever-changing needs. These structures are creating more liquidity by listing the notes or preference shares on the BSX and allowing them to be cleared through "Euroclear". They are also attracting more entrants to the market as the transactions are normally smaller in size.

Appleby is a founding member of ILS Convergence and I am on the Bermuda ILS Steering Committee, helping to shape the industry. As a world-class financial centre and leader in ILS, Bermuda is well positioned for continued success due to its highly regarded regulatory framework, intellectual capital and drive to continually innovate. Investor confidence in ILS structures continues to grow, making ILS transactions more mainstream.

3. In November 2015, the European Commission declared Bermuda's commercial (re)insurance regime fully equivalent to Solvency II. Please discuss the advantages of achieving this status.

Bermuda's designation as equivalent under Solvency II will ensure that Bermuda's commercial insurers can continue to transact business within the European Union – in particular, Bermuda (re)insurers and groups will be able to conduct business in the EU without additional regulatory requirements or restraints (unlike (re)insurers from jurisdictions that have not achieved equivalency under Solvency II). Equivalency will also benefit the EU and its citizens, as it enhances the provision of well-regulated, stable (re)insurance capacity. Equivalency will also substantively strengthen the level of cooperation and trust between international insurance supervisors, as well as the cross-border efficiencies and effectiveness of supervision between jurisdictions.

As Bermuda has made strides to achieve equivalency under Solvency II, we have had many clients welcome the development of the regulatory regime—indeed we have had clients come to Bermuda specifically because of its equivalent status under Solvency II. This, coupled with Bermuda's status as an NAIC-approved jurisdiction, will make Bermuda one of the only reinsurance hubs with unparalleled access to the U.S. and Europe.

4. Where do you see future opportunities for growth?

Bermuda has a history of fostering new ideas and making them happen. For me, I see opportunities for growth in new and interesting vehicles—from a Bermuda legal and regulatory perspective, anything is possible and so I always encourage clients to tell me what they want to do, so that I can build them the framework that they need to grow. What's important is that the Bermuda regulators are open to listening to new ideas and are responsive to what the market needs.

5. Finally, what's the best and worst things about living in Bermuda

The best thing about living in Bermuda is the work environment, vibrant business market and the abundance of outdoor activities. In the unlikely event that you do get bored, travel is easily accessible.

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About Aon Benfield

Aon Benfield, a division of Aon plc (NYSE: AON), is the world's leading reinsurance intermediary and full-service capital advisor. We empower our clients to better understand, manage and transfer risk through innovative solutions and personalized access to all forms of global reinsurance capital across treaty, facultative and capital markets. As a trusted advocate, we deliver local reach to the world's markets, an unparalleled investment in innovative analytics, including catastrophe management, actuarial and rating agency advisory. Through our professionals' expertise and experience, we advise clients in making optimal capital choices that will empower results and improve operational effectiveness for their business. With more than 80 offices in 50 countries, our worldwide client base has access to the broadest portfolio of integrated capital solutions and services. To learn how Aon Benfield helps empower results, please visit aonbenfield.com.

About Aon

Aon plc (NYSE:AON) is a leading global provider of risk management, insurance brokerage and reinsurance brokerage, and human resources solutions and outsourcing services. Through its more than 72,000 colleagues worldwide, Aon unites to empower results for clients in over 120 countries via innovative risk and people solutions. For further information on our capabilities and to learn how we empower results for clients, please visit: http://aon.mediaroom.com.

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As one of the most experienced investment banking firms in this market, Aon Securities offers expert underwriting and placement of new debt and equity issues, financial and strategic advisory services, as well as a leading secondary trading desk. Aon Securities' integration with Aon Benfield's reinsurance operation expands its capability to provide distinctive analytics, modeling, rating agency, and other consultative services.

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