Aon Benfield

# Insurance-Linked Securities

Q1 2016 Update

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# First Quarter 2016 Catastrophe Bond Transaction Review

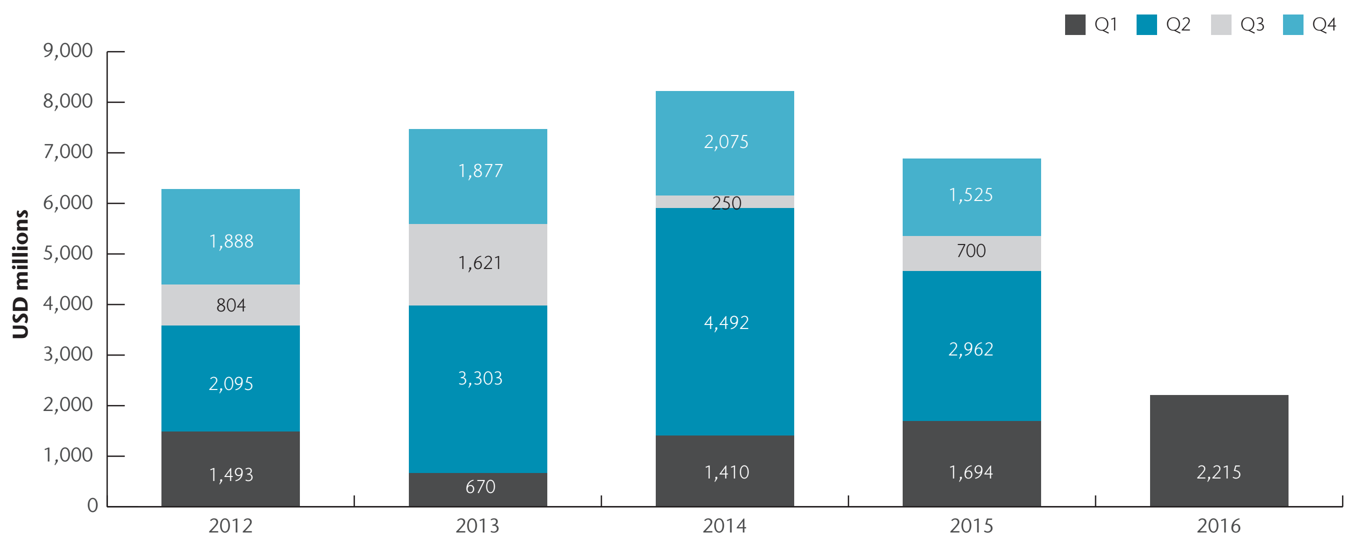
A new record for first quarter catastrophe bond issuance was established in the alternative capital reinsurance market in 2016. During this period, catastrophe bond issuance totaled USD2.22 billion, representing robust 31% growth over the prior record, set in Q1 2015. Such year-over-year first quarter growth contributed to overall market expansion, pushing outstanding catastrophe bond limit to a new market high of USD25.0 billion, as of March 31, 2016.

With market volume typically concentrated around the important reinsurance renewals periods of Q2 and Q4, the strong start to 2016 bodes well for the year ahead, especially in light of the prevailing competitive (re)insurance landscape, which contributed to the more moderate issuance volumes of Q4 2015. Interestingly, the combined weighted average initial expected loss of 2016 transactions was 2.46%–more than 30 bps above the prior year, demonstrating the competitiveness of alternative markets at higher risk levels.

The chart below shows catastrophe bond issuance by quarter since 2012.

All sponsors of Q1 2016 issuances were repeat issuers, exemplifying the consistent value offered by the alternative capital market to insurers and reinsurers. The record issuance provided investors with a wide range of expected losses

**Catastrophe Bond Issuance by Quarter**




*Source: Aon Securities Inc.*

(0.01% - 11.41%) and corresponding risk interest spreads (2.15% - 16.25%) across the 10 transactions that closed during the quarter. The varied transactions demonstrated ILS' ability to offer a wide spectrum of risk-return profiles to investors in this diversifying alternative asset class.

In regard to placed risk, U.S. named storm and earthquake dominated the market, as did, to a lesser extent, Japan typhoon. Additional placed perils included U.S. severe thunderstorm, winter storm, wildfire, volcanic eruption and meteorite impact; the latter four, typically viewed as add-ons to multi-peril coverage, are gaining prevalence in ILS transactions. Canada earthquake and U.S. medical benefits ratio coverage were also part of the Q1 2016 risk transfer. The inter-ILS diversification benefit seen in health, New Madrid earthquake and Japan typhoon exposures, was evidenced in that all such transactions priced at or below an initial risk interest spread of 2.50%. This was in contrast to the rest of the transactions, which all priced at or above an initial risk interest spread of 5.50%. This dynamic demonstrates investors' demands to both balance portfolio exposures across geographies and seek higher returns. Of further note, only one transaction received a rating, as many repeat sponsors continued to opt out of ratings for new issuances.

The table below summarizes the terms of the 10 catastrophe bond transactions that closed during the first quarter.

### First Quarter 2016 Catastrophe Bond Issuance

| Beneficiary | Issuer | Series | Class | Size (millions) | Covered Perils | Trigger | Rating | Expected Loss[1] | Interest Spread |
|---|---|---|---|---|---|---|---|---|---|
| First Quarter | | | | | | | | | |
| SCOR Global P&C SE | Atlas IX Capital DAC | Series 2016-1 | Class A | $300 | US HU, US/ CAN EQ | Industry Index | Not Rated | 3.29% | 7.50% |
| XL Insurance (Bermuda) Ltd | Galileo Re Ltd. | Series 2016-1 | Class A | $100 | US HU & EQ, EU Wind | Industry Index | Not Rated | 9.52% | 13.50% |
| | | | Class B | $100 | | | | 4.96% | 9.00% |
| | | | Class C | $100 | | | | 3.09% | 7.00% |
| Aetna Life Insurance Company | Vitality Re VII Limited | Series 2016-1 | Class A | $140 | US MBR | Indemnity | BBB+ (S&P) | 0.01% | 2.15% |
| | | | Class B | $60 | | | BB+ (S&P) | 0.18% | 2.65% |
| Heritage Property & Casualty Insurance Company and Zephyr Insurance Company, Inc. | Citrus Re Ltd. | Series 2016-1 | D-50 | $150 | FL/HI HU | Indemnity | Not Rated | 3.31% | 7.50% |
| | | | E-50 | $100 | | | | 6.29% | 10.50% |
| Nationwide Mutual Insurance Company | Caelus Re IV Limited | Series 2016-1 | Class A | $300 | US HU, EQ, ST, WS, WF, VE, MI | Indemnity | Not Rated | 1.94% | 5.50% |
| United Services Automobile Association | Espada Reinsurance Limited | Series 2016-I | Class 20 | $50 | US HU, EQ, ST, WS, WF, VE, MI, OP | Indemnity | Not Rated | 2.25% | 5.75% |
| Safepoint Insurance Company | Manatee Re Ltd. | Series 2016-1 | Class A | $75 | FL/LA HU | Indemnity | Not Rated | 1.15% | 5.25% |
| | | | Class C | $20 | | | | 11.41% | 16.25% |
| Mitsui Sumitomo Insurance Co., Ltd | Akibare Re Ltd. | Series 2016-1 | Class A | $200 | JP TY | Indemnity | Not Rated | 1.19% | 2.50% |
| Sompo Japan Nipponkoa Insurance Inc. | Aozora Re Ltd. | Series 2016-1 | Class A | $220 | JP TY | Indemnity | Not Rated | 0.90% | 2.20% |
| State Farm Fire and Casualty Company | Merna Re Ltd. | Series 2016-1 | Class A | $300 | US (New Madrid) EQ | Indemnity | Not Rated | 0.41% | 2.25% |
| Total Closed During Q1 2016 | | | | $2,215 | | | | | |

1 *Expected loss represents initial one-year annualized figures with WSST sensitivity when applicable*

*Source: Aon Securities Inc.*

**Legend**

EU – Europe
FL – Florida
HI – Hawaii
JP – Japan
LA – Louisiana
US – United States
EQ – Earthquake
HU – Hurricane
MI – Meterorite Impact
OP – Other Perils
ST – Severe Thunderstorm
VE – Volcanic Eruption
WF – Wildfire
WS – Winter Storm

Nationwide Mutual Insurance Company (“Nationwide Mutual”) returned to the catastrophe bond market through a new notes program, Caelus Re IV Limited, to capitalize on coverage advancements and innovations since its last notes program incepted in 2013. The transaction was successfully upsized from its initial target size of USD225 million and priced at the low-end of marketed price guidance. The single class of notes issued provides Nationwide Mutual with USD300 million of collateralized reinsurance protection on an indemnity per occurrence basis over a four-year term, for losses arising from named storms, earthquakes, severe thunderstorms, winter storms, wildfires, volcanic eruptions and meteorite impacts in the U.S. The latter five perils are all new additions to the firm’s catastrophe bond coverage, and the transaction overall represents a net increase in total outstanding limit, as the new transaction replaces the USD270 million Caelus Re 2013 Limited Series 2013-1, which matured in early March of 2016.

United Services Automobile Association (“USAA”), a regular sponsor in the catastrophe bond market, also returned through use of a new notes program, Espada Reinsurance Limited. The new issuance vehicle differs from the Residential Reinsurance Limited programs utilized in the past by the USAA for its 25 prior transactions. The issuance provides USAA with U.S. multi-peril aggregate indemnity protection for tropical cyclone, earthquake, severe thunderstorm, winter storm, wildfire, volcanic eruption and meteorite impact, as previously covered in recent Residential Reinsurance Limited transactions. Espada Reinsurance Limited Series 2016-I’s coverage sits across a rather broad layer, with a modeled trigger probability of 9.65% and an initial modeled expected loss of 2.25% (AIR sensitivity case). The transaction closed at the upper range of marketed price guidance and the lower range of size guidance, at USD50 million.

The end of the first quarter saw the successful close of a pair of indemnity Japan typhoon transactions. The first, Akibare Re Ltd. Series 2016-1 was issued to the benefit of Mitsui Sumitomo Insurance Co., Ltd (“Mitsui Sumitomo”), and the second to Sompo Japan Nipponkoa Insurance Inc. (“SJNK”) in Aozora Re Ltd. Series 2016-1. Both transactions found marketing success, with Akibare Re Ltd. Series 2016-1 moderately upsized to USD200 million and pricing at the lower end of marketed price guidance, at 2.25%. This transaction expanded Mitsui Sumitomo’s catastrophe bond utilization as it replaces the matured USD130 million Akibare II Series 2012-1. Additionally, Akibare Re Ltd. Series 2016-1 is Mitsui Sumitomo’s first indemnity and first aggregate transaction. Aozora Re Ltd. Series 2016-1 grew by over 25% to reach USD220 million, more than double SJNK’s inaugural 2014 issuance, and also priced at the lower range of guidance. Also during the quarter, Tokio Marine & Nichido Fire Insurance Co., Ltd. exercised an early redemption to recall the ¥35,000 billion Kizuna Re II Ltd. Series 2015-1 notes on April 1, 2016. The transaction covered Japan earthquake, with collateral held in JPY investment funds, to match the coverage denomination. However, the JPY investment fund was liquidated in light of interest rate shifts to negative rates in Japan, and the sponsor elected an early redemption predicated on excessive supplemental premium payments given the switch to cash collateral.

# First Quarter 2016 Secondary Trading Update

Secondary markets were more active in the first quarter of 2016 than at year end 2015. According to FINRA's Trade Reporting and Compliance Engine (TRACE) there were 311 trades totaling USD307.75 million in the period.[2] This represents an increase in trade volume of more than 25% compared to Q4 2015, while the dollar volume of reported trades increased over 10% from Q4 2015. This rise in trade activity was supported by freed capital being redeployed into the market following the maturing of 10 catastrophe bonds in Q1 2016, representing USD1.37 billion in limit. Peril-specific activity was further motivated by the anticipated early redemption of Kizuna Re II Ltd. Series 2015-1, scheduled to occur on April 1, 2016. In anticipation of this redemption, many investors sought to maintain the diversity of their portfolios by buying into other Japan earthquake bonds on the secondary market. The TRACE reported trade count for Japan earthquake catastrophe bonds increased 140% from Q4 2015 in this period.

Many investors attempted to utilize the secondary market to employ available capital, while others held steady in their positions. This resulted in more buyers than sellers, especially towards the end of the first quarter, which put upward pressure on catastrophe bond prices. Despite the lower supply of catastrophe bonds for sale, many investors were reluctant to increase bids, preferring to hold onto cash in anticipation of new primary issues.

Catastrophe bonds that reported 10 trades or more included Everglades Re Ltd. Series 2014-1 ("Everglades Re 2014-1"), Tar Heel Re Ltd. Series 2013-1 ("Tar Heel Re 2013-1"), Bosphorus 1 Re Ltd. Series 2013-1 ("Bosphorus 1 2013-1"), and Kilimanjaro Re Limited Series 2015-1 Class D ("Kilimanjaro Re 2015-1 D").

Bonds that were more heavily traded earlier in the quarter, such as Everglades Re 2014-1 and Bosphorus 1 2013-1, initially saw downward pressure on pricing until mid-quarter, when it became clear to investors that the primary pipeline was not going to satisfy demand. As a result, an upward surge in pricing was witnessed in bonds actively traded in mid- to late Q1, such as Kilimanjaro Re 2015-1 D, which steadily increased in pricing from mid-February through the end of the quarter as trading activity increased. Tar Heel Re 2013-1 secondary pricing was drawn to par over the quarter, as the bond approached its scheduled maturity on May 9, 2016.

The MultiCat Mexico Limited Series 2012-1 C notes were extended from their initial maturity date of December 4, 2015 to a final maturity date of March 4, 2016 following the loss that occurred due to Hurricane Patricia. The sponsor (The Fund For Natural Disasters) received a 50% payout after AIR Worldwide, the calculation agent for the transaction, delivered its final report.

A total of 14 catastrophe bonds are set to mature in Q2 2016, which is expected to put further downward pressure on bond spreads and increase secondary prices. As overall investor demand remains high, our firm looks forward to a strong second quarter of primary issuance—following the already record Q1 issuance—to match this yet unmet market demand for catastrophe bond risk.

2 *Note that this is an underestimate of total market volume as trades in bonds rated below investment grade are capped at $1 million and foreign trades as well as trades by non-US broker dealers are excluded*

# Aon ILS Indices

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

During the first quarter of 2016, all Aon ILS Indices posted gains, representing an improvement over the prior year period, during which only the U.S. Earthquake index posted a gain. The All Bond and BB-rated Bond indices achieved the greatest growth with returns of 1.81 percent and 1.43 percent, respectively. The U.S. Hurricane and U.S. Earthquake Bond indices followed with returns of 0.72 percent and 1.09 percent, respectively. The Aon ILS Indices performed with mixed results relative to benchmarks, but managed to outperform the S&P 500 and the ABS 3-5 Year Fixed Rate index.

The annual returns for the year ended March 31, 2016 of all Aon ILS Indices also outperformed the prior year's annual returns, for the first time since Q4 2013. The index gains are in part attributable to price appreciation driven by increased demand in the secondary market and the continued absence of a major catastrophe event. The 10-year average annual return of the Aon All Bond index, 8.65 percent, further produced superior returns relative to the other benchmarks. This demonstrates the value a diversified book of pure insurance risks can bring to long term investors' portfolios.

### Aon ILS Indices[3]

| Index Title | Return for Quarterly Period Ended March 31 | | Return for Annual Period Ended March 31 | |
|---|---|---|---|---|
| Aon ILS Indices | 2016 | 2015 | 2016 | 2015 |
| All Bond<br>Bloomberg Ticker (AONCILS) | 1.81% | -0.26% | 5.66% | 3.14% |
| BB-rated Bond (AONCBB) | 1.43% | -0.79% | 4.28% | 0.58% |
| U.S. Hurricane Bond (AONCUSHU) | 0.72% | -0.55% | 6.36% | 6.27% |
| U.S. Earthquake Bond (AONCUSEQ) | 1.09% | 0.69% | 3.26% | 3.12% |
| Benchmarks | | | | |
| 3-5 Year U.S. Treasury Notes (USG2TR) | 2.50% | 1.49% | 2.62% | 3.22% |
| 3-5 Year BB U.S. High Yield (J2A1) | 2.85% | 2.05% | 0.62% | 3.10% |
| S&P 500 (SPX) | 0.77% | 0.44% | -0.39% | 10.44% |
| ABS 3-5 Year, Fixed Rate (R2A0) | 1.38% | 1.59% | 1.72% | 3.52% |
| CMBS 3-5 Year, Fixed Rate (CMB2) | 2.36% | 1.75% | 2.34% | 3.85% |

*Source: Aon Securities Inc., Bloomberg*

[3] *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.*

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