TRUST RE

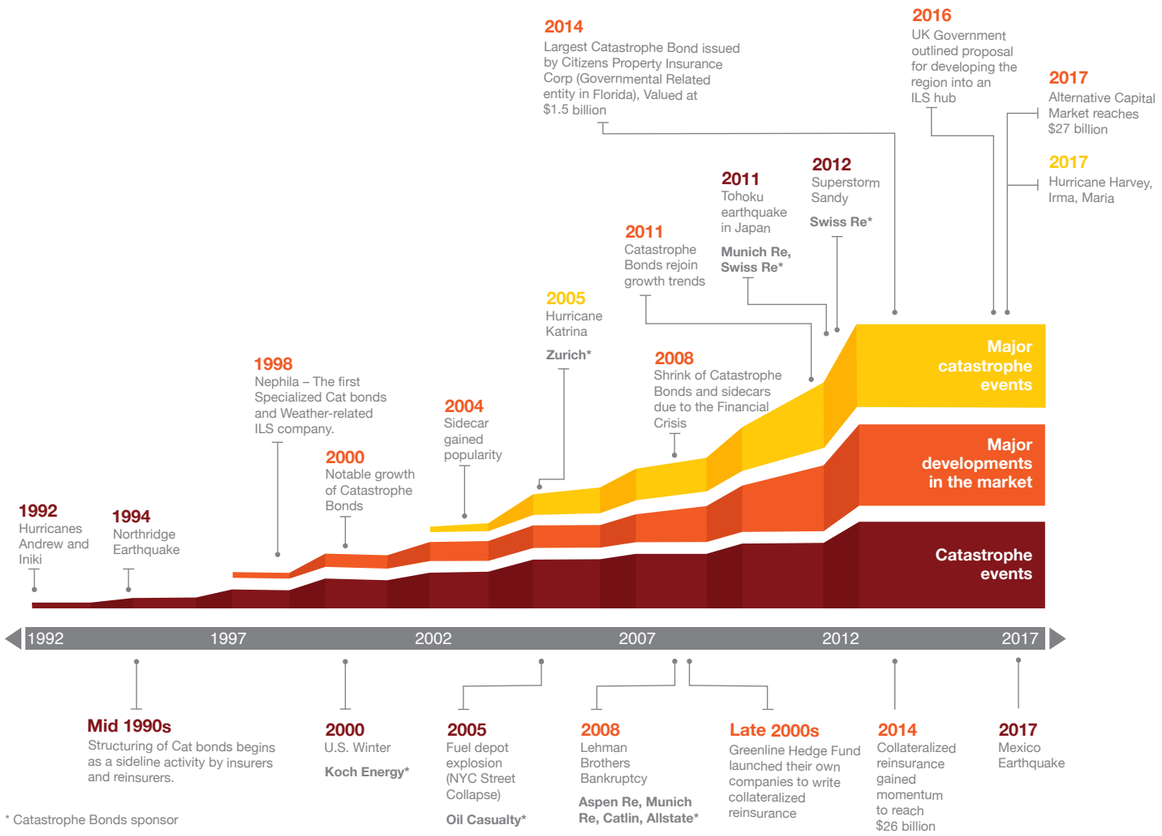
PERSPECTIVES

THE CONVERGENCE OF REINSURANCE AND ALTERNATIVE CAPITAL

SUPPORTING INSURANCE DEMAND

PLANNING AND PERFORMANCE MANAGEMENT DEPARTMENT, NOVEMBER 2018

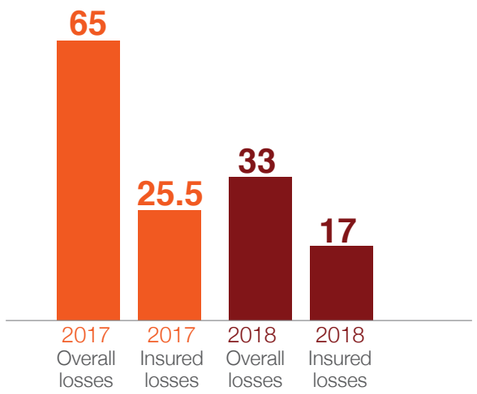
Historical Evolution of Alternative Capital: Driven by Catastrophe Bonds



* Catastrophe Bonds sponsor

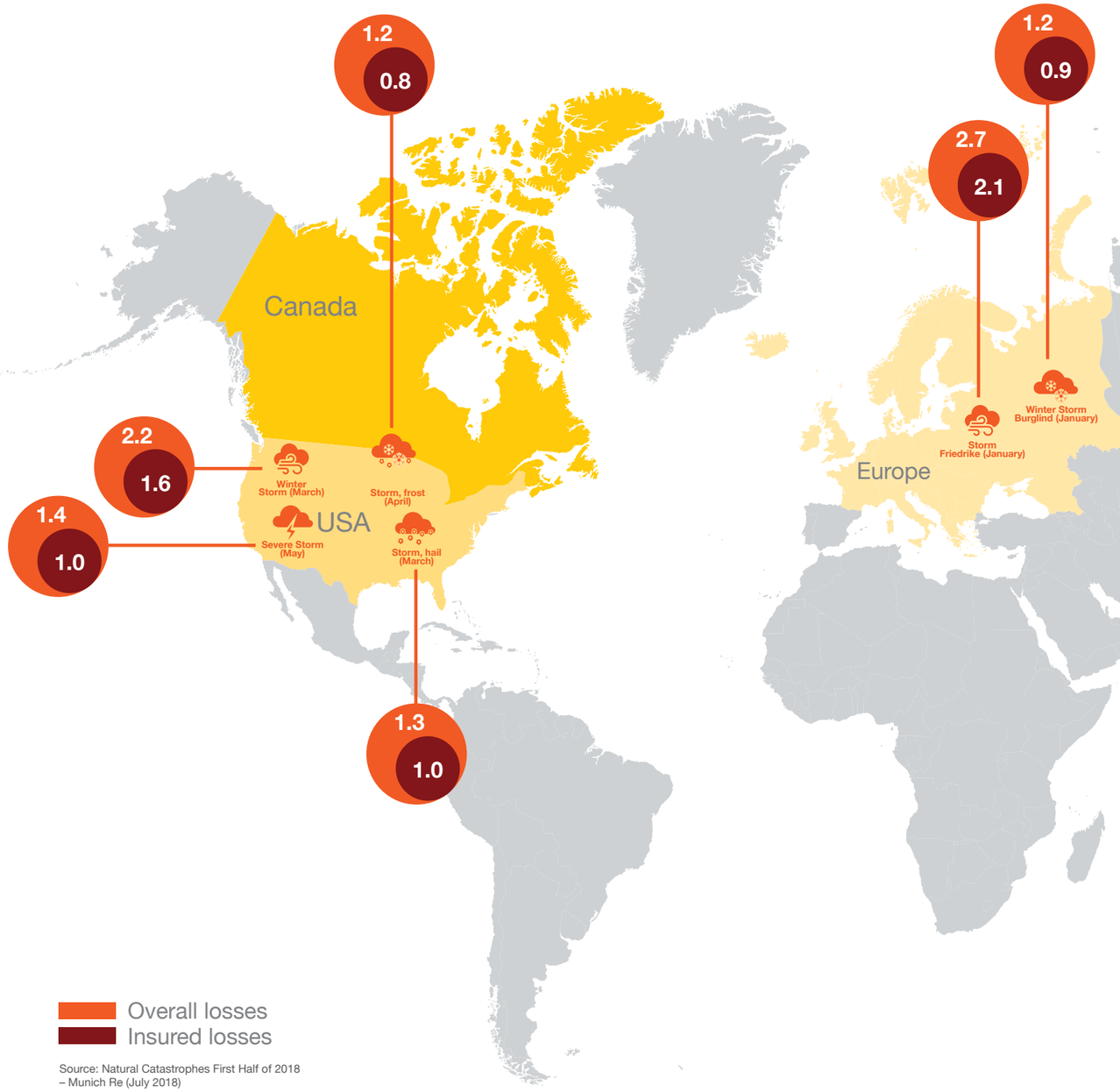
2018 Worldwide Notable Events as at H1 2018

Losses from Natural Catastrophe (in $ billion)



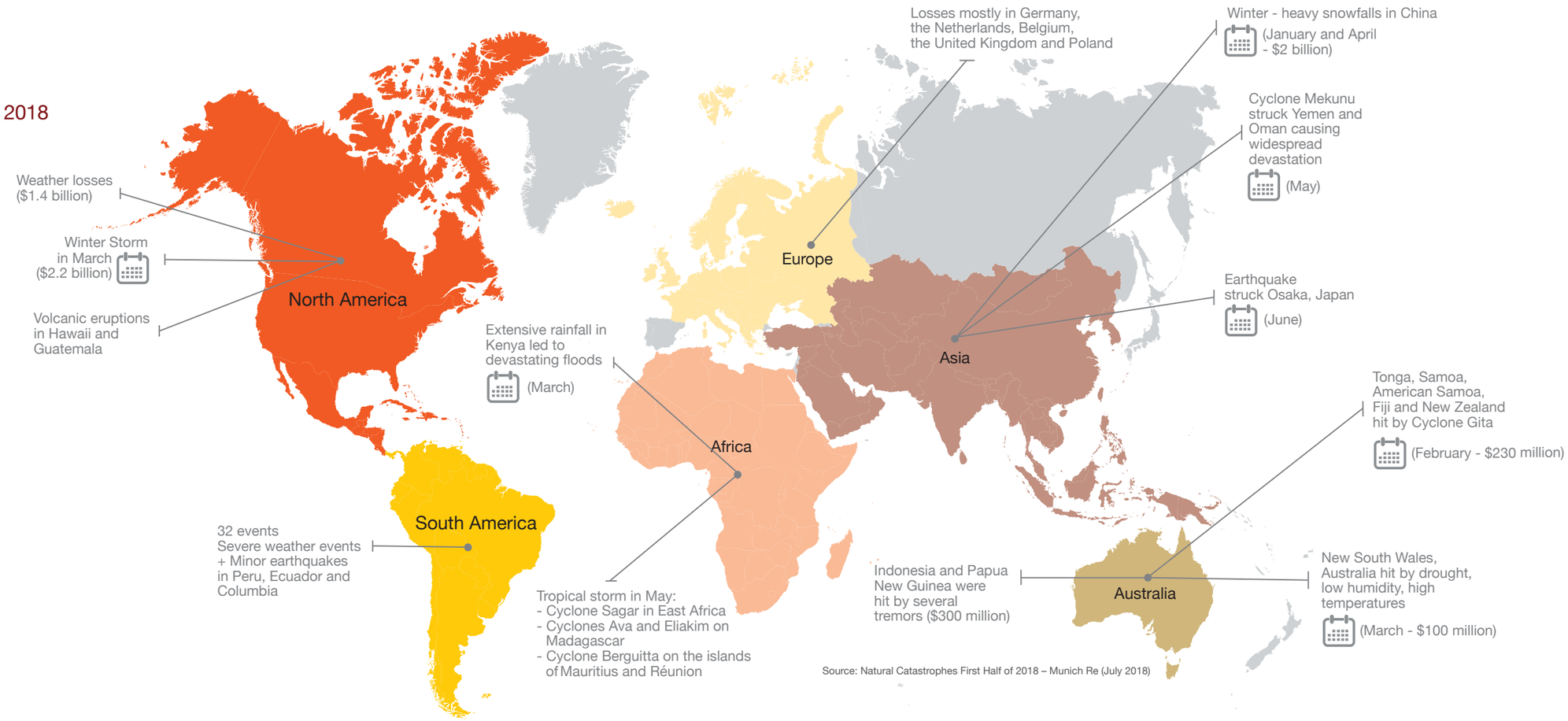
Source: Natural Catastrophes First Half of 2018 – Munich Re (July 2018)

Costliest Natural Catastrophe (in $ billion)



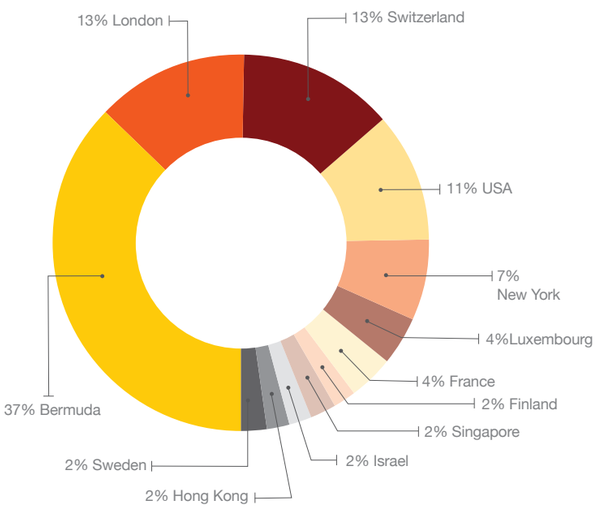
Source: Natural Catastrophes First Half of 2018 – Munich Re (July 2018)

Main Events as at H1 2018



Source: Natural Catastrophes First Half of 2018 – Munich Re (July 2018)

Insurance Linked Securities (ILS) Managers Distribution



Source: Artemis

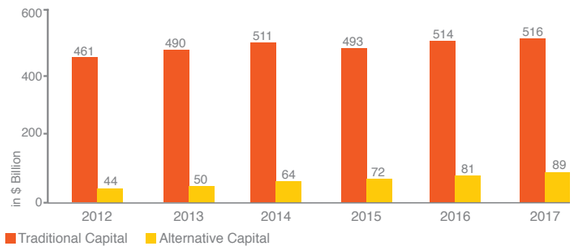
ILS supporting insurance resilience

Reinsurance capacity is well positioned to handle high losses supported by the Alternative Capital Market

Natural catastrophe events were one of the reasons for major losses which hit the global reinsurance market in 2017, causing economic losses of around $320 billion that year. Both the private market and government programs covered the insured losses of up to $128 billion, as estimated. Hence, the insurance coverage ratio for NATCAT showed 40% only, highlighting protection gaps. The year of 2017 highlights that traditional reinsurers were well-capitalized in such events, whereby most of the risk was retained by primary insurers and the catastrophe exposure had been waived to the capital markets. The supply of reinsurance benefits through traditional capital and alternative capital covered the losses and boosted the reinsurers' capacity.

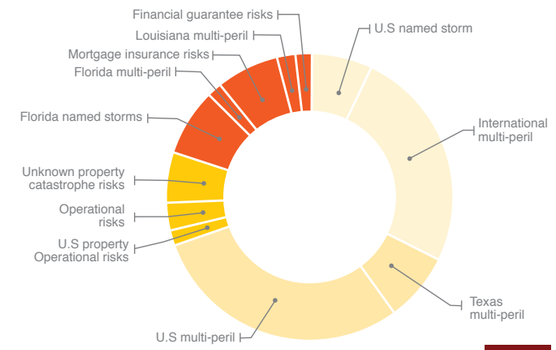
Global reinsurance market dynamics have changed, shared between traditional and alternative capital. Based on Aon Benfield estimates, global reinsurance capital stood at $600 billion as at September 2017, compared with $82 billion of alternative capital. By the end of 2017, the non-life ILS capital in the reinsurance market reached $88 billion. By H1 2018, the ILS market registered 20 new deals with an average deal size of roughly $ 365 million. Overall, notional outstanding in the ILS market was USD 29.11bn at the end of 1H 2018, up 8.39% from the year-end total in 2017 of USD 26.85bn. ILS and alternative capital providers have helped reinsurers because more varied risks are covered, and are better spread into the capital markets, as well as among traditional reinsurers. Institutional investor capital has helped spread eventual losses more widely, thus alleviating volatility from the overall reinsurance market capital.

Global Reinsurance Capital Structure



Source: Aon Benfield Reinsurance Market Outlook Report, April 2018

2018 H1 ILS issuance by Peril



Source: ARTIMES Q2 2018 Catastrophe Bond & ILS Market Report

Alternative Capital Arrangements

Alternative Capital Arrangements

Industry loss Warranty (ILW) | Size as of 2014: $4 Billion

Protection against catastrophe through a derivative contract, which will indemnify the insured only if the loss exceeds the amount set in the contract

Total ILW market trading volume for the 12 months ending June 30, 2016 was estimated at $4.25 billion, across both collateralized and traditional forms.

Reinsurance Sidecar | Size as of 2014: $6 Billion

An Investor in a traditional reinsurance company, taking a portion of the risk alongside the reinsurer

Examples:
- Silverton Re, securing $125 million for the Series 2016 - 1 issuance
- The Aspen Bermuda Limited sidcar expanded by $40 million
- Hannover Rück SE's (Hannover Re) K-Cession expanded by around 25%
- Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft's(Munich Re) Eden Re II Ltd. upsizing by $70 million

Collateralized Re | Size as of 2017: $54 Billion

A treaty whereby a nontraditional reinsurer places in escrow the entire amount of coverage, invested safely in e.g. treasury securities.

Examples: Nephila (via ART Bermuda) entered into a 10-year swap with Capital Power's Bloom Wind Farm facility in Kansas. Under the contract,the wind farm facility will receive fixed annual payments in lieu of the floating energy price over a 10-year term.

Insurance - Linked Securities (ILS) | Size as of 2017: $25 Billion

Protection through bonds, whereby the investor will provide collateral that will be tapped if the reinsurance is triggered. The most commonly known types are called Cat Bonds (part of Property line.)

Source: Aon Benfield Reinsurance Market Outlook Report, Jan 2018

Innovators reshaping the market through innovative solutions

PGGM

Assets
€189 billion

Location
Zeist, The Netherlands

Invested in ILS since: 2006

- Main Client: healthcare and social work sector pension fund.
- PGGM undertakes this type of investment through external managers.

AP3

Assets
SEK304 billion (€45 billion)

Location
Stockholm, Sweden

Invested in ILS since: 2008

- AP3 has built up a small internal team to manage its direct ILS investments.

Nephila Capital

to be 100% acquired by Markel

Assets
$12.2 billion

Location
United States, Bermuda and London

Invested in ILS since: 1998

- Specialising in catastrophe and weather insurance-linked securities (ILS) and reinsurance linked assets
- 100% acquired by Markel Corporation. The firm will be a unit of major global insurance and Reinsurance Company.

Pension funds are new areas of Alternative capital arrangements which play a great role in enhancing the protection gap position. To date, the protection gap remains very large, and the global pension gap is set to increase from about $70 trillion today to roughly $400 trillion by 2025.

Merger and acquisition between insurance-linked securities experts and insurance/reinsurance companies opening doors for exchanging experienced and talented management team with Insurtech, fronting and insurance-linked securities capabilities to enhance and strengthen the breadth and depth of offerings to policyholders, producers and investors.

Trust Re Experts' Viewpoints

New Areas of Development

As ILS expands in deal size and volume, the number and types of market participants also changed. With more market maturity, new entrants have emerged. On the buy-side, pension funds and other institutional investors have become more active participants. On the sell-side, new types of sponsors such as sovereign sponsors, are issuing ILS to support the risk-capital value chain by supporting the reinsurance capacity and improving ecosystem's efficiencies. Hedge funds were key investors in ILS previously, but now the pension funds have increased their participation in the market. Some prominent examples are large Nordic and Dutch pensions funds, e.g. the Swedish buffer fund AP3 and the Dutch giant PGGM, with smaller ones entering the market later, particularly in Switzerland.

Market Hurdles

The limited availability of data leads to:

- Difficulties in understanding the risks
- Makes it hard to model and price ILS
- An imbalance between demand and supply of ILS
- It exacerbates the impact of information asymmetries between managers and investors
- Increases the potential for mispricing risk.

Expert Viewpoint

Following the HIM losses of 2017, many observers expected the ILS market to shrink or retrench somewhat. This has not happened; in fact, it has continued to expand. It therefore appears that the ILS market will continue to grow at a higher rate than conventional reinsurance for the foreseeable future. However, the various ILS structures require a significant amount of risk assessment and modeling which may not be available for many lines of business or territories for some time (if ever). Therefore, for many markets and /or lines of business, ILS will not be a viable option. In such cases, more traditional reinsurance structures will continue to play the key role.

ILS began with Catastrophe Bonds back in the 1990s. We have already seen the securitization concept move into the Life sector, which makes sense given the high level of actuarial information and statistical modeling available. This will no doubt continue to expand. It is also very likely that ILS will develop in new / additional geographic areas, as the historical exposure and claims information becomes more extensive and comprehensive.

It does not seem that there will be any real substitute for ILS for the foreseeable future. However, some companies' reinsurance programs are already split between traditional placements and ILS. It is probable that we will see some reinsurance programs become more of a "blend" of the two.

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Prepared by Planning and Performance Management Department