

The Breadth and Scope of the Global Reinsurance Market and the Critical Role Such Market Plays in Supporting Insurance in the United States

FEDERAL INSURANCE OFFICE, U.S. DEPARTMENT OF THE TREASURY

Completed pursuant to Title V of the Dodd-Frank Wall Street Reform and Consumer Protection Act

DECEMBER 2014



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Glossary

A/H	Accident & Health Insurance
BCR	Basic Capital Requirement
CEA	California Earthquake Authority
ComFrame	.....	Common Framework for the Supervision of IAIGs
Council	.....	Financial Stability Oversight Council
Dodd-Frank Act	.....	Dodd-Frank Wall Street Reform and Consumer Protection Act
FAA	.....	Federal Aviation Administration
FCIC	.....	Federal Crop Insurance Corporation
FEMA	.....	Federal Emergency Management Agency
FHCF	.....	Florida Hurricane Catastrophe Fund
FIO	.....	Federal Insurance Office
<i>FIO 2014 Annual Report</i>	.....	U.S. Department of the Treasury, <i>Federal Insurance Office Annual Report on the Insurance Industry</i> (2014)
FRN	.....	Federal Register Notice of June 27, 2012
FSB	.....	Financial Stability Board
G-SII	.....	Global Systemically Important Insurer
GWP	.....	Gross Written Premiums
HLA	.....	Higher Loss Absorbency
IAIG	.....	Internationally Active Insurance Group
IAIS	.....	International Association of Insurance Supervisors
ILS	.....	Insurance-Linked Securities
ILW	.....	Industry Loss Warranty
LAE	.....	Loss Adjustment Expenses
L/H	.....	Life & Health Insurance
Model Law	.....	NAIC Credit for Reinsurance Model Law and Regulation
<i>Modernization Report</i>	.....	Department of the Treasury, <i>How to Modernize and Improve the System of Insurance Regulation in the United States</i> (December 2013)
NAIC	.....	National Association of Insurance Commissioners
NFIP	.....	National Flood Insurance Program
NRRA	.....	Nonadmitted and Reinsurance Reform Act of 2010
NWP	.....	Net Written Premiums
OPIC	.....	Overseas Private Investment Corporation
P/C	.....	Property & Casualty Insurance
PHS	.....	Policyholders' Surplus
Project	.....	EU-U.S. Insurance Project
SPV	.....	Special Purpose Vehicle
Treasury	.....	U.S. Department of the Treasury
TRIA	.....	Terrorism Risk Insurance Act of 2002, as amended
TRIP	.....	Terrorism Risk Insurance Program
USTR	.....	United States Trade Representative

I. INTRODUCTION

By premium volume, the United States is the largest single-country insurance market in the world. Insurers operating in the United States rely on reinsurers, both foreign and domestic, to support the issuance of new policies, to minimize fluctuations in loss experience, and to limit and diversify individual and portfolio risks, particularly in the case of catastrophes and natural disasters.

Reinsurance is a contract of indemnity between commercial parties – an insurer (i.e., the “cedent” or “ceding insurer”) and one or more “assuming insurers” (i.e., reinsurers) – by which, in exchange for a premium, a specified portion of the risks under one or more insurance policies written by the cedent are transferred (“ceded”) to the reinsurers. Reinsurance serves a variety of functions, and can be tailored to the particular needs of a given cedent. Reinsurance is commonly purchased to limit an insurer’s loss experience resulting from insured risk exposures, to increase an insurer’s underwriting capacity, to promote more efficient allocation of an insurer’s capital, or to facilitate an insurer’s entry to or exit from a particular line of business or market segment. Reinsurance serves an important function as protection for cedents against the accumulation of losses from a natural disaster or other catastrophe. “The reinsurance of peak risks originally assumed by primary insurers – i.e., risks with low probabilities of occurrence, but high severities – is the core business of reinsurers.”¹

The global reinsurance market includes organizations and companies that have operated for a century or more, as well as relatively new companies and alternative forms of risk transfer. The U.S. reinsurance sector continues to be an important source of capacity for domestic insurers seeking reinsurance. Non-U.S. reinsurers also play a key role, as U.S. insurers purchase a substantial amount of reinsurance protection from companies domiciled outside of the United States, or which are part of groups headquartered outside of the United States, including in Europe, the Asia-Pacific region, Bermuda, and other jurisdictions. Additionally, in recent years, insurers, reinsurers, and various capital market participants have developed a range of insurance-linked securities and special purpose vehicles, which have a growing role in the global risk transfer market.

The manner in which reinsurance is regulated in the United States depends upon whether or not the reinsurer is licensed in a U.S. state. Licensed reinsurers are subject to the same state-based regulation as other licensed insurers. Unlicensed reinsurers (typically non-U.S. companies) assuming risks from U.S. ceding insurers are indirectly regulated by state laws, including those that compel licensed insurers to obtain qualifying collateral from unlicensed reinsurers in order for the licensed insurers to take financial statement credit for liabilities ceded to such unlicensed reinsurers. Due to the global diversification of the industry, many non-U.S. reinsurers assuming risk from U.S. insurers are affected by such requirements.

Title V of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act),² established the Federal Insurance Office (FIO) in the U.S. Department of the Treasury (Treasury). Among other provisions, the Dodd-Frank Act authorizes FIO to monitor all aspects of the insurance industry,³ which includes the reinsurance industry, and to coordinate federal

¹ International Association of Insurance Supervisors, *Reinsurance and Financial Stability*, 19 (July 19, 2012).

² Dodd-Frank Act §§ 501-502, 31 U.S.C. § 313 (2010).

³ See, e.g., 31 U.S. § 313(c)(1)(A).

efforts and develop federal policy on prudential aspects of international insurance matters, including matters relating to reinsurance.

This report has been prepared pursuant to the requirement under the Dodd-Frank Act for FIO to issue a report “describing the breadth and scope of the global reinsurance market and the critical role such market plays in supporting insurance in the United States” (Report).⁴ In support of this Report, on June 27, 2012, Treasury published a notice in the Federal Register (FRN) seeking comments from interested parties. Thirty written comments from domestic and international parties were received, including from insurers, reinsurers, industry trade associations, and consumer advocates.⁵ In addition, FIO consulted with a number of reinsurers, industry representatives, and other organizations throughout 2013 and 2014.

This Report describes the important role of the global reinsurance market in supporting the insurance industry in the United States. It is not the purpose of this Report to analyze the extent to which reinsurance or any particular reinsurer could be systemically important. Global reinsurance providers play a vital role supporting insurance in the United States, but by any metric, reinsurance constitutes only a comparatively minor component of the insurance industry. For example, global reinsurance premiums are only a small fraction of direct insurance premiums (less than 5 percent); and reinsurer assets are a small fraction of overall insurance industry assets.⁶ Many global reinsurers and other capital market industry participants operate in the reinsurance market, demonstrating a high degree of substitutability and mobility of risk transfer capital.

⁴ 31 U.S.C. § 313(o)(1).

⁵ All comments *available at* <http://www.treasury.gov/initiatives/fio/reports-and-notice/Pages/closed.aspx>.

⁶ The combined assets of the ten largest reinsurers – which together constitute roughly 90% of the global life and health reinsurance market and 50% of the non-life reinsurance market – are smaller than the assets of the top insurer, and by market capitalization the whole reinsurance sector equals the two top primary insurers. International Association of Insurance Supervisors, *Reinsurance and Financial Stability* (July 19, 2012).

II. BRIEF HISTORY OF REINSURANCE

Reinsurance has been practiced as a commercial endeavor for centuries.⁷ Published references to reinsurance are found in English and European laws from the 15th, 16th, and 17th centuries.⁸ For example, a translation from the *Guidon de la Mer* (Normandy, 1671) states:

But if an underwriter repent of what he has done; if he be afraid to encounter the risk he has engaged to run, or find that he has incautiously bound himself to a greater amount than he may be able to discharge, he may shift it, or part of it, from himself to other insurers by causing a re-insurance to be made on the same risk, upon the best terms he can, and the new insurers will be responsible to him in case of loss, to the amount of the re-insurance.⁹

One author surmised that “[r]einsurance almost certainly grew out of the practice of offering risk to more than one insurer when the first insurer could not accept it all.”¹⁰

Prior to the American Revolutionary War, reinsurance for the fledgling American insurance industry was primarily provided through Lloyd’s—an insurance market in London with roots dating to 1688 (Box 1). Access to Lloyd’s was not available to the U.S. market, however, during the American Revolutionary War and in the very early years of the nation.¹¹ By the first quarter of the 19th century, some reinsurance business was being conducted by U.S. companies,¹² but it appears that most reinsurance was at that time placed overseas.¹³ Reinsurance was well-established as an industry in the United States by the early 20th century.¹⁴

Concurrently, the modern global reinsurance industry developed during the 18th and 19th centuries. Cologne Re was founded in Germany as the first professional reinsurance company in 1842.¹⁵ In the following decades, additional reinsurers were established throughout Europe, including Swiss Re in 1863 and Munich Re in 1880. Some of these companies continue to operate globally to this day, including as reinsurers of U.S. insurers.

⁷ Henry T. Kramer, *The Nature of Reinsurance*, in *Reinsurance* (Robert W. Strain, ed. 1980) at 8. David M. Holland, *A Brief History of Reinsurance*, *Reinsurance News* (Society of Actuaries), Issue 65, 19 (February 2009).

⁸ David M. Holland, *A Brief History of Reinsurance*, *Reinsurance News* (Society of Actuaries), Issue 65, 10-14 (February 2009).

⁹ *Id.* (citing Samuel Marshall, *A Treatise on the Law of Insurance in Four Books*, Second American from the second London edition, U. S. cases collected by J. W. Condy, Vol. I & II (Philadelphia: William P. Farrand and Co., 1810), p. 18)).

¹⁰ Henry T. Kramer, *The Nature of Reinsurance*, in *Reinsurance* (Robert W. Strain, ed. 1980) at 8 (referencing the market at Lloyd’s of London).

¹¹ *Id.* at 15.

¹² *See, e.g., Mutual Safety Ins. Co. v. Hone*, 2 N.Y. 235 (1849).

¹³ David M. Holland, *A Brief History of Reinsurance*, *Reinsurance News* (Society of Actuaries), Issue 65, 22-23 (February 2009).

¹⁴ *Id.* (noting that ten new U.S. reinsurers were formed between 1910 and 1920).

¹⁵ *Id.* at 19.

Box 1: Lloyd's of London

The market now known as Lloyd's of London began conducting business from Edward Lloyd's coffee house in 1688. It is among the world's oldest suppliers of reinsurance, and has had a longstanding role as a supplier of reinsurance to U.S. insurers. Lloyd's has a structure unique in the insurance industry: it is organized as a marketplace where underwriting "members" (the risk-bearing capital suppliers), now primarily consisting of corporations and insurance groups, including U.S.-based insurers, join together and provide capital to "syndicates" that underwrite risk. Presently, 91 syndicates operate within Lloyd's and underwrite a wide variety of insurance and reinsurance lines. Syndicates are essentially annual joint ventures; members have the right, but not the obligation, to participate the following year. Managing agents, engaged by members to operate one or more syndicates, provide management, support staff, and the business infrastructure to individual syndicates. Business at Lloyd's must be placed through an accredited Lloyd's broker. Oversight of the market is conducted by the Corporation of Lloyd's, which sets capital standards, reviews and analyzes the activities of syndicates, and provides various other monitoring functions.¹⁶

During the first half of the 20th century, in large part due to the world wars, new reinsurers began to emerge in the United States as well as in countries (e.g., Switzerland) which experienced fewer commercial disruptions during the wars.¹⁷ On the eve of World War II, to demonstrate its ability to reliably service U.S. business, Lloyd's set up an American trust fund to receive all dollar-denominated premiums and from which claims could be satisfied.¹⁸ That fund evolved into the "Lloyd's American Trust Fund" and related funds established to secure the liabilities of its underwriting syndicates.¹⁹

In the early post-war years, state insurance regulators began to consider whether and how to develop uniform accounting treatment for reinsurance business ceded by U.S. insurers. The subject was still under discussion over 30 years later when, in 1982, the Illinois Department of Insurance submitted a report to the National Association of Insurance Commissioners (NAIC) proposing development of a model law to "create consistent financial standards for assuming reinsurers from state to state, accounting for reinsurance transactions and reserve credits ... and financial reporting and disclosure of certain reinsurance transactions."²⁰ In June of 1984, the NAIC adopted its Credit for Reinsurance Model Law and Regulation (the Model Law), which eventually formed the basis for the laws in all states requiring that non-U.S. reinsurers provide 100 percent collateralization of reinsurance liabilities to U.S. cedents in order for the cedents to receive regulatory "credit" for the reinsurance. The NAIC recently adopted amendments to the

¹⁶ See generally Comment in response to the FRN on behalf of Lloyd's, 1, 3 (August 27, 2012); About Us: The Lloyds' Market, available at <http://www.lloyds.com/lloyds/about-us/what-is-lloyds/the-lloyds-market>.

¹⁷ David M. Holland, *A Brief History of Reinsurance*, Reinsurance News (Society of Actuaries), Issue 65, 23 (February 2009).

¹⁸ *History of Mendes & Mount LLP* (noting that as counsel to Lloyd's, "the Firm helped set up a fund of cash reserves to be used in case of a crippling financial disaster in England as the result of war"), available at <http://www.mendes.com/firm/>.

¹⁹ See generally Lloyd's United States Trust Deeds, available at <http://www.lloyds.com/the-market/operating-at-lloyds/regulation/lloyds-trust-deeds/united-states-trust-deeds>.

²⁰ National Association of Insurance Commissioners, *U.S. Reinsurance Collateral White Paper*, 20 (March 5, 2006).

Model Law, which, if enacted as state law, would permit the state insurance regulator to grant full credit for reinsurance with reduced collateral under some circumstances.²¹

During the latter part of the 20th century, few new U.S.-based reinsurers were established despite the economic growth during the period. Bermuda, however, emerged as an international reinsurance center during this period.²² Over the past two decades, the formation of Bermuda-domiciled reinsurance companies has occurred in waves corresponding to cyclical pricing patterns that followed the depletion of worldwide reinsurance capital in the property & casualty (P/C) sector due to extraordinarily large loss events.²³ These include the so-called class of 1992-1993 (following Hurricane Andrew); class of 2001-2002 (following the terrorist attacks of September 11, 2001); and the class of 2005-2006 (following Hurricanes Katrina, Rita, and Wilma).²⁴ New “classes” of traditional reinsurers did not emerge following record catastrophe losses in 2011 and Superstorm Sandy in 2012. Bermuda is now also becoming prominent in the alternative risk transfer market, discussed below.

Today, the reinsurance industry supporting the U.S. direct insurance market is global in scope, and primarily consists of approximately 50 large, professional reinsurers and reinsurance groups, as well as many smaller reinsurers.²⁵ According to analysis by the Reinsurance Association of America, in 2013 approximately \$46 billion in total (P/C) reinsurance premiums were ceded by U.S.-based insurers to unaffiliated reinsurers; of this amount, approximately \$28.4 billion of premiums were ceded to non-U.S. reinsurers and approximately \$17.6 billion of premiums were ceded to U.S. professional reinsurers.²⁶ As addressed below, if the domiciles of ultimate parent companies are taken into account, the figures show that an even greater portion of U.S. reinsurance premiums are ceded to non-U.S. reinsurance groups.

Related market participants, including brokers and ancillary service providers, also contribute to the availability and affordability of reinsurance. In addition, new reinsurers and other vehicles to distribute insurance risks world-wide continue to be formed. Notably, capital from alternative sources (e.g., pension funds) has emerged to support new sources of risk transfer for insurance companies. In the first quarter of 2014, for example, sponsors issued some \$1.6 billion of insurance-linked securities—a single quarter record. The majority of this “alternative capital”

²¹ See section V.D of this Report.

²² Insurance Act 1978 (as amended), Consolidated Laws of Bermuda.

²³ “After large catastrophes, which tend to reduce global capacity and lead to temporary rate increases in certain lines of business, the [reinsurance] market has traditionally seen an inflow of start-up companies. ... On balance, these dynamics kept the non-life reinsurance market comparatively competitive.” International Association of Insurance Supervisors, *Reinsurance and Financial Stability*, 16 (July 19, 2012). “Reinsurance markets are inherently cyclical.” Standard & Poor’s Ratings Services, *Global Reinsurance Highlights 2014*, 21 (2014)

²⁴ J. David Cummins, *The Bermuda Insurance Market: An Economic Analysis*, 11 (May 6, 2008). In each instance, roughly eight to eleven new reinsurers were established in Bermuda.

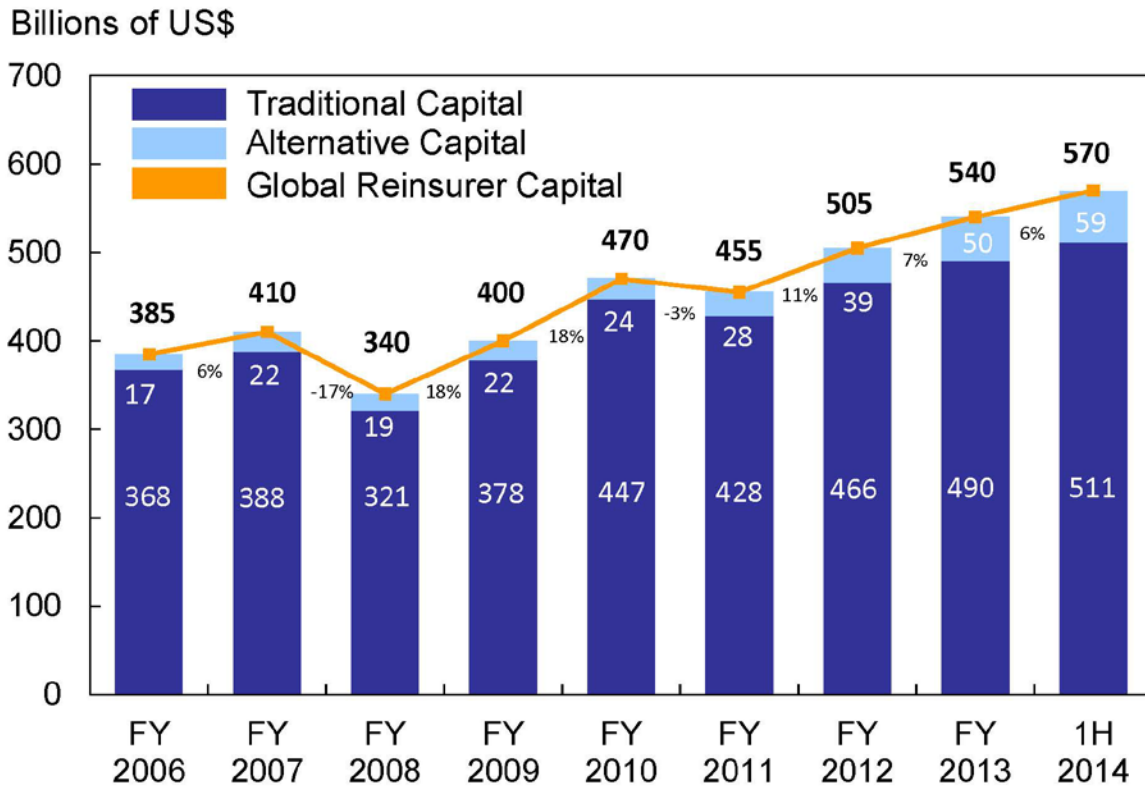
²⁵ Standard & Poor’s tracks 40 “Global Reinsurers.” See Standard & Poor’s Ratings Services, *Global Reinsurance Highlights 2014: Innovation and Adaption are Key to Relevance* (2014). A.M. Best regularly addresses the “Top 50 Global Reinsurance Groups.” See A.M. Best, *Global Reinsurance – Segment Review: The Capital Challenge - How Relevant is the Underwriting Cycle* (September 2014).

²⁶ Reinsurance Association of America, *Offshore Reinsurance in the U.S. Market: 2013 Data*, 4, 13 (2014). The data are approximate, based on analysis of U.S. insurer annual reports, and disregard reinsurance between affiliated companies.

supports catastrophe bonds (“cat bonds”), a mechanism by which insurers securitize catastrophe risk.²⁷

Capital in the reinsurance sector has generally been increasing year-over-year for most of the past decade. Aon Benfield reports that global reinsurance capital amounts to \$570 billion as of mid-2014 (Figure 1).²⁸ Of this amount, \$511 billion is classified as traditional capital and \$59 billion as alternative capital.

Figure 1: Global Reinsurer Capital



Source: Aon Benfield, *The Aon Benfield Aggregate – Results for the Six Months Ended June 30, 2014*

²⁷ See section VI.C of this Report.

²⁸ The dips in 2008 and 2011 correspond to Hurricanes Ike and Irene, respectively, and reflect the cyclical nature which has characterized the global reinsurance market. See Part VI of this Report.

III. DEFINITION AND FORMS OF REINSURANCE

A. Reinsurance Defined

Reinsurance is often described as “insurance of insurance companies.”²⁹ It is a commercial agreement whereby one company (the reinsurer) indemnifies another (the cedent) for insurance losses under policies of insurance issued by the cedent. In a manner broadly analogous to how a policyholder is protected from loss by transferring risk to an insurer, under a reinsurance contract the cedent is protected from its own exposure to loss by transfer of the specified insurance risk to a reinsurer.

“Indemnity” is a fundamental characteristic of traditional reinsurance. In the context of reinsurance an indemnity contract is one in which a party (the reinsurer) only becomes obligated to reimburse (indemnify) the other after that party (the cedent) has itself incurred and paid a loss which is both covered by its own insurance policy or policies and within the scope of the reinsurance contract between the two parties.³⁰

Essential elements of the reinsurance relationship therefore include: (1) a contract between at least two insurance companies, i.e., the cedent and the reinsurer(s); (2) one or more underlying insurance contracts, i.e., the policy or policies issued by the cedent to its own policyholders; and (3) a transfer of some insurance risk from the cedent to the reinsurer(s) pursuant to the contract of reinsurance.³¹

A reinsurance contract is formed only between a cedent and one or more reinsurers, whereas the underlying insurance policies are contracts between the cedent and its policyholders. The underlying policyholders are not parties to the reinsurance contract and generally do not have rights or obligations under it. Similarly, the reinsurer is not party to the underlying insurance policies, and does not have rights or obligations thereunder. In its role as direct insurer, the cedent has and maintains the obligation to adjust and, where appropriate, to pay the claims of its policyholders. Reinsurance does not alter those obligations or shift them to others, because privity of contract does not exist between the reinsurer and the cedent’s policyholders.³²

²⁹ Reinsurance Association of America, *Fundamentals of P/C Reinsurance*, available at <http://www.reinsurance.org/Fundamentals>.

³⁰ Glossary, in *Reinsurance Contract Wording* (Robert Strain, ed. 1992), 755. This differs from some direct (or “primary”) insurance policies, which are more commonly contracts of “liability” rather than of indemnity. See generally *Skandia America Reins. Corp. v. Schenk*, 441 F. Supp. 715, 724 (S.D.N.Y. 1977). Exceptions to this general practice include (1) certain instances, for example in the case of a catastrophe, in which a reinsurer might advance a payment to an insurer with the understanding that the insurer’s payment to policyholders is inevitable; and (2) in case of insolvency of an insurer, in which state regulators require that the obligations of the reinsurer to the estate of the insolvent insurer is not diminished because of the inability of the insurer to pay its direct obligation to policyholders in whole or in part. To address the latter situation, state insurance regulations require an “insolvency clause” as a standard term in reinsurance contracts. In addition, some reinsurance contracts and alternative risk transfer instruments incorporate “parametric” or industry loss triggers, calling for payment based upon the occurrence of a specified industry loss amount or an agreed index.

³¹ Comment in response to the FRN on behalf of Reinsurance Association of America, 2 (August 27, 2012).

³² *Morris & Co. v. Skandinavia Ins. Co.*, 279 U.S. 405, 408 (1929); *Citizens Cas. Co. v. Am. Glass. Co.*, 166 F.2d 91, 95 (7th Cir. 1948).

Accordingly, an insurer must “fulfill the terms of its policy whether or not it has reinsurance or whether or not the reinsurer is rightly or wrongly refusing to perform.”³³

Reinsurers themselves may also buy reinsurance protection (e.g., to address loss exposure from reinsurance contracts), called “retrocessions.” The ceding reinsurer, or “retrocedent,” redistributes some of the reinsurance risk it has assumed (from its cedents) through contracts with one or more other reinsurers, or “retrocessionaires.” A reinsurer may also pool risks from several different affiliates and purchase a retrocession program that covers such risks placed by the reinsurance group on a more efficient basis.³⁴

B. Forms of Reinsurance

Reinsurance is available for numerous lines of insurance business, both life and non-life, and the parties to a reinsurance contract have considerable discretion over the form and substance of an agreement, subject to certain regulatory restrictions imposed on the cedent. With some variation, however, reinsurance agreements generally take one of two basic forms, either “treaty” or “facultative” agreements. These two forms of reinsurance contracts are described below.

1. Treaty Reinsurance

A reinsurance treaty is a standing reinsurance agreement; in exchange for an agreed premium, the treaty covers a class of insurance risks specified in the contract. Typically the “cession” of the reinsured business by the cedent and the assumption of that business by the reinsurer are obligatory pursuant to treaty terms. That is, under treaty reinsurance premium and losses associated with the covered risks are automatically covered by the agreement to be transferred to one or more reinsurers—the reinsurer does not analyze the reinsured business on a policy-by-policy basis before accepting the risk cession.³⁵ As compared to facultative reinsurance, addressed below, treaty reinsurance is less labor-intensive to place and administer, and is the more common form used.

Treaty reinsurance highlights the close business relationship and high degree of trust that customarily has existed between cedents and reinsurers. Reinsurers must “follow the fortunes” of the cedent – which means reinsurers are to a large degree bound by the fortuities of the underlying insurance business – even when reinsurers do not have an advance opportunity to evaluate individual risks underwritten by the insurer. For that reason, reinsurers must rely on the cedent to make sound underwriting and claims-management decisions which, in turn, benefit cedent and reinsurer alike. In this sense, cedents and treaty reinsurers have traditionally operated with mutual interests and objectives and, historically, the reinsurance relationship has been considered one of “utmost good faith.”³⁶

³³ David M. Raim and Joy L. Langford, *Understanding Reinsurance*, in New Appleman on Insurance Law Practice Guide, § 40.01 (2007).

³⁴ Comment in response to the FRN on behalf of Association of Bermuda Insurers and Reinsurers, 13 (August 27, 2012). Reinsurers generally keep proportionately more risk “net” as compared to primary insurers. According to the IAIS, retrocessional premiums amounted to \$25 billion worldwide in 2012. International Association of Insurance Supervisors, *Reinsurance and Financial Stability*, 9 (July 19, 2012).

³⁵ The reinsurer typically has rights, however, to review and audit the cedent’s portfolio of insurance policies subject to the treaty in order to satisfy itself that the ceded business is of the type which the reinsurer agreed to cover.

³⁶ Henry T. Kramer, “The Nature of Reinsurance,” in *Reinsurance* (Robert W. Strain, ed. 1980) at 9-11. “Utmost good faith,” while not generally regarded in law as rising to the level of a fiduciary relationship, characterizes a relationship in which “the maxim of *caveat emptor* has no application to either party.” *Id.* at 9.

Reinsurance treaties are typically classified as either “pro rata” or “excess of loss” contracts. The decision whether to purchase a pro rata or an excess of loss reinsurance treaty depends on the cedent’s objectives. In practice, both types of treaty reinsurance agreements are often purchased in combination to form an insurer’s reinsurance program. For example, an insurer may purchase pro rata treaties and per risk excess of loss treaties in multiple layers, the benefits of which may reduce the risks exposed to its catastrophe per event treaties (described below). Such customization of different types of reinsurance across various lines of business allows an insurer to address its specific risk management concerns.

a. Pro Rata Reinsurance

For risks subject to a pro rata treaty, the insurer and reinsurer share premiums and exposures to losses in an agreed proportion. Pro rata reinsurance has the advantage of simplicity in design and administration, but may come at a relatively high cost to the cedent in terms of underwriting income and total return (as compared to excess of loss reinsurance). This form of reinsurance is particularly suited to addressing a cedent’s need to ensure it has sufficient surplus for the business that it wishes to write, and is useful when a cedent is entering or exiting lines of business.³⁷

Pro rata reinsurance treaties may be further classified as either “quota share” or “surplus share.” Under a quota share treaty (commonly referred to as “coinsurance” in the life insurance context), the cedent and reinsurer share a predetermined percentage of both the premium charged for the underlying insurance policies and the exposure thereunder to first-dollar losses. For example, in a 25 percent quota share treaty, the reinsurer would receive 25 percent of the premiums and be liable to the insurer for 25 percent of the losses paid by the insurer as well as, generally, the same percentage of the insurer’s loss adjustment expenses (LAE). In the event of loss, the insurer remains liable to its policyholders, but the insurer (as cedent) would be indemnified by the reinsurer for 25 percent of the amount of the covered loss and LAE paid under any reinsured policy. A surplus share treaty is similar to a quota share, but the cedent retains a fixed dollar amount of liability and cedes to the reinsurer a percentage of loss above that amount. Unlike a quota share treaty, therefore, the percentage of sharing between the insurer and reinsurer varies according to the limits of the underlying policy.

Pro rata treaties provide the cedent with “surplus relief” and the capacity to write more business or at larger limits. Regulatory-based accounting rules generally provide that insurers must recognize premium revenues as earned over the duration of a policy. In contrast, acquisition costs – primarily commissions paid to agents at policy inception – are expensed immediately. One result is that the insurer’s reported regulatory-based capital in its financial statements is reduced at the inception and early stages of an insurance contract. A ceding commission, paid by the reinsurer to the cedent under a pro rata reinsurance agreement, can be immediately recognized by the cedent as income for regulatory accounting purposes and can therefore partially offset the burden of expensing up-front acquisition costs associated with obtaining the original insurance business.³⁸

³⁷ See section IV.A.3 of this Report.

³⁸ The ceding commission compensates the cedent for producing and administering the ceded business. The surplus relief function may be particularly important for life insurers due to the relatively high acquisition costs.

b. Excess of Loss Reinsurance

In contrast to pro rata reinsurance, excess of loss reinsurance is a form of protection against insured losses sustained above a predetermined and stated threshold, known as the cedent's "retention,"³⁹ and thus does not create a proportional sharing of risk. A reinsurer also may require a cedent to co-participate for a portion of losses above the retention so that the cedent has additional "skin in the game." Under excess of loss reinsurance, a cedent may choose to purchase coverage attaching at high levels of loss, thereby obtaining protection for a relatively modest premium. By indemnifying the insurer for losses above a specified level, excess of loss treaties help stabilize the net losses (i.e., after reinsurance recoveries) in an insurer's portfolio.

Excess of loss treaties generally take one of three forms: "per occurrence" excess of loss, "aggregate" excess of loss, or "per risk" excess of loss. Per occurrence excess of loss treaties protect a cedent from the accumulation of multiple policy losses arising from a single event. Thus, the cedent's retention will usually be much larger than its exposure under any policy that is subject to the treaty. Property catastrophe treaties, for example, are designed to protect against cumulative losses under multiple policies caused by a single natural disaster or other large-scale loss event.

Aggregate excess of loss treaties protect against the accumulation of losses over the effective period of the reinsurance contract. Under an aggregate excess of loss treaty, the reinsurer will indemnify the insurer for a share of losses that exceed an agreed dollar amount or other agreed metric (such as percentage of aggregate net premiums). This form of reinsurance is also called "stop-loss" reinsurance.

Per risk (or per policy) excess of loss treaties provide protection above an insurer's retention on individual risks or policies, rather than on an accident, event, or aggregate basis. The reinsurance contract will specify the class or type of business covered, and the retention and limit of the reinsurance contract will apply to each covered risk.

2. Facultative Reinsurance

Unlike treaty reinsurance, facultative reinsurance does not result in an automatic cession of risk by the cedent, nor an automatic acceptance of risk by a reinsurer. Instead, facultative reinsurance permits an insurer to decide which specific insured risks will be submitted to a reinsurer for consideration. Upon such submission, the reinsurer has the opportunity to underwrite the individual risk, and may elect to accept or decline such risk. Facultative reinsurance may create greater administrative burdens on both cedents and reinsurers because potential risk cessions must be analyzed on an individual basis rather than in advance as a book of business. As with treaty reinsurance, facultative reinsurance may be structured as either excess of loss or pro rata, depending upon the needs of the cedent. Though insurers have a variety of reasons for using facultative reinsurance, it is generally purchased for large or unusual risks, which may be wholly or partially outside the scope of a cedent's treaty arrangements.⁴⁰

³⁹ "Retention," the amount of loss the cedent keeps for its own account, is a reinsurance term roughly analogous to a deductible under an insurance policy. Glossary, in *Reinsurance Contract Wording* (Robert Strain, ed. 1992), 767.

⁴⁰ David M. Raim and Joy L. Langford, *Understanding Reinsurance*, in *New Appleman on Insurance Practice Guide*, § 40.04[1] (2007). For example, the particular insured risk may be excluded under the relevant treaty, or the ceding insurer's exposure may fall within the treaty's retention.

IV. THE PURPOSE AND IMPORTANCE OF REINSURANCE

A. Uses of Reinsurance

Reinsurance is an important mechanism by which an insurer manages risk and the amount of capital it must hold to support such risk. Some of the more common purposes for reinsurance are highlighted below. Inasmuch as reinsurance is a business-to-business transaction, the purpose and terms of reinsurance contracts can vary greatly based upon the parties' needs and commercial objectives. Accordingly, this list is not an exhaustive recitation of the purposes for which insurers purchase reinsurance, but is intended to illustrate the range of benefits reinsurance provides to cedents and to the insurance sector in the United States.⁴¹

1. Stabilizing Underwriting Results

In order to offer products that cover risks faced by policyholders, an insurer generally must set prices (i.e., premiums) for its products before the "cost of goods sold" (i.e., claims) are known. For some coverages, it can take years — even decades — for all of the claims pertaining to a particular policy year to fully develop. The business of insurance is inherently susceptible to fluctuations in underwriting gains and losses, which can adversely affect an insurer's financial position.

Reinsurance can mitigate the risk of fluctuations in underwriting gains and losses faced by insurers. For example, insurers with significant exposures to catastrophic losses utilize reinsurance to help manage the extent of losses from a single event. Insurers often use reinsurance to limit potential losses from an individual policy or on an entire portfolio of policies ("book of business"), thereby tempering the adverse impacts of volatility.

2. Increasing Underwriting Capacity

To honor policy obligations, meet credit rating agency expectations, and comply with state-based regulatory requirements, insurers are required to hold capital. Regulatory requirements and potential loss levels that may significantly reduce or encumber capital may limit the ability of insurers to write increased, or even existing, levels of business, or to write policies with large limits.

Reinsurance addresses these challenges in at least two ways. First, reinsurance allows the insurer to transfer portions of the resulting risk to one or more reinsurers. For accounting purposes, the cedent's transfer of risk is recognized as a reduction of the cedent's policy liabilities (if the insurer has not yet paid the underlying policy claim) or as an asset (if the insurer has already paid the claim). The extent to which the receivable asset increases or the policy liabilities decrease, known as "credit for reinsurance," increases the cedent's reported policyholders' surplus (PHS), i.e., the insurer's assets less its liabilities as measured by regulatory accounting.

Second, insurers use reinsurance to help offset the reduction in PHS that otherwise can accompany writing too much business too fast.⁴² By transferring all or a portion of the insurer's risk on specific policies or portfolios, an insurer increases its capacity to write additional new

⁴¹ Retrocession provides many of the same benefits to a retrocedent as reinsurance provides to a primary insurer (e.g., allowing the retrocedent to write more business and providing risk diversification).

⁴² Policy acquisition costs, such as agents' and brokers' commissions, are expensed when paid at the inception of the policy for regulatory accounting purposes, rather than deferred as an asset and amortized over the term of the respective policies.

business. For example, insurers are typically required to maintain ratios of net written premium (NWP), i.e., the amount of premium an insurer writes less the amount ceded to reinsurers, to PHS of 3:1.⁴³ Through reinsurance, insurers can reduce net written premiums, increase surplus, and better manage NWP-to-PHS ratios within regulatory boundaries and within expectations of credit rating agencies.

Figure 2, based on a simplified scenario from the American Academy of Actuaries, illustrates this leveraging benefit:⁴⁴

Figure 2: Quota Share Reinsurance Example

Insurer	Policyholders' Surplus (PHS)	Reinsurance	Net Written Premium (NWP)	Gross Written Premium (GWP)
ABC	\$5 Million	None	\$15 Million	\$15 Million
XYZ	\$5 Million	25% Quota Share on GWP	\$15 Million	\$20 Million

In this example, both insurer ABC and XYZ have \$5 million of PHS. Insurer ABC, which has not purchased reinsurance, has reached the maximum amount of premium (\$15 million) that may be written based on its PHS of \$5 million and the need to limit the NWP to PHS ratio to 3:1. In comparison, insurer XYZ is able to write an additional \$5 million of gross premium while still maintaining the same 3:1 ratio, because of a reinsurance agreement. Under insurer XYZ's quota share reinsurance agreement, XYZ cedes 25 percent of its gross premiums (i.e., \$5 million) and losses to a reinsurer. Insurer XYZ therefore may increase its market share while maintaining the specified NWP to PHS ratio.

Reinsurance offers related potential advantages for both parties to the contract. A cedent can maximize its use of sales, underwriting, policy administration and claims settlement capabilities, while limiting its risk for those underlying policies; correspondingly, the reinsurer(s) can absorb insurance risk exposures from the cedent and earn a share of profits from the underlying business without having to build distribution networks and underwriting and claims-handling infrastructures.⁴⁵

3. Supporting Entry Into and Exit from Insurance Markets

Reinsurance may assist insurers seeking to expand into new markets or to withdraw from particular segments. Even established insurers with ample capital may need support when entering new markets, new lines of business, or offering new products and features. Reinsurers can assist the transition by assuming a portion of the insurer's related risks. In addition, with regard to both new and established markets, reinsurers may offer advice and expertise on

⁴³ Comment in response to the FRN on behalf of American Academy of Actuaries, 2 (August 27, 2012).

⁴⁴ This simplified example excludes reference to ceding commission and other expenses associated with reinsurance transactions, as well as changes in surplus.

⁴⁵ Comment in response to the FRN on behalf of Insurance Law Committee of NYC Bar Association, 4 (August 24, 2012).

underwriting, pricing and claims-handling issues. Moreover, insurers sometimes wish to reduce or withdraw product offerings in particular markets. An insurer managing a discontinued line of business can transfer all or part of its related loss exposure to an assuming insurer through the use of reinsurance.

4. Promoting Capital Allocation Among Affiliates

Insurers are often owned by, or under common ownership and control with, other insurance companies. Separate insurance companies within a group may exist for legacy reasons (a result of past acquisitions), or might have been formed to operate in different jurisdictions for regulatory reasons, to sell different products, or to use different distribution systems.⁴⁶ Intra-affiliate reinsurance within a group may occur for many of the reasons that an insurer might otherwise purchase reinsurance from a non-affiliate. Additional reasons that are specific to the relationship between and among affiliates often include:

- *Pooling Arrangements* – Insurers that are part of a group may participate in a joint underwriting pool, in which the disparate underwriting experiences of participants are pooled together. The risks are then allocated back to one, some, or all participants sharing in that underwriting experience, each assuming through reinsurance its assigned portion of the aggregate underwriting results of the entire pool.
- *Efficient Capital Allocation* – Intra-company reinsurance can be used to tailor the risk or financial profile of separate legal entities within the group to address regulatory, rating agency, or managerial concerns. In addition, in some instances reinsurance through an affiliate may be more attractive, flexible or stable over time as compared with reinsurance available through the open market.
- *Reinsurance Captives in the U.S. Life Industry* – Life insurers sometimes use reinsurance on an intra-company basis to manage required statutory reserve levels. Regulatory concerns about this widespread practice continue to receive attention within the national and international insurance supervisory community.⁴⁷

5. Achieving Risk Concentration or Diversification

Insurers generally seek a balance between risk concentration and diversification when underwriting one or more books of business. Insurers may use reinsurance to assist in achieving a targeted risk profile. While a large pool of relatively homogeneous risks may suit certain business objectives, including efficient use of a company's underwriting expertise, too much exposure to one class of risk might leave an insurer susceptible to adverse consequences due to that concentration (e.g., an accumulation of correlated exposures in a catastrophe-prone area). Risk transfer in this manner may be particularly important for smaller insurers that have more limited opportunities to diversify risk through underwriting practices than do larger insurers with

⁴⁶ *Id.*

⁴⁷ See Department of the Treasury, *Federal Insurance Office Annual Report on the Insurance Industry* (2014), 43-44 (hereinafter *FIO 2014 Annual Report*) (addressing progress of states in reforming regulatory oversight respecting transfer of risk to life captives); Department of the Treasury, *How to Modernize and Improve the System of Insurance Regulation in the United States*, 32 (December 2013) (hereinafter *Modernization Report*) (recommending that states develop a uniform and transparent solvency oversight regime for the transfer of risk to reinsurance captives). Both reports available at <http://www.treasury.gov/initiatives/fio/reports-and-notices/>.

risk profiles that include multiple lines of business written in multiple jurisdictions or across broader and more diverse geographic regions.⁴⁸

B. The Importance of Reinsurance

The reinsurance marketplace is important to the U.S. insurance industry and, as such, contributes to the general economic prosperity of the country's families and businesses. As described above, reinsurance enhances the availability and affordability of insurance in the United States.⁴⁹

Available and affordable insurance helps spread risk, reduces financial uncertainty for businesses and individuals, provides private capital in a post-event recovery, and promotes economic growth. By spreading insurance risks globally, reinsurance diversifies local insurance markets while providing capital relief and balance sheet protection.

The extent to which U.S. property & casualty (P/C) insurers rely on reinsurance as of year-end 2013 is illustrated in Figure 3 on a line-by-line basis. The average utilization is approximately 19 percent across the board when considering both affiliated and unaffiliated reinsurers, and 12 percent taking only unaffiliated reinsurers into account. For property lines of insurance business, the average utilization is 18 percent for unaffiliated reinsurers, and is as high as 40 percent for allied lines.

Figure 3: P/C Reinsurance Utilization By Line of Insurance

Line of Business	1		2		3		4		5		6		Net Retention	Reins Utilization	Unaffiliated Reins Utilization
	Direct Business	Reinsurance Assumed		Reinsurance Ceded		Net premiums Written		Net Retention		Reins Utilization	Unaffiliated Reins Utilization				
		From Affiliates	From Non-Affiliates	To Affiliates	To Non-Affiliates	Cols. 1 + 2 + 3 - 4 - 5	Net Retention								
1 Fire	13,162,255,451	866,859,399	2,747,969,409	2,161,423,980	3,387,127,806	11,228,532,477	66.9%	33.1%	20.2%						
2 Allied lines	26,346,268,462	1,443,047,665	3,616,966,227	4,544,716,817	12,662,547,697	14,198,993,170	45.2%	54.8%	40.3%						
3 Farmowners multiple peril	3,683,727,839	434,895,200	132,667,201	266,556,652	473,085,843	3,511,647,743	82.6%	17.4%	11.1%						
4 Homeowners multiple peril	80,671,706,514	149,856,374	2,746,363,323	1,392,825,252	9,402,771,084	72,772,333,520	87.1%	12.9%	11.3%						
5 Commercial multiple peril	37,933,389,810	818,556,543	1,820,735,846	2,639,970,124	4,688,006,032	33,244,702,411	81.9%	18.1%	11.6%						
6 Mortgage guaranty	4,549,732,713	13,662,445	27,717,048	20,988,352	240,177,288	4,329,946,572	94.3%	5.7%	5.2%						
8 Ocean marine	3,955,929,531	124,095,252	751,729,484	259,613,133	1,708,630,958	2,863,510,172	59.3%	40.7%	35.4%						
9 Inland marine	17,256,885,852	429,588,043	462,459,220	1,378,839,149	6,623,103,682	10,146,990,290	55.9%	44.1%	36.5%						
10 Financial guaranty	674,864,316	80,186,749	12,931,202	(4,430,339)	61,931,125	710,481,483	92.5%	7.5%	8.1%						
11.1 Medical professional liability - occurrence	2,408,868,965	(36,593,085)	109,374,131	45,755,078	146,306,113	2,289,588,821	92.3%	7.7%	5.9%						
11.2 Medical professional liability - claims-made	7,363,251,622	57,861,693	373,010,765	763,858,820	780,163,729	6,250,101,239	80.2%	19.8%	10.0%						
12 Earthquake	2,292,589,227	35,401,429	316,486,513	523,017,593	534,468,045	1,586,991,523	60.0%	40.0%	20.2%						
13 Group accident and health	4,688,655,561	587,435,340	947,149,060	338,329,910	1,178,713,053	4,706,196,993	75.6%	24.4%	18.9%						
14 Credit accident and health (group and individual)	208,639,731	60,627,832	2,082,912	35,791,338	169,796,126	65,763,010	24.2%	75.8%	62.6%						
15 Other accident and health	1,771,736,150	407,833,898	694,186,408	(26,073,129)	132,987,487	2,766,821,265	96.3%	3.7%	4.6%						
16 Workers' compensation	49,312,678,773	359,674,597	2,106,409,617	4,524,024,181	6,116,390,281	41,138,348,528	79.5%	20.5%	11.8%						
17.1 Other liability - occurrence	33,878,793,848	1,317,670,979	4,173,260,401	5,455,896,423	7,152,714,565	26,761,114,244	68.0%	32.0%	18.2%						
17.2 Other liability - claims-made	19,598,774,816	304,008,990	1,966,796,523	3,481,645,018	3,093,822,540	15,294,112,776	69.9%	30.1%	14.1%						
17.3 Excess Workers' Compensation	1,070,757,369	2,737,487	89,061,503	169,147,726	149,309,393	844,009,242	72.6%	27.4%	12.8%						
18.1 Products liability - occurrence	2,885,306,864	45,652,155	111,053,942	438,822,348	295,532,101	2,307,668,510	75.9%	24.1%	9.7%						
18.2 Products liability - claims-made	560,201,527	23,134,676	43,745,077	82,266,208	133,594,984	411,220,091	65.6%	34.4%	21.3%						
19.1, 19.2 Private passenger auto liability	111,134,418,384	616,948,097	2,259,531,921	1,923,419,790	4,640,706,278	107,446,772,336	94.2%	5.8%	4.1%						
19.3, 19.4 Commercial auto liability	20,505,362,474	529,227,294	1,076,924,773	2,012,165,151	1,745,516,744	18,353,832,664	83.0%	17.0%	7.9%						
21 Auto physical damage	76,893,751,207	238,032,716	1,334,199,254	3,341,180,979	2,135,861,928	72,988,940,282	93.0%	7.0%	2.7%						
22 Aircraft (all perils)	1,731,716,771	104,795,354	384,284,140	349,325,315	803,748,320	1,067,722,628	48.1%	51.9%	36.2%						
23 Fidelity	1,203,151,960	53,027,559	70,897,871	51,232,623	151,645,850	1,124,198,921	84.7%	15.3%	11.4%						
24 Surety	5,255,473,663	334,076,363	494,314,120	729,977,396	483,147,632	4,870,739,113	80.1%	19.9%	7.9%						
26 Burglary and theft	233,695,811	7,728,892	14,312,957	31,818,715	18,665,967	205,252,983	80.3%	19.7%	7.3%						
27 Boiler and machinery	1,558,937,570	116,251,535	1,230,367,283	229,221,927	696,815,371	1,979,519,083	68.1%	31.9%	24.0%						
28 Credit	1,881,380,055	113,347,106	262,587,874	595,533,564	494,460,735	1,167,320,742	51.7%	48.3%	21.9%						
29 International	76,365,530	8,475,954	80,189,703	39,206,894	12,651,382	113,172,907	68.6%	31.4%	7.7%						
30 Warranty	2,518,589,527	6,607,878	42,704,051	615,825,806	796,735,751	1,155,339,900	45.0%	55.0%	31.0%						
31 Reinsurance - Nonproportional Assumed Property	XXX	704,548,183	9,840,701,005	2,108,680,923	724,312,181	7,712,256,083									
32 Reinsurance - Nonproportional Assumed Liability	XXX	115,942,435	6,233,917,019	1,597,034,052	181,992,366	4,570,833,032									
33 Reinsurance - Nonproportional Assumed Financial Lines	XXX	25,092,957	205,336,625	38,638,381	5,527,352	186,263,844									
34 Aggregate write-ins for other lines of business	1,378,557,731	3,062,845	38,832,725	176,092,236	112,299,414	1,132,061,650	79.7%	20.3%	7.9%						
35 TOTALS	538,646,415,616	10,503,358,830	46,821,257,145	42,332,338,387	72,135,267,197	481,503,380,221	80.8%	19.2%	12.1%						
Casualty Lines	378,403,731,878	5,685,297,470	18,711,864,617	23,652,050,455	40,361,891,751	338,786,930,672	84.1%	15.9%	10.0%						
Property Lines	144,159,491,513	3,371,569,685	10,918,285,701	12,926,807,173	28,633,445,172	116,889,069,887	73.8%	26.2%	18.1%						
Financial Lines	16,083,192,234	600,908,100	911,152,166	2,009,127,402	2,228,098,381	13,358,026,731	75.9%	24.1%	12.7%						

Source: ANNUAL STATEMENT for the year December 31, 2013 of the P/C Combined Industry

⁴⁸ International Association of Insurance Supervisors, *Reinsurance and Financial Stability*, 7 (July 19, 2012); Comment in response to the FRN on behalf of Insurance Europe, 2 (August 27, 2012).

⁴⁹ See Swiss Re, *The Essential Guide to Reinsurance*, 14-22 (2013); Comment in response to the FRN on behalf of Reinsurance Association of America, 14 (August 27, 2012).

Life insurers rely on domestic and international reinsurers to reduce losses, minimize exposure to significant risks, acquire or dispose of blocks of policies or business lines, and to provide additional capital for future growth. Ready access to diversified and well-capitalized reinsurance markets is important to maintain the financial strength of U.S. life insurers, to enable those insurers to meet policyholder obligations, and to expand access to affordable life insurance products in the United States.

In the property market, the key role of reinsurance may be most apparent following natural disasters and other catastrophes. Property catastrophe reinsurance provides a crucial backstop for insurers when low-frequency, high-severity events occur, and this market serves as an important illustration of the global nature of the reinsurance business. Catastrophe reinsurance indemnifies ceding insurers following an accumulation of insured losses from a single event, such as a hurricane, earthquake, tornado, winter storm, wild fire, or terrorist attack.⁵⁰

Catastrophe protection as typically structured in reinsurance programs is comprised of a series of high-limit layers, often with multiple reinsurers participating to varying degrees on each layer. Catastrophe reinsurance programs are intended by the purchasing property insurers to provide reasonable assurance of protection for losses from one or more severe events in a given year (e.g., measured as a probable maximum loss for a 1-in-200 year event).

The United States is a large insurance market, with a high degree of private market insurance penetration, and insurers writing U.S. business have substantial exposure to catastrophe losses. Seven of the ten costliest catastrophes in the world, as measured by insured losses, occurred in whole or in part in the United States.⁵¹ Hurricanes Katrina, Rita, and Wilma in 2005 resulted in about \$90 billion of U.S. insured property losses, of which non-U.S. reinsurers paid approximately \$59 billion.⁵² Likewise, reinsurers indemnified insurers for about 60% of the insured losses from the September 11th terrorist attacks, which at the time was the largest insured loss in U.S. history.⁵³ More recently, Superstorm Sandy in 2012 resulted in an estimated \$26 billion of insured losses, with insurers accounting for approximately \$19 billion of this amount.⁵⁴ Approximately 40 percent of the loss to insurers was reimbursed through reinsurance.⁵⁵

⁵⁰ Since shortly after the September 11, 2001, terrorist attacks, the federal government has provided a backstop for certain insured losses resulting from terrorism through the Terrorism Insurance Program (“TRIP”), pursuant to the Terrorism Risk Insurance Act of 2002, 15 U.S.C. § 6701 note. See The President’s Working Group on Financial Markets, *The Long-Term Availability and Affordability of Insurance for Terrorism Risk* (2014). TRIP is scheduled to expire on December 31, 2014.

⁵¹ Munich Re, *Significant Natural Catastrophes 1980 – 2013*, available at http://www.munichre.com/site/corporate/get/documents_E-1423023189/mr/assetpool.shared/Documents/5_Touch/_NatCatService/Significant-Natural-Catastrophes/2013/10-costliest-events-ordered-by-insured-losses-worldwide.pdf.

⁵² Comment in response to the FRN on behalf of Insurance Europe, 3 (August 27, 2012).

⁵³ Comment in response to the FRN on behalf of Association of Bermuda Insurers and Reinsurers, 5 (August 27, 2012).

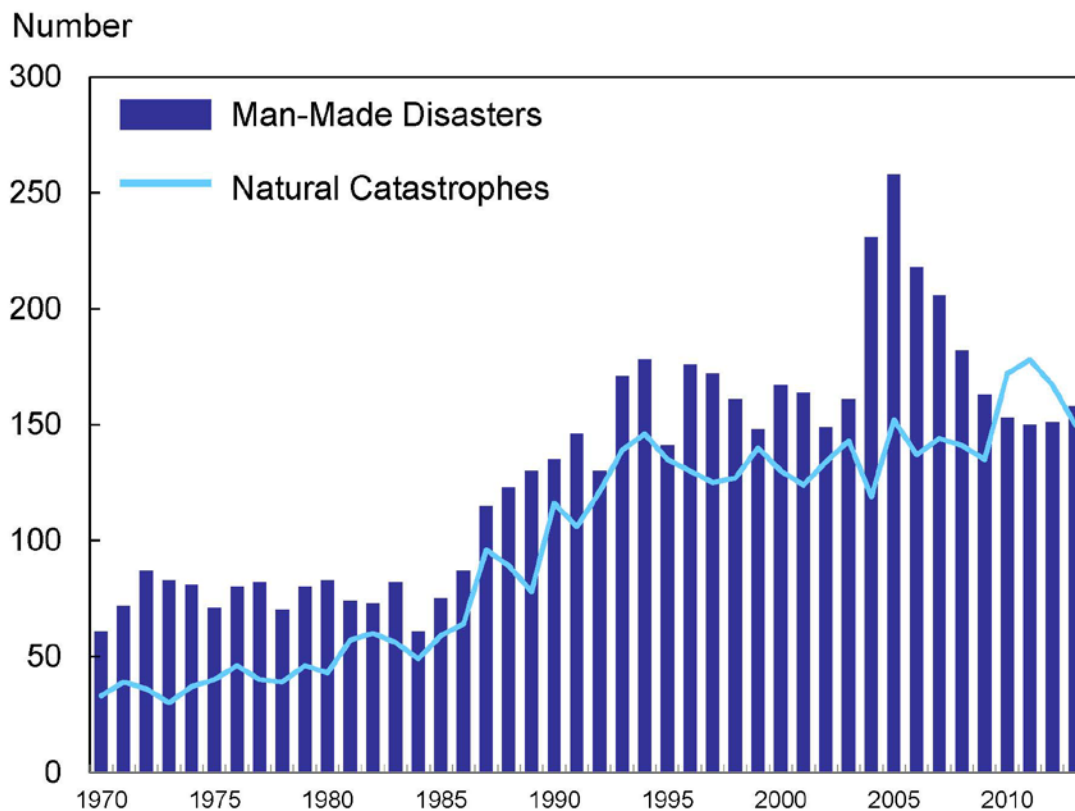
⁵⁴ Insurance Journal, *1 Year After Superstorm Sandy: Quick Economic Facts* (October 2013), available at <http://www.insurancejournal.com/news/east/2013/10/29/309538.htm> (additionally, approximately \$8 billion in losses were paid by the National Flood Insurance Program).

⁵⁵ Global Reinsurance Forum, *Global Reinsurance: Strengthening Disaster Risk Resilience*, 11 (September 2014).

Of course, it is not only in the United States that consumers, businesses and insurers are subject to the risk of loss from catastrophes. Recent decades have been described as a new era for catastrophes world-wide.⁵⁶ Global insured catastrophe losses reached \$116 billion in 2011, which was the second worst catastrophe year as measured by insured loss. Reinsurers assumed more than half of those insured catastrophe losses.⁵⁷

As Figure 4 illustrates, while the number of events has declined from the 2005 peak, the global trend has been toward increasing numbers of catastrophes. When viewed in recent historical context (particularly with respect to Atlantic hurricanes affecting the U.S.), relatively few natural catastrophes occurred in 2013. Nonetheless, the U.S. experienced nine significant natural catastrophes (winter storms, thunderstorms with tornado outbreaks, and flooding), each exceeding \$1 billion in economic loss. The aggregate natural disaster loss of nearly \$13 billion in 2013 was substantially below the average of the preceding 10 years. Globally, 2013 saw more than \$3.5 billion of losses in Germany from hailstorms, \$3 billion of losses in central Europe from flooding, and over \$1.5 billion of losses in Canada from flooding. Typhoon Haiyan caused thousands of deaths and devastating property loss in the Philippines. Worldwide insured natural catastrophe losses in 2013 were approximately \$31 billion.⁵⁸

Figure 4: Number of Events -- 1970-2013



Source: Swiss Re, *sigma* No 01/2014, *Natural Catastrophes and Man-made Disasters in 2013* (2014)

⁵⁶ Kunreuther, H. and Michel-Kerjan, E., *At War with the Weather: Managing Large-Scale Risks in a New Era of Catastrophes*, Preface, MIT Press (2009).

⁵⁷ Swiss Re, *sigma* No 01/2013, *Natural Catastrophes and Man-made Disasters in 2012*, 2 (2013).

⁵⁸ See generally Munich Re, *2013 Natural Catastrophe Year In Review* (Jan. 7, 2014), available at <http://www.iii.org/assets/docs/pdf/MunichRe-010714.pdf>.

Moreover, while individuals, businesses, governments, and insurers have a shared interest in implementing mitigation measures, the need for risk transfer mechanisms to address exposure to catastrophic losses will likely continue to increase. Several studies have shown, for example, that many natural disasters which occurred in the past (and which are capable of repetition) would be far more costly were they to occur today, and that in general loss severity from natural catastrophes will continue to grow.⁵⁹

International reinsurers are of particular importance to the U.S. insurance industry following catastrophes, when insurance capital plays an essential role in post-event recovery. Reinsurers support the insurers that contribute billions for reconstruction efforts and which aid property owners and local, state and regional economies.⁶⁰

⁵⁹ See, e.g., Swiss Re, *U.S. Tornadoes: An Examination of the Past to Prepare for the Future – Modeling for a Complex and Growing Peril* (2014), available at http://media.swissre.com/documents/2014_us_tornadoes.pdf (observing that the primary drivers of increased tornado loss severity are population growth, asset growth, and value growth); Karen Clark & Co, *Historical Hurricanes that Would Cause \$10 Billion or More of Insured Losses Today* (August 2012), available at http://www.karenclarkandco.com/pdf/HistoricalHurricanes_Brochure.pdf; (identifying 28 historical storms which, if occurring today with the same meteorological parameters, would likely cause \$10 billion or more of insured losses); Swiss Re, *The Big One: The East Coast's USD 100 Billion Hurricane Event* (September 2014), available at http://media.swissre.com/documents/the_big_one_us_hurricane.pdf (modeling the 1821 Norfolk and Long Island hurricane).

⁶⁰ See, e.g., International Association of Insurance Supervisors, *Reinsurance and Financial Stability*, 8 (July 19, 2012).

V. REGULATION OF REINSURANCE IN THE UNITED STATES

Although the business of insurance is primarily regulated at the state level, the U.S. insurance sector is in a larger sense subject to an integrated federal-state framework.⁶¹ A state insurance regulator focuses on the financial strength (solvency) of the insurers that are subject to the jurisdiction of that regulator, as well as on market conduct issues (e.g., product design, pricing, and claims payment practices). Among other interstate and international prudential matters relating to insurance, the federal government is involved with oversight of savings and loan holding companies that control insurers, as well as any insurer that may be a nonbank financial company that the Financial Stability Oversight Council (Council) determines should be subject to supervision by the Board of Governors of the Federal Reserve System and enhanced prudential standards.⁶²

While reinsurance serves a range of important functions, regulators recognize that it can concentrate credit risk into comparatively few counterparties. The credit risk created by reinsurance—which often involves large transactions—can be measured by the amount of reserves a reinsurer holds for losses, loss adjustment expenses and life, annuity and health insurance benefits.⁶³ These reserves are based on the expected future claims payments on the risks assumed from the ceding insurers. Such credit risk is mitigated because the transactions must be conducted according to a prudential regulatory framework that limits the amount of risk that is transferred to any one reinsurer,⁶⁴ requires the use of collateral in certain cases, and requires appropriate amounts of capital to be held by the ceding insurers.

Regulation of the business of reinsurance in the U.S. is considered to be either direct or indirect. Inasmuch as reinsurance is part of the business of insurance, it is directly regulated primarily at the state level in the United States if the reinsurer is licensed or domiciled in a given state.

As described below, a substantial portion of reinsurance supporting the U.S. insurance sector is provided by companies not licensed in all states and, in many cases, neither domiciled nor licensed in the United States. While a non-U.S. company may establish one or more reinsurance affiliates in the U.S., developing that corporate structure would require each insurance subsidiary to be licensed in each relevant state, which may limit the flow of capital. A company reinsuring U.S. cedents that is not “authorized”⁶⁵ by any state would not be subject to direct regulation by state insurance regulators, but that company nonetheless is indirectly regulated through requirements under state laws on the cedent-licensees and by certain terms of reinsurance contracts.

⁶¹ In 1945, Congress enacted the McCarran-Ferguson Act to clarify that state laws governing the business of insurance are not invalidated, impaired, or superseded by any federal law unless the federal law specifically relates to the business of insurance. 15 U.S.C. §§ 1011-1015. Section II of the *Modernization Report* discusses the history of insurance regulation in the United States, including an explanation of how the current state-based system developed.

⁶² See generally section V.C below.

⁶³ At the end of 2013, for example, U.S. P/C reinsurers reported \$63 billion in loss and loss adjustment expense reserves. Reinsurance Association of America, *Offshore Reinsurance in the U.S. Market: 2013 Data*, 10 (2014). By contrast, overall insurance industry P/C reserves were nearly \$600 billion. *FIO 2014 Annual Report*, 26.

⁶⁴ See, e.g., 11 CRR-NY § 125, *et seq.* (New York regulations); 18 Del. Code. § 911 (Delaware regulations).

⁶⁵ An “authorized” insurer is one that is licensed or accredited in a given state. See generally Kimberly M. Welsh, *Regulation of Reinsurance*, in New Appleman on Insurance Law Library Edition, §78.02[1].

A. Direct Regulation

In the United States, a state insurance regulator directly regulates reinsurers domiciled and licensed in its state as well as reinsurers licensed in its state but domiciled in another state.⁶⁶ When an insurer cedes business to a licensed reinsurer, the cedent is permitted under regulatory accounting rules to recognize a reduction in its liabilities for the amount of ceded liabilities, without a regulatory requirement for the reinsurer to post collateral to secure the reinsurer's ultimate payment of the reinsured liabilities. A reinsurer licensed in a state is subject to solvency and other regulations imposed by the state which are applicable to insurance companies generally.⁶⁷ Each state, for example, specifies a minimum level of capital and surplus that licensed insurers and reinsurers must maintain. State laws also address restrictions or limits on an insurer's investment portfolios, impose risk-based capital requirements, and provide for on-site examinations, annual and quarterly statement filings, and actuarially-certified opinions, among other requirements.⁶⁸

B. Indirect Regulation

A large and increasing proportion of reinsurance premiums from U.S.-based insurers are ceded to reinsurers based outside the United States that are not licensed by any U.S. state, and thus not directly subject to prudential regulation by any state.⁶⁹ While state insurance regulators do not have direct supervisory authority over such non-state licensed non-U.S. reinsurers, longstanding state laws pertaining to the terms and conditions of reinsurance contracts to which U.S. cedents are party amount to indirect reinsurance regulation of those cedents' reinsurers. Such laws impose limitations on the ability of a licensed U.S. insurer to receive "credit for reinsurance" in its regulatory financial statement unless certain obligations by the reinsurer are met. For the reasons outlined above in section IV.A, an insurer's ability to take credit for the reinsurance is an important aspect of the transaction; therefore, as a practical matter the imposition of such regulatory requirements on the cedent and on the form of the reinsurance contract becomes a business requirement that the cedent must, in turn, impose on its unlicensed reinsurers.

A key requirement has been (and generally remains) that in order to receive financial statement credit for unauthorized reinsurance, a U.S. cedent must be the beneficiary of security posted by the reinsurer, providing collateral equal to 100 percent of the actuarially-estimated liabilities under the reinsurance contract.⁷⁰

In 2011, state insurance regulators unanimously approved amendments to the NAIC's Model Law which, if enacted into law or otherwise implemented in a state, would authorize that state's insurance regulator to certify certain unauthorized reinsurers for reduced collateral requirements. As of October 2014, some form of authorization for the state insurance regulator to accept less than 100 percent collateral from non-U.S. reinsurers had been adopted in 23 states, but those

⁶⁶ Subject to restrictions in the NRRRA, addressed in section V.C of this Report.

⁶⁷ In most instances, laws and regulations that are applicable to "insurers" domiciled in a state apply to licensed "reinsurers" as well unless otherwise specified. *See, e.g.*, N.D. Cent. Code § 26.1-02-05. A reinsurer not offering policies to the public as a primary insurer, for example, would not be subject to approval of its rates and forms.

⁶⁸ Comment in response to the FRN on behalf of Tort Trial and Insurance Practice Section of the American Bar Association, 4 (August 27, 2012).

⁶⁹ Comment in response to the FRN on behalf of Reinsurance Association of America, 5 (August 27, 2012). Such companies are subject to the applicable supervision of the respective non-U.S. domiciliary jurisdiction.

⁷⁰ *See, e.g.*, Iowa Admin. Code r. 191-5.33(510).

state laws and regulations have not necessarily been uniform in structure or implementation. FIO has stated previously that uniformity should be pursued with respect to the supervision of reinsurance, including collateral requirements, because global diversification and capital allocation are beneficial to the U.S. insurance industry and the consumers that rely on it.⁷¹ The subjects of reinsurance collateral reform and the role of the federal government in establishing such uniformity are addressed in section V.D of this Report.

C. Federal Involvement in Reinsurance and Industry Oversight

The federal government participates in multiple reinsurance programs for markets served by private market insurers or reinsurers, including: (1) the Federal Crop Insurance Corporation (FCIC),⁷² under which the federal government provides reinsurance to commercial writers of crop insurance; (2) the Price-Anderson Nuclear Industries Indemnification Act,⁷³ under which nuclear power licensees are required to contribute to a fund (currently limited to approximately \$13 billion) in the event of an incident leading to damages exceeding coverage under commercial insurance policies;⁷⁴ (3) the Overseas Private Investment Corporation (OPIC),⁷⁵ an independent government corporation providing political risk insurance to support investment by U.S. businesses in emerging markets and developing countries, and which may use reinsurance in fulfilling its mandate; (4) the aviation war risk program,⁷⁶ under which the Federal Aviation Administration (FAA) supplies insurance or reinsurance for aircraft when the President determines that commercial air service is necessary in the interest of national defense or foreign policy, and the Secretary of the U.S. Department of Transportation determines that such insurance could not be obtained on reasonable terms in the private market; and (5) the National Flood Insurance Program (NFIP), under which the federal government (through the Federal Emergency Management Agency, FEMA) sells residential flood insurance, and which under recent legislation may in the future be supported by private market reinsurance.⁷⁷

In addition, the Terrorism Risk Insurance Act (TRIA), a post-September 11, 2001, law establishing the Terrorism Risk Insurance Program (TRIP) in Treasury, provides a backstop for insured commercial property and casualty losses resulting from a certified “act of terrorism.”⁷⁸ As of publication of this Report, TRIA will expire on December 31, 2014. Terrorism risk insurance supports a broad range of economic activities across the United States, and in some instances may be prohibitively expensive or unavailable in the absence of TRIP.⁷⁹

⁷¹ See *Modernization Report* at 37.

⁷² 7 U.S.C. § 1501, *et seq.*

⁷³ 42 U.S.C. § 2210.

⁷⁴ 10 C.F.R. Part 140.

⁷⁵ 22 U.S.C. § 2191, *et seq.*

⁷⁶ 49 U.S.C. §§ 44301-10. Authority to provide commercial aviation war risk insurance, other than insurance for aircraft carrying goods or providing services on behalf of the U.S. government, expired on December 11, 2014. 49 U.S.C. 44310. There is a similar program for maritime war risk, administered by the Maritime Administration within the Department of Transportation. 46 U.S.C. §§ 53901-12.

⁷⁷ Regarding the NFIP, see Box 2.

⁷⁸ 15 U.S.C. § 6701 note.

⁷⁹ See The President’s Working Group on Financial Markets, *The Long-Term Availability and Affordability of Insurance for Terrorism Risk* (2014), available at <http://www.treasury.gov/initiatives/fio/reports-and-notice>.

Treasury also has a longstanding regulatory role with respect to reinsurers of companies writing surety bonds for federal projects.⁸⁰ Treasury's Surety Bond Branch certifies insurers to directly write and reinsure federal surety bonds. A "surety bond" is a contract under which one party (the surety) guarantees the performance of certain obligations of a second party (the principal) to a third party (the obligee). By regulation, sureties can cover excess risks on federal surety bonds through reinsurance provided by Treasury-certified reinsurers. Treasury also approves "admitted reinsurers," which Treasury-certified sureties can use to cover non-Federal excess risks.

Several provisions of the Dodd-Frank Act have implications regarding federal roles in the oversight of reinsurance. First, Part II of the Nonadmitted and Reinsurance Reform Act of 2010 (NRRA) specifically addresses the regulation of reinsurance.⁸¹ The purpose of the NRRA is to enhance uniformity in the state-based solvency regulation of insurers and reinsurers by increasing deference to the state in which the reinsurer is domiciled or licensed.

The NRRA addresses this goal by designating the regulator from a reinsurer's domiciliary state as the sole state regulator responsible for the financial solvency of the reinsurer.⁸² Previously, each state in which a reinsurer was licensed had the authority to regulate the reinsurer, which could make the reinsurer subject to as many as 56 state-law standards. In addition, the NRRA provides that if an insurer is domiciled in an NAIC-accredited state,⁸³ and that state has allowed the insurer to take financial statement credit for certain reinsurance, then another state may not deny the insurer such credit for reinsurance.⁸⁴ Previously any state could, and certain states did, impose disparate extraterritorial regulatory regimes addressing credit for the same reinsurance.⁸⁵

Second, the Director of FIO is a member of the Council and is authorized to recommend that the Council designate a nonbank financial company that is an insurer (or an affiliate of an insurer) to be subject to supervision by the Federal Reserve and enhanced prudential standards.⁸⁶ Nonbank financial companies that could be subject to these authorities may include reinsurers.⁸⁷

⁸⁰ See 31 C.F.R. Part 223. The Approved Surety list is cross-referenced in other federal programs, e.g., customs bonds. See 19 C.F.R. § 113.37(a).

⁸¹ Subtitle B of title V of the Dodd-Frank Act, 124 Stat. 1595, 15 U.S.C. §§ 8221-8223.

⁸² 15 U.S.C. § 8222(a).

⁸³ Developed following the failure of several large insurers in the 1980's, the NAIC's Financial Regulation Standards and Accreditation Program is a peer review exercise through which state regulators assess whether a state regulatory agency meets a set of legal, financial, and organizational standards. A state insurance regulatory department is "accredited" if it meets these standards. As of December 2013, all fifty states, the District of Columbia and Puerto Rico are accredited. NAIC, *Financial Regulation Standards and Accreditation Program* (December 2013).

⁸⁴ 15 U.S.C. § 8221(a). Similarly, the NRRA also prohibits a state from requiring a reinsurer domiciled in another state to provide any financial information beyond that which the reinsurer is required to file with its domiciliary state. 15 U.S.C. § 8221(b)(1).

⁸⁵ In October 2013, Treasury released its *2013 Report on the Impact of Part II of the Nonadmitted and Reinsurance Reform Act* in which it found that Part II of the NRRA has not had an adverse impact on the ability of state regulators to access reinsurance information for regulated companies.

⁸⁶ 12 U.S.C. § 5323.

⁸⁷ 12 U.S.C. §§ 5311(4) (nonbank financial company definitions), 5323 (authority of the Council to determine that a nonbank financial company shall be subject to the supervision of the Board of Governors of the Federal Reserve and enhanced prudential standards); 31 U.S.C. § 313(c)(1)(C) (providing authority to FIO to recommend to the Council that it designate an insurer or an affiliate of an insurer as a nonbank financial company subject to the supervision of the Board of Governors of the Federal Reserve and enhanced prudential standards).

Finally, the Dodd-Frank Act authorizes FIO to “coordinate federal efforts and develop federal policy on prudential aspects of international insurance matters, including representing the United States, as appropriate, in the International Association of Insurance Supervisors [IAIS].”⁸⁸ Currently, the Director of FIO serves as a member of the IAIS Executive Committee as well as Chair of its Technical Committee. The Technical Committee is developing the Common Framework (ComFrame) for the Supervision of Internationally Active Insurance Groups (IAIGs).⁸⁹ The criteria for supervisory identification of an IAIG would apply to IAIGs that are reinsurers as well as to those that are primary insurers.⁹⁰

In the international context, the IAIS is involved in the development of global capital standards for the insurance sector as called upon by the Financial Stability Board (FSB).⁹¹ In 2014, the IAIS published a Basic Capital Requirement (BCR) applicable to a global systemically important insurer (G-SII).⁹² The BCR is intended to serve as a foundation for Higher Loss Absorbency (HLA) requirements, an additional capital component that would apply to G-SIIs, and which remains in development. The IAIS is also developing a more comprehensive and risk-sensitive Insurance Capital Standard (ICS) which would be applicable to IAIGs (which includes G-SIIs). It is presently anticipated that from 2019, the ICS will commence to apply to IAIGs, and could then replace the BCR as the foundation for HLA requirements. International insurance standards are not self-executing, and are without legal effect in the United States until implemented through a federal or state process.⁹³

FIO’s Director is also one of six members of the Steering Committee of the EU-U.S. Insurance Project (the Project), the objective of which is to contribute to an increased mutual understanding and enhanced cooperation between the EU and the United States in order to promote business opportunities, consumer protection and effective insurance supervision.⁹⁴ Significant components of the Project focus on the regulation of collateral for reinsurance and on examining differences between such regulation in the EU and the United States. The Project – which includes representation of a range of European and domestic stakeholders (including U.S. state regulators) – has also been exploring how to achieve a consistent approach within each jurisdiction, including consideration of reductions and possible removal of collateral

⁸⁸ 31 U.S.C. § 313(c)(1)(E). The 56 state-level insurance supervisors, the NAIC and the Board of Governors of the Federal Reserve System also are represented at the IAIS.

⁸⁹ Under the current draft of ComFrame, two criteria must be met for an insurance group to be identified as an IAIG: (1) international activity, i.e., the insurance group has premiums written in three or more jurisdictions, and the percentage of gross written premium outside the home jurisdiction is at least 10 percent of the group’s total gross written premium; and (2) size, i.e., based on a rolling three-year average, the insurance group has total assets of at least \$50 billion or gross written premiums of at least \$10 billion. However, involved supervisors have discretion in applying the criteria to determine whether an insurance group qualifies as an IAIG. ComFrame draft and materials *available at* <http://www.iaisweb.org/Supervisory-Material/Common-Framework-765>.

⁹⁰ *See Modernization Report at 23-24.* FIO is also participating in work through the IAIS Technical Committee and various subcommittees in the development of a risk-based capital standard that is expected to become part of ComFrame and which, if implemented in a given jurisdiction, would apply at the group level to IAIGs, including reinsurers that are identified as IAIGs.

⁹¹ http://www.financialstabilityboard.org/wp-content/uploads/r_130718.pdf.

⁹² http://www.iaisweb.org/view/element_href.cfm?src=1/23741.pdf.

⁹³ *See Testimony of FIO Director Michael T. McRaith before House Financial Services Committee (Nov. 18, 2014), available at* <http://financialservices.house.gov/uploadedfiles/hhrg-113-ba04-wstate-mmcrraith-20141118.pdf>.

⁹⁴ Information relating to the Project is *available at* <http://www.treasury.gov/initiatives/fio/EU-US%20Insurance%20Project/Pages/default.aspx>.

requirements in both jurisdictions in favor of a risk-based determination for all reinsurers in relation to a cedent's credit for reinsurance.

With regard to reinsurance, the *Modernization Report* recommends development of a uniform and transparent solvency oversight regime for the transfer of risk to reinsurance captives, and pursuit of a covered agreement for reinsurance collateral requirements.⁹⁵ A covered agreement is a written bilateral or multilateral agreement between the United States and one or more foreign governments, authorities, or regulatory entities regarding prudential measures with respect to the business of insurance or reinsurance which meets certain specified standards.⁹⁶ Work towards initiating negotiations for a covered agreement with leading reinsurance jurisdictions continues.⁹⁷

D. Credit for Reinsurance Collateral Reform

As discussed above, regulatory oversight of the reinsurance industry in the United States is part of the integrated federal-state framework applicable to the insurance sector generally. Non-U.S. reinsurers accepting reinsurance premium ceded from U.S. insurers, however, are not subject to the same state-based prudential supervision applicable to licensed or accredited U.S. insurers and reinsurers. Rather, non-U.S. reinsurers are supervised by the regulatory regime of the applicable overseas jurisdiction. Such reinsurers, when doing business with U.S. cedents, have for many years been “indirectly” regulated by state laws requiring that in order for cedents to obtain “credit for reinsurance” the non-U.S. reinsurer must post 100 percent collateral for all reinsurance liabilities assumed from that cedent. Such “credit for reinsurance laws,” which exist in every state, are based on the Credit for Reinsurance Model Act and Regulation (“Model Law”) of the NAIC, dating to 1984.

Reform efforts — which would consider the efficacy of regulatory supervision in non-U.S. jurisdictions by permitting less than 100 percent collateral — have been under consideration by the NAIC and various states since at least 2001.⁹⁸ In December of 2005, the Ad Hoc Reinsurance Collateralization Roundtable (formed in 2004 and consisting of nine U.S. insurance regulators) presented a report to the NAIC Reinsurance Task Force expressing “substantial agreement” that a system for varying the amount of collateral required from unauthorized reinsurers according to financial strength and reliability was feasible.⁹⁹ In 2006, the NAIC Reinsurance Task Force published a white paper providing a “balanced synopsis of the historical arguments in favor of and against amending U.S. reinsurance collateral requirements,” in order to provide that task force with a basis for making further public policy recommendations on the issue.¹⁰⁰

⁹⁵ See *Modernization Report* at 37 (suggesting that such a covered agreement could be based on the NAIC Credit for Reinsurance Model Law and Regulation).

⁹⁶ 31 U.S.C. § 313(r)(2).

⁹⁷ See section V.D of this Report, further addressing reinsurance collateral reform.

⁹⁸ In August 2001, the NAIC Reinsurance Task Force issued a statement generally favoring reduced collateral, but proposing to revisit the issue in another year. In 2003 the NAIC Insolvency Task Force considered but did not recommend establishing an “approved list” of reinsurers approved for reduced collateral. After further consideration of the issue, in 2004 the NAIC Reinsurance Task Force deferred deliberations to permit other interested parties to work on alternatives for regulatory consideration. See National Association of Insurance Commissioners, *U.S. Reinsurance Collateral White Paper*, 19-21 (March 5, 2006).

⁹⁹ *Id.* at 21.

¹⁰⁰ *Id.* at 1.

In 2008, Florida became the first state to introduce reduced collateral requirements for some unauthorized reinsurance, followed in 2011 by New York, Indiana and New Jersey, with collateral reform adopted in those states by April 2011. The scope and details of these reforms differ in multiple respects, but all permit collateral reduction for some reinsurers accepting business ceded from licensed insurers.

In November 2011, the NAIC adopted – through the unanimous approval of state insurance regulators – amendments to the Model Law that would permit state regulators discretion to designate “certified reinsurers” domiciled in countries determined by the NAIC to be “qualifying jurisdictions.”¹⁰¹ Certified reinsurers would be eligible for reduced regulatory collateral standards, based on the nature and strength of the regulatory regime in the reinsurer’s home jurisdiction and on individualized objective and subjective analysis, including considerations of financial strength, credit rating, and reputation.¹⁰² The Model Law is not self-executing and does not create law in any state. Whether, when, and in what form amendments to the Model Law become a law or regulation is a matter for the respective states.¹⁰³

FIO is authorized to coordinate federal efforts and develop federal policy on prudential aspects of international insurance matters. In this role, FIO’s *Modernization Report* calls for reform to afford “nationally uniform treatment of reinsurers with respect to collateral requirements.”¹⁰⁴ The *Modernization Report* states Treasury’s concerns regarding implementation of the amended Model Law, including:

- A determination by one state within the United States of the adequacy or the equivalence of regulation by another nation would not bind other states, possibly resulting in frustration of broader U.S. economic or regulatory policy.
- The amended Model Law depends too heavily upon assessments of a reinsurer’s creditworthiness by credit rating agencies. A preferable approach would be for other risk-based, empirical factors to be the basis upon which to determine the creditworthiness of the reinsurer.
- Nineteen additional states¹⁰⁵ have now adopted some form of collateral reform based on the amended Model Law; among those states, however, authorization to accept less than 100 percent collateral has not been uniform in the structure or implementation of the state law requirements.

Non-U.S. reinsurers argue that collateral requirements restrict the ability to manage risk globally, restrict reinsurance capacity in the United States, and thus increase costs for U.S. consumers. Non-U.S. reinsurers account for 62 percent or more of reinsurance premiums ceded by U.S.-

¹⁰¹ See National Association of Insurance Commissioners, Credit for Reinsurance Model Law & Regulation, ST-785,786.

¹⁰² *Id.*

¹⁰³ By the time the amended Model Law was passed, the NRRRA had been enacted as part of the Dodd-Frank Act. The NRRRA bars states from denying credit for reinsurance in instances where the state in which the ceding company is licensed has permitted credit for reinsurance.

¹⁰⁴ *Modernization Report* at 37.

¹⁰⁵ That is, in addition to Florida, New York, New Jersey, and Indiana, which – as noted above – had begun modernizing credit for reinsurance laws and regulations prior to NAIC adoption of the amended Model Law. The number was 18 at the time the *Modernization Report* was published.

based insurers.¹⁰⁶ Moreover, EU authorities have recently adopted “Solvency II”—a modernized insurance regulatory regime which goes into effect in January 2016 and which calls for evaluation of regulatory treatment of reinsurers in non-EU jurisdictions. Risk-based regulation of reinsurance collateral requirements will improve opportunities for U.S. reinsurers operating in the EU.

In formulating federal policy on prudential aspects of international insurance matters, federal officials are well-positioned to make determinations regarding whether a foreign jurisdiction has sufficiently effective regulation and, in doing so, consider other prudential issues pending in the United States and between the United States and affected foreign jurisdictions.¹⁰⁷ Accordingly, Treasury, together with the United States Trade Representative (USTR), is considering whether to include collateral requirements.¹⁰⁸ The covered agreement could have the effect of preempting inconsistent state laws.¹⁰⁹

¹⁰⁶ Section VI.B.2.

¹⁰⁷ *Modernization Report*, 38.

¹⁰⁸ *FIO 2014 Annual Report*, 46-47.

¹⁰⁹ 31 U.S.C. § 313(f) (permitting FIO’s Director to issue a determination that a state insurance law is preempted by a covered agreement, in accordance with certain procedures including providing notice and an opportunity for public comment).

VI. GLOBAL REINSURANCE MARKETS

A. The U.S. Insurance Sector as Purchasers of Reinsurance

By premium volume, the United States is the largest single-country insurance market in the world, and the business of insurance is a substantial component of the U.S. economy. Domestic insurers directly employ approximately 2.3 million people.¹¹⁰ In 2013, U.S. insurers wrote approximately \$1.3 trillion in total premiums.¹¹¹ The U.S. insurance sector reported \$5 trillion in total assets in 2013.¹¹²

Broadly viewed, the two principal sectors of the U.S. primary insurance market are:

- The Property & Casualty (P/C) Sector. This sector refers generally to insurance products offering protection to policyholders for financial loss associated with damage to physical property as well as loss from legal liability. The P/C sector in the United States is comprised of more than 2,700 insurers of varying size, specialization and geographic diversity,¹¹³ offering products broadly categorized as either personal lines (e.g., homeowners or automobile insurance) or commercial lines (e.g., workers' compensation, professional liability, or commercial multi-peril insurance)—each of which accounts for approximately half of 2013 P/C premiums. In 2013, P/C aggregate direct premiums were approximately \$544 billion.¹¹⁴
- The Life & Health (L/H) Sector. This sector refers generally to insurance coverage for losses associated with accidents, death, long-term care, or disability. The sector also includes annuity products that create a revenue stream for policyholders (e.g., for retirement planning) in addition to providing death benefits. The L/H sector in the United States is comprised of approximately 1,000 insurers,¹¹⁵ and in 2013, L/H sector aggregate direct premiums totaled approximately \$750 billion.¹¹⁶ Of this, approximately \$570 billion arose from life business (including annuity products) and \$180 billion from A/H business.¹¹⁷

As further described below, U.S. insurers in both of these sectors rely on U.S. and non-U.S. reinsurers. Measured by total ceded premium, the United States is the largest single-country reinsurance market in the world. Roughly half of all reinsurance business originates from North America.¹¹⁸

¹¹⁰ *Modernization Report* at 1.

¹¹¹ SNL Financial, LC.

¹¹² SNL Financial, LC (cash and invested assets, exclusive of separate account assets held by L/H insurers).

¹¹³ *FIO 2014 Annual Report* (citing *A.M. Best's Aggregates and Averages* (2013)).

¹¹⁴ *FIO 2014 Annual Report*.

¹¹⁵ *FIO 2014 Annual Report* (citing *A.M. Best's Aggregates and Averages* (2013)). While the L/H sector includes certain accident & health (A/H) coverages, data from firms licensed solely as health insurers or health maintenance organizations are separate and not included in this Report.

¹¹⁶ *FIO 2014 Annual Report*.

¹¹⁷ *FIO 2014 Annual Report*.

¹¹⁸ Swiss Re, *The Essential Guide to Reinsurance*, 12 (2012).

As a commercial activity, reinsurance is usually purchased and sold in private market transactions. Through various state and federal programs, however, public entities are or may be parties to reinsurance transactions (Box 2).

Box 2: Examples of Government Programs Associated with Purchasing or Supplying Reinsurance

The Florida Hurricane Catastrophe Fund (FHCF) is a government-owned reinsurance entity, created in 1993 after Hurricane Andrew in order to “protect and advance the state’s interest in maintaining insurance capacity in Florida by providing reimbursements to insurers for a portion of their catastrophic hurricane losses.”¹¹⁹ The FHCF is structured as a tax-exempt trust fund, operated by an agency of the Florida government (State Board of Administration of Florida), and provides a backstop to insurers of non-commercial property in Florida.¹²⁰ The FHCF is partially funded through collected premiums, and relies in part on tax-exempt, post-event revenue bonds for shortfalls and recapitalization. The bonds are funded by assessments on most lines of P/C insurance.¹²¹

The California Earthquake Authority (CEA) was established following the 1994 Northridge earthquake to address severe reductions in availability of earthquake insurance.¹²² The CEA operates as a publicly managed, privately financed, regulated insurance entity, offering earthquake insurance for California residential property. Coverage is not subsidized, and is distributed by private insurers that choose to participate in the CEA; funding capital is provided by participating insurers, which also retain a specified degree of exposure. The CEA purchases reinsurance in the commercial marketplace, including through capital markets.¹²³

The National Flood Insurance Program (NFIP) is a federal program administered by the Federal Emergency Management Agency (FEMA),¹²⁴ which makes flood insurance (some at subsidized rates) available for qualified property. Pursuant to the Biggert-Waters Flood Insurance Reform Act of 2012 – which extended the program for five years – the NFIP is authorized to “secure reinsurance of coverage provided by the flood insurance program from the private market at rates and on terms determined by the Administrator to be reasonable and appropriate, in an amount sufficient to maintain the ability of the program to pay claims.”¹²⁵

¹¹⁹ About the Florida Hurricane Catastrophe Fund, *available at* <http://www.sbafla.com/fhcf/AbouttheFHCF/tabid/278/Default.aspx>.

¹²⁰ Fla. Stat. § 215.555 (1993), as amended.

¹²¹ Representatives of the reinsurance industry have been critical of Florida’s approach to addressing the cost and availability of insurance for hurricane risks, as crowding out private market participation. *See* Comment in response to the FRN on behalf of Reinsurance Association of America, 26 (August 27, 2012). According to recent reports, FHCF has been considering whether to obtain support from private reinsurance markets, although it appears that no such arrangements were in place prior to the 2014 hurricane season.

¹²² Further information is *available at* <http://www.earthquakeauthority.com>.

¹²³ CEA recently reported payment of over \$212 million in reinsurance premiums. California Earthquake Authority, *Annual Report to the Legislature and Insurance Commissioner on CEA Program Operations*, 9 (August 2014).

¹²⁴ 42 U.S.C. § 4011, *et seq.*

¹²⁵ Public Law 112-141 § 100232, 126 Stat. 916 (2012). To assist in considering the potential role for reinsurance, FEMA is conducting a Flood Insurance Risk Study in furtherance of section 100232(c). *See* Solicitation Number HSFE60-13-Q-0006.

Other market participants involved in the purchase of reinsurance include reinsurance brokers, also known as intermediaries. Reinsurance brokers are licensed by the individual states and provide a range of services to insurers, such as assistance in designing and placing reinsurance programs as well as offering reinsurance billing and claims services. Reinsurance brokers may also provide technical expertise to insurers such as catastrophe modeling and enterprise risk management advice. Although some “direct” reinsurers conduct business with cedents without using any intermediary, the use of brokers who can access worldwide reinsurance markets is common.

B. Global Suppliers of Reinsurance

The reinsurance industry operates on a cross-border basis from jurisdictions throughout the world. The transnational nature of the business of reinsurance serves to diversify exposure to risk. Referring to the 2005 hurricane season, which included three major storms causing losses in the United States, an IAIS report explained:

Reinsurers contribute to the global diversification of risks and to an efficient allocation of capital and improved risk management on the side of primary insurers.... Without access to global reinsurance capacity the claims burden arising from this exceptional sequence of natural catastrophes would have fallen on U.S. domestic (re)insurers and U.S. subsidiaries of non-U.S. parents. The access to global reinsurance and the reinsurance recoveries obtained from global and domestic reinsurance by primary insurers mitigated the financial impact these catastrophes would have had on U.S. primary insurers and by extension also on U.S. policyholders.¹²⁶

This section provides a range of comparative industry data demonstrating the breadth and global scope of the reinsurance industry. First, this section presents data addressing various economic metrics for the reinsurance industry. It then provides industry data on a geographic basis – starting with the U.S. reinsurance industry and then turning to non-U.S. reinsurance markets which support U.S. insurers.

A single, standardized source of data regarding the international reinsurance industry does not currently exist. This report relies primarily on data published by A.M. Best and Standard & Poor’s (credit rating agencies that provide annual and periodic updates on the global insurance and reinsurance industries); Aon Benfield and Guy Carpenter (global insurance and reinsurance brokers); Swiss Re, Munich Re, the Reinsurance Association of America, and the IAIS.

1. Reinsurance Industry Data

Data regarding the global reinsurance industry both illustrate its breadth and scope and demonstrate its importance to the U.S. insurance industry.

For example, Figure 5 show the top reinsurance groups, constituting the bulk of the global reinsurance market, as compiled by A.M. Best. As illustrated in Figure 5, the top five global reinsurers account for more than \$120 billion of gross premiums written in 2013 (with Munich Re and Swiss Re accounting for \$71 billion of that figure), with the next 45 largest reinsurance groups combined to write approximately \$103 billion of gross premium.

¹²⁶ International Association of Insurance Supervisors, *Reinsurance and Financial Stability*, 8 (2012).

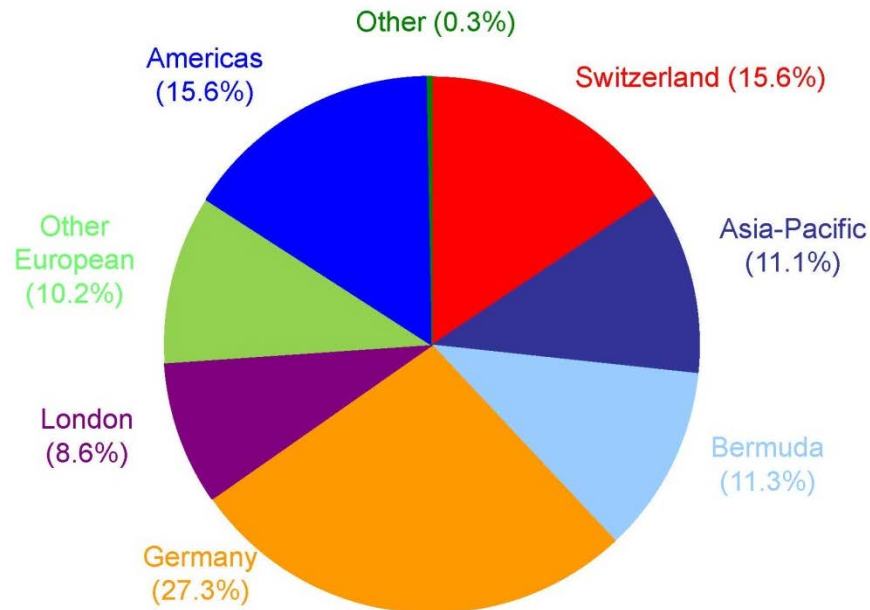
Figure 5: Top 50 Global Reinsurance Groups (GWP \$ millions)

2014 Ranking	Company	Gross Written Premium Life & Non-Life	Gross Written Premium Non-Life Only	Total Shareholders' Funds
1	Munich Reinsurance Company	38,333	23,423	36,108
2	Swiss Re Ltd.	32,934	20,670	32,977
3	Hannover Rueckversicherung AG	19,225	10,764	8,991
4	Lloyd's	15,614	15,594	33,619
5	SCOR S.E.	14,116	6,675	6,856
6	Berkshire Hathaway Inc.	12,776	7,339	224,485
7	Reinsurance Group of America Inc.	8,573	0	5,936
8	China Reinsurance (Group) Corporation	7,936	4,947	7,512
9	Korean Reinsurance Company	5,623	4,995	1,381
10	PartnerRe Ltd.	5,562	4,590	6,766
11	Everest Re Group Ltd.	5,219	5,219	6,968
12	Great West Lifeco	4,206	0	18,701
13	Transatlantic Holdings, Inc	3,423	3,423	4,486
14	MAPFRE RE, Compania de Reaseguros S.A.	2,524	2,102	1,390
15	General Insurance Corporation of India	2,377	2,356	5,243
16	The Toa Reinsurance Company, Limited	2,269	2,269	1,523
17	XL Group plc	2,218	1,894	11,349
18	Assicurazioni Generali SpA	2,178	990	29,470
19	QBE Insurance Group Limited	2,155	2,155	10,403
20	Axis Capital Holdings Limited	2,138	2,138	5,868
21	R+V Versicherung AG	2,095	2,058	2,632
22	Odyssey Re Holdings Corp.	1,868	1,868	3,731
23	Catlin Group Limited	1,850	1,850	3,783
24	Caisse Centrale de Reassurance	1,730	1,611	2,719
25	Amlin plc	1,701	1,701	2,768
26	RenaissanceRe Holdings Ltd.	1,605	1,605	3,904
27	Arch Capital Group Ltd.	1,489	1,489	5,648
28	MS&AD Insurance Group Holdings, Inc.	1,417	1,417	21,725
29	Validus Holdings, Ltd.	1,390	1,390	4,202
30	Deutsche Rueckversicherung AG	1,369	1,320	279
31	IRB - Brasil Resseguros S.A.	1,308	1,255	1,066
32	Endurance Specialty Holdings, Ltd.	1,190	1,190	2,887
33	Aspen Insurance Holdings Limited	1,134	1,134	3,300
34	Markel Corporation	1,134	1,133	6,678
35	White Mountains Insurance Group, Ltd.	1,120	1,120	4,397
36	ACE Limited	1,057	1,057	28,825
37	American Agricultural Insurance Company	941	941	489
38	Allied World Assurance Company Holdings, AG	934	934	3,520
39	Tokio Marine Holdings, Inc.	923	923	26,033
40	Pacific LifeCorp	896	0	8,970
41	Maiden Holdings, Ltd.	868	868	1,124
42	W.R. Berkley Corporation	809	809	4,369
43	ACR Capital Holdings Pte, Ltd.	797	797	700
44	NKSJ Holdings, Inc.	726	726	13,212
45	Montpelier Re Holdings Ltd.	706	706	1,887
46	African Reinsurance Corporation	670	635	678
47	Platinum Underwriters Holdings Ltd.	580	580	1,747
48	Greenlight Capital Re, Ltd.	536	536	1,086
49	Central Reinsurance Corporation	522	321	487
50	Wilton Re Holdings Limited	506	0	1,357

Source: A.M. Best, *Global Reinsurance – Segment Review* (September 2014)

Figure 6 shows the countries and regions most involved in the geographically diffuse reinsurance industry. Over 27 percent of worldwide reinsurance premiums are written (assumed) by German companies. The London market (including Lloyd's) represents nearly 9 percent of the market, and the rest of Europe accounts for about 10 percent. Bermuda and the Asian Pacific regions each represent approximately 11 percent of assumed business, while Switzerland and the Americas (United States, Canada, and Latin America) each assume approximately 15.5 percent.

Figure 6: Global Reinsurance – Gross Premiums Written by Region (2013)

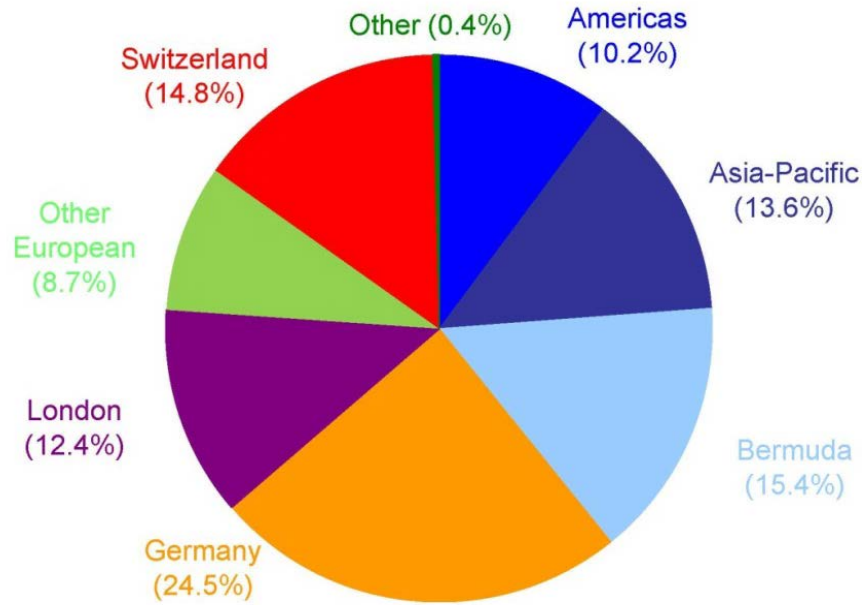


NOTE: Region determined by ultimate parent's domicile. Americas includes U.S., Canada and Latin America. Americas GPW includes Berkshire Hathaway subsidiaries National Indemnity and General Re Corp.

Source: A.M. Best, *Global Reinsurance – Segment Review* (September 2014)

As displayed in Figure 7, if only reinsurance of non-life business is considered, the global distribution is somewhat different, with the Americas only writing approximately 10 percent of worldwide premiums, and Bermuda markets writing roughly 15.5 percent. Both Figure 6 and Figure 7 are based on the domicile of the reinsurers' ultimate parent company.

Figure 7: Global Reinsurance – Non-Life Gross Premiums Written by Region (2013)



NOTE: Region determined by ultimate parent's domicile. Americas includes U.S., Canada and Latin America. Americas GPW includes Berkshire Hathaway subsidiaries National Indemnity and General Re Corp.

Source: A.M. Best, *Global Reinsurance – Segment Review* (September 2014)

One way to view the global nature of the reinsurance industry is to consider the relative transfer of risk between geographic regions. Analysis by the IAIS shows that European insurers and reinsurers are “net insurance risk takers,” i.e., these entities assumed \$47 billion more in reinsurance premium than ceded. In contrast, North American entities ceded \$16 billion more reinsurance premium than assumed. These data, which demonstrate that reinsurers are geographically diverse from the reinsured risks, are displayed in Figure 8.

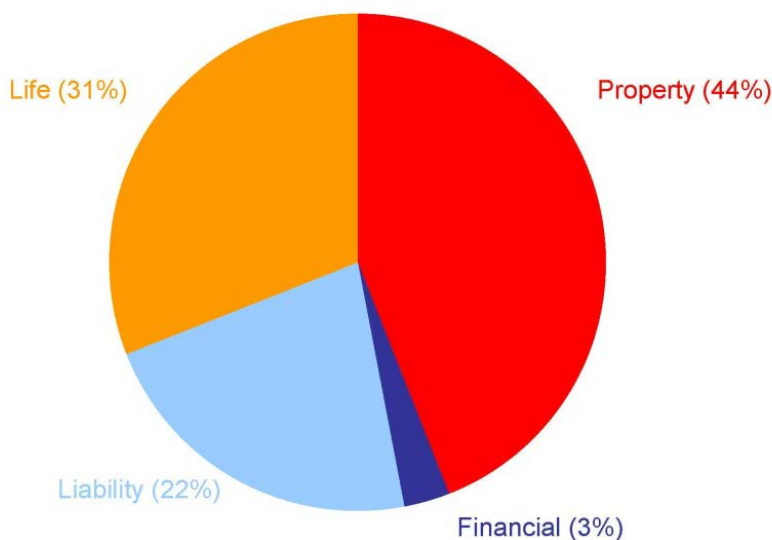
Figure 8: Risk Transfer Between Regions (\$ Billions)

Company	(1) Gross Assumed by Reporting Entities	(2) Gross Ceded to Reporting Entities	Net Position (1-2)
Europe	\$99	-\$52	\$47
North America	\$72	-\$88	-\$16
Asia and Australia	\$2	-\$23	-\$21
Africa and Middle East	-	-\$4	-\$4
Latin American	-	-\$7	-\$7

Source: International Association of Insurance Supervisors, *Global Insurance Market Report*, 20 (2012) (referencing 2011 data)

The global diversity of reinsurance is not limited to the geographic domicile of reinsurers; as Figure 9 illustrates, global reinsurance premiums are widely distributed across sectoral lines of business. Property exposures represent the largest share, driven in part by property insurers' demand for catastrophe protection.¹²⁷

Figure 9: Global Reinsurance Premiums by Sectoral Line of Business



Source: International Association of Insurance Supervisors, *Global Insurance Market Report* (2012) (referencing 2011 data)

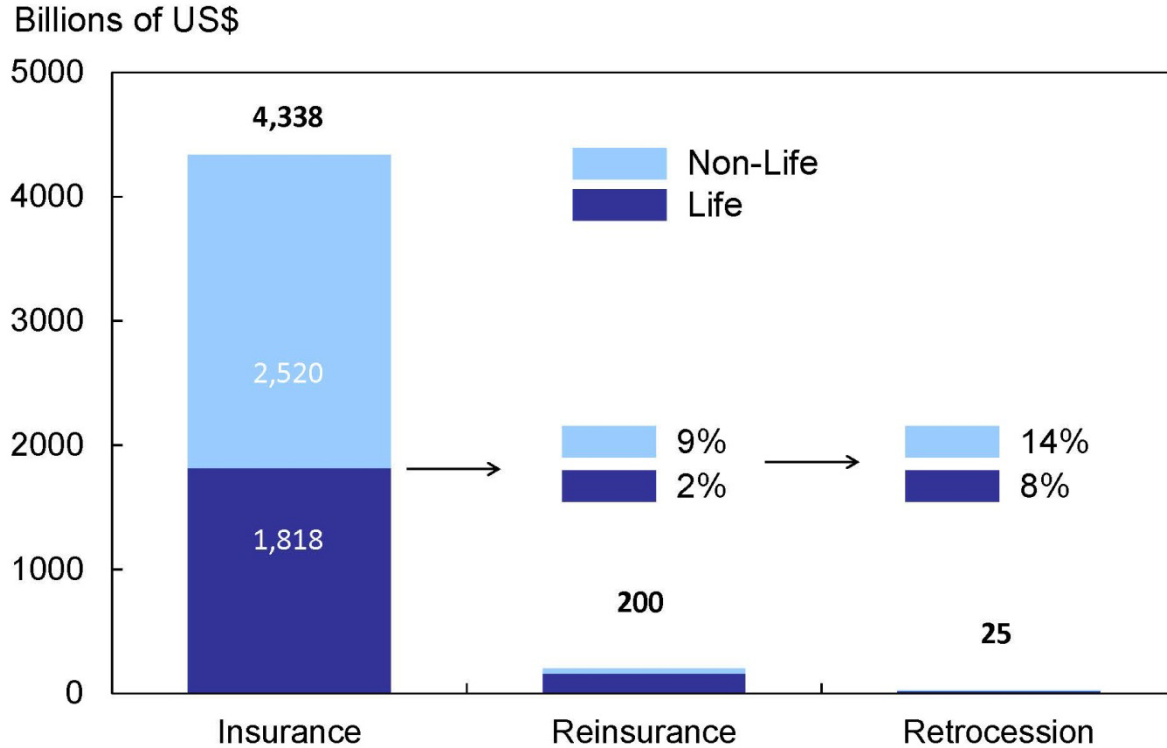
Dedicated reinsurance capital and reinsurance premiums written by the top reinsurers and largest reinsurance groups show yet another perspective of the global scope of the reinsurance industry. The IAIS has noted that the combined assets of the ten largest reinsurers – which together constitute roughly 90 percent of the global L/H market and 50 percent of the non-life market – are less than the assets of the single top primary insurer. By market capitalization, the entirety of the reinsurance industry approximates that of the two top primary insurers.¹²⁸ Similarly, as displayed in Figure 10, the IAIS estimates that worldwide reinsurance premiums (approximately \$200 billion in all) are two percent of primary life premiums and about nine percent of primary non-life premiums; retrocessional premiums (reinsurers' purchase of further reinsurance), in turn, are about \$25 billion.¹²⁹

¹²⁷ As shown in Figure 9, a relatively small segment of the reinsurance market relates to “financial” reinsurance which, in this context, includes reinsurance of the following lines: mortgage guarantee, financial guarantee, fidelity, surety, and credit insurance.

¹²⁸ International Association of Insurance Supervisors, *Reinsurance and Financial Stability*, 15 (July 19, 2012).

¹²⁹ Current figures are comparatively larger than the 2010 data illustrated in the IAIS exhibit. Annual gross written premium for all direct (primary) lines of insurance is on the order of \$4.64 trillion globally. *Swiss Re, sigma No. 03/2014: World Insurance in 2013*, 35. According to this source, combined U.S. direct premiums written for life, health and property/casualty business in 2013 was on the order of \$1.26 trillion. *Id.* Global reinsurance premiums exceed \$220 billion. See A. M. Best, *Global Reinsurance – Segment Review: How Relevant is the Underwriting Cycle* (Sept. 2014).

Figure 10: Global Premium Volume (\$ Billions)



Source: International Association of Insurance Supervisors, *Reinsurance and Financial Stability*, 9 (2012) (referencing 2010 data)

For a variety of reasons relating in part to the timing and manner in which such data are reported and published in various jurisdictions, estimates of total capital within the reinsurance industry vary substantially among sources. In a calculation that provides “a broad measure of capital available for insurers to trade risk with and includes both traditional and alternative forms of reinsurance capital,” Aon Benfield reports that total global reinsurance capital in 2013 approximated \$540 billion, a figure that includes \$50 billion in alternative capital (such as catastrophe bonds).¹³⁰

Global reinsurance capitalization is at record levels, a development that has been accompanied by softening of reinsurance premium rates.¹³¹ For example, for catastrophe reinsurance, global renewal premiums fell 11 percent year-over-year at January 2014,¹³² and for U.S. catastrophe risks, the year-over-year premium reduction was 15 percent. The trend continued with respect to

¹³⁰ Aon Benfield, *Reinsurance Market Update* (April 1, 2014), available at http://thoughtleadership.aonbenfield.com/Documents/20140401_analytics_reinsurance_market_outlook_april2014.pdf. Using a narrower definition, broker Guy Carpenter announced that “dedicated sector capital” at year-end 2013 was \$322 billion. Guy Carpenter & Co., *January 2014 Renewal Report: Capacity: Evolution, Innovation And Opportunity* (January 2014), available at <http://www.gccapitalideas.com/2014/01/05/january-2014-renewal-report-capacity-evolution-innovation-and-opportunity/>.

¹³¹ Press Release, Guy Carpenter & Co., *January 1, 2014 Renewals Bring Downward Pressure on Pricing* (December 30, 2013); Standard & Poor’s Rating Service, “Pricing Slides as Reinsurers Strive for Competitive Footing,” in *Global Reinsurance Highlights 2014*, 18 (2014).

¹³² *Guy Carpenter Report* (Dec. 29, 2013), available at <http://www.gccapitalideas.com/2013/12/29/january-1-2014-renewals-bring-downward-pressure-on-pricing/>.

reinsurance that renewed in April 2014,¹³³ June 2014, and July 2014,¹³⁴ and likely will continue into 2015.¹³⁵ In addition to a period of below-average catastrophe losses,¹³⁶ market capacity expansion, including the increased importance of alternative reinsurance options (addressed below in section VI.C) and accompanying competition for deployment of reinsurance capital partially explain this trend of decreasing reinsurance premiums.¹³⁷ Analysts have suggested that some industry consolidation might occur due to the sector's current competitive climate.¹³⁸ Over the course of 2014, all of the major rating agencies announced negative outlooks for the reinsurance industry.¹³⁹

2. United States Reinsurance Sector

In 2013, the P/C reinsurance market in the United States consisted of about 26 U.S.-based reinsurers operating either as individual companies or groups, five of which accounted for more than half of the \$29.1 billion of net written (assumed) premium.¹⁴⁰ Some of the leading reinsurers in the United States (included in the foregoing data) are affiliates of groups headquartered overseas. For example, QBE North America is an affiliate of QBE Insurance Group Limited (Australia), and Munich Reinsurance America is an affiliate of Munich Re Group (Germany). The combined surplus for these 26 reinsurers was \$146.2 billion as of year-end 2013 and \$128 billion for 2012.¹⁴¹ In 2013, \$96.3 billion of that surplus was attributable to a

¹³³ *Guy Carpenter Report* (April 9, 2014), available at <http://www.gccapitalideas.com/2014/04/09/april-renewals-bring-price-reductions-focus-on-tailored-coverage/>; see also *Chubb Benefits from Reinsurers' Pricing Pain During April 1 Renewals* (April 25, 2014), available at <http://www.snl.com/InteractiveX/article.aspx?ID=27888892&KPLT=4> (“excess supply has driven down prices for certain risks”).

¹³⁴ *Guy Carpenter Report* (June 2, 2014), available at <http://www.gccapitalideas.com/2014/06/02/reinsurance-pricing-falls-again-at-june-1-2014-as-competition-heightens/>; Standard & Poor's Ratings Services, *Global Reinsurance Highlights 2014*, 13 (2014).

¹³⁵ Oliver Suess & Carolyn Bandel, *Worst Market in Memory to Weigh on Reinsurance Rates*, Bloomberg (September 3, 2014).

¹³⁶ E.g., Property Claims Service, *PCS Q3 2014 Catastrophe Review* (October 2014), available at http://www.verisk.com/pcs/14Q3-Cat-Review.pdf?utm_campaign=&utm_medium=email&utm_source=Eloqua.

¹³⁷ Insurance Journal, *P/C Reinsurance Market Softer Due to Alternative Capital* (March 14, 2014), available at <http://www.insurancejournal.com/news/national/2014/03/14/323319.htm> (according to Towers Perrin survey, “CFOs attribute this [reinsurance premium] softness primarily to the significant growth of insurance-linked securities [ILS] and other alternative forms of reinsurance capital”). See also Aon Benfield, *The Aon Benfield Aggregate – Results for the Full Year Ended December 31, 2013*, 5, 8, 19.

¹³⁸ See A.M. Best Says Sector Stable, Carrier Management (Jan. 22, 2014) (citing Standard & Poor's Briefing), available at <http://www.carriermanagement.com/news/2014/01/22/117972.htm>. See also Best's Briefing, *Global Re Outlook Remains Stable* (Jan. 2, 2014) (“in the supply/demand equation, too much capital chasing the same opportunities has put pressure on reinsurance pricing, terms and conditions”); Carrier Management, *Falling Prices Advantage Large Reinsurers, Pressure Smaller Firms* (Feb. 27, 2014), available at <http://www.carriermanagement.com/news/2014/02/26/119085.htm>; Best's Special Report, *Could 2013 Be The Apex of the Next Few Years?* (April 4, 2014); Standard & Poor's, “Tough Competition Could Put Ratings on Global Reinsurers Under Pressure,” in *Global Reinsurance Highlights 2014*, 62 (2014).

¹³⁹ Guy Carpenter Strategic Advisory Update, *Reinsurers Ratings Challenged with Negative Sector Outlook* (September 15, 2014), available at <http://www.gccapitalideas.com/2014/09/15/gc-strategic-advisory-update-reinsurers-ratings-challenged-with-negative-sector-outlook>.

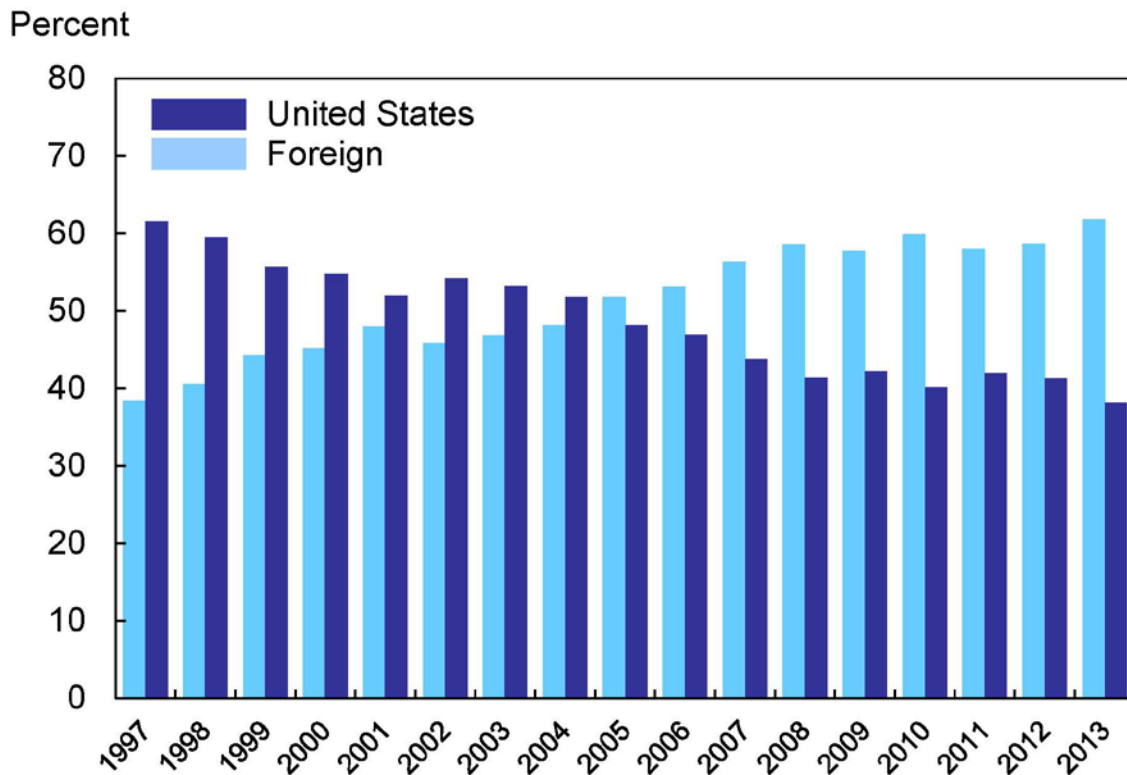
¹⁴⁰ Reinsurance Association of America, *Reinsurance Underwriting Review: A Financial Review of U.S. Reinsurers, 2013 Industry Results* 1, 10 (2014) (based on criteria that include U.S. reinsurance organizations that have in excess of \$10 million of unaffiliated reinsurance premium and \$50 million of PHS).

¹⁴¹ *Id.* at 1, 3.

single company, National Indemnity Company, which is a subsidiary of Berkshire Hathaway, Inc.¹⁴²

In recent years the share of premium ceded by U.S. insurers to non-U.S. reinsurers has been increasing steadily. As seen in Figure 11, the share of premiums ceded by U.S. insurers to U.S.-based reinsurers declined fairly uniformly from 61 percent in 1997 to only 38 percent in 2013.¹⁴³

Figure 11: Market Share of U.S. and Non-U.S. Reinsurers (U.S. Cessions)



Source: Reinsurance Association of America, *Offshore Reinsurance in the U.S. Market: 2013 Data* (2014)

When the countries of the reinsurers' ultimate parent companies are taken into consideration, the importance of the global reinsurance market to U.S. ceding companies is even more evident. Reinsurers owned by groups headquartered or domiciled outside the United States accounted for approximately 92 percent of reinsurance premiums ceded by U.S.-based insurers in 2013.¹⁴⁴ Other than U.S. subsidiaries of offshore companies, a new U.S.-domiciled reinsurer has not been formed in over two decades.¹⁴⁵

¹⁴² *Id.* at 11.

¹⁴³ Reinsurance Association of America, *Offshore Reinsurance in the U.S. Market: 2013 Data*, 13 (2014). The analysis, based on annual statutory financial statements of licensed U.S. insurers, compares U.S. premiums ceded to U.S. professional reinsurance companies, to the U.S. premiums ceded to non-U.S. reinsurers.

¹⁴⁴ *Id.* at 14. The Reinsurance Association of America states that certain aspects of the U.S. regulatory system have contributed to the observed shift of premiums ceded by U.S. primary insurers from U.S.-based to alien reinsurers. Comment in Response to June 27, 2012 on behalf of Reinsurance Association of America, 8 (August 27, 2012).

¹⁴⁵ Comment in response to the FRN on behalf of Reinsurance Association of America, 9, 17 (August 27, 2012).

The U.S. life reinsurance market is led by a relatively few global reinsurers. In October 2013, SCOR SE, a French-based reinsurance group, completed its acquisition of Generali's U.S. life reinsurance operations, giving SCOR SE the largest share of life reinsurance business in the United States.¹⁴⁶ Other major participants assuming U.S. life reinsurance business include Reinsurance Group of America, Inc. (RGA), Swiss Reinsurance Co. Ltd., and Munich Reinsurance Co. In 2012, these reinsurers comprised 83 percent of the life reinsurance market for U.S. risks.¹⁴⁷ Of the four, RGA is the only life reinsurer primarily headquartered at the group level in the United States.

In sum, non-U.S. reinsurers play an integral role in the U.S. insurance market. Today, non-U.S. and foreign-controlled companies assume the majority of premiums ceded by U.S. insurers.

3. Non-U.S. Reinsurance Sector

With more than 200 companies offering reinsurance throughout the world,¹⁴⁸ the global reinsurance market is robust and provides important support to U.S. insurers. Of the \$28.4 billion in U.S. premiums ceded to non-U.S. companies in 2013, most were assumed by reinsurers in seven jurisdictions: Bermuda (\$9.7 billion), United Kingdom (\$4.8 billion), Germany (\$3.7 billion), Cayman Islands (\$3.3 billion), Switzerland (\$1.4 billion), Channel Islands (\$1.3 billion), and Turks & Caicos (\$1.0 billion).¹⁴⁹

a. Europe

Five of the six largest reinsurance groups in the world, by premium volume, are based in Europe: Munich Reinsurance Co., Swiss Reinsurance Co. Ltd., Hannover Rueckversicherung AG, SCOR SE and the Lloyd's market. The combined net L/H and P/C premiums written by these reinsurers were approximately \$107 billion on a group basis in 2013.¹⁵⁰ The largest reinsurance jurisdictions within Europe, by net reinsurance premiums written and the domicile of the individual legal entity reinsurer, are Germany (\$52.3 billion), United Kingdom (\$13.5 billion), Switzerland (\$15.5 billion), Ireland (\$8.6 billion), and France (\$7.9 billion).¹⁵¹

b. Bermuda

Unlike the European reinsurance market, which has existed for more than a century, the development and expansion of the Bermuda reinsurance industry is more recent. Bermuda did not experience noticeable growth in the traditional reinsurance market until the late 20th

¹⁴⁶ David Bruggeman, *Results of the 2012 SOA Life Reinsurance Survey*, *Reinsurance News (Society of Actuaries)*, Issue 76, 7 (July 2013). Generali U.S. Branch is an affiliate of Assicurazioni Generali, S.p.A., an Italian insurance group.

¹⁴⁷ *Id.*

¹⁴⁸ Swiss Re, *The Essential Guide to Reinsurance*, 12 (2013). There are also thousands of small reinsurers, including captives, affiliated, and special purpose reinsurers in 110 jurisdictions worldwide. The vast majority of these companies assume premium from U.S. ceding insurers of less than \$10 million annually. Reinsurance Association of America, *Offshore Reinsurance in the U.S. Market: 2014 Data*, 2-4 and Appendix B, C (2014).

¹⁴⁹ Reinsurance Association of America, *Offshore Reinsurance in the U.S. Market: 2013 Data*, 4, 6 (2014). In addition, reinsurers in the British Virgin Islands, Ireland, and Barbados assumed between \$450 million and \$700 million in reinsurance premium, respectively. All figures disregard transactions with affiliated companies.

¹⁵⁰ Standard & Poor's Ratings Services, *Global Reinsurance Highlights 2014*, 76 (2014).

¹⁵¹ *Id.* at 78-95.

century.¹⁵² Since then, Bermuda has emerged as an important domicile for reinsurers, with a substantial concentration of capital and reinsurance-related resources. A recent industry report noted: “Among other things, Bermuda offers relatively quick regulatory approval to launch operations (a few weeks), favorable tax laws (zero corporate income tax), and proximity to the U.S., the largest reinsurance market in the world (650 miles off the coast of North Carolina).”¹⁵³

The growth of the Bermuda reinsurance market has reflected the cyclical nature of the overall reinsurance market. Bermuda has attracted new market entrants during cycles when worldwide reinsurance capital was low and prices for reinsurance had increased. In 1992, for example, a number of new reinsurers were organized in Bermuda to take advantage of high demand and favorable reinsurance prices following Florida’s devastating Hurricane Andrew. Additional growth spurts, which occurred in waves following major loss-making disasters, have accentuated an overall upward trend in the number of new reinsurers and reinsurance affiliates in Bermuda throughout the last two decades.

According to the Standard & Poor’s analysis of 2013 data, Bermuda hosts 15 of the world’s largest reinsurance groups, as measured by net reinsurance premiums, including two in the top ten (PartnerRe Ltd. and Everest Reinsurance Co.).¹⁵⁴ As of 2013, Bermuda-based reinsurers held approximately 8 percent of the global reinsurance market, doubling the share from 4 percent a decade earlier.¹⁵⁵ Gross premiums written by Bermuda reinsurers reached \$76 billion in 2013; a third of this business is property (including property catastrophe).¹⁵⁶ The bulk of Bermuda insurance and reinsurance premiums (roughly half of GWP) are generated from North American risks.¹⁵⁷

c. Asia-Pacific

Although not as large as European reinsurance groups, Asia-Pacific reinsurers are nonetheless key participants in the international arena. Seven of the world’s largest reinsurance groups are based in the Asia-Pacific region.¹⁵⁸ In 2013 these reinsurers combined to assume almost \$19 billion in net written premiums. The Asia-Pacific reinsurance market is largely driven by

¹⁵² J. David Cummins, *The Bermuda Insurance Market: An Economic Analysis*, 7 (May 6, 2008). Growth of Bermuda as an insurance center expanded following its adoption of Insurance Act 1978, Consolidated Laws of Bermuda.

¹⁵³ Deloitte, *Bermuda Insurance Market Report 2014*, 1 (2014), available at <http://www.deloitte.com/assets/Dcom-Bermuda/Local%20Assets/Documents/DELOITTE%20BERMUDA%20INSURANCE%20MARKET%20REPORT%202014-1.pdf>.

¹⁵⁴ Standard & Poor’s Ratings Services, *Global Reinsurance Highlights 2014*, 76 (2014). For a summary of the Bermuda supervisory regime, see International Association of Insurance Supervisors, *Reinsurance and Financial Stability*, Appendix A1.1 at 37-38 (July 19, 2012).

¹⁵⁵ Deloitte, *Bermuda Market Report 2014*, 1 (2014). The Market Report tracks 20 Bermuda (re)insurance groups, with total capital and surplus ranging from \$529 million to \$29 billion.

¹⁵⁶ Deloitte & Standard and Poor’s, *Bermuda Market Report 2014*, 3 - 4 (2014).

¹⁵⁷ *Id.*

¹⁵⁸ Standard & Poor’s Ratings Services, *Global Reinsurance Highlights 2014*, 76 (2014). This analysis excludes China Reinsurance (Group) Corporation, which both S&P and A.M. Best list as the eighth largest reinsurance group in the world. A.M. Best, *Global Reinsurance – Segment Review: How Relevant is the Underwriting Cycle*, 13 (September 2014).

reinsurers domiciled in Japan (\$10.89 billion), Korea (\$3.57 billion), India (\$2.21 billion), and Australia (\$1.77 billion).¹⁵⁹

Despite significant losses following the 2011 catastrophes, including the Tohoku earthquake and tsunami in Japan and the Christchurch earthquake in New Zealand, Asia-Pacific reinsurers largely replenished capital and maintained strong credit ratings.¹⁶⁰ Asia-Pacific reinsurers likely will continue to seek risk in the United States and other areas of the world to complement and diversify risk portfolios, particularly in light of various regional factors currently presenting challenges to the industry (e.g., consolidation of regional insurers and slowing growth rates in developing markets).¹⁶¹

C. Increasing Capital Markets Convergence With Reinsurance

The reinsurance market typically operates through the traditional structure in which one or more reinsurers assume a portion of an insurer's risk in return for a specified premium. In recent years, however, managers of hedge funds, pension funds, and other equity funds (collectively referred to herein as "capital markets") have increasingly looked to the reinsurance market as a means of diversifying portfolios, capitalizing on cyclical trends in reinsurance pricing, and improving investment yield.

Capital markets may be attracted to the reinsurance business partly because of the low correlation between investment risk and underwriting risk. Underwriting results of reinsurers generally do not track the investment returns of broader financial markets—the influence of natural disasters on the value of equity markets, corporate bonds, and other financial investments, for example, is uncorrelated to the effect of such events on insurers.¹⁶²

Alternative reinsurance solutions may be employed to protect cedents against a variety of risks, but these instruments have primarily been geared toward property catastrophe risks, which offer a relatively short time horizon to maturity, allowing investors to participate in contracts of a few years or less and evaluate returns soon after contract expiration.¹⁶³ Furthermore, alternative reinsurance augments existing traditional property catastrophe reinsurance capacity, which typically requires dedication of a large amount of capital during a short period. Property catastrophe models have developed to a point where capital markets are able to assess the levels of assumed natural disaster risk with sufficient reliability.¹⁶⁴

The nature of investors comprising this capital market is varied. One report states that over half of the capital supporting alternative reinsurance originates from "pension funds, endowments and sovereign wealth funds, generally through specialized insurance-linked investment funds."¹⁶⁵

¹⁵⁹ Standard & Poor's Ratings Services, *Global Reinsurance Highlights 2014*, 78-95 (2014).

¹⁶⁰ A.M. Best, *Global Reinsurance – Segment Review: How Relevant is the Underwriting Cycle*, 19-21 (Sept. 2014).

¹⁶¹ *Id.*

¹⁶² Bernard Van der Stichele, *Some Reflections on the ILS Market from an Institutional Investor Perspective, Alternative Reinsurance Strategies*, 258 (2012).

¹⁶³ J. David Cummins, *The Bermuda Insurance Market: An Economic Analysis*, 44 (May 6, 2008).

¹⁶⁴ Bernard Van der Stichele, *Some Reflections on the ILS Market from an Institutional Investor Perspective, Alternative Reinsurance Strategies*, 260-61 (2012); Angelo John Lewis, *What's Behind the Cat Bond Craze* (A.M. Best 2014) (advances in catastrophe modeling among factors driving increased cat bond investments and increased used of indemnity triggers in these instruments).

¹⁶⁵ Michael J. Millette, *Convergence at High Noon: Catastrophe Risk in the Capital Markets in 2012*, 6, in *Alternative (Re)insurance Strategies* (Morton Lane, ed., 2012).

Over a quarter of the capital comes from hedge funds and private equity funds, while about 10 percent emanates from reinsurers looking for an alternative avenue to obtain returns.¹⁶⁶

1. Types of Alternative Reinsurance

Alternative reinsurance instruments take a number of forms, including those described below.

- *Catastrophe (Cat) Bond* – A cat bond is a structured debt instrument that transfers risk from a sponsor (i.e., an insurer) to investors (i.e., the capital markets) under terms and conditions similar to a reinsurance contract.¹⁶⁷ To create a cat bond, an insurer establishes a special purpose vehicle (SPV) that issues notes to investors. The notes contain conditions similar to a reinsurance contract, so that default on the bond would result under circumstances which would be loss-making under a typical reinsurance catastrophe contract.¹⁶⁸ Funds raised by investors are managed by the SPV in a segregated collateral account which is available to pay the sponsoring company in the event of a loss. If an event does not occur, the premium paid to the SPV by the sponsor, the principal on the note, and investment income earned thereon are returned to the investors.¹⁶⁹ A cat bond's trigger may take various forms, such as an indemnity trigger (i.e., the actual incurred loss of the sponsor), a parametric trigger (i.e., a description of the physical characteristics of the catastrophe), or an industry loss trigger (i.e., the amount of insured loss incurred by the industry).¹⁷⁰ Of these, an indemnity trigger is now by far the most common.
- *Sidecar* – A sidecar is a temporary reinsurance vehicle that shares premiums and losses exclusively with an insurer primarily on a pro-rata basis, generally for business associated with catastrophe risk. Formation of a sidecar involves a number of different parties. A sponsor, either an insurer or, in the case of a retrocession, a reinsurer, will establish a company (the sidecar) for a limited purpose and duration.¹⁷¹ The sidecar may be financed by debt and equity through third party investors (i.e., capital markets). The proceeds from the debt, equity, and premiums ceded by the sponsor are placed in a trust account as collateral for losses that may arise under ceded insurance policies.¹⁷²
- *Industry Loss Warranty (ILW)* – An ILW is a contract that provides coverage for an insurer if the industry-wide insurance loss from an event satisfies a pre-determined condition.¹⁷³ The insurer's own loss will usually also be required to trigger payment under an ILW contract.

¹⁶⁶ *Id.*

¹⁶⁷ A.M. Best Methodology, *Rating Natural Catastrophe Bonds*, 1 (August 23, 2012).

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

¹⁷⁰ RMS, *Cat Bonds Demystified: RMS Guide to the Asset Class*, 5-6 (2012).

¹⁷¹ Marcelo Ramella and Leila Madeiros, *Bermuda Sidecars: Supervising Reinsurance Companies in Innovative Global Markets*, in *The Geneva Papers on Risk and Insurance – Issues and Practice*, 349 (2007).

¹⁷² *Id.* at 351.

¹⁷³ Ali Ishaq, *Reinsuring for Catastrophes through Industry Loss Warranties – A Practical Approach*, Casualty Actuarial Society Forum, 76 (Spring 2005), available at <http://www.casact.org/pubs/forum/05spforum/05sp075.pdf>.

- *Collateralized Reinsurance* – Collateralized reinsurance is a fully collateralized insurance-linked security that can be tailored to supplement the terms and conditions of a traditional reinsurance contract. The collateral, posted by investors, is equal to the coverage limits of the reinsurance net of the premium. The collateral is held in a separate account to satisfy losses due to the ceding insurer; the reinsurance premiums constitute the investor’s return.¹⁷⁴

Similar to traditional reinsurance solutions, alternative reinsurance instruments offer a variety of benefits to cedents (and retrocedents), such as providing an element of diversification to an insurer’s reinsurance portfolio. In addition, the collateralization of a cat bond helps reduce credit risk and enhances predictability of reinsurance costs since the bond terms typically last several years.¹⁷⁵ A sidecar may be used to provide an additional source of reinsurance to an insurer when the reinsurance market has limited capital (e.g., following a natural disaster) and therefore allows an insurer to write more business during a time when rates are high.¹⁷⁶ An ILW offers low transaction costs because the payout is linked to an industry loss figure, not the specific portfolio of an insurer; and thus an ILW may offer a more affordable solution to catastrophe protection.¹⁷⁷ Collateralized reinsurance allows non-traditional reinsurers to efficiently offer additional capacity for catastrophe loss, often on a retrocession basis.¹⁷⁸

2. Development of the Alternative Reinsurance Market

The alternative reinsurance market gained popularity during the 2000s when insurers (and reinsurers) sought additional ways to protect against increasing losses from catastrophes. During a time when equity markets and other reinsurers were infusing capital into new unaffiliated and affiliated reinsurance companies, insurers were also looking to alternative reinsurance instruments as an additional avenue for capacity and diversification. This sector has continued to expand, even as market capacity has increased and rates have declined.¹⁷⁹ One industry analyst recently noted: “Reinsurers will continue to incorporate the competitive strengths of alternative capital flows into their capital and organizations through (i) sponsorship of catastrophe bonds to lower their cost of underwriting capital supporting tail risks; (ii) sponsorship of sidecars to lower their cost of underwriting capital throughout their underwriting risk distribution; and (iii) formation of insurance-linked securities and collateralized reinsurance fund management units.”¹⁸⁰

¹⁷⁴ J. David Cummins, *The Bermuda Insurance Market: An Economic Analysis*, 44 (May 6, 2008).

¹⁷⁵ *Id.*

¹⁷⁶ Marcelo Ramella and Leila Madeiros, *Bermuda Sidecars: Supervising Reinsurance Companies in Innovative Global Markets*, in *The Geneva Papers on Risk and Insurance – Issues and Practice*, 351-52 (2007).

¹⁷⁷ Ali Ishaq, *Reinsuring for Catastrophes through Industry Loss Warranties – A Practical Approach*, Casualty Actuarial Society Forum, 4 (Spring 2005), available at <http://www.casact.org/pubs/forum/05spforum/05spf075.pdf>.

¹⁷⁸ Michael J. Millette, *Convergence at High Noon: Catastrophe Risk in the Capital Markets in 2012*, 15, in *Alternative (Re)insurance Strategies* (Morton Lane, ed., 2012).

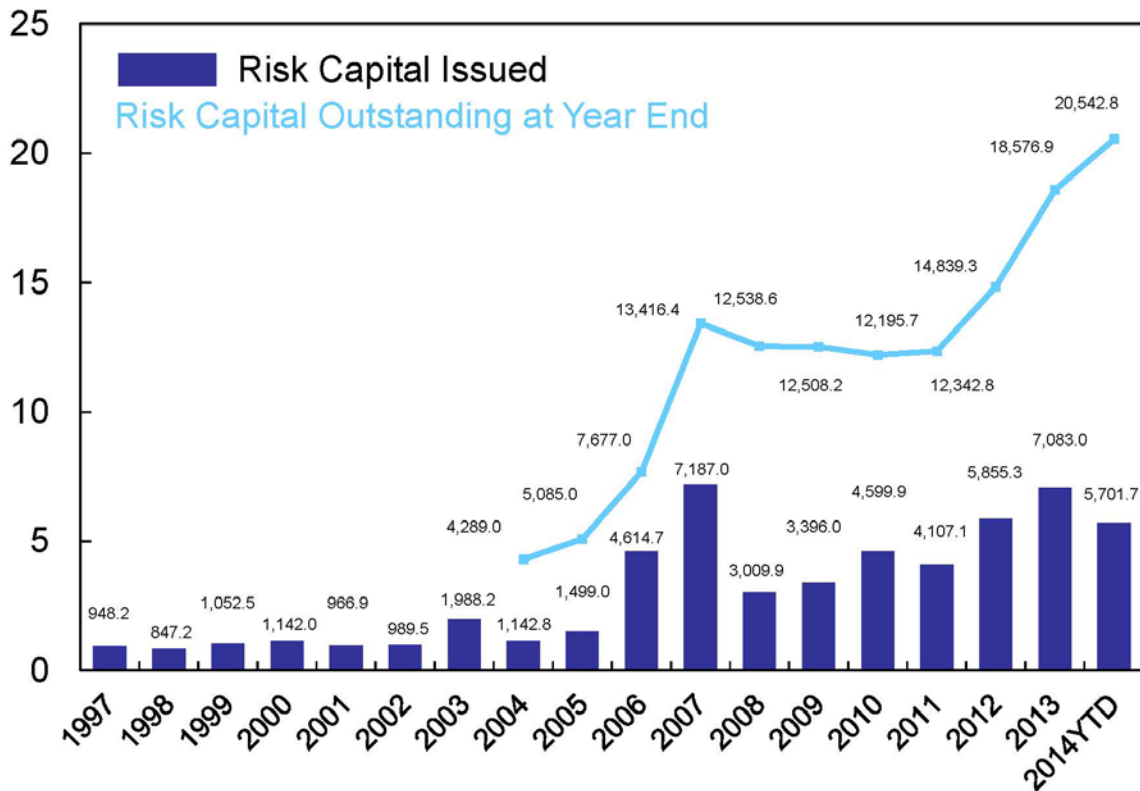
¹⁷⁹ Standard & Poor’s, *A Record Volume of Catastrophe Bonds Highlights Increasing Competition in The Insurance-Linked Securities Market*, in *Global Reinsurance Highlights 2014*, 32 (September 2014).

¹⁸⁰ Aon Benfield, *Reinsurance Market Update* (April 1, 2014), available at http://thoughtleadership.aonbenfield.com/Documents/20140401_analytics_reinsurance_market_outlook_april2014.pdf. See also Artemis, *Insurance-linked Securities Capacity Here to Stay: Hiscox CEO & Chairman* (July 21, 2013), available at <http://www.artemis.bm/blog/2013/07/31/insurance-linked-securities-capacity-here-to-stay->

In the wake of the September 11th attacks, the total amount of cat bonds outstanding in 2002 was \$2.9 billion. Hurricanes Katrina, Rita, and Wilma in 2005 brought further interest in alternative products. By 2008, the total amount of cat bonds outstanding had reached \$16 billion.¹⁸¹ Sidecar reinsurance capacity has also grown over time, from just over \$1 billion in the period between 1999 and 2001 to over \$7 billion in the period between 2005 and 2007.¹⁸² In 2009, non-traditional reinsurance collectively was about \$20 billion in total capacity.¹⁸³ More recently, growth in this segment has been driven by “investors ... looking for better-than-average returns in the short term,” rather than insurers seeking solutions for post-catastrophe capacity issues.¹⁸⁴

Figure 12: Growth of Cat Bonds

Billions of US\$



Source: Guy Carpenter, *Capital Markets: The Reinsurance Evolution Continues* (September 2014)

hiscox-ceo-chairman/ (both the chairman and CEO of Bermuda-based Hiscox group see “insurance-linked securities (ILS) capacity as a permanent and growing feature of the wider insurance and reinsurance market”).

¹⁸¹ Aon Benfield, *Insurance-Linked Securities: Evolving Strength 2012*, 15 (2012). Note that following 2008, cat bond volumes dipped “due to the higher notional amount of catastrophe bonds reaching maturity . . . and lower issuance volume following the global financial crisis.” *Id.* at 6.

¹⁸² *Id.* at 22. Sidecar issuance decreased significantly in 2008 and 2009 before rebounding in 2011. *Id.*

¹⁸³ Aon Benfield, *Reinsurance Market Outlook: Post Convergence – The Next USD100 Billion* (Sept. 2013), 5. Industry data for this sector are approximate and consist in some measure of estimates, because many of these transactions are private placements and not easily tracked.

¹⁸⁴ A. M. Best’s, *Third-Party Capital – Industry Implications*, in *Global Reinsurance – Segment Review* (September 2014), 6.

In recent years, the non-traditional reinsurance market has continued to evolve, and it is now a standard consideration for many reinsurance buyers. Broker Guy Carpenter estimates a total of \$20.5 billion in cat bonds outstanding as of mid-2014 (Figure 12). In the first quarter of 2014, sponsors issued \$1.6 billion of insurance-linked securities, primarily cat bonds, which was a record amount for a single quarter.¹⁸⁵ The second-quarter set another new record, with the issuance of \$4.6 billion in cat bonds.¹⁸⁶ Insurance-linked securities investments for calendar year 2014 are on track to set a new annual record.¹⁸⁷

Although cat bonds and other P/C insurance financing vehicles are the most common form of insurance-linked securities, life insurers have also participated in this market. Prior to the financial crisis, life insurers used interest-linked securities mainly to manage statutory capital and reserve requirements. Principal and interest obligations on these securities were often guaranteed by a single financial guarantor. During the crisis, some of those guarantors encountered credit problems, resulting in lower use of interest-linked securities by life insurers post-crisis. More recently, several insurers and reinsurers have sponsored the issuance of excess mortality bonds,¹⁸⁸ while others have used alternative markets to transfer longevity risk or monetize expected emergence of profits on defined blocks of business.¹⁸⁹

The growth of alternative risk transfer markets extends interconnections between the insurance and reinsurance sector and capital markets. While such instruments serve the economic function of expanding markets for catastrophe and other insurance risks, exposure to such risks could be problematic for unsophisticated investors. These instruments have been described as increasingly mainstream products,¹⁹⁰ although the long-term commitment of non-traditional capital sources has not yet been tested. As some analysts have noted, very few cat bonds to date have experienced major losses.¹⁹¹

¹⁸⁵ Willis Capital Markets & Advisory, *ILS Market Update: Declining Spreads & Flexibility in Structuring* (April 2014), available at http://www.willis.com/documents/publications/Services/Capital_Markets/20140407_WCMA_April_ILS_Market_Update.pdf.

¹⁸⁶ Standard & Poor's, *A Record Volume of Catastrophe Bonds Highlights Increasing Competition in The Insurance-Linked Securities Market*, in *Global Reinsurance Highlights 2014*, 32 (September 2014).

¹⁸⁷ Carrier Management, *Insurance-Linked Securities on Track to Break Issuance Record* (October 20, 2014) (based on estimates by Willis Capital Markets & Advisory).

¹⁸⁸ See *Swiss Re Obtains USD 275 Million of Extreme Mortality Protection from the Capital Markets through its Vita Programme* (July 31, 2012) available at http://www.swissre.com/media/news_releases/nr_120730_extreme_mortality_protection_vita_programme.html; Shankar Ramakrishnan & Joy Wiltermuth, *Extreme Mortality Bond Testing Investor View on Pandemic Risk*, Reuters (October 20, 2014), available at <http://www.reuters.com/article/2014/10/20/mortality-bond-ebola-idUSL2N0SC1E820141020>.

¹⁸⁹ See Mark Cobby, *Deutsche Agrees Record Longevity Swap Deal*, (Feb. 17, 2012), available at <http://www.efinancialnews.com/story/2012-02-17/aegon-longevity-swap>; *Vecta I Ltd. Embedded Value Life Insurance Securitization Completes at C\$120m* (Dec. 16, 2011), available at <http://www.artemis.bm/blog/2011/12/16/vecta-i-ltd-embedded-value-life-securitization-deal-launched/>.

¹⁹⁰ "Once the domain of specialty funds narrowly focused on insurance-linked debt, cat bonds have become an alternative for traditional corporate bond managers as they seek higher returns." Wall Street Journal Money Beat, *Record "Cat Bond" Grows Again, Cuts Insurer's Costs* (April 24, 2014), available at <http://blogs.wsj.com/moneybeat/2014/04/24/record-cat-bond-grows-again-cuts-insurers-costs/>.

¹⁹¹ "I think there's a certain amount of complacency out there right now ... there haven't been any significant events in highly cat bond exposed areas, like a Florida cat event." Angelo John Lewis, *What's Behind the Cat Bond Craze* (A.M. Best 2014) (quoting officer from reinsurance broker, Holborn). See *FIO 2014 Annual Report*, 32

VII. CONCLUSION

The strength and viability of both the insurance and reinsurance sectors are vitally important to the United States, which is the largest single-country insurance market in the world. As authorized under the Dodd-Frank Act, FIO monitors the insurance industry and has produced this Report regarding “the breadth and scope of the global reinsurance market and the critical role such market plays in supporting insurance in the United States.”¹⁹²

While this Report does not analyze the extent to which reinsurance or any particular reinsurer could be systemically important, the business of reinsurance is global in scope, and serves multiple important purposes within the U.S. insurance sector. The global reinsurance market provides access to the financial strength of reinsurers and to alternative risk transfer capital, thereby assisting insurers in preparing for and responding to catastrophes and natural disasters. In addition, reinsurers assist insurers in stabilizing underwriting experience, increasing underwriting capacity, and facilitating entrance to and exit from markets, thereby helping insurers maintain product pricing that is more available and affordable, which benefits the U.S. economy as a whole. Reinsurers also promote capital allocation among affiliates and address risk diversification. In light of the importance of the global reinsurance market to U.S. insurers, and for other reasons described in this Report, Treasury and USTR are considering a covered agreement with respect to collateral requirements for reinsurers.

The majority of unaffiliated reinsurance purchased by U.S. insurers is obtained from non-U.S. reinsurers. The traditional reinsurance market is now supplemented with capital from alternative sources, which has created a growing range of risk transfer sources for insurance companies, such as catastrophe bonds and collateralized reinsurance. As this Report describes, the global reinsurance market provides an essential backstop and various risk and capital management mechanisms for insurance in the United States.

(“the long term commitment of these non-traditional capital sources has not been tested”); Best’s News Service, *William R. Berkley Questions “Moral Commitment” of Alternative Capital* (October 20, 2014).

¹⁹² 31 U.S.C. § 313(o)(1).