Report on the Effectiveness of the Terrorism Risk Insurance Program

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

Completed pursuant to the Terrorism Risk Insurance Act, as amended

JUNE 2022

Table of Contents

Glossary

2015 Reauthorization Act	....	Terrorism Risk Insurance Reauthorization Act of 2015, Pub. L. 114-1, 129 Stat. 3
2019 Reauthorization Act	....	Terrorism Risk Insurance Program Reauthorization Act of 2019, Pub. L. 116-94, 133 Stat. 2534
2020 Effectiveness Report	....	FIO, Report on the Overall Effectiveness of the Terrorism Risk Insurance Program (2020)
2020-2022 TRIP data calls	....	TRIP data calls performed in 2020, 2021, and 2022 (collecting data for the years 2019, 2020, and 2021, respectively)
ACRSM	....	Advisory Committee on Risk-Sharing Mechanisms
ACRSM Report	....	Report of the Advisory Committee on Risk-Sharing Mechanisms (2020)
Act of Terrorism	....	Under TRIA, an act certified as terrorism by the Secretary, in consultation with the Attorney General and the Secretary of Homeland Security
Alien Surplus Lines Insurer	....	Non-U.S. insurer that is an eligible surplus lines insurer as listed on the NAIC's Quarterly Listing of Alien Surplus Lines Insurers
Captive Insurer	....	Insurer formed to insure the risk exposures of its policyholder owner(s) and regulated by the captive insurance laws of a particular state jurisdiction
CMP	....	Commercial Multi-Peril
Co-Pay Share	....	Under TRIP, the percentage of losses that an insurer is obligated to pay after meeting its deductible and the Program Trigger is satisfied. The federal government is responsible for the remaining percentage of losses above the insurer's deductible (i.e., the Federal Share of Compensation). The co-pay share for 2021 was 20 percent.
DEP	....	Direct earned premiums
Embedded Terrorism Insurance	....	Terrorism insurance provided within a P&C policy that also covers other risks
Federal Share of Compensation	....	Under TRIP, the percentage of an insurer's losses that the federal government will pay after the insurer meets its deductible and the Program Trigger is satisfied. The insurer is responsible for the remaining percentage of losses above its deductible (i.e., the Co-Pay Share). The federal share of compensation for 2021 was 80 percent.

FIO	....	Federal Insurance Office
GAO	....	U.S. Government Accountability Office
IMARA	....	Insurance Marketplace Aggregate Retention Amount
Insurer Deductible	....	Under TRIP, the amount an individual insurer must pay before receiving the federal share of compensation, after an event is certified as an act of terrorism and the Program Trigger is exceeded. An insurer's deductible is 20 percent of its TRIP-eligible DEP in the prior year.
NAIC	....	National Association of Insurance Commissioners
NBCR	....	Nuclear, biological, chemical, or radiological
Non-Small Insurer	....	Domestic insurers or groups above the small insurer threshold
P&C	....	Property and casualty
PML	....	Probable maximum loss
Program	....	Terrorism Risk Insurance Program (also, TRIP)
Program Cap	....	Maximum aggregate exposure limit for the federal government and insurers under TRIP in any calendar year. The program cap for 2021 was $100 billion.
Program Trigger	....	Minimum amount of insurance industry aggregate insured losses resulting from certified act(s) of terrorism that must occur in a calendar year before any federal payments can be made under TRIP. The program trigger for 2021 was $200 million.
PWG	....	President's Working Group on Financial Markets
Report	....	FIO, Report on the Overall Effectiveness of the Terrorism Risk Insurance Program (June 2022)
Standalone Policy	....	Insurance policy which provides coverage only for terrorism risk
Secretary	....	Secretary of the Treasury
September 11 Attacks	....	Terrorist attacks occurring on September 11, 2001
Small Insurer	....	An insurer as defined under 31 C.F.R. § 50.4(z)
Take-Up Rate	....	Extent to which terrorism risk insurance is purchased by policyholders
Treasury	....	U.S. Department of the Treasury
TRIA	....	Terrorism Risk Insurance Act of 2002, as amended
TRIP	....	Terrorism Risk Insurance Program (also, Program)
TRIP-Eligible DEP	....	DEP earned within the TRIP-eligible lines of insurance

TRIP-Eligible Lines of Insurance	....	Commercial P&C insurance subject to TRIP pursuant to 31 C.F.R. § 50.4(w)

I. INTRODUCTION AND EXECUTIVE SUMMARY

Under the Terrorism Risk Insurance Act of 2002, as amended (TRIA),[1] the Secretary of the Treasury (Secretary) is required to submit a report regarding the Terrorism Risk Insurance Program (TRIP or Program) to the Committee on Financial Services of the House of Representatives, and the Committee on Banking, Housing, and Urban Affairs of the Senate.[2] The Federal Insurance Office (FIO) of the U.S. Department of the Treasury (Treasury) assists the Secretary in the administration of TRIP.[3] FIO has prepared this Report which, as required by TRIA, must be submitted no later than June 30, 2022, and must include:

(1) "an analysis of the overall effectiveness of the Program;"

(2) "an evaluation of the availability and affordability of terrorism risk insurance, which shall include an analysis of such availability and affordability specifically for places of worship;"

(3) "an evaluation of any changes or trends in the data collected" by the Secretary;

(4) "an evaluation of whether any aspects of the Program have the effect of discouraging or impeding insurers from providing commercial property casualty insurance coverage or coverage for acts of terrorism;"

(5) "an evaluation of the impact of the Program on workers' compensation insurers;" and

(6) "an updated estimate of the total amount" of terrorism risk insurance premiums "earned since January 1, 2003."[4]

TRIA also requires the Secretary to collect data related to the Program on an annual basis.[5] Since the 2015 Reauthorization Act, FIO has conducted five data calls—a voluntary data call in 2016 seeking calendar year 2015 data, and six mandatory data calls in 2017, 2018, 2019, 2020, 2021, and 2022 requiring, respectively, the production of 2016, 2017, 2018, 2019, 2020, and

---

[1] Terrorism Risk Insurance Act of 2002, Pub. L. No. 107-297, 116 Stat. 2322 (2002), as amended. The provisions of TRIA appear in a note of the United States Code (15 U.S.C. § 6701 note) and, therefore, references to the provisions of TRIA are identified by the sections of the law (*e.g.*, "TRIA § 102(1) (definition of an "act of terrorism")").

[2] Beginning in 2016, the Secretary has been required to submit a report to the Committee of Financial Services of the House of Representatives and the Committee on Banking, Housing, and Urban Affairs of the Senate no later than June 30, 2016, and every other June 30 thereafter through the Program's expiration date. Treasury published its first Program Effectiveness Report on June 30, 2016. *See* FIO, *Report on the Overall Effectiveness of the Terrorism Risk Insurance Program* (2016), https://home.treasury.gov/system/files/311/2016_TRIP_Effectiveness_%20Report_FINAL.pdf. Treasury published the second Effectiveness Report in June 2018. *See* FIO, *Report on the Overall Effectiveness of the Terrorism Risk Insurance Program* (2018), https://home.treasury.gov/system/files/311/2018_TRIP_Effectiveness_Report.pdf (*2018 Effectiveness Report*). Treasury published the third Effectiveness Report in June 2020. *See* FIO, *Report on the Overall Effectiveness of the Terrorism Risk Insurance Program* (2020), https://home.treasury.gov/system/files/311/2020-TRIP-Effectiveness-Report.pdf (*2020 Effectiveness Report*). This Report is the fourth Effectiveness Report published by Treasury.

[3] Federal Insurance Office Act of 2010, 31 U.S.C. § 313(c)(1).

[4] TRIA § 104(h)(2).

[5] TRIA § 104(h)(1). This requirement was instituted in the Terrorism Risk Insurance Reauthorization Act of 2015, Pub. L. 114-1, 129 Stat. 3 (2015 Reauthorization Act).

2021 calendar year data. This report (Report) addresses the six statutory considerations identified above and uses the 2020 through 2022 TRIP data calls (2020-2022 TRIP data calls) to comply with the requirements of TRIA.

Based on analysis of the collected information and the identified issues, Treasury has reached the following conclusions:

(1) The Program generally has been effective in achieving the goals identified by TRIA. Refer to Sections V, VI, and VII.

(2) Terrorism risk insurance has generally been available and affordable over the past three years. The reported information reflects that places of worship take up terrorism risk insurance at a higher percentage than do businesses in other industry segments, although for a higher percentage amount of the total policy premium. Refer to Section V.E.

(3) The market for terrorism risk insurance has been relatively stable over the last three years, with few observable differences in relevant benchmarks, such as price and take-up rate. Refer to Sections V, VI, and VII.

(4) Treasury has not observed any aspects of the Program (either based upon the collected data or operation of the Program generally) that have had the effect of discouraging or impeding insurers from providing commercial property and casualty (P&C) insurance in general, or coverage for acts of terrorism specifically. Refer to Sections V, VI, and VII.

(5) Changes in the market for cyber insurance have presented both insurers and policyholders with challenging issues, which continue to evolve. Application of the Program to potential claims of cyber terrorism under cyber policies written in TRIP-eligible lines of insurance requires a complicated analysis based upon existing statutory and regulatory requirements, the nature of cyber risk, and market conditions. Through its administration of TRIP, FIO will continue to evaluate and analyze the application of TRIP to future cyber-related losses. Refer to Section V.I.

(6) The Program continues to serve as an important backstop to workers' compensation insurance given that, under state law, workers' compensation insurance must cover terrorism risk, is not subject to limits of liability, and cannot exclude causes of loss posing extreme aggregation risks. Refer to Section V and VII.

(7) Treasury's estimate of total direct earned premiums for terrorism risk insurance from 2003 through 2021 is approximately $49.7 billion (excepting captive insurers), which is between one and two percent of the total premiums earned in the TRIP-eligible lines of insurance during that period. Refer to Section VIII.

This Report also addresses actions taken to date by Treasury in response to the recommendations of the Advisory Committee on Risk-Sharing Mechanisms (ACRSM). Refer to Section IX.

II. BACKGROUND

Prior to September 11, 2001, commercial P&C insurance policies generally did not exclude coverage for losses resulting from terrorism. The events of September 11, 2001 (September 11 attacks) resulted in approximately $50 billion of insurance losses, about two-thirds of which were reimbursed by reinsurers to insurers.[6] Following the September 11 attacks, insurers and reinsurers began to exclude coverage for terrorism risk from commercial P&C policies.

TRIA was enacted in 2002, in part, because the widespread unavailability of terrorism risk insurance "could seriously hamper ongoing and planned construction, property acquisition, and other business projects, generate a dramatic increase in rents, and otherwise suppress economic activity."[7] TRIA established TRIP, which requires insurers to make terrorism risk coverage available within certain lines of commercial P&C insurance (TRIP-eligible lines of insurance).[8] To assist insurers with the resulting potential financial exposure, certain insurance losses are eligible for reimbursement through the Program if they result from an "act of terrorism" as defined by TRIA and certified by the Secretary.[9] The Program is housed in Treasury and administered by the Secretary with the assistance of FIO.[10]

TRIA originally authorized the Program for a three-year period ending December 31, 2005. Congress has since reauthorized TRIP four times,[11] most recently in the Terrorism Risk Insurance Program Reauthorization Act of 2019 (2019 Reauthorization Act), which extended the Program through December 31, 2027. Changes enacted in Program reauthorizations, coupled with increases in the insurance industry premium base over time, have generally reduced potential federal exposure to insured losses and increased private market exposure.

[6] Insured losses shown in inflation-adjusted 2021 dollars. *See* Insurance Information Institute, *Background on: Terrorism Risk and Insurance* (2021), https://www.iii.org/article/background-on-terrorism-risk-and-insurance.

[7] TRIA § 101(a)(5).

[8] *See* TRIA § 103(c). Treasury has implemented regulations defining the "TRIP-eligible lines of insurance" with reference to certain lines identified for state regulatory purposes as follows: Fire, Allied Lines, Commercial Multiple Peril (non-liability), Commercial Multiple Peril (liability), Ocean Marine, Inland Marine, Workers' Compensation, Other Liability (but not including Professional Liability, which is otherwise within this line for state reporting purposes), Products Liability, Aircraft, and Boiler and Machinery. Definitions, 31 C.F.R. § 50.4(w)(1) (2021). The regulations and Treasury guidance also confirm that cyber insurance, including stand-alone cyber liability policies, are subject to TRIP, so long as they are written in the TRIP-eligible lines of insurance. *Id.*; *see also* Guidance Concerning Stand-Alone Cyber Liability Insurance Policies Under the Terrorism Risk Insurance Program, 81 Fed. Reg. 95312 (December 27, 2016). Some of the TRIP-eligible lines of insurance also include personal P&C premium exposures that are not subject to the Program. There are also certain other defined exclusions within these lines. *See* Definitions, 31 C.F.R. § 50.4(w)(2) (2021).

[9] Further details concerning the operation of the Program are provided in Section III of this Report.

[10] Federal Insurance Office Act of 2010, 31 U.S.C. § 313(c)(1)(D) (2012).

[11] *See* Terrorism Risk Insurance Extension Act of 2005, Pub. L. 109-144, 119 Stat. 2660 (2005); Terrorism Risk Insurance Program Reauthorization Act of 2007, Pub. L. 110-160, 121 Stat. 1839 (2007); Terrorism Risk Insurance Reauthorization Act of 2015, Pub. L. 114-1, 129 Stat. 3 (2015); Terrorism Risk Insurance Program Reauthorization Act of 2019, Pub. L. 116-94, 133 Stat. 2534 (2019).

TRIA provides that the Secretary shall annually require participating insurers to provide information and data for the Secretary to analyze the overall effectiveness of the Program.[12] The information to be provided to the Secretary by participating insurers includes information regarding:

(1) lines of insurance with exposure to terrorism losses;

(2) premiums earned on coverage offered for terrorism losses;

(3) geographical location of exposures;

(4) pricing of terrorism risk coverage offered;

(5) the take-up rate for terrorism risk coverage;

(6) the amount of private reinsurance for acts of terrorism purchased; and

(7) such other matters as the Secretary considers appropriate.[13]

The 2020-2022 TRIP data calls are discussed in Section IV.

[12] TRIA § 104(h)(1).

[13] TRIA §§ 104(h)(1)(A)-(G).

III. TRIP OVERVIEW

The Program requires that each entity meeting the definition of an insurer make available coverage for insured losses resulting from acts of terrorism.[14] The mandatory offer required from participating insurers must "not differ materially from the terms, amounts, and other coverage limitations applicable to losses arising from events other than acts of terrorism."[15] The "make available" requirement applies only to TRIP-eligible lines of insurance.[16] TRIA does not mandate that insurers offer terrorism risk insurance at a particular price,[17] nor does TRIA require any policyholder to purchase insurance for terrorism risk.[18] All commercial P&C insurers writing in TRIP-eligible lines and required to make terrorism risk insurance available under their policies are considered Program participants, regardless of whether their policyholders accept the offer to take up the coverage.

Insurers are eligible for federal payments under the Program only for losses resulting from "acts of terrorism." An act of terrorism is defined under TRIA as an act certified by the Secretary in consultation with the Attorney General of the United States and the Secretary of Homeland Security:

- to be an act of terrorism;
- to be a violent act or an act that is dangerous to human life, property, or infrastructure;
- to have resulted in damage within the United States;[19] and
- to have been committed by an individual or individuals, as part of an effort to coerce the civilian population of the United States or to influence the policy or affect the conduct of the U.S. government by coercion.[20]

[14] TRIA § 103(c). An insurer is defined under TRIA as any entity, including any affiliate thereof, which receives direct earned premiums for TRIP-eligible lines of insurance and is licensed or admitted to engage in the business of insurance in any state; an eligible surplus lines carrier; a federally-approved maritime, energy, or aircraft insurer; a state residual market insurance entity or workers' compensation fund; or, to the extent provided in rules issued by the Secretary, a captive insurer or a self-insurance arrangement. TRIA § 102(6).

[15] TRIA §103(c)(2).

[16] Reinsurance is excluded from the TRIP-eligible lines of insurance. TRIA § 102(11)(B)(vii). The availability of private reinsurance for terrorism risk is discussed further in Section V.F.

[17] State insurance rating laws and regulations may affect the price that can be charged by insurers writing terrorism risk insurance subject to TRIA.

[18] In some circumstances, state law may require the purchase of (or limit the ability to exclude) coverage for terrorism risk, such as in the case of workers' compensation insurance, discussed further in Section VII.

[19] TRIA also provides that an act of terrorism may involve damage outside the United States in the case of certain air carriers or vessels, or on the premises of a U.S. mission. TRIA § 102(1)(A)(iii).

[20] TRIA § 102(1)(A).

Additionally, the Secretary may not certify an act that results in P&C insurance losses totaling less than $5 million,[21] or that was committed as part of the course of a war declared by Congress.[22]

If the Secretary certifies an act of terrorism, participating insurers may submit claims to Treasury, and Treasury will determine whether, and in what amounts, insurers are eligible for payments under the Program.[23] Treasury is then required to obtain reimbursement of certain payments of the federal share of compensation through a recoupment process and may obtain reimbursement of additional payments depending on the amount of total losses.

Payment to a participating insurer under the Program is based on a number of factors described below, including the insurer's individual deductible, the Program Trigger, the federal share of compensation of an insurer's losses, and the Program Cap. As described further below, Treasury may use a recoupment process to recover amounts expended; the applicable process will vary depending upon the Insurance Marketplace Aggregate Retention Amount (IMARA).

Insurer Deductible

After the Secretary certifies one or more acts of terrorism, two prerequisites must be met before an insurer is eligible for payments from Treasury under the Program: (1) the insurer's "insured losses" subject to the Program[24] must exceed its deductible (which is 20 percent of the insurer's direct earned premiums (DEP) in the TRIP-eligible lines for the prior calendar year),[25] and (2) the Program Trigger must be satisfied.

Program Trigger

The Program Trigger is the minimum amount of insurance industry aggregate insured losses resulting from a certified act (or acts) of terrorism taking place in a particular calendar year that must be sustained before any federal payments are made. The Program Trigger was $200

[21] TRIA § 102(1)(B)(ii). As Treasury confirmed in a clarification to the TRIP rules in 2021, P&C insurance losses for certification purposes include amounts that would be payable under P&C insurance policy obligations, such as on account of exclusions or deductibles, because the certification analysis looks to the size of the event in question. *See* 31 C.F.R. § 50.4(b)(2)(ii) (2021). *See also* Terrorism Risk Insurance Program; Updated Regulations in Light of the Terrorism Risk Insurance Program Reauthorization Act of 2019, and for Other Purposes, 86 Fed. Reg. 30537 (June 9, 2021) (*2021 Updated Regulations*); Terrorism Risk Insurance Program; Updated Regulations in Light of the Terrorism Risk Insurance Program Reauthorization Act of 2019, and for Other Purposes; Correction, 86 Fed. Reg. 31620 (June 15, 2021) *(2021 Updated Regulations Correction*).

[22] This limiting clause regarding an act of war does not apply to coverage under the Program for workers' compensation insurance. TRIA § 102(1)(B)(i).

[23] Any determination by Treasury is made pursuant to the Program regulations. *See* Terrorism Risk Insurance Program, 31 C.F.R. Part 50 (2021).

[24] In 2021, Treasury issued a final rule clarifying that "insured losses" for purposes of TRIP exclude any amounts for which the policyholder is responsible (whether on account of policy exclusions, deductibles, or retention amounts). The final rule also addresses the calculation of the Program Trigger, the recovery of the Federal Share under TRIP, and the calculation of the Program Cap. 31 C.F.R. § 50.4(n)(3)(iv) (2021). *See also 2021 Updated Regulations*, 86 Fed. Reg. 30537; *2021 Updated Regulations Correction*, 86 Fed. Reg. 31620.

[25] TRIA § 102(7).

million in calendar year 2021 and will remain at $200 million each year through the expiration of the Program in 2027.[26] Once the Program Trigger has been satisfied, Treasury will make payments to individual insurers for the federal share of compensation above their respective deductibles.

Federal Share of Compensation

After an insurer meets its deductible and the Program Trigger is satisfied, the federal government will pay a certain percentage of that insurer's losses in excess of the insurer's deductible. For calendar year 2021, the federal share of compensation was 80 percent of an insurer's losses above its deductible; this sharing ratio will remain at this level until the Program expires in 2027.[27]

Program Cap

TRIA limits the aggregate exposure of both insurers and the federal government arising from insured losses for an act or acts of terrorism. Specifically, TRIA prohibits the Secretary from making payments for any portion of aggregate insured losses (counting amounts paid by Program participants and the federal government) from acts of terrorism that exceed the Program Cap of $100 billion during any calendar year.[28] If the Program Cap is reached, an insurer that has met its insurer deductible by making payments for insured losses subject to the Program is not liable for any portion of losses that exceeds the Program Cap.[29]

Recoupment

The Secretary will collect "terrorism loss risk-spreading premiums" from insurers if federal payments are made to insurers. Under this mechanism, known as recoupment, Program participants may be required to collect funds from policyholders by placing a surcharge on insurance policies written in TRIP-eligible lines. The surcharges will be set based upon the amount that must be recovered by Treasury and the time within which it must be recovered, as required by TRIA. Insurers must then remit these surcharges to the Secretary.[30] The requirement to collect, or recoup, terrorism loss risk-spreading premiums applies not only to insurers that received federal payments under the Program, but also to all insurers writing

[26] TRIA § 103(e)(1)(B). TRIP did not originally have a Program Trigger. This requirement was introduced in the Terrorism Risk Insurance Extension Act of 2005, Pub. L. 109-144, 119 Stat. 2660. It was initially set at $50 million (for losses occurring in 2006), and it increased to $100 million for losses occurring in 2007. When TRIP was reauthorized through 2014, no change was made to the Program Trigger, which remained at $100 million. Terrorism Risk Insurance Program Reauthorization Act of 2007, Pub. L. 110-160, 121 Stat. 183. The 2015 Reauthorization Act, however, provided for an annual increase in the Program Trigger of $20 million beginning in 2016, until reaching $200 million in 2020. Under the 2019 Reauthorization Act, the Program Trigger remains at $200 million until the current expiration of the Program.

[27] TRIA § 103(e)(1)(A).

[28] TRIA § 103(e)(2)(A).

[29] TRIA requires the Secretary to notify Congress if insured losses are projected to exceed the Program Cap and in that case the Secretary shall determine the pro rata share of insured losses to be paid by each affected insurer. TRIA §§ 103(e)(2)-(3).

[30] TRIA §§ 103(e)(7)-(8).

policies in TRIP-eligible lines of insurance. Surcharges are placed on all TRIP-eligible insurance policies regardless of whether the policyholder purchased terrorism risk insurance.[31]

IMARA

TRIA provides that recoupment under the Program may be mandatory or subject to the Secretary's discretion. This determination depends on how any federal payments under TRIP compare with the total insured losses paid by participating insurers. Mandatory recoupment occurs where total industry payments are below the IMARA. The IMARA, which is calculated annually by Treasury based upon its annual TRIP data calls, is the annual aggregate average of insurer deductibles over the prior three-year period.[32] For purposes of calendar year 2022, the IMARA is $42.7 billion.[33] In connection with amounts subject to mandatory recoupment, Treasury must collect 140 percent of total amounts expended.[34]

[31] TRIA § 103(e)(8).

[32] *See* 31 C.F.R. § 50.4(m)(2) (2021).

[33] *See* IMARA Calculation for Calendar Year 2022 under the Terrorism Risk Insurance Program, 86 Fed. Reg. 73100 (December 23, 2021).

[34] *See* TRIA §§ 103(e)(7)-(8).

IV. DATA COLLECTION

Treasury used the data from the 2020-2022 TRIP data calls as one of the main bases upon which to draw conclusions respecting the effectiveness of the Program. This section explains the FIO data collection process, the categories of insurers who responded to the data call, and how FIO evaluated the quality of the data.

A. Data Collection Process

This Report is based primarily on the results of Treasury's 2020-2022 TRIP data calls and FIO's administration of the Program. In addition, Treasury performed qualitative research and sought input from stakeholders, including insurers, state insurance regulators, the National Association of Insurance Commissioners (NAIC), policyholders, and the general public, through a Federal Register Notice seeking comments.[35] Treasury also reviewed publicly available data reported by insurers to state regulators.

The 2020-2022 TRIP data calls were mandatory for participating insurers, subject to an exception for small insurers that wrote less than $10 million in TRIP-eligible lines premiums in each reporting year.[36]

Treasury collected data on a group basis (combining affiliated companies) because TRIP is generally administered on a group basis.[37] The information collected included data concerning premiums, policy exposures, policyholder take-up rates, and reinsurance.[38] Treasury collected information from four insurer categories (described further below in Section IV.B): (1) alien

---

[35] *See* 2022 Report on the Effectiveness of the Terrorism Risk Insurance Program, 87 Fed. Reg. 18473 (March 30, 2022). Treasury received 18 responsive comments addressing the Program, from: Centers for Better Insurance LLC (April 20, 2022) (addressing NBCR Risks) (CBI NBCR Comments); Centers for Better Insurance LLC (May 2, 2022) (addressing Program Administration) (CBI Program Administration Comments); Centers for Better Insurance LLC (May 3, 2022) (addressing Cyber Risks) (CBI Cyber Comments); National Association of Mutual Insurance Companies (May 11, 2022) (NAMIC Comments); Vermont Captive Insurance Association (May 13, 2022) (VCIA Comments); Marsh McLennan (May 15, 2022) (Marsh Comments); AM Best Rating Services (May 16, 2022) (AM Best Comments); American Academy of Actuaries (May 16, 2022) (AAA Comments); American Property Casualty Insurance Association (May 16, 2022) (APCIA Comments); Coalition to Insure Against Terrorism (May 16, 2022) (CIAT Comments); FM Global (May 16, 2022) (FM Global Comments); Reinsurance Association of America (May 16, 2022) (RAA Comments); Self-Insurance Institute of America, Inc. (May 16, 2022) (SIIA Comments); National Council on Compensation Insurance (May 16, 2022) (NCCI Comments); Underwriters at Lloyd's, London (May 16, 2022) (Lloyd's Comments); United Airlines, Inc. (May 16, 2022) (United Comments); RMS (May 17, 2022) (RMS Comments); and MITRE Corporation (May 27, 2022) (MITRE Comments). All comments are available at https://www.regulations.gov/docket/TREAS-TRIP-2022-0010/comments.

[36] Treasury estimates that insurers eligible for this reporting exception (between 350 to 400 insurers, depending upon the year) represent annually about 0.4 percent of the TRIP-eligible lines premium market for each TRIP data call between 2020 and 2022. *See, e.g.,* S&P Global Market Intelligence (as of April 13, 2022).

[37] An "affiliate" under TRIP is "any entity that controls, is controlled by, or is under common control with the insurer." Definitions, 31 C.F.R. § 50.4(c) (2021). Calculation of the deductible and the submission of claims under TRIP is on a group basis, in light of the "affiliate" definition in the regulations. Recoupment surcharges, however, are assessed and collected on an individual company basis. *See* Insurer Responsibility, 31 C.F.R. § 50.96 (2021). Insurer groups may include both domestic insurers and foreign insurers that write business in the United States only on a surplus lines basis.

[38] *See* Annual Data Reporting, 31 C.F.R § 50.51(b) (2021).

surplus lines insurers, (2) captive insurers, (3) non-small insurers (or larger licensed insurers above the small insurer threshold), and (4) small insurers.[39] Each insurer category completes a different reporting template that is tailored to that category.

Treasury collected data through a third-party insurance statistical aggregator, as required by TRIA.[40] The statistical aggregator provided results to Treasury in an aggregated, anonymous format that did not identify any individual reporting insurer. Treasury obtained most of the workers' compensation insurance elements from the National Council on Compensation Insurance (providing data from the states in which it operates as well as on behalf of other independent state workers' compensation rating bureaus), the California Workers' Compensation Insurance Rating Bureau, and the New York Compensation Insurance Rating Board, thereby reducing the burden of the reporting requirements on the insurance industry.

State insurance regulators began annually collecting data relating to terrorism risk insurance in 2016. The state insurance regulator data calls sought information similar to that collected by Treasury, although in some cases on a more detailed, granular basis. Given the similarity of the information sought by Treasury and state insurance regulators, and the burden caused to insurers by the existence of dual data calls on the same subject, beginning in 2018, Treasury and state insurance regulators developed a consolidated data call designed to satisfy each of their respective statutory mandates and objectives while permitting reporting insurers to submit, for the most part, the same information to both Treasury and state insurance regulators.[41] The consolidated collection approach significantly reduces burdens on insurers required to report information to both Treasury and state insurance regulators.

The 2022 TRIP data call added new reporting requirements for captive insurers, in particular, and for any insurer writing cyber insurance.[42] Treasury discusses the information obtained from these new reporting requirements later in the Report.

B. Responding Insurer Categories

Insurer groups were required to report in one of four insurer categories, based on the requirements of TRIA and its implementing regulations. The categories include insurers that are "admitted" or licensed to write business in at least one U.S. jurisdiction,[43] and domestic and

---

[39] Small insurers are defined with reference to the size of the insurer's policyholder surplus and TRIP-eligible DEP in the immediately preceding year as compared with an amount five times the size of the Program Trigger. *See* Definitions, 31 C.F.R. § 50.4(z) (2021). *See also* FIO, *Study of Small Insurer Competitiveness in the Terrorism Risk Insurance Marketplace* (2019), 9-10, https://home.treasury.gov/system/files/311/2019_TRIP_SmallInsurer_Report.pdf (*2019 Small Insurer Study*).

[40] TRIA § 104(h)(3). The data aggregator for the 2020-2022 TRIP data calls was Insurance Services Office, Inc.

[41] *See* FIO, *2018 Effectiveness Report*, 10-11.

[42] *See* Terrorism Risk Insurance Program 2022 Data Call, 86 Fed. Reg. 64600 (November 18, 2021); 2022 Terrorism Risk Insurance Program Data Call, 87 Fed. Reg. 22026 (April 13, 2022).

[43] An admitted company is "an insurance company licensed to do business in a state(s), domiciled in an alternative state or country." "Glossary of Insurance Terms," NAIC, http://www.naic.org/consumer_glossary.htm.

foreign insurers that have been permitted as a matter of state law to write U.S. business on a surplus lines basis.[44]

In 2022, the four insurer categories required to report information were as follows:

(1) **Alien Surplus Lines Insurers:** Alien surplus lines insurers that are not affiliated with either a domestic non-small or small insurer. Alien surplus lines insurers are discussed in further detail in Section VI.C.

(2) **Captive Insurers:** Insurers formed to insure the risk exposures of their policyholder owners and regulated by the captive insurance laws of a particular state jurisdiction. Captive insurers are discussed in further detail in Section VI.B.

(3) **Non-Small Insurers:** Domestic insurers or groups (including affiliated alien surplus lines insurers) with either DEP in TRIP-eligible lines of insurance (TRIP-eligible DEP) above the small insurer threshold or a policyholder surplus above the small insurer threshold.

(4) **Small Insurers:** Domestic insurers or groups (including affiliated alien surplus lines insurers) with *both* 2020 DEP in TRIP-eligible lines of insurance of less than $1 billion *and* a 2020 policyholder surplus of less than $1 billion (subject to the reporting exception for insurers with less than $10 million in TRIP-eligible DEP).[45] Small insurers are discussed in further detail in Section VI.A.

Figure 1 shows insurer participation by category, as indicated by reported TRIP-eligible DEP.

Figure 1: TRIP-Eligible DEP by Insurer Category ($ billions)[46]

	2020 TRIP data call		**2021 TRIP data call**		**2022 TRIP data call**	
	2019 TRIP-Eligible DEP	% of Total	2020 TRIP-Eligible DEP	% of Total	2021 TRIP-Eligible DEP	% of Total
Alien Surplus Lines Insurers	$ 11.1	5%	$ 11.0	5%	$ 12.1	5%
Captive Insurers	9.0	4%	10.5	5%	14.4	6%
Non-Small Insurers	173.0	80%	175.3	80%	185.5	78%
Small Insurers	22.9	11%	22.2	10%	26.2	11%
Total	**$ 216.1**	**100%**	**$ 219.0**	**100%**	**$ 238.2**	**100%**

Source: 2020-2022 TRIP data calls

[44] Non-admitted insurers can write insurance on a surplus lines basis when the desired coverage cannot be obtained from admitted insurers in the jurisdiction in question. *See* 31 C.F.R. § 50.4(o)(1)(i)(B) (2021). *See also* "Glossary of Insurance Terms," NAIC, http://www.naic.org/consumer_glossary.htm.

[45] The small insurer threshold is calculated annually in relation to the Program Trigger amount (*see, e.g.*, FIO, *2019 Small Insurer Study*, 9). The Program Trigger is now set at $200 million through the current expiration of the Program in 2027; therefore, the small insurer threshold will not change through 2027 absent any intervening legislative changes to the Program Trigger.

[46] Some figures in the Report may not add to 100 percent due to rounding.

Figure 2 illustrates the total amount of premiums in the TRIP-eligible lines of insurance reported by non-small and small insurers. For a breakdown of the terrorism risk insurance premium component of these premiums, see Figure 59 (Section VII).

Figure 2: TRIP-Eligible DEP by TRIP-Eligible Lines of Insurance (Non-Small and Small Insurers) ($ billions)

	2020 TRIP data call		**2021 TRIP data call**		**2022 TRIP data call**	
	2019 TRIP-Eligible DEP	% of Total	2020 TRIP-Eligible DEP	% of Total	2021 TRIP-Eligible DEP	% of Total
Aircraft (all perils)	$ 1.6	1%	$ 1.7	1%	$ 1.9	1%
Allied Lines	7.5	4%	8.4	4%	10.4	5%
Boiler and Machinery	1.6	1%	1.7	1%	2.0	1%
Commercial Multiple Peril (liability)	15.1	8%	14.9	8%	15.1	7%
Commercial Multiple Peril (non-liability)	26.9	14%	28.4	14%	31.4	15%
Excess Workers' Compensation	1.2	1%	1.2	1%	1.3	1%
Fire	9.8	5%	11.4	6%	13.4	6%
Inland Marine	13.0	7%	13.5	7%	10.8	5%
Ocean Marine	2.8	1%	2.9	1%	3.2	2%
Other Liability	47.7	24%	50.2	25%	58.7	28%
Products Liability	3.8	2%	3.8	2%	3.8	2%
Workers' Compensation	64.8	33%	59.1	30%	59.6	28%
Total	**$ 195.9**	**100%**	**$ 197.4**	**100%**	**$ 211.7**	**100%**

Source: 2020-2022 TRIP data calls

C. Response Rate

Treasury estimates that the response rate for domestic insurers in the 2022 TRIP data call (measured by TRIP-eligible DEP) was at least 98.5 percent for non-small insurers, and at least 80.3 percent for small insurers. Treasury estimates that approximately 97.5 percent of non-small insurers and at least 79.7 percent of small insurers reported in the 2021 TRIP data call. Treasury estimates that at least 99 percent of non-small insurers and at least 78 percent of small insurers reported in the 2020 TRIP data call.[47]

Treasury estimates that between 85 to 95 percent of alien surplus lines insurers responded to the 2020, 2021, and 2022 TRIP data calls.[48]

Determining the response rate for captive insurers under TRIP is complicated by the fact that captive insurers typically do not submit publicly available information that could be used by

[47] Treasury evaluates the response rates to the TRIP data calls by analyzing information reported to state insurance regulators as well as independently analyzing insurers where the available state data was not dispositive of the particular insurer's obligation to participate in the TRIP data call. Some amount of non-reporting may be attributable to small insurers that are under the reporting threshold. Treasury will continue to analyze the response rates in future reports.

[48] Alien surplus lines insurers also report certain information to state regulators, and Treasury uses a process to evaluate the response rate for alien surplus lines insurers that is similar to the process it uses for domestic insurers.

Treasury to independently evaluate their response rate. Therefore, Treasury has engaged with state insurance regulators and brokers that work with captive insurers to confirm that the appropriate number of captive insurers report for the TRIP data calls.[49] Based upon the available information and the consistency of results year over year, Treasury estimates that the significant majority of captive insurers that write terrorism risk insurance subject to the Program, on either an embedded or standalone basis, have provided information in response to the 2020-2022 TRIP data calls.

D. Data Quality Evaluation

This Report includes analysis of data for 2019 through 2021, relying on the results of the 2020-2022 TRIP data calls, with a particular focus on the 2021 and 2022 TRIP data calls conducted since Treasury's last Effectiveness Report.[50] Treasury compared the results of its data calls with state reporting data for the same period to further validate the accuracy of reported data. The comparison between TRIP data calls and state reporting data is relevant because TRIP-eligible lines are defined by regulation with general reference to state insurance reporting lines. The Program uses state-defined insurance lines and reporting data standards to determine the "property and casualty insurance" that is subject to the Program, which promotes efficient Program administration. This process also allows Treasury to determine whether the data reported by non-small and small insurers under TRIP data calls is generally consistent with similar data reported for state regulatory purposes.[51]

Figure 3 compares the premiums reported to Treasury in the 2021 and 2022 TRIP data calls with the premiums reported by non-small and small insurers for state regulatory purposes.[52] Some adjustments are made to the state data to account for variations between certain state statutory reporting lines and the premiums that are subject to TRIP and collected by Treasury.[53]

---

[49] Treasury only requires reporting from captive insurers to the extent that they issue terrorism risk insurance that is subject to the Program. Captive insurers that write policies in the TRIP-eligible lines of insurance, but which do not provide any terrorism risk insurance (whether on an embedded or standalone basis), do not have a reporting requirement. *See* 2022 Terrorism Risk Insurance Program Data Call, 87 Fed. Reg. 22026 (April 13, 2022).

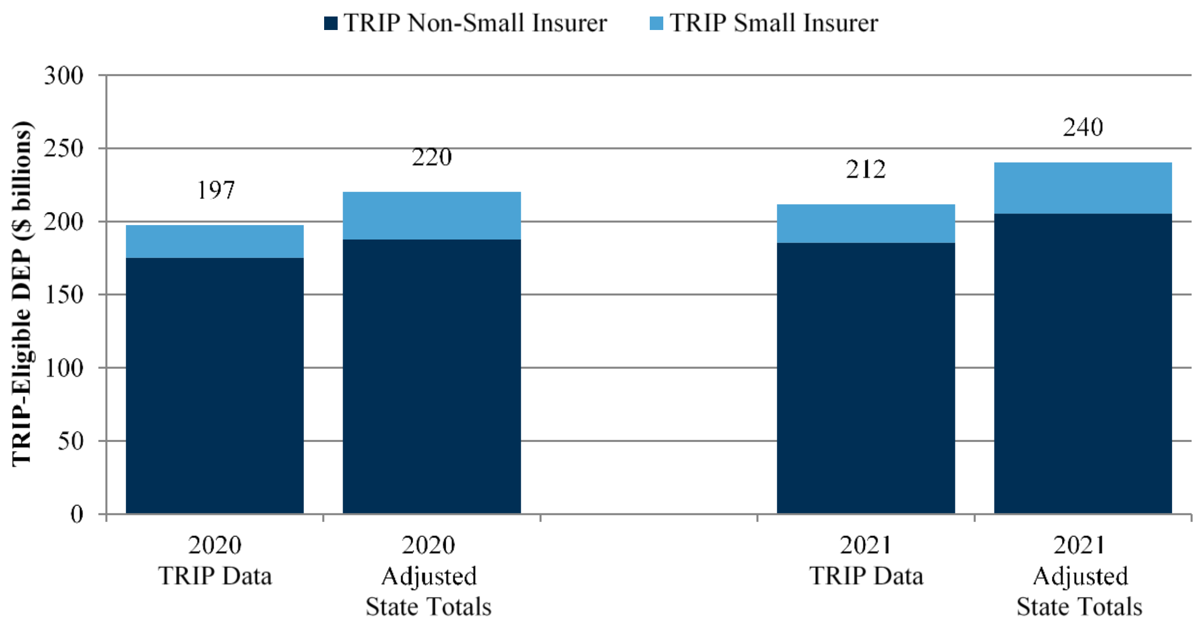
[50] Some figures in this Report relating to the 2020 and 2021 TRIP data calls may not be identical to similar information previously reported by Treasury because of late-reported or corrected data submitted after publication of prior reports. Similarly, late-reported or corrected data received in the future in connection with the 2022 TRIP data call may result in future reporting by Treasury of information different from that reported here.

[51] For purposes of this Report, Treasury evaluated the data reported by domestic non-small and small insurers that regularly make public statutory insurance filings by comparing the Treasury data with the reporting lines for state insurance regulatory purposes. Treasury has addressed this adjustment process in prior reports. *See* FIO, *Study of Small Insurer Competitiveness in the Terrorism Risk Insurance Marketplace* (June 2017), 11, https://home.treasury.gov/system/files/311/Study_of_Small_Insurer_Competitiveness_in_the_Terrorism_Risk_Insurance_Marketplace_%28June_2017%29.pdf (*2017 Small Insurer Study*). Most alien surplus lines and captive insurers do not make such filings; therefore, this analysis does not extend to those Program participants.

[52] Treasury performed this analysis in the *2020 Effectiveness Report*, in connection with the data collected in the 2019 and 2020 TRIP data calls, and concluded that the data reported to Treasury was consistent with the more general information reported by those insurers for state regulatory purposes. FIO, *2020 Effectiveness Report*, 13-14.

[53] The principal differences between state reporting lines and TRIP-eligible lines are: (1) certain lines of insurance (principally Fire and Allied Lines, but also other lines) encompass policies written to cover personal, and not

Figure 3: Comparison of TRIP-Eligible DEP Reported in Treasury Data Calls to TRIP-Eligible DEP Reported to State Regulators



Source: 2021 and 2022 TRIP data calls; S&P Global Market Intelligence (as of May 22, 2022)

The data provided by reporting insurers in the 2021 and 2022 TRIP data calls is consistent with the data that insurers reported for state regulatory purposes. Therefore, the reported data is sufficient for the purpose of analyzing the effectiveness of the Program.[54]

---

commercial, exposures, which are not subject to TRIP; and (2) Professional Liability insurance is not subject to TRIP, even though it is reported for state purposes under the Other Liability line of insurance, which is otherwise a TRIP-eligible line of insurance. *See* 31 C.F.R. § 50.4(w) (2021). Other small (and offsetting) differences arise from the manner in which Treasury collects data, which Treasury has addressed in prior reports. *See* FIO, *2018 Effectiveness Report,* note 53.

[54] One commenter suggested that Treasury should also assess in its Effectiveness Reports matters concerning Program administration (resources, testing, personnel, contracting, etc.), as well as lessons learned from the COVID-19 pandemic, including the potential use of a TRIP model for a pandemic insurance program, and the potential interplay between other federal relief measures and TRIP in the wake of a certified "act of terrorism." *See* CBI Program Administration Comments. This report focuses, as instructed in TRIA § 104(h)(2), on program effectiveness and terrorism risk insurance market issues.

V. ANALYSIS OF THE OVERALL EFFECTIVENESS OF THE PROGRAM

TRIA was established to "protect consumers by addressing market disruptions and ensure the continued widespread availability and affordability of property and casualty insurance for terrorism risk," and to permit private markets to stabilize, resume pricing, and build capacity.[55] Based on Treasury's analysis, the Program has been largely effective in meeting these statutory objectives. Stakeholders—representing the interests of insurers, reinsurers, and commercial policyholders—generally agree that the Program has been effective in achieving its statutory objectives.[56] The 2020-2022 TRIP data calls indicate that the market for commercial P&C insurance in general and terrorism risk insurance in particular remains relatively stable, with insurance both affordable and available to U.S. policyholders. Terrorism risk insurance is available in the market for a relatively low cost and is purchased by the majority of commercial policyholders in the United States, including by the majority of places of worship. Private reinsurance capacity for terrorism risk insurance has increased since the creation of the Program. The Report addresses these observations in more detail below, relying upon the 2020-2022 TRIP data calls. The Report then discusses the projections from modeled loss questions, as well as terrorism risk insurance for nuclear, biological, chemical, or radiological (NBCR) attacks and for cyber losses.

A. General Program Observations

Several commenters cited the Program as the principal mechanism that has made terrorism risk insurance available and affordable since the inception of the Program in 2002, and observed that the Program has had a stabilizing effect on the market for commercial P&C insurance generally and terrorism risk insurance in particular.[57] As reported by certain observers, market fluctuations

[55] TRIA §101(b).

[56] *See* 2022 Report on the Effectiveness of the Terrorism Risk Insurance Program, https://www.regulations.gov/docket/TREAS-TRIP-2022-0010/comments (collecting and providing links to comments).

[57] *See* NCCI Comments, 4 ("Given the challenges presented by the terrorism peril, Congress determined a workable solution was needed that provides primary insurance carriers with a mechanism to manage the impact of the terrorism peril. That solution was the creation of TRIP and it appears it may have contributed to a relatively stable workers compensation market."); APCIA Comments, 1 ("[T]he Terrorism Risk Insurance Act (TRIA) is essential to the continued availability of terrorism insurance in the property casualty insurance market. Terrorism continues to be a challenging peril to model and to insure, but the federal backstop provided by TRIA helps to ensure that terrorism coverage is available to those sectors of the U.S. economy that need it.); AM Best Comments, 1 ("The Program has been—and continues to be—effective in expanding the availability of terrorism insurance and making it affordable."); NAMIC Comments, 2 ("TRIP [is] a risk-sharing model between insurers, policyholders, and the federal government that–in addition to providing an immediate stabilizing effect in the short-term following a terrorist attack–has acted to create space for a robust private market for terrorism insurance to form where it would not have otherwise."); Marsh Comments, 1 ("[T]he program has been very successful in allowing insurers and reinsurance capacity back into the market, while providing numerous layers of protection to the federal government—and ultimately the US taxpayer."); RAA Comments, 1 ("By limiting insurers' exposure to catastrophic terrorism losses, TRIA has enhanced the private market for such coverage and has had a stabilizing influence on the economy. Under TRIA and its extensions, the availability of terrorism risk insurance has increased."); Lloyd's Comments, 1 ("TRIP has been and remains quite effective and successful since its enactment. It serves its purpose of stabilizing the insurance market and the economy in times of uncertainty and provides for a smooth recovery in the event of a future terrorist attack."); CIAT Comments, 1 ("TRIP remains extremely effective

have taken place when the Program has lapsed or when there has been uncertainty over whether it would be reauthorized.[58]

In seeking public comments in connection with this Report, Treasury specifically inquired "[w]hether, and in what fashion, insurance market changes associated with the impact of the COVID-19 pandemic have also affected the market for terrorism risk insurance."[59] The commenters that addressed the issue indicated that they did not observe any associated impact on the terrorism risk insurance market.[60] Based upon its evaluation of the terrorism risk insurance data over the past few years, Treasury has not observed any fundamental changes in the market dynamics for terrorism risk insurance as a result of the COVID-19 pandemic. Treasury will continue to evaluate this issue as necessary.

The Program mechanics—the amount of the Program Trigger, the individual insurer deductibles, and the co-pay shares—also affect how the market for terrorism risk insurance now operates.[61] The 2015 Reauthorization Act prescribed changes to the Program mechanics that would occur over time, which have caused a continued shift of exposure from the federal government to the private market for terrorism risk insurance. Treasury has not observed any market disruption or impediments to participation caused by these changes to the Program mechanics. Although the

---

in achieving its primary purpose, which is to ensure the continued availability of terrorism coverage for commercial policyholders . . . . TRIP has been the key factor in ensuring that the private insurance market remained intact and has continued to meet the American economy's needs in this respect largely through private risk capacity backstopped by this Program."); VCIA Comments, 3 ("TRIP has been highly effective in ensuring that terrorism insurance coverage is available to those wanting or needing such insurance."). *Compare* United Comments, 1 ("The evidence of TRIA's effectiveness is further demonstrated by the ragged state of the war risk and cyber markets where no such Federal backstop exists.").

[58] *See, e.g.*, Congressional Research Service, *Terrorism Risk Insurance: Overview and Issue Analysis* (2022), 1, https://crsreports.congress.gov/product/pdf/R/R47042 ("It is unclear how the insurance market would react to the expiration of the federal program, although at least some instability might be expected were this to occur."); FM Global Comments, 3-4 (noting that the periodic fixed expiration of the Program results in significant market uncertainty, and requires insurers to issue "conditional renewal notices that have to be versatile enough to accommodate an expiration, renewal, or renewal with change, of TRIA, which makes them very complex"); CIAT Comments, 2 ("Indeed, we continue to see evidence that capacity would dwindle without TRIA. During each reauthorization cycle of TRIA, CIAT members have seen policy renewals with 'springing exclusions' that would void terrorism cover if TRIA were to expire during the policy term."); AM Best Comments, 1 ("Program reauthorization 12 months prior to expiration would diminish market disruption and capacity concerns in the future.").

[59] 2022 Report on the Effectiveness of the Terrorism Risk Insurance Program, 87 Fed. Reg. 18473, 18474 (March 30, 2022), https://www.federalregister.gov/documents/2022/03/30/2022-06681/2022-report-on-the-effectiveness-of-the-terrorism-risk-insurance-program.

[60] *See* CIAT Comments, 2 ("The COVID-19 pandemic has created substantial disruption in the insurance marketplace, but in general the market for terrorism risk insurance has remained stable."); Lloyd's Comments, 2 (also not observing terrorism risk insurance market impacts on account of COVID-19, attributing the "stability in this market to the effectiveness of the TRIA program, where the cost-sharing mechanism of a federal backstop gives insurers greater ability to manage exposure, and thus offer coverage at rates that policyholders are willing to pay"); FM Global Comments, 1; NAMIC Comments, 2; United Comments, 1.

[61] The ACRSM also considered whether the Program has transferred too much risk away from the federal backstop to the private market. *See* Report of the Advisory Committee on Risk-Sharing Mechanisms (2020), 10-13, https://home.treasury.gov/system/files/311/5-20-ACRSM-Report-Final.pdf (ACRSM Report). The work of the ACRSM is discussed in Section IX.

2019 Reauthorization Act did not modify any of the Program mechanics from those in place during calendar year 2020, any increases in industry premiums over time will result in a corresponding increase in industry and policyholder exposure.[62] Treasury will continue to monitor and study this issue, as discussed further in this Report.[63]

B. Availability of Terrorism Risk Insurance

The availability of insurance for terrorism risk refers to whether insurers offer coverage for losses arising from an act of terrorism. Even when insurers "make available" terrorism risk coverage as required by TRIA, they retain the ability to limit their terrorism risk exposure in various ways. For example, insurers can limit their exposure to terrorism risk through pricing mechanisms, by declining to underwrite particular risks, or by excluding coverage for certain forms of terrorism loss (where permitted by state law) such as for NBCR attacks.[64] Insurers may also decline to write a particular line of insurance entirely if that line presents too great a risk of loss on account of terrorism.

In assessing whether participating insurers are complying with the "make available" requirement, this Report considers the specific experience indicated by the data calls for commercial multi-peril (CMP) insurance. CMP insurance is a type of commercial package policy that contains coverage for more than one peril in a single policy. Such insurance products are more likely to be purchased by smaller or medium-sized businesses.[65] The TRIP data calls indicate CMP products produced a significant proportion (31 percent in 2021) of all policy premiums

[62] For example, the IMARA (which measures aggregate industry payments that, if not exceeded in a calendar year, require Treasury to recoup any amounts that it expends under the Program) increased from $40.9 billion in calendar year 2020 to $42.7 billion in calendar year 2022, on account of the growth in annual industry premium in the TRIP-eligible lines of insurance. In addition, since the IMARA is the average of aggregate insurer deductibles under TRIP, the increase in the IMARA signals a similar increase in the individual deductibles of individual insurers before they are entitled to make a claim for the federal share under TRIP.

[63] Many countries with substantial insurance markets have adopted some sort of terrorism risk insurance mechanism that relies (to a greater or lesser degree) upon government involvement in case of a significant terrorism event. FIO participates in the activities of the International Forum for Terrorism Risk (Re)Insurance Pools (IFTRIP, an organization of international terrorism risk insurance programs), as part of its assistance to the Secretary in the administration of TRIP. *See generally* "Sharing Knowledge About Terrorism Risk," International Forum for Terrorism Risk (Re)Insurance Pools, http://iftrip.org/ (organization of international terrorism risk insurance programs, providing general information and news); Wendy Peters, *The Terrorism Pool Index* (2022), https://www.wtwco.com/en-US/Insights/2022/05/terrorism-pool-index-2022 (summarizing salient features of terrorism risk programs in IFTRIP member countries). In 2022, Treasury hosted the IFTRIP 2022 Livestream event which addressed panel discussions addressing public/private partnerships in the wake of the COVID-19 pandemic, the potential interrelationship between climate change and terrorism risk, and the role of insurers in promoting resilience and better risk practices. The event featured closing remarks by Treasury Deputy Secretary Wally Adeyemo addressing the role of insurers in promoting better cyber risk practices. "IFTRIP Conference 2022," IFTRIP, https://iftrip.org/iftrip-conference-2022/.[64] The extent of terrorism risk insurance for NBCR losses is addressed further below in Section V.H.

[64] The extent of terrorism risk insurance for NBCR losses is addressed further below in Section V.H.

[65] As noted by industry sources, policies that package together multiple lines typically needed by small businesses are generally more cost effective for such businesses than purchasing separate policies for each line of insurance. *See generally* "Understanding Business Owners Policies (BOPs)," Insurance Information Institute, https://www.iii.org/article/understanding-business-owners-policies-bops.

reported by non-small and small insurers in the TRIP-eligible lines of insurance, excluding workers' compensation.

CMP policies have a high take-up rate for terrorism coverage, which indicates that participating insurers are regularly "making available" terrorism risk insurance to their policyholders. In the 2020-2022 TRIP data calls, approximately 80 percent of CMP policies (as measured by TRIP-eligible DEP) included coverage for terrorism risk, with high percentages observed in all geographic areas of the United States.[66]

Treasury uses a different method to assess program effectiveness in the workers' compensation line of insurance business. This is because all jurisdictions require that terrorism risk coverage be included in all workers' compensation policies and hence the take-up rate is 100 percent. So instead of focusing on the take-up rate, Treasury assesses availability based on whether businesses purchase terrorism insurance coverage in the standard "voluntary" market in comparison to the residual market or whether businesses elect to self-insure.

The standard or voluntary market refers to insurance provided by a state licensed and supervised insurance company through market negotiated terms. If any business cannot find an insurance company to provide needed insurance, then it can obtain that coverage in the residual market. State insurance laws require licensed insurance companies to participate in residual insurance markets through risk-sharing arrangements that vary from state to state. In the residual market, also known as the assigned market, participating insurance companies are allocated these higher risk customers by a market manager or other mechanism. Insurance premiums in this part of the market are higher, and thus reflect that they are businesses' second rather than first choice for coverage. Businesses that choose to self-insure must comply with strict financial responsibility rules. In situations where the residual market share is large or growing it may indicate market stress or inefficiency. Also, expansion of the residual market can put pressure on the voluntary market through the requirement for insurance companies to assume these higher residual risks in proportion to their share of the voluntary market.[67]

Available industry data indicates that the market share of the residual market based upon total workers' compensation premiums has been stable since the enactment of TRIA. That share has ranged from 4 to 6 percent of total workers' compensation premiums over the period between 2007 and 2021.[68] Similarly, the industry data indicates that the percentage of businesses self-insuring has remained steady at between 23.9 percent in 2007 and 25 percent in 2019.[69]

[66] Using policy count data reported by non-small insurers (such information is not collected from small insurers), the take-up rate for terrorism risk insurance in commercial multi-peril lines measured 92 percent in the 2020 TRIP data call, 91 percent in the 2021 TRIP data call, and 88 percent in the 2022 TRIP data call. *See also* Section V.D.

[67] *See* NCCI Comments, 2-3 (noting impact of the September 11 attacks on the increase in the share of the residual market for workers' compensation risks and follow-on impact on insurers in the voluntary market). Workers' compensation issues under TRIA are discussed in Section VII.

[68] NCCI Comments, 3.

[69] *See* Griffin Murphy et al., *Workers' Compensation: Benefits, Coverage, and Costs* (2021), 23, https://www.nasi.org/wp-content/uploads/2021/10/2021-Workers-Compensation-Report-2019-Data.pdf (analysis from the National Academy of Social Insurance, using 2019 data) (2021 NASI Workers' Compensation Report).

Accordingly, in the specific context of workers' compensation insurance, terrorism risk insurance is generally available in the marketplace.

C. Affordability of Terrorism Risk Insurance

Terrorism risk coverage provided under TRIP is generally "embedded" in policies that also cover other risks. Coverage also may be provided on a "standalone" basis where the policy provides coverage only for terrorism risk. Such standalone policies generally are used when properties or operations present heightened exposure to terrorism risk.

The TRIP data calls have indicated that, depending upon the year, between 80-85 percent of the U.S. terrorism risk insurance market (as measured by terrorism risk insurance premium) is provided through embedded policies, while the remaining 15-20 percent is obtained through standalone terrorism policies. When measured by policy limits instead of premiums, the market share of standalone policies is much smaller, due to the higher risk and higher premiums observed in the standalone portion of the market. Each type of policy is examined in greater detail below.

1. Embedded Terrorism Risk Insurance

Embedded terrorism risk insurance is provided within P&C policies that also cover other risks. TRIA requires that insurers disclose to policyholders the amount of premium charged for embedded terrorism risk insurance.[70] This premium cost is often disclosed to the policyholder as a percentage of the total premium charged for the policy.[71]

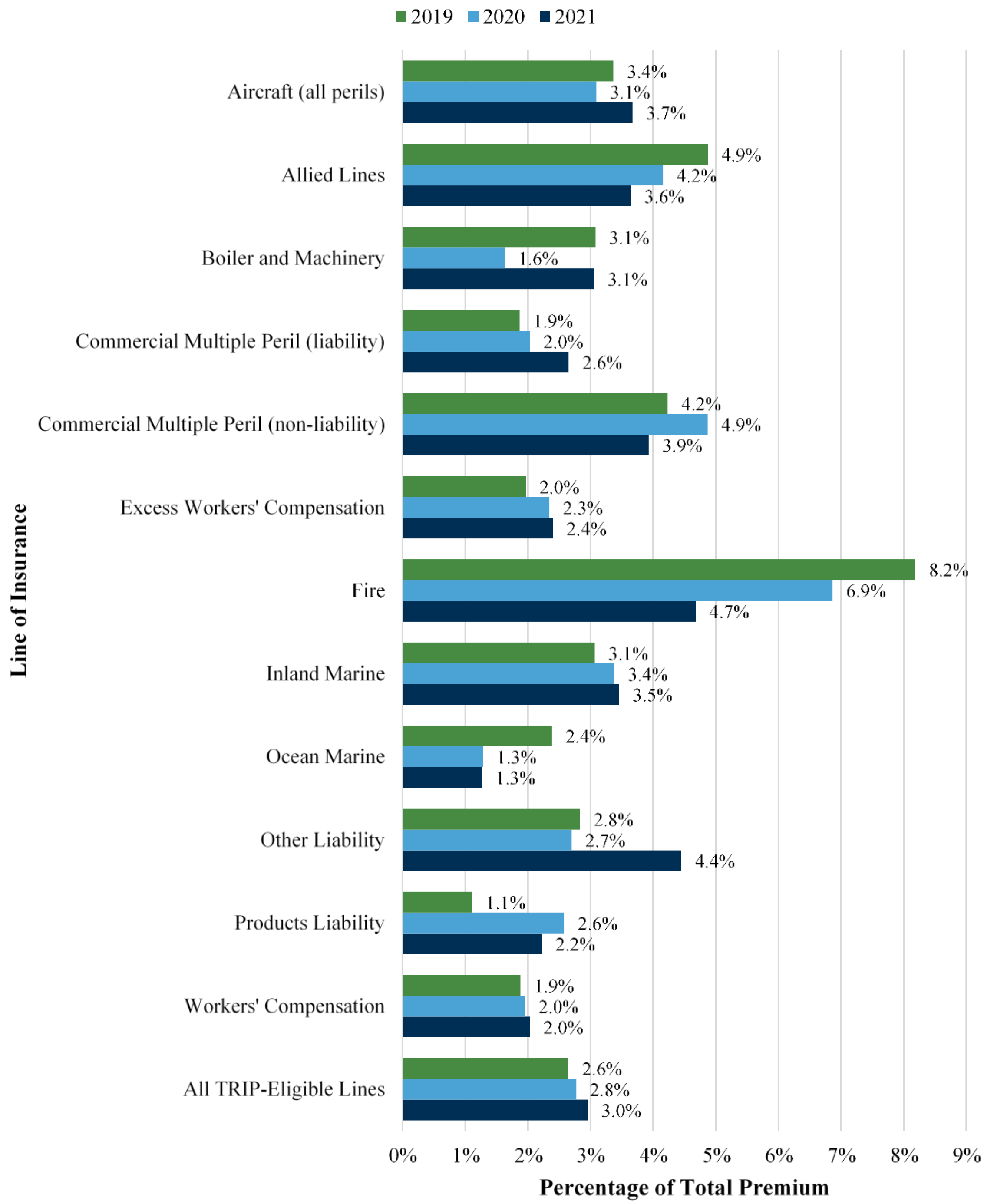
Although approximately 70 percent of insurers charge a premium for terrorism risk insurance within embedded policies, approximately 30 percent provide terrorism risk coverage for no additional charge. Figure 4 illustrates premium charges in the terrorism risk insurance marketplace for embedded terrorism risk insurance coverage, broken out by insurance line and in total, in cases where an additional charge is made for the insurance.[72]

[70] *See* General Disclosure Requirements, 31 C.F.R. § 50.10 (2021); Clear and Conspicuous Disclosures, 31 C.F.R. § 50.12 (2021).

[71] *See* Clear and Conspicuous Disclosure, 31 C.F.R § 50.12(b) (2021); *see also* Marsh, *2019 Terrorism Risk Insurance Report* (2019), 9, https://www.regulations.gov/comment/TREAS-TRIP-2020-0010-0004 (reflecting analysis of terrorism risk insurance cost by industry segment based upon percentage that terrorism risk premium bears to policy premium as a whole).

[72] The figures in this section are based upon the information reported to Treasury by non-small and small insurers. Similar information for captive and alien surplus lines insurers is reported in Sections VI.B and VI.C, respectively.

Figure 4: Percentage of Total Policy DEP Allocated to Terrorism Risk[73]

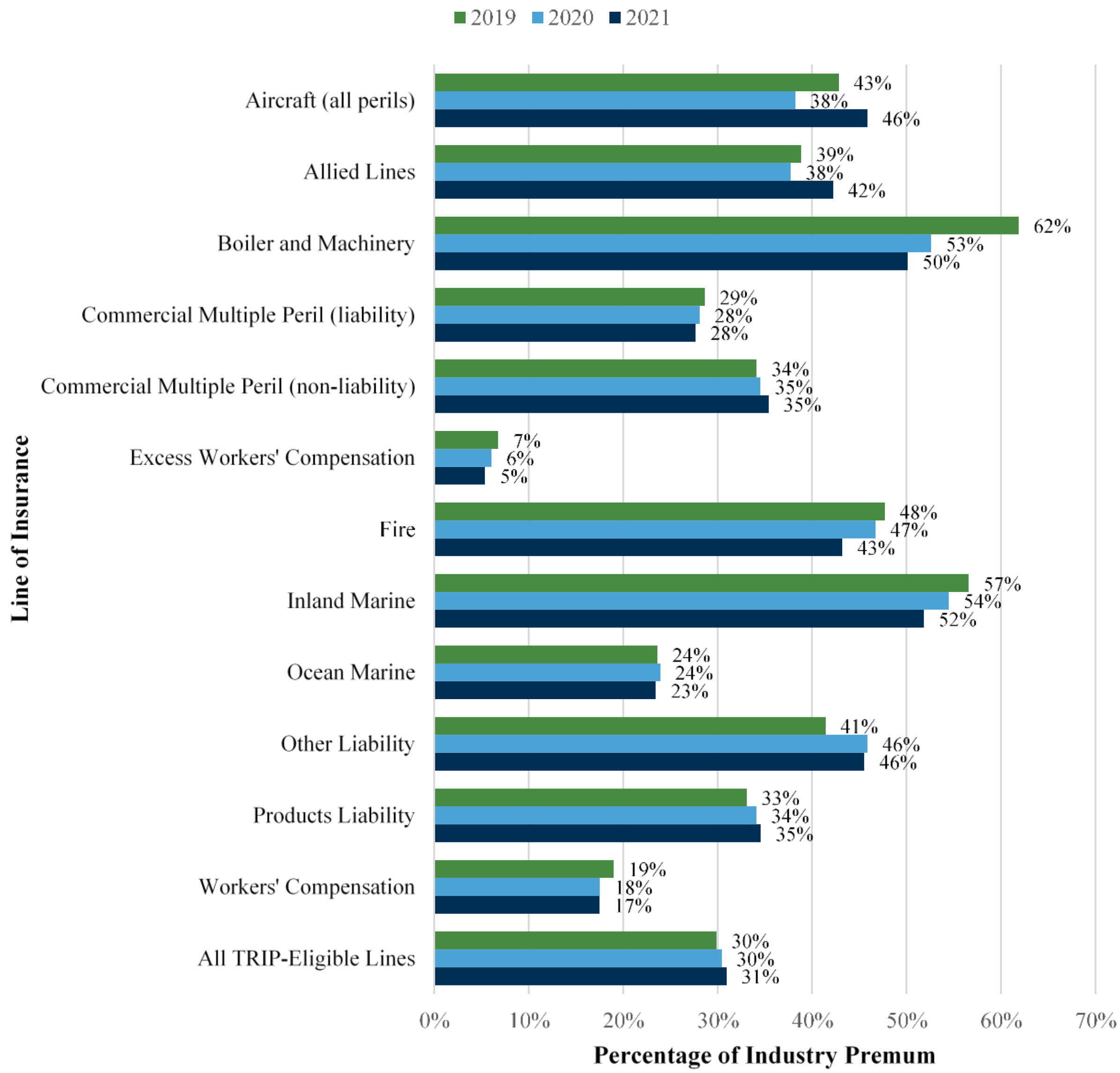


Source: 2020-2022 TRIP data calls.

[73] The premiums for embedded terrorism risk insurance are slightly overstated because total premiums contain a small amount of premium for standalone policies that cannot be removed on a line-by-line basis. When removed from the total figures, however, the total premiums decline by only a few hundredths of a percentage point, rounding to 2.9 percent in 2021.

Figure 5 identifies policies where terrorism risk coverage is provided for no additional charge.

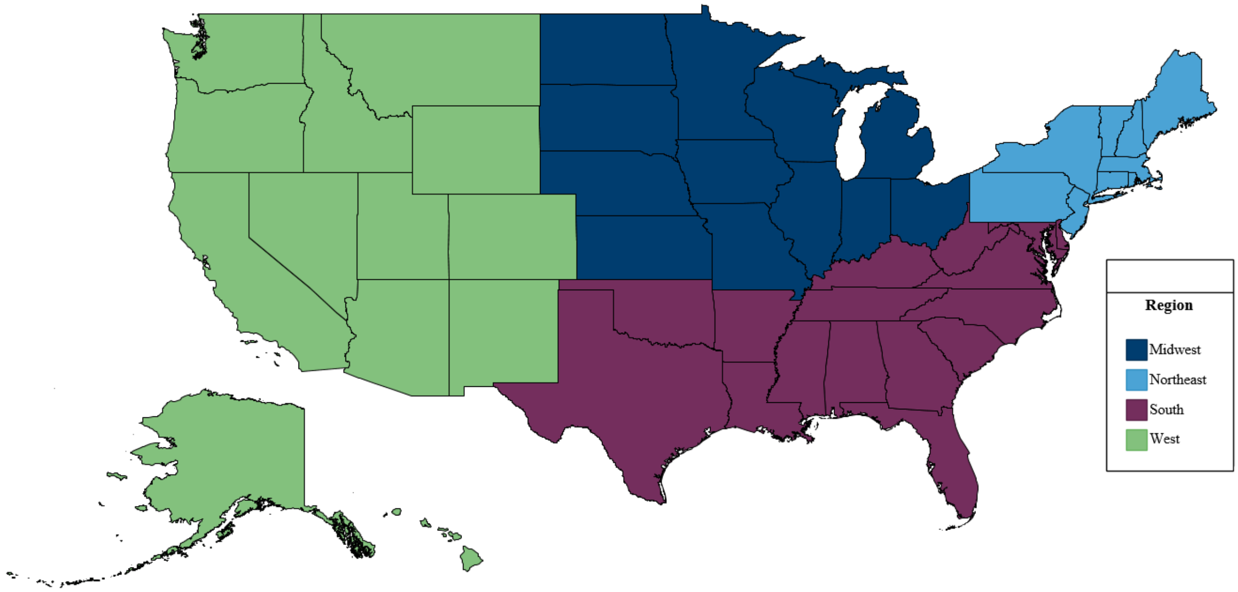
Figure 5: Percentage of DEP Where Policies Include Terrorism Coverage at No Additional Charge



Source: 2020-2022 TRIP data calls

Charges for terrorism risk coverage vary not only by line of insurance but also by geographic area. For purposes of analysis by geographic area, Treasury generally uses either the four U.S. Census Regions (shown in Figure 6) or individual state jurisdictions.

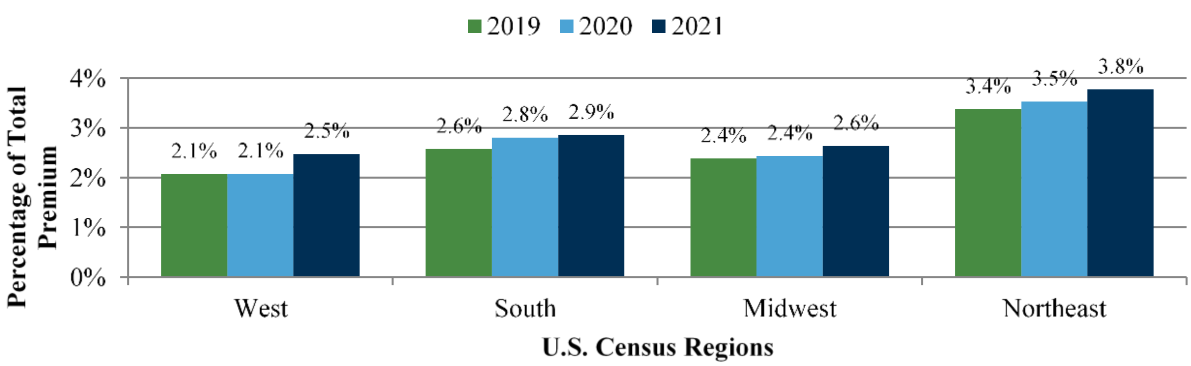
Figure 6: U.S. Census Regions



Source: U.S. Census Bureau

Figure 7 illustrates the percentage of total premiums charged for terrorism risk insurance by region.

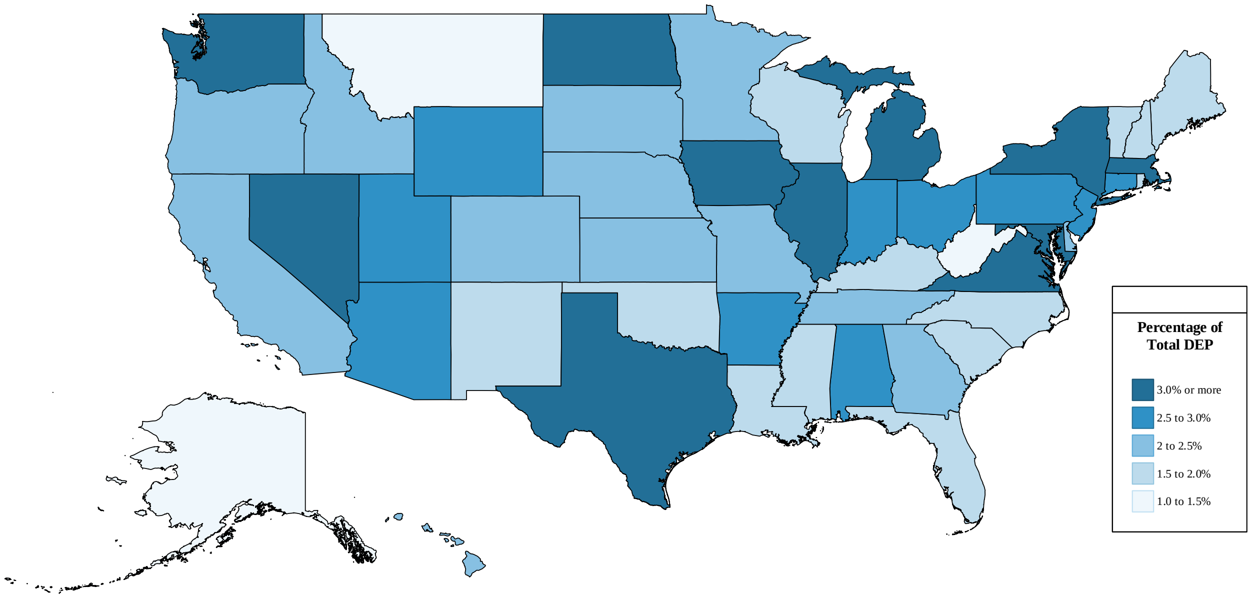
Figure 7: Percentage of Total Policy DEP Allocated to Terrorism Risk (By Region)



Source: 2020-2022 TRIP data calls

Figure 8 illustrates the percentage of total direct earned premiums for terrorism risk insurance by state.

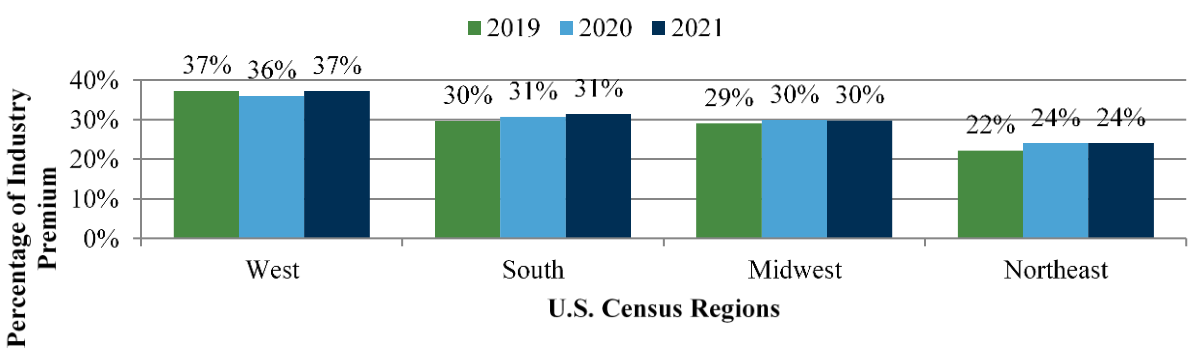
Figure 8: 2021 Percentage of Total Policy DEP Allocated to Terrorism Risk (By State)



Source: 2022 TRIP data call

Figure 9 illustrates where terrorism risk insurance was provided for no additional charge by region.

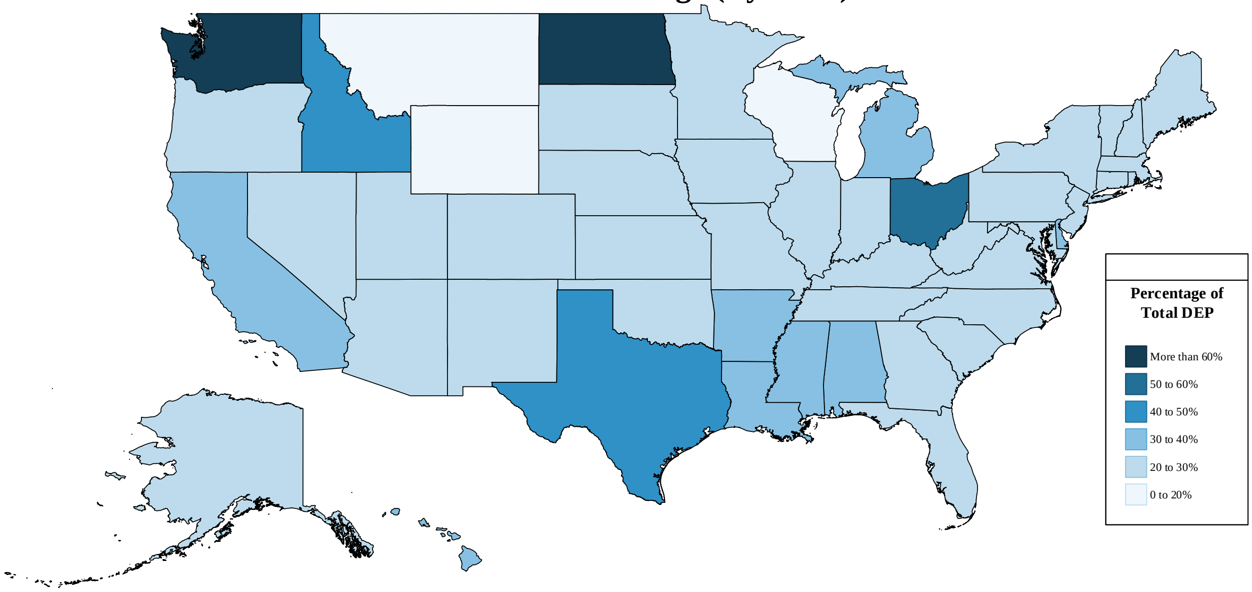
Figure 9: Percentage of DEP Where Policies Include Terrorism Coverage at No Additional Charge (By Region)



Source: 2020-2022 TRIP data calls

Figure 10 illustrates where terrorism risk insurance was provided for no additional charge by state.

Figure 10: 2021 Percentage of DEP Where Policies Include Terrorism Coverage at No Additional Charge (By State)

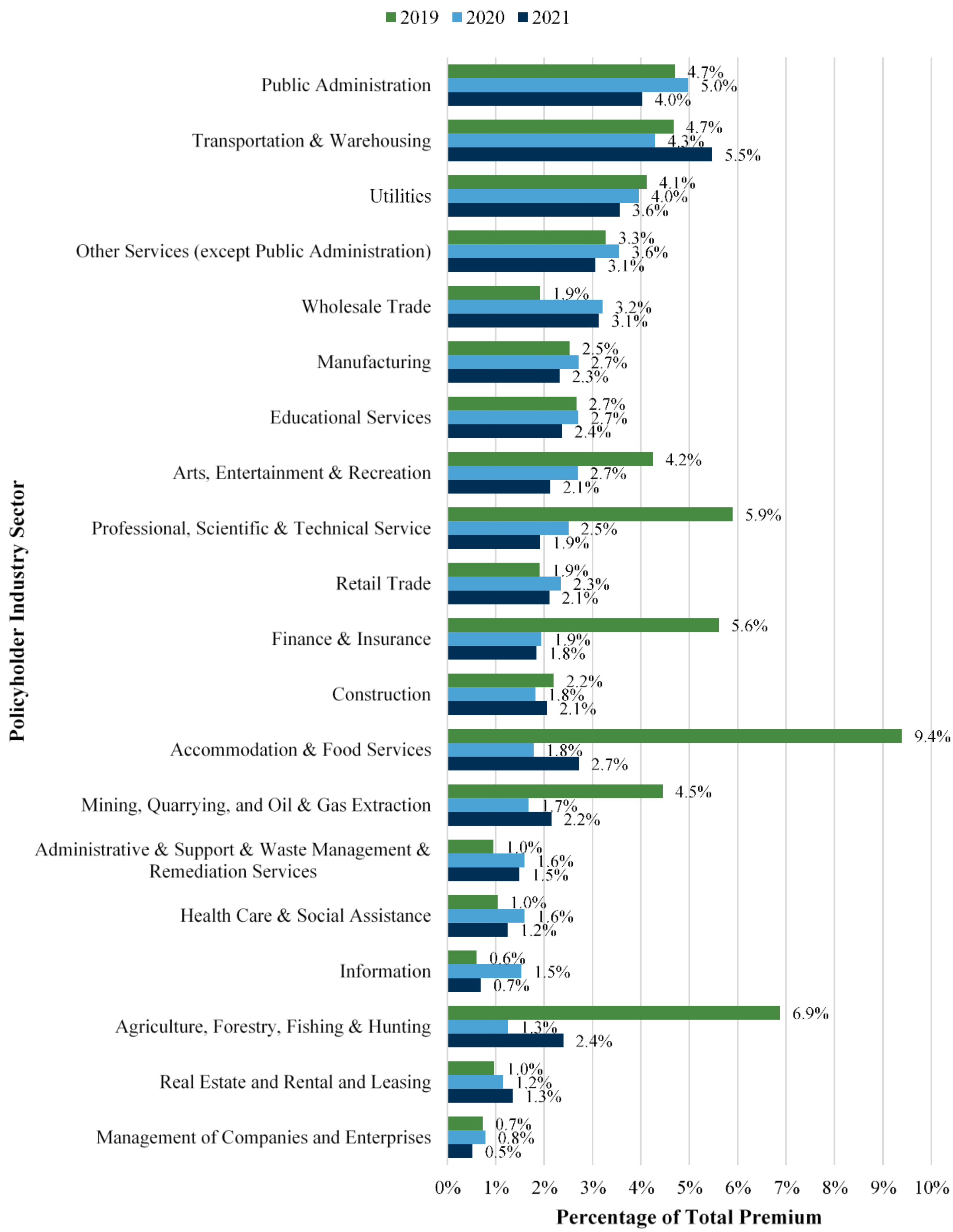


Source: 2022 TRIP data call

Charges for terrorism risk insurance also vary by the policyholder's industry sector. Figure 11 illustrates the policyholder industry sectors of terrorism risk insurance premiums as a percentage of total insurance premiums, as reported by non-small and alien surplus line insurers.[74]

[74] Policyholder industry code data was not requested from small insurers. Industry code data for policyholders insured by captive insurers is provided in Section VI.B.

Figure 11: Percentage of Total Policy DEP Allocated to Terrorism Risk for Non-Small and Alien Surplus Lines Insurers (By Policyholder Industry Sector)



Source: 2020-2022 TRIP data calls

The data from the 2020-2022 TRIP data calls demonstrates that terrorism risk insurance provided on an embedded basis continues to be priced at a relatively small percentage of the total premiums charged for policies, approximately 3.0 percent on average when a charge is made, although that figure has increased slightly over recent years. Additionally, approximately 31 percent of the time, as measured by DEP, terrorism risk insurance is provided for no additional charge–a figure that has also increased slightly. Charges for terrorism risk insurance do vary to some extent by line of insurance, geographic area, and the policyholder's industry sector.

2. Standalone Terrorism Risk Insurance

Standalone terrorism risk insurance policies only provide coverage for losses arising from terrorism, unlike policies providing terrorism risk insurance on an embedded basis. As reported by industry sources, standalone coverage is purchased primarily by organizations that are viewed by insurers as being at relatively high risk of loss due to terrorism in the following situations: when terrorism coverage is not available as part of the commercial property policy, when the price of terrorism coverage from the insurer providing the commercial property policy is too high, or when the terrorism coverage offered by the insurer providing the commercial property policy is too narrow.[75]

Standalone terrorism coverage can be provided either through "certified" standalone terrorism risk policies which are written subject to the terms and conditions of TRIP or through "non-certified" standalone terrorism policies which do not meet the terms and conditions of TRIP. Non-certified standalone terrorism policies therefore insure terrorism-related losses (as defined in the specific policy) regardless of whether the Secretary has certified an act of terrorism under TRIA. Any losses paid by insurers under non-certified standalone terrorism risk policies would not be eligible for reimbursement under TRIP.

As shown in Figure 12, DEP under certified standalone terrorism risk insurance policies accounted for a higher percentage than total DEP earned under non-certified standalone policies.[76]

Figure 12: Percentage of Standalone Policies that are Certified Versus Non-Certified (By DEP)

	Certified Policies			Non-Certified Policies		
	2019	2020	2021	2019	2020	2021
Alien Surplus Lines Insurers	32.4%	47.8%	55.4%	67.6%	52.2%	44.6%
Captive Insurers	94.5%	86.6%	90.4%	5.5%	13.4%	10.0%
Non-Small Insurers	34.8%	54.5%	55.2%	65.2%	44.6%	44.5%
All Insurer Categories	**67.4%**	**67.0%**	**76.1%**	**32.6%**	**32.7%**	**23.3%**

Source: 2020-2022 TRIP data calls

[75] "Stand Alone Terrorism Coverage," International Risk Management Institute, https://www.irmi.com/online/insurance-glossary/terms/s/stand-alone-terrorism-coverage.aspx.

[76] Small insurers have not reported any meaningful amount of terrorism risk insurance identified as standalone terrorism coverage for the last three reporting periods and are accordingly omitted from the analyses in this section.

The data also suggests that standalone terrorism policies in each insurer category can vary significantly in terms of cost and whether they provide coverage under TRIA. Figure 13 illustrates the average cost for standalone terrorism policies, by insurer category, depending upon whether certified or non-certified coverage is provided.

Figure 13: 2021 Certified Standalone Versus Non-Certified Standalone Policies by Policy Count and DEP

	Certified Standalone Policies			Non-Certified Standalone Policies		
	# of Policies	Total DEP	Average Policy Cost	# of Policies	Total DEP	Average Policy Cost
Alien Surplus Lines Insurers	5,485	$ 96,097,857	$ 17,520	2,478	$ 77,429,914	$ 31,247
Captive Insurers	295	464,407,081	1,574,261	3	51,215,658	17,071,886
Non-Small Insurers	2,504	85,582,062	34,178	1,800	68,870,881	38,262
All Insurer Categories	**8,284**	**$ 646,087,000**	**$ 1,625,960**	**4,281**	**$ 197,516,453**	**$ 17,141,395**

Source: 2022 TRIP data call

The TRIP data calls do not request information on the total coverage (i.e., policy limits) provided under non-certified standalone policies, and the disparity in average policy cost between certified and non-certified policies may be due to differences in the relative size or nature of exposures covered under each type of policy. However, the disparity could also indicate a higher cost associated with non-certified standalone policies compared to certified standalone policies. Treasury cannot determine, based upon the data, the extent to which the cost difference is due to the lack of federal support for non-certified policies, higher policy limits under non-certified policies, a combination of these factors, or other considerations. For non-small insurers, the data for 2021 does not reflect any significant difference in the relative cost of the different types of standalone terrorism policies. Alien surplus lines insurers and captive insurers reported a higher total average cost for non-certified standalone policies than the cost charged for certified policies. Treasury will continue to monitor and assess these issues.

Certified standalone terrorism risk insurance policies, which do provide TRIA coverage, account for under one-fifth of all terrorism risk insurance DEP subject to the Program (15.8 percent in 2021), with the balance of approximately 84 percent earned through embedded policies. However, the cost of coverage under certified standalone policies is also significantly higher than the cost of coverage under embedded policies. Measured by the limits of liability of all policies insuring terrorism risk under the Program, certified standalone policies accounted for about 0.5 percent of total policy limits in 2021.

Figure 14 shows the amount of premium charged per $1 million in coverage under embedded policies compared to standalone policies covering TRIA-certified events.

Figure 14: Embedded Policies Versus Certified Standalone Policies: Premium Charged Per $1 Million in Policy Limits

	Embedded Terrorism			Standalone Terrorism		
	2019	2020	2021	2019	2020	2021
Alien Surplus Lines Insurers	$ 121	$ 92	$ 37	$ 176	$ 496	$ 190
Captive Insurers	861	766	980	1,195	897	939
Non-Small Insurers	9	18	19	67	151	265
All Insurer Categories	15	26	26	438	558	488

Source: 2020-2022 TRIP data calls

As noted above, the data indicates that the rate charged for terrorism coverage under embedded policies is typically lower than the rate charged for standalone policies. This indicates that standalone policies are more likely to be issued to policyholders viewed as presenting exposures subject to a higher risk of terrorism attack.

D. Take-Up Rates for Terrorism Risk Insurance

TRIA requires an offer—but does not mandate the purchase—of terrorism risk insurance.[77] Therefore, the extent to which terrorism risk insurance is purchased by policyholders (the take-up rate) may approximate the distribution of insured payments in the event of a terrorist attack. A higher take-up rate means that the losses arising from a terrorist attack will be more likely to be covered by private insurers.

A take-up rate based on the number of policies will be likely influenced by the large number of small policies covering risks with lower insured values. Alternatively, a take-up rate measured by DEP or policy limits will be more influenced by policies covering larger businesses with more insured property and liability exposure. The latter comes closer to reflecting the amount of insured business activity in the economy.

Analyses by Treasury between 2005 and 2014 found that the take-up rate, when measured by the percentage of policies containing terrorism coverage, increased from 27 percent in 2003 (the first full year of the Program) to approximately 60 percent by 2006.[78] In its *2020 Effectiveness Report*, Treasury found the take-up rates to be higher, ranging from 63 percent to 79 percent

[77] The take-up rate data discussed in this section do not consider workers' compensation, which has a 100 percent take-up rate as a matter of state law. Section VII discusses the impact of the Program on workers' compensation insurers.

[78] Office of Economic Policy, U.S. Department of the Treasury, *Assessment: The Terrorism Risk Insurance Act of 2002* (2005), 3, 84, https://www.treasury.gov/resource-center/fin-mkts/Documents/tria_studyby_treas.pdf; President's Working Group on Financial Markets (PWG), *Terrorism Risk Insurance: Report of the President's Working Group on Financial Markets* (2006), 42-44, https://home.treasury.gov/system/files/311/report.pdf; PWG, *Market Conditions for Terrorism Risk Insurance 2010* (2010), 23, https://www.treasury.gov/resource-center/fin-mkts/Documents/PWG%20Report%20Final%20January%2013.pdf; PWG, *The Long-Term Availability and Affordability of Insurance for Terrorism Risk* (2014), 30, https://www.treasury.gov/resource-center/fin-mkts/Documents/PWG_Terrorism_2014.pdf.

depending upon the year, and whether take up was measured by policy count, DEP, or insured values.[79]

Figure 15 illustrates the take-up rates in 2020 by policy count, DEP, and property and liability policy limits. Information is based upon alien surplus lines, non-small, and small insurer reported data.[80]

Figure 15: 2020 Terrorism Risk Insurance Take-Up Rates by Policy Count, DEP, and Policy Limits (by Insurer Category)

	Policy Count	DEP	Property Limits	Liability Limits
Alien Surplus Lines Insurers	30%	44%	40%	77%
Non-Small Insurers	79%	60%	64%	53%
Small Insurers[81]	N/A	66%	37%	61%
All Insurer Categories	**76%**	**59%**	**62%**	**55%**

Source: 2021 TRIP data call

Figure 16 illustrates the take-up rates in 2021 by the same measures.

Figure 16: 2021 Terrorism Risk Insurance Take-Up Rates by Policy Count, DEP, and Policy Limits (by Insurer Category)

	Policy Count	DEP	Property Limits	Liability Limits
Alien Surplus Lines Insurers	31%	45%	35%	95%
Non-Small Insurers	77%	61%	61%	44%
Small Insurers[82]	N/A	60%	51%	63%
All Insurer Categories	**75%**	**60%**	**59%**	**51%**

Source: 2022 TRIP data call

Similar to the price of terrorism risk insurance, the take-up rate of terrorism risk insurance also varies by the geographic region of the United States, and by state. In its *2020 Effectiveness Report*, Treasury found that take-up rates varied by region in 2018 and 2019, with higher rates observed in the Northeast than in other regions when measured by DEP, but not when other methods of measurement were considered.[83] Figure 17 shows the 2020 take-up rates indicated for the Northeast, Midwest, South, and West regions, using the same benchmarks of policy count, DEP, and insured value.

[79] FIO, *2020 Effectiveness Report*, 29.

[80] Captive insurers do not present similar issues to admitted insurers with respect to take-up rates, because the decision of a captive owner to insure its terrorism risk exposure with a captive insurer is a self-insurance decision as opposed to a market decision (although the cost of terrorism risk insurance in the marketplace at large may influence the decision to self-insure through a captive insurer). The captive insurance market for terrorism risk insurance is addressed in Section VI.B.

[81] Treasury did not require small insurers to provide policy count information in the 2021 TRIP data call.

[82] Treasury did not require small insurers to provide policy count information in the 2022 TRIP data call.

[83] FIO, *2020 Effectiveness Report*, 30-31.

Figure 17: 2020 Terrorism Risk Insurance Take-Up Rates by Policy Count, DEP, and Insured Value (by Region)

	Policy Count	DEP	Property Limits	Liability Limits
Northeast	68%	63%	65%	56%
Midwest	80%	63%	69%	58%
South	75%	57%	56%	53%
West	80%	57%	59%	51%
All Regions	**76%**	**60%**	**61%**	**54%**

Source: 2021 TRIP data call

Figure 18 shows the 2021 take-up rates using the same metrics.

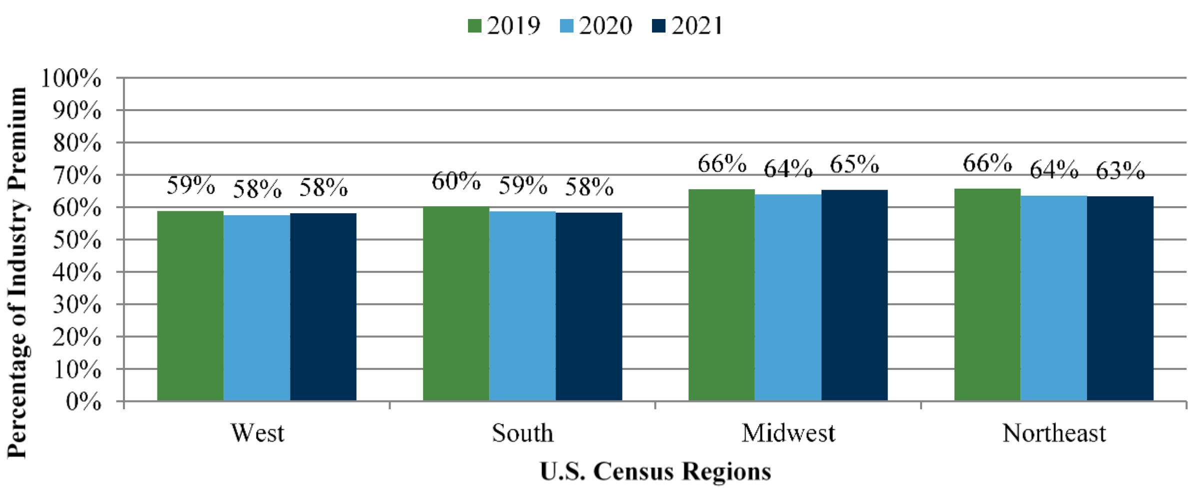
Figure 18: 2021 Terrorism Risk Insurance Take-Up Rates by Policy Count, DEP, and Insured Value (by Region)

	Policy Count	DEP	Property Limits	Liability Limits
Northeast	68%	63%	66%	55%
Midwest	79%	64%	68%	46%
South	73%	57%	52%	46%
West	79%	58%	56%	45%
All Regions	**75%**	**60%**	**59%**	**47%**

Source: 2022 TRIP data call

Figure 19 illustrates take-up rates, based upon DEP, by region.[84]

Figure 19: Terrorism Risk Insurance Take-Up Rates By DEP (by Region)

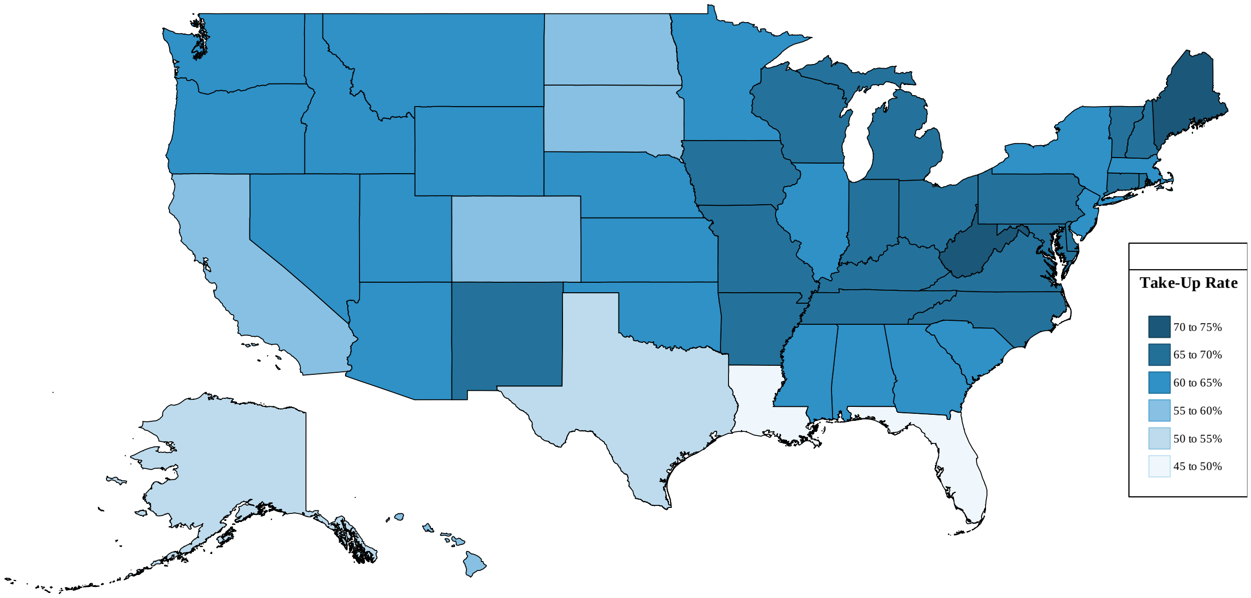


Source: 2020-2022 TRIP data calls

[84] Similar to the other analyses by region, the information illustrated is based upon non-small and small insurer reporting only.

Figure 20 illustrates take-up rates, based upon DEP, by state (for 2021 only).

Figure 20: 2021 Terrorism Risk Insurance Take-Up Rates by DEP (By State)

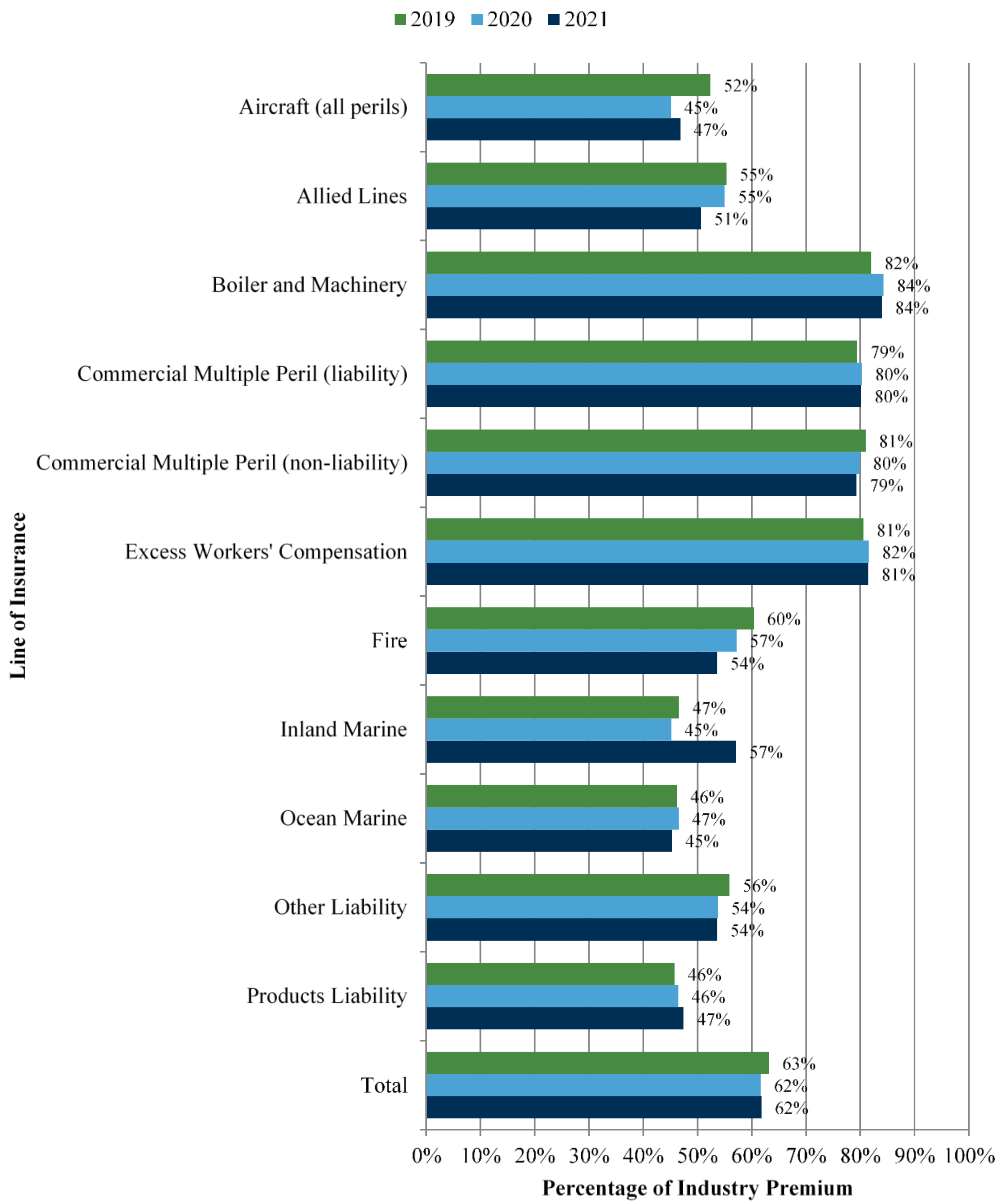


Source: 2022 TRIP data call

The Appendices provide further detail on how take-up may vary by state, type of insurance, and small versus non-small insurers. Appendix 1 contains a table setting forth the 2021 take-up rates presented in Figure 20 by state for both small and non-small insurers combined, as well as additional detail on small and non-small insurers. Appendix 2 provides more detailed take-up information for small and non-small insurers, by state and by groups of TRIP-eligible lines of insurance.

Take-up rates also vary by individual line of insurance. Figure 21 shows the take-up rate within each TRIP-eligible line of insurance (excluding workers' compensation), by DEP.

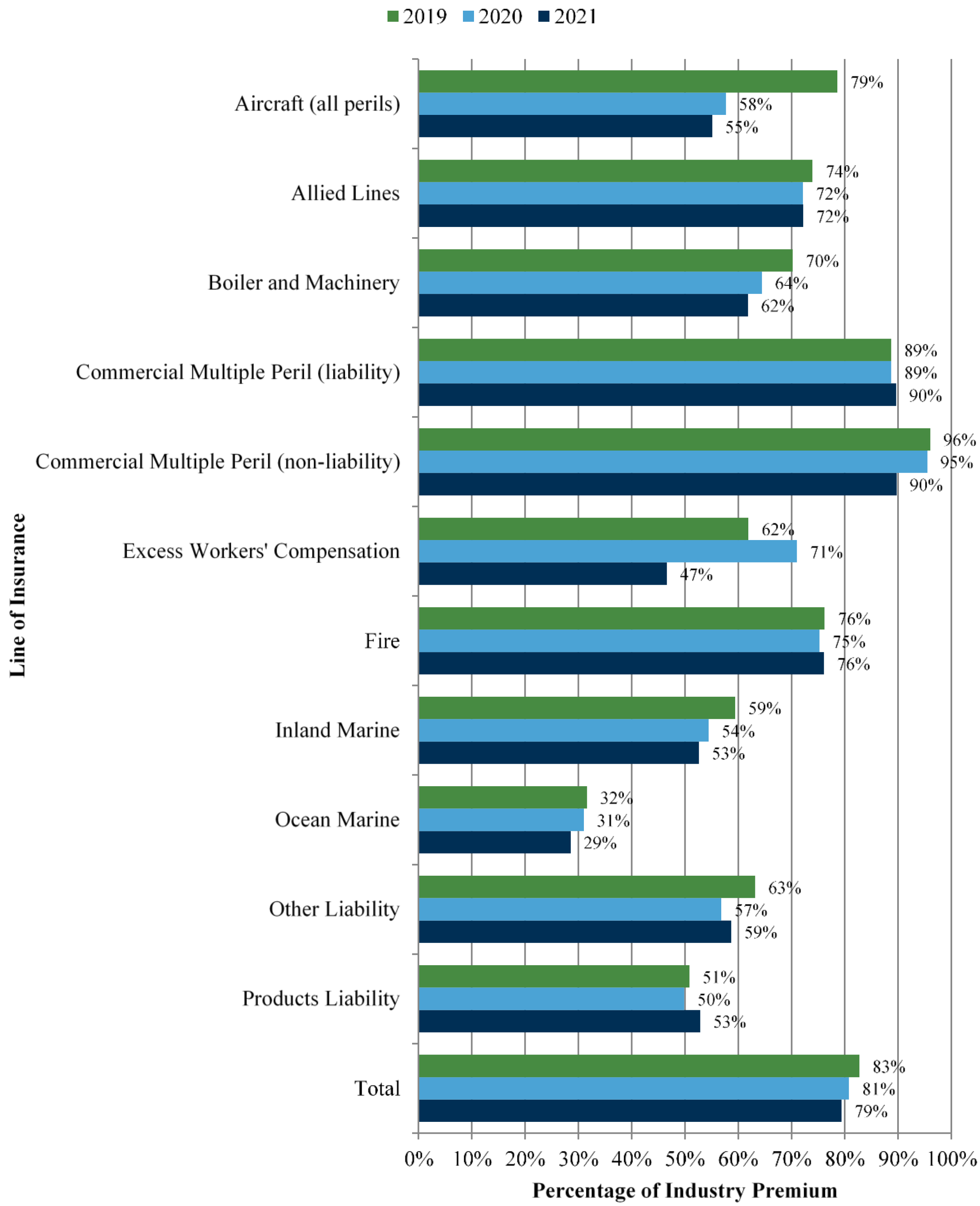
Figure 21: Terrorism Risk Insurance Take-Up Rates in TRIP-Eligible Lines (by DEP)



Source: 2020-2022 TRIP data calls

Figure 22 shows the take-up rate by policy count.

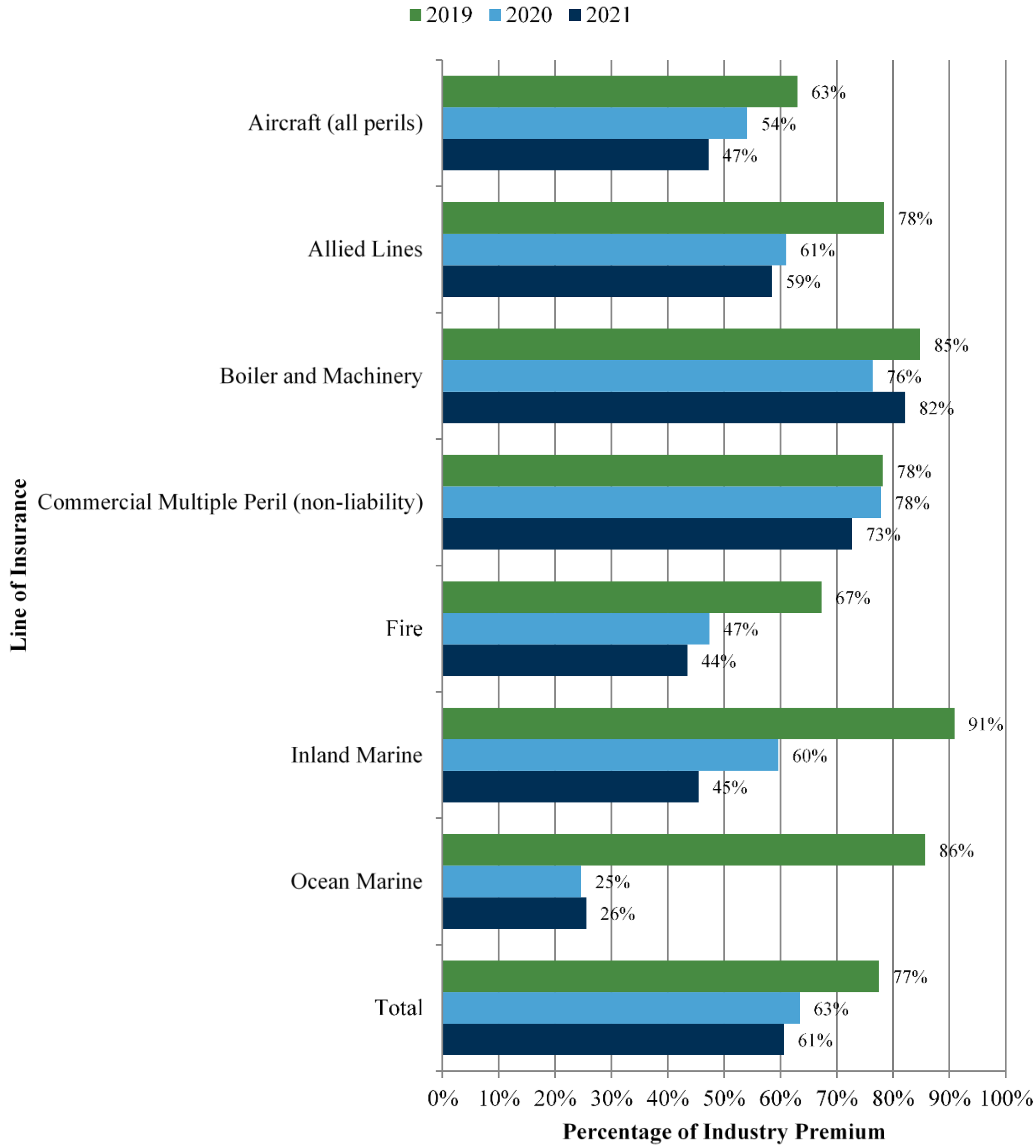
Figure 22: Terrorism Risk Insurance Take-Up Rates in TRIP-Eligible Lines (by Policy Count)



Source: 2020-2022 TRIP data calls

Figure 23 shows the take-up rate in TRIP-eligible property lines by property policy limits.

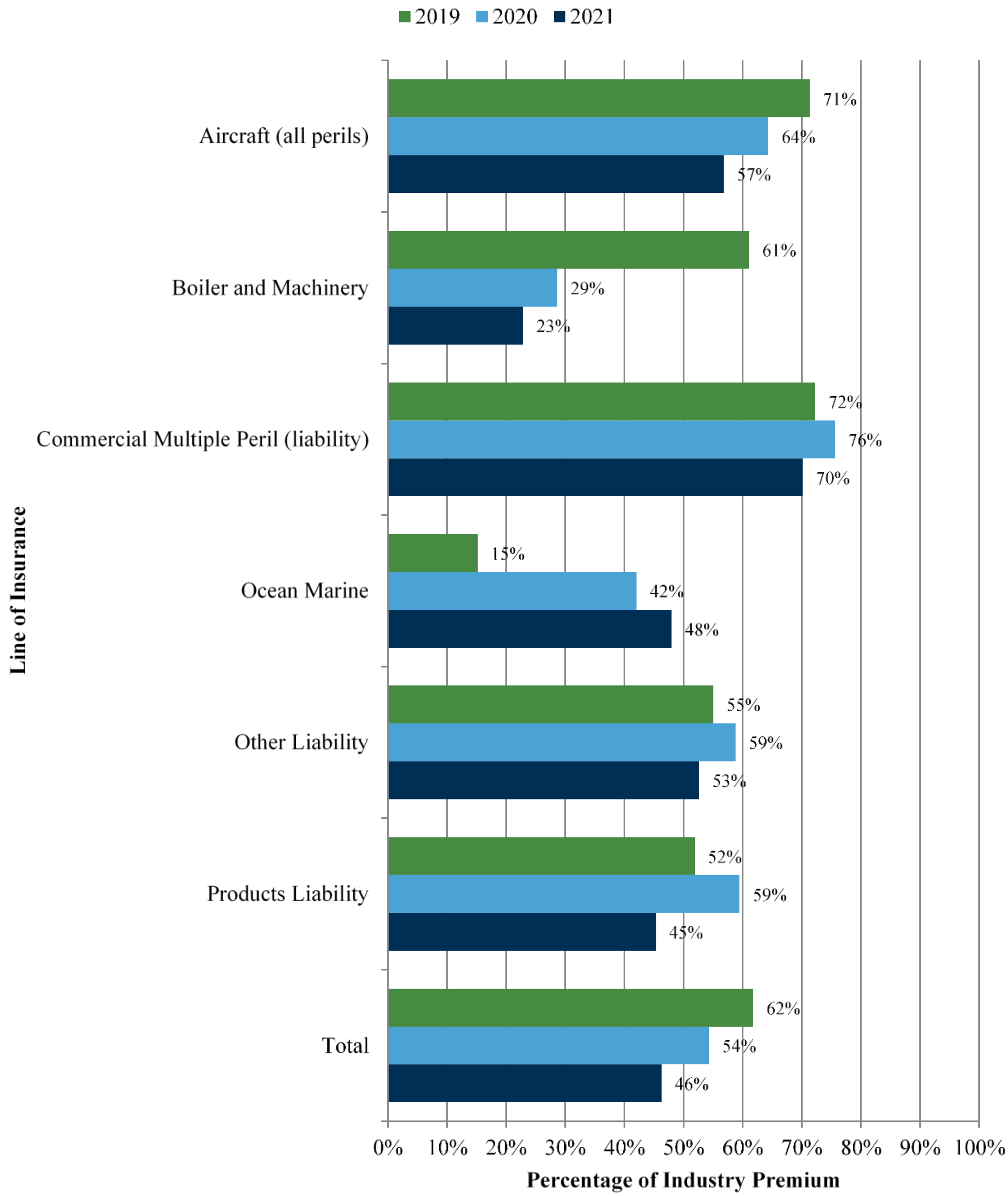
Figure 23: Terrorism Risk Insurance Take-Up Rates in TRIP-Eligible Lines (by Property Policy Limits)



Source: 2020-2022 TRIP data calls

Figure 24 shows the take-up rate in TRIP-eligible lines by liability policy limits.

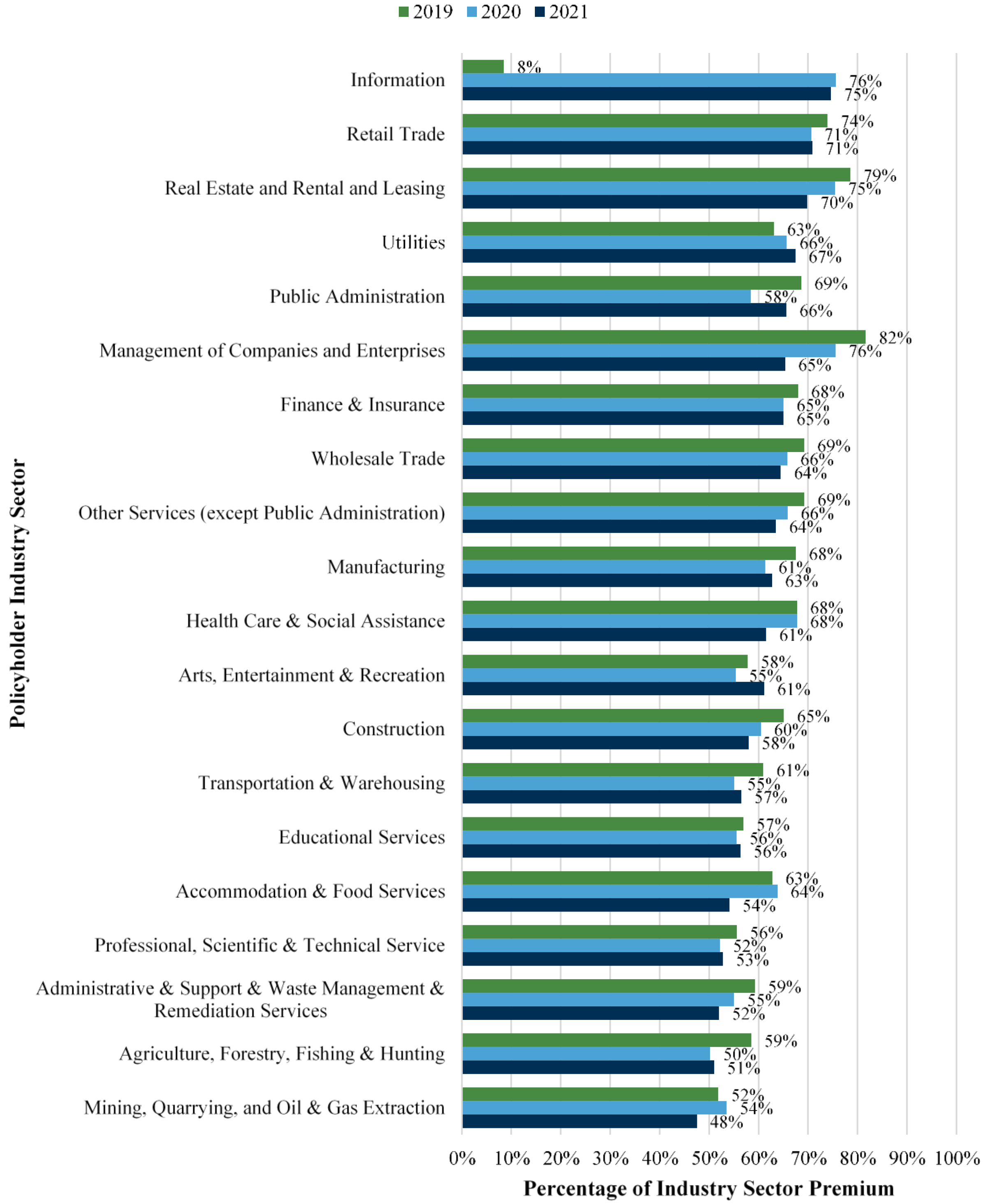
Figure 24: Terrorism Risk Insurance Take-Up Rates in TRIP-Eligible Lines (by Liability Policy Limits)



Source: 2020-2022 TRIP data calls

Take-up rates also vary by policyholder industry sector, as illustrated by Figure 25.

Figure 25: Terrorism Risk Insurance Take-Up Rates by Policyholder Industry Sector (by TRIP-Eligible DEP)[85]



Source: 2020-2022 TRIP data calls

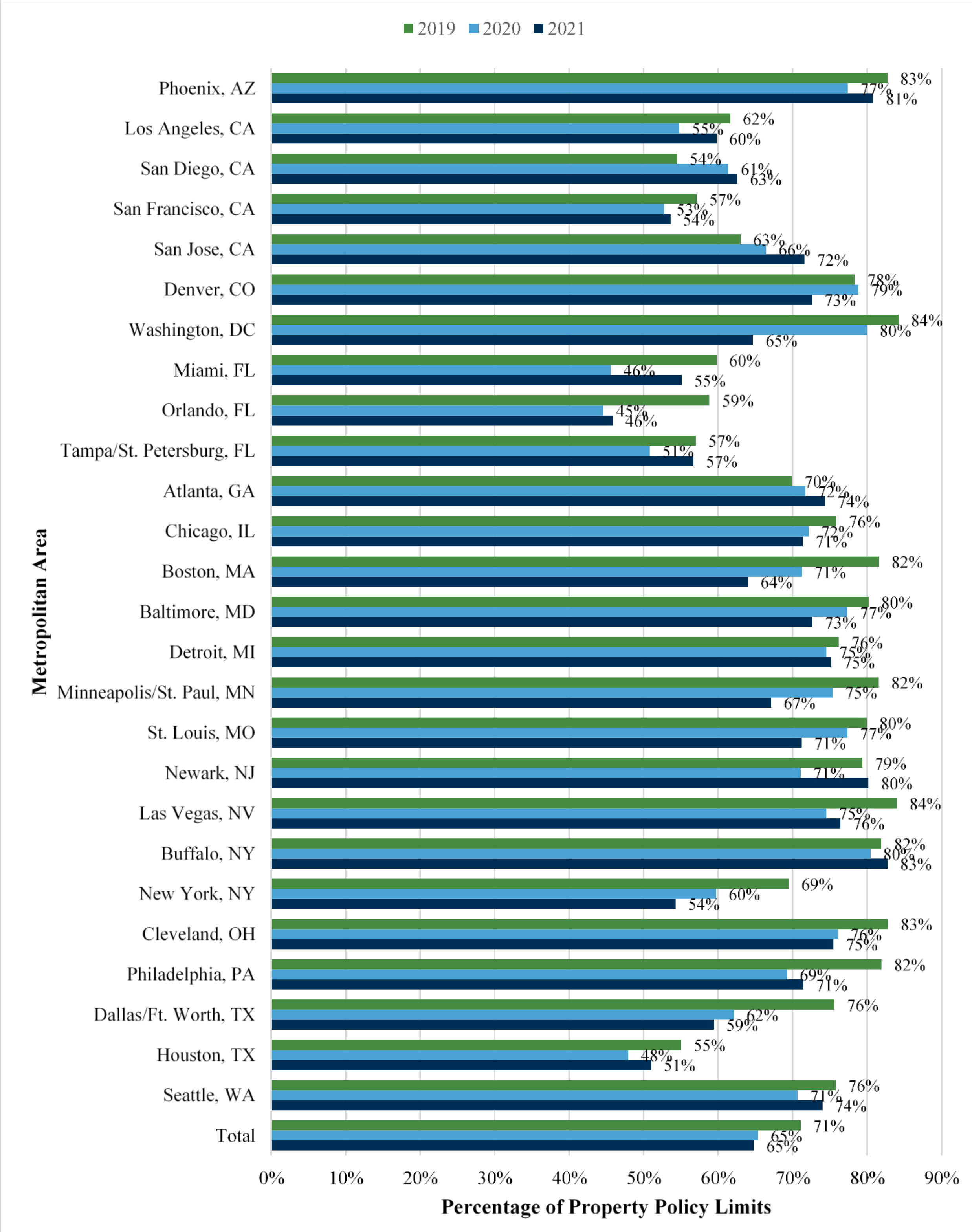
Treasury also requested more specific data from non-small, alien surplus lines, and captive insurers concerning risk exposures in 26 specific metropolitan areas.[86] This information addressed, among other things, the policy property limits assumed by each reporting insurer that are subject to the Program (as well as by those not subject to the Program because terrorism risk insurance was not obtained). In the 2020-2022 TRIP data calls, about 98 percent of the reported policy exposures were identified with a particular geographic region—either a specific metropolitan area, or in the balance of the United States not associated with the specified metropolitan areas.[87] Furthermore, the results obtained for each specified metropolitan area show that the aggregate reported policy property limits are generally proportional to gross domestic product in most metropolitan areas, thus generally validating the data reported by insurers.[88] Figure 26 illustrates the combined results obtained from the 2020-2022 TRIP data calls.

[86] The metropolitan areas identified are identical to those utilized by A.M. Best when considering the terrorism risk exposures of the companies it evaluates.

[87] Reporting insurers were also permitted to identify premiums by geographic region in an "unknown" category, indicating that the policy exposure could not be retrieved by geographic location, whether by one of the specified metropolitan areas or in the balance of the United States. Although the "unknown" category has accounted for higher percentages in TRIP data calls before 2020, the figure has only been about 2 percent per year since the 2020 TRIP data call.

[88] *See generally* "Regional Data," Bureau of Economic Analysis https://www.bea.gov/iTable/iTableHtml.cfm?reqid=70&step=1&isuri=1.

Figure 26: Terrorism Risk Insurance Take-Up Rates by Metropolitan Area (by Policy Property Limits)



Source: 2020-2022 TRIP data calls

Take-up rates by property exposure for areas outside a defined metropolitan area were reported to be 67 percent in 2019, 68 percent in 2020, and 70 percent in 2021—figures comparable to the indicated figures for all metropolitan areas combined (71 percent in 2019, 65 percent in 2020, and 65 percent in 2021). The exposure that is covered under the Program in all other areas in the United States is significant and exceeds the total property limits covered in the 26 metropolitan areas. Based upon the results of the data calls, 67.1 percent of all insured property exposures under the Program fell within the "all other locations in the United States" category in 2019 versus 32.9 percent in the identified metropolitan areas. In 2020, the reported figures were 68.6 percent and 31.4 percent, respectively, and in 2021 they were 69.1 percent and 30.9 percent, respectively.

E. Availability and Affordability of Terrorism Risk Insurance for Places of Worship

The 2019 Reauthorization Act modified TRIA to require that, in reports concerning the effectiveness of the Program, the Secretary provide "an evaluation of the availability and affordability of terrorism risk insurance, which shall include an analysis of such availability and affordability of terrorism risk insurance specifically for places of worship."[89] Although Treasury had previously analyzed the availability and affordability of terrorism risk insurance generally as a measure of the effectiveness of the Program, Treasury had not previously collected information specific to places of worship in its annual data calls. Treasury modified its data call beginning in 2020 by including a new reporting worksheet specifically addressing coverage issued to places of worship.[90]

The Places of Worship worksheet seeks premium information, allocated by whether the policyholder obtained terrorism risk insurance in the general categories of property, liability, and workers' compensation insurance. The codes specified for reporting are limited to religious organizations,[91] which are intended to best approximate the premises associated with places of worship. The information collected can be analyzed to assess the take-up and cost of terrorism risk insurance by places of worship, which is how Treasury typically evaluates whether such insurance is available and affordable in the marketplace.

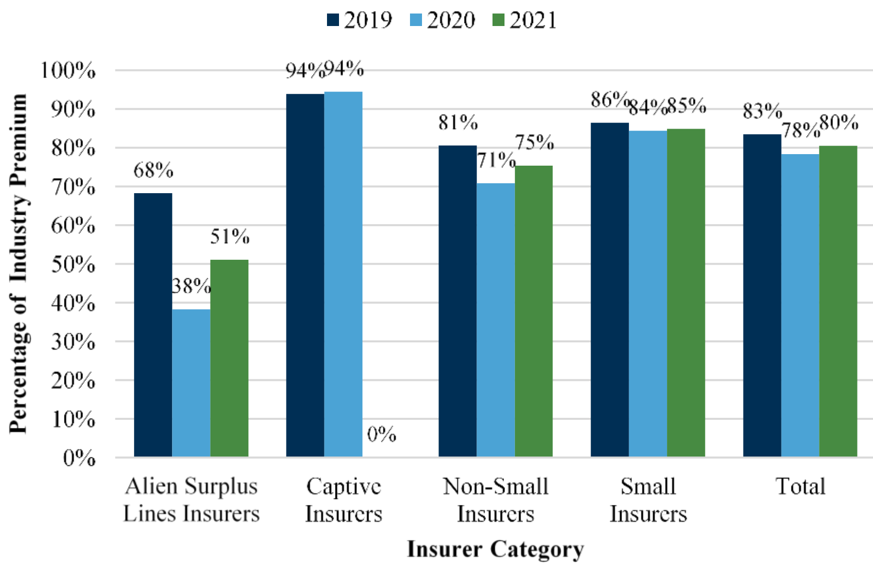
Figures 27 and 28 show the take-up of terrorism risk insurance by places of worship, by premium, by insurer category and type of coverage.

[89] 2019 Reauthorization Act, § 502(c); TRIA §104(h)(2)(B).

[90] *See* FIO, *2020 Effectiveness Report*, 40.

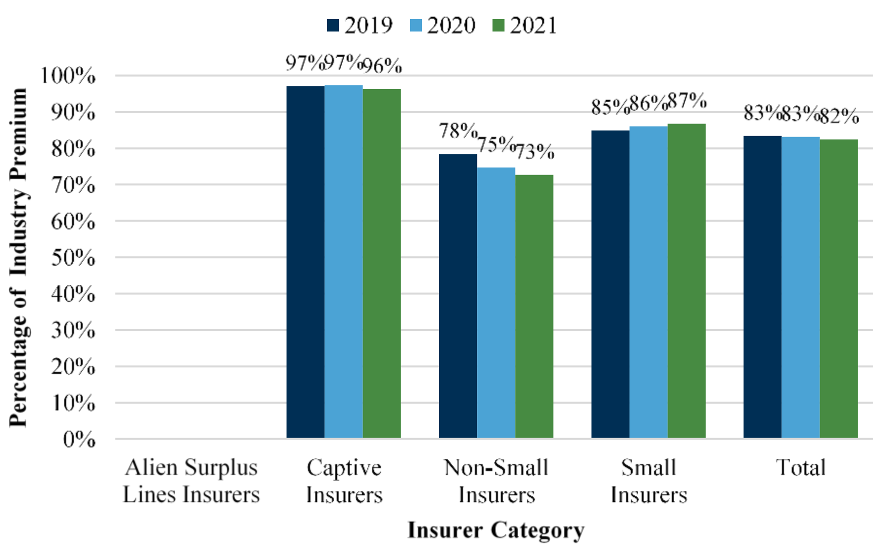
[91] The Places of Worship worksheet permits reporting by the specified North American Industrial Coding System (NAICS) code, Standard Industrial Classifications (SIC) code, or Insurance Services Office (ISO) Class Codes, as well as by other methodologies that are calculated to isolate the premium of reporting insurers associated with places of worship. The worksheet instructions state that premium associated with religious-affiliated institutions (such as hospitals or schools) that are not principally places of worship should not be reported. All insurers subject to the data call were required to complete the Places of Worship worksheet.

Figure 27: Terrorism Risk Insurance Take-Up Rates by Places of Worship (by Property Premium) (by Insurer Category)



Source: 2020-2022 TRIP data call

Figure 28: Terrorism Risk Insurance Take-Up Rates by Places of Worship (by Liability Premium) (by Insurer Category)[92]

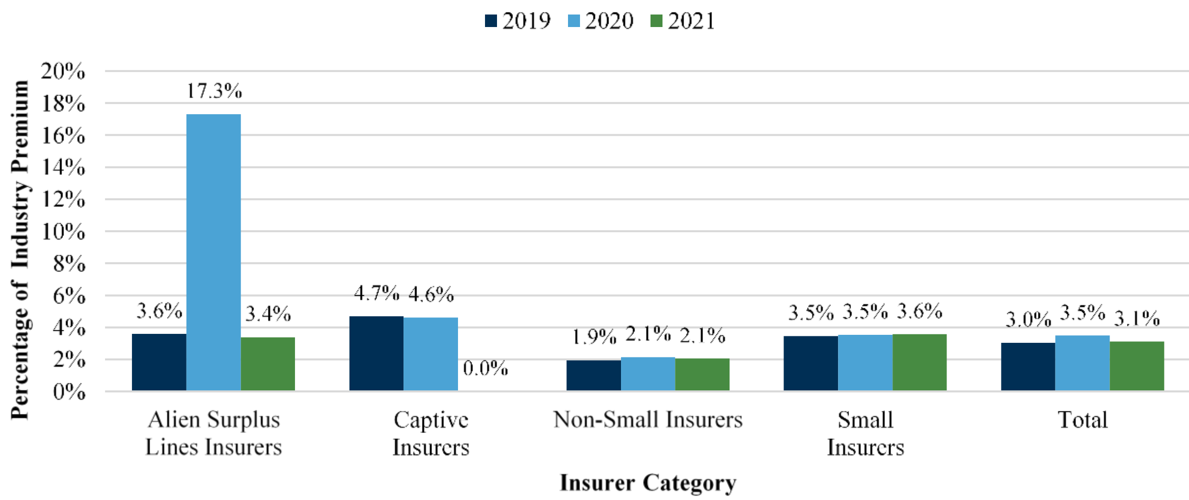


Source: 2020-2022 TRIP data call

[92] Insufficient liability premium was reported by alien surplus lines insurers to permit any meaningful comparisons.

Figure 29 shows the percentage charge, by property premium, for places of worship, by insurer category; Figure 30 shows the same percentage charge information based upon liability premium.[93]

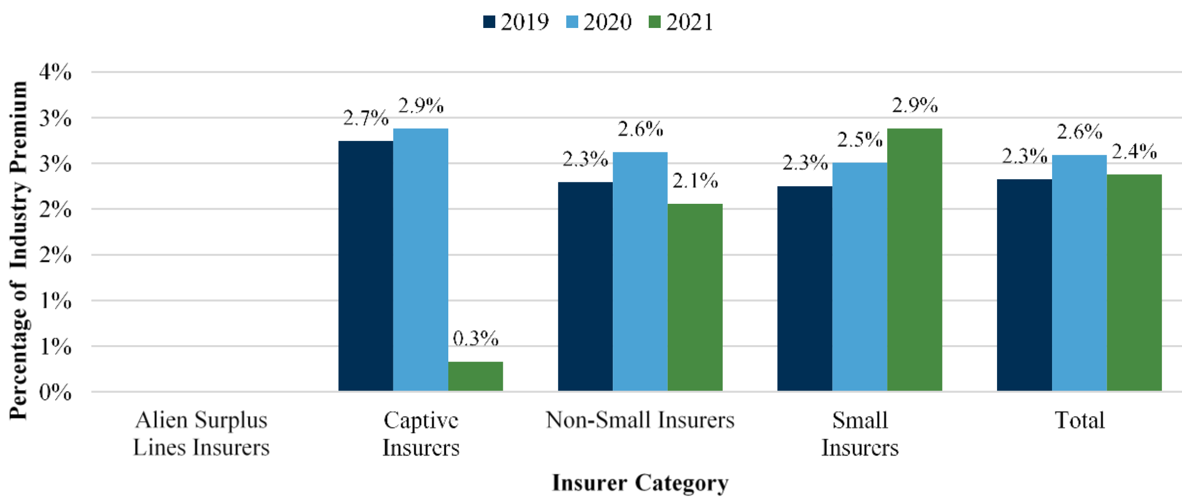
Figure 29: Percentage of Total Policy Property DEP Allocated to Terrorism Risk for Places of Worship (by Insurer Category)



Source: 2022 TRIP data call

[93] Treasury did not collect information when a $0 premium for terrorism risk insurance was identified for places of worship. Therefore, this cost analysis is based upon the total amount of terrorism risk premium charged against TRIP-eligible lines premium where terrorism risk insurance was provided.

Figure 30: Percentage of Total Policy Liability DEP Allocated to Terrorism Risk for Places of Worship (by Insurer Category)[94]



Source: 2022 TRIP data call

Places of worship obtain terrorism risk insurance at rates that exceed those of policyholders overall (approximately 80 percent versus 60 percent in 2021, as measured by premium). The cost paid by places of worship is higher than the amount paid by policyholders overall – about 2.8 percent of total TRIP-eligible lines premiums for places of worship compared to 1.7 percent of total premiums for policyholders overall, once the effect of policies under which coverage provided for a $0 charge is considered. The higher cost for terrorism risk insurance for places of worship could possibly be explained by the higher take-up rate for the insurance. Also of note is the significant role played by small insurers, which represented in 2021 (by premium) about 53 percent of this market segment, even though they only constituted approximately 11 percent of the entire 2021 market in the TRIP-eligible lines of insurance. Treasury will continue to evaluate the availability and affordability of terrorism risk insurance for places of worship in future reports.

F. Private Reinsurance Availability

Reinsurance mechanisms support the proper functioning of insurance markets, and Treasury has followed reinsurance markets in connection with their potential impact on the market for terrorism risk insurance.[95]

---

[94] Insufficient liability premium was reported by alien surplus lines insurers to permit any meaningful comparisons.

[95] For information on reinsurance markets generally, see FIO, *The Breadth and Scope of the Global Reinsurance Market and the Critical Role Such Market Plays in Supporting Insurance in the United States* (2015), https://home.treasury.gov/system/files/311/FIO%20-Reinsurance%20Report.pdf. *See also* FIO, *2018 Effectiveness Report*, 40-41 (observing that the reinsurance market in the United States "has generally been characterized by large amounts of capacity for P&C business, and a resulting decline in prices as reinsurers seek to place business"); FIO, *2020 Effectiveness Report*, 42 (noting "more significant variations in reinsurance pricing and capacity depending on

The most recent reports reflect reinsurance market capacity has been "ample," or at least sufficient for most P&C risks, with some challenges for loss-impacted accounts.[96] Reports reflect that reinsurance pricing has generally strengthened, although more specific reports note flat to modest increases for most accounts, with more substantial increases for loss-impacted accounts.[97] Reinsurance provides significant support for the developing cyber risk insurance market, and sources note that potential reinsurance capacity constraints going forward will be a significant factor in the market.[98] Stakeholders report continued growth in the global reinsurance markets, with reported annual growth in reinsurance dedicated capital of 8.4 percent in 2021, and a full 70 percent over the entire period from 2015 to 2021, for an average annual rate over the period of 6 percent.[99] Reinsurance capacity has been and continues to be augmented by significant competition from alternative risk mechanisms such as insurance-linked securities.[100] However, alternative risk mechanisms have not been a significant factor in the area of terrorism risk exposure.[101]

To the extent it is available and purchased by insurers writing terrorism risk insurance, private reinsurance may serve both to increase the availability of terrorism risk insurance and to reduce Program exposure. Since the enactment of TRIA, Treasury has evaluated reinsurance capacity

geography and line of business, as well as upon the loss record of the particular ceding insurer and existing client relationships").

[96] Guy Carpenter, *January 2022 Reinsurance Renewal, An Evolving Market Leads to Divergent Outcomes*, 2-3, https://www.guycarp.com/content/dam/guycarp-rebrand/pdf/Insights/2022/January-1-2022-Renewal-Briefing.pdf (*GC January 2022 Reinsurance Renewal*).

[97] Gallagher Re, *Reinsurance Market Report: Results for Full-Year 2021* (2022), 3, https://www.ajg.com/gallagherre/news-and-insights/2022/april/reinsurance-market-report-full-year-2021/ (*Gallagher Re 2021 Reinsurance Report*); *GC January 2022 Reinsurance Renewal*, 2-3.

[98] *GC January 2022 Reinsurance Renewal*, 3; John Farley, *2022 Cyber Insurance Market Conditions Report*, (2022), 3, https://www.ajg.com/us/news-and-insights/2022/jan/2022-cyber-insurance-market-report/ ("With as much as 45% of primary cyber insurance market premium ceded to reinsurers, we expect capacity constraints to continue impacting underlying market pricing alongside an evolving cyber threat landscape. (Re)insurers' ability to generate capacity will be an important factor in 2022."); *see also* AM Best Comments, 4 ("A number of reinsurers are willing to assume cyber risk from the primary companies for which they already provide reinsurance for other lines of business. This has resulted in some concentration of cyber risk at the reinsurance level and is concerning. Since the reinsurers are already familiar with the primary insurers' portfolios and underwriting, they are more comfortable providing them reinsurance for cyber while also monitoring their aggregate risk."). However, from a reinsurance pricing standpoint, the significant increase in direct cyber insurance premiums has made flat ceding commissions common where the risk could be placed. *GC January 2022 Reinsurance Renewal*, 3. For more on the cyber insurance market, see Section V.I.

[99] *Gallagher Re 2021 Reinsurance Report*, 8.

[100] Representing about $94 billion of total estimated reinsurance dedicated capital of $728 billion as of 2021. *See Gallagher Re 2021 Reinsurance Report*, 4.

[101] Treasury is aware of only one significant alternative risk transfer instrument for terrorism risk. In February 2019, Pool Reinsurance Co. Ltd. (Pool Re), the government-backed mutual terrorism reinsurance facility in the United Kingdom, brought the first-ever terrorism risk catastrophe bond, in an amount of £75 million (about $100 million) to market as part of its general retrocessional program for its terrorism risk exposures. *See* "Pool Re Sponsors First Terrorism Risk Catastrophe Bond, Baltic PCC," *Artemis*, January 14, 2019, https://www.artemis.bm/news/pool-re-sponsors-first-terrorism-risk-catastrophe-bond-baltic-pcc/. In March 2022, Pool Re increased the amount of the bond to £100 million (about $135 million) as part of its total retrocessional tower of £2.5 billion (about $3.4 billion). *See* "Pool Re's New Cat Bond Upsized to UK£100m as it Renews Retro Tower," *Artemis*, March 2, 2022, https://www.artemis.bm/news/pool-re-new-cat-bond-upsized-to-uk-100m-as-it-renews-2-5bn-retro-tower/.

for terrorism risk in prior reports. In earlier analyses, Treasury found that such capacity was limited and had remained relatively static since shortly after the September 11 attacks.[102] Since the commencement of the TRIP data calls in 2016, however, Treasury has observed that reinsurance capacity for terrorism risk has increased.[103] Treasury's observations are consistent with the observations of commenters that reinsurers may now have a greater willingness to cover conventional (i.e., non-NBCR) terrorism risks than was indicated by Treasury's earlier analyses.[104]

Commenters report that many reinsurers have been increasingly willing to offer reinsurance coverage for conventional terrorism risk as part of ceding insurers' catastrophic risk reinsurance programs otherwise principally devoted to natural catastrophe risks.[105] While this development means that a growing amount of terrorism risk reinsurance is available to potentially satisfy losses, such reinsurance limits are subject to erosion or exhaustion on account of non-terrorism related claims, such as hurricane losses, potentially making them unavailable to back terrorism losses in some instances. The data reported to Treasury since the *2020 Effectiveness Report* continues to support the observation that many insurers are obtaining terrorism risk reinsurance in connection with reinsurance placements for natural catastrophe risks. However, the total amount of purchased reinsurance that will respond to terrorism risk continues to trail the amount of reinsurance purchased for natural catastrophe risks (except in the case of captive insurers, which purchased more terrorism risk reinsurance than natural catastrophe reinsurance). For comparison purposes, Treasury requested information about the reinsurance contract terms (i.e., amount of coverage, attachment point, and co-participation share) for treaties covering terrorism risk and natural catastrophe risk. Figure 31 identifies the total amounts of per loss terrorism risk reinsurance purchased by responding insurers that will cover losses subject to the Program.[106]

[102] *See* PWG, *2006 Terrorism Risk Insurance Report*, 26 ($4-6 billion of terrorism reinsurance capacity in 2005, $6-8 billion in 2006); PWG, *2010 Market Conditions Report*, 19 (between $6-8 billion to $8-10 billion); PWG, *2014 Availability and Affordability Report*, 19 ($6-8 billion).

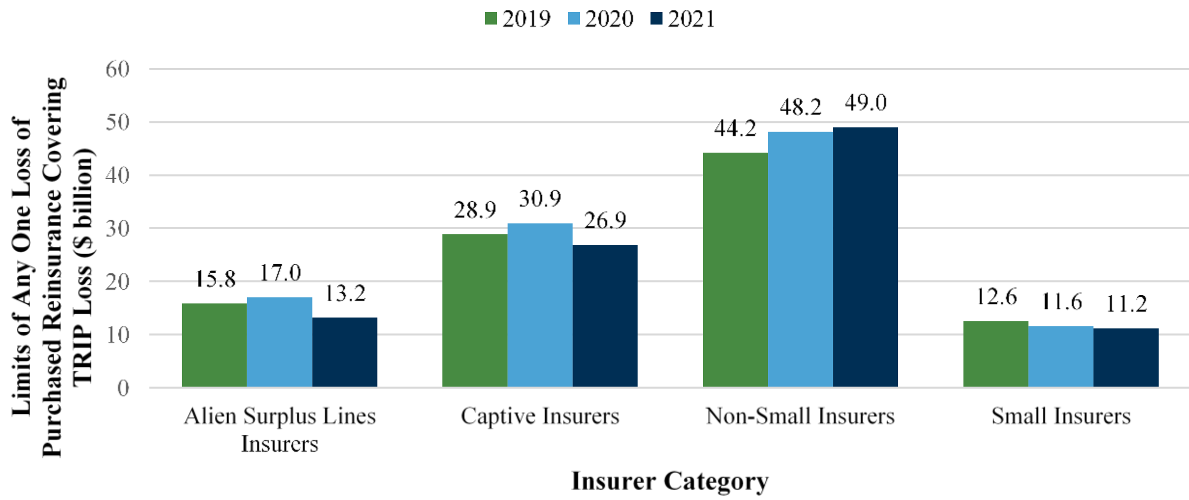
[103] In 2018 and 2019, insurers responding to TRIP data calls (excluding captive insurers) reported a total of $74.4 billion and $72.6 billion, respectively, in reinsurance coverage for a single loss resulting from terrorism. Based upon other reported information, in both 2018 and 2019, approximately 76 percent of these amounts fell within the co-pay obligations of the reporting insurers above their Program deductibles, with the remaining balance falling within the insurer's TRIP deductible. Captive insurers separately obtained an additional $26.6 billion and $28.9 billion in 2018 and 2019, respectively, in per loss terrorism reinsurance limits, and an even higher percentage of those figures fell within the co-pay obligations of the captive insurers. FIO, *2020 Effectiveness Report*, 44.

[104] *See* RAA Comments, 3 ("Reinsurers have been willing to put a defined amount of capital at risk for terrorism-related losses due to the nature of the risk, insurer demand for risk transfer and the price they are willing to pay," and noting that in 2017 "the combined property and workers' compensation private conventional-only terrorism reinsurance capacity was estimated to be $2.5 billion per cedent program."). This figure remains generally consistent with the information reported to Treasury, although a small number of insurers in both the 2021 and 2022 TRIP data calls reported total per loss limits for conventional terrorism risk approaching and even exceeding $5 billion.

[105] *See* RAA Comments, 3 ("[T]he inclusion of terrorism reinsurance coverage in many natural hazard property and workers' compensation catastrophe covers has resulted in traditional and alternative markets supporting existing relationships and diversification efforts.").

[106] Treasury sets forth the total amounts of per loss limits purchased by responding insurers on an aggregated basis as a measure of total market capacity.

Figure 31: Total Per Loss Reinsurance Limits Purchased for Losses Subject to TRIP

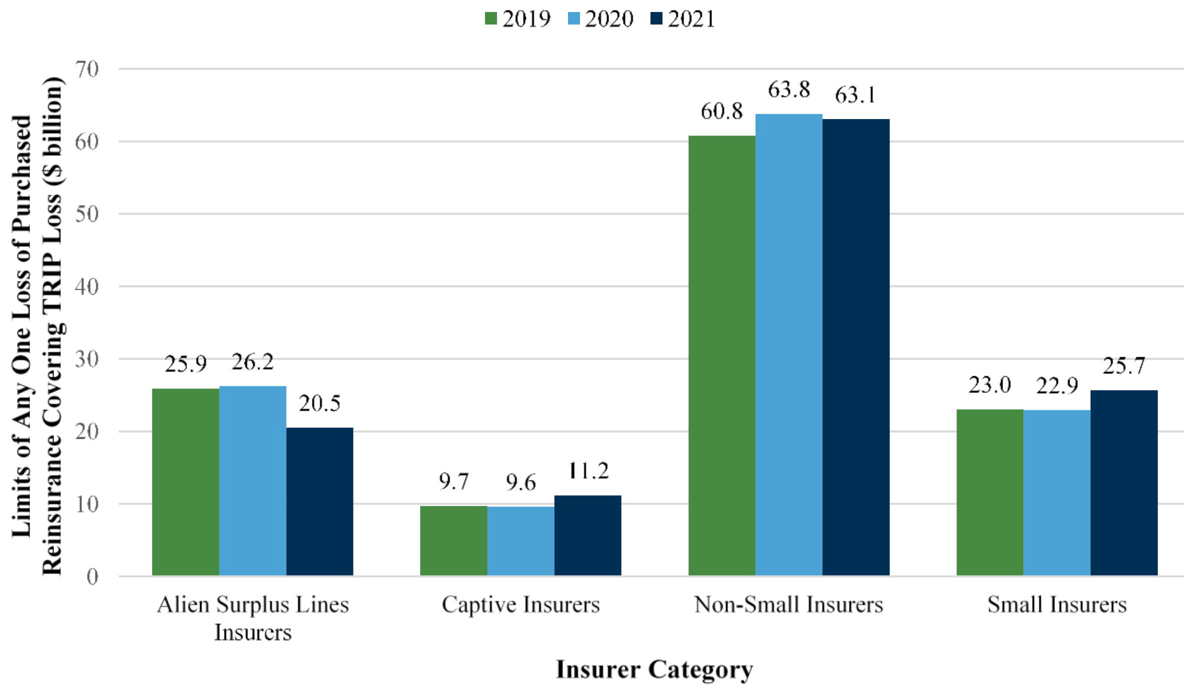


Source: 2020-2022 TRIP data calls

Figure 32 reflects the total amounts of per loss natural catastrophe reinsurance purchased by responding insurers during the same periods. It reflects larger total amounts of natural catastrophe reinsurance versus terrorism risk reinsurance purchased on a per loss basis for alien surplus lines, non-small, and small insurers, and lower amounts for captive ceding insurers.[107]

[107] As in other areas, captive insurers present different issues concerning purchase of reinsurance applicable to terrorism risk losses. Captive insurers' reinsurance experience is further evaluated in Section VI.B.

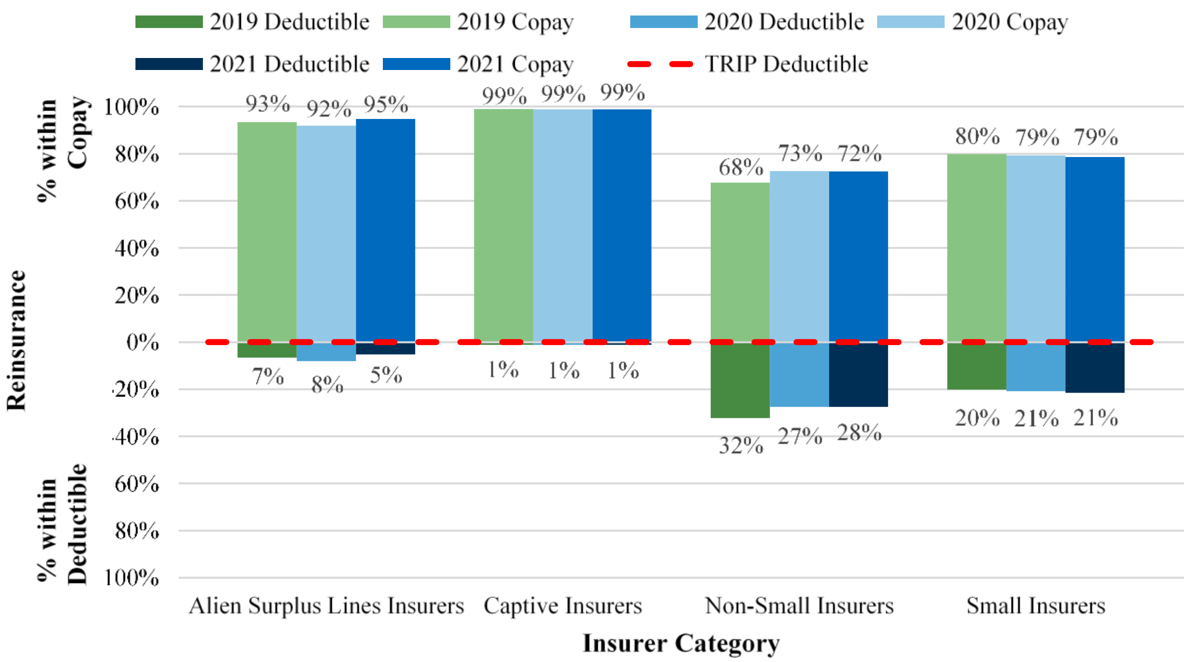
Figure 32: Total Per Loss Reinsurance Limits Purchased for Natural Catastrophes



Source: 2020-2022 TRIP data calls

Private reinsurance can cover some or all of the exposure of participating insurers for amounts which the federal government will not reimburse under TRIP, namely amounts within: (1) insurers' Program deductibles and (2) insurers' co-pay share above the Program deductible. Figure 33 shows Treasury's calculation of the degree to which reinsurance purchased by participating insurers for terrorism risk insurance would respond to losses within a ceding insurer's Program deductible versus within the co-pay layer above the Program deductible.

Figure 33: Total Per Loss Reinsurance Limits Purchased for TRIP Losses Within TRIP Deductible Layer and TRIP Co-Pay Layer (by Percentage)



Source: 2020-2022 TRIP data calls

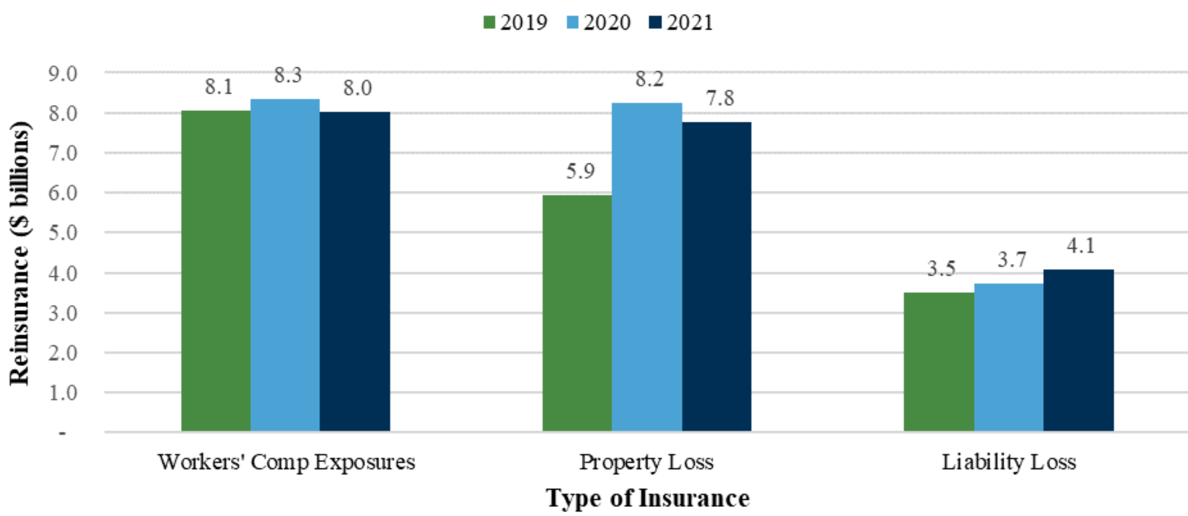
Each column in Figure 33 totals 100 percent of reinsurance purchases, as divided between amounts within TRIP deductibles (below the 0 percent line) and within the co-pay layer once the TRIP deductible has been satisfied (above the 0 percent line). The figure shows that private reinsurance remains more heavily concentrated in the exposure retained by participating insurers above their TRIP deductibles. Based on reported 2021 data, 83.3 percent of the purchased private reinsurance covers loss above the participating insurer's TRIP deductible. This figure is materially affected by captive insurers, which purchase large amounts of reinsurance but have very small TRIP deductibles. When captive insurers are excluded from the analysis, the amount of reinsurance responding above the TRIP deductible was 77.3 percent of the total in 2021.

In many individual cases, reinsurance purchased for terrorism risk insurance remains subject to limitations and exclusions for specified risks. Many reporting insurers, for example, identified various exclusions from—or limitations to—coverage under their terrorism risk reinsurance, typically for exposures at particular locations and more generally for NBCR risks, discussed further below. Such limitations are consistent with information from industry sources and the U.S. Government Accountability Office (GAO) regarding the reported risk appetite of reinsurers for terrorism risk.[108]

[108] *See* Marsh, *2019 Terrorism Risk Insurance Report*, 5 (noting the market assumption that "there is a finite amount of [reinsurance] capacity in the private market, especially for NBCR events."). GAO has also found that reinsurers frequently write terrorism risk reinsurance with specific limits for particular properties, as distinguished from a share of all properties insured by the ceding insurer. *See* GAO, *Terrorism Insurance: Treasury Needs to Collect and*

Treasury also requests data regarding the reinsurance coverage that is expressly available for terrorism risks involving NBCR exposures. The data collected by Treasury for 2018 and 2019, which was analyzed in the *2020 Effectiveness Report*, reflected significantly smaller amounts of reinsurance coverage for NBCR-related terrorism risk than the limits generally available for a terrorism loss.[109] The more recent experience reported to Treasury for 2020 and 2021 is similar.

Figure 34: Total Per Loss Reinsurance Limits Purchased for NBCR Losses Subject to TRIP (by Type of Insurance)



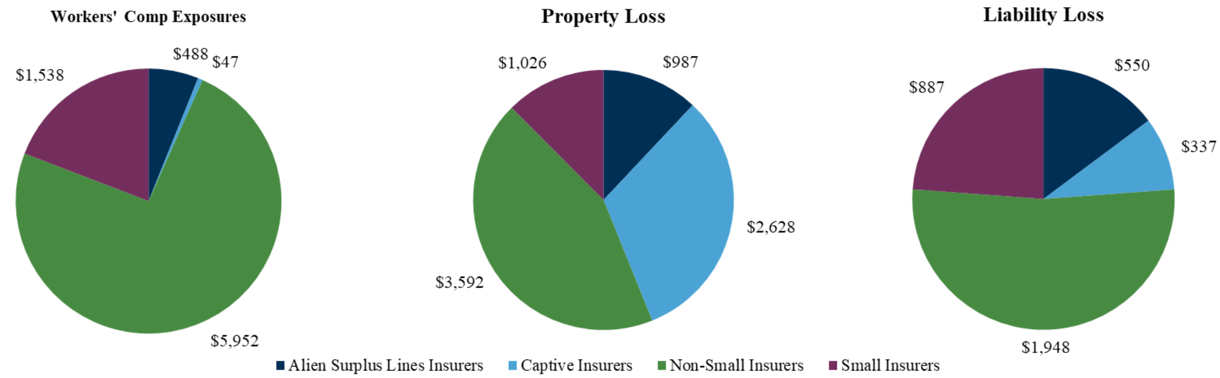
Source: 2021 and 2022 TRIP data calls

The reported reinsurance purchases for NBCR exposures are allocated among the various insurer categories as shown in Figures 35 (for 2020) and Figure 36 (for 2021).

Analyze Data to Better Understand Fiscal Exposure and Clarify Guidance (2014), 35, http://www.gao.gov/assets/670/663387.pdf.

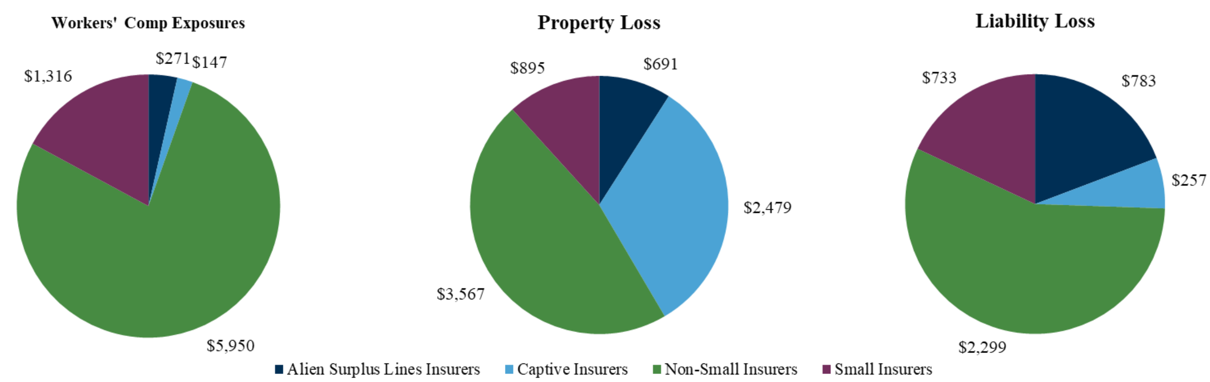
[109] FIO, *2020 Effectiveness Report*, 47.

Figure 35: 2020 Total Per Loss Reinsurance Limits Purchased for NBCR TRIP Losses (by Type of Insurance), Allocated by Insurer Category ($ millions)



Source: 2021 TRIP data call

Figure 36: 2021 Total Per Loss Reinsurance Limits Purchased for NBCR TRIP Losses (by Type of Insurance), Allocated by Insurer Category ($ millions)



Source: 2022 TRIP data call

Although TRIA requires participating insurers to offer insurance for terrorism risk for "acts of terrorism" certified by the Secretary on the same basis as for other perils, TRIA does not require such insurance to be offered for exposures for which coverage is otherwise generally not provided (or specifically excluded) under the policy in question.[110] Because many insurers generally exclude NBCR risks under P&C policies (excepting workers' compensation, as discussed below), the amount of direct insurance coverage for such risks may be substantially limited. The reported data reflects, however, that regardless of the amount of direct coverage available for NBCR exposures, that coverage is less likely to be supported by private reinsurance than losses arising from conventional acts of terrorism. Furthermore, a large portion of the limited reinsurance obtained for NBCR property exposures supports the risks assumed by captive

[110] *See* No Material Difference from Other Coverage, 31 C.F.R. § 50.22(b) (2021).

insurers which—while potentially significant on an individual basis—represents only a small percentage of total risk exposures assumed by insurers participating in the Program.[111]

In sum, private reinsurance capacity for terrorism risk has improved significantly since the immediate aftermath of the September 11 attacks. Commenters attribute this improvement in large part to the backstop support the Program provides for a major portion of insurers' exposure to terrorism risk nationwide.[112] Nevertheless, commenters have noted that the aggregation risk[113] presented by terrorism continues to be a limiting factor for the development of private reinsurance capacity.[114] Modeling applications, including accumulation models, deterministic scenario modeling, and probabilistic modeling of terrorism are available in the market.[115] However, the lack of significant numbers of terrorism events renders modeling potential terrorism exposure from both a frequency and severity standpoint difficult.[116] The TRIP data reflects that private reinsurance capacity may be reduced as the aggregation risk presented by a particular type of terrorism loss (such as from an NBCR attack) increases.

G. Projections from Modeled Loss Questions

To assist in evaluating Program effectiveness and obtain some tangible assessment of the likely impact of the Program in a specific loss situation, Treasury has posed modeled loss questions in each TRIP data call from 2017 through 2022.[117] Treasury has previously discussed the results of these questions in 2018 (for the modeled loss questions posed in the 2017 and 2018 TRIP data calls) and in 2020 (for the modeled loss questions posed in the 2019 and 2020 TRIP data calls).[118]

As in the prior data calls, in the 2021 and 2022 TRIP data calls Treasury posed a question to non-small, alien surplus lines, and captive insurers asking them to report projected loss information based upon a defined, hypothetical terrorism event. The 2021 TRIP data call used an event in

[111] *See* Section VI.B, addressing captive insurers.

[112] *See, e.g.*, Marsh Comments, 1 ("A retrospective review of the TRIP since 9/11 demonstrates that the program has been very successful in allowing insurers and reinsurance capacity back into the market, while providing numerous layers of protection to the federal government—and ultimately the US taxpayer.").

[113] Aggregation risk refers to circumstances where the same event causes losses to a large number of policyholders of the same insurer, potentially in multiple lines of insurance.

[114] RAA Comments, 4 ("Reinsurers can provide only limited capacity for terrorism because the magnitude of these potential losses could pose a solvency threat. Reinsurers' capital is necessary to support many other outstanding underwriting commitments, including natural disasters, workers' compensation and other casualty coverages.").

[115] RMS Comments, 6.

[116] *See* RAA Comments, 4 ("[A]lthough progress has been made in modeling terrorism loss scenarios, forecasts of the frequency and severity of terrorism losses remain problematic."); APCIA Comments, 1 ("While the terrorism insurance market has developed in some significant ways since the 9-11 attacks, insurers and reinsurers still find it difficult to model and provide coverage for NBCR risks.").

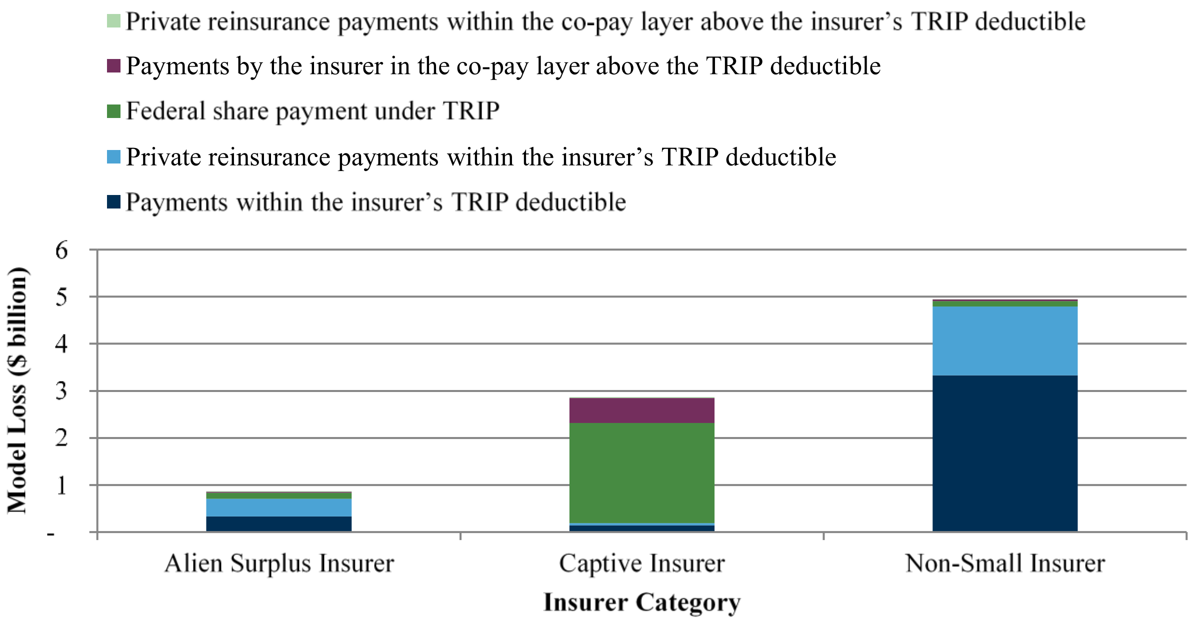
[117] Treasury has not required small insurers to complete the modeled loss questions in the 2017-2022 TRIP data calls. Given the size of the market represented by small insurers, and where their risks tend to concentrate, the experience of small insurers may not significantly affect the aggregate results, even though certain small insurers might sustain a significant loss.

[118] *See* FIO, *2018 Effectiveness Report*, 49-53; FIO, *2020 Effectiveness Report*, 49-55.

Washington, D.C., while the 2022 TRIP data call used an event in Miami, Florida. In both data calls, insurers were given a description of the location and nature of the event, with certain specified assumptions concerning numbers of deaths and injuries, and the scope of property damage. Treasury asked responding insurers to project the total amount of loss exposure arising from the hypothetical modeled event under their TRIP-eligible policies in force at the time of each such event. Treasury further requested that insurers then divide that amount among (1) the insurer's net payments within its TRIP deductible; (2) private reinsurance payments within the insurer's TRIP deductible; (3) federal share payment under TRIP; (4) payments by the insurer in the co-pay layer above the TRIP deductible; and (5) private reinsurance payments within the co-pay layer above the insurer's TRIP deductible.[119]

Figures 37(a) and (b) illustrate how the 2021 TRIP data call modeled loss question was projected to result in payments.

Figure 37(a): Total Insured Loss Payments Resulting from 2021 Washington, D.C. Modeled Loss Scenario by Insurer Category ($ billions)



Source: 2021 TRIP data call

[119] No questions were posed about potential exposure under liability policies in these modeled loss questions because of the difficulty to reasonably project how liability claims might be made in connection with an act of terrorism committed by a third party. Nonetheless, the possibility of liability claims remains an additional source of exposure to participating insurers and the Program. *See, e.g.*, Insurance Infomation Institute, *Terrorism Risk: A Constant Threat* (March 2014), 6, https://www.iii.org/sites/default/files/docs/pdf/terrorism_white_paper_0320141_0.pdf (loss distribution estimates for losses arising from September 11 attacks reflecting that liability claims resulted in 12 percent of total losses). Treasury did ask responding insurers to report estimates associated with potential liability exposure in the 2020 TRIP data call's Dallas scenario. *See* FIO, *2020 Effectiveness Report*, 50, 52-54.

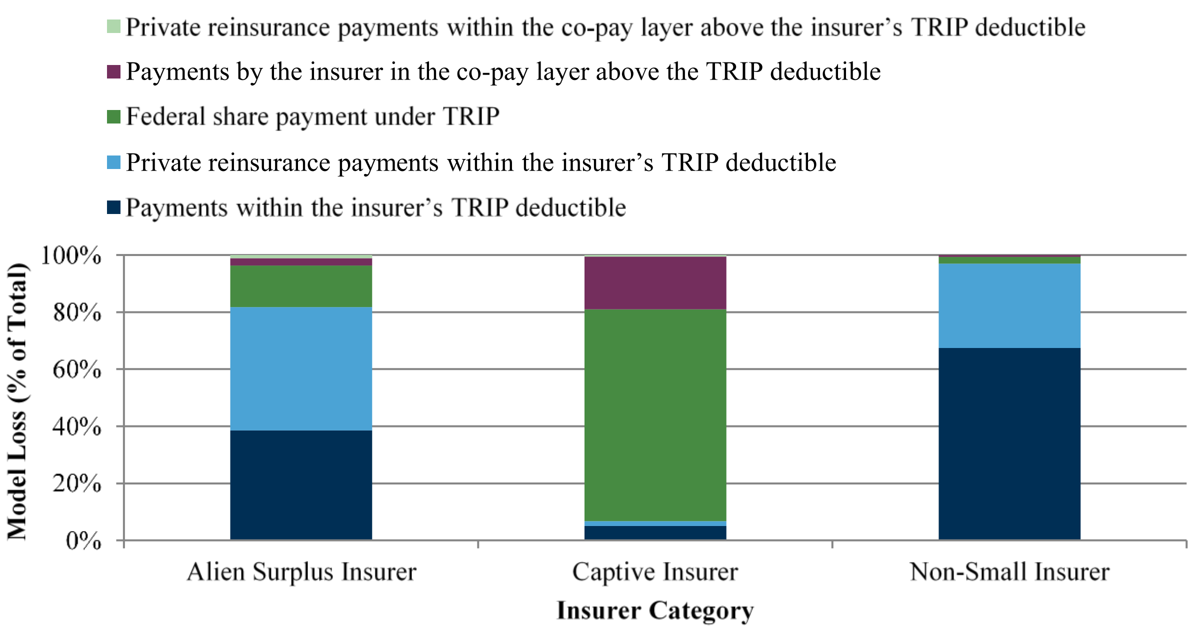
Figure 37(b): Total Insured Loss Payments Resulting from 2021 Washington, D.C. Modeled Loss Scenario by Insurer Category (in $ millions)

	Alien Surplus Lines	Captives	Non-Small Insurers
Payments within the insurer's TRIP deductible	$ 334.3	$ 146.1	$ 3,331.0
Private reinsurance payments within the insurer's TRIP deductible	375.0	46.5	1,461.1
Federal share payment under TRIP	126.6	2,126.7	116.5
Payments by the insurer in the co-pay layer above the TRIP deductible	21.6	530.1	34.2
Private reinsurance payments within the co-pay layer above the insurer's TRIP deductible	10.0	15.7	0.3
Total	**$ 867.5**	**$ 2,865.1**	**$ 4,943.1**

Source: 2021 TRIP data call

Figure 38 sets forth how the loss amounts generated under the 2021 modeled loss scenario are distributed (on a 100 percent basis) within each insurer category.

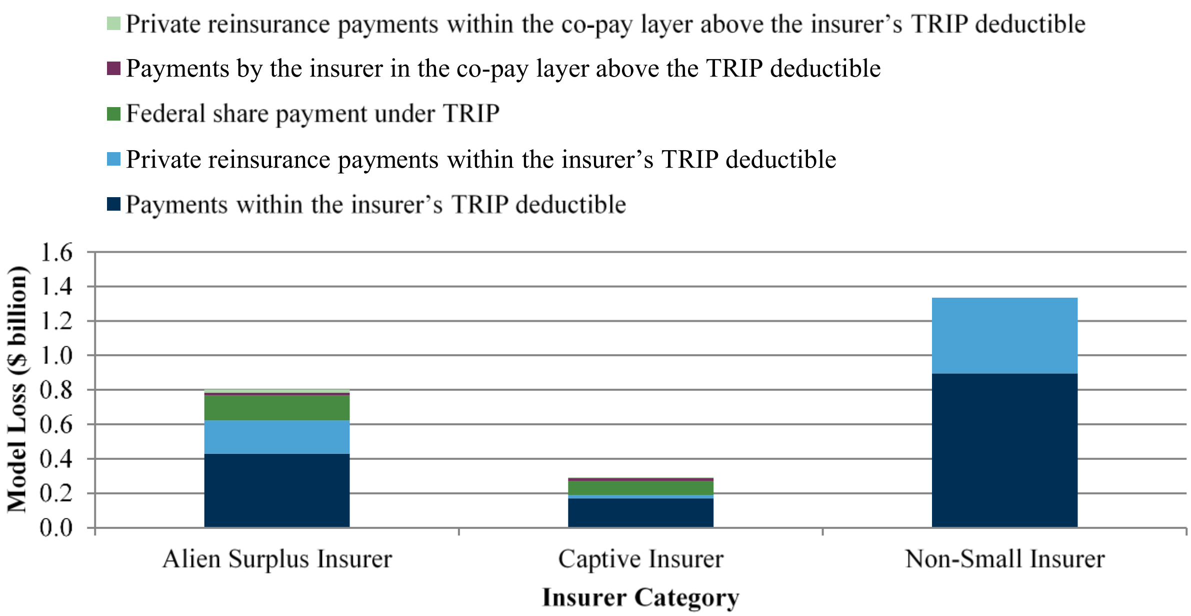
Figure 38: Distribution of Loss Payments Arising from 2021 Washington, D.C. Modeled Loss Scenario Within Each Insurer Category



Source: 2021 TRIP data call

Figure 39(a) and (b) illustrate how the 2022 TRIP data call's modeled loss scenario (set in Miami in 2021) is projected to result in payments.

Figure 39(a): Total Insured Loss Payments Resulting from 2022 Miami Modeled Loss Scenario by Insurer Category ($ billions)



Source: 2022 TRIP data call

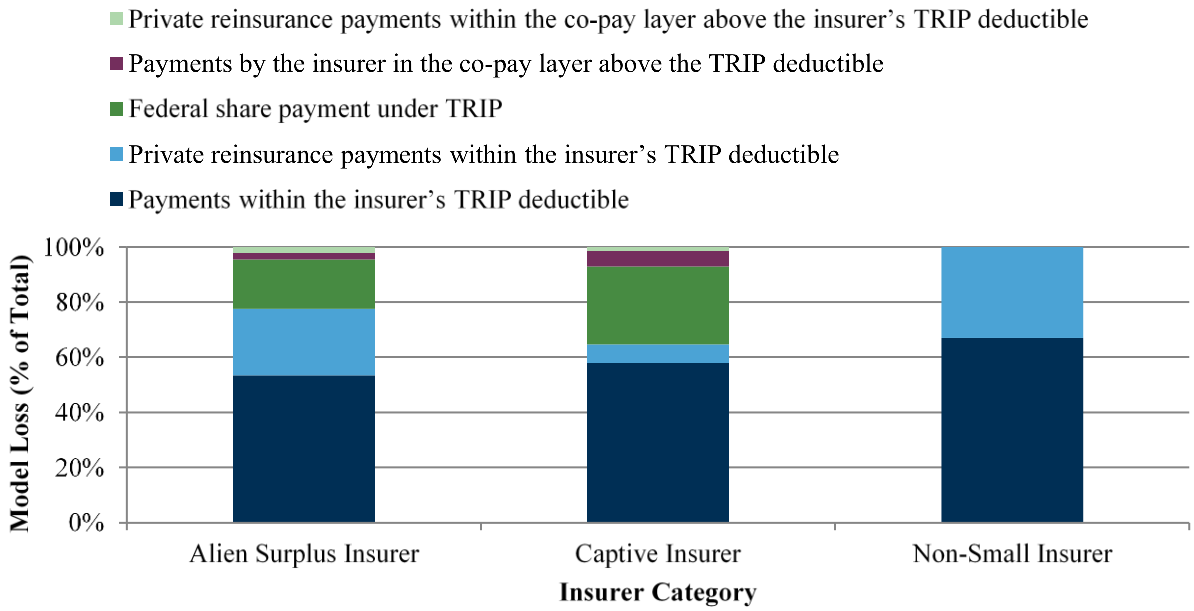
Figure 39(b): Total Insured Loss Payments Resulting from 2022 Miami Modeled Loss Scenario by Insurer Category ($ millions)

	Alien Surplus Lines	**Captives**	**Non-Small Insurers**
Payments within the insurer's TRIP deductible	$ 429.0	$ 169.6	$ 895.0
Private reinsurance payments within the insurer's TRIP deductible	194.3	19.9	439.3
Federal share payment under TRIP	143.4	82.8	-
Payments by the insurer in the co-pay layer above the TRIP deductible	17.9	16.6	-
Private reinsurance payments within the co-pay layer above the insurer's TRIP deductible	18.0	4.1	-
Total	**$ 802.6**	**$ 293.1**	**$ 1,334.3**

Source: 2022 TRIP data call

Figure 40 sets forth how the loss amounts generated under the 2022 TRIP data call's modeled loss scenario are allocated on a 100 percent basis within each insurer category.

Figure 40: Distribution of Loss Payments Arising from 2022 Miami Modeled Loss Scenario within Each Insurer Category



Source: 2022 TRIP data call

The reported information indicates that both the District of Columbia and Miami scenarios would result in losses requiring payments by Treasury, although in each of these cases (as was largely the case with prior scenarios posed) the amounts expended by Treasury will be subject to complete recovery through the recoupment process. The payments made by Treasury would be split between those made to alien surplus line insurers and captive insurers, largely because of the relatively smaller deductibles for those entities as compared to non-small insurers. Under each of these scenarios, no Federal Share of Compensation payments would be directed to the affected non-small insurers (because those losses would be contained within each non-small insurer's TRIP deductible). This recoupment will be at the 140 percent recoupment level through surcharges imposed by Treasury upon all commercial policyholders.[120] Additional amounts would likely be subject to recoupment once small insurer losses (not captured in these analyses) are considered.

H. Terrorism Risk Insurance for NBCR Losses

NBCR losses, to the extent arising from a certified "act of terrorism," are within the scope of the Program. However, TRIA and Treasury's implementing regulations permit an insurer to exclude, from the mandatory offer of terrorism risk insurance coverage that must be made, risks

[120] *See* Mandatory and Discretionary Recoupment, 31 C.F.R. § 50.90(b) (2021); TRIA § 103(e)(7)(D).

that are otherwise excluded under the policy.[121] Accordingly, an insurer that does not provide coverage for NBCR risks generally under its policy is not required to extend that coverage for the risk of terrorism. Because of potentially significant NBCR aggregation risks that insurers find difficult to manage,[122] many insurers exclude these risks to some extent.[123] This means that in the event of a certified act of terrorism involving NBCR losses there may be less coverage for policyholders than would be the case in connection with losses arising from a conventional attack.[124] The principal exception here is in connection with workers' compensation, which as a matter of state law must provide coverage for all employment-related injuries, including those arising from NBCR risks.[125] In addition, so-called "fire following" laws in some states require all fire losses under standard fire policies to be covered, regardless of the cause and the existence of what would otherwise be applicable exclusions in the policy.[126]

While coverage for NBCR risk under policies subject to TRIP is clearly more limited than it is for conventional terrorism risk, the data provided to Treasury reflects that some amount of NBCR terrorism risk coverage is extended by Program participants on a voluntary basis, outside of the context of the mandatory requirements imposed by workers' compensation and fire following laws. In the TRIP Data Calls, Treasury requests the amount of policy limits under which NBCR risk exposures are not totally excluded when insurers report the policy limits that are subject to TRIP (*i.e.*, they extend coverage that would be subject to the Program's backstop). Figure 41 shows the information, on a percentage basis, in a stacked bar chart that illustrates the percentage of TRIP property limits extending coverage for some amount of NBCR risk, by insurer category, from 2019-2021.

---

[121] TRIA § 103(c)(2); 31 C.F.R. § 50.22(b) (2021).

[122] In its analyses, ACRSM identified potential NBCR aggregation risks with examples based upon modeled results. *See* ACRSM Report, 24.

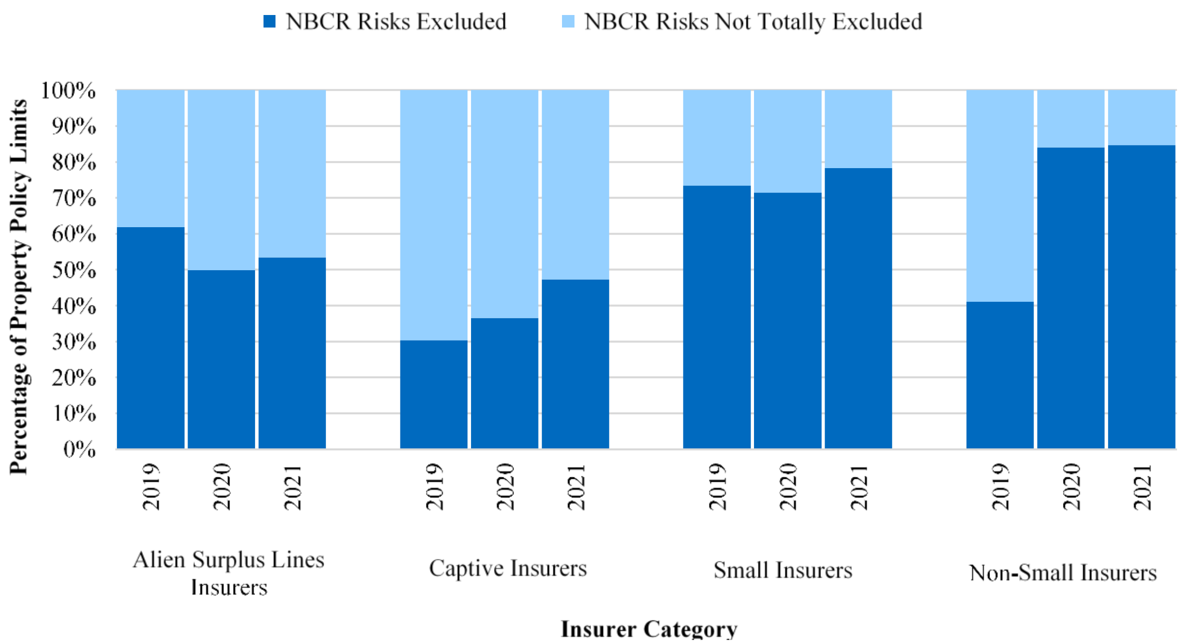
[123] Commenters noted the difficulty in obtain terrorism risk coverage for NBCR risks, particularly in areas deemed to be at greater risk. *See* Marsh Comments, 6 ("Although limited NBCR coverage has been available from insurers over the past 20 years, the market capacity for this coverage remains selective and finite, especially in large cities and central business districts and for certain types of occupancies."). In addition, GAO has previously analyzed the difficulty the policyholders may have in obtaining insurance coverage for these risks. *See* GAO, *Terrorism Insurance; Status of Coverage Availability for Attacks Involving Nuclear, Biological, Chemical, or Radiological Weapons* (December 2008), https://www.gao.gov/assets/gao-09-39.pdf.

[124] *See, e.g.*, FIO, *2020 Effectiveness Report*, 51-52 (discussing results of modeled loss question in a hypothetical attack in San Francisco involving both conventional and non-conventional attack modes and showing greater losses for non-small and alien surplus lines insurers arising from the conventional attack, but greater losses for captive insurers from the non-conventional attack).

[125] The impact of the requirement to provide NBCR coverage in connection with workers' compensation is discussed further in Section VII.

[126] Treasury has previously addressed the implications of fire following laws in prior reports. *See* FIO, *2018 Effectiveness Report*, note 84.

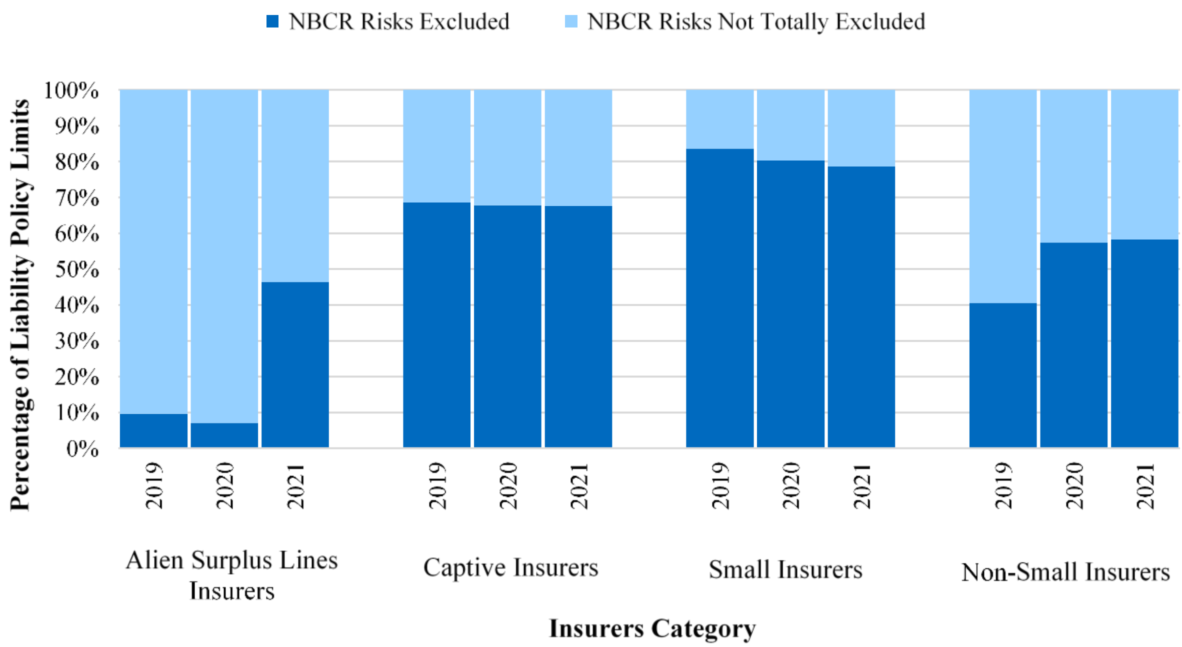
Figure 41: 2019-2021 TRIP Property Limits Where NBCR Risks Are Not Totally Excluded, by Insurer Category



Source: 2020-2022 TRIP data calls

As reflected in Figure 41, all insurer groups extend some amount of NBCR risk in connection with the terrorism risk limits subject to TRIP, although the percentage for captive insurers is higher than for other insurer categories. Figure 42 shows the same information for TRIP liability limits extending coverage for some amount of NBCR risk.

Figure 42: 2019-2021 TRIP Liability Limits Where NBCR Risks Are Not Totally Excluded, by Insurer Category



Source: 2021-2022 TRIP data calls

The relative percentages shown for liability limits are similar to those shown for property limits. NBCR risk remains more challenging for Program participants and will thus be covered by the Program on a more limited basis in the event of a certified act of terrorism. Furthermore, the extent and availability of such coverage in metropolitan areas is likely far less than reflected by Treasury's nationwide figures given the aggregation risk concerns in those areas. Nonetheless, the Program does currently provide support for some amount of NBCR risk that is voluntarily extended, in addition to the amounts that are driven by the statutory requirements associated with workers' compensation and fire following laws. Commenters have identified the Program as critical support for the NBCR terrorism risk insurance (and reinsurance) coverage that is extended by the industry.[127]

Most commenters that addressed the issue of the availability of NBCR risk coverage provided in association with the Program characterized it as an unavoidable consequence of the nature of

[127] *See* Marsh Comments, 6 ("The availability of any NBCR reinsurance capacity is reliant on TRIP to remain in its current program format as it supports the overall market. If TRIP should lapse or be further restricted—with no NBCR alternative requiring all insurers to enter the reinsurance market simultaneously—the impacts remain unknown and untested."); RMS Comments, 3 ("NBCR coverage under TRIP is critical for the insurance market" and observing that "[t]he lack of past claims experience from such attacks combined with the uncertainty around the frequency of NBCR attacks would lead the market to eschew covering these kinds of events" in the absence of TRIP).

NBCR risk, as distinguished from a problem with the Program.[128] Changes to the Program to increase the availability of NBCR terrorism risk insurance could include the requirement that it be mandated, as it is in connection with workers' compensation. However, such a requirement could have a chilling effect on the provision of coverage overall if insurers believe themselves to be unable to assume such an expanded risk exposure. Modification of the TRIP sharing mechanism as applicable to NBCR-related risks could encourage insurers to provide more NBCR terrorism risk insurance.[129] Further improvement in modeling techniques in connection with NBCR loss events could also lead to an improvement in insurer risk appetite for such exposures. Treasury will continue to evaluate this issue and work with the ACRSM and stakeholders to identify ways to further improve coverage for NBCR risks subject to the Program.

I. Terrorism Risk Insurance for Cyber Losses

Treasury has a longstanding interest in terrorism risk insurance for cyber losses and its implications for the administration of TRIP. Since 2016, Treasury has confirmed that TRIA requirements apply to any policy covering cyber risk written in a line of insurance that is subject to the Program.[130] For cyber insurance that is within TRIP-eligible lines, Treasury began

---

[128] *See, e.g.*, CIAT Comments, 3 ("CIAT believes that issues with the availability of NBCR cover are not—have never been—unique to terrorism risk, and therefore do not represent any particular flaw in the TRIA model."); Lloyd's Comments, 3 ("Excluding NBCR terrorism is consistent with TRIA's make available requirement, since NBCR risk is typically excluded from policies regardless of whether terrorism caused the loss. This demonstrates that NBCR coverage is not a problem that is confined to TRIA or terrorism risk more generally, but rather remains an issue that is beyond the capacity of the private market to solve."); Marsh Comments, 6 ("market capacity is selective and finite" for NBCR terrorism risk). One commenter, however, suggests that "the Program is **ineffective** with respect to the risk of loss from NBCR terrorism events," based apparently upon the limited availability of NBCR reinsurance coverage to direct insurance writers, and the fact that some captive insurers provide NBCR terrorism risk insurance to their parent owners in a way that may not be available to other policyholders. *See generally* CBI NBCR Comments. As discussed above, while coverage provided for NBCR risk by Program participants is limited, some levels of coverage are provided across insurer categories. The coverage is not limited solely to captive insurers; and the NBCR coverage is supported in all cases by the Program. Captive insurers are discussed further in Section VI.B below.

[129] The ACRSM has proposed that FIO "[e]xplore whether a change of the cap, IMARA, and deductibles for NCBR is appropriate and, if not, how to address growing uninsured NCBR risk above the $100B cap." *See* ACRSM Report, 25.

[130] *See* Guidance Concerning Stand-Alone Cyber Liability Insurance Policies Under the Terrorism Risk Insurance Program, 81 Fed. Reg. 95312 (December 27, 2016); 31 C.F.R 50.4(w)(1) (2021). *See also 2021 Updated Regulations*, 86 Fed. Reg. 30537. Coverage for cyber losses can also arise under policies that do not expressly state that they cover cyber-related losses, but which do not expressly exclude coverage for such losses. This is commonly referred to as "silent" or non-affirmative cyber risk. Non-affirmative cyber insurance is also subject to TRIA if written in a TRIP-eligible line of insurance. *See* 81 Fed. Reg. at 95313 ("Certain insurance policies that may contain a 'cyber risk' component or which do not exclude losses arising from a cyber event continue to be written in existing TRIP-eligible lines of insurance and are thus subject to the provisions of the Program.").

collecting data in 2018.[131] Treasury also has routinely engaged with stakeholders to discuss the cyber insurance market and significant developments in it.[132]

In 2022, Treasury expanded the TRIP data call to request more detailed information concerning cyber risk insurance.[133] As Treasury explained, "[t]he cyber insurance market continues to grow and evolve, and cyber-related losses (particularly with regard to ransomware) have increased significantly over the past few years. In view of recent market developments and the important role of cyber insurance in the Program, Treasury would like to obtain more detailed information relating to the availability and affordability of such coverage in the market."[134] With respect to cyber insurance, therefore, Treasury now also requests information in the TRIP data call on: (1) premiums and limits of policies written in both TRIP-eligible and non-TRIP-eligible lines of insurance, (2) premium and policy count information broken out by size of policyholder, (3) cyber extortion coverages, and (4) loss information for ransomware exposures.[135] Treasury did not receive complete reporting of these new data elements in the first year of collection, and specifies below the limitations of the new data based upon the amount of reporting received in the different categories.

Before discussing the analysis of the cyber insurance information collected in the 2022 TRIP data call, this Report outlines some general information on cyber insurance coverage and the cyber insurance market. Conditions in the cyber insurance market will affect the scope of insurance that may be extended by cyber insurers that may also provide coverage for certified acts of cyber terrorism. Those conditions may also inform Treasury's administration of the Program and its evaluation of cyber insurance subject to TRIP, particularly where there have been significant changes and developments in the cyber insurance market. The Report also discusses one significant area in the cyber insurance market: the rise and impact of ransomware.

1. Cyber Insurance Coverage

Cyber insurance has been characterized as providing coverage for risks arising "from the use of electronic data and its transmission, including technology tools such as the internet and telecommunications networks," as well as (depending upon the policy's terms and conditions) potentially providing coverage for physical damage that can be caused by cyber attacks, misuse of data, liability arising from data storage, and other risks associated with the availability, integrity and confidentiality of electronic information.[136] The types of events that may be

[131] *See* Terrorism Risk Insurance Program 2018 Data Call, 82 Fed. Reg. 56328, 56329 (November 28, 2017). Not all cyber insurance is written within TRIP-eligible lines. For example, cyber insurance can also be written as Professional Liability Insurance, which is expressly excluded from the Program. 81 Fed. Reg. at 95313; TRIA § 102(11)(B)(xi). *See also* Section V.I.3 below (addressing results of TRIP data call reflecting amount of cyber insurance coverage not within the scope of TRIP).

[132] *See, e.g.*, FIO, *2020 Effectiveness Report*, 56, 61-62.

[133] *See* Terrorism Risk Insurance Program 2022 Data Call, 86 Fed. Reg. 64600 (November 18, 2021) (*TRIP 2022 Data Call Changes*); 2022 Terrorism Risk Insurance Program Data Call, 87 Fed. Reg. 22026 (April 13, 2022).

[134] *TRIP 2022 Data Call Changes*, 86 Fed. Reg. at 64601 (citations omitted).

[135] *See, e.g.*, *TRIP 2022 Data Call Changes*, 86 Fed. Reg. at 64601-64602.

[136] *See* FIO, *Annual Report on the Insurance Industry* (2017), 54, https://www.treasury.gov/initiatives/fio/reports-and-notices/Documents/2017_FIO_Annual_Report.pdf.

covered by cyber insurance include malware, ransomware, phishing, social engineering, cloud outage, and data exfiltration.[137] Coverage for losses associated with such events that may be available under a cyber insurance policy may include the costs of forensic investigations, litigation expenses, regulatory defense expenses and fines, crisis management expenses, business interruption losses associated with the event, and cyber extortion costs. While cyber insurance products vary, they can be characterized as falling into two broad categories: (1) coverage provided for cyber-related losses in a separate, "standalone" policy; and (2) coverage provided as a component of a broader, package policy that also provides coverage for non-cyber losses.

The scope of coverage will be defined by the terms, conditions, and exclusions within the cyber insurance policy. Exclusions may, for example, limit coverage for losses involving third-party suppliers, lost devices, or security controls.[138] More broadly, cyber policies will often contain exclusions to address situations where significant losses might aggregate as the result of a major event that has systemic implications beyond the scope of an individual policyholder. For example, most policies exclude losses from the failure of critical infrastructure such as the power grid, telecommunication systems, or the internet.[139] Quantifying potentially systemic cyber risks remains a significant challenge for insurers and reinsurers.[140]

[137] Malware, or malicious software, is any program or file that is intentionally harmful to a computer, network or server. Types of malware include computer viruses, worms, Trojan horses, ransomware, and spyware. These malicious programs steal, encrypt, and delete sensitive data, and may alter or hijack core computing functions and monitor end users' computer activity. *See, e.g.*, "Malware," National Institute of Standards and Technology (NIST) Computer Security Resource Center (CRSC), https://csrc.nist.gov/glossary/term/malware (NIST CRSC Glossary).

Ransomware is a type of malware that prevents the user from accessing computer files, systems, or networks, and demands the payment of a ransom for the restoration of access. *See, e.g.*, "Scams and Safety: Ransomware," Federal Bureau of Investigation, https://www.fbi.gov/scams-and-safety/common-scams-and-crimes/ransomware. Often, the ransom payment is requested through cryptocurrency or blockchain methods that may provide a degree of anonymity for the recipient of the payment. *See* MITRE Comments, 1.

Phishing is a technique for attempting to acquire sensitive data, such as bank account numbers, through a fraudulent solicitation in email or on a web site, in which the perpetrator masquerades as a legitimate business or reputable person. *See* "Phishing," NIST CRSC Glossary, https://csrc.nist.gov/glossary/term/phishing.

Social engineering is an attempt to trick someone into revealing information (e.g., a password) that can be used to attack systems or networks. *See, e.g.*, "Social Engineering," NIST CSRC Glossary, https://csrc.nist.gov/glossary/term/social_engineering.

A cloud outage is a period of time during which cloud services (i.e., a range of information technology resources that are provided through the Internet) are unavailable. *See, e.g.*, "Cloud Outage," TechTarget, https://www.techtarget.com/searchdisasterrecovery/definition/cloud-outage.

Data exfiltration is the unauthorized transfer of information from a system. *See, e.g.*, "Exfiltration," NIST CSRC Glossary, https://csrc.nist.gov/glossary/term/exfiltration.

[138] PerkinsCoie, "Common Exclusions Invoked by Cyber Carriers to Deny Coverage," *Tech Risk Report Blog*, February 20, 2019, https://www.techriskreport.com/2019/02/common-exclusions-invoked-cyber-carriers-deny-coverage.

[139] *See, e.g.*, American Academy of Actuaries, *Cyber Risk Toolkit* (2022), 25, https://www.actuary.org/sites/default/files/2022-02/CyberRiskToolkit.Feb22.pdf.

[140] *See, e.g.*, Geneva Association and IFTRIP, *Insuring Hostile Cyber Activity: In Search of Sustainable Solutions* (2022), 16-19, https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf_public/cybersolutions_web.pdf (*Sustainable Solutions Report*). Industry sources reflect that cyber risk

Most policies will also have a war exclusion. Such exclusions may address, to varying degrees, both cyber losses directly associated with a conventional, "kinetic" war as well as losses more indirectly linked to a hostile act by a nation-state actor. The exclusionary language traditionally used to address "acts of war" may extend beyond war to encompass a range of hostile activity that could include crime, political unrest, and terrorism.[141] Because of the potential impact of the "make available" requirement under TRIA in this area,[142] many insurers have sought to address this issue by providing for a carveout from war exclusions for cyber attacks certified by Treasury as an "act of terrorism."

Insurers continue to evaluate the extent to which they are willing to extend dedicated affirmative cyber cover for state-sponsored cyberattacks that may seek to further national goals or potentially support terrorist or criminal groups but which are not outright military conflict. The issue has been raised in the context of the NotPetya attacks in 2017, attributed to Russian nation-state actors against Ukrainian interests, which spread beyond Ukraine to many entities on a worldwide basis. Certain P&C insurers that faced NotPetya-related claims under non-cyber insurance policies invoked standard war exclusions (which largely did not speak to cyber impacts) in defense of the claims. While litigation on those issues continues, one recent New Jersey trial court decision rejected that defense.[143] Industry reports indicate that most insurers providing dedicated cyber cover implicated by NotPetya paid claims without invoking a war exclusion. The aggregate impact of those attacks has been estimated to have caused more than $10 billion in losses on a worldwide basis.[144] It also has led cyber insurers to evaluate the extent to which they are willing to assume the risk of potential systemic exposures driven by nation-

modeling techniques are improving, which could make available further market capacity as the industry develops a better understanding of the potential risk exposures, particularly for systemic events that may be difficult for insurers to fully evaluate or exclude from their policies. *See* John Farley, *2022 Cyber Insurance Market Conditions Report*, (2022), 3, https://www.ajg.com/us/news-and-insights/2022/jan/2022-cyber-insurance-market-report/ ("We also expect continued cyber loss modeling tool development as the market pushes for further insights into the far-reaching threats of systemic cyber risk."); RAA Comments, 5 ("[M]odeling of cyber risks has improved in the last few years and, accordingly, such models may provide an enhanced ability to understand the impact of cyber-related terrorism events."). Risk evaluation for cyber risk is further complicated in that cyber risks can cascade across geographic and/or commercial boundaries, which limits the ability of insurers and reinsurers to use traditional risk transfer strategies (focusing on the region, industry, or size of the entity insured) and will need to reevaluate underwriting strategies to account for such differing accumulation risks. *See generally* Jon Bateman, War, *Terrorism, and Catastrophe in Cyber Insurance: Understanding and Reforming Exclusions* (2020), https://carnegieendowment.org/2020/10/05/war-terrorism-and-catastrophe-in-cyber-insurance-understanding-and-reforming-exclusions-pub-82819.

[141] The Geneva Association, in association with IFTRIP, has recently generated a series of papers that explores the insurability issues posed by the insurance of cyber risk in these areas. *See* Geneva Association and IFTRIP, *Cyber War and Terrorism: Towards a Common Language to Promote Insurability* (2020), https://www.genevaassociation.org/research-topics/cyber/CTCW-common-language; Geneva Association and IFTRIP, *Mapping a Path to Cyber Attribution* (March 30, 2021), https://www.genevaassociation.org/research-topics/cyber/cyber-attribution-research-report; Geneva Association and IFTRIP, *Sustainable Solutions Report*.

[142] TRIA § 103(c)(1) ("make available" requirement of "coverage for insured losses"); TRIA § 102(5) ("insured loss" means "any loss arising from an act of terrorism").

[143] *Merck & Co, Inc, et al. v. ACE American Insurance Company, et al*., No. UNN-L-2682-18, 2022 WL 951154 (N.J. Superior Ct. Union Cty. Jan. 13, 2022).

[144] Andy Greenberg, "The Untold Story of NotPetya, the Most Devastating Cyberattack in History," *Wired*, August 22, 2018, https://www.wired.com/story/notpetya-cyberattack-ukraine-russia-code-crashed-the-world/.

state actors, particularly where a government has attributed the attack to a nation-state actor. Lloyd's, for example, has released a series of policy wordings providing different levels of coverage for cyber events that may involve nation-state actors.[145] With the onset of the Russia-Ukraine conflict in 2022, Treasury (through FIO) has observed insurers and regulators taking steps to address potential ambiguities as they relate to war exclusions for cyber incident exposures.

2. Cyber Insurance Market and Ransomware

The cyber insurance market remains a small but growing component of the U.S. P&C market. Treasury estimates of the cyber insurance market are provided in Section V.I.3 below; the NAIC estimates that the size of the U.S. cyber insurance market in 2020 was $4.1 billion in direct written premium, a 29.1 percent increase over the previous year.[146] The NAIC figures include the premium of alien surplus lines insurers, which make up about 30 percent of the cyber insurance market in the United States, with direct written premium of approximately $1.3 billion. The United States continues to dominate the worldwide cyber insurance market.[147]

Cyber insurance is, however, a relatively small part of the total U.S. P&C insurance market. Cyber insurance contributes only 0.38 percent of direct written premiums in the overall P&C market in the United States.[148] Similarly, the amount and limits of cyber insurance is significantly smaller than the limits of insurance otherwise available in the TRIP-eligible property or liability lines. For example, in the 2022 TRIP data call, responding insurers reported total nationwide property limits subject to TRIP (irrespective of whether terrorism risk insurance was obtained) of about $270 trillion, and total liability limits subject to TRIP of about $150 trillion. By contrast, the corresponding figure for all cyber limits (whether subject to TRIP or whether terrorism risk insurance was obtained) was only $2.4 trillion.

Cyber insurance is the fastest growing product segment in the P&C insurance market. Growth in the cyber insurance market has been driven (at least in part) by a significant increase in cyber incidents, particularly ransomware. Nearly two-thirds (63 percent) of global financial

[145] Lloyd's Market Association Bulletin, "Cyber War and Cyber Operation Exclusion Clauses," November 25, 2021, https://www.lmalloyds.com/LMA/News/LMA_bulletins/LMA_Bulletins/LMA21-042-PD.aspx.

[146] Memorandum from NAIC Staff to Property and Casualty Insurance (C) Committee (October 20, 2021), https://content.naic.org/sites/default/files/index-cmte-c-Cyber_Supplement_2020_Report.pdf (NAIC Cyber Data Memo). NAIC and Treasury numbers on cyber insurance will differ. Treasury collects premium data on a direct earned, versus direct written, basis, as TRIP is operated on a DEP basis. Since direct written premium is wholly allocated to the year in which it is written, versus when it is earned, direct earned premium will lag direct written premium in a growing insurance market. *See* Section V.I.3 below (addressing cyber premium information from the TRIP data calls).

[147] One estimate places the 2020 global cyber insurance market at over $7 billion in written premium, with a U.S. share of the total market of over 50 percent. *See* Lucy Fraser, "Cyber Insurance – Growing the Market to Meet the Global Threat," *Association of British Insurers Blog*, February 7, 2022, https://www.abi.org.uk/news/blog-articles/2022/02/cyber-insurance-growing-the-market-to-meet-the-global-threat/.

[148] NAIC Cyber Data Memo.

institutions experienced a rise in destructive attacks over the past year.[149] Additionally, ransomware is projected to remain an increased globalized cyber risk threat.[150] North American and European businesses are the most targeted. Some of the principal targeted sectors are industrial, public sector, and consumer businesses.[151]

Estimates of the magnitude of ransomware losses vary; however, sources report that the losses are significant and that they are increasing.[152] Treasury has estimated that $590 million in payments relating to ransomware were made in the first six months of 2021, based upon Suspicious Activity Reports, as compared with $416 million reported for the whole of 2020.[153] Varying estimates on the scope of the ransomware problem are driven by the comprehensiveness of the data and different metrics being used to analyze the issue, including whether the information is limited to insurance-related amounts or addresses all payments made by or on behalf of affected parties. Recent legislation that will require mandatory reporting by critical infrastructure entities of covered cyber incidents to the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA) should assist authorities, including FIO, in evaluating relevant metrics.[154] FIO regularly engages with CISA to evaluate insurance industry implications from exposures to critical infrastructure (such as utilities, pipelines, and financial services) on cyber terrorism coverage under TRIP and across the cyber insurance industry more generally.

Ransomware and other cyber incidents have led to higher claim frequency and loss severity over the past two years.[155] Since 2019, there has been a substantial increase in cyber insurance pricing resulting from deteriorating loss experience coupled with increased demand for the

[149] Phil Muncaster, "Two-Thirds of Global Banks Witness Surge in Destructive Attacks," *Infosecurity Magazine*, April 21, 2022, https://www.infosecurity-magazine.com/news/global-banks-surge-destructive; Tom Kellerman, *Modern Bank Heists 5.0* (2022), https://www.vmware.com/content/dam/learn/en/pdf/carbonblack/Modern%20Bank%20Heists%205.0%20Report.pdf.

[150] Cybersecurity and Infrastructure Security Agency (CISA), *2021 Trends Show Increased Globalized Threat of Ransomware* (2022), https://www.cisa.gov/uscert/ncas/alerts/aa22-040a.

[151] NCC Group, *Monthly Threat Pulse February 2022* (2022), https://www.mynewsdesk.com/nccgroup/news/ncc-group-monthly-threat-pulse-february-2022-444577.

[152] *See, e.g.*, A.M. Best, *Ransomware and Aggregation Issues Call for New Approaches to Cyber Risk*" (2021), http://www3.ambest.com/bestweek/purchase.asp?record_code=309212 (reporting that total claims rose 18 percent in 2020 owing strictly to first-party ransomware claims, which were up 35 percent in 2020 and now account for 75 percent of cyber claims); Marsh Comments, 7-8 (detailing the increase in ransomware payments by size and frequency since 2019).

[153] U.S. Treasury, Financial Crimes Enforcement Network (FinCEN), Advisory on Ransomware and the Use of the Financial System to Facilitate Ransom Payments (November 8, 2021), 4 n.15, https://www.fincen.gov/sites/default/files/advisory/2021-11-08/FinCEN%20Ransomware%20Advisory_FINAL_508_.pdf. This increase in the frequency of attacks has been accompanied by increased sophistication and larger extortion demands, in part linked to the development of "ransomware-as-a-service" where specialist malware developers sell software code to other cybercriminals. *Id*. at 4.

[154] *See* Cyber Incident Reporting for Critical Infrastructure Act of 2022, Pub. L. No. 117-103 (2022).

[155] Fitch Ratings, "US Cyber Insurance Sees Rapid Premium Growth, Declining Loss Ratios," news release, April 13, 2022, https://www.fitchratings.com/research/insurance/us-cyber-insurance-sees-rapid-premium-growth-declining-loss-ratios-13-04-2022.

product—with both resulting in part from the significant increase in ransomware claims.[156] Cyber insurance loss ratios were only 48 percent in 2015, and then trended downward from 2016 to 2018 until they increased from 47 percent in 2019 to 72 percent in 2020.[157] That loss history has led to significant price increases for the product—one estimate cited a 74 percent increase in 2021 alone for cyber insurance as compared with nine percent in the P&C industry overall. These price increases have contributed to a modest improvement in the cyber insurance loss ratio between 2020 to 2021.[158] Commenters report that cyber insurance premiums continue to increase, and that current demand for cyber risk limits exceeds the capacity of the insurance market to extend such limits, at least at rates that policyholders are willing or able to pay.[159] Policyholders are also accepting higher retentions as a way in which to mitigate the effect of rate increases.[160]

The rapid growth in ransomware exposure has led insurers to tighten underwriting standards to better evaluate cyber loss controls before providing coverage. These standards include, among other things, whether the prospective policyholder is using multi-factor authentication for access to systems, the training platforms of businesses, and policyholder adherence to best practices for security standards.[161] Such requirements may incentivize better cyber security behavior by policyholders and thus improve their resiliency.

Absent some change in the current market dynamics, industry sources believe that cyber insurers will continue tightening policy terms and conditions (including exclusions), while increasingly seeking to limit the extent to which cyber coverage may be provided under non-cyber policies.[162] Additionally, one commenter noted that "cyber liability policies typically include an exclusion for bodily injury and physical property damage," meaning that their coverage for an event of cyber terrorism would not extend to such losses.[163] To the extent that TRIP-eligible lines policies that do cover bodily injury and physical property damage seek to exclude coverage for

[156] FIO previously noted the beginning of this hardening of the cyber market on account of ransomware experience. *See, e.g.*, FIO, *2020 Effectiveness Report*, 56.

[157] Fitch Ratings, "US Cyber Insurance Sees Rapid Premium Growth, Declining Loss Ratios"; The Council of Insurer Agents & Brokers, *Commercial Property/Casualty Market Index, Q3 2021*, 4, https://www.ciab.com/download/32268/.

[158] Fitch Ratings, "US Cyber Insurance Sees Rapid Premium Growth, Declining Loss Ratios."

[159] *See* Marsh Comments, 6-7 ("As of March 2022, pricing increases have not shown signs of slowing down. However, we expect rates to stabilize in the second half of 2022 as underwriters will have had a full twelve months to recalibrate their cyber portfolio."); Marsh Comments, 8 ("Some [policyholders] are reducing policy limits, driven in part by budget constraints, but also due to limited insurer appetite for risk where certain security controls and corporate governance appears to be lacking or insufficient.); RMS Comments, 3 ("Insurers have also managed their risk by reducing line sizes – making cover harder to come by. Demand far outpaces supply in the current market, creating hard market conditions and a large protection gap for many insureds. Even with new market entrants, and some insurers writing more premium, it is not enough to meet existing demand.").

[160] Marsh Comments, 9.

[161] Council of Insurer Agents & Brokers, *Commercial Property/Casualty Market Index, Q3 2021*, 1 (noting inability of some policyholders to get cyber insurance "coverage at all if they did not implement specific carrier-requested cybersecurity measures"); Marsh Comments, 10.

[162] Geneva Association and IFTRIP, *Sustainable Solutions Report*, 11.

[163] *See* APCIA Comments, 1.

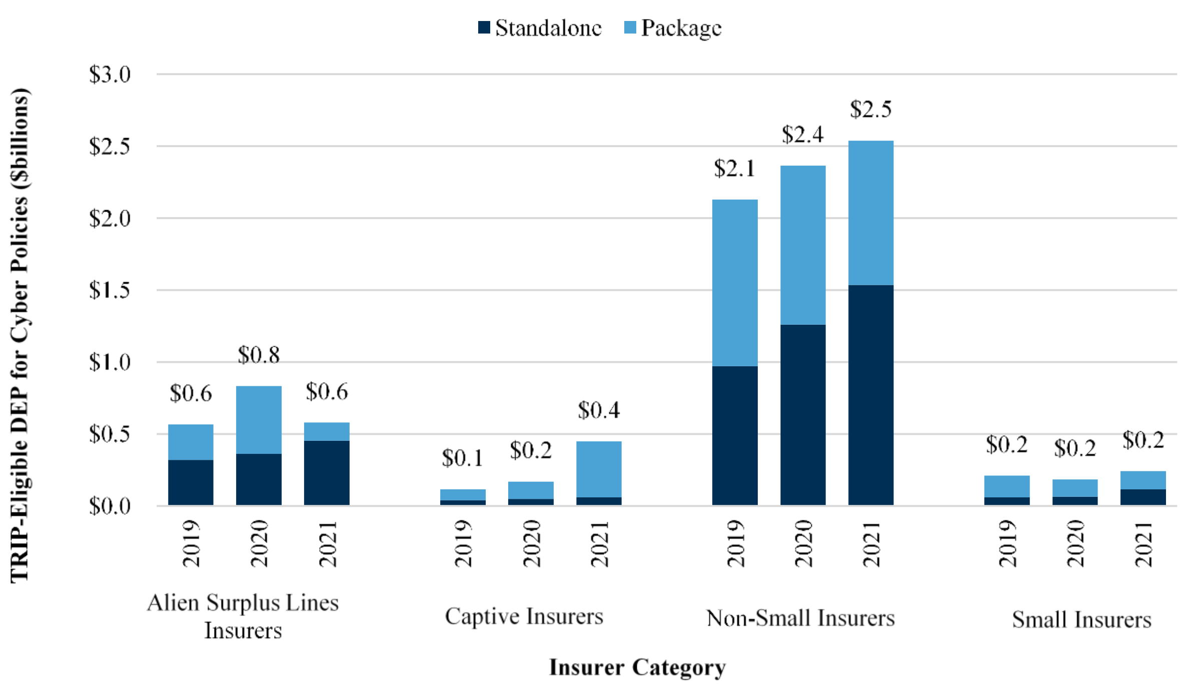
such losses arising from a cyber event, there could be a lack of responsive coverage where a cyber attack is involved. These market developments could create protection gaps for policyholders for needed coverage, a development that FIO will continue to monitor.

3. Analysis of Data Call Information

Both the TRIP data call and the state regulator data call require insurers to report whether their cyber policies are written on a "package" or "standalone" basis.[164] Policies are identified as standalone when the policy provides coverage only for cyber risk, while package policies provide broader coverage, including coverage for non-cyber losses.

For the TRIP data call, respondents are required to report data for cyber policies that provide coverage for terrorism risk and are written in TRIP-eligible lines, even if the policy only responds to losses arising from non-certified acts of terrorism.[165] Figure 43 summarizes TRIP--eligible DEP for cyber policies on a nationwide basis between 2019 and 2021.

Figure 43: 2019-2021 TRIP-Eligible DEP for Cyber Policies



Source: 2020-2022 TRIP data calls

Figure 43 reflects continued market growth in the TRIP-eligible cyber insurance market, with insurers reporting total TRIP-eligible cyber DEP of $3.8 billion in 2021, up from $3.5 billion in 2020. The market remains concentrated among non-small insurers; those insurers hold over 65

[164] In addition to a coordinated data call with TRIP (as discussed in Section IV), the NAIC collects data from insurers writing cybersecurity insurance each year through the Property/Casualty Annual Statement Cybersecurity and Identity Theft Supplement. *See* NAIC Cyber Data Memo.

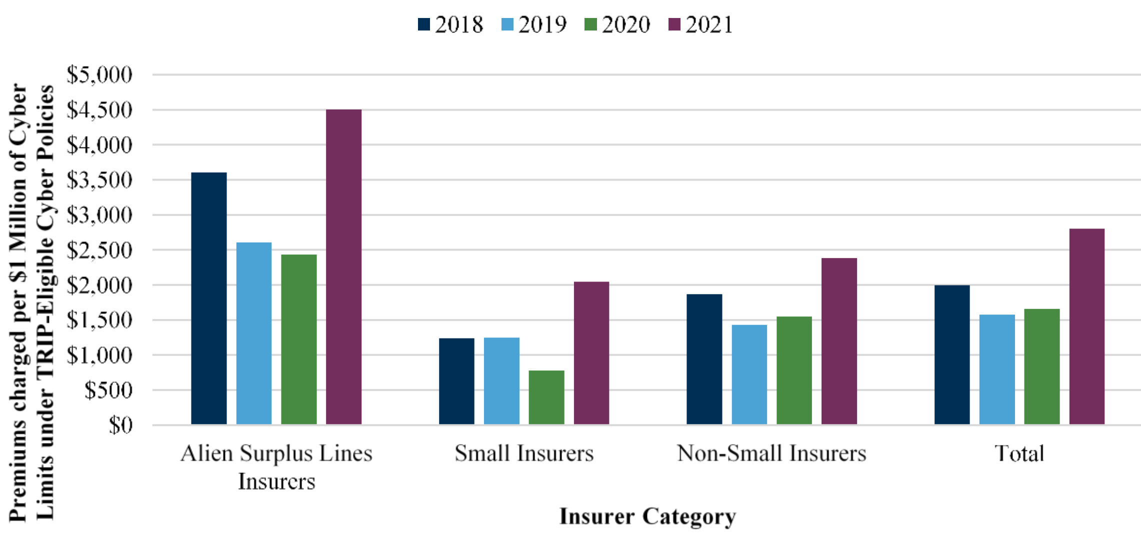
[165] Non-certified standalone policies are discussed in greater detail in Section V.C.2.

percent of the market. Alien surplus lines insurers are also significant participants, with a 16 percent market share. However, the surplus lines insurers' market share is likely understated given that some alien surplus lines insurer cyber premium is combined in the reports of affiliated non-insurers. Stakeholders cited several reasons for minimal participation by smaller insurers in this market (5 percent), including limited availability of loss data, lack of access to reliable models, and lack of specialized underwriting personnel.

Importantly, the most recent data provided in the TRIP data calls reflects that this increased premium in Figure 43 is not supporting the same total amount of limits as in prior years. This demonstrates that increased premiums also have been accompanied by some retrenchment by cyber insurers, as insurers are increasing prices rather than expanding amount of coverage provided.

Figure 44 shows the price of cyber insurance per $1 million in limits between 2018 and 2021, based upon limits of liability under TRIP-eligible cyber policies extending terrorism risk insurance.[166] The cost increase reflected in the 2021 data is generally consistent with cost increases reported by other industry sources and discussed above. However, because Treasury's TRIP data is on a direct earned premium basis, the extent of the increase shown here is smaller than those reflected by other industry sources that are reported on a direct written premium basis.

Figure 44: 2018-2021 Premium Charged per $1 Million of Cyber Limits under TRIP-Eligible Cyber Policies



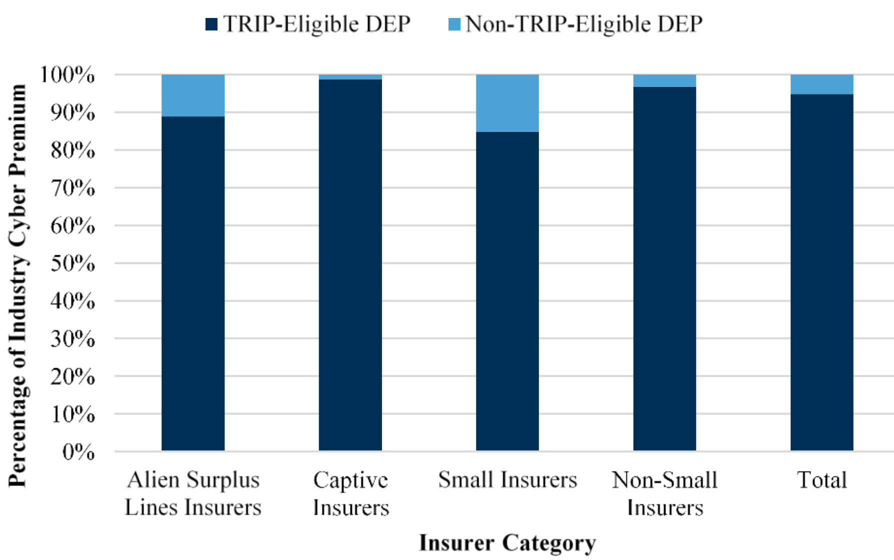
Source: 2019-2022 TRIP data calls

As Treasury has previously observed, at least some of the difference between prior estimates of the total U.S. cyber insurance market and the TRIP-eligible amounts reported to Treasury likely

[166] Prior to the 2022 TRIP data call, Treasury did not collect information on all limits under TRIP-eligible cyber policies but limited the collection to limits associated with policies under which terrorism risk insurance was provided. Starting in the 2022 TRIP data call, Treasury collected broader limits information on all TRIP-eligible lines policies.

stems from cyber policies reported to state regulators that are written as errors & omissions and other forms of professional liability coverage, which is not a TRIP-eligible line of insurance.[167] Among other reasons, including to ensure that Treasury has data on the amount of cyber insurance currently written outside the scope of the Program, Treasury expanded the TRIP data call in 2022 to require the reporting of cyber insurance information in the non-TRIP-eligible lines of insurance. Figure 45 illustrates the relative size of the TRIP-eligible and non-TRIP-eligible cyber insurance markets, based upon the information reported in the 2022 TRIP data call.

Figure 45: 2021 TRIP-Eligible versus Non-TRIP-Eligible Cyber Insurance Market (by DEP)



Source: 2022 TRIP data call

Based upon the reported data collected for the first time in 2022, cyber insurance currently written outside TRIP-eligible lines amounts to only about five percent of the total U.S. cyber insurance market. However, this reported data is based upon a relatively small subset of reporting insurers in 2022 that responded to questions about DEP associated with non-TRIP eligible lines of insurance.[168] As a result, this five percent figure likely underestimates the amount of cyber insurance being written in non-TRIP eligible lines. Treasury will continue to evaluate the issue of cyber insurance written outside TRIP-eligible lines of insurance and take steps to increase the relevant reporting for future TRIP data calls. No mandatory offer of terrorism risk insurance needs to be made under such policies written in non-TRIP eligible lines.

---

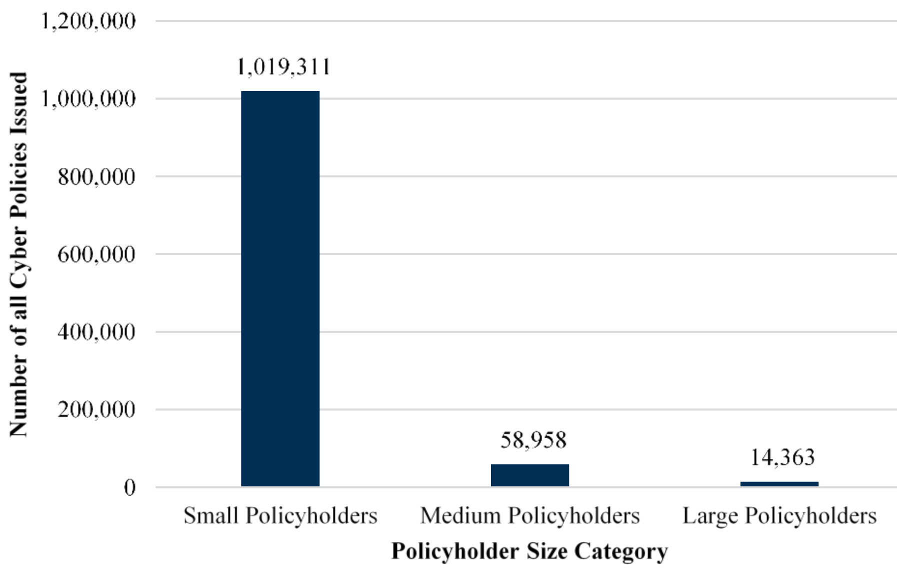
[167] *See* FIO, *2020 Effectiveness Report*, 55-56; 31 C.F.R. § 50.4(w)(2) (2021).

[168] Only about 30 percent of all reporting alien surplus lines, small, and non-small insurers that reported cyber information generally reported any information in response to the new requests addressing cyber insurance written outside TRIP-eligible lines of insurance. An even smaller percentage of captive insurers reported such information, although they may be less likely to provide cyber insurance in non-TRIP eligible lines. In addition, insurers that only write cyber insurance in non-TRIP eligible lines would not have been required to report in the 2022 TRIP data call.

Additionally, insurers would not receive potential payments under the Program in connection with losses under such policies, even if they resulted from a cyber event that Treasury has certified as an act of terrorism.

In addition to obtaining more detailed information concerning the amount of cyber insurance written in non-TRIP eligible lines, Treasury also expanded the 2022 TRIP data call to include information on how cyber insurance is obtained by different sizes of policyholders, as measured by number of employees.[169] This information on policyholder size that was collected for the first time in the TRIP 2022 data call is based upon a more limited sample of industry data as policy count of insurers allocated by policyholder size was only about 25 percent of policy count generally reported, and DEP of insurers allocated by policyholder size was only about 50 percent of the DEP generally reported. Figure 46 shows the proportion of cyber insurance (by number of policies) issued to small, medium, and large policyholders.

Figure 46: 2021 Cyber Insurance Issued to Small, Medium, and Large Policyholders (by Number of Policies)

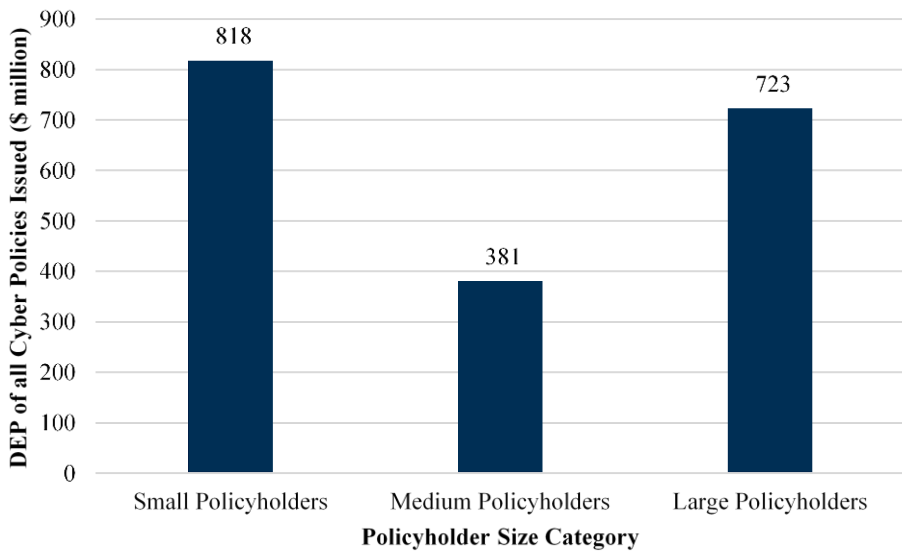


Source: 2022 TRIP data call

[169] Treasury requested that reporting insurers allocate both number of cyber policies issued and DEP by small policyholders (100 or fewer employees), medium policyholders (101-500 employees), and large policyholders (more than 500 employees).

Figure 47 shows the amount of cyber insurance issued to entities in the different size categories as measured by DEP.

Figure 47: 2021 Cyber Insurance Issued to Small, Medium, and Large Policyholders (by DEP)

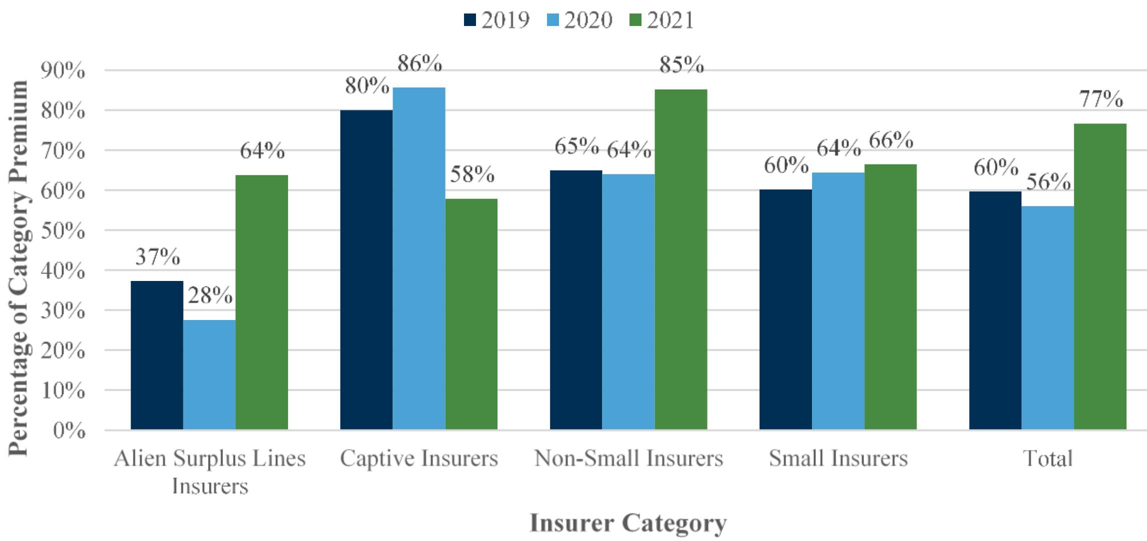


Source: 2022 TRIP data call

FIO will continue to evaluate cyber insurance for different sized policyholders in its administration of TRIP and the annual data call.

Figure 48 shows take-up rates for all cyber policies written in the TRIP-eligible lines of insurance (standalone and package) providing terrorism risk coverage in each insurer category.

Figure 48: 2019-2021 Take-Up Rates for Terrorism Risk Insurance under Cyber Policies (by TRIP-Eligible DEP)



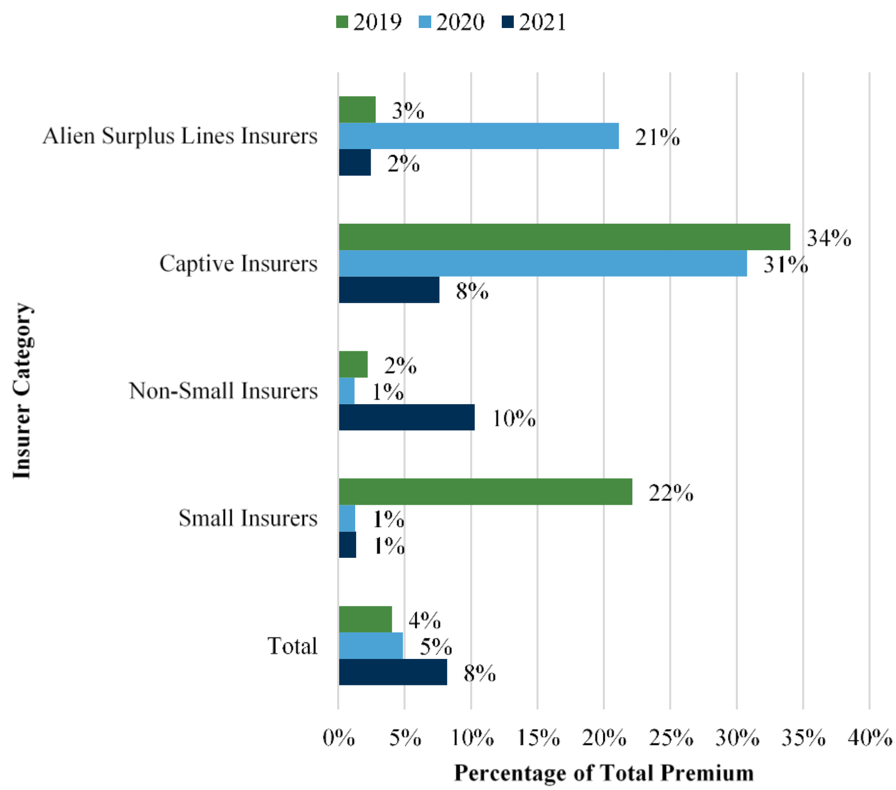
Source: 2020-2022 TRIP data calls

Figure 48 demonstrates a significant increase in the take-up rates from 2020 to 2021. Additionally, take-up rates for cyber insurance covering terrorism risk subject to the Program, combined for all reporting insurer categories, are somewhat higher than overall take-up rates for the Program (compare Figure 48 to Figures 15 and 16).

Figure 49 reflects the reported premiums charged for obtaining terrorism risk insurance associated with standalone cyber insurance policies.[170]

[170] Treasury requests the terrorism risk premium component of cyber coverage under both standalone cyber policies and within the cyber component of package policies. However, much of the information provided in connection with package policies may reflect the terrorism risk premium charged for the entire policy, which does not provide a good assessment of the terrorism risk insurance component of the cyber coverage.

Figure 49: 2019-2021 Percentage of Total Policy DEP Allocated to Terrorism Risk Under Standalone Cyber Policies

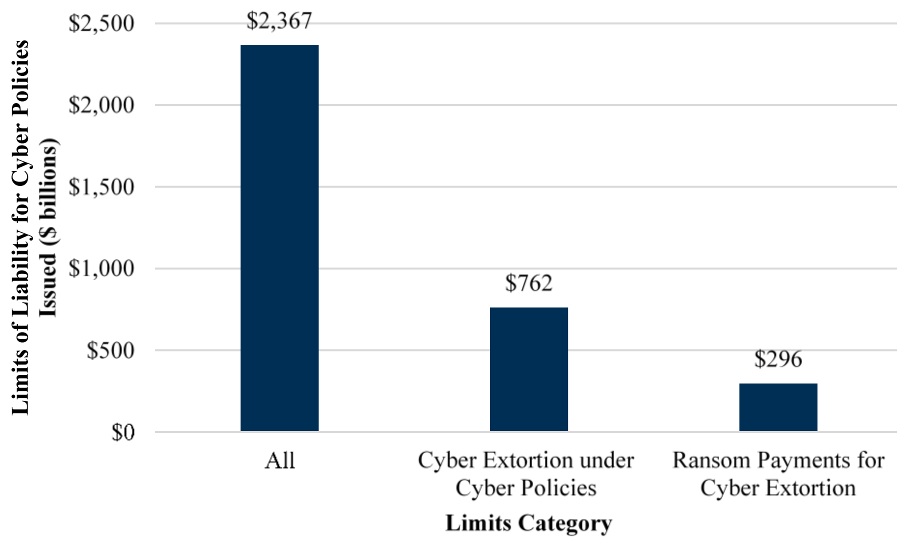


Source: 2020-2022 TRIP data calls

Figure 49 demonstrates that there was an increase from 2020 to 2021 in the percentage of total policy DEP being allocated to terrorism risk under standalone cyber policies (5 percent in 2020 to 8 percent in 2021). Figure 49 indicates that terrorism risk is becoming an increasingly relevant component of standalone cyber policies and indicates that the average premiums associated with terrorism risk under standalone cyber policies are higher than the average premiums charged for terrorism risk under TRIP-eligible policies in the aggregate (*see, e.g.*, Figure 4).

As discussed above, ransomware has had a significant impact upon the cyber insurance market (of which cyber terrorism risk insurance is a key component) in terms of losses, pricing, and the availability of desired limits. For this reason, Treasury expanded the data call to obtain additional information on both the ransomware coverage provided by the cyber insurance market and the losses experienced by such market. Figure 50 shows the total policy limits for standalone cyber insurance policies as compared to the limits for cyber extortion, and the limit specifically for a ransom payment. Columns 2 and 3 below are subsets of the total policy limits expressed in Column 1.

Figure 50: 2021 Total Cyber Policy Limits Compared Against Cyber Extortion Limits and Ransom Payment Limits



Source: 2022 TRIP data call

The information from the TRIP data call reflects that cyber policies in the aggregate will likely provide progressively lower limits depending upon whether the loss is for cyber risk generally, cyber extortion, or specifically for a ransom payment.

Figure 51 shows the 2021 loss experience reported by cyber insurers for cyber extortion loss amounts (paid and incurred), amounts specifically made for ransom payments, and cyber extortion defense and loss containment amounts (paid and incurred). Similar to the other new information categories, the reported information is based upon a smaller subset of insurers than those insurers that reported information on the cyber worksheet generally. This indicates that the reported loss information—while substantial in total—is likely low.[171]

[171] Only about 30 percent of reporting alien surplus, small, and non-small insurers reported loss information pursuant to the expanded data call requests, although that group of companies constituted about 70 percent of all cyber DEP reported in the 2022 TRIP data call. Treasury expects insurers to report this information and the other new categories of information on the cyber worksheet in the 2023 TRIP data call, which is a mandatory requirement for participating insurers under TRIA.

Figure 51: 2021 Reported Cyber Extortion and Ransom Loss Figures (Paid and Incurred)

	Direct Losses ($ million)	% of Total
Direct Losses Paid	$ 605	35%
Direct Losses Paid: Ransom Payment or Reimbursement Only	*403*	*23%*
Direct Losses Incurred	662	38%
Direct Defense and Loss Containment Amounts Paid	232	13%
Direct Defense and Loss Containment Amounts Incurred	243	14%
Total Direct Losses Paid and Incurred and Defense and Loss Containment Amounts Paid and Incurred	**$ 1,742**	**100%**

Source: 2022 TRIP data call

Based on the 2022 TRIP data call, the aggregate ransomware payment amount in 2021 was $403 million, and insurers providing this information reported that it arose in connection with 2,541 claims.

The cyber extortion and ransomware information reported to Treasury for 2021 is generally consistent with, although somewhat lower than, the information provided by market sources and commenters. This new information provides further detail on how ransomware and extortion are affecting the insurance market. Significantly, loss amounts reported by insurers in the TRIP data call (even if they are lower than the insurer experience overall) are significantly greater than some estimates derived from reporting to law enforcement.[172] While ransom payments are a significant portion of total cyber extortion losses for insurers, they are only 23 percent of total losses. Insurer's total losses also include other direct losses of the policyholders, including direct defense and loss containment amounts (77 percent of total losses).

The TRIP data call information shows that: (1) insurer information is a significant component of the data necessary to analyze issues related to ransomware; (2) ransom payments alone are not the most significant portion of total associated losses for cyber insurers; and (3) losses associated with ransomware are having a significant market impact on the cost and availability of cyber insurance, which affects the cost and availability of terrorism risk insurance for cyber acts of terrorism under TRIP.

4. Application of TRIP to Cyber Terrorism Losses

In its *2020 Effectiveness Report*, Treasury addressed some of the issues that could be presented by the application of TRIP to losses resulting from cyber terrorism.[173] Treasury has recognized that an act of cyber terrorism could potentially be certified as an act of terrorism. Indeed, legislative history generated during the initial enactment of TRIA in 2002 recognized cyber terrorism as a risk that could be within the scope of this Program, even though TRIA does not expressly mention cyber.[174] The nature of cyber risk and cyber events presents unique issues

---

[172] *See* FBI, *Internet Crime Report* (2021), 14, https://www.ic3.gov/Media/PDF/AnnualReport/2021_IC3Report.pdf ("In 2021, the IC3 received 3,729 complaints identified as ransomware with adjusted losses of more than $49.2 million.").

[173] FIO, *2020 Effectiveness Report*, 60-62.

[174] *See* H.R. Rep. 107-779, 24, https://www.congress.gov/107/crpt/hrpt779/CRPT-107hrpt779.pdf.

when determining whether to certify a putative act of cyber terrorism as an act of terrorism under TRIA, including certification and attribution, scope of coverage, and cross border issues.

Treasury highlighted some of these issues in its last Effectiveness Report because they are critical in how the Program might respond to a cyber terrorism event, and how the insurance market would view the role of the Program in such a case.[175] These issues are also impacted by the fact that the cyber insurance market has continued to rapidly develop and change in recent years. Treasury identified these issues in its last Effectiveness Report, including the "numerous internal and industry efforts to develop commonalities in taxonomy, policy terms, and exclusions that would more appropriately reflect the cyber risks created by the embedded role of technology in today's society."[176]

Treasury plans to evaluate developments in the cyber insurance market in the context of the current availability and affordability of insurance that would extend to cyber-related losses—both generally and specifically to a cyber "act of terrorism."[177] This work, together with Treasury's TRIP data calls, will help Treasury determine whether any Program changes are necessary in the administration of TRIP. That analysis could include revisions to existing Treasury regulations, as well as broader recommendations relating to TRIA's mechanics. This analysis would be based upon FIO's evaluation of its own data and information, interaction with the ACRSM, engagement with its federal and state partners in the area, and consultation with stakeholders.

[175] Many commenters identified similar issues in the statements they submitted in connection with the current Report. *See* CBI Cyber Comments, 1-5; Lloyd's Comments, 3; AM Best Comments, 3-4; Marsh Comments, 11-12; RMS Comments, 4-5; CIAT Comments, 3; AAA Comments, 3-4; RAA Comments, 4.

[176] FIO, *2020 Effectiveness Report*, 62.

[177] GAO has also recommended that FIO, in conjunction with CISA, engage in further work in this area. *See* GAO, *Cyber Insurance: Action Needed to Assess Potential Federal Response to Catastrophic Attacks* (2022), https://www.gao.gov/products/GAO-22-104256.

VI. ADDITIONAL ANALYSIS ON INSURER CATEGORIES

Non-small insurers represent more than 80 percent of the market for terrorism risk insurance in the TRIP-eligible lines of insurance, as shown in Figure 1. Many of the prior analyses in this Report are heavily weighted by the experience of those non-small insurers. Treasury provides further information here concerning the other insurer categories that participate in the Program: (a) small insurers, (b) captive insurers, and (c) alien surplus lines insurers.

A. Small Insurers

In 2017, 2019, and 2021 Treasury issued studies addressing domestic small insurers, which Treasury defined as those insurers that might not be able to obtain reimbursement under the Program even after satisfaction of their individual deductibles due to the Program Trigger.[178] Treasury will continue to issue studies concerning the competitiveness of small insurers within the terrorism risk insurance market in alternate years, as required by TRIA.[179]

In the 2022 TRIP data call, Treasury again observed that, while small insurers are significant purchasers of private reinsurance, they do not uniformly obtain reinsurance to cover the entire risk of their potential exposure below the Program Trigger. As a result, there is potential for some small insurers to sustain losses above their Program deductibles but be unable to receive federal reimbursement because the Program Trigger is not met.[180] In its prior reports Treasury has noted that, while the amount of insurance purchased by small insurers could be explained by probable maximum loss (PML) information reported for those insurers, a significant percentage of small insurers remain exposed for a PML above their Program deductible and below the Program Trigger amount, without the support of private reinsurance for that exposure.[181] The additional data now available for 2021 continues to reflect the same trend, as shown in Figure 52.

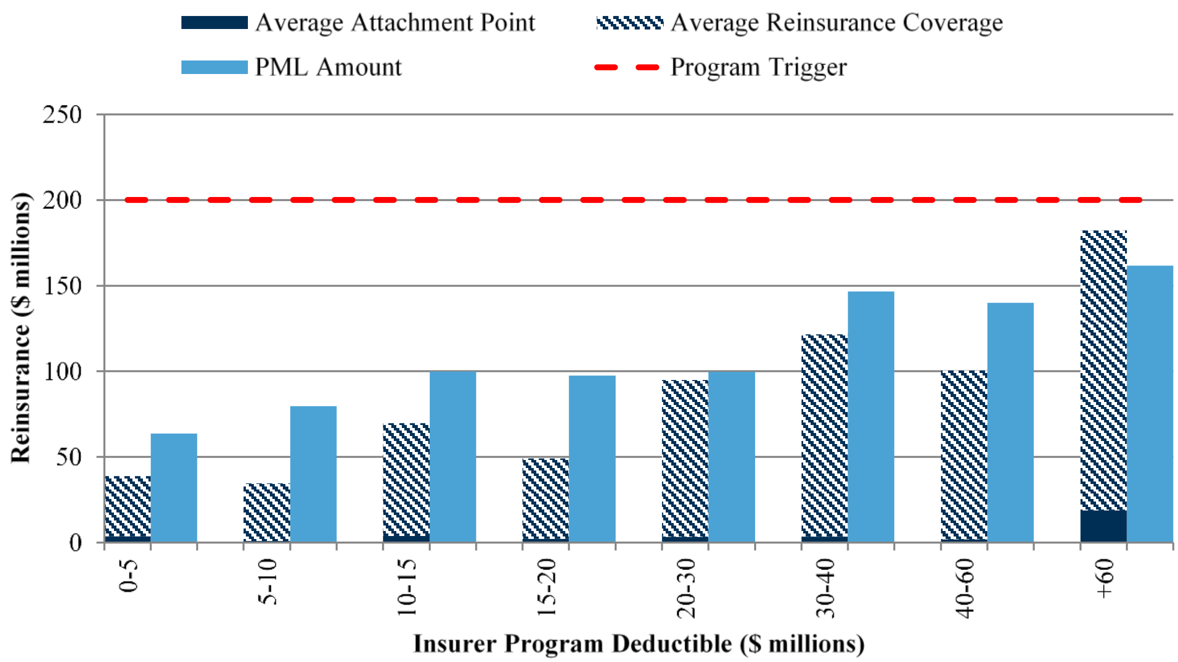
[178] *See* FIO, *2017 Small Insurer Study*, 6-7 (explaining definition of small insurers by reference to application of the Program Trigger). *See also* FIO, *2019 Small Insurer Study*; FIO, *Study on Small Insurer Competitiveness in the Terrorism Risk Insurance Marketplace* (2021), 44-46, https://home.treasury.gov/system/files/311/2021TRIPSmallInsurerReportJune2021.pdf (*2021 Small Insurer Study*).

[179] TRIA § 108(h).

[180] *See* FIO, *2017 Small Insurer Study*, 25-27.

[181] *See* FIO, *2018 Effectiveness Report*, 57-58; FIO, *2019 Small Insurer Study*, 41-43; FIO, *2020 Effectiveness Report*, 63-64; FIO, *2021 Small Insurer Study*, 44-46.

Figure 52: 2021 Comparison Between Small Insurer Deductibles, Reported PML Figures, and Reinsurance Purchases



Source: 2022 TRIP data call

Where reinsurance purchases approximate a small insurer's PML, the lack of reinsurance up to the Program Trigger may not be significant, if the insurer is not exposed to a catastrophic loss up to that amount. As reflected in Figure 52, consideration of a small insurer's PML estimate may explain the lack of reinsurance purchases up to the amount of the Program Trigger in many cases. The reported information, however, still reflects a significant number of small insurers that remain exposed for a PML above their Program deductible and below the Program Trigger amount, without the support of private reinsurance for that exposure. Commenters have identified the current Program mechanics as potentially problematic for small entities that may sustain significant losses that would still not be large enough to trigger the federal payments in light of Program Trigger requirements.[182]

B. Captive Insurers

Captive insurers are licensed insurers formed to insure the risks of a parent or other affiliated entities. Such companies in the United States are supervised and regulated by the state insurance

[182] AM Best Comments, 4 ("lowering the industry trigger from $200 million to $50 million would allow smaller insurers to provide coverage"); SIIA Comments, 3-4 (Treasury should "consider examining the appropriate size and scope of TRIP, which could and should include small- and medium-sized businesses that run the risk of significant losses from the same terrorism-related risks that large businesses face").

departments of their domicile, under state laws and regulations specifically applicable to captive insurers.[183]

U.S. domestic (domiciled or licensed) captive insurers that provide insurance in TRIP-eligible lines participate in the Program.[184] As of 2021, there were 3,069 U.S. domiciled captive insurers writing various lines of insurance and reinsurance (including but not limited to the TRIP-eligible lines of insurance), distributed among 29 states and the District of Columbia.[185] The number of domestic U.S. captive insurers that write terrorism risk insurance subject to the Program for 2021, however, was 589, or approximately 19 percent of the total number of domestic U.S. captive insurers.[186] Those same captive insurers also write insurance that is not subject to the Program. In the 2022 Data Call, reporting captive insurers identified an additional $9.9 billion in non-TRIP-eligible lines earned premium for calendar year 2021, meaning that the TRIP-eligible lines DEP of those captive insurers represented about 59 percent of their total earned premium.

The potential exposure associated with terrorism risk insurance written by captive insurers for a parent or other affiliated entity differs from that of conventional commercial insurers. Commercial insurers must "make available" terrorism risk insurance coverage to all potential, third-party policyholders in the TRIP-eligible lines of insurance. For captive insurers, the offer and acceptance of terrorism risk insurance under the Program is controlled by the insured. Captive insurers are also regulated under a separate regulatory regime under relevant state law. Therefore, even though captive insurers underwrite a significant portion of the risks for losses arising from acts of terrorism that are covered under TRIP, they can also be analyzed separately.

Most state insurance regulators do not require captive insurers to report information publicly concerning their operations. However, industry stakeholders indicate that captive insurers may issue policies for terrorism risk subject to the Program that provide coverage that otherwise might not be readily available, such as for NBCR risks, "trophy" or "iconic" properties, and locations in other higher-risk geographical areas, such as sporting arenas and properties in

[183] TRIA defines a captive insurer as an insurer licensed under the captive insurance laws or regulations of any state. 31 C.F.R. § 50.4(g) (2021).

[184] *See* 31 C.F.R. § 50.4(o)(1)(i)(A) (2021). *See also* Terrorism Risk Insurance Program, 68 Fed. Reg. 41250, 41259-60 (July 11, 2003), https://www.gpo.gov/fdsys/pkg/FR-2003-07-11/pdf/03-17585.pdf.

[185] "Captives by State, 2020-2021," Insurance Information Institute, https://www.iii.org/publications/a-firm-foundation-how-insurance-supports-the-economy/a-50-state-commitment/captives-by-state.

[186] A larger number of captive insurers write P&C insurance that is subject to the Program, but do not issue terrorism risk insurance subject to TRIP to their policyholders; those captive insurers are not required to report in the TRIP data call. *See also* Marsh Comments, 14 (of 1,500 captive insurers for whom Marsh provides management services only about 205 issue policies in one or more TRIP-eligible lines of insurance). There are also large numbers of captive insurers in non-U.S. jurisdictions, as the total number of captive insurers worldwide (including U.S. captive insurers) is now estimated to be over 7,000. *See* "Captive Insurance Companies," NAIC, https://content.naic.org/cipr_topics/topic_captive_insurance_companies.htm. Non-U.S. captive insurers are unable to participate in TRIP unless they have been licensed by one or more state insurance departments to write insurance in one or more U.S. jurisdictions (or have otherwise qualified as an alien surplus lines insurer). Based on the 2022 TRIP data call, only two non-U.S. captive insurers reported information to Treasury as captive insurers licensed in a particular state jurisdiction.

proximity to critical infrastructure.[187] The formation of a captive insurer may provide certain tax advantages to a business entity, as compared to an entity that self-insures its risks by simply putting aside funds to pay anticipated losses and claims.[188]

Captive insurers typically have premium writings (upon which Program deductible calculations are based) that are small, relative to other insurer categories. As a result, captive insurers may be able to claim Program reimbursement subject to low thresholds (in terms of absolute dollars), assuming that overall losses from one or more certified acts of terrorism in a given calendar year are sufficient to trigger the Program.[189] Given their size, however, captive insurers could be in a position in which they could sustain significant losses above their TRIP deductible that would not trigger reimbursement under TRIP in light of the Program Trigger.[190]

Captive insurers tend to insure similar TRIP exposures as other insurers generally—property, liability, payroll (workers' compensation), and mixed. The most significant difference in exposures between captives and alien surplus lines insurers is the lack of substantial participation by alien surplus lines insurers in the market for workers' compensation insurance. Because captive insurers are typically unable, as a matter of state law, to directly provide workers' compensation insurance, most of the workers' compensation insurance issued by captive insurers is in the form of workers' compensation deductible reimbursement policies, which reimburse their policyholders for some portion of the deductibles existing under policies issued to the

[187] *See* VCIA Comments, 2; SIIA Comments, 1-2; Marsh Comments, 15; GAO, *Terrorism Insurance: Status of Efforts by Policyholders to Obtain Coverage* (2008), 9, 14-16, http://www.gao.gov/assets/290/280918.pdf.

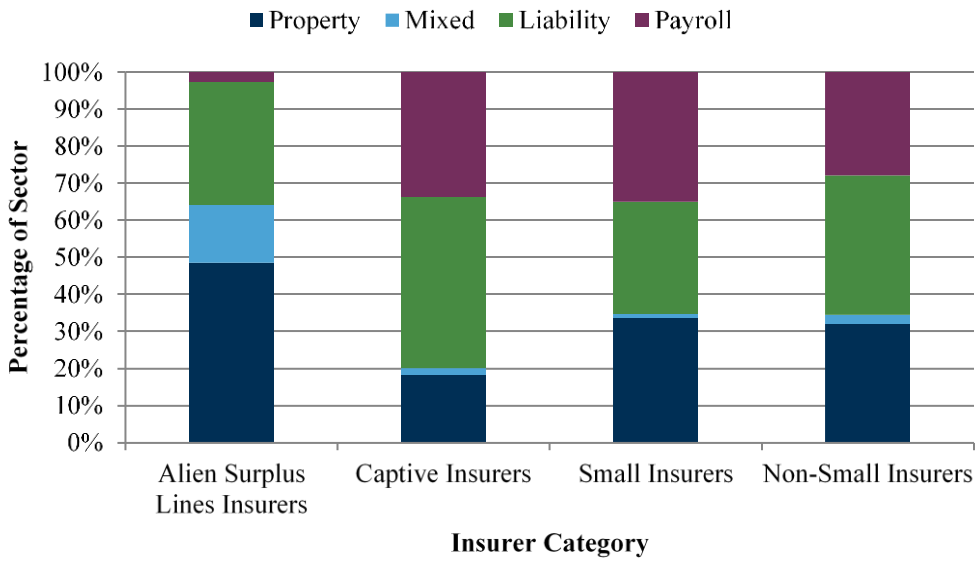
[188] The totality of the tax implications of an insurance arrangement, including self-insurance arrangements, depends upon the specific circumstances presented. In certain cases, however, an insurer with relatively small amounts of total gross receipts or premiums may qualify for favorable tax treatment. A stock insurance company (other than a life insurance company) with gross receipts of $600,000 or less (of which more than 50 percent are premiums) is a tax-exempt corporation. A mutual non-life insurance company with gross receipts of $150,000 or less (of which more than 35 percent are premiums) is also tax-exempt. 26 U.S.C. § 501(c)(15). A non-life insurance company that meets certain diversification requirements regarding policyholders or ownership interests, with annual net written premiums (or, if greater, direct written premiums) of $2.45 million or less in a taxable year beginning in 2022 ($2.4 million for a taxable year beginning in 2021, $2.35 million in 2020, and $2.3 million in 2019) may elect to be taxed only on its taxable net investment income, as defined in 26 U.S.C. § 834. 26 U.S.C. § 831(b). This premium threshold is subject to an annual inflation adjustment. 26 U.S.C. § 831(b)(2)(E). Information reported to Treasury during the 2022 TRIP data call (consistent with prior data calls), however, reflects that about 98 percent of captive insurers, by DEP, are ineligible to elect favorable treatment under 26 U.S.C. § 831(b) because they received premiums in excess of the then-specified premium threshold amount. Accordingly, Treasury's analysis of captive insurers under the Program is mostly based upon data from captive insurers that are taxed on their full income, including both underwriting and investment income.

[189] Treasury's modeled loss questions have demonstrated proportionally higher payments to captive insurers than to other insurer categories. *See* Section V.G. Commenters, as well as the ACRSM, have questioned whether the existing Program mechanics result in an appropriate level of risk sharing where captive insurers are involved. *See* CBI NBCR Comments, 3-5; CBI Cyber Comments, 4-6; Section IX (summary of ACRSM Report). Treasury retains the ability to address the participation of captive insurers in the Program (*see* TRIA § 103(f)) and will continue to consider these issues in connection with its specific rulemaking authority in this area as it evaluates the available data.

[190] *See* FIO, *2017 Small Insurer Report*, 21-23. Although the *2017 Small Insurer Report* focused upon the impact of the Program Trigger upon small insurers, almost all captive insurers are potentially presented with the same risk.

captive insurer's parent by conventional commercial insurance companies.[191] Figure 53 shows the relative breakdown of TRIP exposures in 2021.

Figure 53: 2021 DEP in TRIP-Eligible Lines (by Insurer Category)



Source: 2022 TRIP data call

Treasury modified the 2022 TRIP data call to request more detailed information from captive insurers concerning the prevalence of deductible reimbursement policies issued by captive insurers in all TRIP-eligible lines of insurance, and not solely limited to workers' compensation. Figure 54 sets forth the results of the data call for all TRIP-eligible lines policies, by line, issued by reporting captives in 2021, for conventional policies, deductible reimbursement policies, and then the percentage of deductible reimbursement policies by DEP within each line.

[191] The 2022 TRIP data call showed that approximately 97 percent of the workers' compensation premium reported by captive insurers was in connection with workers' compensation deductible reimbursement policies.

Figure 54: 2021 Captive Insurer DEP in TRIP-Eligible Lines

	DEP Conventional Policies ($ millions)	DEP Deductible Reimbursement Policies ($ millions)	DEP Deductible Reimbursement Policies (% of line total)
Aircraft (all perils)	$ 207.7	$ 0.3	0.1%
Allied Lines	780.7	65.8	7.8%
Boiler and Machinery	1.4	0.5	27.6%
Commercial Multiple Peril (liability)	362.8	147.9	29.0%
Commercial Multiple Peril (non-liability)	390.2	20.6	5.0%
Excess Workers' Compensation	29.6	NA	0.0%
Fire	1,220.1	68.4	5.3%
Inland Marine	21.7	6.6	23.4%
Ocean Marine	32.8	-	0.0%
Other Liability	5,117.4	775.8	13.2%
Products Liability	633.4	35.2	5.3%
Workers' Compensation	140.2	4,300.1	96.8%
Total TRIP Eligible	**$ 8,938.1**	**$ 5,421.2**	37.8%

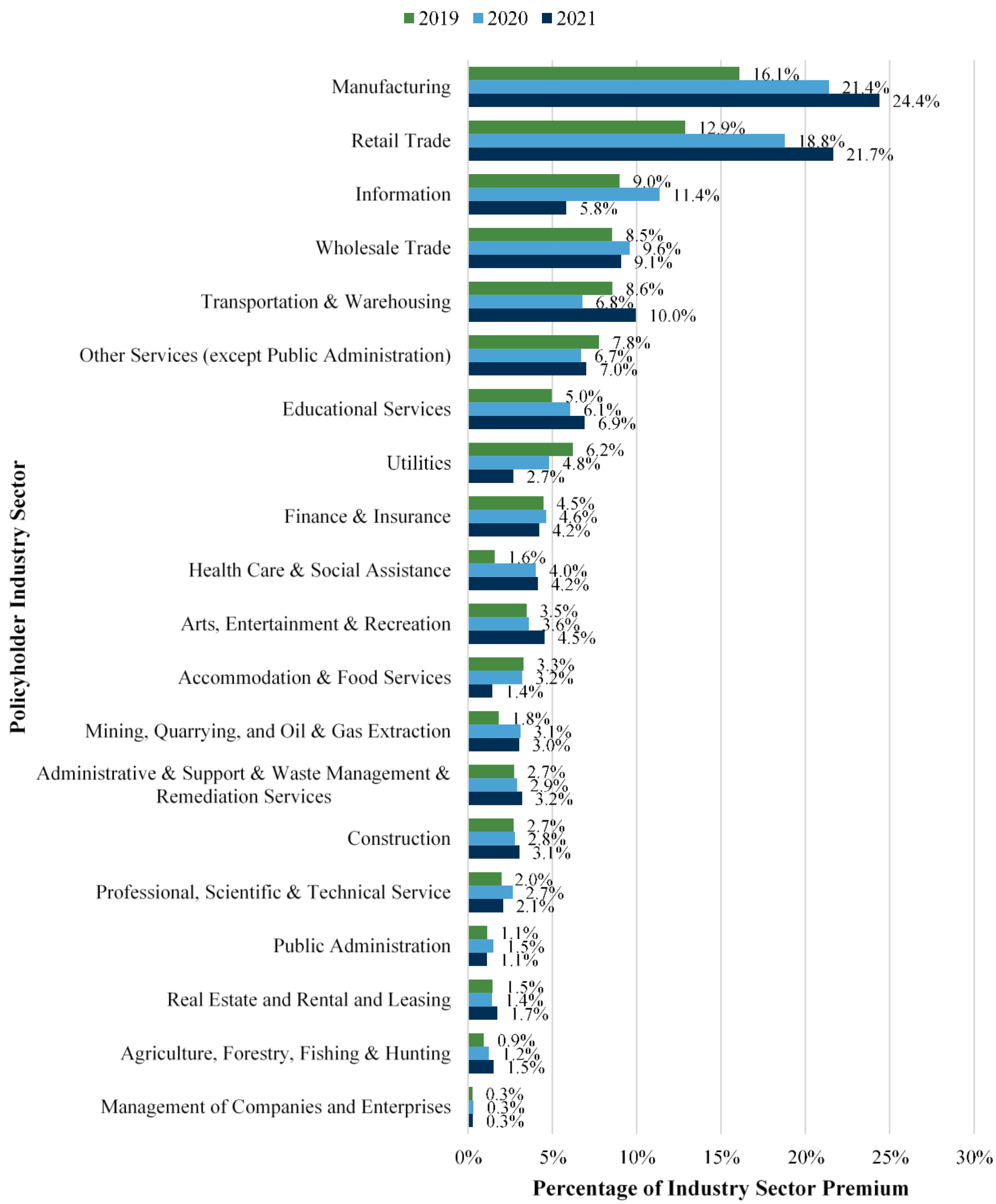
Source: 2022 TRIP Data Call

Based upon the reported data, captives do not appear to be used predominantly to reimburse the deductibles imposed on the policyholder by conventional insurers except in the case of workers' compensation, which as noted above is driven by state law requirements.

Treasury also requested more detailed information from captive insurers concerning the extent of their assumption of NBCR risk exposures. As noted above, captives (like other insurer categories) do not exclude all NBCR risk exposures from all policies. In the 2022 TRIP data call, Treasury requested information on limits extended by captive insurers that only insure NBCR risks. On a percentage basis, about 12 percent of the captive insurer property limits only insure NBCR risk; for liability limits, that figure is only about 1.5 percent.

Captive insurers underwrite risks in all policyholder industry sectors, based upon their responses to the TRIP data calls classifying the business operations of their principal (owner) policyholder. Figure 55 reflects the distribution of policyholder industry categories within the insurance written by captive insurers that is subject to the Program.

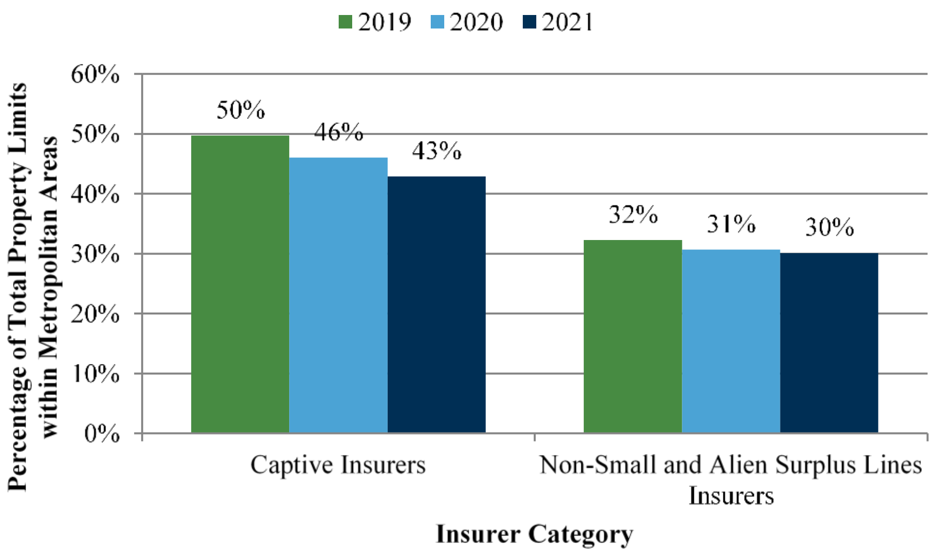
Figure 55: Captive Insurer TRIP-Eligible Lines DEP by Policyholder Industry Sectors



Source: 2020-2022 TRIP data calls

The property exposures written by captive insurers subject to the Program are somewhat more concentrated in the larger metropolitan areas than is the case for non-small and alien surplus lines insurers, as shown in Figure 56.

Figure 56: Percentage of Total Property Limits within Metropolitan Areas for Captive Insurers Versus Non-Small and Alien Surplus Lines Insurers

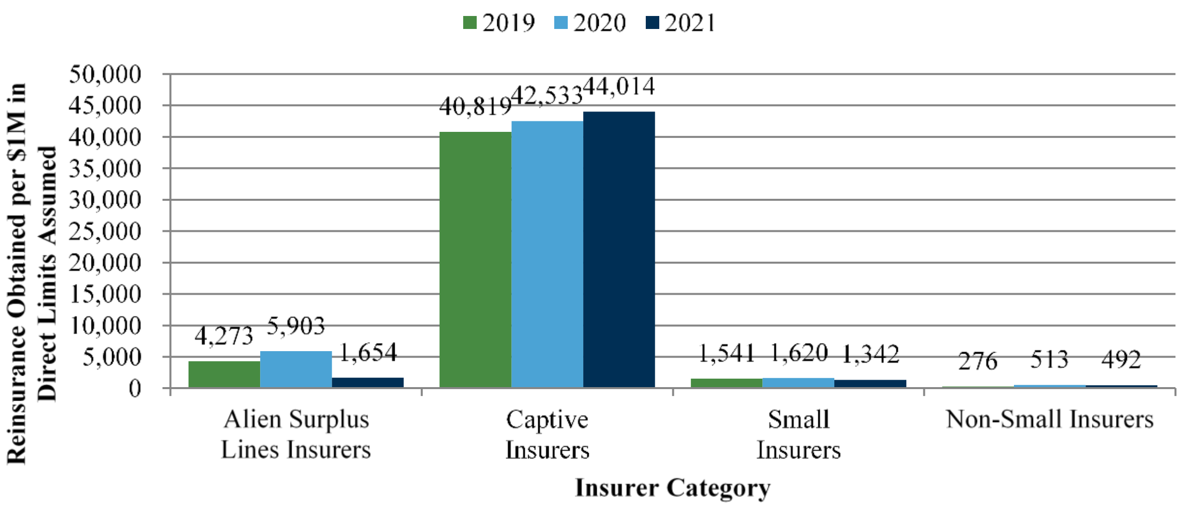


Source: 2020-2022 TRIP data calls

In the 2020 TRIP data call, approximately 29 percent of captive insurers reported purchasing reinsurance that would cover an act of terrorism certified under TRIA; in the 2021 TRIP data call that figure dropped to 24 percent, and in the 2022 TRIP data it dropped further to 21 percent. The data also indicates, however, that captive insurers in the aggregate are obtaining reinsurance coverage for a greater proportion of their insurance risks than is the case for other insurer categories.

Captive insurers, as compared to other types of insurers, may be better able to purchase reinsurance coverage for terrorism risk. This is because conventional commercial insurers will generally have business to reinsure that will present a much broader range of exposures (in terms of type and locations), with the associated aggregation risks presented, than a captive insurer. By contrast, captive insurers write the range of risk exposures presented by their policyholder owners, which will usually be more limited and defined than the portfolio of risks underwritten by a conventional commercial insurer. Figure 57 compares the reinsurance limits for terrorism risk insurance subject to the Program against the total direct property and liability limits assumed under policies subject to TRIP.

Figure 57: Reinsurance Obtained Per $1 Million in Direct Policy Limits Subject to TRIP (Property and Liability Combined)



Source: 2020-2022 TRIP data calls

C. Alien Surplus Lines Insurers

Alien surplus lines insurers are those non-U.S. insurers that have been qualified to do business in the United States through a process administered by the NAIC assessing their financial stability and trustworthiness.[192] Those insurers appearing on the NAIC's current Quarterly Listing of Alien Surplus Lines Insurers participate in the Program pursuant to TRIA.[193] (Like other insurers, not all insurance written by alien surplus lines insurers is in the TRIP-eligible lines of insurance.) The companies on the Quarterly Listing fall into two general categories: (1) insurance syndicates operating at Lloyd's of London and (2) insurance companies domiciled in various non-U.S. jurisdictions (principally European countries and non-U.S. jurisdictions in North America). Industry sources report that Lloyd's accounts for approximately 69 percent of the alien surplus lines DEP in the United States, while individual companies comprise the balance of 31 percent.[194]

The TRIP data calls do not permit an exact evaluation of the participation of alien surplus lines insurers within the Program because of the Program data collection mechanics and the manner in which many such entities participate within TRIP. Many alien surplus lines insurers (Lloyd's syndicates as well as individual companies) are affiliated with U.S.-based insurance groups. Treasury collects data for the Program by insurer group because TRIP operates for most purposes on a group basis—i.e., insurer groups submit claims on a group basis, and the

[192] *See* NAIC, *Quarterly Listing of Alien Surplus Lines Insurers* (January 2022), https://content.naic.org/sites/default/files/publications-quarterly-listing-aliens-OLS-AS-234.pdf.

[193] *See* TRIA § 102(6); 31 C.F.R. § 50.4(o)(1)(i)(B) (2021).

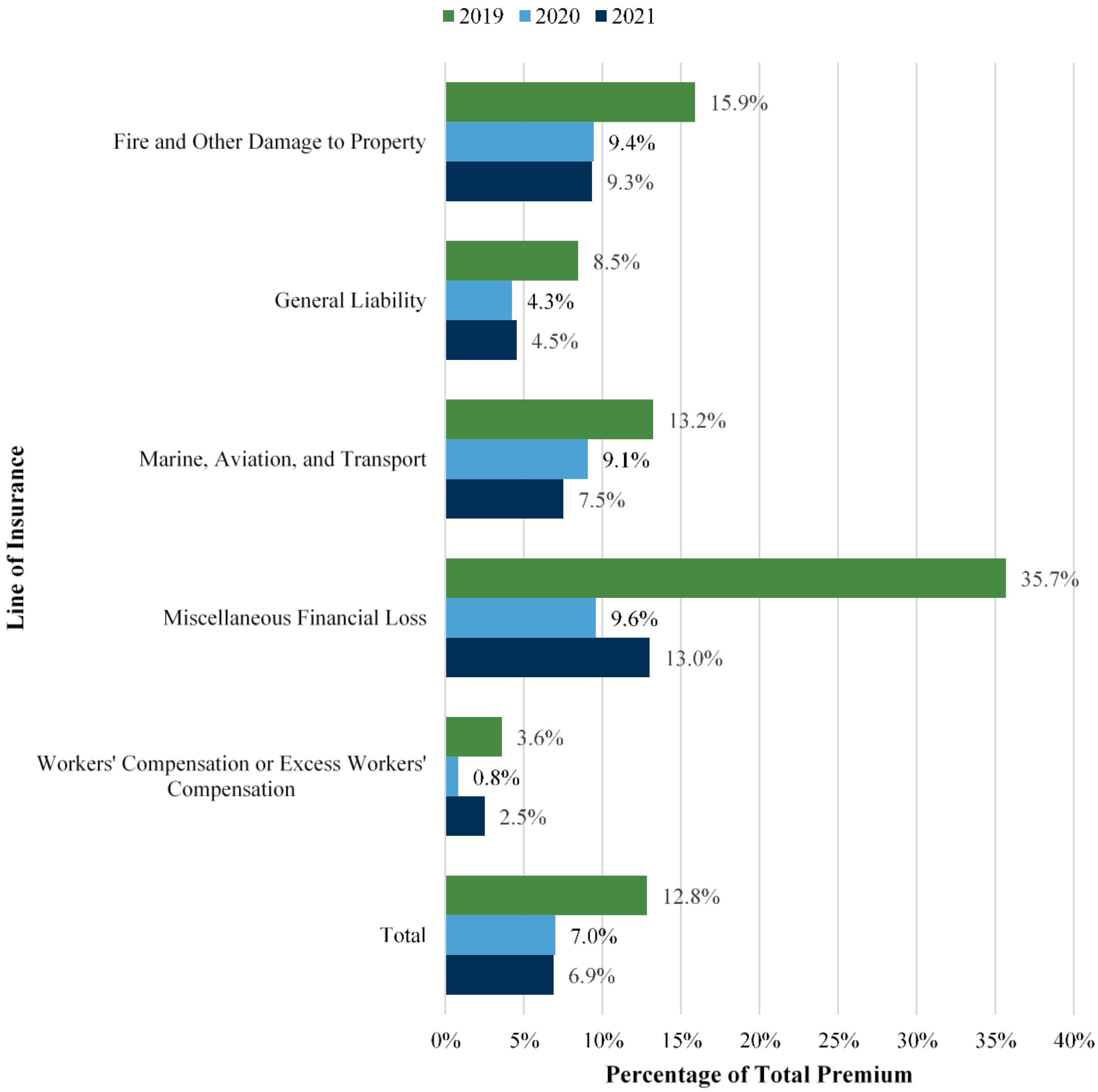
[194] *See* A.M. Best, *Expanded Opportunities Boost Surplus Lines Growth and Spur Improved Operating Profits* (September 16, 2021), 5, available through https://news.ambest.com/presscontent.aspx?refnum=31157&altsrc=9 (citing 2020 data).

deductible that must be satisfied is calculated by reference to the TRIP-eligible lines DEP of the group as a whole. As a result, some of the experience of alien surplus lines insurers participating in the Program is incorporated within the data reported by non-small and small insurers. Given the size of the premium writings of alien surplus lines insurers, this does not have a significant impact on the reported results for non-small and small insurers. It does, however, potentially affect the ability to analyze the entire population of alien surplus lines insurers.

Most of the experience reflected by the reporting of alien surplus lines insurers is set forth above, in the relevant sections of the Report. For purposes of premium, however, Treasury collects information from alien surplus lines insurers based upon a different array of insurance lines that such insurers typically use in connection with their other operations. Figure 58 illustrates charges by alien surplus lines insurers for terrorism risk insurance coverage, by the lines used for alien surplus lines reporting.[195]

[195] Only a very small amount of terrorism risk insurance is provided by alien surplus lines insurers for no additional charge.

Figure 58: Terrorism Risk Insurance Premiums as a Percentage of Total Policy DEP when a Premium is Charged by Alien Surplus Lines Insurers (by Line of Insurance)



Source: 2020-2022 TRIP data calls

The information reported by unaffiliated alien surplus insurers reflects a higher percentage charge for terrorism risk insurance than has been reported by admitted insurers. That differential is to be expected since these insurers write on a surplus lines basis, which responds in large part to risks that may be more difficult to insure, and which cannot be placed in the admitted market.

VII. WORKERS' COMPENSATION

Workers' compensation insurance is a product offered by insurers to employers that covers costs related to medical care and treatment, rehabilitation, loss of wages, and other financial hardships encountered by workers resulting from workplace injuries. Workers' compensation is a TRIP-eligible line of insurance and thus is covered under the Program. Every state, with the exception of Texas, requires employers to possess some form of workers' compensation insurance to cover injured employees.[196] Self-insurance of workers' compensation exposures is also permitted in most states.[197] A qualified self-insurer may obtain excess workers' compensation insurance from a commercial insurance carrier, which will respond to losses above certain thresholds, either on an aggregate or individual claimant basis.[198] Although state law does not generally permit captive insurers to write workers' compensation insurance, many captive insurers issue workers' compensation deductible reimbursement policies to reimburse their policyholders for some portion of the deductible expense under commercial workers' compensation policies issued to the captive insurer's parent.[199]

Unlike most lines of insurance, state laws prohibit insurers from excluding coverage for terrorism risk, including NBCR risks, under workers' compensation coverage. Since terrorism risk cannot be excluded from a policy, the take-up rate for terrorism coverage is 100 percent as it relates to workers' compensation insurance. Furthermore, payments to employees under

[196] In Texas, an employer (subject to certain exceptions) can decline to purchase workers' compensation insurance entirely (including for loss arising from terrorism), or otherwise qualify as a self-insurer for the exposure. However, when a Texas employer elects to remain outside of the workers' compensation system, it also remains subject to common law actions for employment-related injuries. *See generally* Texas Labor Code, Title 5 (Workers' Compensation), Chapter 401 *et seq*. In addition, although Wyoming only requires workers' compensation coverage for workers in "extra-hazardous" occupations, most occupations in Wyoming are so designated under the Wyoming workers' compensation laws. *See 2021 NASI Workers' Compensation Report*, 5 & n.12 (although noting that share of workers subject to the compensation system in Wyoming has declined in recent years on account of the decision of several large employers not to provide coverage). In most states, mandatory workers' compensation coverage does not apply to self-employed workers or independent contractors. Additionally, in some states, mandatory coverage does not extend to some employees in certain sectors, such as farm and domestic workers.

[197] Studies (based upon benefits payment history) indicate that self-insurance constitutes an estimated 25 percent of all workers' compensation. *See, e.g., 2021 NASI Workers Compensation Report*, 23 (based upon 2019 data). Although self-insurers are also responsible for terrorism-related workers' compensation losses, self-insurance arrangements that are not accomplished through P&C insurance within the scope of TRIA are not subject to the Program.

[198] Industry sources describe excess workers' compensation insurance as "a type of coverage available for risks that choose to self-insure the majority of workers' compensation loss exposures. Two categories of coverages are available: specific, which controls loss severity by placing a cap on losses the insured must pay arising out of a single occurrence, and aggregate, which addresses loss frequency by providing coverage once a cumulative per occurrence loss limit is breached." "Excess Workers Compensation Insurance," International Risk Management Institute, https://www.irmi.com/term/insurance-definitions/excess-workers-compensation-insurance.

[199] *See* Section VI.B.

workers' compensation policies are only limited by the scope of benefits available under state law.[200]

NBCR events present a more pronounced aggregation risk than conventional terrorism claims because of the potential for broad-based losses from NBCR events.[201] An insurer cannot decline to write terrorism risk coverage (or the NBCR component of it) in conjunction with workers' compensation coverage, so insurers choosing to write workers' compensation business must find other ways in which to manage the NBCR aggregation risk. For example, industry sources indicate that insurers may attempt to avoid writing policies that present substantial accumulation of exposures in the same specific location.[202] This presents a substantial issue for insurers and employers in large metropolitan areas, with large concentrations of employees subject to workers' compensation. Employers seeking coverage in such metropolitan areas who are unable to find an insurer in the voluntary market may be forced to seek coverage from the residual market, which under state law must provide coverage to all applicants, although such coverage usually comes with a relatively high premium.

Workers' compensation is the largest TRIP-eligible line of insurance by total DEP, as reflected in Figure 2. It is also the largest TRIP-eligible line of insurance by the total amount of terrorism risk insurance premiums charged by non-small and small insurers, as reflected in Figure 59.

[200] *See 2021 NASI Workers' Compensation Report*, 7 (noting that private workers' compensation policies either provide coverage for all workers' compensation benefits, or all benefits subject to a deductible for which the policyholder is responsible).

[201] Estimates of aggregate loss arising from NBCR events have exceeded amounts well in excess of the $100 billion aggregate limit provided for under TRIP. *See, e.g.*, *ACRSM Report*, 24 (noting RMS maximum modeled losses for nuclear, biological, chemical, and radiological terrorism events ranging as high as $625 billion).

[202] *See* Testimony of Tarique Nageer, Marsh & McLennan Companies, before the Senate Banking, Housing, and Urban Affairs Committee (June 18, 2019), 10, https://www.banking.senate.gov/imo/media/doc/Nageer%20Testimony%206-18-19.pdf ("Organizations with a large concentration of employees are the most likely to be affected. In addition to potential price increases, they also face the possibility that their insurers will decline to renew their coverage. The issue of employee aggregation affects any employer with a large number of employees at a single location or campus, as is common among financial institutions, hospitals, defense contractors, higher education institutions, hotels, professional services companies, and nuclear power companies."); Testimony of Director Chlora Lindley-Myers, Missouri Department of Commerce and Insurance, on behalf of the NAIC, before the House Financial Services Committee, Subcommittee on Housing, Community Development, and Insurance (October 16, 2019), 2-3, https://financialservices.house.gov/uploadedfiles/hhrg-116-ba04-wstate-lindley-myersc-20191016.pdf ("Without TRIA, workers' compensation insurers might raise prices or decline to write coverage for businesses with many employees concentrated in single locations or near iconic properties.").

Figure 59: Terrorism Risk Insurance Premiums by TRIP-Eligible Line of Insurance (Non-Small and Small Insurers) ($ millions)

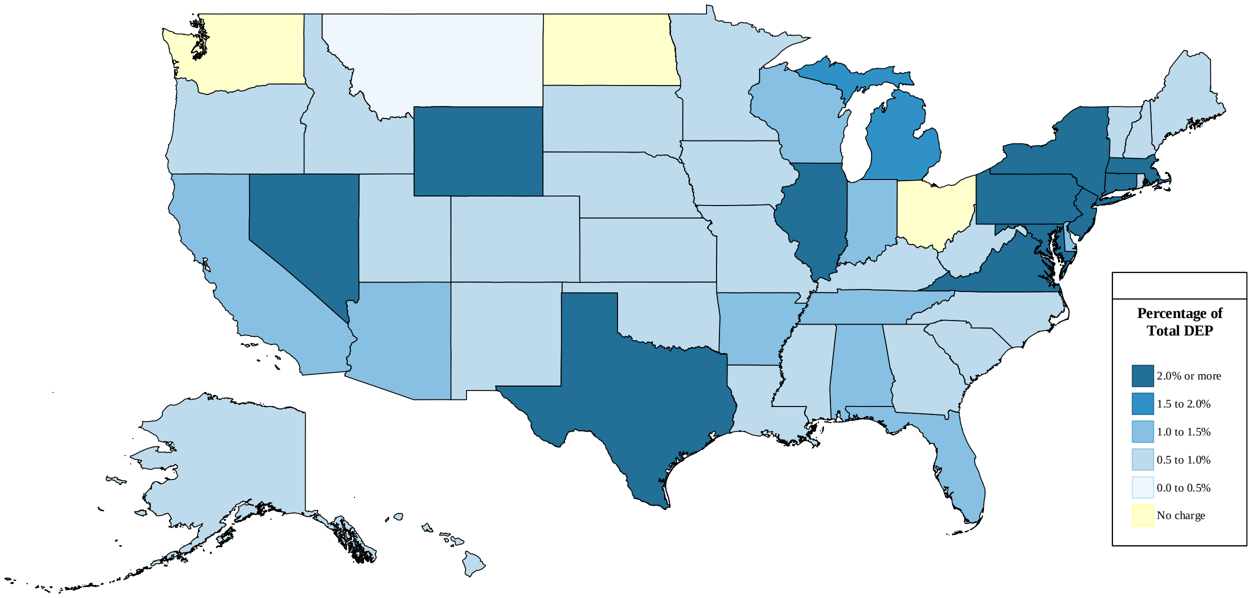
	2020 TRIP data call		2021 TRIP data call		2022 TRIP data call	
	2019 Terrorism Risk DEP	% of 2019 Total Terrorism Risk DEP	2020 Terrorism Risk DEP	% of 2020 Total Terrorism Risk DEP	2021 Terrorism Risk DEP	% of 2021 Total Terrorism Risk DEP
Aircraft (all perils)	$ 15.6	0.6%	$ 14.1	0.5%	$ 17.2	0.6%
Allied Lines	122.0	4.5%	117.9	4.3%	108.5	3.5%
Boiler and Machinery	15.6	0.6%	10.7	0.4%	25.5	0.8%
Commercial Multi-Peril (liability)	158.0	5.8%	172.8	6.3%	229.4	7.4%
Commercial Multi-Peril (non-liability)	600.5	22.1%	714.3	25.9%	623.2	20.1%
Excess Workers' Comp.	17.4	0.6%	22.1	0.8%	23.1	0.7%
Fire	249.0	9.2%	234.9	8.5%	187.5	6.0%
Inland Marine	78.8	2.9%	91.9	3.3%	100.9	3.3%
Ocean Marine	22.8	0.8%	13.0	0.5%	13.8	0.4%
Other Liability	433.8	16.0%	387.2	14.0%	748.2	24.1%
Products Liability	12.5	0.5%	29.6	1.1%	26.0	0.8%
Workers' Compensation	988.7	36.4%	951.4	34.5%	1,001.0	32.2%
Total	**$ 2,714.7**	**100.0%**	**$ 2,759.9**	**100.0%**	**$ 3,104.3**	**100.0%**

Source: 2020-2022 TRIP data calls

The proportional premiums charged for terrorism risk insurance in the workers' compensation line in 2021 vary by jurisdiction, from a high of 16.7 percent of total premiums when a charge is made in the District of Columbia, to a low of 0.4 percent in Montana.[203] Figure 60 illustrates the charges (as a percent of DEP) on a state-by-state basis across the country in 2021.

[203] In three jurisdictions where all workers' compensation insurance is provided by a state entity (North Dakota, Ohio, and Washington), no additional charge is made for the terrorism risk portion of the coverage.

Figure 60: 2021 Terrorism Risk Insurance Premiums for Workers' Compensation as a Percentage of Total TRIP-Eligible DEP when a Charge is Made (Non-Small and Small Insurers)



Source: 2022 TRIP data call

Insurance rates for terrorism risk insurance in the workers' compensation line are based, at least in part, upon terrorism catastrophe modeling that estimates the potential impact of terrorist attacks upon workers' compensation insurers.[204] In the development of loss costs on a state-by-state basis, industry sources report that the impact of the Program is considered.[205] This shows that, in the absence of the Program, indicated costs—and thus associated premium rates—would likely be higher than at present.

In sum, the Program constitutes an important feature of the existing market for workers' compensation insurance in the United States, and observers note that there could be disruptions to that market in the absence of the Program.[206] This is largely on account of the nature of the insurance coverage that must be provided as a matter of state law for workers' compensation exposures. Commenters indicated that the market as a whole has been relatively stable.[207]

[204] NCCI Comments, 3-4.

[205] NCCI Comments, 4.

[206] Marsh Comments, 4 ("[T] the economic impact from a TRIA non-renewal or notable changes to the trigger, deductibles, and co-shares would be particularly challenging for workers' compensation."); AM Best Comments, 2 ("Program reauthorization is a particular issue for workers' compensation capacity. Buyers of this insurance run the risk of losing state-mandated coverage if the Program is not reauthorized, given that terrorism coverage cannot be excluded from workers' compensation policies.").

[207] NCCI Comments, 3-4.

VIII. TERRORISM RISK PREMIUMS EARNED OVER TIME

TRIA requires that Treasury provide in each Effectiveness Report an estimate of the total amount of premiums earned on terrorism risk insurance since January 1, 2003.[208] In the *2020 Effectiveness Report*, Treasury determined that as much as $43.2 billion was earned by non-small, small, and alien surplus lines insurers between 2003 and 2019, with an additional $8.7 billion earned by captive insurers during this period.[209] Based on the information reported for 2020 and 2021, Treasury now estimates that non-small, small, and alien surplus lines insurers have earned approximately $49.7 billion in terrorism risk insurance premiums between 2003 and 2021, with captive insurers earning an additional $10.0 billion.

A. Non-Small and Small Insurers

Figure 61 provides information on terrorism risk insurance premiums earned by non-small and small insurers in 2020 and 2021 and the percentage of total TRIP-eligible DEP represented by that figure.

Figure 61: Terrorism Risk Insurance DEP, Non-Small and Small Insurers

	2021 TRIP data call		2022 TRIP data call	
	2020 Terrorism Risk Insurance DEP	% of Category's 2020 TRIP-Eligible DEP	2021 Terrorism Risk Insurance DEP	% of Category's 2021 TRIP-Eligible DEP
Non-Small Insurers	$ 2,583,255,551	1.5%	$ 2,852,011,364	1.5%
Small Insurers	176,644,263	0.8%	252,263,564	1.0%
Total	**$ 2,759,899,814**	**1.4%**	**$ 3,104,274,928**	**1.5%**

Source: 2021 and 2022 TRIP data calls

Figure 61 shows that that non-small and small insurers earned approximately $5.9 billion in terrorism risk insurance premiums in 2020 and 2021. Adding in the prior figure of $40.6 billion reported in the *2020 Effectiveness Report*, small and non-small insurers earned $46.5 billion in terrorism risk insurance premiums between 2003 and 2021.

B. Alien Surplus Lines Insurers

Figure 62 provides information on terrorism risk insurance premiums earned by alien surplus lines insurers in 2020 and 2021 and the percentage of total TRIP-eligible DEP represented by that figure.

[208] TRIA § 104(h)(2)(F).

[209] FIO, *2020 Effectiveness Report*, 77-78 (using reported estimates for the years 2003 through 2017, coupled with the data directly reported for 2018 and 2019).

Figure 62: Terrorism Risk Insurance DEP, Alien Surplus Lines Insurers

	2021 TRIP data call		2022 TRIP data call	
	2020 Terrorism Risk Insurance DEP	% of Category's 2020 TRIP-Eligible DEP	2021 Terrorism Risk Insurance DEP	% of Category's 2021 TRIP-Eligible DEP
Alien Surplus Lines Insurers	$ 267,394,251	2.4%	$ 293,742,849	2.4%

Source: 2021 and 2022 TRIP data calls

In 2020 and 2021, alien surplus lines insurers earned approximately $561.1 million in terrorism risk insurance premiums. Adding the 2020 and 2021 information received in the TRIP data calls to the prior figure of $2.6 billion reported in the *2020 Effectiveness Report*, Treasury estimates that alien surplus lines insurers earned approximately $3.2 billion in terrorism risk insurance premiums between 2003 and 2021.

C. Captive Insurers

Figure 63 provides information on terrorism risk insurance premiums earned by captive insurers in 2020 and 2021 and the percentage of total TRIP-eligible DEP represented by that figure.

Figure 63: Terrorism Risk Insurance DEP, Captive Insurers

	2021 TRIP data call		2022 TRIP data call	
	2020 Terrorism Risk Insurance DEP	% of Category's 2020 TRIP-Eligible DEP	2021 Terrorism Risk Insurance DEP	% of Category's 2021 TRIP-Eligible DEP
Captive Insurers	$ 638,371,559	6.1%	$ 693,955,072	4.8%

Source: 2021 and 2022 TRIP data calls

Captive insurers earned approximately $1.3 billion in terrorism risk insurance premiums in 2020 and 2021. Adding to the prior figure of $8.7 billion reported in the *2020 Effectiveness Report*, Treasury estimates that captive insurers earned approximately $10.0 billion in terrorism risk insurance premiums between 2003 and 2021.

D. Aggregate Industry Totals

As noted above, Treasury estimates that non-small, small, and alien surplus lines insurers, in the aggregate, earned as much as $49.7 billion in terrorism risk insurance premiums between 2003 and 2021, with captive insurers earning an additional $10.0 billion. Based on the information provided by the domestic admitted market, this amount constitutes between 1 and 2 percent of total TRIP-eligible lines premiums earned over the entire period by these insurers.

Treasury will continue to update these figures in future Effectiveness Reports with the results of future TRIP data calls as they are conducted.

IX. ADVISORY COMMITTEE ON RISK-SHARING MECHANISMS

A. Background

The Advisory Committee on Risk-Sharing Mechanisms was created by the 2015 Reauthorization Act.[210] By statute, the ACRSM is to be made up of directors, officers, or other employees of insurance industry participants that participate or desire to participate in nongovernmental risk sharing mechanisms for terrorism risk.[211] Its role is to provide Treasury with "advice, recommendations, and encouragement with respect to the creation and development of . . . nongovernmental risk-sharing mechanisms" for terrorism risk.[212] After a substantial period of work since its formation in 2015, the ACRSM developed a draft report containing initial recommendations to Treasury relating to the Program, which the ACRSM adopted as its initial Report on May 11, 2020 (the ACRSM Report).[213] Treasury summarized the findings of the ACRSM Report, as well as its initial recommendations to Treasury concerning the Program, in its *2020 Effectiveness Report*.[214]

B. Responses to ACRSM Report Recommendations

FIO has taken a number of steps in response to the 2020 recommendations of the ACRSM.

First, Treasury engaged in a procurement to obtain a terrorism risk insurance model.[215] Treasury expects that the future deployment of this model will allow it to perform its own evaluations of both the likely impact of acts of terrorism at particular locations, as well as the likely financial impact of such acts to the federal government under TRIA. With this information Treasury also will be in a better position to evaluate methodologies to support the movement of terrorism risk from the federal government to the private market.

Second, Treasury published a notice for comments in November 2020, in which it sought comments from the public concerning a number of issues identified in the ACRSM Report.[216] The topics identified in the notice for comments included cyber risk issues under TRIA, the certification process, and the participation of captive insurers in the Program. Treasury has been

[210] 2015 Reauthorization Act, § 110.

[211] 2015 Reauthorization Act, § 110(b)(3).

[212] 2015 Reauthorization Act, § 110(b)(2).

[213] The activities of the ACRSM from its formation in 2015 until the recommendations in its May 2020 Report were detailed in FIOs most recent Effectiveness Report. *See* FIO, *2020 Effectiveness Report*, 79. *See also* Report of the Advisory Committee on Risk-Sharing Mechanisms (2020), https://home.treasury.gov/system/files/311/5-20-ACRSM-Report-Final.pdf .

[214] FIO, *2020 Effectiveness Report*, 79-81.

[215] *See generally* Contract 2032H321C00036, *TRIP Terrorism Risk Modeling*, Federal Procurement Data System, https://www.fpds.gov/ezsearch/search.do?indexName=awardfull&templateName=1.5.2&s=FPDS.GOV&q=2032H321C00036.

[216] Terrorism Risk Insurance Program; Updated Regulations in Light of the Terrorism Risk Insurance Program Reauthorization Act of 2019, and for Other Purposes, 85 Fed. Reg. 71588 (November 10, 2020).

evaluating the comments concerning all of these issues as it continues to consider potential additional actions in response to the ACRSM's recommendations.

Third, Treasury modified its annual TRIP data call to obtain more detail concerning cyber risk insurance, as well as concerning the participation of captive insurers in the Program.[217] This additional information informs certain of the areas identified by the ACRSM, and the initial results of this expansion of the data call have been discussed above in this Report.[218]

Fourth, Treasury has engaged with stakeholders in the areas of captive insurers and the ability of non-profits to access terrorism risk insurance, which has informed its understanding in these areas.

Treasury will be continuing to engage with the ACRSM and stakeholders in the future regarding the issues identified by the ACRSM and continue to report on these matters in future Effectiveness Reports.

[217] *See* above at Section IV.A.

[218] *See* above at Section V.I (cyber), Section VI.B (captive insurers).

X. CONCLUSION

The 2019 Reauthorization Act extended the Program for an additional seven years until 2027, continuing the Program structure in place as of 2020. Treasury's evaluation of the relevant data concerning the Program indicates—consistent with the views expressed by a large number of market participants—that TRIP continues to help make terrorism risk insurance available and affordable in the United States, and that the market for terrorism risk insurance has been relatively stable for some time since the enactment of TRIA. Commenters have contrasted the benefits of TRIP with other areas of risk where no federal support is available in the face of significant market disruptions. While the Program does not mandate the purchase of terrorism risk insurance, a significant proportion of commercial policyholders nationwide have elected to obtain such insurance, and take-up may be even higher in metropolitan areas. The Program is not limited to such metropolitan areas (where terrorism risk is perceived to be most substantial). Indeed, the majority of the risks covered by disclosed policy limits are outside the largest metropolitan areas in the United States.

Commercial reinsurance of terrorism risk has significantly increased since the inception of the Program. There is now increased reinsurance capacity for those exposures that remain wholly with the private market under TRIP. Nonetheless, commercial reinsurance capacity does not exist for all exposures currently covered by the Program, as is reflected in the continued limited amount of reinsurance available for NBCR events, which pose the greatest risk of causing catastrophic industry losses on a broad scale.

The analysis in this Report is based principally on industry data received by Treasury from insurers. Treasury, through FIO, will continue to evaluate and analyze whether the Program is meeting its objectives. Changed circumstances and continued market developments must be assessed over time to make certain that the Program, established in the wake of the September 11 attacks, remains appropriately tailored to efficiently support terrorism risk insurance markets. In particular, recent developments in the cyber insurance market, coupled with changes in the nature of cyber risk since the enactment of TRIA, highlight that further evaluation in this area is necessary. Treasury will also continue to evaluate and address the other areas that have been identified by the ACRSM and other stakeholders.

APPENDIX 1: 2021 TAKE-UP RATES BY STATE

This table sets forth numerically the 2021 take-up rates, based upon DEP (presented graphically in Figure 20 by state for small and non-small insurers combined). It provides the separate experience of small and non-small insurers, and then provides the combined figure as well. Workers' compensation is not included within these figures, although excess workers' compensation is included.

	Non-Small Insurers	Small Insurers	Combined
Alabama	61%	66%	62%
Alaska	51%	56%	51%
Arizona	64%	64%	64%
Arkansas	66%	67%	66%
California	57%	43%	56%
Colorado	60%	52%	59%
Connecticut	65%	70%	66%
Delaware	64%	78%	66%
District of Columbia	62%	75%	63%
Florida	50%	30%	47%
Georgia	63%	64%	64%
Hawaii	54%	75%	57%
Idaho	63%	53%	61%
Illinois	63%	70%	63%
Indiana	63%	81%	65%
Iowa	68%	71%	68%
Kansas	64%	54%	63%
Kentucky	68%	60%	67%
Louisiana	49%	41%	48%
Maine	67%	87%	71%
Maryland	68%	77%	69%
Massachusetts	62%	78%	63%
Michigan	65%	80%	68%
Minnesota	63%	61%	63%
Mississippi	62%	69%	63%
Missouri	65%	75%	66%
Montana	62%	60%	62%
Nebraska	64%	62%	64%
Nevada	62%	53%	62%
New Hampshire	65%	85%	68%
New Jersey	64%	64%	64%
New Mexico	69%	55%	68%
New York	61%	59%	60%
North Carolina	69%	74%	69%
North Dakota	58%	62%	59%
Ohio	69%	69%	69%

	Non-Small Insurers	Small Insurers	Combined
Oklahoma	62%	53%	61%
Oregon	61%	59%	61%
Pennsylvania	68%	71%	68%
Rhode Island	69%	68%	69%
South Carolina	64%	66%	64%
South Dakota	56%	67%	57%
Tennessee	68%	65%	68%
Texas	54%	54%	54%
Utah	65%	49%	64%
Vermont	58%	91%	65%
Virginia	66%	77%	67%
Washington	61%	56%	61%
West Virginia	76%	60%	75%
Wisconsin	66%	74%	67%
Wyoming	63%	60%	62%

Source: 2022 TRIP data call

APPENDIX 2: 2021 TAKE-UP RATES BY STATE AND LINE GROUPS

This table contains more detailed take-up information for small and non-small insurers, by state and by groups of TRIP-eligible lines of insurance. In order to streamline the presentation, and provide information by more general categories of information, Treasury displays the information by the following categories: (1) Property Insurance; and (2) Liability Insurance.[219] Evaluation of Appendix 2 permits identification of differences in take-up, on a state-by-state basis, as between small insurers and non-small insurers, by the more general coverage categories identified.

	Non-Small		Small		Combined	
	Property	Liability	Property	Liability	Property	Liability
Alabama	66%	56%	60%	79%	65%	59%
Alaska	65%	46%	61%	57%	65%	47%
Arizona	75%	57%	66%	68%	74%	58%
Arkansas	73%	59%	73%	64%	73%	60%
California	69%	52%	47%	46%	67%	52%
Colorado	68%	55%	53%	54%	67%	55%
Connecticut	76%	62%	81%	64%	76%	62%
Delaware	74%	62%	72%	83%	73%	64%
District of Columbia	81%	54%	82%	70%	81%	55%
Florida	45%	54%	17%	52%	38%	54%
Georgia	74%	56%	76%	60%	74%	56%
Hawaii	58%	52%	85%	73%	63%	55%
Idaho	72%	59%	25%	66%	66%	60%
Illinois	72%	57%	75%	71%	73%	59%
Indiana	66%	60%	81%	82%	68%	63%
Iowa	76%	59%	76%	80%	76%	62%
Kansas	69%	57%	56%	55%	68%	57%
Kentucky	71%	64%	56%	76%	70%	65%
Louisiana	50%	50%	42%	46%	49%	49%
Maine	75%	64%	92%	92%	78%	69%
Maryland	77%	65%	83%	79%	78%	66%
Massachusetts	71%	58%	88%	71%	74%	59%
Michigan	68%	63%	83%	76%	72%	64%
Minnesota	69%	58%	61%	64%	68%	59%
Mississippi	67%	60%	70%	73%	67%	62%
Missouri	73%	57%	76%	79%	74%	60%
Montana	69%	57%	64%	58%	68%	57%
Nebraska	70%	58%	63%	62%	69%	59%
Nevada	70%	57%	48%	58%	69%	57%

[219] "Property Insurance" includes Fire, Allied Lines, Boiler & Machinery, and Commercial Multi-Peril (Property) combined. "Liability Insurance" includes Commercial Multi-Peril (Liability), Products Liability, and Other Liability combined.

	Non-Small		**Small**		**Combined**	
	Property	Liability	Property	Liability	Property	Liability
New Hampshire	71%	61%	86%	88%	74%	64%
New Jersey	71%	62%	76%	59%	72%	62%
New Mexico	74%	66%	70%	48%	74%	63%
New York	74%	57%	77%	51%	75%	56%
North Carolina	78%	62%	78%	76%	78%	64%
North Dakota	66%	50%	63%	66%	65%	53%
Ohio	76%	63%	69%	74%	76%	63%
Oklahoma	66%	57%	62%	41%	65%	55%
Oregon	71%	57%	59%	62%	70%	57%
Pennsylvania	77%	63%	73%	72%	76%	64%
Rhode Island	77%	66%	75%	67%	77%	66%
South Carolina	67%	61%	65%	70%	66%	63%
South Dakota	59%	51%	73%	69%	61%	53%
Tennessee	76%	63%	65%	71%	75%	64%
Texas	58%	51%	43%	53%	56%	51%
Utah	74%	62%	52%	51%	73%	61%
Vermont	65%	52%	95%	87%	72%	58%
Virginia	78%	61%	85%	78%	79%	62%
Washington	70%	58%	62%	61%	69%	58%
West Virginia	79%	75%	61%	61%	77%	74%
Wisconsin	75%	59%	75%	73%	75%	61%
Wyoming	68%	57%	71%	53%	68%	57%

Source: 2022 TRIP data call