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R STREET POLICY STUDY NO. 101
July 2017

IMPACT OF A BORDER-ADJUSTMENT TAX ON THE CALIFORNIA INSURANCE MARKET

Lars Powell, Ian Adams and R.J. Lehmann

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EXECUTIVE SUMMARY

As the nation's most populous state, among the wealthiest states and a state that is vulnerable to the catastrophic effect of earthquakes, floods, wildfires and other natural catastrophes, California relies heavily on insurance to manage its significant risk. As Congress prepares to consider structural changes to the U.S. tax code, proposals that target international reinsurance would have adverse consequences on Californians' ability to obtain coverage affordably.

Specifically, this report finds that applying a destination-based cash flow tax—better known as a "border-adjustment tax," or BAT—to the import of reinsurance would cost California consumers an additional $1.91 billion in higher property-casualty insurance premiums over the next decade.

This projection is derived by examining the impact a BAT system would have on the supply of international reinsurance and calculating the effects that changes in price and availability would have on the state's insurance market and policyholders. Because property and casualty insurers that do business in California—as in other states exposed to major natural disasters—cede a large volume of risks to foreign reinsurers, the state would experience dramatically higher insurance premiums under a BAT system.

While the precise contours of congressional tax-reform efforts are yet to be determined, proposals such as a BAT or a partial BAT, a reciprocal tax, territorial tax, a discriminatory tax on insurance affiliates or a minimum tax all would affect insurers' ability to use reinsurance to spread risk globally, and hence disproportionately harm consumers in states like California and their ability to secure insurance coverage for their homes, cars and businesses.

This is of particular concern in California, where residents

are overexposed and underinsured with regard to earthquake risk. The California Earthquake Authority has expended great effort to boost the takeup rate of earthquake insurance within the state in an actuarially sound manner. Its ability to continue to do so would be hampered seriously should the cost of reinsurance be driven up. The less that private property owners insure their earthquake risk, the more it will be shunted onto the backs of taxpayers via unprotected mortgage loans.

Should Congress ultimately consider a BAT as part of an overall tax-reform package, it should note that developed nations that employ the conceptually similar value-added tax (VAT) system almost universally exempt financial services like reinsurance from the tax.

TAX REFORM AND THE BAT

More than 30 years after Congress last passed a major overhaul of the U.S. tax code, comprehensive tax reform is back on the agenda, thanks to unified Republican control of the White House and both chambers of Congress. However, Republicans' narrow two-vote edge in the U.S. Senate serves to constrain the sorts of permanent changes they would be able to make on a strictly party-line vote.

Senate rules require only 51 votes to pass legislation moved through the "budget reconciliation" process, which limits floor debate to 20 hours for budget measures. However, under the so-called "Byrd Rule"—named for the former majority leader—a reconciliation measure can be blocked on the floor if it either includes extraneous nonbudget provisions or if it would increase the size of the federal deficit in years subsequent to the 10-year congressional budget window. To waive such points of order requires 60 votes, similar to the rule to invoke cloture and cut off a filibuster.[1] To achieve Republicans' longstanding goal of reducing the U.S. corporate income tax rate, which is among the highest in the world, would require a plan that either cuts spending or raises other taxes in ways that are deficit-neutral.

At the time of this writing, Republican leadership had yet to introduce tax-reform legislation in the 115th Congress. For its part, the White House has offered a one-page summary of its tax-reform plan that does not spell out many of the specific details of its approach.[2] Thus, given that tax legislation must originate in the House of Representatives, most early attention remains focused on the "Better Way" plan drafted by the House Republican Tax Reform Task Force.[3] Initially unveiled in June 2016, the proposal identified a series of problems with the existing code and offered solutions intended to broaden the base, lower rates, minimize taxes on savings and investment and make the corporate tax system more competitive internationally.

Among the plan's most notable changes is a proposed shift to a border-adjustment tax, which would eliminate taxes on foreign income earned by U.S. companies, while simultaneously removing U.S. firms' ability to deduct the costs of goods and services sourced from abroad. The revenues raised by this shift—estimated to be roughly $1 trillion over a decade—would be used to lower the federal corporate tax rate from the current 35 percent to about 20 percent.[4]

The BAT often is compared to a value-added tax, or VAT, a system currently in place in roughly 160 countries around the world.[5] However, there are significant differences between the two. Most obviously, the former is a system for taxing corporate income, while the latter taxes consumption—specifically, the value added at each stage of production for both goods and services. One significant feature both the BAT and VAT do have in common is that both have the effect of taxing imports, but not exports.

However, the overwhelming majority of countries that maintain a VAT—including all members of the European Union—exempt insurance and other financial services. This is due largely to the inherent difficulty in calculating the portion of interest income or underwriting premium that actually constitutes "value added," separate from the risk-free interest rate and premium for risk of default (in banking) or the discounted present value of expected future benefits and any risk premium (in insurance).[6] Applying the VAT to financial services would thus overtax the sector in ways that discourage capital formation.

Under existing law, domestic insurance companies may deduct the cost of reinsurance—whether from a foreign or domestic source, and whether underwritten by an affiliated or unaffiliated reinsurer—as a legitimate business expense. As covered more fully in the next section, reinsurance is the primary tool that insurers—particularly property and casualty

1. Gregory Koger, "8 questions about the Senate's Byrd Rule you were too embarrassed to ask," Vox, Oct. 28, 2015. http://www.vox.com/mischiefs-of-faction/2015/10/28/9603518/byrd-rule-planned-parenthood

2. White House, "2017 Tax Reform for Economic Growth and American Jobs," April 26, 2017. http://www.journalofaccountancy.com/content/dam/jofa/news/2017-tax-reform-for-economic-growth.jpg

3. House Republican Tax Reform Task Force, "A Better Way: Our Vision for a Confident America," June 24, 2016. http://abetterway.speaker.gov/_assets/pdf/ABetterWay-Tax-PolicyPaper.pdf

4. Kyle Pomerleau and Stephen J. Entin, "The House GOP's Destination-Based Cash Flow Tax, Explained," Tax Foundation, June 30, 2016. https://taxfoundation.org/house-gop-s-destination-based-cash-flow-tax-explained/

5. U.S. Government Accountability Office, "Value-Added Taxes: Lessons Learned from Other Countries on Compliance Risks, Administrative Costs, Compliance Burden, and Transition," April 2008. http://www.gao.gov/assets/280/274387.pdf

6. Peter R. Merrill, "VAT treatment of the financial sector," *Tax Analysts*, p. 163-185, 2011. http://www.taxanalysts.com/www/freefiles.nsf/Files/MERRILL-13.pdf/$file/MERRILL-13.pdf

insurers—use to manage their exposure to catastrophically large risks. To counter the possibility that reinsurance transactions may be used for "income stripping" purposes, premiums ceded to jurisdictions deemed by the Treasury Department to be "tax exempt countries" are subject to a 4 percent federal excise tax for insurance premiums and a 1 percent excise tax for reinsurance premiums. In addition, both the Internal Revenue Service and state insurance commissioners have authority to unwind reinsurance transactions judged not to constitute legitimate risk transfers.

In several recent sessions of Congress, legislation has been introduced that would limit domestic insurers' ability to expense the cost of reinsurance ceded to offshore affiliates.[7] Analysis by the Brattle Group of that legislation—which has been sponsored by Rep. Richard Neal, D-Mass., the ranking Democratic member of the House Ways and Means Committee, the chief tax-writing panel in Congress—finds the effects in California would be to raise the annual cost of homeowners insurance by $21.1 million and the annual cost of commercial multiperil insurance by $36 million.[8]

Should a BAT be applied to international insurance transactions, it would go further still. Domestic insurance companies would only be permitted to deduct the cost of reinsurance purchased from a reinsurer domiciled in the United States, while deductions for reinsurance purchased from foreign reinsurers—whether affiliated or unaffiliated—would be disallowed entirely.

The "Better Way" plan did not clarify whether House Republicans intend their BAT proposal to apply to international financial services transactions. Recent reporting suggests House Ways and Means Committee Chairman Kevin Brady, R-Texas, is preparing a proposal that would phase in a BAT over five years, with "targeted rules for the financial services, insurance, communications and digital-services industries."[9] However, there is not, at the time of this publication, any public clarity on what the targeted rules for insurance and financial services might entail.

Were Congress to adopt a BAT that includes insurance and financial services, it would make the United States a global aberration. In fact, among major nations, only China currently applies a VAT to cross-border reinsurance transactions, excluding long-term life and health insurance. It also is important to note that, while China's reinsurance market is growing, it remains small, at a mere $35 billion in 2013.[10] [11] Should Congress implement a BAT system that applies to the import of insurance and reinsurance, the effects would be felt most significantly in states like California, which have significant exposure to natural catastrophes.

THE GLOBAL REINSURANCE MARKET

The property and casualty insurance sector—which includes companies that offer coverage for homes, businesses, vehicles and a variety of liability exposures—wrote $612.27 billion of direct premium in the United States in 2016, including $14.96 billion of premium in California alone, according to data provided by S&P Global Market Intelligence.[12]

Consumers are probably most familiar with "personal lines" insurers who use jingles and quirky ads to market home and auto policies: Allstate, Nationwide, Geico, Progressive, Farmers and so on. Some may also be familiar with the largest writers of commercial business insurance, names like Chubb, Zurich, Liberty Mutual and American International Group Inc. But in addition to these "primary" insurers, a crucial role in all insurance markets is played by lesser-known firms who offer reinsurance, often characterized as "insurance for insurance companies."

There are any number of reasons why insurers purchase reinsurance, but the two primary motivations are to protect against one or more very large individual losses ("catastrophes") or to better manage the fluctuation of claims costs around the expected long-term mean. By limiting insurers' exposure to extreme loss scenarios, reinsurance allows insurers to deploy more capacity overall and to accumulate expertise in particular market niches—serving a specific geography, line of business or class of insured—with less concern that such concentrations will pose a threat to solvency.

Because they specialize in very large risks, reinsurers must operate on a global basis, deploying capital around the world in ways that allow them to diversify their exposure among uncorrelated risks. For example, a reinsurer can take on the risk of very large earthquakes in Japan, hurricanes in Florida, floods in Australia, terrorist events in France and cyberattacks in the United Kingdom, relatively secure in the knowledge that it is unlikely to experience all of these in the same

7. U.S. Sen. Mark Warner, "Sen. Warner, Rep. Neal Introduce Legislation to Close Foreign Reinsurance Tax Loophole," Sept. 28, 2016. http://www.warner.senate.gov/public/index.cfm/pressreleases?ContentRecord_id=03D45963-9516-48EE-841A-142049D8FA4A

8. Michael Cragg, Jehan deFonseka, Lawrence Powell and Bin Zhou, "The Impact of Offshore Affiliate Reinsurance Tax Proposals on the U.S. Insurance Market: An Updated Economic Analysis," The Brattle Group, Jan. 23, 2017. http://www.brattle.com/system/news/pdfs/000/001/172/original/Brattle_Impact_Study_2017.pdf?1485188542

9. Richard Rubin, "GOP Lawmaker Floats 5-Year Phase-In of Border Adjustment Tax," *Wall Street Journal*, June 13, 2017. https://www.wsj.com/articles/gop-lawmaker-floats-5-year-phase-in-of-border-adjustment-tax-1497367997?mg=id-wsj

10. Ying Chen, "China Clarifies Reinsurance Status under VAT Regime," TMF Group, July 1, 2016. http://www.mondaq.com/china/x/505542/sales+taxes+VAT+GST/China+Clarifies+Reinsurance+Status+Under+VAT+Regime

11. InsuranceAsia News Staff, "China's reinsurance market to reach US$198bn by 2020," *InsuranceAsia News*, Aug. 25, 2016. http://insuranceasianews.com/topics/reinsurance/chinas-reinsurance-market-to-reach-us198bn-by-2020/

12. SNL Financial P&C Insurance Market Share Application, accessed May 12, 2017. http://www.snl.com

year. (For those rare cases where that does occur, there also is a market for "retrocessional" cover, or reinsurance for reinsurance companies.)

According to S&P Global Market Intelligence data, the U.S. property and casualty insurance industry on an annual basis cedes about 20 percent of its direct written premiums to reinsurers. Though the United States is itself home to a handful of large reinsurers, each of whom also writes significant coverage abroad, the domestic P&C insurance industry historically purchases more than half of its reinsurance from foreign reinsurers (both affiliated and unaffiliated) and fully half the world's demand for reinsurance comes from the United States.[13]

In the context of this global capital market, erecting barriers to the free flow of reinsurance across national borders—as would be the case under a border-adjustment tax or a tax on offshore reinsurance affiliates—inevitably would result in making primary insurance products more expensive or, in some cases, completely unavailable. As editor R.L. Carter described the industry in his preface to the seminal 1983 textbook *Reinsurance*:

> The layman can be excused for regarding insurance as a mystery but many insurance practitioners themselves view reinsurance in a similar light. Yet without reinsurance many classes of insurance could not be conducted on their present-day scale, or at least any attempt to do so would seriously undermine the degree of security insurers can provide for policyholders. The mobilization of underwriting capacity on an international scale is necessary to provide the amount of insurance cover required for many of today's very large industrial and transport risks, and the world-wide spreading of catastrophe losses, especially those caused by natural disasters, contributes to international economic stability.[14]

CATASTROPHE RISK IN THE UNITED STATES AND CALIFORNIA

The United States faces a host of disaster risks, both natural and manmade. Emerging threats from catastrophic terrorism and cyberattacks pose risks that are potentially ruinous, but difficult to quantify for either frequency or severity.

Floods are the most common and costly natural disasters,[15] but the overwhelming bulk of flood risk is borne by the federally administered National Flood Insurance Program. Due to insufficient insurance premiums and poor risk management, the NFIP is nearly $25 billion in debt to federal taxpayers, having just borrowed an additional $1.6 billion from the federal Treasury in January 2017.[16] A burgeoning private market is emerging that could take on more flood risk, but to do so will require continued access to affordable reinsurance coverage from the global market.[17]

According to Aon Benfield's Annual Global Climate and Catastrophe Report, while 72 percent of the 315 natural catastrophes catalogued around the world in 2016 occurred outside the United States, the nation still accounted for 56 percent of the $54 billion in global insured losses from natural catastrophes.[18]

Even in a nation as catastrophe-prone as America, California distinguishes itself as an especially catastrophe-exposed state. Data from Verisk Analytics' Property Claim Services unit finds California accounted for $1,229.8 million of catastrophe losses in 2015, the second-highest tally of any state.[19] Indeed, going all the way back to April 1953—the earliest records kept by the Federal Emergency Management Agency—California has been the site of 258 presidential disaster declarations and 83 major disaster declarations.[20]

Exacerbating the problems that stem from California's exposure to earthquakes, wildfires and other natural perils is that the state employs an antiquated system of property and casualty insurance regulation enshrined in law by 1988's Proposition 103. That's a major reason why the state earned a "D" grade and placed among the worst insurance regulatory environments in the United States, according to the R Street Institute's 2016 Insurance Regulation Report Card.[21]

Creating new products and filing rates for existing products is much more difficult in California than in most other states. Thus, when the California Earthquake Authority, a publicly managed and privately funded state instrumentality charged with ensuring the availability of earthquake cover-

13. Michael Cragg, et al., 2017.

14. R.L. Carter, ed., *Reinsurance: Second Edition*, Springer, p. xiii, 1983.

15. Federal Emergency Management Agency, "Flooding – Our Nation's Most Frequent and Costly Natural Disaster," March 2010. https://www.fbiic.gov/public/2010/mar/FloodingHistoryandCausesFS.PDF

16. House Financial Services Committee, "Flood Insurance Program Takes another $1.6 Billion from Taxpayers," Jan. 17, 2017. http://financialservices.house.gov/news/documentsingle.aspx?DocumentID=401349

17. Michael Thrasher, "The Private Flood Insurance Market Is Stirring After More Than 50 Years Of Dormancy," Forbes, Aug. 26, 2016. https://www.forbes.com/sites/michaelthrasher/2016/08/26/the-private-flood-insurance-market-is-stirring-after-more-than-50-years-of-dormancy/#1a2bc7f56dda

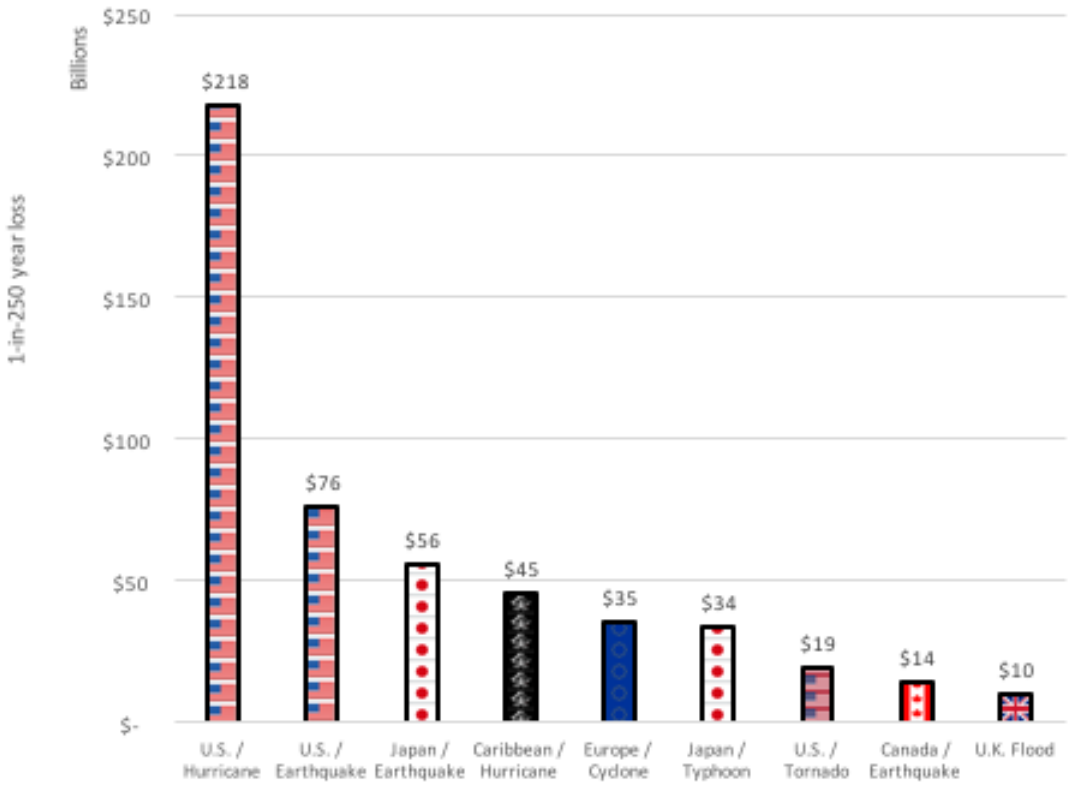
18. Aon Benfield, "2016 Annual Global Climate and Catastrophe Report," Jan. 17, 2017. http://thoughtleadership.aonbenfield.com/Documents/20170117-ab-if-annual-climate-catastrophe-report.pdf

19. Insurance Information Institute, "Top Five States By Insured Catastrophe Losses, 2015," accessed July 1, 2017. http://www.iii.org/table-archive/20295

20. Federal Emergency Management Agency, "Disaster Declarations for California," accessed June 12, 2017. https://www.fema.gov/disasters/grid/state-tribal-government/77?field_disaster_type_term_tid_1=All

21. R.J. Lehmann, "2016 Insurance Regulation Report Card," R Street Institute, Dec. 13, 2016. http://www.rstreet.org/policy-study/2016-insurance-regulation-report-card/

FIGURE I: EXPOSURE TO CATASTROPHIC PERILS ($B)



SOURCE: Average of AIR and RMS catastrophe models insured perils output. Estimated March 2017.

age, recognized that it needed to update its product offerings and rates to entice new customers to purchase earthquake coverage, it was subject to a slow and byzantine system of product approval.

It is tremendously important to boost the takeup rate of earthquake insurance in California, where it sits at roughly 10 percent. California is a borrower-friendly "nonrecourse" state, which means that when a mortgage borrower defaults, all the lender is entitled to recover is the property itself. That's true even in the event an earthquake strikes an uninsured home. A California homeowner's incentive is simply to walk away from the obligation. No matter how many hundreds of thousands of dollars might be outstanding on the loan, the lender could be left to foreclose on nothing more than a pile of rubble.

When the "big one" that every Californian knows to expect finally strikes, the rest of the nation will be on the hook for an avalanche of defaults. In a matter of seconds, tens of thousands of mortgages held by Fannie Mae and Freddie Mac could see their collateral destroyed. The government-sponsored entities, whose obligations are backed by American taxpayers, will have little recourse to regain their investments.

To forestall the necessity of a massive taxpayer-backed bailout, it is crucial that earthquake insurance premiums are as low as possible, so that Californians see good value in the product. That means ensuring that the price of reinsurance, the CEA's primary form of risk-transfer, is kept affordable.

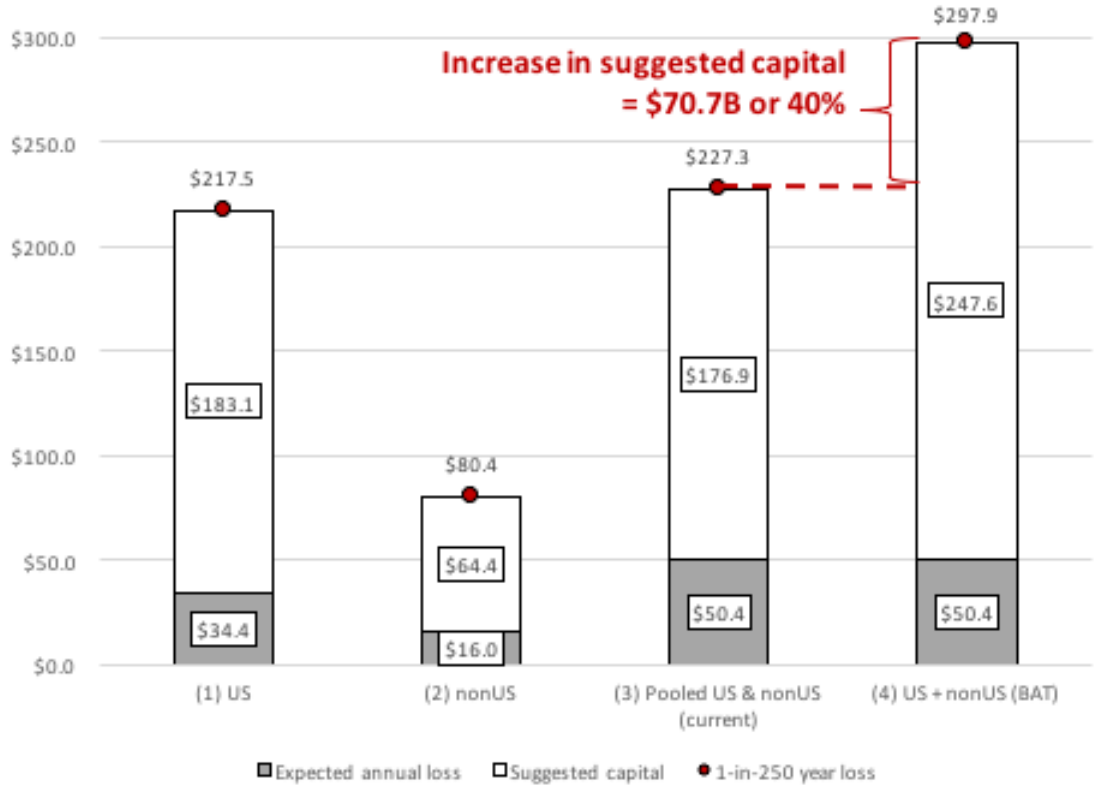
EFFECTS OF BAT ON GLOBAL REINSURANCE MARKETS

To estimate the effects of a BAT on the price of insurance in California requires first to calculate the effect of a BAT on the cost of reinsurance globally and then to calculate California catastrophe risk exposure relative to the rest of the world. Building on work published this year by the Brattle Group,[22] this report uses output from commercial catastrophe models[23] to estimate the change in global reinsurance capital that would be required if a BAT were to be implemented. Figure 1

22. Michael Cragg, et al., 2017.

23. Commercial catastrophe models, such as those offered by Risk Management Solutions (RMS) and AIR Worldwide (AIR) use physical, statistical and numerical modelling gleaned from multidisciplinary science (engineering, meteorology, statistics, and others) to augment the scarce data available on catastrophic perils for predicting future losses. These models are used by (re)insurers, financial markets, self-insured businesses, and governments to set prices for risk. Models are reviewed and approved bi-annually by the Florida Commission on Hurricane Loss Projection Methodology *for use in setting residential property insurance rates in Florida*. For more information, see https://www.sbafla.com/method/Home.aspx

FIGURE 2: EFFECT OF BAT ON GLOBAL REINSURANCE CAPITAL FOR CATASTROPHES ($B)



SOURCE: Average of AIR and RMS model output for the U.S. and pools primary catastrophe exposures of other modeled perils and countries. Suggested capital is the difference between 1-in-250 year loss (99.6% PML) and expected annual loss (AAL).

presents the 1-in-250-year expected losses for the largest perils in the United States and other select locations. Extreme concentration of high-value property in areas exposed to catastrophic perils leaves the United States with substantially greater exposure than all other countries combined.

To provide affordable property insurance, U.S. insurers cede premiums to international reinsurers who pool U.S. hurricane, earthquake, terrorism, wildfire and tornado risks with similar exposures from around the world. Because these exposures are not strongly correlated, pooling reduces the amount of capital reinsurers must hold to insure them. Global reinsurers cover small amounts of each catastrophe exposure, along with many other P&C exposures.

Under a BAT, U.S. insurers' ability to use foreign reinsurance to pool their exposures with those of other countries largely would be eliminated. Because deductions for offshore reinsurance would be disallowed—greatly increasing the relative cost of reinsurance from foreign sources—U.S. primary insurers would face overwhelming incentives to cede risks only to U.S.-domiciled reinsurers. In addition, the United States should anticipate retaliatory legislative actions from all countries affected by the BAT. The effect would be to isolate insurance and reinsurance capital in its respective domestic markets, requiring each country to bear its own risk.

This report uses commercial catastrophe model outputs to estimate the effects of a BAT on reinsurance capital available to support U.S. catastrophe exposure. This calculation requires assumptions about adequacy and efficiency of current capitalization and the symmetry and efficiency of diversification across current insurers and reinsurers.

As a starting point, the analysis assumes current levels of capital in insurance and reinsurance markets are adequate and efficient. In other words, the global insurance and reinsurance markets currently have just enough capital to meet their obligations with a reasonable degree of certainty. On its face, this assumption might not seem reasonable, given the prevailing record-high levels of surplus. However, because this analysis models perils rather than firms, it also must assume that (re)insured exposures are perfectly symmetrical and efficient across the industry. This second assumption

skews in the opposite direction, making it likely that the two assumptions approximately offset.[24]

A perfectly symmetrical and efficient distribution of catastrophe exposures would resemble those considered in the early 1960s by Karl Borch of the Norwegian School of Economics[25] and more recently by David Cummins and co-authors at the Wharton School.[26] Under a perfectly symmetrical and efficient distribution, each (re)insurer holds an identical portfolio of liabilities in exact proportion to its share of industry capital, as if there was only one monolithic global insurer. Reality, of course, does not mimic this perfectly efficient market, as the maximum practical level of diversification is reduced by such factors as contracting costs, moral hazard, adverse selection, rate regulation and idiosyncratic behavior. To the extent risk is not evenly distributed across companies, the industry will require additional capital to achieve the same financial strength. From this perspective, one might consider results from this analysis to be a lower bound and that the actual negative impact on real-world insurance and reinsurance markets could be significantly larger.

The red circle at the top of the far left column of Figure 2 shows the 1-in-250-year loss from hurricanes, earthquakes and tornadoes in the United States is $217.5 billion. In other words, in any given year, there is a 99.6 percent probability that U.S. insured losses from the combination of these perils will be less than $217.5 billion. The column beneath the circle separates that 1-in-250-year loss into the expected annual loss ($34.4 billion) and suggested capital to support the 99.6 percent confidence interval ($217.5 billion – $34.4 billion = $183.1 billion).

Column 2 of Figure 3 displays the 1-in-250-year expected loss, the annual expected loss and suggested capital for the combined distribution of all modeled catastrophe losses outside the United States. These perils and locations include Japanese earthquake and typhoon, Canadian earthquake, European cyclone, Caribbean hurricane and U.K. flood. The expected annual loss is $16 billion and the 1-in-250-year expected loss is $80.4 billion, leaving $64.4 billion in suggested capital.

Comparing the third and fourth columns of Figure 2 demonstrates the powerful effect of pooling uncorrelated global loss exposures. In the current global reinsurance market, these U.S. and non-U.S. loss exposures are pooled (Column 3), with a 1-in-250-year loss of $227.3 billion and total suggested capital of just $176.9 billion. However, under a BAT, such pooling would not take place—first, as domestic insurers lost the benefit of pooling outside U.S. borders and subsequently around the world, as other countries enacted retaliatory tax laws. Without the benefit of pooling global exposures, the U.S. and non-U.S. suggested capital amounts must be combined. In this scenario, the suggested global capital increases by $70.7 billion, or 40 percent, from $176.9 billion to $247.6 billion.

CALIFORNIA'S SHARE OF GLOBAL CATASTROPHE EXPOSURE

This analysis employs commercial catastrophe models to estimate California's share of global catastrophe exposure. We estimate California's exposure as the difference between the expected annual loss and the 1-in-250-year loss in California relative to that of the rest of the world. This method captures both the size of the exposure as well as the uncertainty, which together determine the amount of capital needed to provide coverage.

The expected annual losses for catastrophe perils in California are $3.47 billion, while the 1-in-250-year loss is $52.68 billion. The difference between these, $52.68 - $3.47 = $49.21 billion, is an estimate of the amount of capital required to insure California for catastrophic perils. Summing this number for all states yields $676.8 billion. Thus, California is $49.21 ÷ $676.8 = 7.3 percent of all U.S. capital needs. As shown in Figure 2, the global figure for the same calculation is $247.6 billion. Of this $247.6 billion, the U.S. represents $183.1 ÷ $247.6 = 74 percent. Multiplying California's share of the U.S. figure times the U.S. share of the global figure indicates California's share of global catastrophe capital needs is approximately (0.073 × 0.74 = 0.054) 5.4 percent. Applying this percentage to the total amount of capital that must be raised to maintain financial strength in the global reinsurance market produces a formula of 0.054 x $70.7 billion = $3.82 billion.

A March 2017 report by Florida Tax Watch estimates current required returns on capital for reinsurers to be 5 percent, while the historical target has been closer to 7.5 percent. Using that 5 percent figure, which is in line with coupons charged on recent catastrophe bond issuances, annual premiums in California would have to increase by $191 million (0.05 x $3.82 billion = $191 million). Since this additional annual cost to California consumers would persist into the foreseeable future, a multiyear figure adds appropriate perspective. Over the next decade, ignoring inflation, this analysis estimates $1.91 billion of additional expense for California consumers.

24. Equality of these assumptions might be questionable in the opposite direction during the next hard market.

25. Karl Borch, "Equilibrium in a reinsurance market," *Econometrica*, Vol. 30, No. 3, pp. 424–444, July 1962. http://www.jstor.org/stable/1909887?origin=crossref&seq=1#fndtn-page_scan_tab_contents

26. J. David Cummins, Neil A. Doherty and Anita Lo, "Can insurers pay for the 'big one'? Measuring the capacity of the insurance market to respond to catastrophic losses," *Journal of Banking and Finance,* 26(2-3):557-583, March 2002. https://www.researchgate.net/publication/223224454_Can_Insurers_Pay_for_the_'Big_One'_Measuring_the_Capacity_of_an_Insurance_Market_to_Respond_to_Catastrophic_Losses

CONCLUSION

It is not yet clear if Congress will pursue structural changes to the U.S. tax code, or even a temporary tax cut that expires after 10 years. Both remain a political uncertainty. It also is uncertain whether the border-adjustment tax will be included in any final proposal.

Recent reporting has suggested that both White House economic adviser Gary Cohn and Treasury Secretary Steven Mnuchin oppose including the border-adjustment tax in any tax-reform plan.[27] Sen. Jon Cornyn, R-Texas, the Senate's second-highest-ranking Republican, recently was quoted as telling reporters that "with many people skeptical of how it would work, the border adjustment tax is probably dead."[28] Even so, Chairman Brady remains publicly committed to the need for a BAT.[29]

The merits and drawbacks of a border-adjustment tax more generally are beyond the scope of this analysis. But with time to ponder the consequences of what would be radical changes to the structure of the U.S. tax code, Congress should bear in mind how the border-adjustment tax proposal would affect insurance and reinsurance markets across the country and around the world.

For consumers in California and all across the country, the real effects of applying a BAT to insurance and reinsurance—or of imposing a reciprocal tax, territorial tax, discriminatory tax on affiliates or any other tax that would affect insurers' ability to use reinsurance to spread risk globally—would be to make it harder and costlier for property owners to buy home insurance and earthquake insurance, for employers to buy workers' compensation insurance, for factories and industrial plants to insure their machinery and for contractors to get the terrorism insurance they need to erect new buildings. It's important to bear in mind that, under the current system, insurance companies don't just import reinsurance – they also export risk. Denying insurers the ability to engage in responsible risk transfer would mean concentrating those risks here on our shores.

ABOUT THE AUTHORS

Lars Powell is executive director of the Alabama Center for Insurance Information and Research at the University of Alabama and a senior fellow of the R Street Institute. He earned a Ph.D. in risk management and insurance from the University of Georgia. He previously held the Whitbeck-Beyer Chair of Insurance and Financial Services at the University of Arkansas-Little Rock from 2004 to 2014. Lars' primary areas of research include insurer capitalization and the effects of regulation on insurance markets. Opinions expressed in this report are the author's and do not represent those of the University of Alabama.

Ian Adams is a senior fellow with the R Street Institute, responsible for coordinating R Street's insurance research and outreach, as well as overseeing matters related to next generation transportation. He also is a frequent commentator on the disruptive impact of burgeoning technologies on law and regulation.

R.J. Lehmann is senior fellow, editor-in-chief and co-founder of the R Street Institute. He is the author the 2012-2016 editions of R Street's Insurance Regulation Report Card and numerous other R Street policy papers. He also is an associate fellow of the John Locke Institute and the James Madison Institute.

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The R Street Institute is a nonprofit, nonpartisan, public policy research organization ("think tank"). R Street's mission is to engage in policy research and outreach to promote free markets and limited, effective government.

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28. Jordain Carney, "Senate's No. 2 Republican: Border tax 'probably dead'," The Hill, April 27, 2017. http://thehill.com/blogs/floor-action/senate/330971-top-senate-gop-er-border-tax-probably-dead

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