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TRIA: How Should Costs Be Shared?

Treasury Secretary Snow's testimony last week on the Terrorism Risk Insurance Act (TRIA) highlights the critical importance of choosing how to share the costs of an attack between the federal government and the private sector. Secretary Snow indicated that the Administration would actively support the reauthorization of TRIA before its expiration in December, but only if a number of changes were made, particularly shifting more of the cost of any attack onto the private sector. Proponents of TRIA renewal appear ready, in principle, to accept this compromise.

TRIA has a specific cost-sharing approach for the first $100 billion of annual losses by businesses due to terrorist attacks, explicitly leaving it to Congress to make additional choices were an attack to cost even more. TRIA requires insurers to offer separately priced (or free) terrorism insurance on policies offered to businesses. Businesses may choose not to buy the coverage, but it appears that, in aggregate, a majority of terrorism exposure is being passed onto insurers. Insurers may exclude certain types of losses and may limit the total amount of coverage. In particular, relatively few policyholders are covered for attacks involving nuclear, biological, chemical, or radiological (NBCR) attacks.

Five key mechanisms determine the cost-sharing between the government and insurers:

- Types of losses covered by TRIA.
- Minimum event size to trigger any aid.
- Individual insurer deductibles. Insurers absorb the first portion of all claims.
- Individual insurer co-payments. Insurers absorb a portion of claims above the deductible.
- Recoupment of federal aid or payment of premiums in advance. The government may charge for some or all of its assistance, through up-front premiums or post-attack levies.

This paper explains these mechanisms and suggests a conceptual framework to help lawmakers choose the specific formulas, such as the level of deductibles. Readers less familiar with TRIA may wish to review several papers available on www.coffi.org, especially "Terrorism Risk Insurance Act of 2002: A Primer," and "TRIA Renewal: Key Questions."

Key Cost-Sharing Mechanisms Under Current Law

We start by summarizing the cost-sharing mechanisms as they currently exist under TRIA.

Types of losses covered by TRIA.

Congress has excluded some major categories of potentially insurable losses from TRIA's coverage. First, only losses by businesses are covered. Insurers will also receive claims on personal policies for damages to personal autos, residences, individually-insured lives, etc., which are not eligible for aid under TRIA. Second, only property/casualty losses are covered, not life or health insurance. Third, medical malpractice and financial guaranty lines are not covered. Fourth, attacks by domestic terrorist groups are excluded. Finally, a substantial portion of the risk from NBCR attacks is implicitly not covered, since TRIA only covers risks that the insurers have taken on. Most insurers have excluded NBCR risk from their policies.

The Administration has proposed removing several currently covered lines that it believes represent low risks of accumulating large losses from a terrorist attack and therefore can be handled as part of normal insurer risk management. The commercial auto and general liability lines were specifically mentioned by Secretary Snow. On the other side, policyholder and insurer groups are lobbying for the addition of group life insurance, which, it is argued, has characteristics similar to workers' compensation. Coming from another angle, there is considerable support for adding coverage of domestic terrorist attacks, since such attacks may be similar to international terrorism in their effects on businesses and it may be difficult to distinguish foreign from domestic attacks, even years after the fact.

Minimum event size to trigger any aid.

An attack is not covered by TRIA unless there is an aggregate of $5 million or more of claims against all insurers. This figure is only used to determine eligibility; it does not function as a second kind of deductible. The Administration proposes raising the minimum to $500 million.

Individual insurer deductibles.

Each insurer suffering a loss in an attack must absorb the first portion of the losses, up to an amount equal to 15% of the volume of premiums it wrote in the preceding year on insurance lines covered by TRIA. (This deductible started at 7% for the first full year of TRIA's operations, rising to 10% and 15% according to a specified schedule.)

The 15% figure is sometimes translated to an industry-wide deductible, such as $28 billion for 2005, based on total commercial lines premiums of approximately $187 billion in the preceding year. This can be misleading, except as an indicator of the general magnitude. Some insurers will not have any claims from an attack, especially as so many insurers are specialized by geography or type of risk. The deductibles for these insurers would not be relevant to the federal cost. In addition, some insurers that are hit may have small enough exposure that claims fall below their full deductible, rendering the remaining deductible irrelevant. For example, it appears that the effective deductible for an attack with claims distributed similar to the WTC losses would be about 43% of the deductible that would apply if every insurer had been hit with claims in exact proportion to their premium volumes.

Individual insurer co-payments.

After the deductible is surpassed, the federal government pays 90% of all claims on that insurer, up to the point where industry-wide insured losses exceed the $100 billion total cap. This is usually expressed as a 10% co-payment by the insurer.

Recoupment of federal aid.

TRIA allows, and in some cases obliges, the federal government to recoup all or a portion of the aid that it pays in a year by levying a charge in future years on industrywide premiums in the insurance lines covered by TRIA, even the premiums from businesses that elect not to buy the terrorism insurance offered to them.

Treasury is required to seek repayment of federal assistance if the industry's losses, net of federal assistance, are below the "insurance marketplace aggregate retention" of $15 billion (up from $12.5 billion in 2004 and $10 billion in 2002 and 2003.) The recoupment comes not from the specific insurers that received aid, but from a levy of up to 3% per year charged on future industrywide premiums in the relevant lines.

In addition, the Treasury Secretary has the discretion to demand additional recoupment, up to 100% of federal outlays, taking into account the following factors:

- The ultimate cost to taxpayers of no additional recoupment;
- The economic conditions in the commercial marketplace, including the capitalization, profitability, and investment returns of the insurance industry and the current cycle of insurance markets;
- The affordability of commercial insurance for small- and medium-sized businesses; and
- Such other factors as the Secretary considers appropriate.[1]

A Conceptual Framework for Setting Cost-Sharing

There is no "right" technical answer to the overall degree of cost-sharing between the insurers and the federal government. In general, there is a spectrum running from a purely government program, to a program with high levels of federal outlays complemented by modest costs for insurers, to ones with increasingly smaller federal payments, all the way to fully private insurance, with government regulation but no federal outlays. There is a very active debate as to where the U.S. should be. Insurers and policyholders generally argue for a large public sector role while the Administration pushes for the most private sector participation. A summary of the arguments is contained in "TRIA Renewal: Key Questions" on www.coffi.org.

[1] TRIA legislation, Sec. 103 (7)(D)

However, it may be easier to reach agreement in the short time still available to renew TRIA if policymakers use a common framework to evaluate cost-sharing decisions. The author suggests the following sequence of questions, although the decisions are admittedly somewhat interdependent:

- Should the federal government be a banker or a reinsurer?
- How much should the government subsidize terrorism insurance?
- What is the largest loss we wish private insurers to cover?
- What specific deductibles and co-payments should be set?

Should the federal government be a bank or a reinsurer?

The federal role in terrorism insurance could be envisioned as a "bank," as a "reinsurer," or as a combination. As a "bank", it would advance insurers money to pay terrorism claims, but would expect repayment, with interest, over time. Alternatively, as a "reinsurer" it would take on specified terrorism risks in exchange for up-front premiums that are set at a level expected to cover federal costs over time. Subsidies of various kinds could be incorporated in either approach, as is discussed later. TRIA, as passed in 2002, essentially has the federal government operating as a "bank", with subsidies equal to the government's interest costs, which are not charged back to insurers, plus any non-recouped federal payments.

Either the "bank" or "reinsurer" roles could theoretically be filled by a private sector organization, possibly a mutual financial institution owned by the insurance industry. However, it would be difficult to create an organization with the requisite ability to fund enormous potential claims or to enforce a mechanism for repayment.

Bank. The federal role would be to fund a portion of the insurance industry's terrorism losses, with repayment in future years with interest. The deal would need to be between the "bank" and all, or a very large part, of the insurance industry. Lending to an individual insurer that has been hit heavily by a large terrorism loss is impractical, since the necessary premium increase to fund repayment could be exorbitant. If the insurer tried to raise premiums high enough to fund the repayments, it would find itself undercut by lower-priced competitors who had not suffered as much from that particular attack.

The fundamental benefit to the insurance industry of a federal "bank" would be to spread the cost of losses over multiple years and across the entire industry. The main public policy benefit would be to preserve the solvency of the insurance industry while still achieving the goal of encouraging terrorism coverage for businesses. Individual insurers would be further encouraged to write terrorism policies by the mutualization of the costs of terrorism losses that qualify for assistance. If an insurer writes a high volume of terrorism insurance compared to its peers, it can do so with a knowledge that the entire industry will be sharing the cost of the portion of its losses initially covered by the federal government.

The repayment approach requires two key design decisions. First, how will recoupments be spread across the industry? Current law recoupment is based on future premium volumes in the lines eligible for TRIA coverage, without regard to the volume of terrorism premiums or the take-up ratio of terrorism coverage. Changing to a base using terrorism premiums might be fairer, and would provide more efficient market signals, but would reduce the incentive for individual insurers to encourage businesses to buy terrorism coverage, since each additional policy would not only provide exposure through the federal deductibles and co-payments, but also through its effect on recoupment calculations.

The second decision is how quickly to obtain repayment. TRIA sets a maximum yearly level equal to 3% of premiums in lines eligible for TRIA. Other bases could be industry capital levels or a proportion of industry profits.

It might appear that recoupment has little cost to the insurers if, as now, it is accomplished through a uniform levy on all premiums in lines eligible for TRIA. After all, no one would be at a competitive disadvantage and the businesses buying insurance would absorb the charges in their premium costs. However, businesses would likely curtail their purchase of insurance, which would reduce the volume of business across which insurers could spread fixed expenses, as well as eliminating profit that would have been earned on the lost business.

Businesses could curtail insurance purchases for two reasons. First, there is not a fixed demand for insurance – businesses will buy less of this commodity if the price goes up. Second, larger businesses have alternative methods for protecting themselves, including simply arranging larger liquidity lines with their banks and relying more on their capital and future earnings power to absorb any losses. There are also complicated financial instruments, of which “catastrophe bonds” are one example, that can pass the risk onto the financial markets without going through an insurer. It is unlikely to be feasible to pin an equivalent levy on all forms of financing that would substitute for a simple insurance policy.

Reinsurer. Acting as a “reinsurer”, the federal government would charge insurers an up-front premium intended to cover an expected level of annual costs. (There could, of course, be a deliberate subsidy if policymakers wished to charge insurers less than the expected cost.) Purchase of federal coverage could be mandatory or voluntary. If voluntary, there would need to be some element of risk-based pricing, so that lower-risk insurers are not driven out of the arrangement by an unattractive fixed price based on an average risk level.

There would be two fundamental benefits for insurers from a federal role as “reinsurer”. First, the insurance industry would be able to spread its losses over time, as with the “bank” role, but this time by paying up-front premiums each year. Second, if the federal insurance is voluntary, then individual insurers could treat terrorism insurance more like other business lines. The ability to buy or refuse federal insurance could affect insurers’ approaches to marketing and pricing the underlying terrorism coverage.

It is unclear if this approach would decrease the desire of individual insurers to actively market terrorism insurance to their business clients. Insurers face two kinds of costs from terrorism losses. First, they would directly absorb the portion of terrorism losses that fall within the deductibles and co-payments. These could be set at the same levels under either the “bank” or “reinsurer” approaches. Second, they would pay premiums or levies to the federal government. Under TRIA today, these levies would be largely unrelated to the intensity with which the insurer had persuaded its commercial customers to sign up for terrorism insurance, effectively creating a zero marginal cost for this segment of expenses. The “reinsurer” approach, on the other hand, charges higher premiums for higher business volumes, assuming voluntary purchase of reinsurance. Of course, if this were viewed as a negative, it would be possible to mandate purchase of federal insurance and set the premium based on total volume in lines eligible for TRIA, rather than the volume of terrorism coverage.

The principal public policy benefits of the “reinsurer” approach are the greater clarity of pricing and the enhanced ability of the federal government to eventually withdraw from the business. One benefit of clarity is that federal receipts would be known up-front, rather than being dependent on ad-hoc future decisions about recoupment. Also, societal resources might be better allocated, as insurers were better able to gauge their own costs for providing terrorism coverage and therefore better able to set the prices they charge business customers. (The CBO, among others, has emphasized the importance they place on proper pricing as an incentive for good business decisions.)

A federal “reinsurer” could gradually exit the business by raising the up-front premium to a level that would allow private reinsurers to profitably compete for the business of protecting insurers from the cost of TRIA deductibles and co-payments. This is more difficult for the “bank” approach, especially if, as now, there is uncertainty about how much recoupment will actually be requested, leaving the possibility of a major federal subsidy that private providers could not compete with.

The major public policy disadvantage of the “reinsurer” role is that the federal government would have to set pricing. This exposes taxpayers to the possibility that premiums would be consistently underpriced, as a result of political pressure. On the other hand, the current “bank” structure leaves open the possibility of massive post-attack subsidies that would be determined at a time of even greater political pressure. Pricing is also difficult technically, but at least the government can look to private sector pricing of terrorism policies to business as a guide. In addition, the government could purchase private market reinsurance on a piece of its risk, through a competitive bidding process, as another way of gauging private market pricing.

How much should the government subsidize terrorism insurance?

The federal government could subsidize terrorism insurance in any number of ways. Currently, TRIA provides a clear subsidy through a lack of an interest rate charge on the federal payments that are eventually recouped. It also contemplates the possibility that the government will choose not to ask for recoupment beyond the mandatory levels, which could be a subsidy of tens of billions of dollars.

We should note that the insurance industry is not comfortable with the term “subsidy” here, given that TRIA also forces insurers to cover a risk they might well not cover voluntarily. For explanatory convenience, we will continue to use the term to indicate any situation where the federal government takes on costs related to terrorism insurance that are known or expected to exceed the economic value of any premium or recoupment coming into the government.

There are many arguments made by those who support subsidies, but they usually start with the premise that the nation would be better off if businesses were generally covered against the risk of a major terrorist attack. The arguments range from the moral (why should these particular folks suffer from an attack aimed at the U.S. as a whole?) to the economic (terrorist attacks will be less disruptive if businesses are financially secure against them) to national security issues

(the U.S. can stand firmer if our people's resolve is not weakened by fears of major individual financial losses.)

Subsidy proponents then argue that insurers will not voluntarily provide substantial coverage against a risk many deem "uninsurable" because of its unpredictability and potential enormity. Forcing insurers to provide coverage anyway may not be fully effective if insurers are allowed to set prices and terms and conditions that discourage businesses from buying. Overcoming this issue by strong regulation could have its own problems, including the possibility of insurers pulling back and creating an availability crisis in commercial insurance or having to raise their general insurance pricing substantially to repay losses after a major terrorist attack.

Policymakers may also wish to consider the distributive effects of subsidizing this coverage, although the ultimate consequences are complex. To the extent markets are fully competitive, the benefit of subsidized insurance should filter through to businesses through lower prices and less restrictive insurance policies. Real estate, construction, and transportation businesses are among those likely to be most affected. These businesses in turn should charge lower prices for their products, benefiting the ultimate customers. However, there are arguments about the degree of competitiveness of various markets and it would also be a daunting task to try to track the characteristics of the end consumers.

What is the largest loss we wish private insurers to cover?

There appears to be a strong consensus that there is some level of loss beyond which the industry should not be expected to cover the costs. This is one reason that TRIA explicitly relates only to the first $100 billion of loss in a year with Congress retaining the right to decide about responsibility for any excess afterwards. In addition, many observers argue that the maximum loss covered by insurers, even through repayment of federal aid over time, should be below this $100 billion figure.

Two main metrics can reasonably be used to measure the insurance industry's capacity to absorb losses: capital and premiums. The goals in either case would be to minimize insolvencies by insurers and to leave the insurance industry strong enough to provide the insurance needed by our nation at reasonable prices. If the industry is excessively hard hit, then insurance prices in all lines could be forced up, at least for an adjustment period before sufficient new capital flowed in. Such a flow of new capital also would probably be contingent on prices rising in the long term by enough to offset the risk associated with continuing terrorism exposure.

Regardless of whether capital or premiums are used to measure the capacity to withstand a large loss, one must decide whether to focus solely on commercial lines capacity or whether to spread the burden to personal lines as well. There appears to be a working consensus to focus on commercial lines, possibly because there is a reluctance to have homeowners and other personal lines customers share the burden of business losses. Policymakers need to be aware, however, that many insurers operate in both sectors and there would likely be a spillover effect as capital is reallocated internally. If insurance industry capacity is affected by a large event, there would probably be some increase in personal lines prices and a lesser increase in commercial lines pricing than would be the case if the two sectors were totally separate. This spillover effect would diminish over time as outside capital came into the industry as pricing became more attractive.

Capital. This represents the level of assets of the industry in excess of its liabilities. Assets are very largely in the form of financial investments while liabilities are mostly reserves representing future payments for claims that have already occurred, including an estimate for occurrences that have not yet been reported.

Capital exists as a cushion against many risks. First, existing estimates of the value of assets and liabilities could prove to be wrong. For example, industry reserves set aside against asbestos claims proved to be spectacularly optimistic. Second, the premiums previously agreed upon for providing future coverage may prove insufficient. Hurricanes, earthquakes, and terrorist attacks are all events for which premiums could turn out to be wildly insufficient. Losses exceeding premiums in these areas come out of capital, because U.S tax law does not allow tax-deductible reserves to be set up in advance for such disasters. Were this to change, then such reserves would be added to capital for our calculations here.

Policymakers must decide how much capital the industry needs to retain after a major terrorist attack. This is not the clear-cut technical issue one might expect. It is true that property/casualty insurers calculate a “risk based capital” calculation required by regulation. However, few industry observers have adopted it as a standard for the economic level of capital needed, and, the industry has been working with capital far exceeding the industry’s aggregate risk-based capital requirement. Instead, industry analysis often centers on a traditional and very simple metric, the ratio of premiums/capital. Premium volume is a rough indicator of the total amount of risk taken on by the industry, for which capital is a necessary cushion.

Both the overall premiums/capital ratio and the commercial lines ratio were approximately 1.1 as of 2004. This is quite low, and therefore conservative, by historical industry standards. For illustration, if policymakers were willing to see the commercial lines ratio rise to 1.4 after a major terrorist attack, this 0.3 change in the ratio would imply the ability to withstand a $37 billion after-tax hit. ($187 billion of premiums divided by $134 billion of capital equals 1.4. End of year 2004 commercial lines capital was approximately $171 billion or $37 billion higher than this.) If the industry’s marginal tax rate were 30%, this would yield a $53 billion pre-tax claim cost.

Premiums. Capital serves as one type of shock absorber for insurers. Future premiums serve as another, since an insurer can rebuild its financial position over time by charging higher premiums for future business. This is effectively what the industry does in a “hard” insurance market. The property/casualty industry has a long history of alternating between “soft” and “hard” markets. Weak pricing in the “soft” market leads to losses, which deplete capital to the point where insurers feel compelled to raise prices to rebuild capital, resulting in a “hard market.” Unfortunately for them, the rebuilt capital bases inevitably tempt them to compete increasingly heavily on price, leading to a new round of soft markets.

If the federal role were as a “bank”, then the maximum percentage of premiums could be chosen as a multiple of the desired maximum annual levy multiplied by the number of years policymakers were willing to have insurance pricing burdened by the need to repay the costs of a very large terrorist attack.

The property/casualty industry wrote approximately $425 billion of premiums in 2004, of which about $187 billion were in commercial lines. If policymakers felt that 20% of last year's commercial lines premiums were a reasonable maximum loss, this would imply a loss of $37 billion.

How does the federal role interact with the maximum loss to be borne by insurers?

The above calculations work well when the federal role is that of a "bank." However, it is possible to set the maximum loss level sharply higher if the federal role is that of "reinsurer." In that case, insurers can avoid the financial distress of extreme terrorism losses by choosing (or being required) to buy federal terrorism reinsurance. The financial capacity of these insurers would be reduced only by the annual up-front reinsurance premiums, which should be much lower than the cost of bearing the maximum loss directly.

In the "reinsurer" scenario, policymakers could choose to limit the maximum loss to the same level as if it were in the "bank" role. This would allow for a situation in which none of the insurers chose to buy federal reinsurance. Alternatively, the maximum loss could be chosen solely with an eye to the ability of insurers to absorb the reinsurance premium without pulling back excessively from the terrorism insurance business. Or, an in-between level could be chosen.

What specific levels of deductibles and co-payments should be set?

Two factors militate against the simple approach of directly translating the maximum loss into an industrywide deductible. First, reinsurers have learned over many years that insurers will do a more thorough job of investigating and paying claims if they remain on the hook for a portion of the claims cost. The large majority of reinsurance contracts have at least the 10% co-payment that TRIA currently uses. Thus, a $50 billion targeted maximum loss for the insurance industry would imply a $44.4 billion deductible, if a 10% co-payment is desired and TRIA continues to cover the first $100 billion of losses. In that case, a $100 billion attack would cost the industry $50 billion, with $44.4 billion in deductibles and $5.6 billion in co-payments.

The second factor is that the industrywide deductible needs to be translated to an individual insurer deductible. This is not as simple as dividing the deductible by the premiums written by the industry in the relevant lines of business and using this to divvy up the deductible. This approach will always lead to a lower effective deductible and higher federal payments.

First, it would be extraordinary if an attack were so wide that every insurer suffered claims. Companies buy their insurance from one or a small number of insurers, and, there are unlikely to be enough companies with losses to pull in all insurers. Most do not even write business in all states. Second, the losses will not be distributed among the participating insurers in the same proportion as their share of industrywide premiums. Some insurers may have losses far beyond their deductibles while certain others do not even reach the full deductible. There is no easy way to estimate the effect of these two factors, but one detailed study estimated that the effective deductible for an attack today similar to that on the World Trade Center would have been only 43% of the deductible calculated by taking industrywide premiums and multiplying by 2005's 15% deductible figure.

If policymakers assume that the highest percentage of the industrywide deductible that is likely to be involved in practice is, say, 66.7%, then the $44.4 billion deductible of the earlier example could be raised to $66.6 billion. The only major constraint on making this adjustment is that the higher deductible for each individual insurer could conceivably reach a level that seems excessively risky to that insurer, discouraging the enthusiasm with which terrorism insurance would be offered. Once again, this would be less of an issue if the federal role were as a "reinsurer", since the individual insurers could pass the risk on by buying federal reinsurance.