

# National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling

## INSURANCE AND SAFETY INCENTIVES

### Working Paper

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This working paper discusses the relationship between insurance and incentives for safety in the offshore oil production industry. The Oil Pollution Act of 1990,<sup>1</sup> supplemented by state liability laws and the common law of torts, makes offshore oil producers liable for a wide range of costs associated with oil spills, including both removal costs (containment and cleanup costs) and damages to property owners, natural resources, and those who suffer certain economic losses. Many producers acquire insurance to cover all or part of these potential liabilities. Other producers, primarily large integrated oil companies, self-insure against these liabilities (sometimes by establishing captive insurance subsidiaries).

Financial liability for the costs associated with oil spills provides an important incentive for participants in the offshore oil industry. At least in theory, firms faced with large potential liabilities should adopt all precautions that cost less, in expected value terms, than the liability they will incur if these precautions are not taken. Economists refer to this incentive as “cost internalization.” In the absence of legal intervention, oil spills would create a variety of social costs or externalities — such as cleanup costs and damages to natural resources, fisheries and tourist facilities — and these costs would be borne by others. Imposing liability for these costs on production firms forces them to factor these expected liabilities into their decision-making process, thereby “internalizing” these costs to the industry participants. Faced with such liability for oil spills, the producers, as profit-maximizing entities, should adopt all safety measures that cost less than the expected reduction in liabilities achieved by adopting these measures.

Reality is of course more complex, and a variety of problems can interfere with achieving complete cost internalization. Imperfect information about safety measures and the magnitude of potential liability is one obvious pitfall. The prospect of avoiding liability through bankruptcy is another. What is sometimes called the “principal-agent” problem is yet a third. The shareholders of oil production companies may want the firm to take all cost-effective steps to reduce potential liabilities. But in any large organization the incentives of agents may diverge from those of the principal. For example, employees of the firm may cut corners in order to generate short-term profits, in effect running a risk that a major disaster will not occur on their

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<sup>1</sup> 33 U.S.C. § 2701 *et seq.*

watch. These problems clearly suggest that the liability regime needs to be supplemented by other regulatory strategies.

This is where insurance may enter the picture. To the extent potential liabilities are covered by insurance provided by one or more third party insurance carriers, the insurance carriers also have an incentive to see that future liabilities are limited. The insurance carriers, like the oil producers, are profit-maximizing entities. Their profit is determined, roughly speaking, by the difference between premiums received and payments made to cover future liabilities. So the fewer the number of oil spills, and the less damage they cause when they do occur, the more money the insurance companies make insuring offshore oil facilities.

The introduction of insurance can, in principle, mitigate each of the three problems associated with the liability regime mentioned above. First, insurance companies will have a strong incentive to underwrite efforts to develop information about safety devices and procedures. They may do this by directly sponsoring research, joining with other insurance carriers to create safety institutes, lobbying for government-supported research, or creating a market for independent safety certification firms. Insurance carriers will also have a strong incentive to pass information about safety along to producers. They can disseminate safety information by direct communication with policyholders, by conditioning the extension of coverage on the adoption of particular devices or practices, or by periodic on-site inspections and reviews of operations with firm officials.

Second, insurance greatly reduces the risk that producers will escape liability through bankruptcy. A producer that acquires insurance internalizes the expected costs of oil spills, but the expected costs are incurred *ex ante* (before a spill occurs) through the payment of insurance premiums, rather than *ex post*, after an accident occurs. Premiums will vary by firm, and potentially by individual production facilities, reflecting the judgment of insurance carriers about the level of precautions that the firm or the facility has taken to minimize the risk of spills. And, of course, insurance provides greater assurance that compensation will be paid to victims and that the government will not have to pick up the tab for an oil spill. Had the Deepwater Horizon spill occurred on a lease held by a production company with fewer financial resources than BP, the responsible party would likely have declared bankruptcy. The costs would have been borne by Oil Spill Liability Trust Fund, and when that was exhausted, either by thousands of individual victims or federal taxpayers.

Third, insurance carriers can help monitor the behavior of agents of oil production companies. One way they do this is by adjusting premiums to reflect the record of accidents and safety violations associated with particular firms or production facilities. An employee tempted to cut corners may be dissuaded from doing so if this is likely to result in an increase in insurance premiums for his firm. In many instances, insurance carriers will become even more involved in monitoring the behavior of the insured and its agents, for example, by reviewing the operating plans of producers and meeting with company officials before insurance commitments are made. On occasion, carriers will even arrange for direct inspection of facilities before offering or renewing coverage. In general, the higher the potential liability of the insurance carrier, the more active it will become in screening and monitoring the behavior of the insured. In this fashion, insurance carriers act like a second line of defense in addition to government

inspectors in overseeing the precautions taken by production companies. This can be especially important if government inspectors are overwhelmed by the volume of work and cannot inspect individual production sites frequently.

Insurance is not a cost-free solution. Major oil companies will object to any mandate that they obtain commercial insurance, arguing that they have sufficient resources to self-insure, and that the existing liability regime already creates a strong incentive to gather information and monitor agents to assure compliance with cost-effective safety measures. Smaller producers and the American insurance brokers who sell insurance to them have expressed great concern that any significant increase in potential liability under the Oil Pollution Act could deprive them of access to insurance at affordable rates, and could drive them out of business. Any adjustment in the liability provisions of the Act must be carefully structured to meet these and other objections.

This working paper describes the liability provisions of the Oil Pollution Act, the role that insurance currently plays under the Act, and identifies options the Commission may wish to consider that would enhance the role of insurance in creating incentives for participants in the offshore oil industry to take safety precautions and develop better safety practices in the future.

## **I. The Oil Pollution Act**

The Oil Pollution Act, which was passed in response to the *Exxon Valdez* accident of 1989, imposes liability on vessels, ports, and offshore oil production facilities for the discharge of oil into the navigable waters or adjoining shoreline or the exclusive economic zone. The Oil Pollution Act has a significant impact on the market for insurance related to oil spills, and any reforms designed to modify the role that insurance plays in enhancing safety practices in the offshore oil industry would likely be effected either through amendments to the Act or changes in its implementing regulations. Consequently, it is important briefly to review the provisions of the Act that have the most direct influence on insurance coverage.

### **A. Strict Liability**

The Oil Pollution Act follows the Comprehensive Environmental Response Compensation and Liability Act (CERCLA or Superfund) in imposing what is effectively a form of strict liability on responsible parties for response costs and damages associated with oil spills. Under the Oil Pollution Act, as under CERCLA, the only complete defenses are act of God, act of war, or act of a third party not in a contractual relationship with the responsible party.<sup>2</sup> The Act also creates a contributory fault defense against any claimant for compensation who is guilty of gross negligence or willful misconduct.<sup>3</sup> Subject to these defenses, however, liability does not turn on whether the responsible party was negligent, reckless, or acted unreasonably, as would be characteristic of actions under a common law standard.<sup>4</sup>

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<sup>2</sup> *Id.* § 2703(a).

<sup>3</sup> *Id.* § 2703(b).

<sup>4</sup> Considerations of fault enter the picture indirectly, insofar as the cap on damages other than response costs is lifted if the incident was proximately caused by the responsible party's gross negligence or willful misconduct, by the responsible party's violation of a federal safety regulation, or if the responsible party failed to report the incident or cooperate with removal activities. *Id.* § 2704(c).

In principle, the Oil Pollution Act's strict liability standard should simplify the task of developing underwriting standards by the insurance industry. Potential insurance losses should be a function of the probability of an oil spill multiplied by the likely removal costs and damages associated with spills. There should be little need to account for the vagaries of the common law liability system, including the need to establish breach of a duty of care, causation, or possible defenses based on comparative negligence. Also, courts have held that punitive damages may not be recovered under the Act, further limiting the range of potential outcomes from litigation.<sup>5</sup> Nevertheless, perhaps because there have been few major spills since the enactment of the Oil Pollution Act, there are relatively few reported decisions interpreting the damages provisions of the Act. This may increase the uncertainty about the range of potential claims under the Act. The fact that damages claims can be filed directly against insurance carriers under the Act is also a departure from the common law and is cited as an additional source of uncertainty.<sup>6</sup>

## **B. Concentration of Responsibility**

The Oil Pollution Act departs from CERCLA in that it does not impose joint and several liability on multiple responsible parties for each incident.<sup>7</sup> The Act is written as if there will be one responsible party for each incident. For example, in the case of spills from offshore oil facilities, the responsible party is defined as "the lessee or permittee of the area in which the facility is located."<sup>8</sup> Nevertheless, the Act also expressly allows a responsible party to pursue contribution actions,<sup>9</sup> and says that responsible parties are subrogated to any rights, claims, or causes of action of a claimant who has received compensation under the Act.<sup>10</sup> So the Act clearly contemplates that there will be collateral litigation that will shift or apportion liability among multiple parties.

The CERCLA statute, in contrast, imposes joint and several liability on a variety of potentially responsible parties. As a consequence, CERCLA has been plagued, especially in its early years, by squabbling among potentially responsible parties over who would assume the burden of cleaning up waste sites. The emphasis in the Oil Pollution Act on identifying one responsible party for each incident was likely driven by a desire to avoid these sorts of problems. In particular, Congress appears to have concluded that the process of filing claims and obtaining damages for spills would be greatly expedited by having one responsible party for each incident. Singling out one responsible party also greatly simplifies the administrative process of certifying that producers have complied with the requirement of demonstrating financial responsibility. Not surprisingly, therefore, the Department of the Interior regulations provide that each covered offshore facility "must have a single designated applicant."<sup>11</sup>

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<sup>5</sup> *South Port Marine v. Gulf Oil*, 234 F.2d 58, 65 (1st Cir. 2000).

<sup>6</sup> *See* 33 U.S.C. § 2716(f).

<sup>7</sup> The House bill established joint and several liability for discharges of oil. The Conference Committee eliminated this provision.

<sup>8</sup> 33 U.S.C. § 2701(32)(C).

<sup>9</sup> *Id.* § 2709.

<sup>10</sup> *Id.* § 2715(a).

<sup>11</sup> 30 C.F.R. § 253.11.

The concentration of liabilities on a single party may, however, make it more difficult to obtain insurance coverage for liabilities under the Act. The typical offshore facility is a joint venture among several parties, has different operators for the mobile drilling unit and the well, and involves multiple contractors working on site. Designating one entity (or two in the case of both a vessel and a lease) as the responsible party and requiring that one party demonstrate financial responsibility for all potential removal costs and damages may put considerable strain on the resources of the designated responsible party. It may also run into resistance from insurance carriers given the risk of very large liabilities concentrated on a single firm.

The Act specifically permits responsible parties to secure “indemnification agreements.”<sup>12</sup> In principle, therefore, a responsible party can obtain contractual indemnification agreements from other parties participating in the venture or providing services as contractors. There is, of course, a risk that indemnification will not take place, either because of litigation over the terms of the indemnification agreements or if one or more co-participants or contractors is insolvent. Contractual sharing of liabilities also puts great emphasis on the responsible party as the exclusive monitor of the behavior of all co-participants and contractors. This may be too much to expect of one party that does not obtain all of the economic benefit from the venture. Providing a more explicit statutory basis for apportioning liability among all parties causally responsible for a spill — perhaps in a second stage contribution action — might make it easier for responsible parties to obtain larger amounts of insurance if damage caps are raised under the Act.

### **C. Damages Caps**

The Oil Pollution Act makes the responsible party strictly liable for “all removal costs” incurred by the United States, a state, or any other person acting in a manner consistent with the National Contingency Plan.<sup>13</sup> Removal costs are the costs of containment and removal of oil and other actions necessary to minimize damage to the public and wildlife from a spill.<sup>14</sup> There is no cap on liability for removal costs.

The responsible party is also strictly liable for “damages” caused by the spill. Eligible forms of damages include: (1) injury, loss, or destruction of natural resources (recoverable by a government trustee); (2) injury to or economic losses associated with destruction of real or personal property; (3) loss of subsistence use of natural resources without regard to ownership of those resources; (4) net loss of taxes and royalties incurred by federal, state, and local governments; (5) loss of profits or earnings due to damage to natural resources; and (6) costs of providing emergency public services.<sup>15</sup> Liability for damages in the event of an offshore oil spill is capped under the Act at \$75 million,<sup>16</sup> unless it can be shown that the responsible party was guilty of gross negligence or willful misconduct, violated a federal safety regulation, or failed to

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<sup>12</sup> 33 U.S.C. § 2710.

<sup>13</sup> *Id.* § 2702(b)(1).

<sup>14</sup> *Id.* § 2701(30).

<sup>15</sup> *Id.* § 2702(a)(2).

<sup>16</sup> *Id.* § 2704(a)(3).

report the incident or cooperate with removal activities, in which case there is no limit on damages liability.<sup>17</sup>

The \$75 million cap on damages almost certainly needs to be revisited in light of the Deepwater Horizon spill. BP has already paid claims that measure in the billions, rather than the millions, and has established a \$20 billion fund to pay damages claims. BP has, at least in effect if not officially, waived the \$75 million cap, but there is no guarantee that other producers in the future will agree to waive the cap. From the perspective of the cost-internalization rationale for a liability scheme, a damages cap that limits liability well below levels that may actually be incurred distorts the incentives of industry participants to adopt cost-effective safety precautions. Such a damages cap also represents a subsidy to the offshore oil industry, and it is not clear why offshore production should be favored with public subsidies relative to other sources of energy.

The damages cap is, of course, a feature of the Act that makes insurance carriers much more willing to write insurance for potential liabilities under the Act. The cap puts an upper limit on how much carriers may have to pay in the event of a catastrophic spill, which makes it easier to justify taking on these risks under typical underwriting standards. Indeed, the Act expressly exempts “guarantors” from any liability in excess of the financial responsibility commitment.<sup>18</sup> It is doubtful that insurance carriers are liable under other insurance policies for claims voluntarily paid by responsible parties in excess of the damages cap, unless it can be shown that these are legitimate settlements of claims that would otherwise be meritorious under state oil pollution statutes or the common law.

Any attempt to eliminate the damages cap or to raise the cap to significantly higher levels will undoubtedly be met with the argument that this will cause insurance carriers to drop oil pollution coverage, leading to an exodus of small and independent producers from the offshore industry. The counterargument is that oil producers should bear the social costs of their activities, and if those costs are too large or unpredictable to be insurable, then it is appropriate that these producers leave the industry. These arguments turn on predictions about the future and are inherently speculative. Given the uncertain effects of eliminating the damages cap, it may be prudent to phase in any increase in the damages cap over time, in order to allow the insurance industry to adjust to the new level of exposure and allow Congress to re-assess the claims of limited capacity in the insurance industry in light of actual experience.

#### **D. Financial Responsibility**

The Oil Pollution Act also requires responsible parties to “establish and maintain evidence of financial responsibility,” understood to mean financial resources sufficient to meet potential liabilities.<sup>19</sup> In the case of offshore facilities, financial responsibility ranges from \$35 million to \$150 million, but in no case is greater than \$150 million.<sup>20</sup> Neither the Act nor the

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<sup>17</sup> *Id.* § 2704(c).

<sup>18</sup> *Id.* § 2716(g).

<sup>19</sup> *Id.* § 2716.

<sup>20</sup> The Act provides that responsible parties show financial responsibility of at least \$35 million. *Id.* § 2716(c)(B)(i). The Secretary of Interior has by regulation increased this to \$150 million. (The Oil Pollution Act confers regulatory authority over offshore facilities on “the President.” The President by Executive Order has delegated this authority

regulations specifically requires a certificate of financial responsibility as a condition of obtaining an offshore lease, although it appears that everyone assumes this is required.<sup>21</sup> The only sanction mentioned in the Act for failing to “establish and maintain” financial responsibility is a civil penalty.<sup>22</sup>

The amount of financial responsibility that a responsible party must establish is determined by taking the estimated uncontrolled flow volume for the first 24 hours as set forth in the response plan and multiplying by four.<sup>23</sup> In other words, the regulations assume that no spill on an offshore facility will last longer than four days. The resulting figure is the coverage offshore facility’s “worst case oil-spill discharge volume.”<sup>24</sup> For example, if the worst case oil-spill discharge is more than 1,000 but not more than 35,000 barrels, the financial responsibility requirement is \$35 million. For any volume greater than 105,000 barrels, the required financial responsibility is \$150 million. This ceiling is imposed by the statute and cannot be adjusted by regulation.

The financial responsibility requirement provides the most direct linkage between the Oil Pollution Act and insurance. The Act provides that financial responsibility may be “established by any one, or by any combination, of the following methods” if determined by the Secretary of the Interior to be acceptable: “evidence of insurance, surety bond, guarantee, letter of credit, qualification as a self-insurer, or other evidence of financial responsibility.”<sup>25</sup> The Act confers broad authority on the Secretary to “specify policy or other contractual terms, conditions, or defenses which are necessary, or which are unacceptable, in establishing evidence of financial responsibility to effectuate the purposes of this Act.”<sup>26</sup>

Pursuant to this authority, the Secretary of the Interior has issued regulations that spell out in detail what must be done to establish financial responsibility. If a responsible party seeks to self insure, it must submit audited financial statements showing that it has assets net of liabilities equal to at least ten times the required amount of financial responsibility.<sup>27</sup> If a responsible party seeks to establish financial responsibility by indemnification agreement, only a parent corporation or an affiliate of the responsible party may act as an indemnifier.<sup>28</sup> The regulations appear to contemplate that the indemnifier must show that it satisfies the test for self-insurance.<sup>29</sup> In effect, then, indemnification is a variant on self-insurance.

If a responsible party wishes to demonstrate financial responsibility by obtaining insurance, it must submit a certificate of insurance.<sup>30</sup> The certificate must be from one or more

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to the Secretary of the Interior. *See* Exec. Order No. 12777, 56 Fed. Reg. 54757 (Oct. 18, 1991).) No further increase is possible under the current terms of the Act. 33 U.S.C. § 2716(c)(C).

<sup>21</sup> In contrast, the Act authorizes detention and seizure of any vessel operating in the navigable waters of the United States without evidence of financial responsibility. *Id.* § 2716(b)(1) & (2).

<sup>22</sup> *Id.* § 2716(a).

<sup>23</sup> 30 C.F.R. § 253.14(a)(1).

<sup>24</sup> *Id.* § 253.13(b).

<sup>25</sup> 33 U.S.C. § 2716(e).

<sup>26</sup> *Id.* § 2716(e).

<sup>27</sup> 30 C.F.R. § 253.25.

<sup>28</sup> *Id.* § 253.30.

<sup>29</sup> *See id.* § 253.30(c)(requiring the indemnifier to submit evidence under the net worth test for self-insurance).

<sup>30</sup> *See id.* § 253.20.

insurance carriers each of which have received “Secure” ratings from a recognized insurance rating service.<sup>31</sup> Coverage may be divided into “layers,” with a different insurance certificate for each layer.<sup>32</sup> Each layer is defined in terms of the volume of oil spilled. Thus, for example, one certificate can apply to the first 35,000 barrels spilled, another for the next 35,000 barrels, and so forth.<sup>33</sup> The regulations limit the number of layers to four in the case of a facility located on the Outer Continental Shelf (five for other offshore facilities).<sup>34</sup> Multiple insurance carriers may participate in providing coverage for any layer, and their participation must be described in terms of a percentage of a whole layer.<sup>35</sup> Deductibles are permissible, but if multiple certificates are used, the deductible may apply only to the first (base) layer.<sup>36</sup> To qualify for a deductible, the firm must satisfy the conditions for self-insurance or indemnification for the amount of the deductible.<sup>37</sup>

For the same reasons that the Oil Pollution Act’s \$75 million liability cap may need to be increased, the financial responsibility limits, especially the statutory maximum of \$150 million, also needs to be revisited in light of the Deepwater Horizon spill. As in the case of the damages cap, it may be prudent to consider phasing in any increase in financial responsibility requirements over time, in order to assess the capacity of the insurance industry to respond to higher responsibility requirements.

## **II. How Lessees Establish Financial Responsibility Under the Oil Pollution Act**

As previously noted, the Oil Pollution Act and the implementing regulations allow responsible parties to establish financial responsibility in a variety of ways, including self-insurance, indemnification, conventional third-party insurance, and surety bonds. According to Bureau of Ocean Energy Management, Regulation and Enforcement (formerly Minerals Management Service) information, there are currently 8,400 covered offshore facilities for which financial responsibility has been established. The collective amount of financial responsibility established for these sites is \$10.6 billion. Of this amount, approximately 58% has been established through either a demonstration of self-insurance or by indemnification agreement; 42% has been established through one or more certificates of insurance. (Surety bonds are very rarely used.) Conventional insurance therefore supplies about \$4.4 billion of the demonstrated financial responsibility required by the Oil Pollution Act and implementing regulations for offshore facilities. This, however, is only a minority of the total amount, if we assume that nearly all the indemnification agreements are ultimately a form of self-insurance.

The insurance picture is complicated by the fact that although the Oil Pollution Act requires a demonstration of financial responsibility for *each facility*, most insurance that applies to potential liabilities associated with offshore oil facilities applies to *production companies*. Oil production companies that acquire commercial insurance typically purchase a variety of types of insurance coverage, each with its own standardized ISO form. The most common forms are

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<sup>31</sup> *Id.* § 253.29(a).

<sup>32</sup> *Id.* § 253.29 (c).

<sup>33</sup> *See id.* § 253.15.

<sup>34</sup> *Id.*

<sup>35</sup> *Id.* § 253.29 (c)(4).

<sup>36</sup> *Id.* § 253.29(c)(5).

<sup>37</sup> *Id.*

“Offshore Physical Damage” coverage, which covers direct physical loss of or damage to offshore facilities; “Operator’s Extra Expense” (OEE) coverage, which covers various expenses associated with accidents, including third-party bodily injury claims, third-party claims for damage to and loss of property, the costs of cleanup, and legal defense expenses; “Excess Liability Insurance” (ELI) coverage, which covers various types of third-party claims in excess of OEE coverage, and is typically purchased in layers that add up to a certain aggregate level of protection; “Business Interruption” (BI) coverage, which covers loss of income from accidents; and “Workers Compensation/Employers’ Liability” coverage, which covers claims arising out of employee injuries or deaths.

The most directly relevant type of coverage is Excess Liability Insurance. The standard ISO form for this coverage typically *excludes* liability for pollution damage. This exclusion can be modified, however, by purchasing a specific “pollution endorsement” that overrides the exclusion for an additional premium. Such Excess Liability Insurance pollution endorsements, along with General Liability endorsements, are the primary vehicles for obtaining a certificate of insurance that can be used to satisfy the financial responsibility requirement under the Oil Pollution Act.

Given that the Oil Pollution Act requires that financial responsibility be demonstrated for each offshore facility, it is not entirely clear why insurance for offshore oil spills is organized around production companies rather than facilities. It may be that Oil Pollution Act liability, perhaps because of the relative infrequency of large spills since 1990, has not loomed large enough relative to more conventional losses like physical damage to facilities and injury to workers to justify a shift in conventional insurance practices. In any event, coverage for Oil Pollution Act liabilities is currently regarded as an add-on to conventional coverage acquired by production companies that applies to a variety of losses.

One large insurance company, Munich Re, has suggested that shifting from company-based to a facility-based insurance could result in a significant expansion of available insurance capacity, and would allow liability limits to rise to \$10-20 billion per facility. The argument is based on the assumption that shifting insurance coverage from production companies to individual facilities would allow much greater diversification of risks by each carrier. For example, if a production company has 100 offshore oil facilities in U.S. waters, an individual insurance company could agree to write insurance for a select portfolio of 10 individual facilities in different areas, without having to commit to insuring some portion of all 100. This would then be combined with similar portfolios of facilities from other companies, perhaps operating in different parts of the world. Munich Re assumes there would be extensive syndication of coverage for each facility among multiple carriers, and that the risks associated with each facility would be reduced by a more rigorous safety certification process as part of the licensing of offshore facilities. Munich Re’s optimism about the ability of the insurance industry to expand existing insurance coverage is in sharp contrast to the pessimism of insurance brokers, who assume a continuation of the existing company-based insurance model.

### **III. Potential Reforms to Expand Insurance Coverage**

The Commission may wish to consider several potential reforms to the Oil Pollution Act regime as it bears on the role that insurance plays in promoting safety.

#### **A. Compulsory Commercial Insurance**

One potential reform would be to require that all responsible parties in the offshore oil industry acquire commercial insurance covering a significant portion of their financial responsibility obligation. Compulsory insurance is hardly unheard of in the oil industry. The International Convention on Civil Liability for Oil Pollution Damage, adopted in 1969 and ratified by the United States, makes insurance compulsory for oil tankers operating in international waters. The Oil Pollution Act's financial responsibility requirement can also be seen as a type of compulsory insurance. The proposal here would simply eliminate self-insurance as an acceptable form of Oil Pollution Act insurance. This would not affect smaller operators and independent operators, who generally obtain commercial insurance as is. It would primarily affect large integrated oil companies who are more likely to self-insure.

Requiring commercial insurance for all responsible parties would have several advantages. In terms of promoting safety, it would expand the role of another market actor having a strong incentive to promote safety — commercial insurance carriers. If liabilities are borne by insurance carriers, they will have a strong incentive to promote new safety techniques and methods, either by investing directly in research or by encouraging other institutions (including the government) to engage in such research. Insurance carriers would also have an incentive to communicate these developments to insured parties, and might insist on certification of operators by independent firms devoted to identifying best safety practices as well. And they might provide a vehicle for developing additional collective response mechanisms, along the lines of the Marine Well Containment Company recently created by four major oil companies.

For firms that now self-insure, compulsory commercial insurance would introduce a third-party monitor, which would oversee the precautions these firms take to prevent spills and reduce the impact of spills. This may help prevent principal-agent problems that can undermine safety efforts in large integrated oil firms. A firm that self-insures may encounter difficulty justifying precautionary measures to its accounting department based on internal calculations of expected liabilities. But a firm faced with higher insurance premiums based on loss experience or failure to adopt particular safety measures should find it easier to justify improved safety measures.

Compulsory commercial insurance would also screen out companies with poor safety records, since they would be faced with very high premiums or would be denied coverage altogether. At a minimum, requiring commercial insurance would act as a check against rogue firms or scofflaws entering the industry, since they would presumably be denied insurance coverage.

There would be other advantages as well. Mandating commercial insurance would eliminate potential concerns about adverse selection. If all operators must buy insurance, then

there is no danger that only the riskiest operators will purchase insurance. Eliminating this factor should lower premiums for all firms. Requiring commercial insurance would also eliminate much of the risk of bankruptcy. This would not only eliminate a possible shortfall in liability, which might undermine the incentives to take adequate precautions, but it would also provide a much stronger guarantee that persons injured because of a spill will be compensated, and that taxpayers will not be stuck with paying for large oil spills.

Finally, mandating insurance would create greater pooling of risks, which should facilitate the expansion of insurance capacity. At least over the medium- to long-run, compulsory insurance would permit a greater diversification of risks, since more facilities would be included in the universe of insured entities. Compulsory insurance would also generate more premium dollars. Larger premiums spread over more risks should induce more firms and investors to enter the offshore oil insurance market. If existing commercial insurance carriers are unable to develop adequate capacity to serve the entire industry, then production companies could form their own insurance entity to supplement the capacity of existing carriers.

There are a number of counter-arguments to making commercial insurance compulsory. Major oil companies will argue that they already have adequate incentives to prevent oil spills, and forcing them to purchase insurance from independent carriers would simply be a deadweight cost having no commensurable social benefit. Major oil companies also typically operate under established brand names in the retail market, and the reputational costs of being associated with a major oil spill will act as a further deterrent against risking an oil spill.

Smaller producers will argue that the insurance industry lacks the capacity to provide additional insurance coverage. Smaller producers will therefore either be priced out of the market by high insurance rates, or will simply not be able to obtain insurance, and thus will not be able to demonstrate financial responsibility as required by the Oil Pollution Act.

A further concern relates to the trend in the insurance industry toward syndicating coverage among multiple insurance carriers, which would almost certainly be accelerated by any compulsory insurance requirement. This is most commonly done through re-insurance agreements. Syndication is desirable insofar as it promotes diversification of risks and expands the capacity of the insurance industry to provide coverage. But it may dilute the incentives for any single insurance carrier to engage in careful underwriting of risks and to monitor the behavior or inspect the facilities of insured operators. Thus, syndication may undermine one of the potential benefits of insurance that makes it attractive as a method of backstopping the safety behavior of oil producers.

Finally, there is the concern that any mandate which would require insurance coverage for 100 percent of the costs associated with future spills might dull the incentives for producers themselves to take appropriate precautions. It is a familiar principle in the insurance industry that insured parties under policies with no deductibles or co-payment requirements are more likely to incur claims than policyholders who bear a portion of the costs themselves. Thus, maintaining some degree of self-insurance, through deductibles or co-pay requirements, might be desirable as a way of maintaining incentives for producers to give close and continuing attention

to safety measures. Allowing (or requiring) deductibles and co-payment requirements would also, of course, lower insurance costs.

The language of the Oil Pollution Act would appear to be broad enough to allow a compulsory commercial insurance requirement to be imposed by regulation. The Act confers authority on the President (delegated to the Secretary of Interior) to “determine” which methods of demonstrating financial responsibility are “acceptable.”<sup>38</sup> It goes on to say: “In promulgating requirements under this section . . . the President [who has delegated this authority to the Secretary of Interior], as appropriate, may specify policy or other contractual terms, conditions, or defenses which are necessary, or which are unacceptable, in establishing evidence of financial responsibility to effectuate the purposes of this Act.”<sup>39</sup> These grants of authority would appear to be sufficiently capacious to allow the Department of the Interior to require commercial insurance as a condition of establishing and maintaining financial responsibility. The language would also appear to allow the Department to impose conditions on such insurance policies designed to assure that insurance carriers engage in active monitoring and other risk-reduction functions associated with insurance.

## **B. Raising Liability and Financial Responsibility Caps**

There is a large gap between the Oil Pollution Act’s damages cap (\$75 million) coupled with the maximum financial responsibility requirement (\$150 million) and the liabilities already incurred in the Deepwater Horizon oil spill. This gap means there will inevitably be pressure to adjust these limits upwards. Any upward adjustment raises questions about the capacity of the insurance industry to meet higher liability and financial responsibility limits. If liability and responsibility limits are raised dramatically, and self-insurance continues to be an option, then the effect of such a change might be to drive smaller and independent producers out of the market, leaving only the large integrated oil producers that have the capacity to self insure.

Although the immediate effect of any increase in liability limits and financial responsibility requirements would test the capacity of the insurance industry, it is possible that the long-run effects of such a change might stimulate an increase in insurance capacity. This might happen in part because larger potential liabilities under the Oil Pollution Act could induce a shift in the insurance industry from writing insurance for companies to writing insurance for particular facilities. As described above, the insurance industry has traditionally provided coverage to companies, whereas the Oil Pollution Act imposes liability on particular facilities. If potential liabilities for facilities were to rise, this would presumably cause the insurance industry to focus more on facility-specific risk and insurance. The industry might respond by offering more policies specifically designed to cover individual facilities. Since there are many more facilities than firms, the shift to facilities-based coverage would permit greater diversification of risks by carriers, which would in turn induce greater insurance capacity. This would be even more likely to happen if commercial insurance coverage were made compulsory. Making insurance compulsory would bring all facilities that currently self-insure into the mix, which would magnify the diversification of risk even more.

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<sup>38</sup> 33 U.S.C. § 2716(e).

<sup>39</sup> *Id.*

None of this can be guaranteed, of course. Since it would be difficult (and probably unwise) to legislate the structure of commercial insurance policies, this provides another reason to phase in any increase in liability and financial responsibility caps over time.

### **C. Separating Financial Liability From Emergency Response Liability**

Another way to provide greater diversification of risks in the offshore oil industry would be to disaggregate liability for oil spills to a greater degree than under the Oil Pollution Act. As discussed in Section I, the Act designates a single entity as the “responsible party” for an oil spill. This makes it easier to identify the party who is liable for response costs, and facilitates processing claims for damages by persons injured by a spill. This concentration of liability, however, comes at a cost. As the Deepwater Horizon spill illustrates, there will likely be numerous actors who bear some causal responsibility for a spill. The Oil Pollution Act provides no guidance about how liability is to be apportioned among these multiple actors, other than to provide for federal court jurisdiction over actions for “contribution” by a responsible party against other entities. This statutory design — concentration of responsibility on a single entity combined with vagueness about ultimate apportionment of liability — may not be the best structure for encouraging the expansion of insurance capacity. It might be preferable to deal with *emergency response* and *ultimate financial liability* separately, and in so doing provide a structure for determining ultimate financial responsibility that promotes greater diversification of risk.

Let us turn first to question of ultimate financial responsibility. Under current law, the responsible party is made explicitly liable for response costs and damages (subject to the \$75 million cap), and the apportionment of this liability among all participating firms is determined by indemnification agreements and contribution actions in a manner that is not regulated by the statute and is difficult to predict in advance. In contrast, consider a regime in which all entities bearing some causal responsibility for an oil spill were made explicitly liable for their proportionate share of the costs of the spill (as determined *ex post* by a court), and all such entities were required to demonstrate financial responsibility for such liability, perhaps by obtaining compulsory commercial insurance. Such an alternative regime would further disaggregate the risks associated with oil spills. This in turn would allow for greater pooling and diversification of risks among insurance carriers, and would attract increased insurance capacity.

To illustrate, suppose a particular lease is owned by three oil companies as a joint venture, the offshore oil platform is owned and operated by yet another company, and the joint owners retain three independent contractors to assist with the drilling. Under the current Oil Pollution Act, one of the joint owners must be designated as the responsible party for the facility. Concentrating all liability on this one entity magnifies the risk of insuring the facility. In contrast, if liability were apportioned among the various participating entities in accordance with a determination of their relative share of causal responsibility, this would likely result in the liability being sliced up into smaller shares. For example, the joint owners might be held to be responsible for 60 percent, divided 30-15-15; the platform operator for 5 percent; and the three contractors for 35 percent, divided 20-10-5. This would disburse liability among seven different entities, none responsible for more than 30 percent of the costs. The risks associated with insuring any one entity would be reduced, greater diversification of risk would be possible given

the larger number of entities in the responsibility pool, and insurance capacity would likely be enhanced.

The primary mechanism for achieving this disaggregation of liability would be to borrow a page from CERCLA, and make a large number of entities — such as owners of leases or permits, owners or operators and vessels, and primary contractors working on a facility — responsible parties. As under CERCLA (and the Oil Pollution Act) each responsible party would be strictly liable for removal costs and damages associated with a spill (subject to limited defenses). In contrast to CERCLA, however, these entities would not be made jointly and severally liable for all removal costs and damages associated with a spill. Joint and several liability allows all of the costs and damages associated with a release to be imposed on a single responsible party. This has been shown to create considerable uncertainty and litigation costs and to slow down the pace of remediation of hazardous waste sites. A better approach might be to make each responsible party strictly liable for that portion of costs for which each party has been determined to be causally responsible. The apportionment of causal responsibility would be determined in a single judicial proceeding in federal court after the fact. This would be analogous to a contribution action, but the rule of decision would be based on strict liability and causal apportionment, and would be spelled out in legislation rather than left to develop as a matter of common law adjudication.

There would be several benefits of creating such an explicit statutory apportionment of ultimate liability. First, it would provide a more secure set of incentives for all participating entities to observe optimal safety measures.<sup>40</sup> Currently, the incentives of participants other than the responsible party — including other joint venturers and contractors — are dependent on the terms of indemnification agreements and the vagaries of contribution litigation. A causal apportionment regime would put all participants on notice that they will be held accountable for any removal costs and damages for which they are responsible.

Second, causal apportionment would significantly reduce the risk of participating parties evading responsibility for spills through bankruptcy. Partly this would be due to the disaggregation of liability, making it easier for any entity to absorb the cost. Partly it would be due to the purchase of insurance by a larger set of entities for the express purpose of covering Oil Pollution Act liabilities.

Third, specifying by statute that ultimate financial responsibility will be based on causal apportionment in a single consolidated proceeding should reduce litigation costs relative to the current regime, which provides no guidance about the applicable principle for determining the ultimate apportionment of costs.

Fourth, and most relevant for present purposes, causal apportionment pursuant to statute would help diversify the insurance risks associated with Oil Pollution Act liability. To be sure, some of the potential liability associated with indemnification agreements and contribution

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<sup>40</sup> For further development of the argument that apportioning liability according to causation creates superior incentive effects, see Alexander Stremizer and Avraham D. Tabbach, *Insolvency and Biased Standards — The Case for Proportional Liability*, Yale Economics Department Working Paper No. 75R, Yale Law and Economics Research Paper No. 397 (2009) (and sources cited).

actions is currently covered by various types of insurance. But the coverage would fall under various types of policies established on a company-basis, is subject to a variety of exclusions, and is almost certainly incomplete. Expanding the set of responsible parties that must show financial responsibility (meaning typically or perhaps mandatorily showing that they have obtained commercial insurance coverage) would diversify the risk associated with Oil Pollution Act liability, would help develop an insurance market focused on facilities rather than companies, and should expand insurance capacity.

There are a variety of ways in which such a statutory apportionment of ultimate liability could be combined with concentration of responsibility in order to assure an expeditious response to an emergency. One would be to make an agency of the federal government, and the Oil Spill Liability Trust Fund, responsible for the initial response costs and emergency payments to victims of a spill. The government and the Trust Fund would then be reimbursed — ideally in full — based on an apportionment of liability as established in the *ex post* causal apportionment proceeding. Another, which would track more closely the current Act, would have the firms involved in any particular offshore project designate one of their number the “primary responsible party,” and make that party responsible for the initial response and emergency payments to victims. The primary responsible party would then be reimbursed by the “ultimate responsible parties” in an *ex post* causal apportionment proceeding. A variation on this would have some other entity, such as a federal court, determine on an expedited basis which of the involved firms would serve as the primary responsible party for any given incident above a certain magnitude.

The central point is that concentration of responsibility for emergency response need not be linked to apportionment of responsibility for purposes of determining ultimate financial responsibility for a spill. Greater clarity about the decisional rules and procedures for determining the ultimate allocation of liability could have beneficial effects, not just in reducing litigation costs, but also in promoting safety by all firms participating in the offshore market and achieving greater diversification of risks and hence inducing additional insurance capacity.

#### **D. Safety Certification**

Finally, although detailed consideration of the regulatory framework for overseeing safety in the offshore oil market is beyond the scope of this paper, it is important to note that enhancements in the regulatory structure will have a major impact on the insurance market. I assume that the future regulatory regime will include an enhanced certification process, in which lessees, operators of drilling platforms, and contractors will be required to demonstrate compliance with state-of-the-art risk management technology and operating methods. The more effective this certification process — and the greater the general level of confidence that it will reduce the incidence and severity of spills — then the more likely it will become that increased insurance capacity will be developed to cover higher levels of liability and financial responsibility. The proposition is straightforward: Reduced risk means greater willingness to provide insurance against risk.

To this end, it would be desirable for those responsible for designing a new system of safety certification to consult closely with the insurance industry about the proper structure of the

new system. Both federal regulators and insurance carriers have a strong interest in developing a safety certification system that minimizes the incidence and severity of future spills, making it appropriate to draw upon the insights of the insurance industry in designing an enhanced certification system.

Munich Re, for example, has suggested that certification should be undertaken by private engineering firms that specialize in risk management. The concept might be that federal regulators would certify the certifiers, perhaps engaging in spot checks to assure that the certifiers are performing properly.<sup>41</sup> Insurance companies would then act as a second screen, specifying from among the list of certified certifiers those firms whose approval would be required as a condition of obtaining insurance from that carrier. This would provide a double check on the bona fides of certification firms, and would also create competition among certification firms for employment by insurance carriers.

In the past, insurance firms have performed safety audits and inspections using their own personnel (or some cases, outside contractors) as part of the underwriting process. Given the strong trend in the insurance industry toward syndication, whereby multiple insurance firms provide a percentage of coverage for major risks, the incentive of any particular insurance firm to perform these functions is diluted. The trend toward syndication will undoubtedly be magnified by any increase in liability under the Oil Pollution Act (and by any requirement for compulsory insurance). Thus, it is likely to be increasingly important in the future to develop a specialized safety certification industry than can supplement the in house risk assessment function of insurance carriers. This is another reason for close consultation with the insurance industry in developing an enhanced safety certification system.

T.W.M.

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<sup>41</sup> The Federal Aviation Administration utilizes an analogous system in overseeing compliance by air carriers with its regulations of aircraft safety. See *United States v. S.A. Empresa De Viaco Aerea Rio Grandense (Varig Airlines)*, 467 U.S. 797 (1984).