Vanderbilt Law Review

Volume 64 | Issue 6

Article 9

11-2011

Should BP Be Liable for Economic Losses Due to the Moratorium on Oil Drilling Imposed After the "Deepwater Horizon" Accident?

Steven Shavell

Follow this and additional works at: https://scholarship.law.vanderbilt.edu/vlr Part of the <u>Disaster Law Commons</u>

Recommended Citation

Steven Shavell, Should BP Be Liable for Economic Losses Due to the Moratorium on Oil Drilling Imposed After the "Deepwater Horizon" Accident?, 64 *Vanderbilt Law Review* 1993 (2019) Available at: https://scholarship.law.vanderbilt.edu/vlr/vol64/iss6/9

This Article is brought to you for free and open access by Scholarship@Vanderbilt Law. It has been accepted for inclusion in Vanderbilt Law Review by an authorized editor of Scholarship@Vanderbilt Law. For more information, please contact mark.j.williams@vanderbilt.edu.

Should BP Be Liable for Economic Losses Due to the Moratorium on Oil Drilling Imposed After the *Deepwater Horizon* Accident?

Steven Shavell 64 Vand. L. Rev. 1995 (2011)

In the aftermath of the Deepwater Horizon accident and the BP oil spill, the government imposed a moratorium on deepwater oil drilling in the Gulf of Mexico. The issue addressed here is whether, on grounds of policy, BP should be held responsible for moratoriumrelated economic losses. The answer that is developed is no. The reason, in essence, is that, although the spill caused the moratorium, the moratorium might be viewed as a socially beneficial event on net because its purpose was to avert a significant danger. ***

Should BP Be Liable for Economic Losses Due to the Moratorium on Oil Drilling Imposed After the *Deepwater Horizon* Accident?

Steven Shavell*

I.	THE	THE MORATORIUM ON OIL DRILLING 1997	
II.	LEGAL RESPONSIBILITY FOR		
	MORATORIUM-RELATED LOSSES 1999		9
III.	THE ECONOMIC POLICY ARGUMENT AGAINST		
	IMPOSITION OF LIABILITY FOR		
	MORATORIUM-RELATED LOSSES		1
	<i>A</i> .	The General Economic Basis for	
		Setting Damages Equal to Harm 200	1
	В.	The Benefits and Costs of a Socially	
		Desirable Moratorium	3
	С.	Why Damages for an Accident Should	
		Not Include Moratorium-Caused Losses	
		if the Moratorium is Socially Desirable 2004	4
	<i>D</i> .	Why Damages Should Not Include	
		Moratorium-Caused Losses if the	
		Moratorium is Socially Undesirable	5
IV.	CONCLUSION		6

On April 20, 2010, a catastrophic explosion and fire occurred aboard an oil-drilling platform, the *Deepwater Horizon*, which was leased by BP and stationed approximately fifty miles off the coast of Louisiana, where the ocean depth is nearly five thousand feet.¹ The

^{*} Samuel R. Rosenthal Professor of Law and Economics. I thank John C.P. Goldberg, A. Mitchell Polinsky, David Rosenberg, and W. Kip Viscusi for comments on this Article, Rajiv Mohan and Christopher Quinlan, for research assistance, and the John M. Olin Center for Law, Economics, and Business at Harvard Law School for research support.

^{1.} Ben Casselman, Russell Gold & Angel Gonzalez, Blast Jolts Oil World – Gulf Rig Explodes, 11 Missing; Potential Blow to Industry, WALLST. J., Apr. 22, 2010, at A1; Campbell

Deepwater Horizon accident resulted in the largest oil spill in American history.² Stating his concern about the dangers of future oil spills from deepwater drilling, President Obama announced a wideranging moratorium on this practice on May 27, 2010.³ As will be described, the moratorium has had significant economic repercussions for the Gulf states.

Because the Deepwater Horizon spill ("the BP spill") led to the moratorium and to economic losses, the question arises whether, as a matter of policy, BP (and possibly other firms involved in the spill) should pay for these losses. The Obama Administration apparently believes that the answer to this question is yes. Former White House Press Secretary Robert Gibbs said that "the moratorium is a result of the accident that BP caused" and therefore that demands by deepwater-drilling rig workers for lost wages "are claims that BP should pay."4 The answer to the policy question is also of interest because legal arguments exist that could, in principle, result in BP owing damages for some moratorium-related losses. However, BP asserted that it faces no legal obligation to compensate parties for moratorium-caused losses. When BP reached an agreement with President Obama to establish a \$20 billion fund to compensate victims of spill-related losses, it claimed that it was not legally responsible for moratorium-associated losses.⁵ And when BP agreed to contribute to a separate \$100 million fund to compensate drilling rig workers for moratorium-related wage losses, it averred that it was doing so only as a voluntary act.⁶

The main point developed here is that it is undesirable on grounds of social policy⁷ to hold BP responsible for moratorium-related losses. The nub of the argument is readily summarized. Although BP may be said to have caused the moratorium—I assume that had the spill not occurred, there would have been no moratorium—the

6. Id.

Robertson, 11 Remain Missing After Oil Rig Explodes off Louisiana; 17 Are Hurt, N.Y. TIMES, Apr. 22, 2010, at A13.

^{2.} Leslie Kaufman, Gulf Studies Yield More Than Damage, N.Y. TIMES, Apr. 12, 2011, at D1.

^{3.} Bruce Alpert & Rebecca Mowbray, Obama Suspends Drilling at 33 Wells; Halt Allows Time for Deepwater Safety Study, TIMES-PICAYUNE (New Orleans), May 28, 2010, at A1.

^{4.} Press Briefing, Robert Gibbs, Press Sec'y, Office of the Press Sec'y, The White House (June 9, 2010), *available at* http://www.whitehouse.gov/the-press-office/press-briefing-press-secretary-robert-gibbs-6910.

^{5.} Scott Wilson & Joel Achenbach, BP Agrees to \$20 Billion Fund for Gulf Claims, WASH. POST, June 17, 2010, at A1.

^{7.} By social policy, I refer mainly to the two standard instrumental objectives of tort law: deterrence of risky behavior, and compensation of victims of harm. I focus on the deterrence objective, see infra Part III, but also comment on the compensation objective. See infra Part IV.

moratorium might be viewed as socially beneficial. In particular, the stated justification for the moratorium was that it would reduce the danger of additional oil spills, a danger that seemed more serious in light of the BP spill. If this risk-reduction benefit from the moratorium outweighed the moratorium-related losses, then the moratorium should be seen as socially desirable on balance. Under that assumption, there is no affirmative policy basis for holding BP liable for the moratorium-associated losses. Moreover, holding a party liable for causing a socially desirable outcome that arises as a byproduct of an accident could have a socially perverse effect. Notably, it could depress incentives to engage in activities, such as oil drilling, that are socially good on average, even though they sometimes result in accidents.

Suppose, though, that the moratorium was ill-advised because its benefit was less than the loss it engendered. Under this alternative assumption, the conclusion is the same: BP should not be liable for moratorium losses. But the reason is different—namely, to motivate the government not to err in declaring moratoriums.

This Article is organized as follows. Part I describes the moratorium on oil drilling and its economic importance. Part II addresses the possible liability of BP for moratorium-related losses. Part III develops the basic policy argument of the Article. Part IV discusses and interprets the policy argument and then concludes.

I. THE MORATORIUM ON OIL DRILLING

As noted, the Obama Administration announced a moratorium on deepwater drilling following the accident at the *Deepwater Horizon* platform and the realization that oil was escaping at an extraordinary rate from the wellhead into the waters of the Gulf of Mexico. Specifically, after President Obama's declaration of a moratorium, Secretary of the Interior Ken Salazar issued an order, on May 30, 2010, halting drilling operations on new deepwater wells and stopping consideration of permits for deepwater wells for a period of six months (although he allowed production on existing deepwater wells to continue).⁸ However, a supplier of services to offshore oil- and gas-

8. See Press Release, U.S. Dep't of the Interior, Interior Issues Directive to Guide Safe, Six-Month Moratorium on Deepwater Drilling (May 30, 2010), available at http://www.doi.gov/news/pressreleases/Interior-Issues-Directive-to-Guide-Safe-Six-Month-Moratorium-on-Deepwater-Drilling.cfm (describing Secretary Salazar's order). This moratorium was actually a broadening of an earlier moratorium that applied only to the granting of certain new permits for drilling. See Peter Baker, Obama Extends Moratorium; Agency Chief Resigns, N.Y. TIMES, May 28, 2010, http://www.nytimes.com/2010/05/28/us/28drill.html (characterizing drilling operators successfully challenged the legality of the moratorium in federal court. On June 22, 2010, U.S. District Judge Martin L.C. Feldman granted a preliminary injunction against enforcement of the moratorium.⁹ Judge Feldman based his decision on the view that the government failed to offer specific evidence of the need for the general moratorium and that the moratorium would result in irreparable economic harm to the plaintiffs and to the Gulf state economies.¹⁰ After Judge Feldman rejected the moratorium, Secretary Salazar changed the moratorium's terms. On July 12, 2010, he announced a revised, and in some respects slightly less general, order permitting drilling to continue on specific deepwater wells, provided that the drillers adhered to adjusted and more rigorous safety rules.¹¹ On October 12, 2010, the Administration ended the revised moratorium, allowing drilling at all new wells, but subject to enhanced safety rules.¹²

The purpose of the moratorium was to prevent accidents from deepwater drilling until the risks of these operations could be better assessed and the appropriate steps to remedy them could be identified and undertaken.¹³ The government presumably viewed the BP spill as

12. Press Release, Dep't of the Interior, Salazar: Deepwater Drilling May Resume for Operators Who Clear Higher Bar for Safety, Environmental Protection (Oct. 12, 2010), available at http://www.doi.gov/news/pressreleases/Salazar-Deepwater-Drilling-May-Resume-for-Operators-Who-Clear-Higher-Bar-for-Safety-Environmental-Protection.cfm; see also Peter Baker & John M. Broder, U.S. Lifts the Ban on Deep Drilling With New Rules, N.Y. TIMES, Oct. 13, 2010, at A1.

13. See, e.g., Press Release, Dep't of the Interior, supra note 8 ("The six month moratorium on deepwater drilling will provide time to implement new safety requirements and to allow the Presidential Commission to complete its work... Deepwater production from the Gulf of Mexico will continue subject to close oversight and safety requirements, but deepwater drilling operations must safely come to a halt. With the BP oil spill still growing in the Gulf, and investigations and reviews still underway, a six month pause in drilling is needed, appropriate, and prudent." (quoting Secretary Salazar)); see also DEP'T OF THE INTERIOR, INCREASED SAFETY MEASURES FOR ENERGY DEVELOPMENT ON THE OUTER CONTINENTAL SHELF (2010), available at http://www.doi.gov/deepwaterhorizon/loader.cfm?csModule=security/getfile&PageID=33598

("The Secretary recommends a series of steps immediately to improve the safety of offshore oil and gas drilling operations in Federal waters and a moratorium on certain permitting and

the earlier moratorium as a limit on permits for new wells only, not on further work on existing drilling sites).

^{9.} Hornbeck Offshore Servs. v. Salazar, 696 F. Supp. 2d 627, 630 (E.D. La. 2010).

^{10.} Id. at 637-39.

^{11.} DEP'T OF THE INTERIOR, Q'S AND A'S: NEW DEEPWATER DRILLING SUSPENSIONS 3-4 (2010), available at http://www.doi.gov/deepwaterhorizon/loader.cfm?csModule=security/getfile &PageID=38349 (stating in Q5 that DOI would permit new drilling only under certain restrictive conditions and in Q6 that it would allow only twelve of thirty-three new deepwater sites where drilling was ongoing on May 28, 2010, to continue operations); Press Release, Dep't of the Interior, Secretary Salazar Issues New Suspensions to Guide Safe Pause on Deepwater Drilling (July 12, 2010), available at http://www.doi.gov/news/doinews/Secretary-Salazar-Issues-New-Suspensions-to-Guide-Safe-Pause-on-Deepwater-Drilling.cfm; see also John M. Broder, U.S. Revises Rules for Drilling Ban, N.Y. TIMES, July 13, 2010, at A15.

constituting important new information about the risks of drilling. The BP spill dramatically demonstrated that serious accidents could occur in deepwater operations and that drilling wells at great depths compromised the oil industry's ability to staunch a spill.

The moratorium resulted in substantial economic losses. They included forgone profits of owners of deepwater wells and forgone wages of rig workers and other employees of the deepwater oil industry. The moratorium also caused losses for owners and employees of firms that provide goods and services to the deepwater oil industry, such as manufacturers of drilling equipment and platforms, food and catering services, and ocean transport services. Local economies and the nation generally suffered additional losses on account of reduced spending by the first two categories of victims of economic losses. Further economic losses fell on the government because it collected less in taxes from businesses and employees, as well as less in royalties from oil production.

The magnitude of these various types of losses was large. In a widely cited report, Joseph Mason, a professor at Louisiana State University, estimated that the moratorium would cause approximately \$2.1 billion in economic losses to the Gulf states, including approximately \$500 million in lost wages.¹⁴ Given the importance of deepwater drilling in the Gulf—sixty-four percent of active drilling leases in the Gulf are in deep water¹⁵—it is not surprising that the economic losses due to the moratorium were significant.

II. LEGAL RESPONSIBILITY FOR MORATORIUM-RELATED LOSSES

Is it possible that BP will have to pay damages for losses resulting from the moratorium on oil drilling that followed the *Deepwater Horizon* accident? The most important source of liability for oil spills is the Oil Pollution Act of 1990 ("OPA"), which Congress enacted after the *Exxon Valdez* oil spill.¹⁶ The OPA holds parties

drilling activities until the safety measures can be implemented and further analyses completed.").

^{14.} JOSEPH R. MASON, THE ECONOMIC COST OF A MORATORIUM ON OFFSHORE GAS AND OIL EXPLORATION TO THE GULF REGION (July 2010); see also The Deepwater Drilling Moratorium: A Second Economic Disaster for Small Businesses?: Hearing Before the S. Comm. on Small Bus. & Entrepreneurship, 111th Cong. 21 (2010) (statement of Joseph Mason, Chair of Banking, E.J. Ourso School of Business, Louisiana State University).

^{15.} DEP'T OF THE INTERIOR, supra note 13, at 3.

^{16.} Oil Pollution Act of 1990, 33 U.S.C. §§ 2701–2720, 2731–2738, 2751–2753, 2761–2762 (2006). State common law and admiralty law also provides for responsibility for economic losses from oil spills but it is less broad than under the OPA, so I consider only the OPA here. See generally JOHN C.P. GOLDBERG, LIABILITY FOR ECONOMIC LOSS IN CONNECTION WITH THE

strictly liable for a number of categories of harm caused by oil spills,¹⁷ including economic losses.¹⁸

Although the OPA is not explicit about the principles of causation that courts should employ in its use, a number of sources notably, the legislative history of the OPA, several closely-related statutes, the common law and admiralty law backgrounds on which the OPA expands, and some judicial decisions that apply the OPA suggest that the OPA authorizes claims for economic losses in two types of situations. The first is when a party suffered a loss because an income-earning resource to which the party had rights of use was *physically harmed* due to a spill. The second is when a party suffered a loss because the party was *denied access* to an income-earning resource due to a spill.¹⁹ Such award of damages is consistent with the view that, under the OPA, fishermen would be able to obtain compensation for economic losses if the authorities barred fishing due to the risk of oil contamination of fish.²⁰

The award of damages for economic losses in the second type of situation is of particular interest to us because the moratorium-related losses derived from denial of access to income-earning resources. The decision in a case brought under the OPA, Sekco Energy, Inc. v. M/V Margaret Chouest, illustrates the award of damages in the second type of situation.²¹ In that case, Sekco Energy, the owner of an oil-drilling platform, obtained damages for lost profits from the owner of a vessel, the Margaret Chouest. Sekco Energy lost profits because the government shut down its platform in order to conduct an investigation of a spill caused by the vessel. Significantly, the accident that led to the spill did not damage the platform itself.

The moratorium can be analogized to government authorities barring fishing or preventing Secko Energy from using its drilling platform. Likewise, the moratorium was a governmental act ostensibly taken for prudential reasons that denied owners of deepwater drilling

DEEPWATER HORIZON SFILL (2010). Goldberg, a professor at Harvard Law School, wrote this report at the request of Kenneth Feinberg in his capacity as administrator of the Gulf Coast Claims Facility, which distributes the twenty-billion-dollar fund established to compensate for losses resulting from the spill.

^{17. 33} U.S.C. § 2702(a)-(b).

^{18. 33} U.S.C. §2702(b)(2)(E).

^{19.} GOLDBERG, supra note 16, at 25-35, 39-42.

^{20.} Id. at 12, 40 ("C is a commercial fisherman who relies for his business on fisheries in the Gulf of Mexico. C claims that oil from a spill for which Oil Co. is responsible has polluted the waters in which he fishes, and that he has been and will be unable to fish for a period of time, resulting in lost profits."); id. at 33-34 (stating that the hearings on the OPA suggest that the intent of legislators was that fishermen be able to collect economic losses if fishing was prevented by an oil spill).

^{21.} Sekco Energy, Inc. v. M/V Margaret Chouest, 820 F. Supp. 1008, 1015 (E.D. La. 1993).

platforms and workers on those platforms access to them. Consequently, it appears that these owners and workers could make a colorable claim under the OPA for BP to pay for the economic losses arising from the moratorium.

Of course, BP could make counterarguments to such a claim. These counterarguments would likely revolve around issues of proximate causation. Notably, BP might assert that the moratorium was a risk outside the ambit of those risks that Congress intended the OPA to address or that the moratorium resulted from a supervening, discretionary act of the government. To these counterarguments, there are responses, and I offer no opinion on the probability that claims for BP to pay for moratorium-related losses would fare well under the OPA. Rather, I suggest that it is conceivable that a claim for these losses would succeed.

If a court allowed damages for economic loss under the OPA, then damages would include lost profits of oil companies that would have been able to drill in the absence of the moratorium and lost wages of their employees. However, the economic losses would not be likely to reflect forgone earnings of local economies on account of lower spending by the deepwater drilling industry and its employees because these losses were not the immediate result of any denial of access to income-earning resources.

I now turn from the law to policy and consider whether there is a utilitarian basis for holding BP liable for moratorium-related losses. I argue that there is not. Therefore, if the law is informed by policy, the courts should not hold BP liable for moratorium-associated losses.

III. THE ECONOMIC POLICY ARGUMENT AGAINST IMPOSITION OF LIABILITY FOR MORATORIUM-RELATED LOSSES

A. The General Economic Basis for Setting Damages Equal to Harm

Let me begin by reviewing the economic logic supporting the conclusion that damages under strict liability should equal harm for the purpose of inducing potential injurers to reduce risk optimally.²² (I will comment on the other major purpose of tort law, compensation of victims, in Part IV.) One aspect of risk reduction is motivating

^{22.} I focus on strict liability because the OPA employs strict liability. Under the negligence rule, it is also socially desirable that damages equal harm for the purpose of inducing potential injurers to take optimal precautions. See generally WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF TORT LAW 54-122 (1987); STEVEN SHAVELL, ECONOMIC ANALYSIS OF ACCIDENT LAW 5-72 (1987) (describing the economic theory of liability and incentives summarized here). I comment on the other major purpose of tort law, compensation of victims in Part IV, infra.

[Vol. 64:6:1995

potential injurers to adopt socially desirable precautions—that is, to adopt precautions for which the cost is less than the benefit in terms of risk reduction. For example, suppose a blowout protector at a new oil well would lower the chance of a \$100 million accident from 10% to 5%. Then the blowout protector would yield an expected reduction in harm of 5% times \$100 million, or \$5 million. Hence, the blowout protector would be socially desirable for the driller to obtain if, but only if, it cost less than \$5 million.

It is clear that the driller would purchase the blowout protector exactly when that action is socially desirable if liability is strict and damages for a spill equal the harm caused. In these circumstances, having the blowout protector would save the driller expected liability expenses of \$5 million, implying that the driller would buy the protector if and only if the protector cost less than \$5 million.

Furthermore, if damages are less than the harm from a spill, the driller might not take a desirable precaution when it ought to; and if damages exceed the harm from a spill, the driller might take a precaution when it should not. To illustrate, if damages are \$50 million, then the driller would save only 5% of \$50 million, or \$2.5 million, from having the blowout protector. Thus, if the cost of the protector fell between \$2.5 million and \$5 million, the driller would not purchase the protector even though the purchase would be socially desirable. Conversely, if damages are \$150 million, the driller would save 5% times \$150 million, or \$7.5 million, from having the blowout protector. Therefore, the driller would buy the protector as long as its cost was less than \$7.5 million. Hence, if the cost were between \$5 million and \$7.5 million, the driller would purchase it even though that would not be socially desirable.

A second dimension of risk reduction concerns engagement in risky activities. Society has an interest in motivating parties not to undertake risky activities unless the benefits obtained from the activities outweigh their costs, including the accident losses that the activities generate. Many activities create substantial accident losses even though injurers take socially desirable precautions when engaging in them, for such precautions often, if not usually, only reduce—they do not eliminate—the risk of accidents. In our example, if the blowout protector costs \$3 million, then the driller should purchase it, but there will be a residual risk of five percent of an accident, resulting in expected harm of \$5 million. It would therefore be best that the drilling go forward only if the net benefit derived from drilling exceeds the \$3 million cost of the blowout protector plus the \$5 million in expected harm.

2011] LIABILITY FOR MORATORIUM-RELATED LOSSES 2003

This socially desirable outcome will occur if the injurer faces strict liability for harm and the damages for an accident equal the harm of \$100 million. In these circumstances, the driller will make the socially correct decision whether to engage in drilling operations because the driller would bear an expected liability cost equal to the expected social cost of \$5 million for engaging in its operations.

Additionally, if the level of damages is less than the harm, then the driller might engage in drilling too much from a social standpoint and, if the level of damages exceeds harm, the driller might be undesirably discouraged from drilling. If damages are \$50 million, the expected liability cost of drilling would be \$2.5 million, so the driller would engage in drilling whenever its profits exceed \$2.5 million rather than only when its profits exceed \$5 million; and, if damages are \$150 million, the driller would engage in drilling only when its profits exceed \$7.5 million.

B. The Benefits and Costs of a Socially Desirable Moratorium

Now consider a socially desirable moratorium on an activity, such as oil drilling, declared in the aftermath of an accident. Specifically, make the following assumptions: First, an accident not only causes direct harm, but it also generates new information about the dangers of the activity and added precautions that can be exercised to lower the dangers at other locations where the activity is undertaken. Second, this new information implies that a temporary cessation of the activity would yield social benefits that exceed its costs because the cessation would allow the precautions to be taken.

To illustrate, suppose that drilling is being undertaken at two new wells and an accident resulting in an oil spill occurs at the first well. Before the accident, the government thought that drilling at the second well was safe but, as a result of the accident, the government realized that drilling at the second well involves risk which, if not addressed, will generate an expected harm of \$20 million over the next six months. If, though, the government shuts down the second well for six months, a period that will allow for additional safety steps to be taken, the risk will be eliminated. The total cost of the shutdown is \$5 million, comprised of lost profits and wages of \$3 million and the expense of safety devices of \$2 million.²³ It will be socially desirable for

^{23.} I treat these economic losses as social losses here and elsewhere in this Article. However, economic losses generally are not equivalent to social losses. For example, the profits lost by one firm on account of an interruption in its ability to carry on its operations may result in an increase in the business and profits of another firm, as demand is diverted to this other firm; hence, the second firm's increase in business mitigates the social loss caused by the first

the government to shut the second well down for six months, as this saves society \$20 million minus \$5 million, or \$15 million.²⁴ Thus, a six-month moratorium would be socially desirable.

C. Why Damages for an Accident Should Not Include Moratorium-Caused Losses if the Moratorium is Socially Desirable

Let us next examine the question of what the damages should be when an accident occurs at the first well that leads to a socially desirable moratorium on drilling at the second well. Note that under our assumptions, the accident causes the moratorium in the usual "but for" sense—the moratorium would not have been declared had the accident at the first well not occurred, for that accident produced new information about dangers elsewhere that led to the moratorium.

The total loss due to an accident is the combined effect of the direct loss from the accident and the moratorium-associated effect of the accident. The direct effect of the accident at the first well I will assume to be \$100 million, as in the earlier example. The moratorium-associated effect of the accident at the second well is the benefit it provides less the loss it generates, which is \$15 million. Hence, the total loss due to the accident at the first well is the \$100 million direct loss minus the \$15 million net benefit from the moratorium. This equals \$85 million; the amount is less than the \$100 million direct loss because on balance the moratorium was a good thing-the accident was effectively a wake-up call to society that allowed it to avert expected losses from drilling at a different well. There is no paradox in the calculation that the harm from the accident is less than its direct amount of \$100 million. If the accident had not happened, society would not have known that the risk at the second well was so high and, given the assumptions, society would have suffered an additional \$20 million in expected losses because there would not have been any moratorium on drilling at that well.

Let us now consider the issue of damages. Should the moratorium-caused economic losses of \$3 million be added to the

firm's loss of business. See SHAVELL, supra note 22, at 135-40; Urs Schweizer, Tortious Acts Affecting Markets, 27 INT'L REV. L. & ECON. 49, 49-65 (2007). It would be distracting for our purposes, however, to consider the complexities of this issue.

^{24.} I am assuming that total production of oil from the second well will be the same whether or not there is a moratorium. The only effect of the moratorium is to allow time to install new safety devices in order to prevent twenty-million dollars in harm, and to generate economic losses over that period. In a realistic rather than stylized model, the time value of money would have to be taken into account, for the moratorium would in part delay the time pattern of earnings. Consideration of this issue is not needed for our purposes, so I abstract from it.

direct accident losses of \$100 million? Clearly, the answer is no. The true total social losses caused by the accident are \$85 million. Thus, normal damages of \$100 million are too high; making them higher still, equal to \$103 million, would only exacerbate the problem of excessive damages. Therefore, according to conventional economic deterrence arguments, we arrive at an unambiguous conclusion: damages should not be augmented by the economic losses caused by a socially desirable moratorium. Imposing excessive damages, such as \$103 million, could lead in general to the undesirable consequences I noted above, namely to the taking of precautions that cost more than they are worth to society and to the discouragement of participation in socially desirable activities.

Indeed, in principle, damages should be reduced from \$100 million to \$85 million. This could be achieved by giving the party liable for the accident at the first well a net credit of \$15 million against its conventional damages of \$100 million. Although this is the theoretically correct result, I do not suggest that damages in fact be computed in this way, as I explain in Part IV.

D. Why Damages Should Not Include Moratorium-Caused Losses if the Moratorium is Socially Undesirable

Suppose that the government declares a moratorium after an accident but the moratorium is socially undesirable because its benefit is less than its cost. For example, consider the following modification to the moratorium example: a cessation of drilling at the second well would prevent expected losses of only \$10 million, but it would involve economic losses of \$20 million and expenses for safety devices of \$5 million. Then the moratorium would create a net loss of \$25 million minus \$10 million, or \$15 million (rather than the net benefit of \$15 million in the original example of the moratorium).

Under this assumption, what should damages be for the firm that caused the accident at the first well, leading to the moratorium? It might seem that \$15 million should be added to the direct losses of \$100 million since the total losses caused by the accident include the \$15 million of net social harm due to the moratorium.

However, imposing damages for moratorium losses might perversely affect the government's incentives to declare ill-advised moratoriums. If courts award damages for moratorium-related economic losses, then the government will tend to hear fewer complaints from those who suffer economic losses on account of a moratorium because damage payments will compensate the victims of these economic losses. The government may therefore be more often

[Vol. 64:6:1995

tempted for political reasons (notably, to appear to address the problem caused by a dramatic adverse event, such as the *Deepwater Horizon* accident) to declare moratoriums that are not in the true public interest. Consequently, it may be best for courts not to award damages for economic losses when a moratorium is socially undesirable.

IV. CONCLUSION

In this Part, I want to comment on the foregoing analysis and some of the assumptions underlying it, and then conclude.

First, the main point of the analysis-that adding moratorium losses to normal damages is unsound from a policy perspective-can be better appreciated by considering a hypothetical example. Suppose that before engaging in any deepwater operations in the Gulf of Mexico, an oil company, "Oilco," drilled a test well to ascertain the dangers of deepwater operations. Suppose too that Oilco discoveredbut without causing a spill-that the risks of these operations were significantly higher than anticipated, calling for use of enhanced safety practices there and at other deepwater sites. Suppose also that, as a result of this information, President Obama declared a moratorium to prevent excessively risky deepwater drilling by oil companies in the Gulf until new safety steps were undertaken. Under this counterfactual scenario, the reader would presumably agree that imposing damages on Oilco for economic losses due to the moratorium would not be sensible: Oilco did not cause a spill; all it did was develop useful information that saved society from experiencing future harm from deepwater drilling. To impose liability in these circumstances would not only serve no positive purpose, it could have undesirable consequences, including a perverse chilling effect on drilling test wells. Oilco might not have drilled its test well to gauge danger if it thought that could lead to a large moratorium-related liability. This example is revealing because it isolates the effect of new information about danger as the cause of a moratorium. That the actual BP event resulted both in a spill and in the development of information engendering the moratorium is, I suspect, what fosters a misleading intuition held by some that the moratorium-related losses should be paid by BP.

It may also be useful to observe that in contexts other than the BP oil spill, firms engage in activities that occasionally produce information leading to government actions that impose losses on other parties, yet no one contemplates imposing liability on the firms for this reason. Consider the problems at the Fukushima Daiichi nuclear power plant after the March 11, 2011, earthquake and tsunami that struck northeastern Japan.²⁵ The disaster resulted in delays in plans to build more nuclear power plants in Japan and in other countries,²⁶ but no one suggests that the plant owner, Tokyo Electric Power Company, should be liable for the lost wages of construction workers or other losses associated with these delays in nuclear power plant construction. Similarly, consider the accident in which part of the fuselage of a Southwest Airlines Boeing 737 aircraft blew off during a flight on April 1, 2011.²⁷ This incident led the Federal Aviation Administration ("FAA") to call for airlines to inspect certain Boeing 737 aircraft for metal fatigue.²⁸ Again, I am aware of no calls to hold Southwest Airlines responsible for the losses due to the FAAmandated inspections.

Second, according to the analysis, BP's damages should, in principle, be reduced if the moratorium was socially desirable, yet I do not suggest that this necessarily be done in practice. The chief reason is difficulty in estimating the risk-reduction benefits of the moratorium. That would require an unusually complex inquiry, as it would involve predicting the likelihood and magnitude of spills from both existing new wells and planned wells in the event that the moratorium had not been declared. In contrast, excluding the economic losses due to the moratorium from damages requires no such inquiry.

Third, I considered in the analysis both the possibility of a desirable and of an undesirable moratorium and found that under each possibility BP should not pay for economic losses due to the moratorium. Nevertheless, one may ask whether the moratorium declared after the BP spill began was well-advised. It is not easy to come to a judgment about this question. Although we have some idea

^{25.} See Martin Fackler, Powerful Quake and Tsunami Devastate Northern Japan, N.Y. TIMES, Mar. 12, 2011, at A1; Martin Fackler & Mark McDonald, Death Toll Estimate in Japan Soars as Relief Efforts Intensify, N.Y. TIMES, Mar. 14, 2011, http://www.nytimes.com/2011 /03/14/world/asia/14japan.html.

^{26.} See Jo Becker & William J. Broad, New Doubts About Turning Plutonium Into a Fuel, N.Y. TIMES, Apr. 10, 2011, http://www.nytimes.com/2011/04/11/us/11mox.html; Judy Dempsey, Panel Urges Germany to Close Nuclear Plants By 2021, N.Y. TIMES, May 12, 2011, at B7; Andrew Pollack, Japan's Nuclear Future in the Balance, N.Y. TIMES, May 9, 2011, http://www. nytimes.com/2011/05/10/business/energy-environment/10yen.html; Kosuke Takahashi, Fukushima marks a 'Nuclear Ice Age', ASIA TIMES ONLINE, Apr. 5, 2011, http://www. atimes.com/atimes/Japan/MD05Dh01.html.

^{27.} See Elizabeth A. Harris, After Scare, Southwest Grounds Planes, N.Y. TIMES, Apr. 3, 2011, at A19.

^{28.} See Jad Mouawad & Christopher Drew, More 737 Cracks Found; U.S. Seeks Inspections, N.Y. TIMES, Apr. 5, 2011, at A1.

of the economic costs of the moratorium, I am aware of no estimates of its value in reducing risk.

Fourth, I have considered only the deterrence-related goal of tort liability, not its compensatory goal. In this regard, an important general consideration is that the tort system is a very expensive means of accomplishing compensation. On average, it appears to cost more than a dollar to deliver each dollar of compensation to a victim through the medium of the tort system (this average being computed over both settled and adjudicated cases); the tort system can be likened to an ATM that imposes a service charge of over a dollar for each dollar that is withdrawn.²⁹ The costly nature of the tort system relative to other ways of insuring victims of loss, including government-provided insurance or disaster relief, implies that from an economic policy perspective, the tort system cannot be justified solely as a method of assuring compensation to victims of loss.

In light of the arguments that I have advanced showing that the imposition of liability for moratorium-related economic losses does not achieve the deterrence objective of tort law, and the observation that the tort system should not be employed purely as a means of compensation, I conclude that there is no clear policy warrant for BP to pay for these losses.

^{29.} Tillinghast-Towers Perrin reports in a nationwide survey of the tort system that victims receive only \$0.46 of every dollar paid by defendants. TILLINGHAST-TOWERS PERRIN, U.S. TORT COSTS: 2003 UPDATE 17 (2003) (stating that victims receive \$0.22 of the tort cost dollar for economic losses and \$0.24 for noneconomic losses); see also A. Mitchell Polinsky & Steven Shavell, The Uneasy Case for Product Liability, 123 HARV. L. REV. 1437, 1469-70 (2010).