Assigning Responsibility Following a Catastrophe

Alternatives to Relying Solely on Traditional Civil Litigation

Nicholas M. Pace, Lloyd Dixon
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Preface

The traditional U.S. civil litigation system might not always be the most effective and efficient means for assigning responsibility following a catastrophic event and providing just compensation to large numbers of affected individuals and entities. Some have argued that an approach better suited to handle the flood of claims that arises following a major disaster is needed, one that rapidly injects resources into affected areas and minimizes the generation of substantial legal and other transaction costs while extending liability protections to certain types of industries or economic activities.

This report reviews various alternatives to relying exclusively on traditional civil litigation to assign responsibility for the causes of a catastrophe believed to have a human origin and to determine the types of losses that a designated responsible party must reimburse. It reviews examples of circumstances in which statutory substitutes for the traditional tort system have been adopted for dealing with at least some of the consequences of widespread harm, describing the approaches taken and providing assessments of how these substitute systems have operated in practice. Our goal is to provide a resource that policymakers can consult when planning how to respond after a major adverse event should they conclude that traditional civil litigation might not be the best way to assign responsibility. We do not, however, address the underlying question of whether an alternative to ordinary litigation is actually needed for any particular type of adverse event.

The report will be of primary interest to those concerned about the response of the civil justice system in addressing catastrophic events. It is one component of a body of research being conducted by the RAND Center for Catastrophic Risk Management and Compensation into means for reducing the social and economic harm caused by catastrophes. Related center work in this area has explored issues relating to the delivery of postdisaster compensation and other assistance.

The RAND Center for Catastrophic Risk Management and Compensation

The RAND Center for Catastrophic Risk Management and Compensation seeks to identify and promote laws, programs, and institutions that reduce the adverse social and economic effects of natural and human-caused catastrophes by improving incentives to reduce future losses; providing just compensation to those suffering losses while appropriately allocating liability to responsible parties; helping affected individuals, businesses, and communities to recover quickly; and avoiding unnecessary legal, administrative, and other transaction costs.

Questions or comments about this report should be sent to the project leader, Nicholas M. Pace (NickPace@rand.org). For more information about the RAND Center for Catastrophic Risk
Management and Compensation, see www.rand.org/jie/justice-policy/centers/catastrophic-risk-management or contact the director at ccrmc@rand.org.

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Funding for this venture is provided by generous contributions from the RAND Center for Catastrophic Risk Management and Compensation advisory board. Collectively, their contributions and contributions by other donors to RAND Ventures reflect pooled grants from a range of sources, including corporations, trade and professional associations, individuals, government agencies, and private foundations.
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Introduction

The traditional U.S. civil litigation system might not always be the most effective and efficient means of assigning responsibility following a catastrophic event and providing just compensation to large numbers of affected individuals and entities. Rapid injections of resources into affected areas could do much to help reduce human suffering and the potential for a self-reinforcing economic downturn, but routine litigation might not respond in a sufficiently timely manner. Civil litigation can also be slow in identifying and rectifying the underlying causes of the event, a potentially serious problem when the activity that produced the catastrophe is repeated daily. Some have argued that an approach better suited to handle the flood of claims that arises following a major disaster is needed, one that minimizes the generation of substantial legal and other transaction costs while extending liability protections to certain types of industries or economic activities thought to be vital to the national interest.

This report reviews various alternatives to relying exclusively on traditional civil litigation to assign responsibility for the causes of a catastrophe believed to have a human origin and to determine the types of losses that a designated responsible party must reimburse. It reviews examples of circumstances in which statutory substitutes for the traditional tort system have been adopted for dealing with at least some of the consequences of widespread harm, describing the approaches taken and providing assessments of how these substitute systems have operated in practice. Our goal is to provide a resource that policymakers can consult when planning how to respond after a major adverse event should they conclude that traditional civil litigation might not be the best way to assign responsibility. We do not, however, address the underlying question of whether an alternative to ordinary litigation is actually needed for any particular type of adverse event.

This report does not directly address issues primarily related to the distribution of compensation to individual claimants. Those issues have been studied a good deal elsewhere. Nevertheless, it can be difficult to neatly separate responsibility assignment from compensation delivery when attempting to examine either task. When compensation questions involve the assignment of responsibility, we address them in this report.

Processes and Frameworks for Assigning Responsibility

Our report looks at the different approaches, or frameworks, that are used to address the legal relationships between parties following a catastrophic event (the term liability regime embraces a similar concept). Generally, our interest lies in examining frameworks in which some aspect of responsibility can assigned by means other than the exclusive use of traditional tort litigation (although traditional tort rules might be in play in other aspects of the framework). We will return shortly to what we mean by a framework, but we start by defining the processes that are
used within these frameworks to make those assignments. These processes typically arise out of legislatively enacted statutes, administrative-agency regulations and procedures, and appellate case law. Processes can also be defined by contractual relationships between individuals or entities or by the independent actions of a party.

**Processes**

Our definition of a responsibility-assignment process is not a rigid one. It is simply some manner in which responsibility for an adverse event might be affixed upon or accepted by individuals or entities through formal procedures (such as agency hearings), informal actions (such as when a company voluntarily sets up a claim facility to pay requests for compensation), or by operation of law (such as statutory impositions of responsibility that require members of the same industry to share in addressing future losses).

We describe nine such processes:

**Traditional Tort Litigation**

The primary means for assigning responsibility in the United States is, of course, traditional tort litigation. The basis for asserting that a person or entity was responsible for causing an adverse incident (that, in turn, resulted in injury or economic loss) can be grounded on a wide range of legal authority arising from common-law principles, statutory rights, and regulatory requirements.

**Modified Tort Litigation**

An argument can be made that seemingly minor modifications to traditional tort liability can essentially create what amounts to a very different process for assessing responsibility. Commonly employed modifications to traditional tort presumably designed to reduce potential defendant exposure include immunity from direct civil liability, limitations on total financial liability, caps on compensatory awards, forum and venue restrictions, limits on punitive-damage size or requirements, collateral-source rule changes, requirements to first exhaust administrative remedies, restrictions on attorney-fee arrangements, modifications to joint and several liability, imposition of a prefiling waiting period, mandatory bench trials, federal preemption, discovery restrictions, and a reduced time period in which to file suit. In contrast, changes might be incorporated in a modified tort environment with the goal of enhancing a plaintiff's ability to advance a claim against a defendant, such as the imposition of strict liability, an increased time period in which to file suit, stricter limits on time to decision, and mandatory liability insurance coverage requirements.

**Agency Investigations**

An important means for determining responsibility lies within the realm of administrative agencies. Investigations are routinely conducted as part of the mission statements for some agencies, which, in turn, can result in findings that an individual or entity contributed in some way or was the root cause of an adverse incident. Depending on enabling statutes and regulations, these agencies can have broad powers to subpoena records, to compel individuals to provide testimony, and to search and seize evidence, sometimes with wider latitude than
might be afforded a law enforcement agency. In some instances, statutes can bar the admission of findings from an agency investigation as evidence in a tort suit that arises from the same incident.

**Agency Determinations**

Agency determinations are nonadversarial proceedings in which agency staff affix responsibility on a party based on its internal review of relevant facts and controlling regulations, statutes, and departmental guidelines and procedures. These determinations can be made without any formal input from a potentially responsible party.

**Agency Adjudications**

The most formal process for determining responsibility within an administrative body comes in the form of agency adjudications, often employed when a party contests an agency’s decision to assess civil penalties or impose some other sanction, and typically involving some type of hearing. Adjudications by administrative bodies are defined by the agency’s own rules of practice, and the most rigidly structured types are those held under a state or federal version of the Administrative Procedure Act.\(^1\) Here, the decider is an administrative law judge. In some instances, the administrative law judge’s decision is only a proposed one, in that the agency head makes the final decision. Like in a civil lawsuit or a criminal prosecution, parties or entities that are the subject of the adjudication might have the right to present arguments and evidence, confront and cross-examine adverse witnesses, seek some level of discovery, retain an attorney, navigate layers of appeal, have the decision based solely on the record, or receive a statement of reasons for the decision.

**Agency-Initiated Civil Litigation and Criminal Prosecutions**

Government agencies have other options available to them when they desire to affix responsibility on a party believed to be engaging in some sort of prohibited conduct or to have caused harm to others. One approach involves filing civil litigation in court to seek the imposition of civil fines and penalties, the recovery of expenditures made by the government but ultimately required by a party’s actions, or the granting of injunctive relief. Another approach involves the agency requesting that a government prosecutor (such as the U.S. Department of Justice or a state’s attorney general) initiate a criminal prosecution.

**Other Processes**

One additional process involves what could be termed *self-imposed responsibility*, in which, for example, a party might choose to publicly declare that it will “take care” of everything and everybody in the aftermath of a serious accident, even before the first lawsuit is filed. Another involves *negotiated responsibility*, in which multiple actors decide among themselves to allocate responsibility, either before or after the incident. Finally, *mandated responsibility* can be thought of as a situation in which a party is required by law (rather than contract) to bear some

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\(^1\) Pub. L. No. 79-404, 1946.
responsibility for an adverse event that might arise in the future, regardless of the party’s actions.

**Frameworks**

These processes must be viewed in the context of overarching frameworks that reflect legislatures’ intentions as to how legal relationships between actors ought to be sorted out following specific types of events. A framework exists in each state, for example, to address the consequences of motor vehicle accidents. A framework can be the result of a single, comprehensive overhaul of existing legal authority, or it might have developed piecemeal over decades, but, typically, it is designed to answer one or more of the following questions: Who is responsible? How much should the responsible party pay? Who is deserving of compensation? And how much should they receive? All of the frameworks of interest in this report involve federal legislative initiatives that were intended to alter the liability profile of some types of potential defendants (*potentially responsible parties*, or PRPs, in the parlance of some administrative processes) and at least address the “who is responsible” issue to some degree.

Notable federal frameworks have included the following enactments:

- **The Air Transportation Safety and System Stabilization Act of 2001** and the related **Aviation and Transportation Security Act** limited airlines’ liability in the aftermath of the September 11, 2001, terrorist attacks and created a comprehensive compensation program in the form of the September 11th Victim Compensation Fund of 2001.²
- **The Amtrak Reform and Accountability Act of 1997** capped Amtrak’s liability at $200 million (including awards for punitive damages) for a single accident or incident for claims by passengers for personal injury, death, or property damage related to rail passenger transportation; the act also created a uniform punitive-damage standard.³
- **The Atomic Testing Liability Act** treated government contractors in claims for loss of property, personal injury, or death resulting from radiation exposure related to the nation’s nuclear weapon testing program as if they were federal employees rather than independent contractors, essentially substituting the United States for the contractor as the defendant in the action.⁴
- **The Biomaterials Access Assurance Act of 1998** eliminated the liability of a supplier of components or raw materials used in medical devices placed inside the body for harms related to implants (other than involving the silicone gel or envelope in a breast implant).⁵

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³ Pub. L. No. 105-134.
• The **Black Lung Benefits Act of 1972** created an administrative program to provide disability benefits to current and former coal miners (and certain other coal-related occupations) with pneumoconiosis ("black lung"), as well as to their surviving dependents; it typically requires the operator of the last coal mine in which the injured or diseased worker was employed for a year or more to cover the cost of those benefits.\(^6\)

• The **General Aviation Revitalization Act of 1994** prohibited product liability claims against manufacturers of general aviation aircraft equipped to carry no more than 19 passengers and not engaged in scheduled commercial service that were delivered to the aircraft’s first purchaser, lessee, or broker at least 18 years prior to the loss.\(^7\)

• The **Public Readiness and Emergency Preparedness Act of 2005** provided tort immunity to manufacturers, distributors, administrators, and others for the use of medical countermeasures against epidemics, pandemics, and acts of terrorism; the act also established an administrative procedure for claiming medical benefits, lost-income benefits, and death benefits.\(^8\)

To better understand how such legislation operates in practice to change the traditional tort rules, we provide detailed background on four types of mass adverse incidents for which six different frameworks were adopted to address responsibility issues. The examples chosen illustrate a range of different approaches that might be considered should policymakers decide that traditional civil litigation might not perform optimally for assigning liability in the context of a major disaster.

The first example explains how the 1999 Montreal Convention treaty (ratified by the U.S. Senate in 2003) imposed a modified tort liability system for passengers seeking compensation for aviation-related injuries and deaths arising from international flights.\(^9\) The second discusses how marine and inland water oil spills are addressed by the Oil Pollution Act of 1990's (OPA's) administrative program for designating responsible parties and for reimbursing expenditures related to oil recovery and spill-related losses.\(^10\) Next, we looked at the development of a regime under the 1957 Price–Anderson Nuclear Industries Indemnity Act for addressing liability in the face of accidents at commercial nuclear power plants.\(^11\) Finally, we examined three approaches for altering the liability profile of manufacturers and health care providers when various types of vaccines are alleged to have caused injuries or deaths: the National Swine Flu Immunization Program of 1976 (to which we refer as the Swine Flu Act), the National Childhood Vaccine Injury Act of 1986 (NCVIA), and what we call the smallpox vaccine acts (the Smallpox Emergency

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\(^7\) Pub. L. No. 93-298.

\(^8\) Pub. L. No. 109-148, Div. C.


Personnel Protection Act of 2003 and the National Smallpox Vaccination Program made possible by Section 304 of the Homeland Security Act of 2002).\textsuperscript{12}

We chose these example events (international aviation accidents, oil spills on navigable waters, nuclear power plant accidents, and mass vaccine injuries), in part, because they can have an anthropogenic origin. All four events also have the potential to cause widespread harm, which can include injuries, deaths, property damage, and economic losses, depending on the setting, within a short time frame. Importantly, the primary responsibility-assignment frameworks for the example events (1) have been in place for years, (2) are still controlling law today, (3) would be utilized in the future should an appropriate mass adverse event arise again, (4) incorporate a complex set of changes to the traditional tort litigation regime (rather than simply capping liability), and (5) have been used in practice.\textsuperscript{13} Obviously, this is not an exhaustive list of adverse incidents in which some sort of alternative to the traditional tort system has been implemented. For example, we do not closely examine issues related to terrorism and, notably, the framework set up to address various responsibility and compensation issues related to the September 11, 2001, attacks. That decision was made in part because the relevant liability provisions of the 9/11-related legislation were applied retrospectively but to a single event and were never envisioned as an ongoing program for assigning responsibility and providing an alternative source for compensation in future instances of aviation-related terrorism or other catastrophic events. That said, understanding the consequences of the approach used for dealing with victim losses and party liability arising from 9/11 would certainly be relevant to further work in this area.

**Comparing the Six Frameworks**

**Overview**

This section provides a brief description of the events and frameworks that were the focus of this report (Table S.1). First, when questions arise over an airline's liability following an international aviation accident, the Montreal Convention's rules change many of the traditional aspects of how tort litigation might proceed. It was the follow-on regime to the earlier Warsaw Convention, a pre–World War II international treaty that standardized liability rules governing nonmilitary international air transportation.\textsuperscript{14} The Warsaw Convention was intended to foster the growth of the then-developing commercial aviation industry, in part by placing significant limits on carriers' liability for losses of cargo or passengers. Montreal removed some, but not all, of those limitations. Punitive damages continued to be prohibited, but carriers would now be strictly liable (sometimes referred to as \textit{presumed liable}) for proven injury claims up to about $153,000 (as of April 2017). Claims beyond that point would have to proceed under


\textsuperscript{13} Although the Swine Flu Act is no longer in effect and the smallpox vaccine acts have been essentially replaced by later legislation, we consider the still-viable NCVIA to be the primary alternative framework for mass vaccine injuries.

whatever tort theories were available in the jurisdiction where the case was brought. A uniform two-year limitation on filing claims is imposed; there are restrictions on the proper forum for bringing suit; there can be no recovery for mental distress without accompanying physical injuries; and the airlines are required to make modest advance payments within 15 days of the loss to cover the immediate economic needs of injured passengers or the families of decedents.

Table S.1. Example Incidents, Frameworks, Processes, and Foci

<table>
<thead>
<tr>
<th>Incident Type</th>
<th>Framework</th>
<th>Process Employed for Assigning Responsibility</th>
<th>Assignment Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>International aviation accident</td>
<td>Montreal Convention</td>
<td>Modified tort litigation</td>
<td>Airline</td>
</tr>
<tr>
<td>Oil spill in navigable waters</td>
<td>Oil Pollution Act of 1990 (OPA)</td>
<td>Agency determination</td>
<td>Owners, operators, demise charters, licensees, and permittees</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Agency adjudication</td>
<td>OSLTF, although potentially also parties that the agency later deems responsible</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Agency-initiated recovery litigation</td>
<td>Parties deemed responsible by agency determination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modified tort litigation</td>
<td>Parties deemed responsible by agency determination</td>
</tr>
<tr>
<td>Nuclear power plant incident</td>
<td>Price-Anderson Act</td>
<td>Modified tort litigation</td>
<td>Any actor potentially liable for the incident</td>
</tr>
<tr>
<td>Mass vaccine injury</td>
<td>National Swine Flu Immunization Program of 1976 (swine flu claims)</td>
<td>Agency determination</td>
<td>United States (substitute for program participants)</td>
</tr>
<tr>
<td></td>
<td>National Childhood Vaccine Injury Act of 1986 (NCVIA) (claims involving specified vaccines)</td>
<td>Modified tort litigation</td>
<td>United States (substitute for program participants)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Agency adjudication</td>
<td>Vaccine manufacturers and administrators (payments from trust fund)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modified tort litigation</td>
<td>Vaccine manufacturers and administrators (payments from trust fund)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modified tort litigation</td>
<td>United States (substitute for covered persons)</td>
</tr>
</tbody>
</table>

NOTE: OSLTF = Oil Spill Liability Trust Fund, created by OPA.

* A demise charter is a vessel lease in which all of the vessel’s operating expenses pass to the lessee.
OPA was expressly enacted to address responsibility issues for discharges of oil into navigable waters, which it does through a mix of processes. Following a spill, an informal agency determination identifies a “responsible party” as defined in the act, typically on the basis of the ownership or operation of the identified source of the oil (such as a vessel or onshore refinery). That initial designation of responsibility is not the equivalent of a civil trial verdict in a court of law; rather, it sets into motion certain duties on the part of the designee, such as cooperating with federal authorities in cleanup operations and establishing a process for handling claims for losses (such as removal expenses, property damage, lost profits, diminished earning capacity, lost government revenue, and natural resource damage). When the responsible party cannot be identified or is without sufficient assets, or when the responsible party denies its legal liability, those with loss claims can proceed against the Oil Spill Liability Trust Fund (OSLTF), which is financed by a tax on crude oil used in or exported from the United States. Relatively informal agency adjudications decide on the validity of such OSLTF claims, and the agency can later initiate civil litigation to recover OSLTF payments or any spill-related government expenditures from the responsible party. Still another process included in the OPA framework is modified tort litigation, which claimants can initiate directly against the responsible party as an alternative to the agency’s adjudication process. Parties designated administratively as “responsible” can choose to challenge that status, but, if successful, they lose OPA’s limitations on a responsible party’s financial liabilities for damage claims and the costs of removal arising out of a single incident (for example, the damage cap for a freighter of 40,000 gross tons is currently set at $44 million).

The owners, operators, and licensees of commercial nuclear power plants are the primary subjects of the Price–Anderson Act’s provisions to address an injury- or damage-causing nuclear accident. Price–Anderson uses a mix of private insurance, pooled industry contributions, and federal assurances to ensure that a minimum level of financial resources is available to compensate claims. At the present time, each operator or owner must purchase $375 million in insurance coverage for claims against its own power plant, plus have sufficient assets or insurance to contribute as much as $121 million to cover claims at any other plant that exceed the $375 million first tier of coverage. Given the number of licensees across the country, this equates to a potential fund of about $13 billion to address claims arising out of a single incident, although the owner or operator of the power plant where the incident actually occurred would be directly liable for only that first tier plus whatever contributions it would be required to make to the second tier. Price–Anderson’s language puts the onus on the federal government to come up with a plan that would “provide for full and prompt compensation for all valid claims” exceeding about $13 billion in first- and second-tier coverage. Price–Anderson also changed the rules for seeking compensation through litigation. Nuclear plant accident claims trigger federal jurisdiction, and there is a prohibition on the recovery of punitive damages. If the federal government declares that an extraordinary nuclear occurrence had taken place, the plant owner or operatory would be subject to strict liability for claims, and there would be a uniform three-year statute of limitations regardless of where the injury or damage occurred.
Finally, three different frameworks have been used to address issues related to vaccine injuries. The National Swine Flu Immunization Program of 1976 greatly reduced the potential liability of certain types of participants in the swine flu vaccination campaign (such as manufacturers and inoculation administrators) by substituting the United States as the responding party in any claim or as the defendant in any lawsuit (thus transferring the responsibility for the costs of compensation and claims handling to the United States as well). As a result, those asserting that they had been injured would have to follow the procedures of the Federal Tort Claims Act (FTCA), which requires the exhaustion of administrative remedies (in this instance, an agency's determination of the eligibility of the claim for personal injuries) prior to the commencement of litigation against the United States (the FTCA also prohibits punitive-damage claims and the use of a strict-liability theory, but the Swine Flu Act specifically allowed strict-liability claims). But, although the Swine Flu Act would have substantially modified the procedural law for making claims and pursuing litigation, the applicable substantive law (in other words, the theoretical basis) for vaccine injury liability would remain largely unchanged from a traditional tort lawsuit, other than in regard to punitive damages. Although the manufacturers, distributors, and inoculators would find their liability exposure essentially reduced to zero, claims brought against their designated substitute in terms of responsibility (the United States) would be advanced under essentially the same rules for proving negligence, strict liability, or breach of warranty as would be found in any traditional tort lawsuit.

The NCVIA took a different approach, conferring no blanket immunity on manufacturers of specified types of vaccines, but instead markedly narrowing the theories of liability that could be used against them. Claims for compensation advanced against those manufacturers (as well as vaccine administrators) would have to first be processed through formalized agency adjudication, although claims meeting a set of criteria would be presumed eligible. Parties unsatisfied with the outcome could conceivably bring litigation involving modified tort rules following the exhaustion of administrative remedies, but claims alleging design defects or side effects that could be considered “unavoidable” would be barred. No matter what process is used, the NCVIA mandates that funds for paying claims, settlements, or verdicts would come from per-dose excise taxes on vaccines, rather than the pockets of the manufacturers or the U.S. Treasury.

The third vaccine-related framework is set forth in the smallpox vaccine acts, which addressed smallpox vaccine injuries in a way could be characterized as combining features of the other two vaccine programs. The legislation was adopted in the shadow of 9/11 and the invasion of Iraq, when concerns about possible terrorist attacks utilizing biological agents were heightened. The original versions of the smallpox vaccine acts again substituted the United States for manufacturers, administrators, and selected others in terms of liability, but, in this instance, strict-liability theories would be unavailable as they would in any FTCA claim. Product liability claims that cannot utilize strict liability are extremely difficult to advance successfully, and there was substantial pressure to create a means by which first responders and health care providers (the targets of the smallpox vaccination campaign) would be able to recover losses related to side effects. Subsequent legislation created an administrative determination process with precisely defined
eligibility criteria similar to the NCVIA (but without its more formal adjudication procedures and more liberal benefits) that would have to be completed prior to moving to the courts for resolution.

**Primary Goals of the Frameworks**

The six frameworks described in Table S.2 were primarily intended, at least originally, as a means to protect a particular industry. In the case of Montreal and Price–Anderson, the commercial aviation and nuclear power industries were in their infancy, and the protections afforded by the treaty or legislation were hoped to encourage growth. The three vaccine acts were adopted in light of industry and insurer complaints about liability exposure, as well as concerns that the supplies of certain vaccines believed to be vital to the nation's public health were at risk or currently inadequate. The story behind OPA is not as straightforward: Developing a comprehensive and rapid response to immediate needs following a spill was arguably a motivation of at least equal importance to industry protection. In five of the six frameworks, steps were taken to streamline or facilitate the compensation claiming process to some degree or expand the types of compensation beyond those that might be available under traditional tort liability, a typical quid pro quo for liability protections afforded to an industry.

**Table S.2. Primary Goals of Example Frameworks**

<table>
<thead>
<tr>
<th>Framework</th>
<th>Protect Industry</th>
<th>Finance Cleanup</th>
<th>Facilitate Compensation to Injured Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>OPA</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Price–Anderson</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Swine Flu Act</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCVIA</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Smallpox vaccine acts</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

**Liability Protections Embedded in Frameworks**

*Features*

Certain parties were favored in all of these six key frameworks, but the specific methods of protection differed. Table S.3 describes the most-important protections offered to favored parties, with the leftmost column representing what would provide the strongest financial security available and the rightmost column representing the weakest.
Table S.3. Liability Protections Embedded in Frameworks

<table>
<thead>
<tr>
<th>Framework</th>
<th>Favored Party</th>
<th>Substitution of the United States as Defendant</th>
<th>Caps on Aggregate Liability</th>
<th>Funding for Losses Spread Across Other Sources</th>
<th>Eliminate or Limit the Use of Strict Liability</th>
<th>Punitive Damages Prohibited</th>
<th>Other Limits on Bases for Recovery, Available Damages, or Attorneys’ Fees</th>
<th>Claim Before Filing Suit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>Airlines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>OPA</td>
<td>Owners and operators of ships, offshore and onshore facilities, and deepwater ports</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Price–Anderson</td>
<td>Nuclear power plant owners and operators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Swine Flu Act</td>
<td>Vaccine manufacturers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>NCVIA</td>
<td>Vaccine manufacturers and selected others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Smallpox vaccine acts</td>
<td>Vaccine manufacturers and selected others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

xxi
The substitution of the United States as the defendant-payor in the Swine Flu Act and the smallpox vaccine acts arguably provides the most complete shield against liability, financial or otherwise, than any other framework discussed here, especially considering that the favored party would also be relieved of potentially significant expenses related to processing claims and defending lawsuits. Note that, although other protections set forth in Table S.3 (such as limits on financial liability or punitive-damage prohibitions) would have little meaningful relevance to favored parties under the Swine Flu Act and the smallpox vaccine acts given that the United States would be the actual beneficiary of such framework features, the table nevertheless notes when the protections are in place. Although the favored parties under OPA and Price–Anderson continue to bear responsibility for the costs of compensation, remediation, and recovery (as well as associated transactional expenses), such parties have the benefit of potentially significant caps on aggregate financial exposure (the second “protection” column in Table S.3). The caps are generally fixed under Price–Anderson, but, under OPA, the limitations vary depending on the size and type of vessel or facility. Price–Anderson’s caps have not yet been exceeded by incurred losses, but OPA’s have frequently, and, in some instances, the responsible party in a marine oil spill can morph into a claimant seeking to recover some of its own expenses once the cap has been reached.

Exceptions

In four of the six frameworks, the protections described in Table S.3 are not absolute. In OPA and the three vaccine acts, such liability limitations could vanish if the favored party came to the table without clean hands in terms of wrongful acts or, perhaps more importantly, failed to cooperate with the U.S. government in some way following the event (Table S.4). In Montreal and Price–Anderson, there are no meaningful exceptions.

Table S.4. Exceptions to Liability Protections

<table>
<thead>
<tr>
<th>Framework</th>
<th>Instances in Which Liability Protections Can Be Withdrawn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>None</td>
</tr>
<tr>
<td>OPA</td>
<td>Gross negligence or willful misconduct of the responsible party or violations of applicable federal regulations that proximately caused the incident; failures to report, cooperate, or comply with agency orders</td>
</tr>
<tr>
<td>Price–Anderson</td>
<td>None</td>
</tr>
<tr>
<td>Swine Flu Act</td>
<td>Failure to cooperate with the United States in the processing or defense of a claim or suit; negligence in carrying out a production contract with the United States</td>
</tr>
<tr>
<td>NCVIA</td>
<td>Improper preparation of vaccine; failure to provide proper warnings in compliance with regulatory requirements; negligent or fraudulent actions; intentional and wrongful withholding of information during the vaccine approval process</td>
</tr>
<tr>
<td>Smallpox vaccine acts</td>
<td>Failure to cooperate with the United States in the processing or defense of a claim or suit; failure to carry out obligations or responsibilities under government contract; misconduct that is grossly negligent, reckless, illegal, or willful</td>
</tr>
</tbody>
</table>
Means for Seeking Compensation

Although the primary interest of this work is in responsibility assignment, one has to include any associated compensation program into the calculus of whether the overall framework is meeting the goals of its designers. For the purposes of Table S.5, we define compensation program as whatever mechanism is in place to address claims involving property damage, personal injuries and deaths, remediation and cleanup expenses, and financial losses (such as business interruption or lost profits). This would obviously include a highly structured system for considering a very specific type of claim and rules crafted for a singular purpose (such as the NCVIA program), but it would also cover instances in which traditional tort litigation is the sole option available to claimants or in which the consideration of a claim presented to an agency was handled informally just like any other FTCA-required prelitigation remedy. The table describes the aspects of these procedures that work to a claimant’s benefit in some way compared with attempting to advance similar claims through ordinary litigation (aspects that affect a claim negatively are generally described in Table S.3). Finally, “Source of Funding” describes the sources that would be used to pay any compensation made available to a successful claimant (the table presumes that such a source might utilize insurance coverage to pay such compensation).

Table S.5. Features of the Compensation Program Associated with Each Framework

<table>
<thead>
<tr>
<th>Framework and Activity</th>
<th>Process for Assigning Responsibility</th>
<th>Advantage to Claimant Relative to Traditional Tort</th>
<th>Source of Funding</th>
</tr>
</thead>
</table>
| Montreal Convention    | Civil lawsuit of claims against a PRP| • Airlines are strictly liable for the first $153,000 in damages.  
• The burden of proof shifts to the defendant to show lack of negligence or third-party cause for damages above $153,000. | Carrier |
<p>| OPA: Designation of responsible parties | Informal internal agency determination of a PRP’s status | • Not relevant; claimant does not participate prior to the initial decision | Not relevant; decision does not trigger payment |</p>
<table>
<thead>
<tr>
<th>Framework and Activity</th>
<th>Process for Assigning Responsibility</th>
<th>Advantage to Claimant Relative to Traditional Tort</th>
<th>Source of Funding</th>
</tr>
</thead>
</table>
| OPA: PRP claim resolutions | Informal internal determination by PRP of claims | • The responsible party is already identified as a result of agency determination.  
• The responsible party is strictly liable.  
• A wide range of damages is available, including pure economic loss.  
• The claiming process is streamlined, with few procedural requirements.  
• It is *presumably* a faster, simpler, and less costly compensation approach than civil litigation. | Responsible party |
| OPA: Agency claim resolutions | Semiformal internal agency determination of claims against the trust fund in lieu of a PRP | • Claims can be advanced against the fund within 90 days of the PRP claim.  
• There is an effective presumption of liability against the OSLTF.  
• A wide range of damages is available, including pure economic loss.  
• It is *presumably* a faster, simpler, and less costly compensation approach than civil litigation. | OSLTF (with potential reimbursement to the OSLTF from the responsible party at a later point) |
| OPA: Agency-initiated civil reimbursement actions | Civil lawsuit brought by an agency against a PRP for claims previously paid | • Not relevant; claimant does not participate because its claims have already been resolved | Responsible party (*claimant* is the OSLTF) |
| OPA: Claim resolution through litigation | Civil lawsuit of claims against a PRP | • The responsible party is strictly liable.  
• A wide range of damages is available, including pure economic loss. | Responsible party |
<p>| Price–Anderson | Civil lawsuit of claims against a PRP | • If an extraordinary nuclear occurrence is declared: (1) liability is presumed, and (2) there is a three-year statute of limitations from the discovery of the injury and its cause. | Layers of private insurance, postincident assessments against members of the industry, and a soft promise by Congress for additional funding if needed |</p>
<table>
<thead>
<tr>
<th>Framework and Activity</th>
<th>Process for Assigning Responsibility</th>
<th>Advantage to Claimant Relative to Traditional Tort</th>
<th>Source of Funding</th>
</tr>
</thead>
</table>
| Swine Flu Act: Agency claim resolutions | Semiformal internal agency determination of claims against the United States | • There are limits on attorneys' fees (assuming no impact on the availability of counsel).  
• Strict-liability theories are available despite a federal defendant.  
• No discretionary-act defense is possible despite a federal defendant.  
• Strict liability would be presumed for claims involving GBS.  
• It is *presumably* a faster, simpler, and less costly compensation approach than civil litigation. | United States (general fund) |
| Swine Flu Act: Claim resolution through litigation | Civil lawsuit of claims against the United States | • There are limits on attorneys' fees (assuming no impact on the availability of counsel).  
• Strict-liability theories are available despite a federal defendant.  
• No discretionary-act defense is possible despite a federal defendant.  
• Strict liability would be presumed for claims involving GBS. | United States (general fund) |
| NCVIA: Agency claim resolutions | Formal adjudication of claims against the United States | • There is no need to prove negligence.  
• If claim meets the VICP table’s tests for vaccine type, side effect type, and time of onset, there is a rebuttable presumption of causation.  
• Reasonable attorneys' fees are available to all good-faith claimants, regardless of outcome.  
• It is *presumably* a faster, simpler, and less costly compensation approach than civil litigation. | Vaccine Injury Compensation Trust Fund financed by $0.75-per-dose excise tax assessed against all manufacturers, distributors, and importers |
| NCVIA: Claim resolution through litigation | Civil lawsuit of claims against a PRP | • None | Vaccine manufacturers or administrators |
### Framework and Activity

<table>
<thead>
<tr>
<th>Framework and Activity</th>
<th>Process for Assigning Responsibility</th>
<th>Advantage to Claimant Relative to Traditional Tort</th>
<th>Source of Funding</th>
</tr>
</thead>
</table>
| Smallpox vaccine acts: Agency claim resolutions | Semiformal internal agency determination of claims against the United States | • There are limits on attorneys’ fees (assuming no impact on the availability of counsel).  
• If the claim meets the smallpox table’s tests for side effect type and time of onset, there is a rebuttable presumption of causation.  
• It is presumably a faster, simpler, and less costly compensation approach than civil litigation. | United States (general fund) |
| Smallpox vaccine acts: Claim resolution through litigation | Civil lawsuit of claims against the United States | • There are limits on attorneys’ fees (assuming no impact on the availability of counsel). | United States (general fund) |

**NOTE:** VICP = Vaccine Injury Compensation Program. The VICP table is the vaccine injury table referenced when someone files a claim under the VICP (see Health Resources and Services Administration, undated). GBS = Guillain–Barré syndrome.

### Speed of Determination

Despite the fact that comprehensive data on time needed to reach a decision regarding responsibility in these frameworks were not always available, it is probably safe to say that the fastest process among our examples involves the initial responsible party assignment under OPA, while the slowest can be anything involving civil litigation, especially if the matter eventually finds its way into the appellate courts. In some of the procedures employed in the frameworks we have reviewed, someone who is potentially responsible for the causes of a catastrophe might see the rapidity with which a decision is made very differently from someone who is attempting to recover financial losses. Table S.6, which provides a sense of how long a particular component of a framework (for example, the consideration of a claim presented to a government agency) might require to reach a conclusion, distinguishes instances in which a claimant’s perspective differs from that of a PRP, if indeed there is such a difference.
<table>
<thead>
<tr>
<th>Framework and Activity</th>
<th>Process for Assigning Responsibility</th>
<th>Time to Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>If the matter goes to trial, possibly years</td>
</tr>
<tr>
<td>OPA: Designation of responsible parties</td>
<td>Informal internal agency determination of a PRP’s status</td>
<td>Can be within 24 hours in some instances</td>
</tr>
<tr>
<td>OPA: PRP claim resolutions</td>
<td>Informal internal determination by PRP of claims</td>
<td>Information regarding claim handling times is not available, but a claimant can proceed against the trust fund or bring a civil lawsuit if the claim is not resolved within 90 days.</td>
</tr>
<tr>
<td>OPA: Agency claim resolutions</td>
<td>Semiformal internal agency determination of claims against the trust fund in lieu of a PRP</td>
<td>For claimants: Most claims appear to be processed within six months to one year. For PRPs: Results of agency claim decisions are not relevant until trust fund reimbursement action is initiated.</td>
</tr>
<tr>
<td>OPA: Agency-initiated civil reimbursement actions</td>
<td>Civil lawsuit brought by an agency against a PRP for claims previously paid</td>
<td>For claimants: Not relevant because individual claims would already have been resolved administratively For PRPs: If the matter goes to trial, possibly years</td>
</tr>
<tr>
<td>OPA: Claim resolution through litigation</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>If the matter goes to trial, possibly years</td>
</tr>
<tr>
<td>Price–Anderson</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>If the matter goes to trial, possibly years</td>
</tr>
<tr>
<td>Swine Flu Act: Agency claim resolutions</td>
<td>Semiformal internal agency determination of claims against the United States</td>
<td>For claimants and defendant-payor (United States): About 13 months on average For PRPs: Not relevant because of the substitution of the United States as defendant-payor</td>
</tr>
<tr>
<td>Swine Flu Act: Claim resolution through litigation</td>
<td>Civil lawsuit of claims against the United States</td>
<td>For claimants and defendant-payor (United States): If the matter goes to trial, possibly years For PRPs: Not relevant because of the substitution of the United States as defendant-payor</td>
</tr>
<tr>
<td>NCVIA: Agency claim resolutions</td>
<td>Formal adjudication of claims against the United States</td>
<td>For claimants: 3.5 years to disposition on average For PRPs: Not relevant because compensation comes from an excise tax-funded trust fund</td>
</tr>
<tr>
<td>NCVIA: Claim resolution through litigation</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>If the matter goes to trial, possibly years</td>
</tr>
</tbody>
</table>
Framework and Activity | Process for Assigning Responsibility | Time to Decision
---|---|---
Smallpox vaccine acts: Agency claim resolutions | Semiformal internal agency determination of claims against the United States | *For claimants and defendant-payor (United States):* Information regarding claim handling times is not available. 
*For PRPs:* Not relevant because of the substitution of the United States as defendant-payor

Smallpox vaccine acts: Claim resolution through litigation | Civil lawsuit of claims against the United States | *For claimants and defendant-payor (United States):* If the matter goes to trial, possibly years 
*For PRPs:* Not relevant because of the substitution of the United States as defendant-payor

Perhaps not surprisingly, the level of formality associated with the making of a decision appears to drive time to disposition. At one extreme would be the OPA initial responsible party designation mentioned above, which, depending on the circumstances, could be rendered in a matter of just a few hours after the discovery of an oil discharge. Increased formality in terms of rules of rights and responsibility come into play in proceedings in which a government agency makes an administrative determination of a claim presented to it, such as when OPA claimants proceed against the OSLTF to recover damages or recovery costs or when Swine Flu Act and smallpox vaccine act claimants seek compensation from the Secretary of Health and Human Services for vaccine-related injuries. The decisionmaker is the same entity that is the target of the claimant request for compensation, and, perhaps for that reason (or in spite of it), the time for consideration from the claimant’s perspective is generally less than a year for OPA and slightly over a year for the Swine Flu Act.

Once third-party neutrals do get involved, time to reach a decision increases markedly. A claim presented as part of the NCVIA’s VICP comes in the form of a petition filed with the U.S. Court of Federal Claims by a claimant (the petitioner) against the Health and Human Services Secretary (the respondent). The process typically approaches three and a half years from the claimant’s standpoint. The civil courts are the sole forums used for claims brought under Montreal or Price–Anderson and certain other aspects of the other frameworks (such as suits against the United States after the administrative claim process was exhausted in the Swine Flu Act and smallpox vaccine acts). In all of these situations, the time to final resolution could take as long as any ordinary civil litigation involving issues of similar complexity and stakes.

**Party Rights and Limitations**

From the standpoint of both potentially responsible parties and claimants, the “fairness” of the responsibility-assignment process is presumably driven by a belief (or lack thereof) that the decisionmaker is impartial and that there is some meaningful level of control or opportunity to participate in the decisionmaking. The illustrative frameworks we have reviewed differ markedly in the procedures in place to provide parties with this sense of fairness. Table S.7 presents an overview of the features of various procedures within the six frameworks of interest that speak to the perception of fairness, distinguishing those features, when necessary,
by whether they benefit a potentially responsible party or a claimant. Some of the procedural mechanisms in the table use a trial in open court as the primary decisionmaking tool for determining responsibility and claim value. Ordinary civil litigation provides a long-standing structure for reaching a decision that essentially incorporates every single fairness bell and due-process whistle available under the current state of U.S. law.

Perhaps one step down on the fairness appearance ladder are situations that involve some sort of adjudication using administrative law judges (or their equivalent) and relatively formal rules and procedures. This description most closely fits the manner in which claims presented under the NCVIA are considered. In contrast are semiformal agency determinations in which the decisionmaker has some sort of preexisting relationship with what might be thought of as an interested party. For example, claims submitted against the OSLTF under OPA are evaluated and ruled on by a unit of the Coast Guard, the same entity that is likely to have made the original decision to designate a specific entity or individual as the responsible party. The means by which an agency under OPA identifies and subsequently designates a responsible party soon after an oil discharge is discovered is arguably the least fair, in outward appearance, of all of the processes listed in Table S.7. The party is unlikely to have any meaningful input into that decision, even presuming that it is on sufficient notice that a determination was in progress.

Table S.7. Fairness-Related Features of the Responsibility Determination Process

<table>
<thead>
<tr>
<th>Framework and Activity</th>
<th>Process for Assigning Responsibility</th>
<th>Rights and Limitations of Parties</th>
<th>Opportunities for Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>Full due-process rights</td>
<td>Can seek appellate review</td>
</tr>
</tbody>
</table>
| OPA: Designation of responsible parties | Informal internal agency determination of a PRP’s status | *For claimants*: Not relevant because claimants do not participate  
*For PRPs*: Limited ability to challenge or submit evidence in advance of a decision; might have no knowledge of action being taken | *For claimants*: Not applicable  
*For PRPs*: Limited opportunity for immediate reconsideration; might be able to challenge during subsequent agency civil reimbursement action |
| OPA: PRP claim resolutions | Informal internal determination by PRP of claims | *For claimants*: Can satisfy the initial claiming requirement with a minimal request, but standards for bringing a successful claim are not always clear  
*For PRPs*: Considerable control over claim evaluation | *For claimants*: None for the underlying decision, but, if a claimant remains unsatisfied, that claimant can proceed de novo against the OSLTF administratively or against the PRP in district court  
*For PRPs*: Not relevant because the PRP alone makes the decision to pay or deny the claim |
<table>
<thead>
<tr>
<th>Framework and Activity</th>
<th>Process for Assigning Responsibility</th>
<th>Rights and Limitations of Parties</th>
<th>Opportunities for Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPA: Agency claim resolutions</td>
<td>Semiformal internal agency determination of claims against the trust fund in lieu of a PRP</td>
<td>For claimants: Agency regulations specifically address claim procedures. For PRPs: Not directly relevant because the responsible party is not usually involved</td>
<td>For claimants: Can request reconsideration of the decision or seek limited review in district court; if a claimant remains unsatisfied, that claimant can seek appellate review or proceed de novo against the PRP in district court For PRPs: Not as part of this process, although defenses could be put forth if an agency seeks reimbursement through court action</td>
</tr>
<tr>
<td>OPA: Agency-initiated civil reimbursement actions</td>
<td>Civil lawsuit brought by an agency against a PRP for claims previously paid</td>
<td>Full due-process rights</td>
<td>Can seek appellate review</td>
</tr>
<tr>
<td>OPA: Claim resolution through litigation</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>Full due-process rights</td>
<td>Can seek appellate review</td>
</tr>
<tr>
<td>Price–Anderson</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>Full due-process rights</td>
<td>Can seek appellate review</td>
</tr>
<tr>
<td>Swine Flu Act: Agency claim resolutions</td>
<td>Semiformal internal agency determination of claims against the United States</td>
<td>For claimants: Agency staff created claim procedures without specific regulatory authority. For PRPs: Not directly relevant following substitution of the United States as defendant-payer</td>
<td>For claimants: Can request reconsideration; if a claimant remains unsatisfied, that claimant can proceed de novo against the United States in district court For PRPs: Not directly relevant following substitution of the United States as defendant-payer</td>
</tr>
<tr>
<td>Swine Flu Act: Claim resolution through litigation</td>
<td>Civil lawsuit of claims against the United States</td>
<td>For claimants: Full due-process rights For PRPs: Not directly relevant following substitution of the United States as defendant-payer</td>
<td>For claimants: Can seek appellate review For PRPs: Not directly relevant following substitution of the United States as defendant-payer</td>
</tr>
<tr>
<td>Framework and Activity</td>
<td>Process for Assigning Responsibility</td>
<td>Rights and Limitations of Parties</td>
<td>Opportunities for Review</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------</td>
<td>----------------------------------</td>
<td>--------------------------</td>
</tr>
</tbody>
</table>
| NCVIA: Agency claim resolutions | Formal adjudication of claims against the United States | *For claimants:* Adjudication by a third-party neutral; claim procedures are specifically addressed by rules of court and agency regulations; attorneys' fees are paid even if a claim is unsuccessful; judicial oversight of proceedings but limited due-process rights (e.g., discovery is at the discretion of the special master)  
*For PRPs:* Not directly relevant given that any payments will come from the trust fund | *For claimants:* Can seek review of special master decisions by a judge of the U.S. Court of Federal Claims, then seek appellate review; if a claimant remains unsatisfied, that claimant can proceed de novo against the PRP in district court  
*For PRPs:* Not directly relevant given that any payments will come from the trust fund |
| NCVIA: Claim resolution through litigation | Civil lawsuit of claims against a PRP | Full due-process rights | Can seek appellate review |
| Smallpox vaccine acts: Agency claim resolutions | Semiformal internal agency determination of claims against the United States | *For claimants:* Agency regulations specifically address claim procedures.  
*For PRPs:* Not directly relevant following substitution of the United States as defendant-payor | *For claimants:* The claimant could request reconsideration of the decision, although appellate review would not be permitted; if a claimant remains unsatisfied, that claimant can proceed de novo against the United States in district court  
*For PRPs:* Not directly relevant following substitution of the United States as defendant-payor |
| Smallpox vaccine acts: Claim resolution through litigation | Civil lawsuit of claims against the United States | *For claimants:* Full due-process rights  
*For PRPs:* Not directly relevant following substitution of the United States as defendant-payor | *For claimants:* Can seek appellate review  
*For PRPs:* Not directly relevant following substitution of the United States as defendant-payor |

**Leakage to Civil Litigation**

An important measure of the “success” of a framework involves the degree to which it fully addressed the responsibility-assignment needs of the types of incidents for which it was designed—in other words, the extent to which ancillary litigation was avoided (Table S.8). Note that, in all of these frameworks, the potential exists for significant levels of litigation over matters related to the underlying adverse event. This might include, for example, lawsuits over insurance coverage or co-responsible party contribution. Table S.8 describes only litigation initiated by the individuals and entities that might also bring claims for damages, remediation, or reimbursement against the types of responsible parties that were the focus of the six frameworks of interest.
Table S.8. Litigation Potential Outside of the Framework

<table>
<thead>
<tr>
<th>Framework</th>
<th>Potential for Ancillary Litigation</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>High</td>
<td>Litigation against an airframe, engine, or component manufacturer; Federal Aviation Administration; first responders; and similar entities falls outside of the convention.</td>
</tr>
<tr>
<td>OPA</td>
<td>Variable</td>
<td>There is no significant restriction on claimants to pursue recovery from a designated responsible party via lawsuit; other actors believed to be at fault can be sued without liability cap concern, but the potential is probably minor for incidents with damages well within the liability cap.</td>
</tr>
<tr>
<td>Price–Anderson</td>
<td>Low</td>
<td>The definition of nuclear incident is very broad, although diminished property value claims could be an important exception.</td>
</tr>
<tr>
<td>Swine Flu Act</td>
<td>Low</td>
<td>There is little reason to go outside the act.</td>
</tr>
<tr>
<td>NCVIA</td>
<td>Moderate</td>
<td>The trend in appellate opinions has been to make the act the exclusive remedy for all listed vaccine claims, but there have been many attempts to advance autism and thimerosal lawsuits.</td>
</tr>
<tr>
<td>Smallpox vaccine acts</td>
<td>Low</td>
<td>There is little reason to go outside the act.</td>
</tr>
</tbody>
</table>

Montreal is perhaps the most “leaky” in this regard because aviation litigation is a target-rich environment, especially in the period following the disaster, when so much about the circumstances leading up to the incident is still unknown. There are few downsides to filing suit against many types of defendants in addition to the airline, thus allowing for flexibility in amending complaints as needed as more information is made available. The spillover is perhaps greatest in situations in which aspects of Montreal prevent claims for damages from employing local laws believed to be especially generous.

At the other end of the spectrum are Price–Anderson, the Swine Flu Act, and the smallpox vaccine acts. The definition of what constitutes a nuclear incident in Price–Anderson is extremely broad, and the focus of the act’s liability shield is really about the incident rather than just certain parties, which means that essentially no actors with potential liability for the radiation release will be subject to a lawsuit separate from one brought against the plant’s owner or operator. That said, recent appellate law suggests that one possibly important exception might involve claims of diminished property values in the absence of any actual physical damage or radiation exposure. For the two vaccine programs, the potential for extraframework litigation is also low: The rules (especially in the form of liability protections) are structured in such a way as to make administrative relief the only realistic avenue to any compensation at all.
Conclusions

The Long Shadow of Tort

The detailed examination in our report of how each of the example frameworks were utilized during mass adverse events after their implementation yielded some important conclusions. One was that the American tort liability system and its hallmark of fully featured due process in the context of court adjudication will always provide the backdrop for the implementation of any legislatively enacted framework. Tort litigation will continue to be perceived as the primary safety valve for those who are dissatisfied with any alternative process. It is simply not possible for a legislature to impose an alternative regime so airtight in its restrictions that civil litigation is never an option; no matter what clever steps are taken, it is highly likely that competent counsel will find a way around the roadblocks or at least subject them to repeated challenges. And if access to the tort system is considered too difficult or expensive, injured parties who believe they are without meaningful recourse will turn to other options to address their postdisaster needs, such as employer-funded health care, workers’ compensation, Medicare, the bankruptcy courts, or government disability benefits, thus placing undue stress on programs that were never designed to deal with catastrophe-level losses. Given that reality, policymakers desiring to create a functional alternative model for determining responsibility should be less concerned with building an impregnable wall against ancillary litigation and instead focus on crafting an administrative process that serves as an attractive alternative to tort, so much so that those with potential claims will be incentivized to participate rather than to seek to opt out at any cost.

The other side of the coin involves those who are the subject of a responsibility determination. Some corporate defendants might perceive the tort system as particularly frustrating in the face of what is asserted to be asymmetrical litigation and outsized transactional expenses, but the system does provide the same rights of discovery, open trial, and opportunities for appeal to both sides. In the context of a major disaster, in which the assignment of liability triggering significant financial implications might result from little more than informal administrative decisionmaking, having one’s day in court might be preferred. The same need to make an alternative approach attractive to claimants also applies to potentially responsible parties: If they perceive the process to be unfair or a waste of time and money, or less likely to resolve disputes with certainty and finality, they will either look elsewhere for adjudicating their disputes or refrain from conducting the types of activities the alternative framework was designed to support.

Creating a Viable Alternative to Traditional Tort

Our case studies also suggested that something more than just strong political will is needed to make long-term changes in the traditional legal relationship between those who bear some responsibility for the genesis of a disaster and those who actually have to endure its consequences. It is certainly possible to enact a framework that reduces the liability exposure of a favored party without including some sort of corresponding compensation program. In the shadow of a looming national emergency or when it is likely that the number of individuals or
businesses that the restrictions might adversely affect is small, widespread political opposition during the run-up to passage might well be muted. But when these new rules are actually put to the test following a disaster and stories begin to circulate of otherwise-blameless families and enterprises finding themselves without full legal recourse, the subsequent pressure to radically change the framework or repeal it altogether might be irresistible. If the claim side of the equation is not addressed in a manner that is widely perceived to be fair, in a time of crisis, the sustainability of the larger framework will be in doubt.

**Key Needs for a Successful Framework**

All of the example frameworks we reviewed contained the following features in varying forms:

- a set of underlying goals for making the effort to change traditional tort
- various protections for individuals and entities that would otherwise find themselves embroiled as defendants in litigation
- narrowly drawn definitions for identifying those individuals and entities
- a description of the circumstances under which those protections could be denied
- a program or changes in existing rules to address the losses incurred by members of the public, government bodies, and private organizations that would otherwise be handled by the traditional tort system
- narrowly drawn definitions of those who would be eligible for such compensation
- a means to fund such compensation both in terms of payout and in terms of the resources required to handle expected workload
- appropriate procedural protections for both potentially responsible parties and claimants to provide a meaningful sense of fairness.

But despite the above-described commonalities, the frameworks we reviewed arguably differed significantly in how well they served to address the goals originally intended by policymakers and how they were received by those who shoulder the consequences of whatever activity or industry received special consideration. To the extent that any of the example frameworks were perceived as inadequate or flawed when implemented, it is often because their designers did not fully flesh out necessary details in their haste to change the status quo, or because they did not consider how the program’s features would play out under real-world conditions and when involving actual, rather than just theoretical, stakeholders.

The strengths and weakness in our example frameworks suggest that policymakers must address some fundamental issues during the design phase. To start with, policymakers must **assess how well any proposed framework would operate in the context of a truly horrific incident** with widespread destruction and suffering. Policymakers need to think long and hard about whether the programs they are championing will work as planned when subjected to stresses arising not from the most likely worst-case scenario (the one imagined during program design) but instead from the worst-possible-case scenario. A key test would be whether, under such an assumption, the program could continue to operate as intended, whether additional resources or guidance could be provided as needed to adequately respond to the unanticipated demand, or whether it would break down completely and lead to irresistible pressure on Legislators to jettison the entire framework.
A framework can change the rules of tort, but it cannot completely tilt the balance of the new regime in favor of one type of stakeholder over another and survive for any length of time without undermining the political consensus that supported its creation. Framework designers must incorporate realistic means for claimants to seek redress of losses that are no longer available through traditional tort remedies. This does not imply that claimants must always collect every penny that might be awarded in a trial verdict, but completely blocking access to meaningful compensation within the framework is not an option.

It is also important to make sure that the program can operate effectively the moment the disaster first unfolds. Compensation funds financed by excise taxes or through congressional appropriations need to be in place long before the first claims are received. There must be at least realistic plans for quickly and adequately staffing administrative programs for deciding responsibility or processing claims when needed. Equally important would be to have clear guidelines in place for making claims and evaluating their merit long before the need arises.

To facilitate an appropriately rapid response when the need arises, legislators should provide adequate guidance to administrators to implement a program that accurately reflects legislative intentions and expectations. Administrative agencies are certainly in the best position to develop the detailed procedures that PRPs and claimants must follow, but they should not be given unlimited latitude when determining the substantive rules for liability determinations and compensation decisions. Such foundational issues should be addressed through open debate by elected representatives seeking consensus rather than by bureaucrats who might have their own agendas in mind.

In the same vein, legislators should highlight the framework's primary goals and purposes. Administrators need this sort of general road map to help guide their design decisions; judges require it as well to more accurately interpret how the law should be applied; and the public at large is no less deserving of legislative transparency.

Every framework we discussed required some commitment of government resources, whether it involved providing judges and courtrooms, the creation and financing of large trust funds, the development of an administrative bureaucracy for processing claims, or even making assurances that those with losses will be compensated in some way. Such government commitments to follow through on program infrastructure and funding must be realistic and firm.

Planners have to consider the possibility that the most attractive and obvious deep pocket might no longer exist after the dust settles. What happens when the proximate cause for losses incurred across a region is essentially assetless or has vanished? Designing a program to operate successfully even if a responsible party has not been identified or is no longer financially viable is a critical need. Making sure that some sort of credible governmental backstop is in place seems like a necessary component of any framework that purports to deal with the liability consequences arising from a potential catastrophe.

Program designers must also anticipate a potential for strong resentment from various quarters regarding the rules for liability limitations and compensation. If these apparent
inequities are believed to be critical features of a framework that is intended to be an alternative to traditional tort, then stakeholders, policymakers, and the general public need to be firmly convinced of their importance in addressing the consequences of a disaster. Indeed, making the strongest public case possible for these program features might be nearly as important as designing them correctly.

What would happen if the program were seen as an inadequate solution for the needs of large numbers of individuals and organizations? Parties will not hesitate to bypass the framework in favor of alternative approaches that they perceive to be fairer, quicker, or less expensive. Policymakers need to plan for some sort of backstop solution to deal with a mass exodus from any alternative process, perhaps considering a way to consolidate massive numbers of claims before a single court, or having procedures in place to rapidly ramp up the hiring of special masters to help move cases along.

Finally, perhaps to state the obvious, any alternative responsibility-assignment framework that seeks to change the rules regarding traditional tort, especially if affecting state tort claims, must be designed from the start to withstand almost certain appellate challenge. Presumably, all federal legislation is drafted with a good-faith intent to comply with existing constitutional and statutory requirements, but, in the aftermath of a catastrophe, a long, drawn-out cycle of appellate challenges and subsequent legislative corrections to fix ill-considered language is not a process the public welfare can afford.

Looking Forward
In the context of planning for legal determinations following a disaster, policymakers have essentially three options available. First, they could cross their fingers and hope that what is already in place will work for a catastrophe of regional or national proportions. To the extent that existing frameworks, such as OPA and Price–Anderson, are insufficient to handle the load or do not apply, the tort system is not unfamiliar with the problem of addressing the consequences of mass adverse events, although, as measured by the eight years needed to resolve most Hurricane Katrina-related litigation, the process will be anything but rapid.

They could wait until events unfold, when they would have the best idea of who is affected, what their specific needs are, and what features would be most helpful. Such an ex post, ad hoc approach maximizes the amount of political will that would be needed to move a radical proposal through an otherwise-sluggish and suspicious legislature. An argument could be made that, even with foreknowledge that certain actors were considering plans to use hijacked civilian airliners as instruments of mass terror, an idea like the September 11th Victim Compensation Fund of 2001 would never have made it out of committee before the tragic events of that day unfolded. The problem is that the window of opportunity will be short, and little time would be available for any sort of thoughtful consideration of viewpoints or exploration of alternative approaches.

Something between these two extremes is most advisable. The United States could take steps now to develop a template of general rules and policies for a comprehensive framework that can be easily and quickly adapted to the particular circumstances of any sort of future disaster.
Imagine, for example, an OPA-like scheme that had already been discussed, tweaked, and vetted, ready to be applied the moment that a one-two-three punch like the March 2011 Tōhoku earthquake, tsunami, and reactor meltdown hits with enough power to overwhelm traditional American jurisprudence. In this period of relative calm, the United States has the time and resources to come up with a plan that can benefit from the considerable body of research on these issues, from an effort to build consensus across a wide range of stakeholders, and from reasoned debate without the usual pressure to just do something—anything—in the immediate aftermath of a crisis. It has that luxury now, and it would be irresponsible not to take advantage of our good fortune.
Acknowledgments

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Lisa Bernard performed her usual professional and thorough job of editing and organizing the final version of the report. Kathryn Kuznitsky contributed significantly during the review stage of this report. Jayne Gordon provided invaluable administrative support throughout our effort.
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AEC</td>
<td>Atomic Energy Commission</td>
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<tr>
<td>AED</td>
<td>automated external defibrillator</td>
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<tr>
<td>ALJ</td>
<td>administrative law judge</td>
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<tr>
<td>APA</td>
<td>Administrative Procedure Act</td>
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<tr>
<td>ATSA</td>
<td>Aviation and Transportation Security Act</td>
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<tr>
<td>ATSSSA</td>
<td>Air Transportation Safety and System Stabilization Act of 2001</td>
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<tr>
<td>CAA</td>
<td>Clean Air Act</td>
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<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<td>CICP</td>
<td>Countermeasures Injury Compensation Program</td>
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<tr>
<td>CSB</td>
<td>U.S. Chemical Safety and Hazard Investigation Board</td>
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<td>CWA</td>
<td>Clean Water Act</td>
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<tr>
<td>DHS</td>
<td>U.S. Department of Homeland Security</td>
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<tr>
<td>DOJ</td>
<td>U.S. Department of Justice</td>
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<tr>
<td>DTP</td>
<td>diphtheria, tetanus, and pertussis</td>
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<tr>
<td>DWPA</td>
<td>Deepwater Port Act of 1974</td>
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<tr>
<td>EAB</td>
<td>Environmental Appeals Board</td>
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<tr>
<td>ENO</td>
<td>extraordinary nuclear occurrence</td>
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<tr>
<td>EPA</td>
<td>U.S. Environmental Protection Agency</td>
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<tr>
<td>FAA</td>
<td>Federal Aviation Administration</td>
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<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
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FOSC  federal on-scene coordinator
FTCA  Federal Tort Claims Act
FY    fiscal year
GAO   U.S. Government Accountability Office
GBS   Guillain–Barré syndrome
GT    gross ton
HEW   U.S. Department of Health, Education, and Welfare
HHS   U.S. Department of Health and Human Services
HSA   Homeland Security Act of 2002
IIT   incident investigation team
IOM   Institute of Medicine
JFK   John F. Kennedy International Airport
LAX   Los Angeles International Airport
MDL   multidistrict litigation
MMR   measles, mumps, and rubella (vaccine)
MODU  mobile offshore drilling unit
MSHA  Mine Safety and Health Administration
NCVIA National Childhood Vaccine Injury Act of 1986
NPFC  National Pollution Funds Center
NRC   U.S. Nuclear Regulatory Commission
NTSB  National Transportation Safety Board
OALJ  Office of Administrative Law Judges
OCSLA Outer Continental Shelf Lands Act
<table>
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<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>OPA</td>
<td>Oil Pollution Act of 1990</td>
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<tr>
<td>OSLTF</td>
<td>Oil Spill Liability Trust Fund</td>
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<tr>
<td>PHSA</td>
<td>Public Health Service Act</td>
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<tr>
<td>PREPA</td>
<td>Public Readiness and Emergency Preparedness Act of 2005</td>
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<tr>
<td>PRP</td>
<td>potentially responsible party</td>
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<tr>
<td>RECA</td>
<td>Radiation Exposure Compensation Act</td>
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<tr>
<td>SAFETY</td>
<td>Support Anti-Terrorism by Fostering Effective Technologies</td>
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<tr>
<td>SDR</td>
<td>special drawing right</td>
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<tr>
<td>SEPPA</td>
<td>Smallpox Emergency Personnel Protection Act of 2003</td>
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<tr>
<td>TAPAA</td>
<td>Trans-Alaska Pipeline Authorization Act of 1973</td>
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<tr>
<td>TMI</td>
<td>Three Mile Island</td>
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<tr>
<td>TRIA</td>
<td>Terrorism Risk Insurance Act</td>
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<tr>
<td>USPHS</td>
<td>U.S. Public Health Service</td>
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<tr>
<td>VCF</td>
<td>September 11th Victim Compensation Fund of 2001</td>
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<tr>
<td>VICP</td>
<td>National Vaccine Injury Compensation Program</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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Chapter One: Introduction

Overview

Throughout much of the history of U.S. civil jurisprudence, the paradigmatic legal dispute was one in which a limited number of individuals or entities advanced claims against an equally limited number of individuals or entities believed to be responsible for various economic and noneconomic losses. The model incorporated an extremely liberal ability for each party to discover—and subsequently present at trial—a wide range of evidence supporting its position. There was an implicit assumption that the resolution of a dispute would affect the interests and behaviors of the parties alleging and defending such claims almost exclusively because the concerns and actions of those not directly involved in the instant matter were to be of scant importance to the decisionmakers. The decisionmakers themselves would be either a randomly chosen judge or a jury made up of ordinary citizens, none of whom was presumed to have any special insight into technical, scientific, or public policy issues associated with the dispute prior to jury selection. The decisionmakers would be given great deference in how they chose to resolve the dispute, with wide latitude in assigning responsibility or assessing compensation. Multiple stages of postdecision review, perhaps requiring years to complete, would serve to ensure that the outcome of the deliberations was a reasoned one. This model reflected itself in the court rules, legislative enactments, and appellate authority that developed over the decades to regulate litigation in this country, establishing a framework that would, one hopes, ensure that due process for the affected parties was exercised at every step, even if at the expense of apparent efficiency, a speedy resolution, or modest transaction costs.

An argument can be made, however, that this model does not work as well when

- the dispute involves not a few parties but instead tens or even hundreds of thousands
- circumstances require that any decision be made with all deliberate speed
- the utmost importance is placed on discovering the underlying causes of the problem and not just the specific legal relationship between two parties
- the outcome of the deliberative process needs to be as predictable as possible, in which the decisionmakers might need to have special skills or knowledge to grasp the complexity of the situation before them
- solutions must be crafted to prevent recurrence of the problem and to remediate its immediate effects.

These are conditions in which a dispute resolution process that places an emphasis on moving slowly and deliberatively, is narrowly focused, and is of concern primarily to a select few might not always be the optimal path. These are also conditions that can describe society's interests in how responsibility should be assessed following a catastrophe with a human origin, an event
that has caused widespread human suffering, massive financial losses, significant property
damage, and substantial disruption to order, security, and individuals’ senses of well-being.

This report reviews various alternatives to relying exclusively on traditional civil litigation to
assign responsibility for the causes of a human-caused catastrophe and to determine the types
of losses that a designated responsible party must reimburse an injured party. It reviews
examples of circumstances in which statutory substitutes for the traditional tort system have
been adopted for dealing with at least some of the consequences of widespread harm,
describing the approaches taken and providing assessments of how these substitute systems
have operated in practice. Such historical examples offer useful insight as to some of the
choices available for building alternative mechanisms for assigning responsibility and help
describe the policy aims and values that led to their adoption. Our goal is to provide a resource
that policymakers can consult when planning how to respond after a major adverse event
should they conclude that traditional civil litigation might not be the best way to assign
responsibility. We do not, however, address the underlying question of whether an alternative
to ordinary litigation is actually needed for any particular type of adverse event.

This report does not directly address issues related primarily to the distribution of
compensation to individual claimants. Those issues have been studied a good deal elsewhere. Nevertheless, it can be difficult to neatly separate responsibility assignment from compensation delivery when attempting to examine either task. Although there have been disaster compensation systems in which the underlying responsibility for the event is a complete nonissue in terms of funding those systems or deciding how money would be allocated among victims (the Hokie Spirit Memorial Fund created by voluntary donations after the 2007 mass shooting at Virginia Polytechnic Institute and State University would arguably be one example), and some means for determining causal responsibility for a major accident have no direct link to financial responsibility (an investigation conducted by the National Transportation Safety Board [NTSB], for example), a perhaps more common approach involves identifying potentially responsible parties (PRPs) with an eye toward financing the distribution of any compensation. A related matter can involve the need to make a determination of whether the specific injuries or damages being claimed are actually the result of the actions of the party asserted to be responsible for the incident. When such issues involve the assignment of responsibility, we address them in this report.

In the remainder of this introductory chapter, we define some of the key terms we use in this
document, review goals and important functions of a responsibility-assignment process, and
lay out the organization of this report.

\[\text{References}\]

15 See, e.g., CPR Institute for Dispute Resolution, 2011.
17 Indeed, in classic tort law theory, the question of compensation affects the question of responsibility. Along with other elements of negligence, the losses that a plaintiff alleges must be proven to exist or there cannot be a finding of legal responsibility on the part of the defendant (in other words, no injury means no tort).
Terminology

Catastrophes and Disasters

Our interest here is on what we describe as *catastrophes*, a term we employ interchangeably with *disasters*. Certainly, more-nuanced definitions for catastrophes have developed in the literature, perhaps reflecting a perception that certain events in the past 30 years or so were fundamentally different in magnitude and impact from “ordinary” disasters.\(^\text{18}\) Examples include the 2011 Tōhoku earthquake, tsunami, and related events at the Fukushima Daiichi nuclear power plant complex; the combined impact of Hurricanes Katrina and Rita in 2005; the 1986 Chernobyl nuclear power plant accident; the 2004 Indian Ocean earthquake and tsunami; the 1984 release of methyl isocyanate gas in Bhopal; the 2010 earthquake in Haiti; and the 1991 Bangladesh cyclone. From this perspective, adverse incidents can be placed on a continuum of magnitude, with distinct categories ranging from (from least impact to greatest) *emergencies* to *disasters, catastrophes*, and, ultimately, to an *extinction-level event*.\(^\text{19}\) For example, the U.S. Department of Homeland Security (DHS) defines a catastrophic incident as any natural or manmade incident, including terrorism, that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions.\(^\text{20}\)

The term *extraordinary levels* is not defined by DHS specifically, but the agency does provide examples of incidents that are likely to meet the test:

- chemical, biological, radiological, nuclear, or high-yield explosive weapons of mass destruction, large-magnitude earthquakes, or other catastrophic incidents affecting heavily populated areas.\(^\text{21}\)

We employ a more moderate definition of *catastrophe* simply for the reason that events clearly meeting the DHS threshold have, thankfully, been relatively rare occurrences in the United States in the past half century. To be inclusive as possible, we also avoid narrowly defining our use of the term by using quantifiable measures (such as minimum levels of deaths, property damage, injuries, or direct insured losses) or official designations (such as a presidential declaration of a major disaster under the Stafford Act).\(^\text{22}\) Under our conceptualization, a

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\(^{18}\) See, e.g., Bissell, 2013, pp. 3–4 (catastrophes have a transnational impact and a high degree of complexity of aftereffects); Quarantelli, 2006 (catastrophes are events that prevent resources within the affected area, as well as those in surrounding communities, from providing assistance, with near-total disruption of everyday life); and Sugarman, 2007 (major disasters are harms that are catastrophic to many people and often sufficiently grave to overtax the capacity of moderate and larger communities to deal with the consequences).

\(^{19}\) Oliver, 2010.

\(^{20}\) DHS, 2006, p. 42.

\(^{21}\) DHS, 2006, at p. 42.

\(^{22}\) Robert T. Stafford Disaster Relief and Emergency Assistance Act, Pub. L. No. 100-707 (1988). Despite the great significance that the media, industry, and governmental bodies place on presidential disaster declarations, not every major disaster is so labeled. For example, the March 1989 *Exxon Valdez* oil spill in Prince William Sound, Alaska, is not listed on the Federal Emergency Management Agency’s (FEMA’s) website as an incident granted major-disaster status during that year (FEMA, undated).
catastrophe is a mass adverse event that unfolds rapidly and causes significant loss (such as property damage, financial losses, personal injuries, or environmental damage) to many or over a wide area, although we are mindful of the fact that rapidly, significant, many, and wide are certainly subjective terms.

Human-Caused Versus Natural Disasters

The focus of this report is on assigning responsibility to persons or entities; as a result, we have a similar focus on what are referred to as human-caused disasters—in other words, mass adverse events with anthropogenic origins. That said, the events surrounding a natural disaster can lay the foundation for a human-caused one. Although there might not be any direct links between humans and the genesis of a low-pressure system in the mid-Atlantic that later develops into a category 5 hurricane, the effects of that storm might be alleged to have been exacerbated by the actions (or inactions) of government agencies, construction companies, architects, levee builders, insurers, emergency responders, chemical storage companies, or ordinary citizens, thus creating circumstances in which some type of determination of responsibility takes place.

Responsibility

For the purposes of this report, we might use the terms responsibility, liability, blame, guilt, and fault essentially interchangeably. In actuality, each of those words can have different implications depending on the setting. For example, it might be said that a company was responsible for a chemical leak at its manufacturing plant (it was its plant, its chemicals, and its employees) but not really at fault because the company had taken all appropriate safety precautions, the incident was not reasonably foreseeable, a third party intentionally triggered the leak, or other factors. Nevertheless, responsibility and its synonyms as used herein simply imply some sense of accountability; legal, financial, moral, or otherwise.

Note that our interest in responsibility is not solely in identifying the root or proximal cause of a catastrophe. Actions that are asserted to contribute, to any degree, in the sequence of events leading to onset are in play, as are postonset actions that also lead to additional loss, damage, or incurred costs.

Compensation

We use the term compensation to refer to financial payments or other assistance arising out of one of the processes that are the subject of this report, regardless of the underlying purpose for such payments. A perhaps more common use of the term implies some sort of legal or moral duty on the compensator's part that led to providing the payment or assistance. For example, one source defines compensation as “something given or received as an equivalent for services, debt, loss, injury, suffering, lack, etc.; indemnity,” essentially a type of quid pro quo, which would clearly cover situations in which a court ordered a party to a lawsuit to pay damages, in which an individual or entity voluntarily chose to make a payment in order to “make up” in some way for causing harm to others, or in which there was an existing

23 “Compensation,” undated.
contractual obligation (such as when an insurer settles a claim with a policyholder). We employ the term more broadly and include, for example, financial aid provided by philanthropic organizations and government programs that might have no purpose other than to ameliorate the suffering of others.

**Responsibility-Assignment Processes**

Our report looks at the different approaches, or *frameworks*, that are used to address the legal relationships between parties following a catastrophic event (the term *liability regime* embraces a similar concept). Generally, our interest lies in examining frameworks in which some aspect of responsibility can assigned by means other than the exclusive use of traditional tort litigation (although traditional tort rules might be in play in some other aspect of the framework). We will return shortly to what we mean by *framework* but start by defining the *processes* that are used within these frameworks to make those assignments. These processes typically arise out of legislatively enacted statutes, administrative-agency regulations and procedures, and appellate case law. Processes can also be defined by contractual relationships between individuals or entities, or even independent actions of a party. An example of a process would be a U.S. Environmental Protection Agency (EPA) administrative determination that a certain property was a federally regulated wetland and that recent construction work had violated applicable regulations. An NTSB investigation into the root causes of an accident would be another example. Traditional tort litigation is yet another process that might be utilized for assigning responsibility. In Chapter Two, we describe different types of processes in greater detail.

These processes generally have a well-defined structure. The NTSB does not examine the causes of transportation incidents out of idle curiosity; rather, it does so because federal law requires the agency to conduct independent accident investigations and determine probable cause and to do so by following specific procedures. Controlling statutes and regulations outline the precise procedures that the board must follow during incident investigations, emphasize that the investigation is a nonadversarial process, place other federal agencies on notice that the NTSB’s activities take priority over other investigations, set forth the right of anyone interviewed to have a representative present, provide board employees with wide powers to collect information and examine evidence, identify which stakeholders (such as the operator of an aircraft, the manufacturer of an aircraft’s engine, or the pilots’ union) can be formal parties and participate in the investigation, and place limits on how the investigation’s results can be used in separate any suit or action for damages.\(^\text{24}\)

Not all of the processes described in this report can be employed following every type of catastrophic incident. Rules that define the process might limit its use to specific circumstances, such as, for example, offshore events (versus those on land), industrial releases of chemical gases (versus radiation releases), or incidents involving international travel (versus domestic transit). The short- and long-term impacts of any responsibility assignment can vary with the process as well. Some have little direct effect on the relationships between parties found to be responsible and those who believe that they have been harmed by those parties’

\(^{24}\) See, e.g., 49 C.F.R. Part 831 et seq.
actions. Other processes, such as traditional tort litigation, can lead to court-ordered seizures of personal, real, or intangible property, potentially bankrupting those found to be responsible. And it is important to note that any single incident, such as a chemical-plant explosion or freight-train derailment, can trigger multiple processes operating sequentially or in parallel, sometimes complementing each other, sometimes working at cross-purposes.

It should be noted that, although our interest is in how responsibility might be affixed following a catastrophe, the processes examined in this report are most often employed under relatively mundane circumstances. Traditional tort litigation, for example, is concerned primarily with assigning responsibility for incidents arising out of minor fender benders and other motor vehicle collisions, if the number of lawsuits filed in courts throughout the country is any indication. And although NTSB investigations target the nation’s most serious aviation, rail, maritime, highway, and pipeline incidents each year in order to make the best use of the agency’s limited resources, the agency classifies only a fraction of the total conducted as “major.” Nevertheless, such processes as these are the ones most likely to be utilized following the onset of a catastrophe.

Our definition of a responsibility-assignment process is not a rigid one. It is simply some manner in which responsibility for an adverse event might be affixed on or accepted by individuals or entities through formal procedures (such as agency hearings), informal actions (such as when a company voluntarily sets up a claim facility to pay requests for compensation), or operation of law (such as statutory impositions of responsibility that require members of the same industry to share in addressing future losses).

Frameworks
Processes must be viewed in the context of overarching frameworks that reflect legislatures’ intentions as to how legal relationships between actors ought to be sorted out following specific types of events. A framework can be the result of a single, comprehensive overhaul of existing legal authority, or it might have developed piecemeal over decades. A framework exists, for example, to address the consequences of motor vehicle accidents. Traditional tort law is the default framework for determining liability in such instances, but, over many years, legislatures have taken specific steps to achieve certain public policy goals in the context of those accidents. Examples include laws that require proof of insurance when vehicle registrations are renewed, define the minimum amounts of coverage required for such insurance, designate a state’s secretary of state as an appropriate party to receive a complaint and summons when a nonresident defendant operates a vehicle on the state’s highways, make the person who signs a minor’s driver’s license application legally responsible for the minor’s negligent driving, and bar the application of the joint and several liability doctrine except in

\footnote{For example, slightly more than one-half of all tort cases filed in New Jersey state courts during the year ending June 2012 involved automobile-related personal injury or property claims (New Jersey Courts, 2013, p. 87).}

\footnote{In 2008, for example, the NTSB conducted 19 “major accident” investigations (seven aviation, three highway, three marine, four rail, and two pipeline), compared with 221 less serious “regional” or “field accident” investigations (206 aviation, seven highway, four marine, and four rail) (NTSB, 2009).}
instances in which a defendant driver was intoxicated. This mosaic of rules and regulations are the background against which an individual or entity is determined to be responsible for an accident and the extent of a responsible party’s financial liability for the resulting consequences. In addition, this same framework provides the road map for determining whether other individuals or entities have been harmed by those consequences, whether the responsible party should pay for associated losses, and the size of such compensation. In some states, a very different framework exists, one in which the legislature has implemented a comprehensive no-fault auto insurance scheme intended to streamline the recovery of losses and reduce overall transaction costs, ostensibly to reduce the need to utilize traditional tort litigation as the primary responsibility-assignment process. Despite such sweeping changes, ultimately, the same questions are answered in a no-fault framework as in a traditional tort framework: Who is responsible, how much should they pay, who is deserving of compensation, and how much should they receive? All of the frameworks of interest in this report are intended to at least address the “who is responsible” issue.

The postcatastrophe landscape might have a complex array of methods in which the legal relationships between parties might be determined. For any adverse event—a chemical pipeline break, for example—multiple frameworks to address the question of responsibility can be in play. The rules authorizing and controlling an NTSB investigation into the causes of the pipeline rupture might be one framework. The outcome of that investigation might not have financial consequences for any particular party, but it will definitely affix blame. The rules authorizing and controlling an EPA administrative determination of responsibility for cleaning up the land surrounding the pipeline might be another framework. In this instance, the framework is intended to facilitate remediation efforts and return the immediate environment to its prior condition. This requires determining who is at fault for the chemical spill and what the at-fault party will pay to the government (or, as is often the case, to private contractors working at the behest of the government) for the costs of the cleanup. A third framework might be the court rules and substantive law controlling a civil lawsuit brought by residents living near the break site seeking the recovery of personal injury damages. Here, the framework fully addresses legal and financial responsibility with regard to the relationships between the residents and those named as the defendants in the suit, as well as eligibility for compensation and the size and extent of that compensation.

Note that we do not consider the NTSB investigation, the EPA administrative determination, and the outcome of the civil lawsuit in the example presented above as individual processes within the same larger framework. Although the EPA might rely on the outcome of the NTSB investigation before deciding who should be the target of cleanup cost recovery efforts, it is certainly possible that different parties would be held responsible by each of the three processes. Moreover, it would be difficult to make a strong case that the legislature (in this instance, Congress) consciously intended to create a regime in which the NTSB, EPA, and the courts coordinate their activities to address the consequences of spills from chemical pipelines, chemical spills generally, or even pipeline breaks generally. That said, there are frameworks in which multiple processes are indeed designed to achieve public policy goals in the context of the same type of adverse event. Later in this document, for example, we discuss the Oil
Pollution Act of 1990 (OPA), which does utilize a variety of processes, such as administrative determinations and tort litigation, in order to deal with responsibility questions related to maritime oil discharges.

**Approach**

The case studies presented in Chapters Four through Seven are based on our assessment of the key statutory, regulatory, and appellate law that created, implemented, and interpreted the frameworks employed in the example mass adverse events. Our descriptions of how such frameworks worked in practice were informed by news articles, academic studies, government reports, agency manuals and other materials, and legal journals. The conclusions presented in Chapter Nine draw from what we learned from the case studies, as well as related discussions in the academic, policy, and legal literature.

**Organization of This Report**

Chapter Two lays the groundwork for this report by providing background on some of the basic processes for assigning responsibility for either the cause of an event or the losses due to the event.

Chapter Three describes frameworks that Congress has rolled out with the goal of changing traditional rules regarding liability determinations for certain parties and, in some instances, the process by which compensation for losses can be sought.

In Chapters Four through Seven, we describe selected examples of mass adverse events for which various comprehensive frameworks are in place to address the consequences of such incidents. The following events are examined:

- international aviation accidents
- oil spills in navigable waters
- nuclear power plant accidents
- mass vaccine injuries.

Chapter Eight compares the frameworks utilized in the selected adverse events in terms of

- primary goals
- liability protections
- associated compensation program and financing
- speed
- features affecting the appearance of fairness
- “leakage” to the traditional civil litigation system
- rationalizations offered for changing traditional legal relationships between parties.

Finally, in Chapter Nine, we provide some concluding comments on the application of these frameworks and offer our observations regarding various options available to policymakers.
In this chapter, we present an overview of the basic processes that courts, the executive branch, legislatures, and private individuals and organizations have utilized to assign responsibility for damage or injury caused by a mass adverse event.

**Traditional Tort Litigation**

The mother of all means for assigning legal responsibility in the United States for the causes of harm is, of course, traditional tort litigation.\(^\text{27}\) The basis for asserting that a person or entity was responsible for causing an adverse incident (which, in turn, resulted in injury or economic loss) can be grounded on a wide range of legal authority arising from common-law principles, statutory rights, and regulatory requirements. We describe this process in considerable detail here because most of the frameworks discussed in Chapter Three were specifically designed as alternatives to traditional tort litigation. The broad (and admittedly simplistic) generalizations presented below present only a cursory, thumbnail sketch of the substantive and procedural laws of most states and the federal system, focusing on just those aspects that have, on occasion, been addressed by legislators crafting alternatives to the tort system.

Traditional tort lawsuits usually involve one or two named plaintiffs bringing their claims against no more than a few defendants. When events trigger large numbers of potential claims, as might be expected following a disaster, it is not unknown for the dockets of nearby courts to swell with dozens, hundreds, or even thousands of new cases related to the same incident. For the sake of judicial efficiency and to avoid overwhelming court resources, these clusters of cases might be consolidated into a single proceeding, usually only on a temporary basis and primarily for the purpose of uniform management prior to a separate trial.

Catastrophes can lead to what might be thought of as group litigation, in which large numbers of individual plaintiffs are named in a single complaint, bringing similar claims against those asserted to be responsible for the plaintiffs’ losses. Such joinder of individual claims is permitted only when there are questions of law or fact common to all named plaintiffs and when their rights to relief are related or arise out of the same set of transactions or occurrences. Alternatively, a small number of named representative plaintiffs can bring a class action addressing catastrophe-related claims on behalf of themselves and those similarly situated. If a judge approves the representative plaintiffs’ motion for class certification, one or

\(^\text{27}\) We refer to this process as traditional tort litigation even though we recognize that many tort-related disputes are settled or ended long before any suit is filed. However, such disputes arise and are resolved under the shadow of possible litigation and the potential for a trial.
more of the plaintiffs’ attorneys will be named as class counsel, and any subsequent dispositive resolution (such as a settlement or a verdict at trial) would apply to the claims of all class members. Because the absent class members need not always be identified, such resolutions can involve millions of virtual plaintiffs. It is important to note that, following a mass catastrophe, it is not unknown to see large numbers of individual plaintiff cases, cases involving considerable numbers of named plaintiffs joined in the same complaint, and multiple class actions, all arising out of the same incident and often being handled by the same court, at least for pretrial purposes.

Tort lawsuits are usually filed in state courts, and plaintiffs might have some discretion as to where in the state the case might be brought. The federal courts can be a venue as well, but only if circumstances surrounding the matter trigger federal jurisdiction. The rules of procedure the case will follow will depend on where the case is heard (federal rules in federal court, the rules of the state in state court). In contrast, the substantive law that would be applied (such as the specific legal requirements for proving that the defendant was responsible) does not depend on where the case is heard but instead involves a more nuanced analysis. That said, questions of tort liability are often controlled by the law of the state where the claimed injuries occurred.

There are significant limitations on the time in which a complaint must be filed following the date of the incident or the discovery of the harm (for example, about half of the states have a two-year limit on the filing of personal injury claims, and most of the remainder use three years). Usually, there is no requirement for a plaintiff filing suit to have first made an administrative claim against a PRP or to have delayed filing for some specified period of time.

Much of the activity in civil courts of general jurisdiction between case initiation and resolution involves the discovery phase, in which the parties have broad powers to obtain documents, data, and statements from the opposing side. Litigation is an adversarial process, with the parties often taking the lead in deciding the pace of the pretrial phase and in deciding what evidence would be presented to the trier of fact. The role of judges in the litigation process has traditionally been limited to ruling on pretrial motions and overseeing the conduct of trials. Juries are typically used to decide questions of fact, although judges can serve in that role as well, with bench trials held either at the request of the plaintiffs or when required by statute. Trials are relatively rare, with settlements and voluntary dismissals by far the most common manner in which a case is terminated.

When a tort claim does reach the trial stage, the trier of fact is usually presented with three key questions: (1) whether the defendant was legally responsible for causing the event at the center of the litigation; (2) whether that event, in turn, caused the losses claimed by the plaintiffs; and (3) what amount of compensation the defendants should pay the plaintiffs for those losses (assuming affirmative decisions on the first two questions). Attorneys for opposing parties work with the judge to define the precise instructions that the trier of fact must follow when answering these questions after considering the evidence presented to them at trial. In tort

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cases, the issue of responsibility can turn on one of three theories: that the defendant was negligent in its actions, that common law or statute imposes strict liability on the defendant for any incidents that arise out of certain activities (even if the defendant was not negligent), or that the defendant intentionally caused the harm.

In some instances, the trier of fact will also be asked to decide the relative contribution of each party at trial in regard to causing the plaintiff's claimed losses. This percentage-based apportionment of responsibility might concern only the defendants in the case, but it can also include an assessment of the plaintiff's own actions (depending on the jurisdiction, a plaintiff's relative negligence might reduce or completely bar any recovery for losses).

Traditionally, the collateral-source rule served to bar defendants from presenting evidence at trial in order to show that some or all of the plaintiffs' claimed economic losses had already been reimbursed by other sources, such as an insurance policy, a government benefit program, or workers' compensation. Defendants can also seek to offset any prior payments made to plaintiffs (such as in the form of monetary assistance to address immediate medical expenses, for example) from the award.

The jury (or judge, in some instances) has great discretion in deciding the nature and size of compensatory awards, which include awards for economic losses (such as medical care expenses) and awards for noneconomic losses (such as pain, suffering, and other subjective complaints). In most jurisdictions, the trier of fact also has the option of awarding punitive damages to the plaintiffs, primarily for the purpose of punishing the defendants.

Under certain circumstances, multiple defendants can be held to be jointly and severally liable for the injury or damage, essentially creating a type of collective responsibility for any awarded damages. In such situations, the plaintiff can recover the total amount of awarded compensation from any defendant in the case without regard to that defendant's allocated percentage of fault (such paying defendants can subsequently seek financial contribution from nonpaying defendants, assuming that there are assets available).

Trial awards (or monetary settlements, if a negotiated resolution was reached) are paid out of a defendant's own assets or, if the defendant had such coverage in effect at the time of the incident, by third-party liability insurance policies. Intentional harms and liabilities arising out of contractual relationships are generally not covered by liability insurance, nor are payments related to punitive-damage awards. State or federal law might require that individuals and businesses engaged in certain activities (most notably, motor vehicle ownership) obtain liability insurance coverage with minimum financial limits.

There are multiple points in the posttrial process at which the decisions of the trier of fact can be reviewed and modified. The verdict of the jury or judge does not have the force of law until the trial judge enters it into the record as a final judgment. Prior to that point, the judge might decide that the jury’s decision was not supported by the evidence and might vacate the verdict or pressure the parties to reach an acceptable compromise. After judgment has been entered, multiple layers of appeal by any unsatisfied party might be available, primarily concerning
questions of law decided by the trial judge, and it can be years before all options for review have been exhausted.

With few exceptions, each side in a lawsuit is responsible for its own legal expenditures, regardless of the outcome of the case. Common fee arrangements with one's own counsel include payment contingent on a successful outcome and calculated as a percentage of the recovery obtained, payment on an hourly basis, a flat fee, or compensation as a salaried employee. Typically, the fee arrangement between a party and its chosen counsel is a private matter and not subject to regulation, limitations, or review. Public financing and third-party funding are not common; contingency-fee agreements are the primary way for plaintiffs with resource constraints to obtain representation. If the defendant's legal exposure was covered by a third-party liability insurance policy, the insurer might pay the defendant's attorneys' fees and litigation expenses.

**Modified Tort Litigation**

An argument can be made that seemingly minor modifications to traditional tort liability can essentially create what amounts to a very different process for assessing responsibility. Courts, lawyers, judges, and lawsuits would still be involved, but rule changes—such as a statutory imposition of strict liability (versus the more-difficult-to-prove standard of negligence) or grants of immunity for some PRPs but not others—could dramatically change the dynamics of litigation. Many of the frameworks described in Chapter Three incorporate modified tort liability procedures.

It is important to note that these modifications do not always address the legal standards for assigning responsibility, at least not directly. For example, caps on noneconomic-loss recovery, bars against punitive damages, or limitations on awards for wrongful death would have no direct bearing on whether a jury would find a defendant liable. But such procedural changes might strongly affect whether an attorney working on a contingency-fee basis would find a particular claim presented by a potential new client to be economically viable enough to take on. With enough such modifications in place, the postcatastrophe litigation demand could conceivably drop to near zero, regardless of whether the claims had likely legal merit.  

A modified tort environment does not involve a specific set of changes to ordinary litigation rules. Rather, it refers to a situation in which one or more nontraditional provisions have been adopted in the expectation that the provisions will, for example,

- reduce the frequency and severity of claims advanced against PRPs
- bring greater predictability to trial outcomes

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29 In some instances—most notably, in class actions but also under certain statutorily defined circumstances—the defendant will be required to pay all or part of the attorneys' fees and litigation expenses incurred by a successful plaintiff.

30 See, e.g., Garber et al., 2009.
reduce the potential for plaintiffs to have “home-field advantage” when filing a new suit
provide an enhanced opportunity for a prelitigation resolution of claims, or perhaps ease the claim resolution process for plaintiffs.

That said, whether a specific modification to traditional tort litigation has actually accomplished any of its intended goals, or had disproportionally adverse consequences for particular classes of parties, can be the subject of extensive research and much debate.

Legislative modifications to traditional tort that were presumably designed to reduce potential defendant exposure include the following:

- **immunity from direct civil liability**: Certain types of parties might not be held liable for damages arising out of specified acts or omissions. Intentional acts are often excepted.
- **limitations on total financial liability**: Liability can attach to certain parties, but they would not be required to pay more than a fixed amount for all claims arising out of a single incident or over a particular time period.
- **caps on compensatory awards**: Often, such caps involve only noneconomic-damage awards, usually limiting them to no more than a fixed dollar amount.
- **forum and venue restrictions**: Forum restrictions require that a case be brought in a particular court system, such as the federal district courts or the courts of a specific state. Rule changes can also make it easier for a defendant to remove a case first filed in a state court to a federal district court for further processing. Venue restrictions limit the options available for plaintiffs when choosing the specific courthouse within a court system to file a new case.
- **limits on punitive-damage size or requirements**: Options here might include heightening the legal standards that must be met before the trier of fact can award punitive damages, prohibiting punitive damages from being awarded in more than one case if the defendant and the underlying acts are the same in each, restricting the size of the punitive award to no more than a fixed dollar amount or to a fixed multiple of any compensatory award, or outright prohibition.
- **collateral-source rule changes**: Options might include allowing the admission at trial of evidence of prior payments to the plaintiffs by collateral sources, such as the plaintiffs' health insurers, or requiring the judge to offset the trier of fact’s award by the size of any prior payments (usually with some adjustment for the plaintiff’s costs to obtain the offset benefits, such as expenditures for insurance premiums).
- **requirement to first exhaust administrative remedies**: A claimant would have to complete an administrative process designed to provide an alternative means of resolving the dispute prior to filing a formal lawsuit.
- **restrictions on attorney-fee arrangements**: A typical approach places limits on an attorney’s ability to charge clients on the basis of a percentage of any recovery. For example, a sliding scale might be imposed, in which the maximum fee would be
40 percent of the first $50,000 recovered; one-third of the next $50,000; 25 percent of the next $500,000; and 15 percent of any amount exceeding $600,000.

- **modifications to joint and several liability:** One approach limits a defendant's financial exposure to the proportionate share of the trial award based on the relative percentage of responsibility for that specific defendant as determined by the trier of fact. Another involves a similar rule change but only with regard to noneconomic awards.

- **imposition of a waiting period:** A potential plaintiff would be prohibited from filing a new lawsuit until a specific period of time has elapsed from the event, presumably to give a PRP sufficient time to investigate and respond to a claim.

- **mandatory bench trials:** Judges, rather than juries, would decide all questions of fact.

- **federal preemption:** Federal statutes and common law, rather than an individual state's law, would control the substantive law to be applied.

- **discovery restrictions:** The traditional right to liberal pretrial discovery would be limited or eliminated.

- **reduced time period to file suit:** The time allowed for initiating a lawsuit might be reduced, or the starting point for calculating such time would be limited to the date the harm occurred.

In contrast, changes might be incorporated in a modified tort environment when the goal is to **enhance** a plaintiff's ability to advance a claim against a defendant:

- **imposition of strict liability:** This removes the need for a plaintiff to prove that the defendant was negligent. Proof that the plaintiff's claimed injuries or damages were caused by the event that gave rise to strict liability would still be required.

- **increased time period to file suit:** A longer time to file would be permitted. Alternatively, the date of discovering the injury or loss would be allowed as a starting point for calculating elapsed time.

- **stricter limits on time to decision:** This requires the trier of fact to render a decision within a set time period; failure to do so could result in procedural advantages for the plaintiff.

- **mandatory liability insurance coverage requirements:** PRPs would be required to carry third-party liability insurance with certain minimum limits.

### Agency Investigations

An important means for determining responsibility lies within the realm of administrative agencies. Investigations are routinely conducted as part of the mission statements for some agencies, which, in turn, can result in findings that an individual or entity contributed in some way to or was the root cause of an adverse incident. Depending on enabling statutes and regulations, these agencies can have broad powers to subpoena records, to compel people to provide testimony, and to search and seize evidence, sometimes with wider latitude than might be afforded a law enforcement agency.
One example of this process is an investigation into the causes of chemical accidents at industrial facilities conducted by the U.S. Chemical Safety and Hazard Investigation Board (CSB). CSB staff members involved in such investigations can include chemical and mechanical engineers, as well as industrial safety experts, who interview witnesses; issue subpoenas; enter and inspect chemical facilities; obtain samples or equipment; and examine company records, inventories, and operating procedures.\(^{31}\) An investigation might take 12 months before a report containing key findings and root causes of the accident, as well as any safety recommendations, is drafted and submitted to the CSB for its consideration.\(^{32}\)

The root-cause analysis of a CSB investigation clearly identifies the party or parties responsible for an accident, as well as the actions or inactions believed to have triggered the adverse event. For example, an investigation into a fatal explosion in 2011 at a Hawaii storage facility being used for fireworks disposal laid much of the blame on the unexploded-ordnance remediation company conducting the disposal, citing insufficiencies with the company’s internal hazard analysis; the training, experience, and knowledge of its personnel; and the company’s ad hoc modifications to existing disposal procedures.\(^{33}\) Nevertheless, the CSB report would play no direct role in the wrongful-death claims that were subsequently brought against the company after the explosion. The statute that created the CSB provided that

> [n]o part of the conclusions, findings, or recommendations of the Board relating to any accidental release or the investigation thereof shall be admitted as evidence or used in any action or suit for damages arising out of any matter mentioned in such report.\(^{34}\)

This statutory bar to admission might limit the investigation’s direct effect on the progress of any parallel civil court proceeding, but the information contained in an agency report concerning the facts behind and presumed causes of the same event as the subject of a civil suit could have important indirect influences. For one thing, a report’s methodical recounting of what took place prior to the adverse event provides a clear road map for counsel on both sides to follow when presenting their versions of the facts to a jury. Similarly, statements made to investigators by company employees or bystanders and incorporated into the document would have great utility when preparing for an examination of experts or witnesses on the stand.

Not all agency investigations involve similar restrictions on how their conclusions might be used. For example, the federal Mine Safety and Health Administration (MSHA), part of the U.S. Department of Labor, is tasked, among other duties, with investigating mine accidents. As was the case with CSB investigations, ones conducted by MSHA also have as their objective a determination of the root causes of an accident, with such information being shared with the industry with the primary goal of preventing similar occurrences.\(^{35}\) And like the CSB, MSHA has been provided with considerable latitude for its work, with the ability to perform on-site


\(^{32}\) CSB, undated.

\(^{33}\) CSB, 2013, p. 10.

\(^{34}\) 42 U.S.C. § 7412(6)(G).

\(^{35}\) MSHA, 2011, p. 7.
physical examinations of the accident site, inspect company records and other documents, conduct witness and expert interviews, and perform analysis and testing of mining equipment and materials. But no explicit limits exist on the uses of an MSHA investigative analysis in other legal proceedings. To the extent that an MSHA report otherwise satisfies the public records and reports exception to the hearsay rule, it could be admitted into evidence in a lawsuit seeking to recover compensation for injuries or property damage. Such a report would not be dispositive in determining responsibility in the civil lawsuit, and the judge in the suit would still have to first assess its admissibility by examining the timeliness of the underlying investigation, the special skill and experience of the investigators, and any possible problems with the motivation behind the findings and conclusions.

**Agency Determinations**

The extensive investigations described above are often conducted for the purpose of discovering and procuring evidence to aid in understanding the causes of an adverse event and, in turn, in developing recommendations to help reduce the chance of recurrence. But the conclusory report generated from the investigation is, even within the agency itself, more advisory in nature than it is dispositive of the identified responsible party’s legal status. Because the report is not the end product of a process that results in administrative sanctions, demands for repayment of cleanup costs, or other consequence, a party would generally have no right to challenge the results either through administrative appeal or in the courts. Instead, the report’s findings of fact and final conclusions could provide justification for administrators to take the next steps toward a more consequential conclusion regarding a party’s status, with that next step often constituting what we call an *agency determination*.

Agency determinations are nonadversarial proceedings in which agency staff affix responsibility on a party based on its internal review of relevant facts and controlling regulations, statutes, and departmental guidelines and procedures. These determinations have important implications for a party because they set the stage for further executive branch action. For example, under OPA, a federal on-scene coordinator supervising efforts to deal with an oil discharge in navigable waters (the coordinator would be from EPA if the event involved inland waters, from the Coast Guard in a coastal-water or Great Lakes incident) makes a determination of who was the responsible party for damage claims or for reimbursing the costs of cleanup. That determination is not a rigidly formal process and might, for example, simply come from a quick search of property records to find out who owned an abandoned oil-storage facility.

These determinations are typically made without any formal input from a PRP. Administrative staff might have considerable discretion as to whether the participation of a PRP would be permitted as part of the agency determination and, perhaps more importantly, to define the

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36 MSHA, 2011, p. 25.
nature and extent of any such participation. There need not be any hearings and no evidence taken, and the type of exhaustive, multimonth investigation described above might never occur. Indeed, one common characteristic of agency determinations following an adverse event is that they can be triggered within a very short time after the onset of the incident. The designation of a responsible party under OPA following an oil spill, for example, can occur within 24 hours of the first reports of a pipeline rupture or shipping accident. The rapidity of the decision makes sense in the context of an event with significant and immediate consequences, even though it might come at the cost of preventing a PRP from having a chance to immediately respond to a proposed determination.

That said, these determinations can usually be challenged later, either within the agency’s internal appeal process or in court, although the exact method for doing so depends on the controlling authority, as well as evolving appellate decisions. For example, EPA regularly uses administrative compliance orders to request that a party it has identified as responsible take some corrective action, such as cleaning up a toxic-waste site or restoring a damaged wetland. In 2012, the U.S. Supreme Court held that administrative compliance orders issued under the Clean Water Act (CWA) can be immediately challenged in court under the provisions of the Administrative Procedure Act (APA), the legislatively created structure that defines each federal agency’s responsibilities and powers, because the enabling law had no explicit prohibition against seeking immediate review and because the opportunities for having the agency reconsider the decision were few. Judicial review of an agency decision, such as a determination of responsibility, are usually based on claims that the agency’s actions were arbitrary and capricious, were an abuse of discretion, or constituted some other violation of due process.

See, e.g., EPA, 2009, p. 52.

Agency determinations can involve a more extensive and focused investigation, one that might have a role for stakeholders. For example, an EPA designation of a PRP can, should the agency so choose, include reviewing documents, conducting site investigation and sampling, conducting interviews, performing title searches, doing other research, and notably sending information request letters to parties to gather information (EPA, 2013c). That said, the employment of such letters seems to be standard practice primarily in the context of Superfund-site matters, in which a rapid determination of responsibility regarding land polluted years or even decades earlier might not be a priority.

See, e.g., EPA, 2014.

Determinations can also be challenged by what one might characterize as informal means, such as initiating postdetermination discussions with an agency for the purpose of clarifying the decision or to correct any findings or conclusions believed to be in error. See, e.g., Sackett v. EPA, 566 U.S. 120, 127 (2012). Such discussions are at the agency’s discretion and, as such, provide no certainty of uniform application.


Agency Adjudications

The most formal process for determining responsibility within an administrative body comes in the form of agency adjudications, often employed when a party contests an agency’s decision to assess civil penalties or impose some other sanction, and typically involving some type of hearing. Adjudications by administrative bodies are defined by the agency’s own rules of practice, and the most rigidly structured types are those held under a state or federal version of the APA. Unlike agency determinations that can be issued by relatively low-level administrative staff, here the decider is an administrative law judge (ALJ), often employed by the agency itself, although, in some instances, the ALJ is drawn from a centralized panel that serves multiple agencies. In some instances, the ALJ’s decision is only a proposed one, in that the agency head makes the final decision.

Similar to a civil lawsuit or a criminal prosecution, parties or entities that are the subject of the adjudication might (depending on the specific rules and the ALJ’s preferences) have the right to present arguments and evidence, confront and cross-examine adverse witnesses, seek some level of discovery, retain an attorney, navigate layers of appeal (to the head of the agency, to a semi-independent board set up to hear appeals of administrative decisions, or to the courts), have the decision based solely on the record, and receive a statement of reasons for the decision.\(^{45}\) That said, ordinary criminal and civil proceedings offer parties far more-liberal opportunities to defend allegations of wrongdoing (for example, there might be significant restrictions on the number of witnesses that can be presented in an agency adjudication), stricter rules of evidence (agency adjudicators might consider evidence that could never be presented to a jury), and enhanced party rights (for example, there is no right to government-supplied counsel in an agency setting). Most notably, the burden of proof in agency adjudications is usually on the party initiating the action, which, in many instances, can be the person or entity contesting the agency’s decisions to assess a penalty (in a civil or criminal setting, the primary burden of proof would not be on the party defending a claim of responsibility).

EPA’s Office of Administrative Law Judges (OALJ) provides an example of an agency’s adjudicatory tribunal. When the target of an EPA enforcement action disputes the charges, the matter is heard by the ALJs of OALJ. The enforcement action technically begins when EPA files a complaint with OALJ, but the administrative adjudication process is effectively initiated when the target party responds by filing an answer. The complaint sets forth the details of the alleged violation of an environmental statute or regulation and can propose a monetary penalty.

Once an ALJ is assigned, the usual OALJ practice is to issue a prehearing order that, similar to a case-management order in civil court, sets forth various deadlines and describes what is expected from the parties in terms of a voluntary prehearing exchange of information. That exchange might include the names of intended witnesses, a summary of what they would testify to, and a description or copies of proposed exhibits. There is also a very limited right to

\(^{45}\) See, e.g., the extensive set of rules of practice before EPA’s Environmental Appeals Board (EAB), the agency’s semi-independent appellate body, at 40 C.F.R. Part 22.
compel additional discovery from an opposing party, although only with the consent of the ALJ. It is not uncommon for the parties to be in settlement negotiations while the matter moves through the prehearing stage, and, if those discussions are successful, parties jointly file a consent agreement to conclude the proceedings.

The ALJ eventually issues an order scheduling the hearing date, and that order requires the parties to work together to jointly stipulate to facts that cannot reasonably be contested. The evidentiary hearing itself is similar to procedures used in civil and criminal courts, with an opening argument, presentation of witnesses and exhibits, and opportunities for cross-examination and evidentiary challenges. Closing arguments can take the form of a posthearing brief submitted by each party, filed at least a month after the conclusion of the hearing.

The ALJ issues the initial decision of the tribunal, and parties are cautioned that the final decision will not be rendered for at least several months. The burden of proof in these cases is based on a preponderance-of-evidence standard and is placed on the party filing the complaint when the question involves whether the claimed violation did occur (the respondents have the burden in regard to affirmative defenses). The decision becomes final 45 days after issuance. OALJ’s stated policy is to work toward the issuance of an initial decision within 18 months after the respondent’s answer is filed.

Parties wishing to appeal OALJ’s final decision must file a petition within 30 days with the EAB. EAB review of initial decisions by an ALJ is de novo, which allows the EAB to set aside the factual findings of the underlying result if it so chooses, although, in practice, this would be unusual. The EAB can also substitute its judgment on the amount of any imposed fine, but this too is an uncommon result. More likely, the EAB will either affirm the existing initial decision or send the matter back to OALJ for reconsideration.46

The EAB decision is final, and there is no possibility of subsequent appeal to the EPA administrator. Because of that finality, dissatisfied parties (other than EPA) do have the right at this point to seek judicial review, although the scope of that review, as suggested earlier, is quite limited. Courts give agency decisions great deference when they are the products of the discretion that the legislature has granted to the agency. Such reviews often focus on the narrow issues of whether the agency exceeded the scope of its jurisdiction, whether proper procedures were followed, or whether the decision is so obviously wrong that it must be set aside.

**Agency-Initiated Civil Litigation and Criminal Prosecutions**

Government agencies have another option available to them when they desire to affix responsibility on a party believed to be engaging in some sort of prohibited conduct or to have caused harm to others. The information gathered during agency investigations and agency determinations can lead to a decision to seek the enhanced remedies and serious sanctions that would be available only in a civil or criminal court. In one sense, the agency has already reached

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the conclusion, at least internally, that a party's actions and legal responsibility merit taking more-extreme steps when attempting to enforce its rules and regulations. Moving out of the realm of administrative law and into the civil and criminal courts is done to seek the judgment of a decisionmaker in a neutral forum that the agency's conclusion about a party's responsibility was, in fact, a correct one and, if such allegations are proven, to recover funds, enjoin the party from continuing to engage in the conduct, force the party to take certain steps, and, in the most extreme instances, mete out punishment that might include financial sanctions and imprisonment.

One approach involves filing civil litigation in court to seek the imposition of civil fines and penalties, the recovery of expenditures made by the government but ultimately required by a party's actions, or the granting of injunctive relief. To use EPA as an example again, this time with regard to provisions of the Clean Air Act (CAA), the agency has statutory authorization to "commence a civil action for a permanent or temporary injunction, or to assess and recover a civil penalty."\(^{47}\) The action would be filed in a federal district court, which would have the power to restrain any "violation, to require compliance, to assess such civil penalty, to collect any fees owed the United States . . . and any noncompliance assessment and nonpayment penalty . . . and to award any other appropriate relief."\(^{48}\) The U.S. Department of Justice (DOJ), presumably an attorney in its Environment and Natural Resources Division, would file the complaint on behalf of EPA. The matter would proceed toward trial, in a manner somewhat similar to that outlined in the discussion on traditional or modified tort liability above, although it is not unknown for district courts to grant government motions for summary judgment on the factual allegations and limit the issues at trial to the question of fines or other financial assessments. Environmental statutes permitting civil enforcement often impose the standard of strict liability for allegations of regulatory violations, thus removing the party's intent from any determination of responsibility. That said, the accused party would still have the right to put on a vigorous defense to the allegations, which could involve arguments and evidence that the agency's underlying assumptions regarding the defendant's actions or omissions (for example, that the cause of the oil discharge was the defendant's failure to comply with federal regulations) were in error.

Recovery actions are also a type of agency-initiated civil litigation. For example, EPA can seek reimbursement for its Superfund cleanup efforts (as well as for the efforts of contractors paid by EPA) from parties it believes responsible for the polluted site.\(^{49}\) Often, an informal request for payment initiates the process, but, should the party refuse to pay to EPA's satisfaction, DOJ will file the recovery action in court. As was true for the civil penalty actions described above, at trial, the defendant can challenge its responsibility for the underlying incident giving rise to the cleanup operations.

\(^{48}\) 42 U.S.C. § 7413(b)(3).
The other approach involves the agency requesting that DOJ initiate a *criminal prosecution*. Under the CAA, parties that violate a wide variety of orders, requirements, and prohibitions in regard to EPA activities can, if convicted, “be punished by a fine pursuant to Title 18 or by imprisonment for not to exceed 5 years, or both.”\(^{50}\) Other actions, such as making false statements, tampering with pollution-measuring equipment, or knowingly releasing hazardous air pollutants that place another in danger of death or serious injury, could result in imprisonment for one to 15 years.\(^{51}\) In all of these potential violations, the defendant must be shown to have the appropriate mens rea.

Four observations might be helpful when trying to understand how agency-initiated litigation would play out in a postcatastrophe legal environment. First, defendants in civil enforcement suits and criminal prosecutions have a wide array of procedural rights and affirmative defenses available to them that parties who are the subject of less formal agency investigations, determinations, and adjudications do not. It is possible that the final resolution of an enforcement or prosecution would take years to complete, if parties seek review in the appellate courts.

Second, moving the dispute out of the internal machinery of the agency and handing it to a judge or jury to decide essentially takes the agency out of the loop. Agency staff can urge the decider to rule one way or another, but they no longer make the determination themselves. For PRPs who believe that they have been unfairly targeted by the agency and its employees, having a third-party neutral in play might result in a greater level of satisfaction with the process and a heightened sense of having one’s day in court.

A third observation is that outcomes of these actions are likely to have significant impact on parallel processes that seek to hold parties responsible for personal injuries, property damage, or economic loss. A criminal conviction for intentionally releasing a hazardous pollutant with the knowledge that doing so placed someone in harm’s way could have substantial probative value in a subsequent civil suit by individuals who came in contact with the chemical, especially regarding the question of punitive damages.

And finally, the collateral consequences of an adverse outcome (from the defendant’s perspective) in these proceedings might be far more of a concern to a corporate defendant than the size of any civil or criminal fine. Convictions can lead to debarment or the loss of an operating license, events that could push a once-viable enterprise into bankruptcy.

### Other Ways in Which Responsibility Can Attach

The processes described above involve what might be thought of as “classic” third-party assessments of responsibility. Tort lawsuits, whether or not operating under traditional rules, ultimately require a jury of ordinary citizens or a judge to determine whether a person or entity is responsible for some adverse event. The conclusions reached in an administrative

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\(^{50}\) 42 U.S.C. § 7413(c)(1).

\(^{51}\) 42 U.S.C. § 7413(c)(2), (3), (4), (5).
investigation are made by employees of the agency, albeit ones who might have special technical knowledge or expertise in a particular industry or scientific field. Ordinary staff members at an agency (often with a wide range of job titles, such as search manager, paralegal, enforcement officer, cost-recovery specialist, or on-scene coordinator) can be involved in making administrative determinations of responsibility. ALJs render decisions when an agency’s adjudication functions are invoked. And judges and juries come back into play when an agency turns to the civil and criminal courts for a final resolution of its most serious issues with PRPs. In all of these situations, the process relies on one or more people to make the responsibility decision; the decision came about after the onset of the adverse incident; and the party in question might well have vigorously contested the designation.

Some circumstances, however, do not fit neatly into this third-party assessment model. One involves what could be termed self-imposed responsibility. In the aftermath of a serious accident, a party might choose to publicly declare that it will “take care” of everything and everybody, even before any agency reports are issued, even before any investigation has begun, even before the first lawsuit is filed. What this means in practice is not always clear. For example, it is not uncommon for a railroad to quickly announce that it is accepting responsibility for the consequences of a derailment posing a threat to nearby residents (perhaps because of the release of chemicals from one of the tank cars). In the immediate aftermath of the incident, the railroad might freely distribute vouchers for motel stays and meals and reimbursements for mileage and other expenses. But litigation over who should be compensated beyond those limited benefits, what they would be compensated for, and how much they would receive can linger for years after the train had left the tracks. Self-acceptance of responsibility can also come much later in the process, when it can be a tactical decision. In the 2000 crash of Alaska Airlines Flight 261, the airline and the successor to the manufacturer conceded liability on the eve of trials in 2003, which angered some of the families of decedents because there would be no need for public testimony about the root cause. Nevertheless, the concession greatly accelerated the settlement process, essentially ending litigation for all but one holdout.

Another way involves negotiated responsibility. Multiple actors can decide among themselves to allocate responsibility, both before and after the incident. Immediately following an air crash, for example, the insurer that assumed most of the risk for an airline might take the lead in reaching out to surviving passengers or family members and offering to settle as many claims as possible. At some later point, insurers for the aircraft manufacturer, the engine manufacturer, parts suppliers, maintenance subcontractors, and others might negotiate a funding agreement with the lead insurer, one that sets forth each potential defendant’s

52 EPA, 2009, p. 45.
53 Arguably, judges are also involved in this process whenever a dissatisfied party in an administrative adjudication seeks postdecision judicial review.
54 See, e.g., Picard, 2001 (discussing the protracted litigation that followed an April 1996 railcar derailment and subsequent chlorine release in Alberton, Montana).
proportional share of the early settlement payments.\textsuperscript{56} Such an agreement would not have dispositive weight in any tort litigation or administrative action, but it does clear up the more immediate question of who is going to pay for what. A similar result comes in the form of indemnification agreements and hold-harmless clauses, which are common in commercial contracts. These provisions put the obligation to cover losses on the shoulders of one party, even if the root causes of the damage were, in fact, the actions of another.

Issues related to negotiated responsibility can also find their way into the civil litigation arena in the form of breach-of-contract actions when one of the parties to the agreement believes that another is not living up to its terms of indemnification agreements and hold-harmless clauses. Although a jury or judge might ultimately decide each party’s precise duty to the other, we do not treat such litigation as a determination of interest to this report. It is the moment when the party signed the indemnification agreement, not when the courts were asked to enforce the understanding at some later point in time, that responsibility actually attached.

Finally, \textit{mandated responsibility} can be thought of as a situation in which law, rather than contract, requires a party to bear some responsibility for an adverse event that might arise in the future, regardless of the party’s actions. Under the Price-Anderson Nuclear Industries Indemnity Act, for example, each commercial nuclear reactor in the United States in 2017 is required to carry $375 million in liability coverage.\textsuperscript{57} If a nuclear accident at one site triggers damages that exceed that first tier of coverage, all other reactor licensees across the country (slightly more than 100 at the present time) would be assessed a pro rata share of any excess, currently capped at about $121 million per reactor. Presumably, none of the reactor licensees making such contributions played even a minor role in the immediate cause of the nuclear accident, but, nevertheless, the law requires them to share the financial burden for the loss. Arguably, the National Vaccine Injury Compensation Program (VICP) also imposes a form of mandated responsibility.\textsuperscript{58} Under the program, each vaccine manufacturer, producer, or importer of vaccines in the United States is required to pay a $0.75 excise tax on the sale of each dose of different types of vaccines (such as those intended to provide protection for measles, hepatitis A, or human papillomavirus).\textsuperscript{59} The proceeds collected from this tax are pooled into a trust fund that is used to compensate vaccine-related injury or death claims for those covered vaccines, no matter which manufacturer, producer, or importer had a connection to the specific inoculation in question.

\begin{itemize}
\item \textsuperscript{56} Sarsfield et al., 2000, p. 84.
\item \textsuperscript{57} National Association of Insurance Commissioners and Center for Insurance Policy and Research, 2017; U.S. Nuclear Regulatory Commission (NRC), 2014b.
\item \textsuperscript{58} 42 U.S.C. § 300aa-10 et seq.
\item \textsuperscript{59} 26 U.S.C. §§ 4131, 4132.
\end{itemize}
Chapter Three: Congressionally Enacted Frameworks

Proposals for developing alternatives to traditional tort as the sole means of addressing liability determinations have floated about for at least the past century, with the most notable activity taking place within the context of workplace injuries and illnesses, motor vehicle accidents, and medical malpractice claims. Outside of the universal adoption of a form of workers’ compensation in every state, however, instances in which a statutory substitute for at least some traditional tort rules could conceivably apply to individuals and entities across the United States are limited. In this chapter, we first summarize some alternative programs that Congress has rolled out with the goal of creating national rules regarding liability determinations (and, on occasion, the rules under which compensation can be sought) that apply only to specific parties or instances. The list of frameworks presented in this chapter is illustrative rather than comprehensive and focuses on those that were intended to replace or modify some aspect of traditional tort litigation (for example, we do not include the legislation that granted the NTSB the power to conduct investigations into transportation accidents, because such investigations do not directly affect how tort litigation might proceed). Although only some of these frameworks were intended to operate solely in the aftermath of a mass adverse event, various features in all of the summarized enactments provide real-world examples of what legislatures might include in disaster-related programs. Finally, we explain our rationale for focusing on six of these frameworks for an examination of their origins, features, and application in the subsequent four chapters.

Framework Summaries

9/11 Acts

We use the term 9/11 acts to describe the framework that the Air Transportation Safety and System Stabilization Act of 2001 (ATSSSA) and the related Aviation and Transportation Security Act (ATSA) implemented in the aftermath of the terrorist attacks on September 11, 2001. ATSSSA created the September 11th Victim Compensation Fund of 2001 (VCF), utilizing a special master who would oversee the payment of compensation to individuals (or their survivors) who were physically injured or killed as a result of the terrorist-related aircraft

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60 As a general rule, the summaries presented in this chapter do not include legislation whose sole feature is to treat a small group of private individuals as federal employees in order to trigger the provisions of the Federal Tort Claims Act (FTCA). Although the discussion in Chapter Seven will make clear the importance of such an approach within a comprehensive framework for responsibility determinations, a considerable number of federal statutes confer this type of “employee” status on the members of various commissions and boards, as well as volunteers assisting federal programs. See, e.g., Cohen, 2008 (describing dozens of such laws).

Compensation would address claims related to economic and noneconomic losses, but not punitive damages. A claimant submitting a request for compensation would waive the claimant’s right to be a party in a civil action for damages related to the aircraft crashes. A federal cause of action would be the exclusive remedy for damages arising out of the hijackings and subsequent crashes (with the applicable substantive law guided by traditional choice-of-law principles), and the district court for the Southern District of New York would have original and exclusive jurisdiction over all such actions. Certification by the U.S. Department of Transportation that an air carrier was a victim of an act of terrorism limits the carrier’s responsibility to third parties to a maximum of $100 million in the aggregate, with the federal government responsible for any liability above that amount (punitive damages would not be available in such claims). The Department of Transportation would have the discretion to extend such protections to vendors, agents, and subcontractors of air carriers, including capping their liability to the limits of existing insurance coverage.

The related ATSA limits all claims for tort, contribution, or indemnity arising from the terrorist-related aircraft crashes of September 11, 2001, against an air carrier, aircraft manufacturer, airport sponsor, or person with a property interest in the World Trade Center to the limits of the respondent’s existing liability insurance coverage. ATSA limits claims against the City of New York for 9/11-related matters to the greater of the city’s insurance coverage or $350 million. ATSA provides immunity to government employees and agents, as well as airport security personnel, for good-faith reporting of suspicious activity. It also grants immunity to qualified volunteers for providing emergency services on commercial flights except in instances of gross negligence or willful misconduct. There would be no liability in state or federal court for good-faith acts intended to thwart acts of criminal violence or piracy on commercial flights.

**Amtrak Reform and Accountability Act of 1997**

This act capped Amtrak’s liability at $200 million (including awards for punitive damages) in a single accident or incident for claims by passengers for personal injury, death, or property damage related to rail passenger transportation. It creates a uniform punitive-damage standard for such claims, in which a plaintiff must establish, by clear and convincing evidence, that the defendant acted with a conscious, flagrant indifference to the rights or safety of others. The punitive-damage standard applies only to the extent that state law allows punitive awards.

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63 Throughout this section, we use the present tense when discussing publications, including laws, because they exist in the present and state whatever they state in the present. However, this act, like most laws, including all of those in this section, was passed at some fixed point in time and might no longer be controlling law.

Arming Pilots Against Terrorism Act

This act is Title XIV of the Homeland Security Act (HSA) of 2002, major legislation enacted in reaction to the events of September 11, 2001.\footnote{Pub. L. No. 107-296 (2002).} HSA contains several provisions related to vaccine injury liability that we discuss at length in Chapter Seven, as well as the Support Anti-Terrorism by Fostering Effective Technologies (SAFETY) Act described elsewhere in this chapter.\footnote{Pub. L. No. 107-296 (2002), Title VII, Subtitle G.} The Arming Pilots Against Terrorism Act immunizes commercial pilots who volunteer to be deputized and armed as “federal flight deck officers” from liability in litigation brought in state or federal court for their actions defending the flight deck during acts of criminal violence or air piracy, except in instances of the flight deck officer’s gross negligence or willful misconduct.\footnote{HSA, § 1402.} The flight deck officers are treated as federal employees for the purpose of such claims. Air carriers are relieved of all liability for damages in any action rising out of a federal flight deck officer use of or failure to use a firearm.

Atomic Testing Liability Act

This legislation from 1990 treats government contractors in claims for loss of property, personal injury, or death resulting from radiation exposure related to the nation’s nuclear weapon testing program as if they are federal employees rather than independent contractors.\footnote{Pub. L. No. 101-510 (1990), § 3141. The Atomic Testing Liability Act is a reenactment of the 1984 Warner amendment (Pub. L. No. 98-525, § 1631), which provided essentially the same protections to government contractors.} By doing so, the United States essentially substitutes itself for the contractor as the defendant in the action, shouldering the costs of defending the claim or suit, and incurring all financial responsibility in the event of a settlement or trial award. In addition to conferring federal jurisdiction (a lawsuit originally filed in state court would now be removable to federal court for all further proceedings), the substitution triggers certain procedural rules and substantive laws that apply in instances in which the United States is a defendant in a tort action.

Aviation Medical Assistance Act of 1998

Under this act, no liability can attach to an air carrier for harms caused by utilizing the medical assistance of a passenger if the airline had a good-faith belief that the passenger was medically qualified.\footnote{Pub. L. No. 105-170 (1998).} Absent gross negligence or willful misconduct, individuals are shielded from liability when providing or attempting to provide assistance during an in-flight medical emergency. The act applies to all lawsuits, whether brought in state or federal court.

Bill Emerson Good Samaritan Food Donation Act of 1996

This act bars civil liability on the part of donors or distributors of “apparently wholesome” food to needy people (or nonprofit organizations that, in turn, provide such food) absent gross
negligence or intentional misconduct.\textsuperscript{70} Legislative history suggests that the act preempts only those state or local laws that provide less liability protection.\textsuperscript{71}

**Biomaterials Access Assurance Act of 1998**

The act eliminates the liability of a supplier of components or raw materials used in medical devices placed inside the body for harms related to implants, other than the silicone gel and the silicone envelope utilized in breast implants.\textsuperscript{72} The liability shield does not apply if the supplier was the manufacturer or seller of the implant or if the components or materials failed to meet contractual requirements or specifications. Discovery is prohibited during the pendency of a defendant’s motion to dismiss on the basis of supplier status. The act applies to all actions, whether in state or federal court. It also allows the impleader of a dismissed biomaterial supplier when the court finds that the supplier's negligence or intentionally tortious conduct was an actual and proximate cause of the harm to the claimant.

**Black Lung Benefits Act of 1972**

Along with other programs to address the financial aspects of pneumoconiosis ("black lung"), the act provides disability benefits to current and former coal miners (and certain other coal-related occupations) with medical conditions meeting specific objective criteria, as well as benefits to surviving dependents of those whose deaths were attributable to the disease.\textsuperscript{73} Benefits under what came to be known as the Federal Black Lung Program are offset by those available under workers' compensation, state black lung programs, or Social Security disability. Generally, the operator of the last coal mine in which the injured or diseased worker was employed for a year or more is responsible for covering the costs of benefits (operators are required to insure against potential payments or qualify as a self-insurer). The eligibility for such benefits is first determined through an informal administrative process handled by Department of Labor staff who schedule medical examinations, gather evidence, and issue proposed decisions. Parties dissatisfied with the proposed decision have 30 days to request a hearing before an ALJ.

There is a rebuttable presumption of eligibility when the claimant has a disabling respiratory or pulmonary impairment and has 15 years or more of qualifying coal mine employment. In the absence of such presumption, the claimant must show that his or her pneumoconiosis arose from working at the mine and that the disease was a substantially contributing cause of the claimed disability. Operators alleged to be responsible for benefit payments can submit evidence opposing a determination of eligibility or later challenge an award by arguing that it was made based on a mistake of fact or that there has been a change in the claimant's medical condition. The Benefits Review Board can review the ALJ's ruling internally, after which a dissatisfied party can seek review by an appropriate federal appellate court to determine

whether the ALJ’s factual findings were supported by substantial evidence and whether the legal conclusions of the ALJ and Benefits Review Board were rational and consistent with applicable law.

In instances in which the last mine employment was prior to 1970, in which no responsible coal mine operator can be identified, or in which the operator has defaulted on required payments, the benefits are provided through the Black Lung Disability Trust Fund. The fund is financed by an excise tax on the sale of coal and also pays the costs of administering the program.

**Cardiac Arrest Survival Act of 2000**

The act provides immunity to persons other than health care professionals (including hospitals, clinics, and other medical entities, as well as their employees) for using automated external defibrillators (AEDs) in a perceived medical emergency. No immunity would be available if the harm involved was caused by willful or criminal misconduct, gross negligence, reckless misconduct, or a conscious, flagrant indifference to the rights or safety of the victim. Acquirers of AEDs (such as building owners) would also be shielded from liability in such instances, unless the acquirer failed to notify local emergency responders of the device’s location, failed to properly maintain and test the AED, or failed to provide proper training to its employees when an employee was the person operating the device in the emergency. It applies to actions in both state and federal courts.

**Commercial Space Launch Act Amendments of 1988**

This act builds on earlier legislation that required an individual or private entity wishing to conduct a commercial space launch or reentry or operate a launch or reentry site in the United States to obtain a federal license. It provided federal indemnification of third-party liability claims against such licensees for death, bodily injury, or loss of or damage to property arising from a launch-related incident, utilizing a first tier of mandatory private insurance (or a demonstration of adequate financial responsibility) for the lesser of the amount calculated by the federal government as the “maximum probable loss” for such claims, $500 million, or the maximum liability insurance then available on the world market at a “reasonable cost.” The federal government provides a second tier of coverage to compensate all third-party claims against the licensees in excess of the first tier up to $1.5 billion (in 1988 dollars), except in cases of willful misconduct. The federal government must approve claims that would be paid out of second-tier funds as just and reasonable, although the government would be responsible for reasonable litigation and settlement expenses. Moreover, in instances in which it appears that aggregate claims will exceed the first tier, the president will have to submit a proposed plan for both compensation and financing to Congress for its approval.

74 Pub. L. No. 106-505 (2000), Title IV.
76 Financial responsibility for claims above this second tier would presumably fall on the shoulders of the licensees or other liable parties.
Licensees are also required to obtain insurance or demonstrate adequate financial responsibility (with a likely value of $100 million) to cover possible claims by the United States. In addition, reciprocal waivers would need to be entered into with the United States, as well as contractors, subcontractors, and customers, for possible claims regarding property damage or personal injuries.

**Federal Tort Claims Act**

Originally enacted in 1946, the FTCA was a limited waiver of sovereign immunity by the federal government, allowing certain types of tort claims related to the wrongful or negligent acts or omissions of federal employees.\(^\text{77}\) Claims are initially presented to the relevant administrative agency and potentially later as a lawsuit in federal district court, although under certain procedural rules and substantive laws that differ from traditional tort liability in significant ways.

**Foreign Intelligence Surveillance Act of 1978 Amendments Act of 2008**

The Foreign Intelligence Surveillance Act amendments grant broad immunity to electronic communication service providers (e.g., telecommunication carriers, Internet services) for providing information, facilities, or assistance as a result of an order by the Foreign Intelligence Surveillance Court or under certain other exigent circumstances.\(^\text{78}\) Civil actions against such providers seeking monetary or other relief, if brought in state court, can be removed to federal court. Certification by the U.S. Attorney General to a federal district court judge that the providers were complying with national security requirements will trigger a dismissal of any civil action, unless the court finds that the certification was not supported by substantial evidence.

**General Aviation Revitalization Act of 1994**

The General Aviation Revitalization Act of 1994 prohibits product liability claims (for both personal injuries and property damage) against manufacturers of general aviation aircraft equipped to carry no more than 19 passengers and not engaged in scheduled commercial service that were delivered to the aircraft’s first purchaser, lessee, or broker at least 18 years prior to the loss.\(^\text{79}\) The protections are also enjoyed by manufacturers of any new component, system, subassembly, or other part installed into the aircraft at least 18 years previously. The prohibitions do not apply if the manufacturer misrepresented, concealed, or withheld information from the Federal Aviation Administration (FAA) relevant to the performance or the maintenance or operation of the aircraft or the component that was causally related to the loss. The liability restrictions do not affect injury or death claims advanced either by passengers who were on board for the purpose of medical treatment or other emergency or by persons who were not aboard the aircraft (such as those on the ground).

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\(^{79}\) Pub. L. No. 103-298 (1994), § 3.
Montreal Convention
In 2003, the U.S. Senate gave its advice and consent to ratification of an international aviation treaty known as the Montreal Convention.\(^{80}\) The treaty, in part, sets forth rules for the liability of air carriers for losses to cargo and passenger injuries and deaths related to international flights. In Chapter Four, we describe the Montreal Convention in detail.

National Childhood Vaccine Injury Act of 1986
The National Childhood Vaccine Injury Act of 1986 (NCVIA) limits the liability of manufacturers and producers of certain vaccines while creating an alternative compensation system for those who believe that they have been injured by a vaccination. In Chapter Seven, we discuss the NCVIA at length.\(^{81}\)

National Swine Flu Immunization Program of 1976
This act, which we call the Swine Flu Act throughout this report, is another framework for addressing liability determinations related to vaccinations—in this instance, those intended to prevent the spread of the swine flu.\(^{82}\) In Chapter Seven, we describe the Swine Flu Act in detail.

Oil Pollution Act of 1990
OPA establishes a comprehensive scheme for addressing the consequences of oil discharges, with facilitated means for recovering losses related to oil pollution and limitations on the liability of those deemed responsible for the discharges.\(^{83}\) In Chapter Five, we describe OPA in detail.

Paul D. Coverdell Teacher Protection Act of 2001
In states that receive federal education funds targeting the needs of children from low-income families and that have not enacted a statute that expressly rejects the act’s features, under certain conditions, injured parties cannot hold teachers (broadly defined to include principals, administrators, board members, and other employees) liable for their acts or omissions on behalf of the school to control, discipline, expel, or suspend a student or maintain order or control (no restriction applies if the plaintiff is the school).\(^{84}\) Such restrictions would be in effect if the actions were carried out in conformity with federal, state, and local laws; the teacher was acting within his or her scope of employment or responsibilities; the teacher was properly licensed, certified, or authorized; there was no willful or criminal misconduct, gross negligence, recklessness misconduct, or a conscious, flagrant indifference to the rights or safety of others on the part of the teacher; and the harm was not caused in a way related to transportation. Teacher actions constituting crimes of violence, terrorism, sexual offenses, or

\(^{81}\) Pub. L. No. 99-660 (1986), Title III.
violations of civil rights laws or that were taken while the teacher was under the influence of alcohol or drugs would void the protection.

More generally, the act prohibits punitive-damage awards (assuming that such awards are already available under applicable law) in any action against a teacher for acts within the scope of his or her employment or responsibilities unless there was “clear and convincing evidence” that the harm was proximately caused by the teacher’s willful or criminal misconduct or by a conscious, flagrant indifference to the rights or safety of the individual harmed. In such actions, the teacher's liability for noneconomic damages would be in proportion only to his or her percentage of responsibility as determined by the trier of fact, thus abrogating joint and several liability for such damages.

**Protection of Lawful Commerce in Arms Act**

The 2005 act grants broad immunity to gun manufacturers and dealers for claims related to criminal or lawful misuse of firearms or ammunition, although major exceptions to that immunity exist, such as when transferring a firearm with knowledge that it will be used in a crime, in product defect claims (other than when the firearm was used in the commission of a crime), and in certain actions brought by the U.S. Attorney General. The act also includes the Child Safety Lock Act of 2005 as one of its provisions, which extends similar protections to private handgun owners if the weapon that was the subject of a damage claim resulting from its criminal or unlawful misuse had been made inoperable by means of secure gun storage or safety device when a third person accessed it without the handgun owner's permission or authorization.

**Price–Anderson Nuclear Industries Indemnity Act**

The 1957 Price–Anderson act created the overarching framework for determining liability issues arising out of radiation release incidents at nonmilitary nuclear power plants. In Chapter Six, we discuss Price–Anderson at length.

**Public Readiness and Emergency Preparedness Act of 2005**

The Public Readiness and Emergency Preparedness Act of 2005 (PREPA) provides tort immunity (absent willful misconduct and certain other acts or omissions) to manufacturers, distributors, administrators, and others related to the use of medical countermeasures against epidemics and pandemics, as well as various chemical, biological, radiological, and nuclear agents of terrorism. It also created the Countermeasures Injury Compensation Program (CICP) to offer an administrative procedure for claiming medical benefits, lost-income benefits, and death benefits. See the discussion in Chapter Seven.

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Radiation Exposure Compensation Act

The 1990 Radiation Exposure Compensation Act (RECA) created an administrative compensation system to provide benefits to those contracting certain types of cancers and other diseases from nuclear weapon testing exposure or from uranium industry employment.\(^{88}\) The compensation payments originally came out of the RECA Trust Fund, which was funded out of discretionary appropriations. Later legislation made funding for the RECA Trust Fund mandatory and made the fund the source for payments for on-site participants of nuclear tests and those who were “downwind,” while the Energy Employees Occupational Illness Compensation Fund would be used to pay uranium workers, such as miners and ore transporters. RECA fills the liability gap that would normally prevent affected individuals from successfully bringing suit against the United States for their exposures because of the discretionary-function exception.\(^ {89}\)

Support Anti-Terrorism by Fostering Effective Technologies Act of 2002

A provision contained in HSA, the SAFETY Act grants numerous liability protections to the sellers of “anti-terrorism technologies” as determined by the DHS Secretary (a device used for scanning seaborne cargo for the presence of nuclear material might be one such technology).\(^ {90}\) The protections apply to all claims against the seller that are related to an act of terrorism when its DHS-certified technology was deployed in defense against (or response to or recovery from) such an act. The federal district courts have exclusive and original jurisdiction over such claims, allowing related lawsuits filed in state court to be removed to federal court. In such suits, punitive damages against the seller are prohibited, as are awards for prejudgment interest. Noneconomic-damage awards for pain, suffering, mental anguish, and the like are available only if the plaintiff suffered some sort of physical harm, and they can be awarded against a defendant only in an amount proportional to that defendant’s responsibility for the underlying harm (thus eliminating joint and several liability for this type of damages). A plaintiff’s recovery would be reduced by any collateral benefits the plaintiff might have received.

Importantly, there is a rebuttable presumption that the “government contractor defense” was available to the seller, essentially shielding the seller from liability if it can show that the technology conformed to reasonably precise specifications required by the United States and that it warned the government of any dangers or limitations of which it alone was aware. That presumption would disappear if the seller acted fraudulently or with willful misconduct in


\(^{89}\) 28 U.S.C. § 2680(a). The discretionary function effectively prevents a suit in tort against the United States if the harm was the result of the exercise or performance (or the failure to do so) of a discretionary function or duty on the part of a federal agency or employee. Generally, such discretion constitutes an exercise of judgment based on considerations of public policy. A decision to engage in a program of aboveground nuclear testing near populated areas in order to rapidly build an atomic arsenal in the face of a growing Soviet threat, despite the potential for downwind injuries, is arguably one such exercise in judgment.

\(^{90}\) HSA, §§ 863–864.
submitting information to DHS during the course of the department's consideration of the antiterrorism technology.

**Smallpox Vaccine Acts**

We use the term *smallpox vaccine acts* to jointly refer to the National Smallpox Vaccination Program as set forth in Section 304 of HSA and the Smallpox Emergency Personnel Protection Act of 2003 (SEPPA). These acts provide liability protections to smallpox vaccine manufacturers and administrators and describe the rules for an administrative compensation program to address personal injuries and deaths triggered by the vaccinations. In Chapter Seven, we describe the smallpox vaccine acts in detail.

**Terrorism Risk Insurance Act of 2002**

The Terrorism Risk Insurance Act (TRIA) provides a federal government reinsurance “backstop” for losses associated with acts of terrorism in exchange for requiring insurers to offer terrorism coverage for certain types of insurance. TRIA created an exclusive federal cause of action for tort claims involving acts of terrorism, thus making such cases removable to federal district court (although the substantive law of the state where the act of terrorism occurred would apply) and eligible for consolidation before a single federal judge for pretrial processing. No federal funds would be used for punitive-damage awards. TRIA also allows for the attachment of certain foreign governments’ assets to pay for compensation. Subsequent amendments required advance Department of the Treasury approval of certain settlements involving covered losses.

**Volunteer Protection Act of 1997**

This act provides immunity from claims of ordinary negligence to any volunteer acting within scope of that volunteer's responsibilities (and, if required, who was also properly licensed or certified) on behalf of a nonprofit or government body. The protection would not apply if (1) the harm was caused by willful or criminal misconduct, gross negligence, reckless misconduct, or a conscious, flagrant indifference to the rights or safety of the person harmed; (2) the volunteer operated a vehicle for which a license or insurance was required; (3) the volunteer's actions constituted a crime of violence, terrorism, hate crime, sexual offense, a violation of civil rights laws; or (4) the volunteer was under the influence of drugs or alcohol. The liability protection does not extend to the nonprofit or government body.

In situations in which the liability shield would not be complete, the act creates a uniform standard for the imposition of punitive damages (assuming that such an award is available in the jurisdiction where the action is brought) in which the plaintiff must establish by clear and convincing evidence that the harm was proximately caused by the volunteer's actions that constituted willful or criminal misconduct or a conscious, flagrant indifference to the rights or

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safety of the person harmed. The volunteer would also be liable for noneconomic damages only in proportion to his or her percentage of responsibility.

**Y2K Act**

This detailed legislative package was enacted in July 1999 and addressed claims (other than those involving personal injury or death) related to actual or potential failures from the Y2K bug, the potential failure of a computer system to appropriately handle date-related data for the year 2000 and beyond.\(^4\)

The act includes imposition of a uniform punitive-damage standard of “clear and convincing evidence” and, in instances in which the defendant is a small business (less than 50 full-time employees) or an individual of modest means (less than $500,000 net worth), a cap on punitive damages of the lesser of three times the compensatory damage award or $250,000 (except in cases of intentional harm). One provision also eliminates joint and several liability, except in contract actions if the defendant acted with specific intent to injure or knowingly committed fraud, in instances in which the defendant’s share is uncollectable and the matter involves a consumer product, or when the plaintiff has a net worth of less than $200,000 and the award exceeds 10 percent of that net worth. The act prevents claims for contribution against settling defendants in noncontract actions. It also requires prelitigation notice to a prospective defendant, who would have a certain amount of time to remediate the problem or offer to proceed within some alternative dispute resolution program. The act requires pleading with specificity. Awards are offset by the amount of damages the plaintiff might have avoided by taking steps toward mitigation. Recovery for pure economic loss is barred in a tort action. Federal district courts would be granted original jurisdiction over Y2K bug claims, except under certain precisely defined conditions. Regulatory penalties for small businesses in first-time violations would also be barred, although some exceptions exist. Interestingly, the act had retrospective application to any action brought after January 1, 1999.

**A Closer Look**

The four chapters that follow provide background on a selected set of frameworks that have been purposely designed to address responsibility issues arising under certain types of mass adverse incidents. The examples selected illustrate a range of different approaches that might be considered should policymakers decide that traditional civil litigation might not perform optimally for assigning liability in the context of a major disaster.

The first example (international aviation accidents in Chapter Four) explains how the Montreal Convention treaty imposes a modified tort liability system for passengers seeking compensation for aviation-related injuries and deaths as a result of international flights. The second (oil spills in navigable waters in Chapter Five) discusses how marine and inland water oil spills are addressed by OPA's administrative program for designating responsible parties and for reimbursing expenditures related to oil recovery and spill-related losses. Next (nuclear

power plant accidents in Chapter Six), we look at the development of a regime under the Price-
Anderson Act for addressing liability in the face of accidents at commercial nuclear power
plants. Finally (mass vaccine injuries in Chapter Seven), we examine three different approaches
(as implemented through the Swine Flu Act, the NCVIA, and the smallpox vaccine acts) for
altering the liability profile of manufacturers and health care providers when various vaccines
are alleged to have caused injuries or deaths.

We chose these example events, in part, because they can have an anthropogenic origin. All four
events also have the potential to cause widespread harm, which might include injuries, deaths,
property damage, and economic losses, depending on the setting, within a short time frame.
Most importantly, the primary alternative responsibility-assignment frameworks for the
example events satisfy criteria we believe to be important in terms of relevance and our
research approach, one that attempts to report on how they have worked rather than simply
describing the controlling black-letter law. These primary frameworks (1) have been in place for
years, (2) are still controlling law today, (3) would be utilized in the future should an
appropriate mass adverse event arise again, (4) incorporate a complex set of changes to the
traditional tort litigation regime (rather than simply capping liability), and (5) have been used in
practice.\footnote{Although the Swine Flu Act is no longer in effect and the smallpox vaccine acts have been essentially
replaced by later legislation, we consider the still-viable NCVIA to be the primary alternative framework
for mass vaccine injuries.} Other potential candidates for our case studies fit these criteria to some degree
(railroad accidents, for example), but terrorism (featuring a framework set up to address
various responsibility and compensation issues related to the September 11, 2001, attacks) was
the most compelling option. We chose not to include terrorism as a separate case study because
the relevant liability provisions of the 9/11 Acts were applied retrospectively to but a single
event and were never envisioned as an ongoing program for assigning responsibility and
providing an alternative source for compensation in future instances of aviation-related
terrorism or other catastrophic events. That said, understanding the consequences of the
approach used for dealing with victim losses and party liability arising from 9/11 would
certainly be relevant to further work in this area.
Chapter Four:
International Aviation Accidents

Although the crash of any modern airliner certainly qualifies as a disaster, it is only in the context of international flights that Congress has seen fit to adopt (via the ratification of a treaty) a framework for assessing responsibility to serve as an alternative to traditional tort. Legal proceedings involving international aviation accidents offer a particularly interesting case study because a ready-made comparison exists for adverse incidents wherein the air travel took place solely within the borders of the United States.

Background

The Warsaw Convention

In 1929, 32 countries signed a treaty intended to standardize the rules regarding nonmilitary international air transportation. The United States, which was not part of the original body of signatories, would adopt the terms of the treaty five years later as a result of Senate ratification. The treaty, which came to be universally referred to as the Warsaw Convention, was intended to foster the growth of the then-developing commercial aviation industry, in part by placing significant limits on carriers’ liability for losses to cargo or passengers. A person (or family of a decedent) asserting a claim against a carrier for bodily injury or death on an international flight, absent a showing of willful misconduct, would, at the time, be limited to about $8,300 in total compensation (about $116,000 in 2014 dollars), if the injuries claimed occurred when en route, embarking, or disembarking. That limit would be in place regardless of whether the law in the passenger's home country would have permitted the seeking of much higher damages through tort litigation or other means. Punitive damages would be barred, and, as the Warsaw Convention’s language regarding “bodily injury” would be interpreted by most courts in the decades to come, there could be no recovery for mental injury without some associated physical trauma. Available forums for those bringing such claims were limited to where the carrier was domiciled or had its principal place of business, where the ticket was purchased, or the ticket’s final destination (with a round-trip ticket, the final destination is the same as the point of origin, regardless of whether the claim arose on a flight segment landing in another country).

96 Convention for the Unification of Certain Rules Relating to International Carriage by Air, October 12, 1929.
97 The Warsaw Convention also standardized other aspects of air transportation, such as claims for lost or damaged cargo or baggage, claims for delay, and transportation documentation requirements. The discussion in this report is concerned solely with how the Warsaw Convention and subsequent modifications under the Montreal Convention affected potential liability for personal injuries.
In the 1960s, a de facto carve-out was created for the liability cap as it pertained to passengers departing from or arriving in the United States, made possible by separate agreements entered into by the major carriers serving the United States. The limit for these passengers would be $75,000. By the 1990s, additional intercarrier agreements effectively held carriers to a standard of strict liability for all proven damages up to about $135,000, regardless of a passenger’s origin or final destination, as long as the carrier was a party to one of the agreements. In addition, by this time, court decisions in the United States had begun to allow recovery for mental injuries, although usually only if such mental injuries were the proximate outgrowth of physical trauma.

The Montreal Convention
In 1999, representatives of 121 nations met in Montreal to extensively revise the terms of the original treaty and to bring it in line with the complex array of ad hoc intercarrier agreements that had developed over the years. With the ratification of the treaty by the U.S. Senate in 2003, the Montreal Convention accords implemented a more uniform system of liability, one in which

- carriers would be strictly liable (presumed liability) for proven injury claims up to about $135,000 (at the time)
- the liability cap was formally eliminated, so injury claims above the $135,000 strict-liability threshold could clearly be pursued if local law so allowed
- a uniform two-year limitation on filing claims was imposed
- in addition to the forums of filing allowed by the Warsaw Convention, a claim could now also be advanced in the courts of the passenger’s principal place of residence
- the airlines would be required to make modest advance payments within 15 days of the loss to cover the immediate economic needs of injured passengers or the families of decedents.

The dollar amount of the strict-liability threshold is not fixed but instead is linked to special drawing rights (SDRs), an International Monetary Fund–weighted basket of four major currencies. The threshold for injury and claims was set at 113,100 SDRs, which, at the beginning of April 2017, was the equivalent of $153,454.

Application
As can be seen in Table 4.1, Montreal imposes a complex overlay of controls for those bringing injury claims related to air travel. Some common scenarios are represented in the table. The second column reflects a situation in which, following an incident on an international flight, a U.S. resident attempts to bring an injury claim against the airline in a U.S. court. Doing so presents no problems under Montreal, because the 1999 revision to the Warsaw Convention

100 Lloyd v. Am. Airlines (In re Air Crash at Little Rock Ark.), 291 F.3d 503, 509 (8th Cir. 2002).
101 As of April 3, 2017, each SDR was worth $1.3568 (International Monetary Fund, 2017).
clearly included the residency of the passenger as one of the tests for permissible jurisdiction. As a result, it would not matter if the carrier were based in another country, the ticket had been purchased outside the United States, or the final destination on the itinerary were outside the United States as well. Jurisdiction might well be different for a foreign resident who flew on a non-U.S. carrier. Unless the ticketing or destination test were satisfied, the claim would have to be brought in a jurisdiction outside of the United States. The third column describes such a situation. The July 6, 2013, crash of Asiana Airlines Flight 214 as it arrived in San Francisco on a nonstop from Seoul provides a striking example of differences in access to U.S. remedies that can arise under Montreal. Under most circumstances, people injured in California (as all passengers were on this flight) would be able to bring suit in the courts of California and have California tort law applied to determine responsibility, regardless of residency. With Montreal, however, the majority of passengers on Flight 214 (about half of whom were Chinese nationals, with most of the remainder from South Korea) would have to sue the carrier in either South Korea (given that Asiana is based there, some passengers were South Korea residents, and many itineraries involved round-trip tickets with Seoul as the ultimate destination) or China (either because of residency or because about one-third of the passengers had originated in Shanghai on connecting flights). A passenger in an adjacent seat who happened to hail from the United States (as represented by the second column) would have no such restrictions.

Table 4.1. Scenarios Under the Montreal Convention

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Flight</th>
<th>Residency</th>
<th>Filed In</th>
<th>Defendant</th>
<th>Statute of Limitations</th>
<th>Claims for Mental Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>International</td>
<td>International</td>
<td>Domestic</td>
<td>Any Carrier</td>
<td>Foreign Carrier</td>
<td>U.S. Court</td>
</tr>
<tr>
<td>United States</td>
<td>Non-United States</td>
<td>Any</td>
<td>Any</td>
<td>U.S. Court</td>
<td>Two years</td>
<td>Depends on the state where the case is filed; can be more than two years</td>
</tr>
<tr>
<td>U.S. Court</td>
<td>Foreign Court</td>
<td>U.S. Court</td>
<td>Foreign Carrier</td>
<td>Depends on the state where the case is filed; can be more than two years</td>
<td>Depends on the case where the claimant sustained no physical injuries</td>
<td></td>
</tr>
</tbody>
</table>

An increasingly important aspect of Montreal’s jurisdictional rules involves the ability of a passenger flying on a codeshare flight to proceed against the ticket-issuing carrier rather than the actual carrier. If the ticket was purchased in Seoul as a United Airlines ticket on a codeshare with Asiana, for example, an argument can be made that courts in the United States would have jurisdiction. See, e.g., Banino, 2009, and Danko and Meredith, 2013.
<table>
<thead>
<tr>
<th>Scenario</th>
<th>Flight / Residency</th>
<th>Filed In</th>
<th>Defendant</th>
<th>Punitive-damage claims</th>
<th>Noneconomic-damage claims</th>
<th>Liability standard</th>
<th>Burden of proof</th>
<th>Country where the claim is advanced</th>
<th>Forum</th>
<th>Immediate payments by carrier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>International</td>
<td>U.S. Court</td>
<td>Any Carrier</td>
<td>No</td>
<td>Yes</td>
<td>Strict liability</td>
<td>Damages under threshold: Minimal burden on claimant to prove that damages arose from the incident</td>
<td>Multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>International</td>
<td>Foreign Court</td>
<td>Foreign Carrier</td>
<td>No</td>
<td>Depends on the country where the case is filed</td>
<td>Negligence, intentional act, or strict liability</td>
<td>Damages above threshold: Burden is on the carrier to prove that the incident was due to a third party or was not due to its own negligence</td>
<td>State or federal court, depending on jurisdictional rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>International</td>
<td>U.S. Court</td>
<td>Noncarrier (e.g., Manufacturer)</td>
<td>Depends on the state where the case is filed; likely allowed</td>
<td>Yes</td>
<td>Negligence, intentional act, or strict liability, depending on facts and controlling law</td>
<td>On claimant</td>
<td>State or federal court, depending on jurisdictional rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>U.S. Court</td>
<td>Foreign Carrier</td>
<td>Depends on the state where the case is filed; likely allowed</td>
<td>Yes</td>
<td>Negligence, intentional act, or strict liability, depending on facts and controlling law</td>
<td>On claimant</td>
<td>State or federal court, depending on jurisdictional rules</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The table above summarizes the differences in legal frameworks for handling claims based on the scenario of flight, residency, filed in court, defendant, and punitive/damages considerations.
For some aspects of the litigation that ensued from the Flight 214 incident, where the claim is brought makes little difference, as long as Montreal applies. The time period for bringing injury claims, the prohibitions on claims for “pure” mental injuries or for punitive damages, the imposition of a strict-liability standard of responsibility for claims less than the monetary threshold, the burden of proof, and jurisdictional restrictions would be the same regardless if the matter is filed in San Francisco, Seoul, or Beijing. But regarding the value of the dollar amounts being sought, the site of jurisdiction and the law applied would have a significant impact.

In China, for example, claimants in wrongful-death cases can seek to recover medical and funeral expenses, necessary living expenses of the deceased's dependents, and death compensation. But those living expenses are “calculated on the basis of the average consumption expenditure of those living in the city where the court is located, or the average cost of living for rural residents where the court is located, as the case may be,” which essentially requires only an estimate of “what the dependents will need to survive at a relatively decent standard of living until they can fend for themselves.” And compensation for death is “calculated on the basis of 20 times the previous year's average net income of urban residents in the city where the court is located, or the average net income of rural residents where the court is located,” with some reduction for decedents age 60 or older. Taken together, the calculations can be characterized as “strictly mathematical,” based primarily on geographical income data rather than any factors specific to the decedent. With annual wages averaging about 48,000 yuan (about $7,800), wrongful-death recoveries, even for high-salaried executives in major Chinese cities, would be modest by U.S. standards. In contrast, the more-generous law in California wrongful-death and survivorship lawsuits allow recovery for the survivors' loss of the decedent's future financial support, services, training and advice; the pecuniary value of the decedent's love, companionship, comfort, care, assistance, protection, affection, society, and moral support; and any claims the decedent might have against the defendant prior to death. Perhaps as a result, multimillion-dollar wrongful-death recoveries, even for decedents with modest incomes, are certainly not unusual in the state.

It is important to remember that Montreal applies only to the liability of the carrier. Claims against other potential defendants, such as airframe or engine manufacturers, parts suppliers, airports, air traffic controllers, hijackers, or other passengers, fall outside of the legal framework established by the convention for modified tort litigation. The fourth column of

104 Clarke, 2008.
105 Clarke, 2008.
108 Wage data are from “Wages in China,” 2013.
110 See, e.g., Chang and Panish, 2012.
Table 4.1 describes a situation in which the manufacturer’s liability is at issue, thus freeing passengers, regardless of residency or ticketing issues, from Montreal’s strict rules regarding the choice of forum. Under this scenario, local jurisdictional rules permitted the filing of a lawsuit in a U.S. court, perhaps because the manufacturer was a U.S. corporation or because, as was also true with Asiana Airlines Flight 214, the incident unfolded and the harms were suffered within U.S. borders. If so, traditional rules regarding tort liability would be in play. Similarly, Montreal would not control in situations similar to ones represented in the table’s rightmost column, in which the flight was not considered to be an international one (and again, traditional tort liability would be in effect). It should be kept in mind that the “international” nature of a scheduled flight is from the passenger’s perspective, not necessarily a reflection of the originating airport and the destination. A flight from John F. Kennedy International Airport (JFK) in New York City to Los Angeles International Airport (LAX) would not be international in character for those passengers who purchased one-way JFK–LAX tickets or roundtrip JFK–LAX–JFK tickets either. But it might be for other passengers on the same flight, such as those flying to Los Angeles from Europe with a change of planes in New York.

Related Responsibility Processes

The two most notable processes for responsibility assignment outside of a modified tort claim under Montreal would be traditional tort litigation and NTSB investigations. The processes associated with the Asiana incident again provide a recent example. NTSB staff members were at the site by the end of the day of the incident and remained there for about two weeks.111 Asiana and Korea’s Aviation and Railway Accident Investigation Board participated in the investigation, and FAA, Boeing, Pratt and Whitney, Air Cruisers (an evacuation equipment supplier), Honeywell International, and the San Francisco Fire Department were formal parties. The investigation was extensive, as evidenced by a docket containing more than 90,000 separate entries logging evidence submissions, investigatory events, witness statements, stakeholder input, and other related items. In December 2013, the NTSB convened a one-day hearing for the investigation into the crash, focusing on pilot awareness in highly automated aircraft, emergency response, and cabin safety. On June 24, 2014, just short of a year after the accident, the NTSB adopted a report that determined the primary cause of the crash to be the flight crew’s mismanagement of the approach and inadequate monitoring of airspeed, with the crew’s misunderstanding of the complexities of the auto throttle and autopilot flight director systems as contributing factors.112 Although Asiana accepted the NTSB conclusion that the ultimate responsibility for controlling the situation was on the pilots, Boeing, the aircraft’s manufacturer, “respectfully” disagreed with the finding that the auto flight systems had contributed in any way.113

112 NTSB, 2014a, 2014b.
113 Vacar, 2014; Lee, 2014.
Lawyers representing some of the claimants asserted that the NTSB final report might be of help in resolving pending lawsuits.\footnote{114}{Weikel, 2014.} Such suits involved various strategies. For example, some cases (including at least one seeking class-action status) were filed in Illinois state court solely against Boeing (headquartered in Chicago), asserting non-Montreal product liability claims arising out of a lack of a low-speed indicator on behalf of more than 170 passengers.\footnote{115}{Bronstad, 2014.} Boeing removed the cases to federal court with the intent of having them subsequently transferred to the Northern District of California for pretrial processing as part of a federal multidistrict litigation (MDL) proceeding, although the removal was challenged initially and did not completely succeed until 2015 when the Seventh Circuit Court of Appeals ruled that, because the incident occurred at some point during a transocean flight, federal admiralty jurisdiction applied.\footnote{116}{Lu Junhong v. Boeing Co., 792 F.3d 805, 807 (7th Cir. 2015); Sundar, 2014.} By mid-2015, approximately 50 lawsuits had been included on the MDL docket at some point, some advancing Montreal claims against the airline, and some with additional allegations against Boeing and others (which would not be subject to Montreal’s restrictions on punitive damages or pure mental injury).\footnote{117}{In re Air Crash at San Francisco, California, on July 6, 2013, MDL No. 2497, N.D. Cal.} Although the MDL proceeding began in only December 2013, lawyers for the defendants and some claimants were already in settlement negotiations by the time the NTSB report was released, reportedly discussing the establishment of a process for claim resolution for those passengers without severe injuries.\footnote{118}{Bronstad, 2014.} The MDL cases would not include a lawsuit filed in California state court by the family of a Chinese student who was killed during the incident; the suits claim that errors by local first responders (and not the Montreal-protected carrier) were directly responsible for her death.\footnote{119}{See, e.g., Hale, 2014.}

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Although NTSB reports would have only indirect influence on the outcome of civil litigation (because of prohibitions on being entered directly into evidence at trial\footnote{120}{See, e.g., Sarsfield et al., 2000, Chapter Four.}), their real import might be in the contributions that insurers make to pay claims arising from an aviation accident. As noted in Chapter Two, funding agreements between key aviation-related insurers are entered into to bring some sense of order to the postaccident financial environment. These agreements can be informal at the start, with the understanding that more-precise allocations of relative responsibility might come later as additional information is developed. An NTSB final report would presumably qualify as additional information, and its “findings may call for an adjustment of the funding agreement that has financed claimant settlements up to that time.”\footnote{121}{Sarsfield et al., 2000, p. 125.} Without such negotiated liability, there might be little to prevent an explosion of complex, high-stakes litigation between the carrier, the manufacturer, and other conceivably responsible parties long after the last passenger claims have been fully satisfied.

\footnotesize{\begin{itemize}
\item \footnote{114}{Weikel, 2014.}
\item \footnote{115}{Bronstad, 2014.}
\item \footnote{116}{Lu Junhong v. Boeing Co., 792 F.3d 805, 807 (7th Cir. 2015); Sundar, 2014.}
\item \footnote{117}{In re Air Crash at San Francisco, California, on July 6, 2013, MDL No. 2497, N.D. Cal.}
\item \footnote{118}{Bronstad, 2014.}
\item \footnote{119}{See, e.g., Hale, 2014.}
\item \footnote{120}{See, e.g., Sarsfield et al., 2000, Chapter Four.}
\item \footnote{121}{Sarsfield et al., 2000, p. 125.}
\end{itemize}}
The NTSB would not be the only governmental agency with an interest in assigning responsibility for some aspect of an adverse aviation incident. For example, the U.S. Department of Transportation reached an agency determination that Asiana had failed to provide required services to passengers and their families immediately after the June 2013 accident, assessing $400,000 in civil penalties and requiring the airline to spend up to another $100,000 to sponsor airline industry conferences and training.\textsuperscript{122}

**Observations**

Unlike most of the other alternative systems for deciding responsibility in a postdisaster environment, the Montreal Convention’s framework can, under certain circumstances, actually make it easier than traditional tort liability for a claimant to assert an allegation that another actor was responsible for losses. Montreal’s imposition of presumed liability can eliminate the need to successfully prove that the carrier was fully or partially responsible, at least for claims not exceeding the threshold. This can be helpful in the context of relatively minor injuries, in which the complex proof required to show negligence on the part of the carrier might require significant legal resources that can overwhelm the potential recovery. The expense of hiring expert witnesses and contracting for laboratory testing can undercut the perception of a tort lawyer operating on a contingency fee that a potential new client’s claim would be a financially viable one. The presumption of liability also means that carriers cannot raise contributory-negligence defenses (common in other tort suits) alleging, for example, that the plaintiff refused to wear a seat belt during the approach into San Francisco International Airport despite instructions to do so from the flight crew.

For more-serious claims, the burden of proof associated with amounts over the threshold is also more “plaintiff friendly,” given that it places the ball in the defendant’s court to show that it was not negligent, often only by arguing that some other actor was at fault. This feature of Montreal might provide carriers with an incentive to settle very large claims, given that proving that an incident was caused by a third party for the limited purpose of reducing exposure related to a single passenger’s claim might not be a wise strategy if there are parallel negotiations for contribution with manufacturers and others. It might also be quite difficult for defendants to prove a lack of negligence in relation to incidents for which the underlying causes or the contributions of third parties are not clear, as is the case (as this report is written) with the disappearance of Malaysia Airlines Flight MH370 in March 2014. Although the Warsaw Convention might have had preservation of international carriers’ financial health as its primary mission, modifications over the years culminating in the Montreal agreement has tilted the playing field back in the direction of claimants, especially so for those with losses asserted to exceed the threshold. As a result, it is not uncommon for injured passengers or surviving family members to seek affirmative judicial acknowledgment than Montreal applies to their losses, sometimes countering strenuous carrier arguments that the dispute must be handled through a traditional tort claim.

\textsuperscript{122} Nakaso, 2014.
That said, there are many instances in which Montreal is seen as a barrier to full recovery. The prohibition on punitive damages, for example, undercuts the powerful leverage that claimants can have in settlement negotiations when there are allegations that the defendant acted in an outrageous or shocking manner. In addition, Montreal might offer little additional benefit to the families of those killed as the result of an act of terrorism in which the airline was essentially blameless, at least insofar as monetary claims exceeding the threshold are involved. The many non-Montreal claims being brought on behalf of passengers on Asiana Flight 214, a flight certainly international in character, suggests that the framework is a relatively porous one, at least for major incidents in which a wide variety of potential defendants might be in the mix and for which courts in the United States are seen as extremely attractive venues. From a defendant’s perspective, at least, Montreal might streamline postcatastrophe dealings with claimants to a certain degree, but the manner in which the question of responsibility is ultimately answered is likely to be complex, lengthy, and fractured into multiple venues, despite any “final” NTSB determination. As one observer noted regarding the Asiana crash, “Anybody who has a fingerprint on that airplane is gonna get served with a suit somehow.”

\[\text{Schaub, 2014.}\]
Chapter Five:
Oil Spills in Navigable Waters

Arguably the most comprehensive congressional framework for addressing the legal, financial, and physical consequences of a disaster was created to respond to discharges of various forms of petroleum (such as crude oil, diesel fuel, and sludge) into the waters of the United States. The framework can apply when just a pint of gasoline seeps into the middle of the ocean, but it also serves as controlling law for incidents in which the discharge involves millions of gallons of crude and pollutes the waters and shorelines of multiple states. We include this particular framework because it might be the best tested of any described in this report.

Background

Frameworks Prior to Exxon Valdez

The potential for a large-scale catastrophic oil spill did not begin with the advent of the supertanker era or the development of giant offshore drilling platforms. Indeed, the largest oil spill in U.S. history when measured in barrels (and the world's largest other than those due to intentional acts during the 1991 Gulf War) was caused by a land-based oil well blowout in 1910 near Maricopa, California, taking 18 months to bring fully under control. Nevertheless, a string of large oil spills in the 1970s and 1980s (such as the wreck of the Argo Merchant off the coast of Nantucket in 1976, the sinking of the Hawaiian Patriot 300 miles from Honolulu in 1977, the ramming of the Corinthos in a Philadelphia harbor in 1975, a fire on the motor vessel Mega Borg near Galveston in 1990, the collision of the Mandoil II off of Oregon in 1968, and a blowout of a Union Oil platform off the coast of Santa Barbara in 1969) provided strong evidence to both the public and policymakers that releases of tens of thousands of tons of oil in U.S. waters were unfortunate possibilities. None of these incidents, however, compares with the national attention and legislative concern triggered by the 1989 grounding of the Exxon Valdez and its implications for the environmental health of Prince William Sound, Alaska.

Prior to Exxon Valdez, a mid-19th century admiralty law and four comprehensive legislative packages dating from the 1970s addressed the consequences of oil spills into water in terms of liability, cleanup costs, and compensation. The Limitation of Liability Act was enacted in 1851 to encourage U.S. “shipbuilding and to induce the investment of money in this branch of industry” by allowing shipowners to limit their liability for certain types of claims related to a vessel's voyage to the postaccident value of the vessel and its freight. Although the Limitation

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124 Harvey, 2010.
125 The discussion in this paragraph draws heavily on Ramseur, 2010, pp. 7–9.
126 Although higher limits are now available for personal injury or death claims (46 U.S.C. § 30506), the owners of the Titanic successfully asserted the act to limit their liability to surviving passengers, families of the deceased, and those who had shipped cargo on the vessel to the total value of the lifeboats that
of Liability Act has never been expressly repealed, the potential for a major maritime oil discharge to have financial implications that greatly exceed the value of the possibly wrecked vessel that carried the product provided some of the motivation for Congress to pass CWA, the Deepwater Port Act of 1974 (DWPA), the Outer Continental Shelf Lands Act (OCSLA) Amendments of 1978, and the Trans-Alaska Pipeline Authorization Act of 1973 (TAPAA). The financial liability of responsible parties for maritime oil spills continued to be limited under these four regimes, but the ceiling was raised in the form of a fixed total amount (under TAPAA) or a variable limit based on the lesser (or greater, in some instances) of a fixed amount or a rate per gross ton (GT) of discharged oil (under DWPA, CWA, and OCSLA). All four regimes imposed strict liability on those deemed responsible for oil spills (without restriction in the case of the CWA; for only specific activities or locations in the case of the other three packages), plus joint and several liability for coresponsible parties. Responsibility would automatically attach to the owner or operator of the vessel from which oil had been discharged.

All of the regimes set up trust funds for dealing with the immediate needs resulting from a spill, at levels ranging from $4 million to $200 million. CWA’s fund would be financed by appropriations from the U.S. Treasury, while the other three were funded by taxes on oil or fees imposed on certain parties. In CWA and OCSLA, certain expenses would have no limitation (recovery costs in CWA, federal and state cleanup costs for OCSLA). Recoverable damages would, in every instance, include cleanup costs incurred by the government, but the laws differed markedly as to whether other damages (such as economic losses or claims by private parties) would be addressed. In sum, the response to a catastrophic oil spill and the extent of liability of a PRP would depend on where and how the spill happened, and not just on the severity of the incident.

*Exxon Valdez* put this maze of laws related to oil spills to the test. Legislative review of the response to the Alaskan disaster concluded that the “nation’s ability to avoid or clean up spills of oil and hazardous substance in the United States currently depends on a network of public and private participants operating under a patchwork of Federal, state, and local laws and regulations.” Although existing authority enabled the U.S. government to seek recovery of the costs of cleanup and removal in *Exxon Valdez*, there was no “comprehensive legislation in place that promptly and adequately compensates those who suffer other types of economic loss as a result of an oil pollution incident.” Many hoped that OPA would serve as that comprehensive legislation.

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The Oil Pollution Act of 1990

According to its preamble, OPA was intended to “establish limitations on liability for damages resulting from oil pollution, to establish a fund for the payment of compensation for such damages, and for other purposes.” The vague reference to “other purposes” belies the fact that OPA is the primary tool that the federal government uses to marshal its considerable resources to quickly respond to a spill with cleanup and remediation efforts, as well as to take steps to prepare for such eventualities in the future. Under OPA, the president would have the power to “ensure effective and immediate removal of a discharge, and [provide] mitigation or prevention of a substantial threat of a discharge, of oil or a hazardous substance”\(^\text{131}\) involving the nation’s navigable waters, the adjoining shorelines, an exclusive economic zone extending 200 nautical miles out to sea, or any natural resources under the exclusive management authority of the United States. The power would be exercised by taking immediate federal action to remove or prevent an oil spill, by directing (i.e., ordering) private parties, state governments, or federal agencies to take such steps and by monitoring the actions of others.\(^\text{132}\)

**Liability**

How does OPA address the problem of figuring out who ought to pay for all of these efforts? Once the president (or, more precisely, his or her designee) is made aware that a spill has triggered OPA, the source or threat of discharge is identified administratively and the responsible party notified.\(^\text{133}\) Who that “responsible party” might be is a function of the identified source of the oil.\(^\text{134}\) Depending on the circumstances, a responsible party could be the person (which includes corporations and governmental bodies) owning, operating, or demise chartering a vessel; the owners or operators of onshore facilities or pipelines; the licensee or permittee of offshore facilities; or, in the case of abandoned sources (such as an abandoned vessel), the person who would have been deemed a responsible party prior to the abandonment.

Once a person or entity is designated as responsible, the party would then be liable for all removal costs incurred by government agencies and (under certain circumstances) private parties. In addition, liability would attach for six categories of damages (including prejudgment interest), although the first three would be recoverable only by the government:\(^\text{135}\)

- **natural resources:** Governmental bodies could recover for destruction, loss, or loss of use of natural resources; associated costs of restoration, rehabilitation, or replacement; any diminution in value; and the cost of damage assessment.
- **revenue:** Government bodies could recover for lost taxes and other forms of revenue.

\(^{131}\) OPA, § 4201(a).
\(^{132}\) OPA, § 4201(a).
\(^{133}\) OPA, § 1014(a).
\(^{134}\) OPA, § 1001(32).
\(^{135}\) OPA, § 1002(a), (b); § 1005.
• **public services**: States and local governments could recover expenditures for providing services due to the spill, such as those related to additional fire, safety, or health protection.

• **real or personal property**: Owners or lessors of property would be able to recover for property damage and related economic loss.

• **subsistence use of natural resources**: Exploiters of natural resources would be able to recover for loss of subsistence use arising from damaged, destroyed, or lost resources on which they depend for food, economic security, or other products. The crew of a commercial fishing boat might fall under this definition.

• **profits and earning capacity**: Any claimant could recover for lost profits or diminished earning capacity arising out of discharge-related damage to or loss of real property, personal property, or natural resources. In a marked departure from traditional maritime law (and traditional tort law, for that matter), this provision has been interpreted to allow for the recovery of so-called “pure” economic loss under OPA, in which the claimant is seeking compensation for financial losses even though neither the claimant nor its property were physically affected.\(^{136}\)

Notably absent from this list is any mention of compensation for personal injuries or death. A savings clause in OPA essentially states that, except as otherwise expressly provided, the legislation would not affect admiralty or maritime law. Because OPA does not discuss the issue, much less expressly prohibit such claims, claims for injuries to people caused by incidents at sea would be available in the maritime common law and fall outside of the OPA framework.\(^{137}\) In addition, criminal and civil penalties against a responsible party (or any other actor the government believes to have contributed to the incident or its aftermath) are provided for separately through the CWA.\(^{138}\)

Defenses are available to the strict-liability regime that OPA imposes. The person or entity initially determined to be responsible can shift that designation to a third party if it can be established that the discharge was solely caused by the acts or omissions of the third party (the designee's employees, agents, and those with whom the original designee had a contractual relationship would not be considered third parties). Doing so requires a showing that the original designee had exercised all due care in handling the oil and had taken precautions against the foreseeable acts or omissions of third parties. Until that showing is made, the original responsible party has to continue paying for recovery costs and damages, with a right of subrogation against the third party if the defense is successful.\(^{139}\) In addition, liability would be avoided if the designated responsible party could show, by a preponderance of the evidence, that the discharge was the sole result of an act of God or war.\(^{140}\) Given the difficulties inherent in proving that any incident was “solely” the result of natural events or some other actor, with

\(^{136}\) *In re Oil Spill*, 808 F. Supp. 2d 943 (E.D. La. 2011).

\(^{137}\) Hume, 2011, pp. 1448–1449.

\(^{138}\) 33 U.S.C. §§ 1319 and 1321.

\(^{139}\) OPA, § 1002(d).

\(^{140}\) OPA, § 1003(a).
absolutely no contributing factors related to the operation or condition of the vessel or facility, circumstances in which liability can be shifted or eliminated completely can be narrow.\textsuperscript{141} A 2004 revision to OPA added an “innocent landowner” defense, in which a responsible party could argue that, when the real property where the discharge emanated was acquired, the party did not know—and had no reason to know—that oil was located on, in, or at the facility (the defense would also be available under certain specified circumstances, such as when the property was acquired through inheritance).\textsuperscript{142} But, for any possible defenses to be successfully invoked, a designated responsible party has to have completely clean hands in its postincident handling for any liability shift or complete elimination, with these defenses unavailable if the party failed to report the incident, failed to provide reasonable cooperation and assistance to officials, or failed to comply with agency orders.\textsuperscript{143}

If a party deemed responsible disagrees with the designation, it (or its insurer or other guarantor) would have five days to formally deny the identification. If it fails to do so within that time period, it now has the responsibility of publicly advertising its status as a responsible party starting no later than 15 days after the designation and continuing for at least 30 days and announcing instructions on how claims should be presented.\textsuperscript{144} If instead the responsible party denies the designation within the five-day period (or if the source was unable to be identified or was determined to be a public vessel), the president would announce how claims might be made against a trust fund controlled by OPA (discussed below).\textsuperscript{145}

\textit{Caps on Financial Exposure}

OPA instituted important limits on the financial liabilities of a responsible party for damage claims and the costs of removal.\textsuperscript{146} Such caps are subject to periodic adjustment for inflation, as well as possible revisions based on subsequent studies of risk or by dividing the major categories into smaller classes based on size, storage capacity, or other factors.\textsuperscript{147}

At the time of OPA’s passage, ships built to carry oil as cargo would have a total liability cap of up to $1,200 per gross ton or $10 million, whichever was greater.\textsuperscript{148} Subsequent legislation and

\begin{itemize}
  \item \textsuperscript{141} An interesting ancillary question is whether the liability of multiple parties determined to be responsible can be considered joint and several. OPA does not address this issue directly, although some legislative history suggests that some members of Congress intended joint and several liability: “The conference agreement imposes strict, joint and several liability upon a responsible party who discharges oil into or upon navigable waters or adjoining shorelines or the exclusive economic zone of the United States” (statement of Rep. Henry Nowak of New York, reported in \textit{Sun Pipe Line Co. v. Conewago Contractors, Inc.}, 1994 WL 539326 [M.D. Pa. Aug. 22, 1994]).
  \item \textsuperscript{142} 33 U.S.C. § 2703(d). The 2004 revision mentioned is Coast Guard and Maritime Transportation Act of 2004, Pub. L. No. 108-293.
  \item \textsuperscript{143} OPA, § 1003(c).
  \item \textsuperscript{144} OPA, § 1014(b). If the required advertising does not commence in the allowed time, the president would have the authority to make the announcement at the responsible party’s expense. See also Coast Guard Authorization Act of 1996, Pub. L. No. 104-324, § 1142(a).
  \item \textsuperscript{145} OPA, § 1014(c).
  \item \textsuperscript{146} OPA, § 1004(a).
  \item \textsuperscript{147} OPA, § 1004(d).
  \item \textsuperscript{148} Relatively small oil carriers have more-modest limits.
\end{itemize}
inflation adjustments by the end of 2015 changed the cap so that single-hull or bottom oil tankers would have limits of the greater of $3,500 per gross ton or either $7 million (if less than or equal to 3,000 GT) or $25.8 million (if more than 3,000 GT). The cap for double-hull and bottom tankers would be the greater of $2,200 per gross ton and either $4.7 million (if less than or equal to 3,000 GT) or $18.8 million (larger than 3,000 GT). As a point of reference, the biggest ultralarge crude carriers operating today are double hulled and have a gross tonnage of about 235,000 GT, capping their potential liability at about $517 million. OPA imposed liability caps on all other vessels of $600 per gross ton or $500,000, whichever was greater. These limits were later raised to the greater of $1,100 per gross ton or $940,000 (the gross tonnage of the largest nontanker vessels currently on the seas are about 170,000 GT, equating to a cap of about $187 million). Onshore facilities and deepwater ports had total caps of $350 million, later increased to $633.85 million. Offshore facilities, such as oil platforms, differ from these other types in a significant way: There is no cap for the costs of removal even though there is a cap ($75 million originally, changed to about $134 million in 2015) for damage claims. Mobile offshore drilling units (MODUs), such as Deepwater Horizon, are treated as a hybrid of oil tank vessels and offshore facilities for the purpose of the cap: They are tank vessels when determining their initial liability limits and what would be classified as the responsible party but are offshore facilities if the damages and removal costs exceed their initial liability limits. If a responsible party can shift that designation to a third party, the caps applicable to the originally designated responsible party would now protect the third party.

One important aspect of these caps is that they generally represent the minimum levels of financial responsibility that must already be in place (perhaps in the form of insurance, surety bond, guarantees, qualification as a self-insurer, or other means) for certain potentially responsible parties to operate within U.S. territory. The requirements extend, however, only to vessels, offshore facilities, and deepwater ports, and, in some instances, the minimum insurance level might be lower than the cap.

The liability cap can be pierced on a showing that the incident was proximately caused either by the gross negligence or willful misconduct of the responsible party or by a violation of “an applicable Federal safety, construction, or operating regulation” on the part of a responsible party (including its employees, agents, or contracting partners). The clean-hands rule used to prevent elimination of liability applies here as well: No cap would be in effect if there were failures to report, cooperate and assist, or comply with agency orders. And no cap would be in

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151 OPA, § 1002(d)(2).
152 OPA, § 1016.
153 OPA, § 1004(c).
place for the recovery of removal costs borne by the government when the matter involves offshore facilities on the outer continental shelf or vessels transporting oil from those facilities.

**The Fund**

Although the act's imposition of strict liability would, at least in theory, provide a ready source of funding for cleanup operations or compensating those harmed by the discharge, in reality, events following the initial discharge can unfold too rapidly to allow sufficient time to formally designate a responsible party and seek reimbursement or institute a process for paying claims. To have a financial capacity in place to deal with the immediate consequences of a spill, OPA provided for the full implementation of the existing Oil Spill Liability Trust Fund (OSLTF). The fund would be used for payment of the costs of removal or natural resource damage assessments incurred by federal or state authorities, compensating damage claims or removal cost claims that were not already covered by the responsible party, and reimbursing federal agencies for costs and expenses of administering the spill response or addressing other aspects of OPA.\(^\text{154}\)

At the time of OPA's passage, the OSLTF had already been on the books for four years, initially funded with a $0.013 tax on crude oil used in or exported from the United States.\(^\text{155}\) With OPA, existing environmental cleanup funds (such as the CWA's § 311 revolving fund; the DWPA's liability fund; and TAPAA's Trans-Alaska Pipeline Liability Fund) were subsumed into the OSLTF.\(^\text{156}\) In addition, legislation separate from OPA increased the tax to $0.05 per barrel, although, at the present time, the rate is $0.09 for crude oil received or petroleum products entered after December 31, 2016.\(^\text{157}\) Natural resource damage recoveries, recoveries from subrogation actions, and penalties would also help finance the OSLTF.\(^\text{158}\) Despite a period of more than ten years in which the tax was not collected because of a sunset provision, by the end of fiscal year (FY) 2013, total assets of the fund were reported to be $3.29 billion.\(^\text{159}\) OPA also placed a $1 billion maximum on total expenditures for any single incident, of which no more than $500 million could be for natural resource damage assessments and claim payments.\(^\text{160}\)

Except for certain governmental bodies, claims for removal costs or damages must be first presented to the responsible party before any reimbursement from the fund or civil action would be possible.\(^\text{161}\) There are minimal rules in place regarding how such a claim must be

\(^{154}\) OPA, § 1012(a).


\(^{160}\) 26 U.S.C. § 9509(c)(2).

\(^{161}\) OPA, § 1013(a); Boca Ciega Hotel v. Bouchard Transp. Co., 51 F.3d 235, 237 (11th Cir. 1995). Responsible parties need not make payments to claimants who were grossly negligent or willfully caused the incident (OPA, § 1003(b)).
presented or how it would be evaluated by the responsible party. Once the responsible party receives the claim, there is what amounts to a 90-day consideration period. If the claim is not settled within that time, or after any point in which the responsible party denies all liability, the claimant would have the options of either bringing an action in court to resolve the dispute or proceeding against the fund. The claimant would not, however, be able to complete both processes simultaneously because OPA prevents the fund from approving or certifying any claim presented to it during the pendency of any court action. Claimants seeking reimbursement of recovery costs or payment of damages from the OSLTF would present their claims to the Coast Guard’s National Pollution Funds Center (NPFC) (the Coast Guard’s unit that rules on claims against the OSLTF) for a determination and would be successful only to the extent that their losses were not caused by their own gross negligence or willful misconduct. There would be a time limit of six years following the end of recovery efforts to bring a claim for recovery costs, a three-year limit for bringing claims for damages after a point at which any losses were reasonably discoverable, and a three-year limit for natural resource damage claims (starting when the official assessment has been completed). Regulations controlling the presentment of claims against the OSLTF include both general (“claimant bears the burden of providing all evidence, information, and documentation deemed necessary”) and specific (“claim must be signed in ink”) requirements. An adverse decision on the claim could receive a one-time internal reconsideration if the claimant makes the request within 30 days of the notification of denial. Once the decision is considered final, the claimant could seek limited review in federal district court, with a subsequent opportunity for appellate review (note that the claimant always has the ability to proceed against the responsible party if unsatisfied with the outcome of the OSLTF process). Any payments made to claimants or state governments from the OSLTF would give the United States subrogation rights to proceed against the responsible party. The attorney general would have the authority to bring recovery actions seeking not only the amounts of paid for removal or damages but also interest, administrative and adjudicative costs, and attorneys’ fees. When defending a recovery action, a responsible party can challenge all payments made by the OSLTF on the basis that its original designation as the responsible party was in error (e.g., that a third party was sole cause of the discharge). Challenging NPFC’s decision on a specific claim (such as an assertion that the amount paid was too generous) can be more

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162 See Chuc Nguyen v. Am. Commer. Lines, L.L.C., 805 F.3d 134 (5th Cir. 2015) (a written request for a “sum certain” would appear to constitute a claim); and 33 U.S.C. § 2705(a) (there need only be a plan for processing claims, and it must include procedures for handling claims involving interim, short-term damages).
163 OPA, § 1013(c).
164 OPA, § 1013(b)(2).
165 OPA, § 1012(b). See also 33 C.F.R. §§ 136.1–136.313 (claim procedures for the OSLTF).
166 OPA, § 1012(h).
167 33 C.F.R. § 136.105.
168 33 C.F.R. § 136.115(d).
169 OPA, § 1015(a).
170 OPA, § 1015(b).
difficult because the narrow standard available for review would set aside the agency’s final action only if the result was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.171

If litigation over removal costs or damages takes place, the action could be brought in state court (depending on applicable jurisdictional rules) or federal court.172 A set of time limits different from those for bringing claims against the fund exists for filing court actions for cost recovery, damages, contribution, or subrogation (generally three years, with the start of the time period varying by the relief sought).173

Application

The key person involved in determining responsibility under OPA, at least initially, is the federal on-scene coordinator (FOSC).174 The FOSC, either from the Coast Guard or EPA, oversees all federal efforts in response to an oil discharge and is required to “collect pertinent facts about the discharge or release, such as its source and cause [and] the identification of potentially responsible parties . . . .”175 According to the straightforward language in OPA that defines who might be considered a responsible party under the act, the process of identification would not seem to be particularly difficult. If oil is pouring out of the hull of a vessel that has just run aground, for example, it is simply the vessel’s owner or operator that would be designated as the responsible party. In addition, the FOSC can draw on federal agency resources to help in the identification process, such as having the NPFC examine certificates of financial responsibility issued to operators of all oil cargo vessels, as well as any vessel greater than 300 GT. State agencies can also assist in determining who owns or operates or leases whatever property is of interest. It turns out, however, that, in nearly half of all reported discharges, “the FOSC is unable to identify the source of the spill or identify a responsible party.”176

In situations other than such “mystery spills,” the agency is instructed to use a “rapid means” to initially inform a responsible party (or its guarantor) of the identification, followed by a written notice of designation.177 The notified party has five days to return a written denial, describing why the designation is incorrect and including any supporting documentation.178 But

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172 OPA, § 1017(b)(c).
173 OPA, § 1017(f).
174 The FOSC designation of a responsible party appears to be the most common path for assignment following an oil spill, but it is certainly not the only one. For example, the federal government might seek a declaratory judgment from a court that the defendants and their guarantors are liable for removal costs and damages under OPA as designated responsible parties. See, e.g., “Complaint,” filed December 15, 2010, in United States v. BP Exploration & Prod., Civil Action No. 2:10-cv-04536, E.D. La.
175 40 C.F.R. § 300.135(c); see also 40 C.F.R. § 300.305(b)(2).
176 U.S. Coast Guard, 2013b.
177 33 C.F.R. § 136.305(a).
unlike the civil litigation process, in which blanket denials of each allegation and statement of fact in the original complaint are seemingly standard components of every defendant’s answer, responsible parties in the OPA framework typically do not challenge the designation. That might be because “an incentive exists for responsible parties to respond quickly and competently in order to limit the extent of their financial exposure,” the incentive being OPA’s liability limits available to “cooperative” responsible parties. ¹⁷⁹

Not only does providing “all reasonable cooperation and assistance requested by a responsible official”¹⁸⁰ as part of the OPA process help ensure that the limits remain in place; it also helps set the stage for the responsible party’s own claims against the OSLTF. It is not uncommon for a responsible party to seek reimbursement against the fund for any expenditures it made on cleanup operations, damage claim payments, administrative costs, subcontractors, or other needs when total expenses exceed its demonstrated entitlement to the OPA limit of liability. The 2004 grounding of the Selendang Ayu on Unalaska Island in Alaska (with a release of 330,000 gallons of bunker oil) provides one example. The parties designated as responsible indicated that they had incurred $149 million in removal costs.¹⁸¹ Because of the gross tonnage of the vessel (40,000) and the OPA liability limit rate at the time of $600 per gross ton, the responsible parties began a process that could conceivably result in receiving as much as $125 million from the OSLTF, five times their maximum financial exposure. As long as the above-limit costs claimed by responsible parties were incurred as part of actions to prevent, minimize, or mitigate the effects of the incident; were directed by the FOSC or were consistent with the National Contingency Plan, the federal government’s master plan for responding to releases of oil or hazardous substances; and were adequately documented, they can be paid out of the fund.

Nevertheless, identified parties do challenge the designation of responsibility on occasion, sometimes passively, sometimes formally. An OPA recovery action in 2008 against the parties deemed responsible for a discharge from abandoned oil-storage units provides a useful example.¹⁸² When the units started to leak, the Natural Resource Damage Claims Division of the Coast Guard conducted a record search and determined that the last known lessees of the land where the units were located were the entities “owning or operating the facility” as defined by OPA and, as such, the responsible parties. The Coast Guard sent a letter to the lessees indicating that it had identified them as responsible and stating that, if the identification was disputed, evidence would need to be provided.¹⁸³ There was no response to the letter. A subsequent complaint that DOJ filed on behalf of the Coast Guard sought to recover nearly $1 million for removal costs and natural resource damages, plus prejudgment interest, administrative costs, and attorneys’ fees. At that point, the original designation became the

¹⁸⁰ OPA, § 1004(c)(2)(B).
¹⁸¹ U.S. Coast Guard, 2013a.
core question at issue in the lawsuit, and the parties could present their arguments as to why they should not have been classified in this way. In this case, the strategy worked: At trial, the jury disagreed with the Coast Guard’s assessment of responsibility and found that, although the defendants leased the land, they were not the owners or operators of the oil-storage units as defined by OPA.  

A more immediate denial can be seen in the example of the 2010 Deepwater Horizon blowout.  

Within a week following the explosion and fires on the MODU, the Coast Guard sent notices of designation to Transocean Holdings (the owner and operator of the MODU) and BP Exploration and Production (a co-owner of the wellhead on the seafloor and the main lease holder and operator of the Macondo Prospect) that they had been identified as responsible parties and informing them of the five-day response period.  

Both BP and Transocean responded within five days, but the substance of their replies differed. BP acknowledged that it would be a responsible party under OPA, although with a “full reservation of rights with respect to any and all other parties.” Transocean, on the other hand, acknowledged OPA responsibility (reserving “all of its rights and defenses under OPA”) only for discharges on or above the surface of the water, expressly denying responsibility “for any underwater discharges of oil from the wellhead.” The question of where exactly the oil was discharged and, as such, who would have OPA responsibility for same was still being litigated years after the blowout.  

A party’s ability to immediately challenge the designation appears to be limited. The agency’s determination process is not formal adjudication, and there appears to be little opportunity in the early days after the incident for making a concerted argument that the agency’s conclusion was incorrect. At best, the materials supplied with the designated party’s initial response to the notice of designation might get the agency to reconsider, but there does not appear to be any duty on the agency to do so, at least not one set forth in OPA. Although the federal APA rules regarding informal agency decisions could be utilized as a default set of remedies in this situation, our review of case law and reported decisions of NPFC suggest that the most typical approaches for challenges take one of two paths. The first involves the party waiting until being presented with a court complaint brought by NPFC to recover expenditures made by the fund for removal and damage claims and then challenging that assessment based on the various

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185 This incident has been referred to by a variety of commonly employed labels (e.g., Maconoro Well blowout, Gulf oil disaster, Macondo/Deepwater Horizon spill), some of which are carefully chosen to focus (or avoid focusing) attention on one possible contributing party. We use the name of the mobile drilling platform simply for the sake of convenience.

186 U.S. Coast Guard, 2010; Director, NPFC, 2010.


188 Nicoletti Hornig and Sweeney, 2010.

189 United States v. BP Exploration & Prod., 753 F.3d 570, 571 (5th Cir. 2014). See also In re Oil Spill by the Rig “Deepwater Horizon” in the Gulf of Mexico, 844 F. Supp. 2d 746 (E.D. La. 2012).
defenses available in OPA (e.g., act of God, total responsibility of a third party, innocent landowner, not the actual owner or operator).  

The other common approach involves the party presenting its own monetary claim against the OSLTF (for example, to recover all costs expended for removal) and asserting a defense at that time, arguing that, because the party’s status actually fell under one of OPA’s exceptions, it should be treated like any other claimholder without regard to the liability limit (if the party were unsuccessful in making this argument, a district court would be asked to review the NPFC’s decision). In either instance, it seems to makes little difference to a final determination of responsibility whether the party responded to the initial designation, whether the party acknowledged its status as an OPA responsible party, or whether it immediately began cleanup operations and made compensation payments on its own.

It should be remembered that identifying the responsible party is only half the challenge in getting money back into the hands of those claiming losses. In 51 major oil spills between 1990 and 2007 (major being defined as having costs that exceed $1 million) in which the limits of liability were not reached, responsible parties paid only 65 percent of the total costs of damages and remediation (none of these incidents fell into the “mystery spill” category because the source of the discharge was always identifiable). In such instances, the OSLTF was able to cover the remaining 35 percent, but the potential that a responsible party might be dissolved or have entered the protection of the bankruptcy courts when the tab for the spill is presented underscores the need to consider alternative sources for compensation in postdisaster planning.

Related Responsibility Processes

Four important points should be kept in mind when considering OPA’s framework for assessing liability. First, it applies only to parties that the Coast Guard or EPA has designated as responsible. Other actors who might have contributed to the underlying causes of the adverse incident, but who were not so designated officially, exist outside of the administrative process by which statutory responsibility can be determined quickly and by which damage claims can be presented in a relatively straightforward manner. More importantly, such actors are also outside of the protections afforded by OPA’s liability cap, with financial exposure limited only by applicable civil law and the judgment of a trier of fact.

Second, with the exception of the cap on liability, OPA places negligible restrictions on the right to bring an action at law to recover whatever damages might be available under the act from an officially designated responsible party. The 90-day consideration period is certainly not an unsurmountable barrier to seeking an adjudication of a claim. After that point, a person or

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193 Failure to first present a claim to the responsible party could result in having the lawsuit dismissed without prejudice. In the Deepwater Horizon litigation, however, a complaint’s failure to allege that
entity that believes that an OPA-designated party has harmed it is certainly free to file a complaint. Even the bar against OSLTF payments while a separate court case is pending does not prevent the litigation from proceeding: OPA has no statutory mandate that all related litigation be stayed pending resolution of the claim against the fund. Our understanding is that the processing of the claim against the fund is simply put on hold until the court matter is resolved. And the fact that a claimant has been able to collect against the fund for some type of loss does not necessarily impede a subsequent civil court action for other damages beyond what was provided through the OSLTF process. Indeed, OPA contemplates a situation in which responsible parties could pay claims for “interim short-term damages” without precluding any future recoveries for losses outside the scope of those interim payments, a situation that would not be common in tort litigation, in which defendants are usually reluctant to provide any compensation at all until a full release is obtained.

Third, OPA contains savings clauses that explicitly preserve some aspects of federal and state law, affirmatively stating that nothing in the legislation prevents the application of laws that would “impose additional liability or additional requirements . . . relating to the discharge, or substantial threat of a discharge, of oil” and noting that, except as otherwise provided, the act “does not affect . . . admiralty and maritime law.” The courts are still considering what this means in practice (for example, the question of whether OPA serves to bar all claims for punitive damages or instead allows those that would have been available under general maritime law continues to be debated). However, the fact that additional remedies are theoretically available to those believing that they have been harmed by a responsible party could increase the frequency and magnitude of damage claims pursued through litigation.

Finally, although the OPA designation of responsibility has significant financial consequences for a party, the official determination’s direct impact on separate legal proceedings seeking damage awards against that party is muted on the question of negligence. The fact that a person or entity owned or operated an onshore facility from which oil leaked into a waterway (all that would be needed for an OPA designation) would be only one aspect of many for a judge or jury to consider when evaluating a tort claim of liability. Far more important would be that party’s acts and omissions, aspects that the OPA framework takes into only limited consideration.

presentation has been made did not result in immediate negative consequences for more than 100,000 individual complaints. See “Order and Reasons,” filed August 26, 2011, in In re Oil Spill by the Oil Rig “Deepwater Horizon” in the Gulf of Mexico, on April 20, 2010, Civil Action No. 2:10-md-02179, MDL No. 2179, E.D. La.

194 OPA, § 1005(a).
195 OPA, §§ 1018(c), 6001(e).
196 Compare In re Oil Spill, 808 F. Supp. 2d 943, 962 (E.D. La. 2011); S. Port Marine, LLC v. Gulf Oil Ltd. P’ship, 234 F.3d 58, 64–66 (1st Cir. 2000); and Costonis, 2013.
197 The use of admiralty and maritime law as an alternative avenue for seeking compensation can be a double-edged sword. Claims involving personal injury or death are certainly possible outside of OPA, but they might be subject to restrictions, such as the Limitation of Liability Act, which limits all shipowner liability for damages to the postincident value of the vessel and its cargo.
Taken together, these points suggest why, when the consequences of an oil spill reach what might be thought of as truly disastrous proportions, significant levels of litigation can arise despite Congress' apparent intention to impose a comprehensive regime through OPA for handling questions of liability and damages. *Deepwater Horizon* provides a vivid example. The family of one of the workers who was killed in the incident filed the first court action the very next day after the blowout and fire. From that modest beginning, the legal battle developed into a massive MDL consolidation in the Eastern District of Louisiana that contained, by the end of June 2014, more than 3,100 separate cases, many of which involved large-scale mass actions (including class actions and the use of “short-form joinders” that allowed tens of thousands of claimants to sign up as plaintiffs onto a single master complaint without paying individual filing fees). The need to bring some semblance of order to this extremely complex and multifaceted litigation required the individual lawsuits to be grouped into separate “bundles” for pretrial treatment that distinguished between claims for personal injury and death; economic loss and property damage; Racketeer Influenced and Corrupt Organizations Act issues; postexplosion cleanup; postexplosion emergency response; public damage; injunctive and regulatory relief; and claims against the government. Other related cases developed outside of the damage claim model, including federal criminal prosecutions, agency actions seeking civil fines and other sanctions, shareholder suits, cross-defendant actions alleging tens of billions of dollars in damages and seeking contribution for claims already paid, and at least one environmental damage class action brought in a Mexican court of law. The litigation landscape related to *Deepwater Horizon* is far too vast to do any reasonable level of justice in the space available in this report, other than to note that, although OPA is the legal focus of many of these cases, the model it arguably contemplates of a quick designation of responsibility followed by efficient administrative processing of the vast majority of damage and cleanup claims never really materialized. Although the specific consequences that arose from the *Deepwater Horizon* event might not have been predictable, there were warnings that the OPA framework would be strained in an extremely serious incident. A 2007 GAO report noted that, although the OSLTF had a $1 billion per-incident cap, *Exxon Valdez*’s cleanup costs

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199 Some of these consolidated cases had been terminated or transferred by this time.


201 Certainly, OPA played an extremely important role in the incident. By the end of FY 2012, for example, more than $612 million in disbursements for *Deepwater Horizon*-related oil removal had been made from the OSLTF (U.S. Coast Guard, 2013d). But it should be noted that one of the key features of OPA, the cap on aggregate liability for damages, was not in play. In the months following the discharge, BP announced that it would voluntarily waive the then-$75 million limit on damage liability, and that waiver was later incorporated as part of an order issued by the judge overseeing the MDL proceedings. See “Statement of BP Exploration & Prod. Inc. Re Applicability of Limit of Liab. Under Oil Pollution Act of 1990,” filed October 18, 2010, and “Order re Applicability of Limit of Liability Under Oil Pollution Act of 1990 to BP Exploration & Production Inc. (and Its Affiliates),” entered December 23, 2010, in *In re Oil Spill by the Oil Rig “Deepwater Horizon” in the Gulf of Mexico, on April 20, 2010*, Civil Action No. 2:10-md-02179, MDL No. 2179, E.D. La.
alone were $2.2 billion; the report warned that, although “the Fund has been successful thus far in covering costs that responsible parties did not pay, it may not be sufficient to pay such costs for a spill that has catastrophic consequences.”

How often has an oil spill created an environment in which the courts, rather than the OPA framework, have been the primary means for addressing the legal consequences of the incident? One way to get a sense of when that might happen is to look at the instances in which the OPA liability limits were smaller than the known costs of removal and damages. The assumption here is that, when the consequences of a spill are greater than what a responsible party is obligated to cover, then conditions might be optimal for those who believe that they have been harmed to go outside of the OPA process. There certainly is a large number of opportunities for OPA’s framework to come into play; in calendar year 2012, for example, about 3,000 incidents involved oil discharges into water. But beginning with OPA’s enactment in 1990 through the end of FY 2012, no more than 64 discharge events in total involved removal and damage costs higher than the applicable limits of liability. Although Deepwater Horizon is obviously the most prominent example of those 64 events, the 2010 Enbridge pipeline rupture in Michigan and subsequent release of more than 843,000 gallons of tar sand oil, some eventually winding up in the Kalamazoo River, might offer an example of the level of extra-OPA proceedings that might be expected in an extremely serious incident, albeit one that does not rise to the level of the largest accidental spill in history involving a marine environment. Enbridge being an “onshore facility” under OPA, an owner’s or operator’s liability limits for a pipeline were $350 million at the time, but the responsible party estimated that it had more than $0.5 billion in costs, such as for “emergency response, environmental remediation and cleanup activities associated with the crude oil release and potential claims by third parties.”

By the end of the fourth year, however, the incident had triggered no more than 30 state court and 11 federal court cases seeking compensation for private claims—certainly more than zero, but nothing near Deepwater Horizon proportions. It might be that OPA works as intended in terms of being a comprehensive and generally all-inclusive framework for postdischarge responsibility assessments for the vast majority of oil spills, breaking down only to some extent when the triggering event reaches truly catastrophic proportions.

Litigation certainly commands the lion’s share of attention in terms of responsibility assessments outside of the OPA framework, but it is not the only process. Coast Guard

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202 GAO, 2007, p. 34.
203 U.S. Coast Guard, 2012b, p. 285.
204 U.S. Coast Guard, 2013c. One was Deepwater Horizon (the only offshore facility in this group); another was the 2010 Enbridge pipeline rupture (the only onshore facility); and the remainder were vessel incidents. Although the Coast Guard had not, by September 2013, officially proclaimed the Enbridge incident to be one with exposure that exceeded the limits of liability because “reliable supporting estimates of OPA removal costs and damages are not currently available,” we include it here given its wide-ranging impact and the Coast Guard’s belief that ultimately it might be included in this group (U.S. Coast Guard, 2013c, p. 3, fn. 1).
205 Enbridge, undated.
206 Christenson, 2014; authors’ analysis of Public Access to Court Electronic Records docket for the U.S. District Court for the Western District of Michigan, July 2014.
investigations, for example, are common when the oil discharge involves vessels or offshore facilities, although, as we have seen with some other types of administrative investigations, their application in private litigation would be indirect. And often, more than one agency conducts its own inquiry. In *Deepwater Horizon*, government investigation reports were issued, for example, by the U.S. Chemical Safety and Hazard Investigation Board, a national commission formed by the president, the National Academy of Engineering and the National Research Council, the Coast Guard, and the Bureau of Ocean Energy Management, Regulation and Enforcement.

**Observations**

The existence of an already-funded pool for reimbursing expenses associated with oil spill removal efforts and damage claims removes much of the initial uncertainty about the financial implications of immediately beginning the recovery process. Although the OPA designation of a responsible party is often one of the initial steps that the Coast Guard or EPA takes after learning of an incident, doing so is not a condition precedent for moving forward. Private companies can be contracted to perform cleanup duties, state and local governmental units can roll out their resources, and federal agencies can implement procedures in place for handling emergencies of this type, all working with the knowledge that their efforts are almost certainly to be compensated at some point, and, in a worst-case scenario in which a designated responsible party is never identified, has insufficient assets, or plans to engage in costly and protracted legal battles, that compensation will nevertheless be meted out through the straightforward administrative processes of the OSLTF. The risk of financial exposure is low, which means that there are fewer potential downsides for working closely with the FOSC, which, in turn, helps to create a coordinated public-private partnership when responding to a developing disaster.

From the designated responsible party’s perspective, the OPA framework can provide a path for responding to a problem that clearly is related to a vessel or facility it operates or owns, even if it believes that it was not at fault (or at least not solely at fault) for the spill itself. Even in situations in which the party strenuously disagrees with the designation, actions taken to work with the FOSC or address cleanup operations on its own will not undercut subsequent assertions that the final bill really should be presented to some other actor. OPA’s general linking of minimum levels of financial responsibility to the cap (at least for vessels, offshore facilities, and deepwater ports), coupled with a responsible party’s ability to claim against the

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207 No part of marine casualty investigations, including “findings of fact, opinions, recommendations, deliberations, or conclusions, shall be admissible as evidence or subject to discovery in any civil or administrative proceedings, other than an administrative proceeding initiated by the United States” (46 U.S. Code § 6308[a]). As a result, a Coast Guard accident report could not be used in a trial for damages, nor could it be used in an administrative proceeding brought by the designated responsible party.

OSLTF for its own expenditures over the cap, removes, in most circumstances, uncertainty about financial exposure no matter how the blame game plays out in the end. The OPA process also allows a responsible party to focus its litigation resources on seeking contribution from other actors, rather than fighting large numbers of individual claims piecemeal.

That said, OPA’s scheme is not without its price for those who believe they have been harmed. It is true that, for claimants seeking damages allowed under the act, the lack of any need to prove negligence or some other theory of liability before seeking a recovery against the fund avoids some of the delay, transaction costs, and uncertainty that can be associated with litigation. But it would be incorrect to assume that claims presented to NPFC are always rapidly paid in the amounts requested. Our informal analysis of selected NPFC decisions for 2012 (none related to Deepwater Horizon) suggests that damage claims involving personal or real property losses or loss of profits or earnings are rarely granted without significant modification of at least two-thirds reduction of the amount claimed, and, in some instances, complete denial was the final outcome (claimants for removal cost reimbursement fare far better, with only about one-quarter involving a reduction of 50 percent or more). Moreover, although many claim requests are decided within just a month or two after being presented to NPFC, a large number take six months and some make take a year or more, especially if an appeal of an initial determination was made or if parallel litigation was in progress. Admittedly, these outcomes and times to resolution have to be considered against what might have occurred had the only means available to a claimant required filing a complaint in a court of law, but they do caution against a blanket assumption that administrative processes are unquestionably a more favorable alternative for someone seeking relief. And although the instances in which limitations on liability have come into play are relatively uncommon in OPA’s more than quarter-century of operation, the cap does present an obvious problem for potential claimants in instances in which incident severity is at the upper end of the scale.
Chapter Six: Nuclear Power Plant Accidents

Although estimates of the likely health and public welfare consequences of a severe nuclear power plant incident in the United States at the present time range from the modest to the horrific, photographic images of the destruction at the Chernobyl power station and the eerily abandoned nearby city of Pripyat serve as stark reminders that catastrophic events do happen, even when the risks of occurrence are thought to be extremely low.\(^{209}\) This chapter considers a framework that was originally developed in the 1950s in anticipation of such events, although, as was true for some of the frameworks discussed in this report, policymakers’ primary concern at the time was the financial viability of the enterprise owning or controlling the economic activity that might trigger an incident.

Background

In May 1956, the Atomic Energy Commission (AEC) issued its very first permit allowing construction to begin on a privately owned and operated nuclear power plant, and, in August of the following year, General Electric’s Vallecitos boiling water reactor achieved a controlled, self-sustaining reaction.\(^{210}\) Had an accident occurred at the Vallecitos site when the reactor went critical and released radiation into the surrounding community (thankfully, this never happened), those who believed that they had been injured or suffered some sort of loss would have stood in the same shoes as any plaintiff in a case involving a motor vehicle collision or a slip and fall on a supermarket floor.\(^{211}\) In such instances, formal litigation advancing existing common-law and state-law remedies would have presented the sole avenues for relief. That said, victims of nuclear power accidents would likely to have been in worse shape than their

\(^{209}\) For a modest estimate, see, e.g., NRC, 2012b, p. iii:
Both mitigated (operator actions are successful) and unmitigated (operator actions are unsuccessful) cases of all modeled severe accident scenarios ... cause essentially no risk of death during or shortly after the accident [while] calculated longer term cancer fatality risks for the accident scenarios analyzed are millions of times lower than the general U.S. cancer fatality risk.

For the more horrific, see, e.g., Gilinsky, 2017:
The NRC staff told the commissioners in 2014 that a worst-case spent fuel pool fire in a US plant like those at Fukushima—of which there are nearly three dozen—could release 25 times more long-lasting radioactivity than escaped from the Fukushima reactor vessels, and perhaps even more. Such a release could render 10,000 square miles uninhabitable and (around the Pennsylvania nuclear plant the staff chose as an example) could require the evacuation of 4 million persons.

\(^{210}\) American Society of Mechanical Engineers, 1987; NRC, 2015. On October 19, 1957, the Vallecitos power plant near Pleasanton, California, became the first commercially licensed reactor to supply significant power to the electric grid.

companions in tort. Although buying a liability insurance policy would be a relatively easy task for any owner of an automobile or a retail store, thus increasing the chances for full compensation should an incident arise with that automobile or with that store, at the time, private insurers were reluctant to offer coverage to power plants that were using the radical new technology of nuclear energy, one with the theoretical power to inflict significant damage on an entire city in the event of an accident. To address the dearth of available liability insurance at the time and to encourage the ongoing development of commercial nuclear applications, in September 1957, Congress passed the Price–Anderson Act, providing for governmental indemnification against extreme losses incurred from a nuclear power plant accident.\textsuperscript{212}

The original form of Price–Anderson focused solely on creating a more hospitable environment for nuclear power production. Plant owners and operators would be required to carry a minimum amount of coverage for “public liability” arising from nuclear incidents, with the amount to be determined by the AEC and the government indemnifying policyholders for $500 million worth of additional losses.\textsuperscript{213} The combination of minimum private insurance (later set at $60 million) and guaranteed federal indemnity would be available to protect not only the plant owner or operator but also any parties to agreements of indemnification and any party that state tort law might attempt to reach in regard to the incident, such as the plant’s builders or other third-party causes (such as an airline whose plane crashed into the reactor). The costs of investigating and defending claims, such as defendants’ attorneys’ fees, would be part of the combined indemnification.\textsuperscript{214}

An important feature of Price–Anderson was the assurance to owners and operators that their financial exposure was predictable. Maximum liability arising out of a nuclear incident for all of the actors under the “omnibus coverage” umbrella would be limited to the federal guarantee plus the insurance requirement, thus creating an effective cap of $560 million. In the event that claims for damages arising out of a nuclear incident appeared likely to exceed that cap, an application could be made to a federal bankruptcy court judge for various relief, including orders limiting the liability of those under the protection of the umbrella, staying the payment of claims or executions of judgment, apportioning claimant payments, allowing partial payments before final resolution, or setting aside a portion of the remaining omnibus coverage to deal with future claims due to injury latency.\textsuperscript{215}

\textsuperscript{212}Pub. L. No. 85-256 (1957). The Price–Anderson Act has been characterized as a congressional response to a “lack of adequate available insurance,” which at the time meant that, if a major nuclear accident were to occur, its consequences could result in liability claims that would exhaust the levels of insurance that were then available and impose on the nuclear industry large, potential losses for which no insurance was available. (Bailey et al., 1998, p. 1)

\textsuperscript{213}Berkovitz, 1989, p. 7.

\textsuperscript{214}Price–Anderson Act, § 3.

\textsuperscript{215}Price–Anderson Act, § 5; 42 U.S.C. § 2210(o).
It is important to note that Price–Anderson did not apply just to catastrophic meltdowns or massive explosions. The “nuclear incidents” to which the act referred meant any event causing bodily injury, sickness, disease, or death, or loss of or damage to property, or for loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct material.\textsuperscript{216}

The expansive definition would include relatively minor events, as well as events affecting individuals, entities, or property on or off the plant site.

By the mid-1960s, three concerns had arisen about how liability claims might be handled in a post-nuclear incident environment.\textsuperscript{217} One was the problem of proving negligence with the complex technology and procedures necessary for operating a nuclear plant. Although the more liberal doctrine of strict liability was potentially available to any plaintiff seeking to recover against a defendant for harms arising out abnormally dangerous conditions or activities (such as keeping a lion in one’s backyard or using dynamite to demolish a building), it was not necessarily a given that the law of every state would apply the same plaintiff-friendly rule to nuclear incidents. Second, the latency period associated with radiation injuries could be longer than the maximum time periods allowed by some state statutes of limitations at the time. Finally, issues related to the proper forum could arise in a major nuclear accident, with litigation scattered across multiple states and no ability to coordinate proceedings.

In 1966, the act was amended, in part, to address some of these concerns.\textsuperscript{218} State tort law would still control, but with an overlay of changes designed to streamline the claiming process without creating a new federal cause of action. The AEC would have the authority to declare that an extraordinary nuclear occurrence (ENO) had taken place, a declaration that would follow a determination that the release of radiation affecting people or property outside of the plant site was a “substantial” one, according to standards to be promulgated by the AEC.\textsuperscript{219} Such standards were subsequently defined as a release related to a “substantial discharge or dispersal of radioactive material offsite” that “has resulted or will probably result in substantial damages to persons offsite or property offsite.”\textsuperscript{220} If an ENO was declared, owners and operators would be required to waive “any issue or defense as to conduct of the claimant or fault of persons indemnified.”\textsuperscript{221} They would also have to waive any issue or defense based on any statute of limitations if [the] suit is instituted within three years from the date on which the claimant first knew, or reasonably could have known, of his injury or damage and the cause thereof.\textsuperscript{222}

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\textsuperscript{216} Price–Anderson Act, § 3; 42 U.S.C. § 2014(q).
\textsuperscript{217} Rocchio, 1987, pp. 538–539.
\textsuperscript{218} Pub. L. No. 89-575 (1966).
\textsuperscript{219} The current tests for whether a release is substantial can be found at 10 C.F.R. § 140.85.
\textsuperscript{220} 10 C.F.R. § 140.84; 10 C.F.R. § 140.85.
\textsuperscript{221} 42 U.S.C. § 2210(n)(1)(F).
\textsuperscript{222} 42 U.S.C. § 2210(n)(1)(F).
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These waivers of defenses following an ENO would essentially create uniform conditions with strict liability and a three-year statute of limitations for all claimants. Thus, a form of no-fault liability would be triggered, wherein those seeking to recover for their radiation-related injuries and damages need not prove that negligence on the part of the plant owner caused or contributed to the release. Instead, they would only have to convince a trier of fact that the claimed monetary value of their injuries or damages was reasonable and that such losses were, in fact, a direct result of the release.

In addition, all public liability claims arising out of an ENO would have original jurisdiction in federal court, meaning that, even though the controlling substantive law concerning liability and damages might be state tort law, the complaint could be filed in federal court if the plaintiff chose or removed to federal court from state court if the defendant desired.\(^{223}\) Such removals would be likely, so the opportunity would exist for coordinated federal pretrial processing of all ENO-related claims before a single judge (which would facilitate the distribution of compensation should the total monies awarded exceed the limit on liability). The process for dealing with the possibility that the aggregate value of damage claims might exceed the limit on liability was more formalized, with court approval required for all claim payments once the aggregate payout exceeded 15 percent of the omnibus coverage and allowing any “interested person” to submit a plan for the disposition of the remaining fund, as well as pending claims involving personal injuries, property damages, and possible latent injuries.\(^{224}\)

In 1975, the system of indemnification was substantially changed by congressional amendment.\(^{225}\) The minimum limits of private insurance had risen to $140 million, but, instead of a fixed amount of government financial assurance beyond that point, the basic core of protection in an accident with losses greater than $140 million would be primarily made up by postincident assessments (up to $5 million) against each large commercial reactor licensee. The agency with oversight over the reactors (by this time, NRC) would make up any difference to cover the $560 million liability cap. Moreover, there was a soft promise that, should the situation really get out of control and damages exceed the liability cap, “Congress will thoroughly review the particular incident and will take whatever action is deemed necessary and appropriate to protect the public from the consequences of a disaster of such magnitude . . . .”\(^{226}\) Whether Congress would, in fact, make good on that promise when the time comes has never been tested.

Arguably, the 1975 amendments to Price–Anderson made the term liability cap somewhat of a misnomer, given that Congress was now required to “take whatever action is deemed necessary and appropriate,”\(^{227}\) which conceivably could include actions that would deliver full compensation to all otherwise-eligible claimants even if aggregate loss exceeded $560 million.

\(^{223}\) 42 U.S.C. § 2210(n)(2).
\(^{225}\) Pub. L. No. 94-197 (1975).
\(^{226}\) Pub. L. No. 94-197.
\(^{227}\) Pub. L. No. 94-197, § 6.
Nevertheless, we believe that cap continues to be the appropriate characterization of what the 1975 amendments described as the maximum “aggregate liability for a single nuclear incident of persons indemnified, including the reasonable costs of investigating and settling claims and defending suits for damage.” 228 From the perspective of a nuclear plant’s owners or operators, their liability (or more precisely, their liability along with that of their insurers and contributing members of the same industry) is indeed capped. From the perspective of those advancing claims, there is certainty only as to aggregate losses that do not exceed $560 million. Beyond that point, congressional action would be needed to address unpaid or underpaid claims, but its mandate speaks only to actions that would “protect the public from the consequences” of the incident, which is not quite the same as making sure everyone receives full compensation. Instead, Congress could conceivably require all unpaid claims, as well as all prior trial verdicts and pretrial settlements, to be paid on a proportional basis so that their total would not exceed $560 million. It could subject all claims beyond the $560 million threshold to an alternative administrative process that sets strict limits on available damages. 229 Or it could decide that massive funding of radiation cleanup operations completely satisfied its statutory requirement to protect the public, even if some individuals and entities with proven losses remained unsatisfied. Because claimants cannot be confident as to what Congress might do, we consider aggregate claims to be effectively capped, even though it is possible that Congress could authorize full payment of judgments and settlements beyond the threshold.

As might be expected following the partial meltdown at the Three Mile Island (TMI) nuclear power plant in 1979, Congress revisited Price–Anderson. One major charge affected by amendments in 1988 was to increase the maximum secondary assessments from $5 million to $63 million per reactor unit per incident, with periodic adjustments for inflation. With the minimum private insurance coverage raised to $200 million and the number of licensees at that time, the theoretical level of total indemnity (and therefore the liability limit) was about $7.3 billion. By 2014, mandatory first-tier coverage was $375 million, and secondary assessments were set to no more than $121,255,000 with respect to any nuclear incident (and no more than $18,963,000 per incident within one calendar year), yielding a total available indemnity amount of about $13.6 billion, although the total fluctuates somewhat from year to year. 230 In nuclear incidents for which it was likely that total claims would exceed the liability cap, the president would have 90 days to report to Congress on the estimated aggregate dollar value of all personal injuries and property damage losses, submit plans that would “provide for full and prompt compensation for all valid claims” (potentially including those arising “as a

229 An example of a similar approach taken by Congress was legislation establishing a special program to settle claims against the United States related to a massive series of explosions at the port of Texas City, Texas, in 1947 (Pub. L. No. 84-378, 1955). Claims would be submitted to the Secretary of the Army, compensation for death would be limited to $25,000, a similar $25,000 limit would apply to claims for personal injuries or property damages, and attorneys’ fees would be capped at 10 percent.
230 Nuclear Energy Institute, 2014 (the figure includes $13.2 billion in potential second-tier coverage resulting from the nuclear industry licensee assessment). Another estimate places the total liability at about $12.4 billion (National Association of Insurance Commissioners and Center for Insurance Policy and Research, 2017). Coverage amounts for 2014 are from 10 C.F.R. § 140.11.
result of latent injuries that may not be discovered until a later date"), and provide recommendations of additional sources of funds, such as new revenue measures, to address potential above-cap losses.\(^{231}\) It would be up to Congress, of course, to enact legislation to actually create the compensation program and to authorize necessary funding. Because of the lack of certainty about what Congress might or might not do in this regard, we continue to characterize the $13.6 billion total indemnity threshold as a type of cap.

Perhaps in response to fears during the early days of the TMI incident regarding possible hazards and costs related to a mass exodus of those living and working near the plant, the 1988 amendments expanded the definition of *nuclear incidents* to include precautionary evacuations. The scope of the Price–Anderson framework was also extended, to some degree, to Department of Energy contractors dealing with nuclear waste disposal. Another aspect of the 1988 amendments was to liberalize the conditions in which the federal courts would have original jurisdiction. Instead of requiring a formal declaration of an ENO, federal jurisdiction would apply to any nuclear incident, thus avoiding a repeat of the situation in which pending federal court cases had to be dismissed or remanded during the TMI event when NRC formally declined to declare an ENO. On the other hand, the waivers of defenses creating a strict-liability regime with a three-year statute of limitations would still require ENO status. Despite Price–Anderson’s long-standing model in which state substantive law on liability and damages would be essentially untouched except when an ENO was triggered, punitive damages would now be prohibited in all nuclear incidents when the underlying claims are “against a person on behalf of whom the United States is obligated to make payments under an agreement of indemnification covering such incident or evacuation.”\(^{232}\)

**Application**

Despite being the most serious nuclear accident in U.S. history, TMI was never classified as an ENO.\(^{233}\) NRC denied petitions seeking such status on the basis that the amount of radiation discharged or dispersed off-site did not reach substantial levels as defined by the controlling regulations.\(^{234}\) Although the no-fault provisions of an ENO declaration were never in place (so any claims against the plant would be handled by traditional tort), the maximum limits on liability were. But paid claims never reached the ceiling ($560 million at the time), despite the plant’s insurers having initiated an aggressive campaign at the very start of the incident to quickly reimburse the expenses of evacuees.\(^{235}\) By the time of the resolution of the final

\(^{231}\) 42 U.S.C. § 2210(i)(2).
\(^{232}\) 42 U.S.C. § 2210(s). What this means in practice is uncertain. Some suggest that Congress intended a complete bar against punitives; others assert that the prohibition is effective only when the layers of private insurance and postincident assessments have been exhausted, requiring the federal government to fill in any gap in coverage.
\(^{233}\) NRC, 2013.
\(^{235}\) Smith, 2014.
remaining claims in 2003 (including the settlement of a class action seeking reimbursement for economic loss brought by a class of residents within a 25-mile radius of the plant), just $71 million in compensation and litigation costs had been paid.236

Because there has never been a situation in which the AEC or NRC declared that an ENO had occurred, we have no real-world examples of how the application of presumed liability under Price–Anderson works. Nevertheless, Price–Anderson plays an ongoing role in damage suits every year, primarily because the current version of the act goes beyond just commercial plant operations to include Department of Energy nuclear and radiological facilities, as well as the movement of nuclear fuel to and from covered facilities. A review of searchable court filings in 2012 available on Westlaw found several new cases asserting claims for relief under Price–Anderson, including ones alleging the onset of breast cancer due to the release of hazardous radioactive substances from nearby nuclear material processing facilities; alleging “significant and debilitating personal injuries” or death to more than ten plaintiffs as a result of activities related to the storage and transportation of radioactive waste residues; and alleging that leukemia resulted from having worked with a “Cesium 137 source tool” as part of oil well services performed for his employer.237 But other than clearly allowing federal jurisdiction (which was likely to be allowed anyway given the probable diversity of the residency of the parties), the matters proceeded in a manner similar to that of any action filed in federal court based on state tort law. The true test of Price–Anderson, in which massive numbers of claimants avail themselves of the strict-liability standard, large numbers of cases filed all over a region are consolidated into a single court for processing, and issues related to exhausting the liability protection come into play, has, thankfully, never been realized.

Related Responsibility Processes

NRC’s Office of Investigations conducts numerous inquiries on NRC’s behalf, although the focus appears to be on allegations of wrongdoing in terms of willful violations of NRC regulations and criminal statutes.238 There is a safety component to the work, such as reporting potential issues to NRC staff when discovered during the course of an investigation, and the Office of Investigations can assist staff in reviewing matters of regulatory concern, but its primary interest is in law enforcement.239 Although some of what it terms significant investigations involves internal employee issues (such as false statements on job applications),

236 Nuclear Energy Institute, 2014. Almost half ($34 million) of the $71 million was paid to settle class actions alleging personal injuries and economic losses, $5 million settled a class action by establishing a program for studying the biological effects of radiation exposure, and another $2 million was to address individual claims and cover evacuation costs. The remainder ($29 million) was for covering legal expenses (Smith, 2013a).
238 NRC, 2014a.
when the subject is activity at an NRC licensee, the final action usually involves referring the results of the investigation to DOJ. Office of Investigations findings also are the basis for some of the actions taken by the NRC Office of Enforcement, which notifies those within NRC’s jurisdiction of identified violations of regulatory requirements, explains desired corrective actions, and, in some instances, imposes civil sanctions.

A situation more analogous to the NTSB process in terms of responsibility assignment comes in the form of an NRC Accident Review Group expert investigation into events of “extraordinary safety significance,” ones that pose “significant hazard to public health and safety, security, or the environment, or [involve] high public, media, congressional, or executive branch interest.” However, we were unable to find any publicly available document describing the findings of an Accident Review Group investigation over a recent three-year period. A more common approach would be the formation of an incident investigation team (IIT), made up, to the extent possible, of “technical experts who, to the extent practicable, do not have, and have not had, previous significant involvement with licensing and inspection activities at the affected facility.” An IIT investigation is triggered in the case of a “significant operational event,” a “radiological, safeguards, or other safety-related operational event at an NRC-licensed facility that poses an actual or a potential hazard to public health and safety, property, or the environment.”

An example of an IIT causal investigation involved the June 2011 fire and associated power loss to certain systems at the Fort Calhoun Nuclear Generating Station about 20 miles north of Omaha, Nebraska. The fire, at a time when the Missouri River was at flood stage and surrounded much of the plant, resulted in the interruption of cooling-water circulation through a spent-fuel rod pool for 90 minutes. The reactor was already in cold shutdown for a planned refueling outage. To determine the cause of the incident, NRC inspectors were onsite for eight days and conducted a “review of control room alarm logs, control room operator log entries, plant voltage plots, review of post-event statements from the on-shift operators, and interviews with plant fire brigade personnel, system engineers, and electrical maintenance personnel,” along with observations of operator behavior in the plant’s simulator. The plant’s own internal root-cause analysis was evaluated as well. NRC also invited the participation of the plant owner in its significance determination process, suggesting that the agency “encourages an open dialogue between the NRC staff and the licensee.” If the licensee so chose, it could present its version of the events at an open-to-the-public regulatory conference or submit a written response. Failure to take either step would result in relinquishing any right to appeal a final determination of significance. Ultimately, the team determined that the underlying cause was plant staff’s failure to investigate acrid odors that had emanated from the area where the fire eventually ignited, characterizing the incident as a level-red event (high safety or security significance). As a result, the matter was considered for escalated enforcement action in

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244 NRC, 2012a, pp. 7, 11.
accordance with NRC policy. The plant was not allowed to restart its reactors until December 2013, although much of the delay was the result of other issues uncovered at the plant as a result of inspections for postflood damage and ongoing oversight related to the fire.\textsuperscript{245}

Observations

It is worthwhile to note that even its most ardent critics might agree that Price–Anderson succeeded in its original mission of encouraging commercial nuclear energy in the face of limited indemnity options available to operators in the late 1950s. Whether its subsequent amendments have created an optimal system for dealing with the difficult tasks of allocating responsibility and compensating losses associated with a catastrophic nuclear event is another question entirely. Despite being one of the oldest congressionally created frameworks for assessing responsibility following a disaster, actual experience with Price–Anderson is limited in this regard. It has been reported that the insurance pool facilitated by the act has paid out about $354 million from its inception in 1957 through 2012, a figure that might seem to indicate a vast reservoir of large-scale damage claims until one realizes that $288 million of that amount was for ancillary expenses, such as the costs policyholders incurred for defending claims.\textsuperscript{246} And of the remaining $65 million in paid indemnity, about $41 million appears to have been used for TMI-related claims.\textsuperscript{247} For a liability program in place for more than two decades, $24 million in non-TMI payments does not provide a lot of data points, especially in light of the fact that none of those settlements or awards was the product of the strict-liability regime that is the hallmark, at least from the claimant’s perspective, of Price–Anderson.

It should be noted that the insurance pool’s aggregate payout over the years might have been very different had the defendants in a multidecade-long class action against the Rocky Flats nuclear weapon plant near Denver, Colorado, utilized a different legal strategy. After a federal criminal investigation publicly revealed that plant workers repeatedly mishandled radioactive waste, resulting in contamination of nearby soil and groundwater, local homeowners filed suit alleging diminished property values.\textsuperscript{248} The federal court class action, based on both Price–Anderson and state nuisance law, resulted in a judgment following a trial verdict of about $177 million in compensatory damages, $200 million in punitives, and $549 million in prejudgment interest. The defendants were initially successful when appealing the verdict, arguing that the trial judge’s instructions were overly broad in defining what constituted a nuclear incident for the purposes of Price–Anderson in regard to real property damage claims. They asserted that “the district court should have required the plaintiffs to prove at trial physical damage to their property or the loss of a specific, particularized use of their

\textsuperscript{245} Winchester, 2013.

\textsuperscript{246} Smith, 2013b. Our assumption is that the individual outlays making up the totals discussed here have not been adjusted for inflation.

\textsuperscript{247} Smith, 2013a.

\textsuperscript{248} A history of the Rocky Flats class-action litigation can be found in Aguilar, 2016, and \textit{Cook v. Rockwell Int’l Corp.}, 790 F.3d 1088, 1090–1192 (10th Cir. 2015).
property—not mere contamination by radioactive materials or reduced property values."\(^{249}\) The 10th Circuit agreed, vacating the judgment and remanded the case for further proceedings. In what was later described as “a little judicial jiu-jitsu,” the plaintiffs then seemed to embrace the defendants’ theory by disclaiming any effort to prove that a Price–Anderson nuclear incident had occurred and instead argued that the verdict should stand because it was properly founded on Colorado nuisance law, even if the procedural aspects of Price–Anderson were no longer in effect. The defendants countered with an argument that Price–Anderson “also preempts and precludes any state law recovery where (as here) a nuclear incident is asserted but ultimately unproven.”\(^{250}\) A subsequent appeal to the 10th Circuit on this theory found the appellate court disagreeing with the defendants this time and upholding the earlier verdict. In 2016, the case settled for $375 million, presumably funded outside of the Price–Anderson insurance pool. Interestingly, Price–Anderson did come into play in the end when the federal government reimbursed the defendants for the settlement in early 2017, reportedly as a result of “a statutory obligation imposed by the Price–Anderson Act (as amended) to indemnify certain Department of Energy contractors for particular legal liabilities.”\(^{251}\)

Another key feature of Price–Anderson that has not been put into play are the procedures set forth to deal with the consequences of a catastrophic event in which the financial resources provided by layers of private insurance and nuclear industry assessments (about $14 billion currently) could be exhausted by personal injury and property damage claims. In such an event, the act’s liability limits adequately protect the financial exposure of the plant’s owner or operator, but some affected individuals and entities might be left without obvious recourse for obtaining full recovery. One way the act addresses that possibility is to require judicial approval of all payments against the guarantors that exceed 15 percent of the liability limits.\(^{252}\) Such payments must be made in accordance with a court-approved plan that can provide for pro rata reductions in the value of legitimate claims in order to ensure “the most equitable allocation of available funds.” Proportionate reductions can go only so far to offset the underlying problem of having too many claims and not enough money to pay them all, so the act then puts the onus on the president to offer Congress a proposed compensation plan.

Two aspects of Price–Anderson’s provisions for a potential compensation plan should be noted. First, there is little guidance as to what that plan should look like, beyond paying full and prompt compensation on all valid claims. Indeed, there is far more detail about the procedures Congress should follow when considering the president’s plan (no more than ten hours of debate are allowed, for example) than what features ought to be included in the program or who will pay for it. Second, there is no requirement that the president submit a proposed plan in advance of a nuclear crisis that might involve tens of billions of dollars’ worth of losses and widespread calamity. The 1988 amendments to the act did require the president to appoint a commission to study various means for fully compensating victims when losses exceed the cap.

\(^{249}\) 790 F.3d 1088 at p. 1090.
\(^{250}\) 790 F.3d 1088 at p. 1092.
\(^{251}\) Bier, 2017.
The Presidential Commission on Catastrophic Nuclear Accidents' report, issued in 1990, focused on the use of the civil courts as the primary vehicle for evaluating compensation claims, including the right to trial by jury if a claimant so desired:

The Commission recommends a tripartite judicial procedure, including a preliminary phase when claims are consolidated before a single decisionmaker, a second phase in which generic issues are identified and decided by the court with the assistance of relevant experts; and a third phase consisting of individualized informal procedures culminating in a right to binding arbitration or, if claimants so choose, to adjudication on a modified tort model.253

The recommendations provide a useful road map for building a court-centered compensation program, but, understandably, the report’s authors did not attempt to actually draft the detailed administrative regulations and legislative enactments necessary for program implementation and operation. That daunting task would be left to others to complete, presumably in the chaotic days following a massive radiation release, when those responsible for program design might be under enormous pressure to churn out something that can be voted on as quickly as possible. Moreover, it is not assured that Congress will immediately embrace whatever is proposed, perhaps differing with some of the philosophical underpinnings of the commission’s recommendations. For example, although Price–Anderson calls for “full and prompt compensation,” the commission opined that what constituted full had to be seen in the context of the act’s overarching goals:

The goal of the Price–Anderson plan is to provide compensation for loss, and, thus, regulatory, deterrence, and retributive concerns should be accorded little weight in determining recoveries under the Act. Because these noncompensatory goals serve as the basis for the full range of claims and recovery traditionally available in tort, the Commission has concluded that full compensation in the Price–Anderson context should not require providing recovery for all claims that might be recognized under present common-law principles of tort.254

In that light, the commission felt that recovery for intangible losses (such as for pain, suffering, disfigurement, or emotional distress) should be allowed only under narrowly defined circumstances and, when available, the amounts strictly controlled. A more traditional tort-like approach would, the commission believed, inject irrelevant considerations into the compensation process:

A principal reason for not recognizing intangible losses is that they are inconsistent with the insurance approach upon which the compensation plan is based. The fact that these losses are not insurable but are vigorously pursued in tort actions suggests that they are not so much claims of actual loss as they are instruments for assigning blame and exacting retribution. While not denigrating these goals in a pure tort scheme, the Commission believes they are not usefully pursued in the

253 Presidential Commission on Catastrophic Nuclear Accidents, 1990, Chapter Two.
254 Presidential Commission on Catastrophic Nuclear Accidents, 1990, Chapter Three.
Price-Anderson context, the goal of which, as noted above, is compensation for loss. 255

Regardless of whether the commission’s findings in this regard are appropriate, it is likely that specific program features, such as restrictions on the recovery of intangible losses after liability limits are reached (especially when there would be no such restrictions for adverse events with similar causes but more-modest aggregate claims), could be the subject of contentious debate by Congress. Arguably, the optimal time for legislators to discuss these issues (and for administrative agencies to draft detailed regulations) would be during times of relative peace, not after the disaster has unfolded.

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255 Presidential Commission on Catastrophic Nuclear Accidents, 1990, Chapter Three.
Chapter Seven: 
Mass Vaccine Injuries

Aviation accidents, oil spills, and nuclear incidents are examples of potentially disastrous events with what might be thought of as a single point of origin (e.g., an airplane, a supertanker, a nuclear power plant). In this chapter, we examine frameworks that might apply to a different type of incident, one in which the last act in the chain of events leading to widespread harm might have been repeated tens of thousands of times at locations across the country. Our hypothetical scenario involves mass vaccinations, carried out within a very short time in response to some sort of developing national emergency, such as the rapid spread of an avian influenza capable of human-to-human transmission with a high degree of pathogenicity, or an extremely credible threat of multiple airborne releases of a potent bioterrorism agent, such as viral hemorrhagic fever. The scenario presupposes that the new vaccine quickly developed in response to these threats unexpectedly triggers severe illnesses in a substantial proportion of recipients, causing both significant injuries and widespread economic disruption, with a latency period that is long enough to allow large numbers of vaccinations to take place before discovery of the problem but short enough to meet our primary interest in mass adverse events with relatively rapid onset.

Liability frameworks have already been implemented that might well be drawn upon if such a situation develops in the future. One involves the NCVIA, which established a program (the VICP) for compensating those injured by childhood vaccines. Another involves the National Smallpox Vaccination Program made possible by Section 304 of HSA and SEPPA, to which we refer jointly as the smallpox vaccine acts. But the roots of the NCVIA and the smallpox vaccine acts as they relate to liability actually go back to an earlier attempt at dealing with issues related to responsibility for mass injuries from a vaccination campaign: the Swine Flu Act.

This chapter examines the genesis of and basic structures for the Swine Flu Act, the NCVIA, and the smallpox vaccine acts, even though vaccine-related mass adverse events might not fit the common conception of a large-scale disaster in the same way that air crashes, nuclear plant meltdowns, or supertanker spills do. That said, the legislative initiatives discussed here represent alternative approaches that have already been implemented to deal with the legal consequences of injuries potentially affecting thousands of Americans and arising from events

An updated version of the smallpox vaccine acts can be found in PREPA, with subsequent legislation implementing the CICP compensation program. See, e.g., Pub. L. No. 109-148 (2005); and 42 C.F.R. Part 110.

The phrase “National Smallpox Vaccination Program” does not appear in HSA § 304, but the program was a direct outgrowth of the legislation’s provisions for the “administration of smallpox countermeasures by health professionals.”

in which questions of responsibility have national security and welfare consequences. Moreover, the lessons that can be learned from the historical development and actual implementation of these particular frameworks can help guide policymakers when crafting future responsibility-assignment mechanisms.

**Background and Application**

**Swine Flu Vaccines**

*History*

In January 1976, an outbreak of flu at a New Jersey military base was determined to have been caused by a virus antigenically related to the one responsible for the 1918–1919 worldwide flu pandemic. Concern about a possible pandemic of similar proportions involving the newly discovered strain, popularly referred to as *swine flu*, resulted in a major federal effort, as President Gerald Ford put it in March of that year when making a request to Congress for funding, to “inoculate every man, woman and child in the United States.”\(^258\) The proposed strategy was for the federal government to contract with private pharmaceutical companies, with the ultimate goal of producing enough swine flu vaccine to meet the president’s request.\(^259\)

But, from the very start of the effort, representatives of manufacturers and their insurers loudly voiced their concerns over potential liability exposure.\(^260\) By the summer of 1976, their voices took more-concrete form, with insurers now refusing to extend coverage without full indemnification for any possible liability on the part of insured manufacturers. Although the planned rollout of the vaccination campaign was still months away, coverage related to the swine flu program had essentially evaporated by this point in time, placing large-scale production of the vaccine in significant jeopardy. Discussions with key stakeholders offered piecemeal solutions, such as one in which the federal government would, through its contracts with the manufacturers, assume the duty to warn vaccine recipients of potential side effects. Under such a scheme, liability related to product design, product production, or negligence would continue to be the producers’ responsibility. But, without some all-encompassing mechanism in place to markedly reduce the risk to manufacturers and their insurers of a possible flood of claim payments and associated defense expenses, the program was in serious trouble of getting sufficient supplies into the field before the winter.

To deal with this problem, the Swine Flu Act was enacted in what has been described as “good faith haste.”\(^261\) The bill was “drafted in a weekend” and sent to Congress on the first of August, passed the Senate on a voice vote, “rushed” to the House “without even copies for members,”

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258 Ford, 1976.
who voted on the bill under a no-amendment rule, and finally signed by President Ford on August 12.\textsuperscript{262}

**Structure**

The basic approach of the legislation was to have the United States step into the shoes of “program participants” (manufacturers, distributors, or those providing free vaccinations, such as state departments of health), shouldering any liability for all personal injury or death claims arising out of the vaccine program based on any act or omission of a participant.\textsuperscript{263} A complaint could name the United States as the defendant or, if need be, the United States would substitute itself as a defendant in any action against a participant. Because the federal courts would have exclusive jurisdiction over swine flu vaccine-related claims, cases originally filed in a state court would be removed to federal court.

Swine flu vaccine-related injury claims brought against the United States would then be the exclusive path to compensation for vaccinees and their families. The cases would be handled in a manner generally similar to any action brought against the United States under the FTCA, the long-standing framework for adjudicating tort claims against the federal government.

The FTCA provides for a waiver of the common-law doctrine of sovereign immunity, which bars all suits against the government without its consent. The waiver under the FTCA is not unlimited, however. Claims that seek punitive damages, allege the applicability of strict liability under state tort law, seek prejudgment interest, are brought by members of the military for service-related injuries, are brought by most civilian federal employees over work-related injuries, involve various harms caused intentionally by non-law enforcement government employees (such as assaults, battery, or false arrest), or involve acts or omissions of the government or its employees that were within its discretionary function of making or executing public policy (also known as the “discretionary-act defense”) would fall outside the waiver and as such be barred.\textsuperscript{264}

The FTCA also imposes a claim-first-then-sue requirement. A tort claim against the federal government must initially be presented to the agency whose employees were alleged to have caused the harm.\textsuperscript{265} That presentation would have to occur within two years of the claimant having discovered both the injury and the underlying cause.\textsuperscript{266} The agency would then have six

\textsuperscript{262} Neustadt and Fineberg, 1978, pp. 52–53.

\textsuperscript{263} Pub. L. No. 94-380 (1976).

\textsuperscript{264} 28 U.S.C. § 2674; 28 U.S.C. § 1346(b); \textit{Feres v. United States}, 340 U.S. 135, 146 (1950); 5 U.S.C. § 8116(c) (civilian federal employees pursue claims for work injuries through the procedures set forth in the Federal Employees’ Compensation Act, 5 U.S.C. § 8101 et seq.); 28 U.S.C. § 2680(h); 28 U.S.C. § 2680(a). The discretionary-act exception effectively prevents a suit in tort against the United States if the harm was the result of the exercise or performance of (or the failure to exercise or perform) a discretionary function or duty on the part of a federal agency or employee. Generally, such discretion constitutes an exercise of judgment based on considerations of public policy. A decision to engage in a program of aboveground nuclear testing near populated areas in order to rapidly build an atomic arsenal in the face of a growing Soviet threat, despite the potential for downwind injuries, is arguably one such exercise in judgment.

\textsuperscript{265} 28 U.S.C. § 2675(a).

\textsuperscript{266} 28 U.S.C. § 2401(b); \textit{DuBose v. Kansas City S. R. Co.}, 729 F.2d 1026, 1030 (5th Cir. 1984).
months to settle the claim or deny it.\textsuperscript{267} And, if denied, the claimant would have a six-month period to file a complaint in federal court.\textsuperscript{268} If the agency failed to respond at all within the six-month span, the claimant would have no time limitations on when the complaint might be filed.\textsuperscript{269} If the matter later proceeds to trial, the claim would be heard only by a judge; jury trials are unavailable under the FTCA.\textsuperscript{270} There are also limits to allowable attorneys’ fees if contracted on a contingency-fee basis. Attorneys handling FTCA matters cannot charge more than 20 percent if the matter is settled by the agency at a point prior to the claimant filing suit, or more than 25 percent if the matter is settled or reaches a verdict afterward.\textsuperscript{271}

The Swine Flu Act embraced most, but not all, of the FTCA’s traditional rules. The liability of the United States under the act could be based on any theory of responsibility available to a claimant under state tort law—including negligence, breach of warranty, or strict liability—that might have been asserted against a program participant.\textsuperscript{272} This potential ability (depending on the applicable law) to proceed under a strict-liability theory against the United States was a major departure from normal FTCA practices. Another important departure was the restriction on the United States from invoking any discretionary-act defense.\textsuperscript{273} And a third was a “do-over” exception to the FTCA’s requirement that an administrative claim must first be made with an agency before bringing suit, or the suit would be dismissed. If a suit was filed before the claim was presented to the agency, there would now be a second chance to start the administrative process.\textsuperscript{274}

Under the Swine Flu Act, it would be the U.S. Attorney General, rather than lawyers for the manufacturers or distributors (or their insurers), who would defend any civil action or proceeding related to vaccine injuries.\textsuperscript{275} As such, the substitution of the United States as the defendant in a complaint, rather than a simple indemnification of program participants for earlier settlements or trial awards, meant that the potentially significant transaction costs of defending all vaccine-related claims, regardless of outcome, would be entirely shifted to the federal government.\textsuperscript{276} That very important benefit, as well as the liability protections afforded by the act, would evaporate, however, for those program participants that failed to cooperate with the United States in the processing or defense of a claim or suit.\textsuperscript{277} Under such circumstances, a judge could be asked to order that the participant be reinserted into the case

\textsuperscript{267} 28 U.S.C. § 2675(a).
\textsuperscript{268} 28 U.S.C. § 2401(b).
\textsuperscript{269} Pascale v. United States, 998 F.2d 186, 188 (3d Cir. 1993).
\textsuperscript{270} 28 U.S.C. § 2402.
\textsuperscript{271} 28 U.S.C. § 2678.
\textsuperscript{272} Pub. L. No. 94-380.
\textsuperscript{273} Pub. L. No. 94-380.
\textsuperscript{274} Pub. L. No. 94-380.
\textsuperscript{275} Pub. L. No. 94-380.
\textsuperscript{276} Although the specter of liability was undoubtedly on the minds of the insurance industry as it pushed for the Swine Flu Act, reportedly, it was “even more concerned with the overhead costs of adjusting and adjudicating individual claims” (Reitze, 1986, p. 178).
\textsuperscript{277} Pub. L. No. 94-380.
as the target defendant and the United States dismissed as a party. There would also be negative consequences for any participant that failed to carry out, or was negligent in carrying out, any obligation or responsibility it assumed under its contract with the United States. In such instances, the United States would have the right of subrogation against that participant for any payments made for settlements or court judgments, as well as litigation costs.

One of the purposes of the act was “to establish a procedure under which all such claims [regarding vaccine injuries] will be asserted directly against the United States,” although the legislation left the details of such procedures largely up to the Secretary of the U.S. Department of Health, Education, and Welfare (HEW), as well as the actual administration of the program. Although an administrative claim had to be initially presented to HEW prior to filing suit, an understanding between HEW and DOJ gave the latter department the responsibility for designing the claiming process, fact-finding and legal analysis, sending the file out for medical review, and making a recommendation to HEW as to the final action it should take in respect to each claim. Under the procedures eventually adopted by DOJ, claimants dissatisfied with the HEW final decision could request a reconsideration up to six months after receiving notice of the outcome (and, if still unsatisfied, the party could always file a suit against the United States in federal district court). But because the creation of a large-scale administrative claim handling mechanism for personal injury claims was relatively new territory for all concerned, the details were created largely on the fly. As one investigation described it, DOJ had little guidance in developing its procedures for processing swine flu claims. Except for broad guidelines set forth in the Federal Tort Claims Act and the Code of Federal Regulations (28 CFR 14), there were no specific procedures in legislation which Justice could follow, and no other programs analogous to the swine flu program which Justice could use to develop a model for handling the voluminous claims. Our review showed that Justice’s assistant chief, Torts Section, Civil Division, developed procedures as claims began to be filed. The procedures were revised as the claims workload increased. At the time of our review, the administrative procedures for processing swine flu claims had not been documented.

**Claims and Related Responsibility Processes**

Despite the enactment of requested legislation essentially operating as a complete shield for manufacturers and their insurers, the vaccine program nevertheless fell short of its target of inoculating everyone in the United States, with just 45 million swine flu vaccinations given over a ten-week period. The good news was that the fears of a national pandemic never materialized, with only a very small number of confirmed instances of swine flu reported after the first cases.

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279 U.S. General Accounting Office, 1981, p. 5. At least through the early years of the program, HEW never overruled a DOJ recommendation.
280 U.S. General Accounting Office, 1981, Enclosure I, p. 6. General rules for administrative evaluation of tort claims presented to a federal agency did exist under the FTCA, and, because DOJ was the agency administering such claims, the procedures described under 28 C.F.R. §§ 14.1-14.11 applied for evaluating any claim presented to DOJ applied.
in New Jersey. The bad news was that, within two months after the mass inoculations had begun, reports began to surface regarding the onset of Guillain–Barré syndrome (GBS) in some of the recipients of the vaccine. GBS is an autoimmune disease with ascending paralysis, with a mortality rate of about 8 percent, and a general incidence rate of between one and two in 100,000. Various antecedent events are associated with GBS onset, most commonly infections, but also injections and being struck by lightning. Although the number of reported GBS cases was small compared to the total vaccine recipient count, the consensus among epidemiologists was there was a measurable excess of new cases beyond the expected background rate. With the apparent incidence of GBS being 11 times greater following swine flu vaccination, the absence of any widespread outbreak of swine flu, and nearly a year’s worth of missteps and bad publicity over political squabbles and production problems, the decision to shut the program down in December 1976 was probably not a particularly difficult one to make.

But, although the vaccination campaign was ending, the claiming phase had just begun. The informational materials supplied with informed-consent forms used during the vaccination campaign noted the potential for adverse effects but provided few details other than to assert that the “vaccines have been field tested and shown to produce very few side effects” and that “anything more severe” than “fever and soreness during the first day or two after vaccination” would be “highly unlikely.” The consent form itself simply noted that “most people will have no side effects from the vaccine,” although some people (presumably everyone outside of the “most” group) would have “fever, chills, headache, or muscle aches within the first 48 hours.” A passage in the form advised about the “possibility of severe or fatal reactions” or “allergic reactions,” but it was in a section describing the “special precautions” that should be taken by certain at-risk groups, such as children, those allergic to eggs, those with current fevers, and those who had recently received another vaccine. The sufficiency of these warnings would be at the heart of the litigation drama about to unfold.

By the end of December 1976, 31 administrative claims for compensation had been presented to HEW, the initial point of contact for swine flu vaccination problems. Within a few months, a total of 532 cases of GBS had been reported among the vaccinated population, including 32 deaths. By the end of March 1977, the number of claims had increased to 282, but now the

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280 Winer, 2001, p. 381.
287 Neustadt and Fineberg, 1978, p. 122; Appendix C of the present report.
288 Office of Technology Assessment, 1979, p. 98.
first formal lawsuits began to appear, with 14 filings by this time. But a more inauspicious sign of things to come was that HEW had received more than 3,000 inquiries asking about the procedures for making a claim.

By February 1978, the number of claims had topped 1,100, of which more than 300 asserted injuries related to GBS. The 26 swine flu lawsuits scattered across 17 federal districts were consolidated for pretrial processing by the Judicial Panel on Multidistrict Litigation and assigned to the District Court for the District of Columbia. At the same time, the Swine Flu Act’s provisions were also being tested in the appellate courts, but the restrictions on manufacturers’ liability, the requirement of an initial administrative claiming process, and the law’s imposition of the FTCA’s prohibitions on jury trials and punitive damages ultimately survived appellate scrutiny.

As the litigants were engaging in extensive discovery in the MDL proceeding, in June 1978, HEW Secretary Joseph A. Califano Jr. described a new policy under which GBS claimants need not prove negligence by Federal workers or others in the Swine Flu Program as required by Federal law and the law in many states. Instead claimants in most cases need to show only that they in fact developed Guillain–Barre as a result of a Swine Flu vaccination and suffered the alleged damage as a result of that condition.

The first reason that Califano provided for the policy was a legal one:

[The] informed consent form . . . did not warn individuals that there was a one in one hundred thousand risk that a person receiving a flu shot would contract Guillain–Barre and that one in every two million would die from the condition . . . .

The second reason was a matter of public policy: Given that the federal government had “actively urged millions of Americans to get flu vaccination shots and funded the nationwide campaign,” the agency had “decided to provide just compensation for those who contracted Guillain–Barre as a result of the Swine Flu program rather than force many individuals to prove government negligence in protracted proceedings.” In the MDL proceedings, the parties incorporated the substance of the statement into agreed pretrial stipulations that eliminated the need for a plaintiff in any future trial to prove any particular theory of liability.

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294 See, e.g., Ducharme v. Merrill-Nat’l Laboratories, 574 F.2d 1307 (5th Cir. 1978); Jones v. Wyeth Laboratories, Inc., 583 F.2d 1070 (8th Cir. 1978).
Two aspects of the Califano policy should be noted. First, it applied only to those asserting that the vaccine had triggered GBS. Those alleging that other conditions (such as encephalitis, transverse myelitis, brain-stem stroke, localized brachial neuropathy, drop foot, serum sickness, adhesive capsulitis, or rheumatoid arthritis, all common complaints in claims received by HEW) had resulted would still need to prove that the facts of the case supported a liability standard available to the plaintiff under the appropriate state law where the incident occurred. Put another way, the announcement essentially divided the pool of plaintiffs into two tiers, one moving forward under a limited no-fault scheme and the other remaining in the world of tort, albeit one with FTCA features.

Second, this injection of strict liability into GBS cases did not mean automatic recovery. Claimants with the condition still had to pursue the matter, first administratively and then, if need be, through the courts. Moreover, they would have to prove that they had been diagnosed with GBS, and they would have to make a successful argument for receiving the amount of damages they believed to be justified. Most critically, claimants still needed to establish a causal connection between the administration of the vaccination and the onset of GBS. In other words, although they need not show whether or why there was a problem with the vaccine, they still had to show that receiving the vaccine was, in fact, the cause of their particular problems.

These aspects might have been the reasons that, despite Califano’s stated intention to avoid “protracted proceedings,” the pace of administrative claim resolution did not exactly move forward at light speed. Although 3,340 claims had been filed with the agency by December 1978, only 11 (0.3 percent) had been paid, at an average of $3,327. Denials had been issued in 9.8 percent of the claims, 1.3 percent had been withdrawn by the claimants, while 88.6 percent were still pending.

By the end of 1979, three years after the last vaccination, an estimated 3,900 claims had been submitted and 990 lawsuits filed. Perhaps not surprisingly, given the ad hoc nature of the process to review claims, it was taking about 13 months on average from the time the claim was first received to the point at which DOJ made its recommendation to HEW. Less than one out of three swine flu vaccine claims involved allegations of GBS, but the rate at which the condition was alleged in formal litigation was about six out of ten.

After this point, the growth in claims began to level out, eventually topping out at about 4,200. Swine flu vaccine complications generally develop soon after the injection is given, and, with a two-year cutoff for presenting a claim after either injection is given or the problem arises, the plateauing of new claim presentations was understandable. The lawsuits, however, would continue to grow. Some 13 years after the announcement of the national campaign,

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302 By late March 1979, there were 1,045 GBS claims among the total of 3,694 and 276 GBS lawsuits out of 464 (Office of Technology Assessment, 1979, p. 100).
about 1,600 lawsuits had been filed, seven of which were still pending by 1990. Final resolution counts for claims and suits are not published, but, based on available information, payments were likely to have been made to claimants only about 16 percent of the time, with the remainder eventually denied without payment or otherwise closed. Those seeking relief from the courts did better, with about 31 percent either receiving a settlement or a judgment in their favor (the remainder of the lawsuits either resulted in a judgment for the defendant or were dismissed).

**Childhood Vaccines**

**History**

By 1986, about 250 lawsuits were being filed each year against the manufacturers of combined vaccines against diphtheria, tetanus, and pertussis (DTP), a perhaps impressive number in light of one report asserting that, from 1963 to 1979, only 27 claims had been made regarding any vaccine-related injuries (including for polio, seasonal flu, smallpox, measles, typhus, and typhoid), other than those arising from the 1976 swine flu program. The pertussis (whooping cough) component of the vaccine was known to have side effects that could, for at least one in every 310,000 vaccinees, cause severe neurological complications or even death, although the net reduction in total deaths and serious illnesses afforded by the vaccine’s protections provided strong incentives for mass-inoculation programs. This threat of liability had destabilized the domestic manufacturing market, leaving but a single producer available for new supplies of DTP vaccine, an important part of the childhood vaccination series recommended by federal and state governments.

The situation was somewhat similar to that involving the run-up to the swine flu inoculation program, but the Swine Flu Act’s approach to liability protections, substitution of the federal government as a universal defendant, and the imposition of FTCA procedures on litigated claims were not perceived as good role models. Even during the earliest days of the swine flu program, the federalized tort procedures it employed were seen as “inappropriate for a long-term national policy.” Concerns were also raised over the Swine Flu Act’s application of the individual state law of each plaintiff’s residence (resulting in a Balkanized tort law despite the national nature of the vaccination program), the potential disincentives to vaccination campaign

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105 Institute of Medicine (IOM) and National Research Council, 1985, Table 6.1, p. 91. As of December 15, 1983, 4,152 claims had been filed, with 34 then pending. Given that 4,179 claims would ultimately be filed, the 61 claims that, by the end of 1983, were either still pending or yet to be filed would have negligible impact on the percentages offered here.
107 Sing and Willian, 1996, p. 52.
108 Office of Technology Assessment, 1979, p. 98.
110 533 F. Supp. at 723 (discussing a March 1977 report on vaccination policy published by the National Immunization Work Groups at the behest of the Office of the Assistant Secretary for Health in the U.S. Department of Health and Human Services [HHS]).
participation arising from the difficulties inherent in pursuing tort claims, and the presumably high transaction costs associated with advancing or defending litigated compensation claims.

**Structure**

In response to issues related to insurance availability and the time and expense associated with vaccine litigation, Congress passed the NCVIA. Like the Swine Flu Act, this legislation had the goal of providing some level of liability protection for manufacturers, but it approached the task in a very different way. Producers would be immunized against injury or death claims arising from side effects that were “unavoidable,” as long as the vaccine was “properly prepared” and accompanied by “proper directions and warnings.” Later interpretations of the act concluded that the language barred design-defect claims as well. Moreover, there would be a presumption that any warning accompanying the vaccine would be sufficient if the producer had complied with all regulatory requirements, including providing appropriate warnings to the claimant or the claimant’s physician. There would be no immunity, however, if a plaintiff could establish by clear and convincing evidence that the producer was negligent, committed fraud, intentionally and wrongfully withheld information during the approval process, or engaged in some other unlawful activity. Furthermore, any immunity would be available for only those vaccines listed in a vaccine-injury table (the VICP table) set forth in the NCVIA legislation and later amended through the regulatory process. At the time of passage, the VICP table listed only DTP; measles, mumps, and rubella (MMR); and oral poliovirus vaccines as being covered by the act’s protections. Over the years, the list of covered vaccines has grown markedly, and, at the present time, even seasonal flu shots are included.

Despite the presumption of a sufficient warning as long as the manufacturer followed applicable regulations and a bar against design-defect claims, manufacturers would still be

311 From the House report:

Manufacturers have become concerned not only with the problems of time and expense [in dealing with the civil tort system], but with the issue of the availability of affordable product liability insurance that is used to cover losses related to vaccine injury cases. Whether current problems with liability insurance arise from a crisis in the tort system or from a particularly bad downturn in the business cycle of the insurance industry has been and remains a matter of great controversy. Nevertheless, there is little doubt that vaccine manufacturers face great difficulty in obtaining insurance. This lack of insurance was the stated reason for one manufacturer to withdraw temporarily from the vaccine market in 1984. Others have suggested that they may follow a similar course of action. This factor, coupled with the possibility that vaccine-injured persons may recover substantial awards in tort claims, has prompted manufacturers to question their continued participation in the vaccine market. (H.Rept 99-908 [1986], pp. 6–7, reprinted at 1986 U.S.C.C.A.N. 6344, pp. 6347–6348)

312 NCVIA, § 2122(b)(1).


314 NCVIA, § 2122(b)(2).

315 NCVIA, § 2114(a).

316 “National Vaccine Injury Compensation Program: Addition to the Vaccine Injury Table to Include All Vaccines Against Seasonal Influenza,” 78 Fed. Reg. 67369–67370 (Nov. 12, 2013). Other covered vaccines now include those targeting hepatitis B, rotavirus, pneumococcal pneumonia, hepatitis A, seasonal influenza, meningococcal disease, and human papillomavirus.
potentially liable for problems caused by any negligent product. At first glance, the protection might not seem very broad, given that negligence is a very common issue in tort litigation generally. However, successful vaccine lawsuits alleging solely negligence (for example, that the vaccine itself was not produced in the required or approved manner, contained live viruses that should have been killed, or included unauthorized adulterants or contaminants) are relatively rare. Strict-liability theories involving claims of failure to adequately warn of potential side effects (no matter how remote the possibility) or claims of design defects (such as an assertion that a different vaccine formulation would have avoided the injuries) provide a far more promising foundation for a successful claim. Such theories were at the root of much of the swine flu and DTP litigation in the 1970s and 1980s and were clearly of concern to many of those promoting the passage of the NCVIA.

The flip side of the NCVIA’s liability protections for manufacturers was its establishment of “a scheme of recovery” for those believing that they had been injured by a vaccination, a scheme that was intended “to work faster and with greater ease than the civil tort system.” Tort lawsuits were still possible, but the NCVIA required every claimant (which could include the recipients of the vaccine or their families) to first seek compensation through an administrative program (described in the act as the National Vaccine Injury Compensation Program but commonly referred to as the VICP) before filing suit for more than $1,000 in damages. When the NCVIA was signed into law, the bar against suits that did not first complete the VICP process applied only to claims against manufacturers; a later amendment added claims against vaccine administrators (the individuals and entities that actually perform the inoculation).

The petition for compensation initiating the administrative claim would name the HHS Secretary as the respondent and would have to be filed within three years of the onset of a vaccine-related injury or its first manifestations, or within two years of death. The venue would be an appropriate U.S. District Court (changed in 1987 to the U.S. Court of Federal Claims), where a special master would adjudicate the petition. If the claimant or HHS objected to the decision of the special master, such objections could be submitted to the judges of court for review, which, in turn, was mandated to enter a judgment as “expeditiously as practicable” but not later than 360 days after the petition had been filed (later amendments would place the onus on the special master to finalize the petition’s adjudication within 240 days, not counting any time during which the proceedings were suspended, and then give the court 120 days to complete any review of objection). The claimant would be able to either accept the judgment (thus disposing of the claim) or formally reject it within 90 days, with the option of proceeding against the manufacturer or vaccine administrator in a civil lawsuit, presumably on a theory that did not involve a failure to warn or a defective design.

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319 NCVIA, § 2116.
320 The procedural requirements for such adjudications can be found in Vaccine Rules of the United States Court of Federal Claims as codified at 42 U.S.C. §§ 300aa-10–300aa-34 and 42 C.F.R. §§ 100.1–100.3.
321 NCVIA, § 2121(a).
instances in which the final judgment of the court was challenged by either HHS or the claimant, the decision could be appealed to the appropriate federal circuit court of appeals.

Despite the legislation’s name, the NCVIA did not restrict its provisions to vaccines received by minors: As long as the vaccination was listed on the VICP table, the age of the recipient would not matter. And as long as certain specific conditions were present, the claimant would have no need to prove causation during the administrative process. The VICP table described, for each vaccine covered by the program, known adverse side effects and the time period within which those effects would be expected to arise following the inoculation. If the claimant could make a showing (documented by medical evidence) that he or she had the condition indicated in the VICP table and that it manifested itself within the time limit following the inoculation, there would be a rebuttable presumption of causation.\(^\text{322}\) The presumption could be defeated, but HHS would have the burden of proof. The rules of procedure in the claim process are relatively relaxed, by traditional civil litigation standards. For example, discovery is not a right normally available to either side during the consideration of an NCVIA claim.\(^\text{323}\)

It would also be possible to advance claims against covered vaccines that involved listed side effects arising after the presumptive time limit or that involved side effects not in the VICP table, but doing so would require the claimant to prove, by a preponderance of the evidence, that the vaccine and not some other agent was the actual cause of the injury. As was true with GBS claims under the Swine Flu Act after Califano’s policy announcement, the question regarding causation in these “off-table” claims would concern only whether the vaccine caused the complained of ailment, not whether there were defects in its manufacture, labeling, or design (note that all of the vaccines involved in these off-table claims are, in fact, those listed in the VICP table, but either the point of claimed onset or the type of claimed side effect were outside the scope of the official requirements for the rebuttable presumption of causation). That said, off-table claims are, in practice, as close to “full-blown litigation” as is possible with the relatively informal procedures of the VICP, and proof of causation in fact would require “evidence of a strong temporal relationship” between the vaccination and the injury and “either reliable medical opinion or scientific theory explaining a logical sequence of cause and effect.”\(^\text{324}\) As such, a mere suggestion that a “vaccine is only related in some sense to the injury falls far short of the reliability required by a preponderance standard in an individual case.”\(^\text{325}\)

\(^{322}\) The NCVIA does not specifically provide for a presumption of causation for claimed injuries meeting the onset time and description characteristics in the VICP table, but subsequent appellate cases have relied on the act’s legislative history to make the distinction. See H.Rept 99-908 (1986), reprinted in 1986 U.S.C.C.A.N. 6344, 6359 (“If the injury is not demonstrated to have been caused by other, defined illnesses or factors and the injury is demonstrated to have met the other requirements of Section 2111 and the Table, the injury is to be deemed to be vaccine-related”); \textit{Bunting v. Sec’y of Dep’t of Health & Human Services}, 931 F.2d 867, 871–872 (Fed. Cir. 1991).


\(^{325}\) \textit{Althen v. Sec’y of Dep’t of Health & Human Services}, 58 Fed. Cl. 270, 284 (Fed. Cl. 2003) (original quotation marks omitted).
The inability to obtain full prehearing discovery of, for example, a manufacturer's records regarding a vaccine's development and testing history might markedly increase the difficulty of proving an off-table claim. Such off-table claims are not a minor part of the VICP and, in fact, represent 98 percent of all claims filed since 2009. The reason for this significant shift from the original focus of the program as an informal claiming process to more-adversarial proceedings has been HHS' extension of the liability protections to some vaccines that are listed without describing any covered side effects at all. At the present time, all claims involving about half of the vaccines in the VICP table would, by definition, be of the off-table variety because of the absence of listed side effects.

Successful claimants (whether or not off-table) could potentially recover past and future unreimbursed economic losses exceeding $1,000, such as for the costs of rehabilitation, counseling, education, vocational training, and medical care. Claimants could also recover future diminished earning capacity. Noneconomic damages (such as those for past or future pain, suffering, or emotional distress) were recoverable as well, but limited to $250,000. A claim involving wrongful death could receive a maximum of $250,000. Interestingly, the original act provided for annual Consumer Price Index–based adjustments to the caps on noneconomic and wrongful-death damage awards, but later legislation removed this requirement. Punitive damages would not be awarded through the VICP, nor would compensation for losses sustained by someone other than the vaccinee or on the vaccinee's behalf (thus, no loss-of-consortium claims by the parents of a vaccinated child would be permitted). One of the more unusual aspects of the NCVIA was that reasonable attorneys' fees would be potentially available for all claimants, not just the ones receiving compensation. That said, noncompensated claims would have to show that the action was brought in “good faith” and with a “reasonable basis” for the claim in order to recover attorneys' fees.

It is important to keep in mind that most of the special rules regarding the types of damages available, limitations on award size, and allowable attorneys’ fees apply only to the claim process of the VICP. Once the matter moves to the lawsuit stage, state court actions are possible, and generally the law that applies, other than in regard to liability protections afforded to the manufacturer for unavoidable side effects, would be whatever state rules of tort

326 See, e.g., Roller, 2013.
328 GAO, 2014, p. 17.
329 NCVIA, § 2115(a)(1).
330 NCVIA, § 2115(a)(3).
331 The $250,000 limit is more of a ceiling than a cap in that an apparent policy of the Office of Special Masters allows awards to approach $250,000 only if the suffering was “at the most extreme in intensity, duration and cognizance of all vaccine-injured petitioners” (Graves v. Sec’y of Dep’t of Health & Human Services, 109 Fed. Cl. 579, 581 [Fed. Cl. 2013]).
332 An estate can recover a decedent’s injury-related expenses for the period of time between the injury and the death, which could mean total compensation in excess of $250,000 (Zatuchni v. Sec’y of Dep’t of Health & Human Services, 516 F.3d 1312 [Fed. Cir. 2008]).
334 NCVIA, § 2115(d).
are available to the plaintiff. Punitive damages, for example, could potentially be awarded at trial, although the act does contain some restrictions under which such damages could be awarded. Similarly, a parent in a postclaim lawsuit could bring an action alleging loss of consortium for a vaccinated child, something not possible within the VICP. The procedures for seeking recovery from the manufacturer on the sole available theory of defective manufacturing are modified somewhat compared to traditional litigation, with a mandatory trifurcation of any trial consisting of an initial liability stage, a second stage for determining damages, and a third for any punitive-damage claims. In addition, the filing of a petition with the VICP stays all state court statutory limitations on the time allowed to initiate a lawsuit until the final judgment of the VICP is rendered.

Another issue to consider is that the NCVIA’s liability protections and post-VICP litigation modifications only extend to manufacturers. Claims against health care providers that, for example, assert that the vaccine was negligently administered (such as giving an intramuscular vaccination intravenously in error) or was provided to a patient prior to inquiring whether he or she had a severe, life-threatening egg allergy would be outside of the act’s limitations on liability. But even though the health care provider would not receive the liability protections, claims against the provider would still have to be submitted to the mandatory administrative claim process before any lawsuit could be filed.

Compensation for VICP claimants would come from the Vaccine Injury Compensation Trust Fund, which would be subrogated to the rights of any claimant to whom payment was made. The trust fund would be financed by an excise tax on each dose of vaccine manufactured or produced in or imported to the United States, although, at the time of its passage, no such tax was in place. Subsequently, the original tax was calculated using a risk-based formula in which DTP was taxed at $4.56 per dose, MMR at $4.44, and oral poliovirus vaccine at $0.29. In 1997, legislation simplified the assessment, setting the tax at a flat $0.75 per dose (a combination vaccine, such as DTP with three different vaccines, would be taxed at $2.25). The $0.75 rate, which has not increased since 1997, is paid by the manufacturer, producer, or

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335 NCVIA, § 2123(d)(2). Unless the plaintiff can show that the manufacturer engaged in fraud, intentionally withheld safety information, or participated in other criminal activities related to vaccine safety and effectiveness, punitive damages cannot be awarded if the manufacturer otherwise complied with applicable federal law and regulations (42 U.S.C. § 300aa-23(d)).
337 NCVIA, § 2123.
338 NCVIA, § 2116(c).
339 NCVIA, § 2117.
340 It appears that, although the HHS rulemaking process designates the vaccines that will be listed in the VICP table, congressional action is required to amend the Internal Revenue Code to actually impose the excise tax on the manufacturer of any newly listed vaccine.
importer, not the end user, although, presumably, such costs are passed through to each point in the supply chain. By May 2017, the trust fund had a balance of about $3.7 billion.\textsuperscript{343}

**Claims and Related Responsibility Processes**

Because our primary interest is in responsibility assignment, the VICP’s experience in processing claims might not seem to be especially relevant. When the claims involve unavoidable side effects from a vaccine listed in the VICP table and the vaccine’s preparation, directions, and warnings were proper, the liability of the manufacturer or the vaccine administrator is not at issue, and neither potential defendant would be directly affected by the decision of the special master in reviewing the eligibility of a claim. If compensation is awarded, the source for the payments is not that manufacturer or administrator, but instead would be the trust fund, which is already financed by the per-dose excise tax.

Part of the rationale behind creating the administrative compensation program was to address a large number of claims that would otherwise have found their way to the courthouse in the form of formal lawsuits. Claims that are absorbed by the program either in terms of accepted compensation (thus barring any future litigation) or denials that are not challenged can minimize defendants’ financial exposure, both by reducing the potential for tort trial verdicts and settlement payments and by reducing the total costs of defense. Moreover, the perceived success of the VICP in acting as a viable alternative to litigation can affect the willingness of potential claimants to avail themselves of the program, to take the claim process seriously (rather than simply going through the motions until it is possible to file a court complaint), and to accept any decision of the special master as final. Ultimately, the performance of a compensation program, or lack thereof, can influence whether there is political consensus to continue the liability shields, modify them, or abandon the program altogether.

As of August 1, 2014, HHS had received a total of 15,333 claims had been received since the initial implementation of the VICP.\textsuperscript{344} In the past decade, an average of about 450 petitions were filed each year, although there were significant spikes in FY 1990–FY 1991 and FY 2002–FY 2004, with counts that were many times larger than the annual averages before or after those periods. The bump in claims in the early 1990s reflected a cutoff date of January 31, 1991, in which claims concerning vaccinations taking place before October 1, 1988 (the day the VICP began) had to be filed. The backlog in adjudications caused by the pre-VICP claims had just about been cleared out when, in FY 2002, large numbers of off-table claims alleging that a childhood vaccination had triggered the onset of autism began to hit the system, often asserted to have been the result of an MMR inoculation or the administration of a vaccine containing thimerosal, a mercury-based preservative.\textsuperscript{345}

The sharp influx of new claims related to autism, the potential for protracted and vigorously litigated proceedings in each of these off-table claims, and the policy implications of having

\textsuperscript{343} U.S. Department of the Treasury, 2017.

\textsuperscript{344} HHS, 2014. Some of the very early claims were submitted to HHS as simple letter requests for compensation prior the formal creation of the VICP.

\textsuperscript{345} J. Klein and Helms, 2006, p. S150.
multiple special masters independently adjudicating whether there was a link between
government-mandated vaccination programs and the national incidence of autism-spectrum
disorders in children led to the establishment of an Omnibus Autism Proceeding within the
Court of Federal Claims to consolidate the processing of more than 5,400 autism-related cases.
Ultimately, six test cases presenting two different theories of a vaccine–autism connection were
litigated, but the decisions in all six rejected the petitioners’ theories of causation. Once the
appeal process was concluded in late 2010, autism claimants had to decide whether to proceed
with their claims within the VICP (given the test-case results, compensation would be highly
unlikely) or request an administrative dismissal that would leave open the possibility of
proceeding with a traditional lawsuit.\textsuperscript{346} As might be imagined, thousands of these cases exited
the program in FY 2011 and FY 2012 to pursue other options.

The autism episode makes interpreting the “success” rate of claimants in the VICP (as well as
the program’s impact on manufacturers’ and providers’ liabilities) problematic. Of the
approximately 13,500 adjudications completed by August 2014, 3,700 (about 27 percent) were
ruled to be compensable (by a special master’s decision, a ruling by a Court of Federal Claims
judge, a concession by HHS that the claim should be paid based the agency’s own review of the
record, or a settlement), with the remainder dismissed in some manner.\textsuperscript{347} Those dismissals,
however, include the mass exodus of autism claimants in FY 2011 and FY 2012. If those two
years are ignored, slightly more than 34 percent of the rulings were in the claimants’ favor. If
pre–FY 2000 adjudications are also dropped in order to focus on the recent history of the VICP,
the rate increases to 41 percent.

A VICP claimant’s march toward a final determination is not particularly rapid. HHS reports
that, “on average, it takes 2–3 years to adjudicate a petition/claim after it is filed.”\textsuperscript{348} A 2014
GAO study presented a somewhat different picture, reporting that claims filed since FY 2009
(thus excluding most autism claims) and adjudicated by the end of March 2014 required about
1.6 years on average.\textsuperscript{349} It should be kept in mind that this figure would exclude the cases that
have lingered the longest in the system—in other words, matters filed prior to FY 2009. An
arguably more informative measure of throughput would be to look at the averages for
disposed cases each year. Excluding autism cases, the average for cases disposed of in FY 2012
was about 3.5 years, although, for other years since FY 2009, the average was more modest.\textsuperscript{350}

Over nearly three decades, the average compensation that the VICP paid to 3,700 successful
claimants was $754,000, and their attorneys were awarded an average of $31,000 in fees and

\textsuperscript{346} “Notice to Counsel,” filed October 8, 2010, \textit{In re Claims for Vaccine Injuries Resulting in Autism
Spectrum Disorder or a Similar Neurodevelopmental Disorder}, Autism Master File, Office of Special
Masters, U.S. Court of Federal Claims.

\textsuperscript{347} HHS, 2014. Dismissals include adverse determinations by special masters (or by Court of Federal Claims
judges when the special masters’ decisions are challenged), statute-based terminations (such as one
triggered by missing a filing deadline), and voluntary withdrawal of claims.

\textsuperscript{348} HHS, 2014, p. 1.

\textsuperscript{349} GAO, 2014, p. 10.

\textsuperscript{350} GAO, 2014, pp. 11–12.
costs.\textsuperscript{351} About 4,800 payments were made to attorneys in dismissed cases, with an average of about $13,000 in fees and costs.\textsuperscript{352} All of these averages roughly hold true when examining just adjudications from FY 2000 onward. At least from the claimants’ perspective, transaction costs, if assumed to be primarily in the form of approved attorneys’ fees and costs, are low compared to those in traditional civil litigation, in which counsel is paid on a contingency-fee basis (we have no comparable information about transaction costs incurred by HHS or DOJ in responding to the petitions). Because the VICP fee and cost award is paid in addition to, and not out of, gross compensation received, a rough approximation of a contingency-fee rate would be fees divided by the sum of compensation plus fees, resulting in a 4-percent fee. Even if payments to attorneys made in noncompensated claims are added to the mix to better reflect total transaction costs, the rate rises only to about 5.5 percent. To be precise, the “fee percentage” we describe here also includes awarded costs, which would not be part of a standard contingency-fee contract. And it should be understood that the fees and costs allowed by a special master might well not reflect the full amount requested by a petitioner on behalf of his or her attorney.

The NCVIA certainly did not create an impenetrable shield for all vaccine-related injuries. Obviously, a claim regarding a vaccine not listed in the VICP table could be advanced in state or federal court without first submitting to the VICP process. For listed vaccines, relatively minor claims for $1,000 or less could also skip the administrative phase. Because the VICP’s focus is on monetary damages, suits seeking equitable relief can bypass the VICP as well.\textsuperscript{353} But these exceptions involve only the primacy of the administrative claims process: The underlying liability protections afforded to manufacturers and vaccine administrators are still in place regardless of venue as long as the vaccine is listed in the VICP table and the issues involve design, warnings, preparation, or directions.

That said, a wave of ancillary litigation developed against a wide range of defendants with the goal of recovering for vaccine-related injuries without moving through the VICP process. Many had their roots in claims involving the relationship between vaccines and autism, usually turning on the question of whether adulterants or contaminants in the injected materials were responsible for the alleged injuries. The argument was that, although the VICP would admittedly cover the active ingredients of the vaccine itself (presumably the virus), anything added to the injection would not.

One Oregon state court case related to autism was filed in 2001 as a putative class action on behalf of 30 million children born on or after January 1, 1990, and allegedly injured by mercury-based vaccine preservatives, naming manufacturers and distributors of vaccines and thimerosal as defendants (as well as a few in-state administering physicians, presumably to defeat federal diversity jurisdiction). Autism-spectrum disorders were alleged to be one type of

\textsuperscript{351} HHS, 2014.

\textsuperscript{352} HHS reports that, by August 2014, about 200 payments for attorneys’ fees and costs have been made on an interim basis for an average of $87,100. Presumably, these are for claims involved in long-term adjudications that are still pending.

\textsuperscript{353} It is less clear whether derivative claims for harm to a noninjured person fall into this group.
mercury-triggered injury, but the suit encompassed a much wider range of neurological complaints. A parallel putative class action was filed at the same time in the same court, but this one specifically sought only future medical monitoring (a type of equitable relief) for children receiving injections containing thimerosal but who have not yet manifested any signs of symptoms of mercury-induced injuries.\textsuperscript{354} Similar lawsuits were filed in at least eight other states. A federal district court judge ruled that both Oregon actions did not fall under the NCVIA because the claims were held to have been based on the effects of thimerosal, rather than the vaccines that contained the preservative.\textsuperscript{355} An Oregon state court judge, however, later held that, as a matter of law, thimerosal fit within the definition of a vaccine preservative, as opposed to an adulterant or contaminant, and the matters were ones more properly handled by the VICP.\textsuperscript{356} Hundreds of other non-VICP vaccine lawsuits were filed around the country under a variety of theories and strategies, such as an exclusive focus on thimerosal manufacturers and distributors, explicitly requesting no more than $999.99 in damages for each class member,\textsuperscript{357} claims of loss of consortium, and, as seen in the Oregon cases described above, alleging that thimerosal was an adulterant or contaminant or by seeking some form of equitable relief. Such cases have typically not been successful in the long run for plaintiffs, although it was reported that, by 2005, manufacturers had spent more than $200 million defending such claims.\textsuperscript{358}

Such expenditures were likely to be prime motivators behind a few extra sentences added at the last minute to HSA, sweeping legislation enacted in the shadow of 9/11.\textsuperscript{359} Applying to both pending and future litigation (including that related to childhood vaccines), the new provisions redefined vaccine manufacturers to include manufacturers of any component or ingredient used in the vaccine (obviously including thimerosal) and explicitly noted that such items could not be treated as a form of contaminant.\textsuperscript{360} A year later, three Republican senators led a successful push for the provisions' repeal, contending that the "change had been hidden in the Homeland Security Act and had not been discussed before passage," but the entire affair was noted as having "done nothing but muddy already murky waters" related to the autism question.\textsuperscript{361}

\textsuperscript{354} Mead v. Aventis Pasteur, Inc., No. 0107-07136 (Cir. Ct. Multnomah County, Or., filed Aug. 21, 2001).
\textsuperscript{358} J. Klein and Helms, 2006. That said, the “sue the thimerosal maker, not the vaccine manufacturer” approach has occasionally been upheld as a workable solution to VICP primacy, allowing cases to proceed in state court. See, e.g., Holder v. Abbott Laboratories, Inc., 444 F.3d 383, 385 (5th Cir. 2006), and Reilly v. Wyeth, 876 N.E.2d 740 (Ill. App. 2007). Such claims would still have a heavy burden to prove a causal link between thimerosal and autism or other injuries.
\textsuperscript{359} HSA is addressed more fully in the next section, discussing smallpox vaccine liability.
\textsuperscript{360} See discussion in Greenleaf, 2012.
\textsuperscript{361} Greenleaf, 2012, pp. 312–314.
Smallpox Vaccines

History
Smallpox immunization programs in the United States date back to the very beginnings of the nation. In February 1777, for example, George Washington ordered mandatory variolation (cutaneous insertion of material from smallpox pustules) for new enlistees in the Continental Army, thus providing much needed protection from a disease that had already killed thousands of American soldiers during the Revolutionary War. A mix of compulsory vaccination programs at the state, local, and school levels in the late 1800s and early 1900s in the United States helped reduce the annual infection rate to zero for the deadliest form of the disease by 1930, and the same result was achieved for the more common and somewhat milder form two decades later.

Similar efforts were being conducted in other countries, and, by 1980, the World Health Organization (WHO) formally declared that the disease had been eradicated from the entire planet as a direct result of its intensive 13-year global vaccination campaign. Hoping to prevent any flare-up that might result from accidental release of viral material stored in research laboratories around the world, WHO subsequently took steps to consolidate remaining variola virus stocks. By 1983, there were just two authorized repositories of the smallpox virus (one in the United States and one in what was then the Soviet Union), although, because the global consolidation effort relied solely on each country’s good-faith compliance, there was always a potential that some unreported stockpiles had remained outside of the approved locations. The elimination of known wild strains of smallpox meant that little concern was voiced when a key manufacturer of smallpox vaccine discontinued further production for general distribution in the early 1980s, and the reaction was just as muted when the Centers for Disease Control and Prevention (CDC) subsequently announced that the vaccine would no longer be available for civilian use (routine military use in the United States was discontinued in 1990).

But by 1999, media articles began to report on U.S. government assessments reaching conclusions that Iraq and North Korea were likely to have concealed inventories of smallpox virus for potential weaponization purposes and that Russia might have unreported stores outside of its single known WHO-approved location. In addition, highly publicized attacks in Tokyo involving sarin gas in the mid-1990s had highlighted the potential for the use of biological and chemical agents as weapons of terror by even technologically unsophisticated organizations or rogue states. In response to the possibility of smallpox bioterrorism, HHS

362 Cantey, 2011.
365 Guillemin, 2014.
366 See, generally, IOM, 2005b, Chapter Two.
367 Broad and Miller, 1999.
issued a solicitation in February 2000 for a contract to develop a new smallpox vaccine accompanied by the production of at least 40 million doses.\textsuperscript{368}

Concerns about the potential for smallpox to return to the world stage began to evolve from a theoretical but unlikely public health topic into a more urgent national security issue. The potential for intentional releases of smallpox to have an extremely disruptive effect on society was examined during the summer of 2001. The Center for Strategic and International Studies and the Johns Hopkins Center for Civilian Biodefense Strategies coordinated a senior-level exercise (“Dark Winter”) at Andrews Air Force Base that simulated a bioterrorism attack involving simultaneous releases of smallpox at shopping malls in three U.S. cities. The participants concluded that such an attack could significantly threaten national security and, in a worst-case scenario, kill perhaps as many as 1 million Americans, that U.S. health care and public health systems had no available surge capacity to deal with these types of intentional releases, and that there was not enough vaccine currently available to inoculate more than a small fraction of the population.\textsuperscript{369}

At about the same time, however, CDC offered a contrasting view of the need for widespread smallpox vaccination. In June 2001, its Advisory Committee on Immunization Practices felt that the “risk for smallpox occurring as a result of a deliberate release by terrorists is considered low, and the population at risk for such an exposure cannot be determined.”\textsuperscript{370} Given that the “benefits of vaccination do not outweigh the risk regarding vaccine complications,” the advisory committee concluded that “pre-exposure vaccination is not recommended for any group other than laboratory or medical personnel” working with the viruses used in the vaccines. That said, it was suggested that, if “the potential for an intentional release of smallpox virus increases later,” vaccination prior to actual exposure might be indicated for “selected groups (e.g., medical and public health personnel or laboratorians).”

It took the events of September 11, 2001, to provide the primary catalyst for a new round of mass smallpox vaccinations in the United States, one that was planned to go deep into the civilian population beyond just health care personnel. In November 2001, the federal government greatly expanded the existing vaccine-production contract to obtain enough new supplies that, along with frozen vaccines left over from the 1970s, could be used to inoculate every American if desired.\textsuperscript{371} But despite the heightened national anxiety triggered by the September 11 attacks, as well as a flurry of letters containing another potent bioweapon (anthrax spores) sent a few weeks later, concerns were raised from the American Medical Association and other quarters that any sort of immediate widespread inoculation effort would

\textsuperscript{368} U.S. General Accounting Office, 2000, p. 2.  
\textsuperscript{369} Center for Health Security, undated.  
\textsuperscript{370} Rotz, Damon, and Becher, 2001, p. 18.  
\textsuperscript{371} Petersen, 2001; Stevenson and Stolberg, 2002.
be unwarranted. Indeed, President George W. Bush noted his own concerns that, “if we were to have universal vaccination, some might lose their life.”

At the time of the expanded vaccine order, the announced purpose was simply to create a government stockpile to be used in the event of a terrorist attack. That policy shifted markedly over the following year, the result of considerable debate within President Bush's administration about whether the risk of a terrorist attack involving smallpox had increased to the point that a preemptive inoculation campaign was now needed, especially in light of rising tensions during the run-up to the invasion of Iraq. Reportedly, some in the administration had argued that Iraq under Saddam Hussein had the potential to weaponize smallpox on its own or could transfer hidden supplies to third parties, thus necessitating widespread vaccination of the civilian population in anticipation of such an attack. Others argued for a more measured response of fewer than 20,000 vaccinations of certain health care workers and first responders, noting the potential for large numbers of vaccinees to incur serious side effects if a massive nationwide campaign was initiated.

Ultimately, the administration decided on a middle course, announcing in December 2002 its intention to immediately begin mandatory vaccinations of 500,000 military personnel. In addition, more than 400,000 doctors, nurses, and certain first responders would be encouraged to participate in a voluntary program beginning the following January. Once that target group had been vaccinated, the program would be then opened up to as many as 10 million other civilian health care and emergency workers, again on a voluntary basis. In order to make sure that the program would be able to address the military, health, and first-responder groups as planned, the general public would have only limited access to such vaccinations until new supplies came online from the ramped-up production contract.

The selection of a January 2003 start date for the initiation of the civilian campaign had its origins in HSA, enacted the previous November. Although the effort to consider a bill to consolidate numerous U.S. executive branch organizations related to domestic security under a single umbrella had begun in June, it was not until just before final consideration that a section was quietly inserted to provide sweeping liability protections to smallpox vaccine manufacturers and administrators in the event that the vaccines were distributed in response to a national security threat. Although the legislative history of the bill is essentially silent as

374 Preemptive inoculation is not necessarily needed to reduce the threat from smallpox outbreaks. Vaccinations of those already infected with smallpox can be used to treat the condition if done within a few days of exposure. In addition, some argue that a “ring” strategy can be used to contain the spread of an outbreak, by vaccinating those surrounding the location of newly discovered infected people.
375 Weisberg, 2008; Stevenson and Stolberg, 2002.
377 Stevenson and Stolberg, 2002.
378 During a House session on November 13, 2002, Rep. Henry Waxman remarked, Now, I want to talk about one of the hidden provisions we found buried in this massive bill today. Section 304 severely restricts the abilities of persons killed or injured by the
to the intended purpose of these protections, the provisions were later claimed to address the concerns of manufacturers and health care providers administering the vaccine about their potential liability in any federal inoculation campaign. Interestingly, securing an adequate supply of the vaccine for the program and addressing insurance coverage availability did not seem to be pressing concerns at the time. The November 2001 contract for producing a smallpox vaccine reserve of national scope was still in effect at the time of passage, and, even before HSA’s liability protections were in place, the manufacturer of the reserve supply had estimated that it would make 30- to 40-percent profit on the work.

Under the revised bill, once the HHS Secretary issued a declaration that an actual or potential bioterrorist incident or other public health emergency requires the administration of smallpox vaccine as a type of “countermeasure,” the exclusive remedy for any action to recover for vaccine-related personal injuries would be an FTCA lawsuit against the federal government, which would essentially stand in the shoes of a wide variety of potential defendants, such as vaccine manufacturers and the health care entities administering the vaccine. The revised bill with the new smallpox liability provisions was introduced into the House on the 13th and passed the very same day, the Senate concurred less than a week later, and President George W. Bush eventually signed on the 25th of November. Because HSA would not take effect until 60 days after the date of its enactment, it might not be surprising that, on precisely the 24th of January (i.e., the requisite 60th day), the HHS Secretary issued the necessary declaration for the vaccine liability protections. On that same day, the first civilian vaccinations were given to four health care workers in Connecticut.

Although what was essentially the final version of HSA moved quite quickly through Congress during mid-November 2002, concerns had been voiced from the very moment the new provisions were inserted that the broad protections afforded by the act might leave those who were injured as a result of smallpox vaccine administration out in the cold. The House minority staff on the Committee on Government Reform argued that, if the federal government wanted to protect the financial exposure of vaccine manufacturers, it could have simply indemnified the producers from potential liability and reimbursed them for any trial awards or settlements. Instead, it was claimed, making the federal government the sole target of any

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381 HSA, § 304(c).
383 Office of the Secretary, 2003.
385 Minority staff, undated, p. 2.
lawsuits that might arise would trigger the procedures and the restrictions of the FTCA, erecting hurdles that “sharply [curtail] the right of victims to seek compensation.” Despite such protests, HSA was eventually passed by overwhelming margins in both houses.

The vaccination program, however, did not roll out as planned. By the tenth week after the HHS declaration, only about 6 percent of the more than 400,000 targeted civilians had received the injections, and half of these vaccinees were located in just eight states. The HHS Secretary asserted that delays in getting hospital workers vaccinated were having ripple effects on the entire campaign. The slow start in that quarter was blamed on a variety of factors (including hospital union issues, uncertainty as to how workers' compensation would apply, health care providers' preoccupation with other vaccination duties, and a lack of perception that bioterrorism threat was an imminent risk), but the Secretary also suggested that perhaps one-third of the hospitals were waiting until a federal plan could be developed to provide compensation to their workers for any side effects.

The potential for a lack of a mechanism to deliver compensation for vaccine injuries—other than through standard FTCA lawsuits—to affect the rollout of the program was noted prior to even the first inoculations. In late 2002, CDC requested that the IOM examine issues related to implementing the upcoming civilian vaccination campaign. The IOM's response concluded that the type of compensation approach envisioned in HSA “could seriously affect achievement of the stated goal of the program—to increase the nation’s bioterrorism preparedness.” Under HSA, the IOM suggested, claimants alleging adverse reactions would be limited to lawsuits based on theories of negligence in manufacturing or administration, and, as a result, someone who was significantly affected by known side effects without any specific negligence in play would be unable to recover at all. FTCA actions do not allow for strict-liability claims (absent a specific legislative exception, as was made in the Swine Flu Act), so allegations of a failure to warn or of design defects not involving negligence would not be permissible. Moreover, family members and others accidentally infected by contact with a vaccinee during the two- to four-week postinoculation period in which the vaccinia virus (the milder relative of smallpox used in the vaccines) can be transferred to others would have no recourse whatsoever. The IOM assessment noted the irony involved with providing liability protections to those manufacturing or administering the vaccinations but none to those who were volunteering to be the first line of defense against bioterrorism, suggesting that health care workers' “concerns about the financial burden for caring for the adverse reactions of the smallpox vaccine . . . could greatly decrease the number of people who volunteer for smallpox vaccination.” The IOM was not alone with these criticisms; some legal scholars had also reached the conclusion that an FTCA action for addressing physical injuries associated with the program would work to bar any recovery

188 Committee on Smallpox Vaccination Program Implementation, 2005.
189 The risks of inadvertent vaccinia (the type of virus used in smallpox vaccinations) infection from contact with someone (or contact with their bandages, clothing, etc.) who has recently been vaccinated are quite small but can be life threatening. See, e.g., Wertheimer et al., 2012.
absent clear error: “If everything is done perfectly, without any negligence, some percentage of people given the vaccine will be injured by it—it’s a dangerous vaccine—and they will not be compensated under the law.”

The HHS Secretary essentially echoed that view during a December 2002 press conference on smallpox policy. When asked how members of the military and first responders (who would be the initial recipients of the program) would be compensated for adverse reactions, he first acknowledged the difficulties of successfully advancing a negligence claim:

They would have to prove negligence in order to recover, and that, as many people have pointed out, could be difficult, because if [the vaccine manufacturers or administrators] are agents of the Federal Government and are licensed and are doing everything properly, negligence would not apply.

The fallback position for such a result would be a mix of health insurance and workers’ compensation:

So then the next step is how do these individuals get compensated?

They will be able to get compensated of course under their own health insurance programs, and most of the individuals in the first category certainly will be people that are covered by health insurance, either by their employer or by their own personal plans.

Secondly, they will also be covered by the state workers compensation laws of the particular state which would pay them compensation. And heaven forbid, if somebody dies, they would be able to receive the wrongful death portions of the workers compensation law put out by the particular state.

Some of those whom the law was designed to protect also raised concerns about HSA’s mechanisms for shielding key participants in the vaccine program. Although it was clear that manufacturers and distributors would be covered by the liability shift to the federal government, there was confusion about precisely who else might be included under the umbrella. For example, although the act’s definition of those who enjoy the nearly complete immunity included “an official, agent, or employee” of a vaccine manufacturer or distributor, the health care entity overseeing the administration, or the actual inoculator, it was not clear whether a physician at a hospital working as an independent contractor (as many do and therefore would be neither an official, an agent, nor an employee) but not actually giving the shot might be protected as well. Moreover, there was uncertainty about whether health care workers who shed the virus after a recent inoculation (leading to inadvertent transmissions) would be protected, because such transmission would arguably not be an intended part of the official countermeasure campaign described in the Secretary's declaration.

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390 Pear, 2002, quoting Professor Edward P. Richards of Louisiana State University Law Center.
391 CDC, 2002.
With the campaign stagnating and with perhaps unexpected resistance to widespread smallpox vaccination without some sort of protections offered to vaccinees coming from important organizations (such as the American Nurses Association and the American Federation of State, County and Municipal Employees) whose members were being asked to volunteer for inoculations, there was support in early 2003 from both sides of the aisle, as well as the White House, for a compensation program, as well as certain revisions to HSA related to liability protections. With the requisite political will firmly in place, SEPPA moved through both houses with striking speed, and, on the same day (April 11), the Senate passed the bill by unanimous consent and the House voted passage without objection. When President Bush signed the act into law two weeks later, a type of no-fault compensation scheme addressing smallpox vaccine-related injuries was now in place, one that would operate in the shadow of HSA’s existing FTCA approach.

**Structure**

**Homeland Security Act.** Section 304 of HSA is the key provision extending a form of immunity to individuals and entities involved in the smallpox countermeasure program, and that immunity is triggered by the HHS Secretary’s declaration described earlier. The declaration would describe the types of substances to be considered a covered countermeasure, as well as the start and end dates in which the program would be in effect. Depending on the language used in the declaration, a countermeasure could include any substance preventing or treating smallpox or the immune globulin that would be used to control or treat any adverse side effects.

HSA defined a **covered person** as (1) a manufacturer or distributor of a covered countermeasure, (2) a health care entity overseeing its vaccine administration, (3) a **qualified person** (a licensed health care professional or other expressly authorized under state law to administer the countermeasure and who, in fact, performed the vaccination), or (4) any official, agent, or employee of any of the foregoing. Every covered person would be deemed a “an employee of the Public Health Service with respect to liability arising out of administration of a covered countermeasure against smallpox to an individual during the effective period of a declaration by the Secretary . . . .” With this stroke of a pen, organizations, such as pharmaceutical companies and hospitals, would receive the same liability protections as a U.S. Public Health

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394 It should be noted that an earlier version of SEPPA that would have placed some significant limitations on the compensation available to someone injured from the smallpox vaccination program was the subject of strenuous congressional debate prior to bipartisan compromise. See, e.g., 149 Cong. Rec. H2478–H2494, March 31, 2002.
396 HSA § 304(c), amending § 224(p)(2)(A) of the Public Health Service Act (PHSA) (Pub. L. No. 78-410 [1944]).
397 HSA § 304(c), amending PHSA, § 224(p)(7)(B).
398 HSA § 304(c), amending PHSA, § 224(p)(1).
Service (USPHS) doctor. Many federal laws utilize a similar fiction, in which a private organization or individual is deemed to be a federal employee for the purposes of the FTCA.\textsuperscript{399}

Under existing 42 U.S.C. § 233(a), describing USPHS liability for damages related to personal injury, including death, resulting from the performance of medical, surgical, dental, or related functions, including the conduct of clinical studies or investigation, by any commissioned officer or employee of the Public Health Service while acting within the scope of his office or employment, [FTCA procedures would be] exclusive of any other civil action or proceeding by reason of the same subject-matter against the officer or employee (or his estate) whose act or omission gave rise to the claim.\textsuperscript{400}

This type of designation has far-reaching legal ramifications and has been used in a variety of situations having nothing to do with smallpox vaccinations to convey the FTCA’s extensive protections to people who do not receive federal paychecks. In the context of community health centers that receive federal funding, for example, a similar legislatively enacted provision essentially shields the health centers and their employees from the financial consequences of medical malpractice suits by treating them as part of USPHS.\textsuperscript{401} Litigation can still take place, subject to the rules of the FTCA, but it is the United States that will stand as the defendant, not the individual providers or the health care centers, and it will be the United States that will shoulder the costs of defense and pay any administratively resolved claim, settlement, or verdict. In the context of smallpox, the protections of 42 U.S.C. § 233(a) were reemphasized in HSA as “exclusive of any other civil action or proceeding for any claim or suit this subsection encompasses.”\textsuperscript{402}

There are limitations to this redirection of liability from the manufacturer or administrator to the United States. First, the underlying event would have to meet the explicit conditions set forth in the Secretary’s declaration in terms of who would be expressly authorized to administer the covered substance, as to whether the administration took place during the effective dates of the declaration, and whether the person receiving the countermeasure fell into one of the categories specifically described in the announcement.\textsuperscript{403} Second, the covered person would have to “cooperate” with the United States in the defense of the action; failing to do so could lead to seeking a court order to substitute the person for the United States as the defendant, the Office of the Attorney General removing itself as defense counsel, and the renunciation of liability on the part of the United States for any acts or omissions of that person.\textsuperscript{404} Finally, in instances in which the federal government has made payments to a

\begin{itemize}
\item See, e.g., Cohen, 2008 (describing 50 such laws).
\item 42 U.S.C. § 233(a).
\item HSA § 304(c), amending PHSA, § 224(p)(3).
\item HSA § 304(c), amending PHSA, § 224(p)(2)(B). The protections would also apply if the administrator had reasonable grounds to believe that the recipient was in one of the groups defined in the Secretary’s declaration.
\item HSA § 304(c), amending PHSA, § 224(p)(5). Presumably, the procedures and requirements of the FTCA would no longer apply at that point, and any litigation could move forward as a traditional tort claim.
\end{itemize}
claimant because of either the failure of a “covered person to carry out any obligation or
responsibility assumed by such person under a contract with the United States” or misconduct
that was “grossly negligent, reckless, or illegal . . . or willful,” the United States would have the
right to recover the sums paid out plus litigation costs and interest. 405

Notwithstanding such exceptions, any smallpox vaccine campaign–related lawsuit naming a
covered person and filed in a state court would be subject to removal to federal court upon the
filing of a certification by the U.S. Attorney General that the claims involved arose out of the
administration of a covered countermeasure. 406 In such an instance, the United States could
then move to dismiss the case without prejudice given that the FTCA requires plaintiffs to
exhaust any administrative remedies before proceeding with a court action. 407 The
administrative remedy that HSA envisioned at the time of passage was known as a “Section 304
claim” for monetary damages for injuries or death, which would have to be filed with the HHS
Secretary within the two-year statute of limitation. The FTCA’s traditional limitations on
attorneys’ fees and its prohibitions on claims involving punitive damages, strict-liability claims,
predjudgment interest, or the discretionary acts of government agents would apply here as well.

The hurdles facing any Section 304–related claim were far from trivial. First, in the
administrative claim and in any subsequent lawsuit, the claimant would have to make a
showing that the alleged injury or death was the result of negligence or a wrongful act or
omission, so claims related to known side effects, absent some other error, were not likely be
successful. And given that the vaccination campaign had its specific focus on health care
providers and first responders who would be likely to receive their inoculations in the scope of
their employment, a resident of a state where the local workers’ compensation program was the
exclusive remedy for work-related injuries would essentially be barred from submitting a
Section 304 claim. 408

Administrative Declaration. The black-letter law described in Section 304 has to be viewed
within the context of how the HHS Secretary implemented its requirements. The formal
declaration on January 24 not only set in motion the liability protections contained in HSA; it
arguably expanded their scope beyond what the legislation described. 409 As part of the “Policy
Determinations” in the declaration, the Secretary stated that determining

who is contraindicated; monitoring, management, and care of the
countermeasure site; evaluation of countermeasure “take;” and contact
transmission of vaccinia . . . all arise out of and are directly related to and
part of the administration of the countermeasure. 410

405 HSA § 304(c), amending PHSA, § 224(p)(6).
406 HSA § 304(c), amending PHSA, § 224(p)(4). See also 42 U.S.C. § 233(c).
408 CDC, 2003.
409 For a full discussion of how the declaration might have expanded the original shield, see Richards,
410 Office of the Secretary, 2003.
Thus, *administration* in the Secretary’s view now went beyond the mere act of inoculation to include all related services. Moreover, the meaning of *official, agent, or employee* would now include anyone “who [shares] any employment or other staffing relationship with the health care entity,” which would arguably include physicians operating as independent contractors. The Secretary’s 2003 declaration was renewed annually and extended until at least January 23, 2008.411

**SEPPA.** With the passage of SEPPA, a mechanism was now in place to address concerns that those who suffered vaccine side effects as a result of their voluntary participation in the national campaign would be without meaningful recourse except through private health insurance or workers’ compensation benefits. Interestingly, the Smallpox Vaccine Injury Compensation Program (which would become effective in November 2002) was designed to terminate once any case of smallpox was identified anywhere in the world.412 It would apply solely to health care providers, first responders, and support personnel who volunteered for vaccinations as part of a “smallpox emergency response plan” formulated by the HHS Secretary; in other words, the program would not be available to members of the general public, although a special exception was made for those incurring injuries as a result of a secondary transmission under specific circumstances.413

Many of the details of the program were left up to the HHS Secretary to develop through the rulemaking process, such as how to determine whether someone had sustained a covered injury through direct vaccination or secondary transmission, whether such injury was one for which compensation might be available, what the amount of any such compensation might be, or whether death benefits were warranted.414 The interim final rule setting forth such details was published in 42 C.F.R. Part 102.415 One important aspect of program design involves the development of a smallpox vaccine injury table that, like the one used for the VICP, would identify the types of injuries, illnesses, and other conditions that would be presumed to have resulted from primary administration of (or secondary transmission from) a smallpox vaccine.416 The smallpox table would also set forth the time frame in which the initial symptom or other manifestation of such conditions would have to appear to rise to the presumption. For example, under the initial smallpox table adopted in August 2003, the presumption would apply for a “significant local skin reaction” if it manifested itself up to 21 days from the administration of the vaccine to a recipient or the exposure to vaccinia virus through contact.417 Meeting the type-of-condition and time-of-onset tests for the application for the presumption

412 SEPPA, § 2, amending PHSA, § 261(a)(2)(C).
413 PHSA, § 261(a)(2), (3), and (6).
414 PHSA, § 262(a).
415 Regulations covering SEPPA can be found at 42 C.F.R. §§ 102.1–102.92.
416 PHSA, § 263(a)(1).
would be extremely important for a claimant because failure to do so would mean that the Secretary would have to decide eligibility for compensation based on a preponderance-of-the-evidence standard that the complained-of conditions were related to a smallpox vaccine, taking into consideration “relevant medical and scientific evidence” and potentially including the “views of qualified medical experts.”

The time frame for filing a claim for compensation depended on the manner in which the injuries were incurred: one year for direct administration and two years for secondary transmission. Should the Secretary rule in favor of the claimant, all “reasonable and necessary” medical items and services needed to treat or at least improve the condition would be paid for or reimbursed, although such benefits would be secondary to collateral sources, such as private health insurance, workers’ compensation, or government obligations. There would be potential recovery for lost earnings, although it would be capped at two-thirds of income at the time of the injury, with some upward adjustment for claimants with dependents. As was the case with medical benefits, compensation for lost income would also be secondary to other sources. Lost-income benefits would be limited to $50,000 per year, subject to a total ceiling that matched the amount that SEPPA authorizes for death cases. In instances in which the claimant was actually the survivor of an eligible person, that death benefit would be calculated in a manner modeled after the approach used in the federal Public Safety Officers’ Benefits Program for survivors of law enforcement officers killed in the line of duty. The death benefit would be net of any lost-income benefits provided by SEPPA and would not be available at all if benefits through the Public Safety Officers’ Benefits program were, in fact, paid with respect to the decedent (thus at least some law enforcement officers who suffer fatal injuries as a result of the vaccine program would receive no death benefits through SEPPA). In all instances in which death benefits (in which a survivor is a minor dependent), medical benefits, or lost-income benefits were likely to be paid out over a span exceeding a year, the Secretary would have the option of imposing some type of structured settlement or lump-sum payment. Notably, SEPPA had no provision for compensating noneconomic damages.

Unlike many administrative actions, a decision on a claimant’s application for benefits under the SEPPA compensation process would not be reviewable by any court of law. That said, 

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418 PHSA, § 262(c)(2).
419 PHSA, § 262(d).
420 PHSA, § 264(a), (b).
421 PHSA, § 264(a), (b).
422 PHSA, § 265(a), (b). In addition, the first five days of lost income would not be compensable, unless the total number of days lost was ten or more (PHSA, § 265[c][4]).
423 PHSA, § 265(c).
424 PHSA, § 265(c)(3). The total lifetime ceiling does not apply to those found to be permanently and totally disabled.
425 PHSA, § 265(a).
428 PHSA, § 262(e).
429 PHSA, § 262(f)(2).
SEPPA required the HHS Secretary to develop a method for making a request for reconsideration, which eventually took the form of a very informal postdetermination internal review process.428

In addition to setting up the compensation program, SEPPA made technical revisions to Section 304 of HSA. One effectively made the compensation program the type of administrative remedy that would need to be exhausted prior to moving forward with an FTCA lawsuit.429 Another would offset the value of any SEPPA compensation program benefits from any recovery under such an FTCA action.430 Conforming HSA’s language to that used in the Secretary’s January 2003 declaration, SEPPA provided a more expansive definition of what constituted a covered health care entity and included states and their political subdivisions as potentially covered persons.431 In addition, a hospital or other health care facility would receive the liability protections offered by Section 304, even without actually participating in the vaccination campaign, if one of its employees had been inoculated elsewhere and inadvertently was the source of a secondary transmission.432 The issue of liability protection for those falling outside of a strict official, agent, or employee definition was also addressed by including contractors, volunteers, and anyone with privileges at a health care entity.433 Finally, the Secretary’s earlier conceptualization of administration to cover related activities, such as obtaining informed consent, determining who should receive the countermeasure, and monitoring and managing the inoculation site, was adopted.434

Claims and Related Responsibility Processes
Despite the fact that the smallpox campaign was the subject of an intense national debate and that the scope of the program had the potential to exceed 10 million participants, by the end of 2003, slightly fewer than 40,000 civilians had received the vaccine.435 According to CDC, only 48 reports of adverse events that might be thought of as major were received in 2003, another 97 reports were classified as serious adverse events not necessarily causally related to the vaccinations, and 712 were nonserious outcomes, such as chills and headaches.

With such low numbers of vaccinees, it might not be surprising that, by September 2006, just 62 people had made claims for benefits from the compensation program.436 Of these, 16 made claims after the one-year filing period and were not eligible for benefits, and another 27 were denied because they either could not document that they had, in fact, been vaccinated or could not satisfy the preponderance-of-evidence threshold for proof (two people with an adverse

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428 PHSA, § 262(f)(1). See also 42 C.F.R. § 102.90.
429 SEPPA, § 3(c).
430 SEPPA, § 3(c).
431 SEPPA, § 3(f).
432 SEPPA, § 3(f).
433 SEPPA, § 3(f).
434 SEPPA, § 3(f).
436 Clark and Levin, 2008.
ruling later requested reconsideration through the informal review process, the outcomes of which were not available). The remaining 19 received an affirmative ruling, although, of the 18 who actually received benefits (one had all medical and income losses offset by other sources), eight claimed injuries that were not listed in the smallpox table. What might be the most remarkable is that, as far as we can determine, no federal district court lawsuit has ever alleged injuries related to the 2003 smallpox vaccine program.\textsuperscript{437} In other words, the smallpox compensation scheme appears to have fully captured any litigation demand from those who believed they had been harmed as a result of the civilian campaign.

After multiple extensions, the effective period set by the HHS Secretary ended in January 2008. Nevertheless, both Section 304 and SEPPA remain on the books and can be triggered as circumstances require. However, although the liability protections of Section 304 could be available in advance of an actual attack (any declaration of a potential public health emergency would suffice), the compensation program would end the moment a verified smallpox case appeared. Such a declaration is unlikely because the smallpox vaccine program as envisioned by Section 304 and SEPPA have been essentially subsumed into PREPA, which provides even more-extensive tort immunity (absent willful misconduct and certain other acts or omissions) to manufacturers, distributors, and others on declared countermeasures. One hallmark of PREPA is that, unlike the relatively narrow focus of Section 304 and SEPPA on a single type of vaccine and a small group of “covered persons,” it gives considerable discretion to the HHS Secretary to define, as needed, the specific types of individuals and entities who would receive the liability protections (e.g., administrators, planners, prescribers), the scope of the immunity in terms of what part of the continuum from product design to application would be included, and the type of countermeasures covered (which can be any drug, medical device, or vaccine, as long as it can be used to combat the effects of terrorism, epidemics, or pandemics). PREPA incorporates many of the compensation-related provisions found in SEPPA to define the rules and benefits related to its own CICP, although, unlike with SEPPA, the sole moneys available to pay claimants must come from a fund with a specific congressional appropriation (it was not until June 2009 that such funding was authorized).\textsuperscript{438} PREPA does not rely on the fiction that a covered person is an employee of the United States in order to provide its considerable immunity. The federal government need not step into the shoes of any potential defendant because there is no possibility that a person claiming injuries could bring an action for ordinary negligence or strict liability. A covered party could be sued for willful misconduct in a federal district court, but only after the claim has moved through CICP or satisfies certain other conditions.

In October 2008, the HHS Secretary issued a declaration under PREPA that a credible risk to the public health from smallpox exposure existed and therefore warranted smallpox-related countermeasures to be subject to the act’s liability protections.\textsuperscript{439} The declaration was renewed

\textsuperscript{437} State court personal injury claims against entities related to the civilian campaign in some manner have, in fact, occurred. See, e.g., Wells, 2009.


in December 2015 and remains in effect until the end of 2022.\textsuperscript{440} Given the more-expansive definitions of what constitutes covered countermeasures in PREPA and the far greater powers afforded to HHS to shape both the liability protections and any associated compensation program as it desires, it is unlikely that Section 304 and SEPPA will ever be employed again as originally envisioned.\textsuperscript{441}

**Observations**

The three programs described here nominally share the same goals (protect the sources and administrators of vaccines from financial exposure while encouraging vaccination in the targeted populations), but their approaches differed markedly. The swine flu and smallpox programs have the federal government stepping into the shoes of potential defendants, thus insulating specific parties from potential financial exposure. An alternative approach toward the same end might have involved simple indemnification for any settlements or trial awards, but doing so would not remove the specter of potentially far greater expenditures as a result of legal fees, expert-witness expenses, and other costs associated with processing and defending claims. For many defendants for whom the legal position is strong (as it often is in product liability litigation) but the potential for mass litigation involving complex medical or scientific testimony is nevertheless high, it is the uncertainty of spiraling transaction costs, rather than adverse trial verdicts, that might drive their business decisionmaking, including withdrawal from the market. It is also quite possible that complaints about potential liability in some instances were driven less by good-faith concerns about legal costs than by using their position as the only practical source for the product as an effective negotiating tool. Regardless of the motivation behind seeking a modified liability regime, once the federal government effectively replaced them as the target of all claiming and actual litigation, manufacturers of swine flu and smallpox vaccine could, for all practical purposes, move forward with production plans without regard to liability concerns or associated costs, assuming that they complied with the requirements of the enabling legislation.

The situation was and remains quite different for the childhood vaccine program. Manufacturers would still have exposure because they continued to be potential defendants, but the liability rules in play were tilted in their favor, narrowing the circumstances in which a claimant might be successful. Moreover, their financial outlays for most paid claims would be offset to a great degree by an existing trust fund financed through a per-dose excise tax, the costs of which could be passed along to a captured market. And perhaps most importantly, they would reap the benefits of a fully featured compensation program (operated at government expense) that would siphon off the vast majority of claims that would otherwise manifest themselves as costly lawsuits (regardless of whether compensated) spread across the country. The diversion of potential claims to an administrative black hole was not perfect but


\textsuperscript{441} We chose to discuss Section 304 and SEPPA here rather than the more up-to-date smallpox vaccine-related provisions found in PREPA and CICP because the program rolled out in 2003 has at least some reported experience in terms of liability and compensation.
seems to have been sufficiently effective to make participation in the government’s production program a financially viable proposition.

It would be difficult to claim, however, that all three programs were universally asserted to be successes beyond the liability protections offered to certain large corporations. The swine flu and smallpox vaccination programs collapsed in the light of threats that never fully materialized and were stalled by skepticism among the general population as to the underlying need and the potential for personal downside risks. Although some of this stagnation was due to concerns about the associated compensation programs (criticisms were made of inadequate payments, high transaction costs, extended delay, heavy burdens of proof placed on claimants, and narrowly drawn limitations on what constituted compensable claims), the campaigns fizzled as a result of factors over which the programs had no meaningful control—specifically, the nosedive in the number of new swine flu cases in the United States and the absence of any reports of the use, intended or otherwise, of weaponized smallpox (or any bioterrorism agent, for that matter) in the United States or anywhere else in the world. Without credible public health threats to sustain participation, there was no political will to continue to move forward with the original ambitious plans, and the campaigns were quietly dropped.

The childhood vaccine program is the obvious exception because it continues in full force today and, in fact, now covers vaccines never contemplated by the original drafters of the litigation, such as those for seasonal influenza provided to recipients of all ages. But besides also being called to task over the same reported problems as seen in the swine flu and smallpox programs (e.g., payment size, transaction costs), the compensation side of the childhood vaccine saga has faced striking challenges in terms of demand triggered by autism-spectrum claims that markedly taxed the system’s ability to handle the existing caseload and resulted in significant ancillary litigation. Presumably, the autism spike was totally unexpected by those drafting the legislation and those overseeing the day-to-day operation of the claiming process. Epidemiologists arguably have a fairly precise view of the most likely incidence of vaccine-related effects, given the widespread distribution of these substances throughout the population over the course of decades, and, presumably, they can usually predict with reasonable certainty how many claims will eventually involve a particular side effect. As such, the out-of-left-field impact of the autism-related groundswell presents an extremely useful example of the difficulties an in-place liability or compensation system—one that is designed to handle catastrophes of a certain type and size—might have in adapting to unanticipated events or scope. Arguably, the OPA experience in addressing the uncharted territory opened up by the magnitude of the 2010 Deepwater Horizon blowout provides a similar example.

In the case of the childhood vaccine scheme, the system was eventually able to address the autism spike through creative processes presumably modeled on techniques often applied by judges overseeing mass tort litigation, such as the use of bellwether trials to bring some sort of resolution (or at least some sort of order) to the issues in play. It is this ability to adapt to changing circumstances and needs that mark a successful mechanism for determining responsibility in the aftermath of a catastrophe. Had the autism cases completely overwhelmed the VICP to the point that some semblance of normality was no longer possible, the program
might have been relegated to the dustbin of one-off attempts to bypass traditional tort that were eventually allowed to fade away.

The vaccine case studies also present us with a helpful lesson of the limits to which facilitating compensation can offset perceptions that a protected activity or industry remains innately dangerous. Although a claimant-friendly (at least in comparison to traditional litigation) compensation program can help sell policymakers on the idea of tailored protections or other liability rules for key players by offering a quid pro quo for any special treatment, it is not necessarily true that even a liberal compensation program removes all participant concerns. The mechanism put into place as a result of SEPPA certainly addressed some of the complaints of stakeholder organizations representing those who would be asked to volunteer, but the mere fact that there would be some nonzero compensation for adverse events was not enough to get health care professionals and first responders across the country to roll up their collective sleeves and be vaccinated. The speed, generosity, fairness, or minimal costs of a compensation program have absolutely no effect on the health risks associated with receiving a particular type of vaccination. It is unlikely, for example, that parents weighing the risks and benefits of childhood vaccines take into account the compensation rules, inner workings, and annual statistics of the VICP in their decisionmaking.

But perhaps the most common thread connecting all three frameworks is that they were adopted in the heat of crisis, be it the discovery of a particularly nasty strain of flu, the destabilization of the market for a product needed to keep a generation of young Americans healthy, or the apparent specter of imminent bioterrorism. In the case of swine flu and smallpox, legislation was rushed through Congress with lightning speed, with little of the careful legislative deliberation that might have benefited the programs’ structure. Here, apparent crisis fueled apparent consensus, and, although there was little meaningful opposition in the face of what was characterized as potential national calamities, what was passed might not have been well thought out or closely examined. Indeed, when the inadequacies of Section 304 became apparent, the solution was to quickly pull together a follow-up bill (SEPPA) that essentially left most of the crucial details to the discretion of an administrative agency. Most critically, without the impending threat of a potential and immediate public health emergency, it is unlikely that any of the sweeping protections that these bills offered for just a handful of companies would have had the requisite political backing to be put into effect.

The situation related to childhood vaccine was somewhat different because the shrinkage characterizing national DTP production capability had been accompanied by congressional interest in some sort of compensation delivery program two years before actual passage of the legislation, with numerous public interest groups, academics, and others routinely weighing in on what such a program should and should not look like. Still, it was the need to protect the interests of the sole remaining manufacturer, rather than implementing a fairer way to address consequences of vaccine campaigns, that likely swayed many potential opponents of the program to vote in favor. The point here is that, in all three cases, the public might have been better served had the luxury of time been available to draft the best approach possible. On the other hand, had the clock not been loudly ticking away toward the onset of some real or
imagined crisis, it is likely that none of these programs would have generated sufficient legislative support for its passage.
Chapter Eight: Comparing Frameworks

The illustrative frameworks detailed in Chapters Four through Seven constitute a diverse set of congressional responses to concerns about the potential consequences of various types of mass adverse events. A wide range of policy choices are represented in the case studies, some affecting the behavior of actors only before the event unfolds (such as with mandatory insurance coverage), and some coming into play only once personal injuries, property damage, and economic loss have been incurred. A comparison of the key features and performance of these frameworks can provide some insight into how such choices might work (or fail) in any future legislative initiative.

We begin the chapter by providing an overview of the frameworks and processes used for each incident type. We then proceed to summarize the key features of each framework in the following dimensions:

- primary goals
- liability protections
- compensation program and financing.

Following a summary of the key features, we review the performance of the frameworks in terms of

- speed
- party rights in the responsibility-assignment process
- leakage to civil litigation.

We then conclude by describing justifications and criticisms that have been advanced for implementing similar features in these frameworks, as well as other alternatives for responsibility assignment.

Overview of Framework Examples

The types of incidents discussed in the previous four chapters were the focus of some federal legislative initiatives to alter the liability profile of some types of potential defendants (or PRPs, in the parlance of some administrative processes). See Table 8.1. To recap, three key frameworks for determining responsibility are typically in play when the matter involves an international aviation accident. When the question involves the liability of the airline, the Montreal Convention's rules change many aspects of how litigation would proceed, such as mandating a mix of strict liability and negligence theories, depending on the amount of damages sought and prohibiting claims for punitive damages. When the issue of a nonairline actor (such as a manufacturer) is at issue, Montreal does not apply, and traditional tort lawsuits are possible. Finally, investigations conducted by the NTSB as part of the agency's statutory
mandate to examine adverse aviation events can scrutinize any aspect of the flight and any individual or entity that might have played a role in the incident.
### Table 8.1. Example Incidents, Frameworks, Processes, and Foci

<table>
<thead>
<tr>
<th>Incident Type</th>
<th>Framework</th>
<th>Process Employed for Assigning Responsibility</th>
<th>Assignment Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>International aviation accidents</td>
<td>Montreal Convention</td>
<td>Modified tort litigation</td>
<td>Airline</td>
</tr>
<tr>
<td></td>
<td>Civil litigation</td>
<td>Traditional tort litigation</td>
<td>Any actor other than the airline</td>
</tr>
<tr>
<td></td>
<td>NTSB accident investigation</td>
<td>Agency investigation</td>
<td>Any actor</td>
</tr>
<tr>
<td>Oil spills in navigable waters</td>
<td>OPA</td>
<td>Agency determination</td>
<td>Owners, operators, demise charters, licensees, and permittees</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Agency adjudication</td>
<td>OSLTF, although potentially also parties that the agency later deems responsible</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Agency-initiated recovery litigation</td>
<td>Parties deemed responsible by agency determination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modified tort litigation</td>
<td>Parties deemed responsible by agency determination</td>
</tr>
<tr>
<td>Civil litigation</td>
<td>Traditional tort litigation</td>
<td></td>
<td>Any actor other than those deemed responsible parties</td>
</tr>
<tr>
<td>Incident investigations by various agencies and boards</td>
<td>Agency investigation</td>
<td></td>
<td>Any actor</td>
</tr>
<tr>
<td>Nuclear power plant incidents</td>
<td>Price-Anderson Act</td>
<td>Modified tort litigation</td>
<td>Any actor potentially liable for the incident</td>
</tr>
<tr>
<td></td>
<td>NRC IIT investigations</td>
<td>Agency investigation</td>
<td>Any actor</td>
</tr>
<tr>
<td>Mass vaccine injuries</td>
<td>National Swine Flu Immunization Program of 1976 (swine flu claims)</td>
<td>Agency determination</td>
<td>United States (substitute for program participants)</td>
</tr>
<tr>
<td></td>
<td>NCVIA (claims involving specified vaccines)</td>
<td>Agency adjudication</td>
<td>Vaccine manufacturers and administrators (payments from the trust fund)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modified tort litigation</td>
<td>Vaccine manufacturers and administrators (payments from the trust fund)</td>
</tr>
<tr>
<td></td>
<td>HSA + SEPPA (smallpox vaccine claims)</td>
<td>Agency determination</td>
<td>United States (substitute for covered persons)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modified tort litigation</td>
<td>United States (substitute for covered persons)</td>
</tr>
</tbody>
</table>

Three frameworks also play prominent roles in discharges of oil into navigable waters. OPA was expressly enacted to address responsibility issues in such instances, which it does through a
mix of informal agency determinations to quickly identify a responsible party as defined in the act; more-formal agency adjudications to decide claims against the OSLTF by property owners, businesses, and the like for damages and cleanup costs associated with the spill (the responsible party's financial exposure is in play here because the agency can seek reimbursement later); civil suits against the responsible party to recover any spill-related government expenditures or OSLTF payments; and modified tort litigation brought by claimants against the responsible party as an alternative to the agency’s adjudication process.\footnote{One could argue that instances in which law requires the responsible party to set up its own claim processing facility to field spill-related requests for payment or reimbursement constitutes a type of determination or adjudication. But because it would be the employees or contractors of the responsible party making the decision on a presented claim (similar to any sort of evaluation of a claim made on a private party), rather than an administrative agency or a court, we do not include it in Table 8.1. We do discuss this type of mandatory private-party claim program in the remainder of the chapter.} The second framework in play is traditional tort litigation brought by those alleging financial or personal injuries, but only when the target of the complaint is an individual or entity other than OPA’s designee as a responsible party. In addition, a variety of government agencies and boards, such as the Coast Guard, EPA, and the CSB, can conduct their own investigations into the root causes of a discharge.

The owners, operators, and licensees of commercial nuclear power plants are the primary subjects of the Price–Anderson Act’s liability protections in the event of an injury- or damage-causing nuclear accident, but the act’s indemnification mandates, as well as its caps on financial exposure and modifications to ordinary tort litigation, apply to any party that might conceivably be liable for the event. The funds for compensation would come from Price–Anderson’s mandated mix of private insurance, pooled industry contributions, and federal guarantees. In addition, NRC would have broad powers to conduct an investigation into what might have taken place, the findings of which could result in subsequent enforcement actions against those deemed responsible and subject to NRC’s oversight.

Finally, we presented three different frameworks that have been used to address issues related to vaccine injuries. The National Swine Flu Immunization Program of 1976 greatly reduced the potential liability of certain types of participants in the swine flu vaccination campaign (such as manufacturers and inoculation administrators) by substituting the United States as the responding party in any claim or as the defendant in any lawsuit (thus transferring the responsibility for the costs of compensation and claims handling to the United States as well). As a result, those asserting that they had been injured would have to follow the procedures of the FTCA, which requires the exhaustion of administrative remedies (in this instance, an agency’s determination of the eligibility of the claim against the United States for personal injuries) prior to the commencement of litigation. But although the Swine Flu Act would have substantially modified \textit{procedural law} for making claims and pursuing litigation, the applicable \textit{substantive law} (in other words, the theoretical basis) for vaccine injury liability would remain largely unchanged from a traditional tort lawsuit. Although the manufacturers, distributors, and inoculators would find their liability exposure essentially reduced to zero, claims brought against their designated substitute in terms of responsibility (the United States) would be

\[\text{116}\]
advanced under essentially the same rules for proving negligence, strict liability, or breach of warranty as would be found in any traditional tort lawsuit.

The NCVIA took a different approach, conferring no blanket immunity on manufacturers of specified types of vaccines, but instead markedly narrowing the theories of liability that could be used against them. Claims for compensation advanced against those manufacturers (as well as vaccine administrators) would have to first be processed through formalized agency adjudication, although claims meeting a set of criteria would be presumed eligible. Parties unsatisfied with the outcome could conceivably bring litigation involving modified tort rules following the exhaustion of administrative remedies, but claims alleging design defects or side effects that could be considered “unavoidable” would be barred. In either instance, the NCVIA mandates that funds for paying claims, settlements, or verdicts would come from per-dose excise taxes on vaccines, rather than the pockets of the manufacturers or the U.S. Treasury.

The third framework set forth in the smallpox vaccine acts (HSA and SEPPA) addressed smallpox vaccine injuries in a way could be characterized as combining features of the other two vaccine programs. HSA again substitutes the United States for manufacturers, administrators, and selected others in terms of liability, thus insulating them from financial exposure in most circumstances, but, in this instance, strict-liability theories would be unavailable. An administrative determination process under SEPPA (with precisely defined eligibility criteria similar to those for the NCVIA but without its more-formal adjudication procedures and more-liberal benefits) would have to be completed prior to moving to the courts for resolution.

Primary Goals of the Frameworks

Of the 11 frameworks set forth in Table 8.1, six were the result of legislative initiatives designed to address both the assignment of liability and the resolution of financial claims against those deemed to be responsible in some way for an adverse event leading to property damage, economic loss, personal injuries, and even death. These six are presented in Table 8.2, and our references to frameworks in the remainder of this chapter are to only these laws because these legislative packages were specifically designed to move certain types of potential liability claims out of traditional tort litigation to some degree. All six were primarily intended, at least originally, as a means to protect a particular industry. In the case of Montreal and Price-Anderson, the commercial aviation and nuclear power industries were in their infancy, and the protections afforded by the treaty or legislation were hoped to encourage growth. The three vaccine acts were adopted in light of industry and insurer complaints about liability exposure, as well as concerns that the supplies of certain vaccines believed to be vital to the nation’s public health were at risk or currently inadequate. The story behind OPA is not as straightforward; developing a comprehensive and rapid response to immediate needs following a spill was arguably a motivation of at least equal importance to industry protection, but the

443 Our characterizations of the intended purposes of the liability protections incorporated in the smallpox vaccine acts are based on representations made by the executive branch following the passage of HSA.
very first words in the act were to note its purpose as to “establish limitations on liability for
damages resulting from oil pollution.” Moreover, although OPA certainly raised the ceiling on
aggregate damages compared to existing limits in maritime and environmental law, lawmakers
chose not to eliminate those limits in their entirety and, as a result, continued a 19th-century
policy under which shipowners and certain others would be granted special protections.

<table>
<thead>
<tr>
<th>Framework</th>
<th>Protect Industry</th>
<th>Finance Cleanup</th>
<th>Facilitate Compensation to Injured Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPA</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Price-Anderson</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swine Flu Act</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCVIA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smallpox vaccine acts</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

In five of the six frameworks, steps were taken to streamline or facilitate the compensation
claiming process to some degree or expand the types of compensation beyond those that might
be available under traditional tort liability, a typical quid pro quo for liability protections
afforded to an industry.\footnote{Although the Swine Flu Act makes reference to an administrative claim process that would “establish an orderly procedure for the prompt and equitable handling of claims by persons alleging such injury or death,” no specific provisions were put into place that would go beyond the existing requirement that any claim brought against the federal government under the FTCA would have to be first presented to an administrative agency. One might make the argument that the program ultimately developed by DOJ streamlined the administrative compensation process to some degree (and the 1978 policy announcement by Secretary Califano would have made it easier to recover from Guillain–Barré–related symptoms), but the act itself was generally unconcerned with facilitating the claiming process.}

### Liability Protections Embedded in Frameworks

#### Features

Certain parties were favored in all of these six key frameworks, but the specific methods of
protection differed. Table 8.3 describes the most-important protections offered to favored
parties, with the leftmost column representing what would provide the strongest financial
security available and the rightmost column representing the weakest.
<table>
<thead>
<tr>
<th>Framework</th>
<th>Favored Party</th>
<th>Substitution of the United States as Defendant</th>
<th>Caps on Aggregate Liability</th>
<th>Funding for Losses Spread Across Other Sources</th>
<th>Eliminate or Limit the Use of Strict Liability</th>
<th>Punitive Damages Prohibited</th>
<th>Other Limits on Bases for Recovery, Available Damages, or Attorneys' Fees</th>
<th>Claim Before Filing Suit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>Airlines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>OPA</td>
<td>Owners and operators of ships, offshore and onshore facilities, and deepwater ports</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>Unclear</td>
<td>x</td>
</tr>
<tr>
<td>Price–Anderson</td>
<td>Nuclear power plant owners and operators</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Swine Flu Act</td>
<td>Vaccine manufacturers</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>NCVIA</td>
<td>Vaccine manufacturers and selected others</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Smallpox vaccine act</td>
<td>Vaccine manufacturers and selected others</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
The substitution of the United States as the defendant-payor in the Swine Flu Act and the smallpox vaccine acts arguably provides the most complete shield against liability, financial or otherwise, than any other framework discussed here, especially considering that the favored party would also be relieved of potentially significant expenses related to processing claims and defending lawsuits. The experience of Price–Anderson, in which such transaction costs have been more than four times the aggregate size of paid claims, underscores the advantage of such an arrangement to a favored party. Note that, although other protections set forth in Table 8.3 (such as limits on financial liability or punitive-damage prohibitions) would have little meaningful relevance to favored parties under the Swine Flu Act and the smallpox vaccine acts given that the United States would be the actual beneficiary of such framework features, the table nevertheless notes when the protections are in place.

It should be noted that the approaches taken by the Swine Flu Act and the smallpox vaccine acts to implement the substitution of the United States differ somewhat. In the former framework, one might initiate a state court suit naming a manufacturer of swine flu vaccine as the defendant, but the United States would subsequently file a motion to substitute itself for the manufacturer (which would then be dismissed from the case). With federal jurisdiction established (because of the United States’ status as a named defendant), the matter would be removable to federal district court. In the latter framework, no motion to substitute would be necessary because, by definition, a manufacturer of smallpox vaccine would be legally considered to be employee of USPHS (if the matter was filed in state court, removal to federal court would be the likely next step). The manufacturer would be treated just like any federal employee sued for negligence in the course of his or her employment.

In both instances, the procedures of the FTCA would apply, including a bar against punitive-damage claims, the use of a judge (rather than a jury) as the trier of fact, the availability of the often extremely powerful discretionary-act defense, and a requirement that the claim be presented to a federal agency for consideration prior to filing suit (a prohibition on strict-liability theories, another signature FTCA feature, did not affect Swine Flu Act claims, although it did apply to the smallpox vaccine acts). Because the substitution has potentially adverse implications for the rights of the plaintiff when seeking compensation, some have suggested an alternative approach whereby the original state court action would be allowed to proceed under traditional tort rules with the manufacturer remaining as the named defendant (thus having no effect on punitive-damage claims, the right to trial by jury, etc.), but the United States would assume the costs of defense and pay any settlement or judgment as if it were simply indemnifying the defendant.445

Although the favored parties under OPA and Price–Anderson continue to bear responsibility for the costs of compensation, remediation, and recovery (as well as associated transactional expenses), such parties have the benefit of potentially significant caps on aggregate financial exposure (the second “protection” column in Table 8.3). The caps are generally fixed under Price–Anderson (although they can change over time), but, under OPA, the limitations vary

depending on the size and type of vessel or facility (for example, the largest supertankers would have caps of more than $500 million, while offshore drilling platforms now have a limit of $134 million on damages but no limits whatsoever on the costs of removal). Price–Anderson’s caps have not yet been exceeded by incurred losses, but OPA’s have frequently, and, in some instances, the responsible party in a marine oil spill can morph into a claimant seeking to recover some of its own expenses once the cap has been reached.

Another approach involves funding compensation at least in part from other sources, thus partially relieving the favored party from the responsibility for the losses incurred by others. Under certain circumstances, the federal government would contribute some of the funds needed to address damage or injury claims arising from a particularly significant nuclear incident as part of Price–Anderson. In addition, postincident assessments against other major commercial nuclear power generators would be stacked on top of the affected power plant’s private insurance coverage, thus spreading at least some of the risk of financial exposure across an entire industry. And it would be the revenue realized by a per-dose excise tax on all vaccine manufacturers, producers, and importers, rather than a defendant’s own pockets alone, that would pay claims under the NCVIA’s administrative compensation scheme.

At this point, the focus of the protections in Table 8.3 shifts from limiting the exposure of a favored party to restrictions on individual claims. One approach involves altering the foundations on which liability can be asserted—most notably, by placing restrictions on a claimant’s use of a strict-liability theory (the fourth protection column). The smallpox vaccine acts, because they follow the rules of the FTCA in terms of proceedings against the federal government, eliminate strict liability as a basis for recovery (the Swine Flu Act, although it did embrace many of the FTCA’s procedures, explicitly allows strict liability if available under the applicable law of the state). A similar result is reached with the NCVIA because it prohibits some types of claims (such as those involving unavoidable side effects) that often utilize strict-liability theories. Whether or not the availability of a strict-liability basis for recovery will have a meaningful impact on the likelihood of advancing a successful claim obviously depends on the circumstances of the incident. Even when available, it would still require a judge to decide that the activity was abnormally dangerous or otherwise meets the applicable legal test for the imposition of strict liability in that jurisdiction. That said, at least having the potential for utilizing a strict-liability theory might confer some strategic advantage to a plaintiff, especially in the context of high-risk industries whose products and activities might be considered inherently dangerous if they fail when used in a reasonably foreseeable manner, such as turbines on airliners and safety equipment at chemical plants. In a postcatastrophe setting in which key evidence might no longer be available and witnesses few, proving actual negligence on the part of individuals and organizations might present a difficult and expensive threshold to clear.446

446 Some of that expense (such as for experts to reconstruct the chain of events that led to the incident) would be spread across multiple claimants when aggregate litigation is in play, such as that resulting from class actions, large inventories of plaintiffs represented by a small number of law firms, or consolidated proceedings, such as MDLs.
Although arguments have been made that punitive-damage awards are either well correlated to underlying awards for compensatory damages as a matter of practice or effectively correlated as the result of a series of appellate decisions,\textsuperscript{447} it is probably uncontroversial to state that the availability of punitive damages presents a wild card in terms of predicting a PRP’s total financial exposure following a catastrophe. Punitive-damage awards are clearly off the table for Montreal, Price–Anderson, the Swine Flu Act, and the smallpox vaccine acts, although there is not yet universal agreement on the question of whether OPA permits punitive damages if they were available under general maritime law or serves to bar them completely.\textsuperscript{448}

A wide variety of other restrictions on individual claims have been employed. For example, Montreal prohibits claims for mental injuries when there are no associated physical injuries; the Swine Flu Act and smallpox vaccine acts incorporate the FTCA’s caps on attorneys’ fee percentages and restrictions on prejudgment interest; and the NCVIA grants a presumption of sufficiency to vaccine warnings if in compliance with regulatory requirements. Note that we are treating limitations on claimants’ or plaintiffs’ attorneys’ fees as a potentially advantageous feature for favored parties to the extent that such restrictions might make it more difficult for some to find legal representation.\textsuperscript{449} In addition, it should also be noted that Table 8.3 reflects instances in which these types of protections are afforded to a favored party at any point postincident. In some instances, restrictions would apply only within the context of a claim moving through an initial administrative review. Within such proceedings, the smallpox vaccine acts cap lost-income claims, do not allow noneconomic-loss compensation, and use a fixed schedule of benefits for death claims, while the NCVIA prohibits loss-of-consortium claims and caps noneconomic and wrongful-death damages to $250,000; a subsequent civil lawsuit from either proceeding, however, would face no such limitations. And although compensation for personal injuries or death would not be available through OPA directly, such claims could be advanced in ordinary tort litigation outside of the OPA framework.

Finally, a potentially effective means of protection for the favored parties is to funnel claims into administrative compensation processes before aggrieved individuals and entities can seek damage recovery through civil litigation. In instances in which the government is responsible for operating the compensation process, some of the transaction costs for claim processing will be shifted away from favored parties. Regardless of the identity of the operator, requirements to exhaust agency or claim facility remedies can weed out weak claims that would otherwise consume resources for litigation defense and, to the extent that disputes are resolved administratively, markedly reduce lawsuit frequency. The three vaccine frameworks, as well as OPA to a certain extent, utilize this strategy (vaccine claims are first presented to a federal agency, while OPA claims are first presented to a responsible party or, if need be, to the Coast Guard or EPA).

\textsuperscript{447} On the former assertion, see, e.g., Eisenberg et al., 1997. On the latter, see, e.g., \textit{Exxon Shipping Co. v. Baker}, 554 U.S. 471 (2008).

\textsuperscript{448} Punitive damages are unavailable to claimants in an NCVIA administrative claim adjudication, but they are available if the claimant is dissatisfied with the outcome of the agency process and subsequently files suit in U.S. District Court.

\textsuperscript{449} See, e.g., Garber et al., 2009.
Exceptions
In four of the six frameworks, the protections described in Table 8.3 are not absolute. In OPA and the three vaccine acts, such liability limitations could vanish if the favored party came to the table without clean hands in terms of wrongful acts or, perhaps more importantly, failed to cooperate with the U.S. government in some way following the event (Table 8.4). Any abrogation of responsibility under vaccine-production contracts with the federal government would also threaten available protections in the context of the Swine Flu Act and the smallpox vaccine acts. In Montreal and Price–Anderson, there are no meaningful exceptions.

Table 8.4. Exceptions to Liability Protections

<table>
<thead>
<tr>
<th>Framework</th>
<th>Instances in Which Liability Protections Can Be Withdrawn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>None</td>
</tr>
<tr>
<td>OPA</td>
<td>Gross negligence or willful misconduct of the responsible party or violations of applicable federal regulations that proximately caused the incident; failures to report, cooperate, or comply with agency orders</td>
</tr>
<tr>
<td>Price–Anderson</td>
<td>None</td>
</tr>
<tr>
<td>Swine Flu Act</td>
<td>Failure to cooperate with the United States in the processing or defense of a claim or suit; negligence in carrying out a production contract with the United States</td>
</tr>
<tr>
<td>NCVIA</td>
<td>Improper preparation of vaccine; failure to provide proper warnings in compliance with regulatory requirements; negligent or fraudulent actions; intentional and wrongful withholding of information during the vaccine approval process</td>
</tr>
<tr>
<td>Smallpox vaccine acts</td>
<td>Failure to cooperate with the United States in the processing or defense of a claim or suit; failure to carry out obligations or responsibilities under government contract; misconduct that is grossly negligent, reckless, illegal, or willful</td>
</tr>
</tbody>
</table>

Means of Seeking Compensation
Although the primary interest of this work is in responsibility assignment, one has to include any associated compensation program into the calculus of whether the overall framework is meeting the goals of its designers. One reason is that compensation paid to claimants can be an important driver of a responsible party’s ultimate financial exposure following a catastrophe, even when the question of underlying liability for any such losses has already been resolved. Depending on the framework, compensation payments might be drawn directly from a responsible party; alternatively, the entity making the payment at the time might seek to recover the sums advanced down the line. In addition, a requirement that a claimant must first turn toward an administrative compensation scheme can go far toward siphoning off lesser-value cases that would nevertheless incur substantial transaction costs in litigation. In addition, the extent to which a compensation program is seen as fair and efficient can greatly influence
public and stakeholder perceptions of the entire scheme, and, as we have seen, breakdowns in this area can lead to ending or significantly modifying an existing framework.

Each of the frameworks we reviewed affects the compensation potentially available to injured parties, either in the aggregate or for individual claims. For the purposes of Table 8.5, we define compensation program as whatever mechanism is in place to address claims involving property damage, personal injuries and deaths, remediation and cleanup expenses, and financial losses, such as business interruption or lost profits. This would obviously include a highly structured system for considering a very specific type of claim and rules crafted for a singular purpose (such as the NCVIA program), but it would also cover instances in which traditional tort litigation is the sole option available to claimants or in which the consideration of a claim presented to an agency was handled informally just like any other FTCA-required prelitigation remedy. The table describes the aspects of these procedures that work to a claimant’s benefit in some way compared to attempting to advance similar claims through ordinary litigation (aspects that affect a claim negatively are generally described in Table 8.3). Finally, “Source of Funding” describes the sources that would be used to pay any compensation made available to a successful claimant (the table presumes that such a source might, in fact, utilize insurance coverage to pay such compensation).

Table 8.5. Features of the Compensation Program Associated with Each Framework

<table>
<thead>
<tr>
<th>Framework and Activity</th>
<th>Process for Assigning Responsibility</th>
<th>Advantage to Claimant Relative to Traditional Tort</th>
<th>Source of Funding</th>
</tr>
</thead>
</table>
| Montreal Convention    | Civil lawsuit of claims against the PRP | • Airlines are strictly liable for the first $153,000 in damages.  
• The burden of proof shifts to the defendant to show lack of negligence or third-party cause for damages above $153,000. | Carrier          |
<p>| OPA: Designation of responsible parties | Informal internal agency determination of a PRP’s status | • Not relevant; claimant does not participate prior to the initial decision | Not relevant; decision does not trigger payment |</p>
<table>
<thead>
<tr>
<th>Framework and Activity</th>
<th>Process for Assigning Responsibility</th>
<th>Advantage to Claimant Relative to Traditional Tort</th>
<th>Source of Funding</th>
</tr>
</thead>
</table>
| OPA: PRP claim resolutions | Informal internal PRP determination of claims | • The responsible party is already identified as a result of agency determination.  
• The responsible party is strictly liable.  
• A wide range of damages is available, including pure economic loss.  
• The claiming process is streamlined, with few procedural requirements.  
• It is presumably a faster, simpler, and less costly compensation approach than civil litigation. | Responsible party |
| OPA: Agency claim resolutions | Semiformal internal agency determination of claims against the trust fund in lieu of a PRP | • Claims can be advanced against the fund within 90 days of the PRP claim.  
• There is an effective presumption of liability against the OSLTF.  
• A wide range of damages is available, including pure economic loss.  
• It is presumably a faster, simpler, and less costly compensation approach than civil litigation. | OSLTF (with potential reimbursement to the OSLTF from the responsible party at a later point) |
| OPA: Agency-initiated civil reimbursement actions | Civil lawsuit brought by an agency against a PRP for claims previously paid | • Not relevant; claimant does not participate because its claims have already been resolved | Responsible party ("claimant" is the OSLTF) |
| OPA: Claim resolution through litigation | Civil lawsuit of claims against a PRP | • The responsible party is strictly liable.  
• A wide range of damages is available, including pure economic loss. | Responsible party |
<p>| Price–Anderson | Civil lawsuit of claims against a PRP | • If an ENO is declared, (1) liability is presumed and (2) there is a three-year statute of limitations from the discovery of the injury and its cause. | Layers of private insurance, postincident assessments against members of industry, and soft promise by Congress for additional funding if needed |</p>
<table>
<thead>
<tr>
<th>Framework and Activity</th>
<th>Process for Assigning Responsibility</th>
<th>Advantage to Claimant Relative to Traditional Tort</th>
<th>Source of Funding</th>
</tr>
</thead>
</table>
| **Swine Flu Act: Agency claim resolutions** | Semiformal internal agency determination of claims against the United States | - There are limits on attorneys’ fees (assuming no impact on the availability of counsel)  
- Strict-liability theories are available despite a federal defendant.  
- No discretionary-act defense is possible despite a federal defendant.  
- Strict liability would be presumed for claims involving GBS.  
- It is *presumably* a faster, simpler, and less costly compensation approach than civil litigation. | United States (general fund) |
| **Swine Flu Act: Claim resolution through litigation** | Civil lawsuit of claims against the United States | - There are limits on attorneys’ fees (assuming no impact on the availability of counsel)  
- Strict-liability theories are available despite a federal defendant.  
- No discretionary-act defense is possible despite a federal defendant.  
- Strict liability would be presumed for claims involving GBS. | United States (general fund) |
| **NCVIA: Agency claim resolutions** | Formal adjudication of claims against the United States | - There is no need to prove negligence.  
- If a claim meets the VICP table’s tests for vaccine type, side-effect type, and time of onset, there is a rebuttable presumption of causation.  
- Reasonable attorneys’ fees are available to all good-faith claimants, regardless of outcome.  
- It is *presumably* a faster, simpler, and less costly compensation approach than civil litigation. | Vaccine Injury Compensation Trust Fund financed by a $0.75 per-dose excise tax assessed against all manufacturers, distributors, and importers |
In many of these frameworks, there can be, under specific circumstances, a presumption of liability on the part of certain parties. Airlines, for example, are strictly liable under Montreal for claims for up to about $154,500. This does not, however, mean that they are going to pay every claim that they receive under that threshold. A claimant still has to prove that it has suffered losses, that those losses have the dollar value sought, and, most importantly, that the losses were incurred as a result of some aspect of the claimant’s international flight. What the claimant does not have to prove is why the incident occurred in the first place, such as identifying which component in the engine failed and whether it failed because of a design or manufacturing defect or because the airline neglected routine maintenance duties. In the types of litigation that are frequently encountered in the context of mass disasters, ones involving complex technical and scientific questions of fact, as well as significant damage to the event site making evidence collection problematic, the value of such a presumption cannot be overstated. But many claims advanced with the benefit of a presumption nevertheless fail because the claimant cannot or will not (or does not understand the need to) provide needed documentation, such as that regarding annual income or medical payments. Recall that, in the no-fault compensation program set up under the smallpox vaccine acts, more than 40 percent of all claims were denied because necessary documents were not submitted or because of a lack of proof that the injuries met the program’s requirements. And in OPA’s administrative claim

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450 Indeed, strict liability has been characterized as the superior regulatory device when optimal accident avoidance is desired, especially when potential claimants would have little influence over accident risk. See, e.g., Bruggeman, 2010, pp. 34–35.
facility, one in which the responsible party (and the OSLTF that stands in its shoes, at least temporarily) might have been deemed liable within hours of the first drop of oil hitting the water, damage claims are frequently cut in value by two-thirds or more.

Although the table does indicate some advantages for claimants (beyond the presumptions of liability just discussed) that go beyond what are available through civil litigation (for example, the ability under OPA to recover pure economic loss without incurring personal injury or property damage), none of these programs can be characterized as especially generous. Even in the case of the administrative claim facilities that are ostensibly designed to facilitate the remediation of losses, a claimant’s recovery within the facility’s benefit scheme might well be markedly less than what might have been received with an equally successful trial verdict or pretrial settlement. Limitations on recoverable damages—such as caps on lost income, fixed wrongful-death benefits, punitive-damage prohibitions, and, in some instances, no specific benefit allowed for noneconomic losses, such as pain, suffering, or disfigurement—will markedly affect the recovery compared to ordinary litigation, assuming, of course, that the outcome in the hypothetical lawsuit was favorable to the claimant.451

The quid pro quo for participating in these programs, despite the potential of reduced compensation, is at least the promise of a process that is easier to navigate, faster in terms of time to resolution, more certain in terms of outcomes, and less costly in terms of attorneys' fees and litigation expenses. We have noted that promise at various points in Table 8.5’s description of presumed claimant advantages, but we cannot say with certainty whether the outcomes for participating claimants on those measures were, across the board, better than those had they been plaintiffs in civil litigation instead.

**Speed of Determination**

Despite the fact that comprehensive data on time needed to reach a decision regarding responsibility in these frameworks were not always available, it is probably safe to say that the fastest process among our examples involves the initial responsible party assignment under OPA, while the slowest can be anything involving civil litigation, especially if the matter eventually finds its way into the appellate courts. But as any introductory physics textbook will attest, the perception of speed is relative to the perspective of the observer. In some of the procedures employed in the frameworks we have reviewed, one who is potentially responsible for a cause of a catastrophe might view the rapidity with which a decision is made very differently from someone who is attempting to recover financial losses. Table 8.6, which provides a sense of how long a particular component of a framework (for example, the

451 Of the administrative compensation systems in the frameworks we reviewed, only the NCVIA has an express provision for including noneconomic damages in the compensation provided, although it is capped at $250,000. Noneconomic losses are not recoverable under OPA's claim process, although, because of the act's savings clause, separate litigation under admiralty and maritime law would be available for seeking compensation for personal injury and death claims. Arguably, HHS' consideration of a prelawsuit claim related to swine flu vaccine injuries could take noneconomic loss into account when making an offer of settlement.
consideration of a claim presented to a government agency) might require to reach a conclusion, distinguishes instances in which a claimant’s perspective differs from that of a PRP, if indeed there is such a difference.

Table 8.6. Speed of Responsibility Determination

<table>
<thead>
<tr>
<th>Framework and Activity</th>
<th>Process for Assigning Responsibility</th>
<th>Time to Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>If the matter goes to trial, possibly years</td>
</tr>
<tr>
<td>OPA: Designation of responsible parties</td>
<td>Informal internal agency determination of a PRP’s status</td>
<td>Can be within 24 hours in some instances</td>
</tr>
<tr>
<td>OPA: PRP claim resolutions</td>
<td>Informal internal PRP determination of claims</td>
<td>Information regarding claim handling times is not available, but a claimant can proceed against the trust fund or bring a civil lawsuit if the claim is not resolved within 90 days.</td>
</tr>
<tr>
<td>OPA: Agency claim resolutions</td>
<td>Semiformal internal agency determination of claims against the trust fund in lieu of a PRP</td>
<td>For claimants: Most claims appear to be processed within six months to one year. For PRPs: Results of agency claim decisions are not relevant until trust fund reimbursement action is initiated.</td>
</tr>
<tr>
<td>OPA: Agency-initiated civil reimbursement actions</td>
<td>Civil lawsuit brought by an agency against a PRP for claims previously paid</td>
<td>For claimants: Not relevant because individual claims would already have been resolved administratively. For PRPs: If the matter goes to trial, possibly years</td>
</tr>
<tr>
<td>OPA: Claim resolution through litigation</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>If the matter goes to trial, possibly years</td>
</tr>
<tr>
<td>Price–Anderson</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>If the matter goes to trial, possibly years</td>
</tr>
<tr>
<td>Swine Flu Act: Agency claim resolutions</td>
<td>Semiformal internal agency determination of claims against the United States</td>
<td>For claimants and defendant-payor (United States): About 13 months on average. For PRPs: Not relevant because of the substitution of the United States as defendant-payor</td>
</tr>
<tr>
<td>Swine Flu Act: Claim resolution through litigation</td>
<td>Civil lawsuit of claims against the United States</td>
<td>For claimants and defendant-payor (United States): If the matter goes to trial, possibly years. For PRPs: Not relevant because of the substitution of the United States as defendant-payor</td>
</tr>
<tr>
<td>NCVIA: Agency claim resolutions</td>
<td>Formal adjudication of claims against the United States</td>
<td>For claimants: 3.5 years to disposition on average. For PRPs: Not relevant because compensation comes from an excise tax–funded trust fund</td>
</tr>
<tr>
<td>NCVIA: Claim resolution through litigation</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>If the matter goes to trial, possibly years</td>
</tr>
</tbody>
</table>
**Framework and Activity** | **Process for Assigning Responsibility** | **Time to Decision**
---|---|---
Smallpox vaccine acts: Agency claim resolutions | Semiformal internal agency determination of claims against the United States | *For claimants and defendant-payor (United States):* Information regarding claim handling times not available  
*For PRPs: Not relevant because of the substitution of the United States as defendant-payor*  

Smallpox vaccine acts: Claim resolution through litigation | Civil lawsuit of claims against the United States | *For claimants and defendant-payor (United States):* If the matter goes to trial, possibly years  
*For PRPs: Not relevant because of the substitution of the United States as defendant-payor*  

Perhaps not surprisingly, the level of formality associated with the making of a decision appears to drive time to disposition. At one extreme would be the OPA initial responsible party designation mentioned above, which, depending on the circumstances, could be rendered in a matter of just a few hours after the discovery of an oil discharge. These types of decisions can be rapid ones because they are essentially unilateral actions by EPA or Coast Guard staff without any input, at least in the beginning, by potentially affected parties. Although a designated party can challenge the designation afterward, the cap on financial liability for damages and (in most instances) recovery costs might provide considerable incentive to accept the result except in instances of clear error.

OPA envisions a relatively simple but somewhat more adversarial process for claims for damages or removal costs presented directly to the designated responsible party. As would be true for any claim presented to an alleged tortfeasor or its insurer, the responsible party would have great discretion in the manner with which it reviews such a claim, the criteria it would apply toward evaluating its merits and value, and the overall pace of the review. But although information about the typical time needed by the owner or operator of a source of oil pollution to either approve or deny such claims is not available, the act gives claimants the option of proceeding against the OSLTF as a substitute for the responsible party or initiating a civil action against that same responsible party once 90 days has elapsed from initial claim presentation. Thus, even if the responsible party ignores the claim altogether and does nothing, the process will essentially end once this relatively brief time limit has elapsed and the claimant chooses another avenue toward compensation.

Increased formality in terms of rules of rights and responsibility comes into play in proceedings in which a government agency makes an administrative determination of a claim presented to it, such as when OPA claimants proceed against the OSLTF to recover damages or recovery costs or when Swine Flu Act and smallpox vaccine act claimants request compensation from the HHS Secretary for vaccine-related injuries. Although there are clear rules for both sides to follow in the deliberative process, these procedures do not rise to the level of a formal adjudication by a third-party neutral. The decisionmaker is the same entity that is the target of the claimant request for compensation, and, perhaps for that reason (or in spite of it), the time...
for consideration from the claimant’s perspective is generally less than a year for OPA and slightly over a year for the Swine Flu Act (time to disposition information for the 62 claims handled as part of the smallpox vaccine acts was not available). Note that the organizations and individuals who might be thought of as the true causes of the damages in question (i.e., the owner or operator of the source of the oil leak in OPA or the vaccine manufacturer or distributor in the swine flu and smallpox vaccine programs) are not parties to the proceedings and thus have little meaningful interest in the length of time it takes to reach a decision in any of these administrative claim reviews (for an OPA designated responsible party, the outcome of the decision, rather than the pace of the review, does have potential significance for the party because a future action to recover the administrative award is certainly possible).

Once third-party neutrals do get involved, time to reach a decision increases markedly. A claim presented as part of the NCVIA’s VICP comes in the form of a petition filed with U.S. Court of Federal Claims by a claimant (the petitioner) against the HHS Secretary (the respondent). Here, a special master of the court would make the initial decision on the petition, with a federal judge subsequently entering final judgment based on that decision. Although there are limits of 240 days on the time required by the special master to reach the decision and 120 days on the time required by the federal judge to thereafter enter the judgment, in actuality, the process typically approaches three and a half years from the claimant’s standpoint, in part because of the time petitioners require to gather and submit medical documentation and in part because of respondents’ use of external medical experts. Again, perspective on what constitutes delay varies, because vaccine manufacturers and distributors are not directly involved in the proceedings, so the outcome is essentially only a decision against the vaccine trust fund. It is only when the petitioner rejects the decision of the Court of Federal Claims and files a lawsuit in a trial court of appropriate jurisdiction that the focus of the claim is turned toward those manufacturers and distributors.

The civil courts are the sole forums used for claims brought under Montreal or Price–Anderson. They are also employed when other avenues for compensation have first been utilized as required, such as claimants seeking compensation directly from designated responsible parties after the 90-day waiting period has elapsed under OPA, from the vaccine manufacturer or distributor after the Court of Federal Claims review is completed under the NCVIA’s VICP, and from the United States after the administrative claim process was exhausted in the Swine Flu Act and smallpox vaccine acts. Civil lawsuits are also potentially in play when the OSLTF seeks reimbursement from designated responsible parties for any prior payments it made. In all of these situations, the time to final resolution could take as long as any ordinary civil litigation involving issues of similar complexity and stakes.

452 For a discussion of some of the possible causes behind the length of time needed to reach a decision within the VICP, see GAO, 2014, pp. 12–13.
Party Rights and Limitations

From the standpoint of both PRPs and claimants, the fairness of the responsibility-assignment process is presumably driven by a belief (or lack thereof) that the decisionmaker is impartial and that there is some meaningful level of control or opportunity to participate in the decisionmaking. The illustrative frameworks we have reviewed differ markedly in the procedures in place to provide parties with this sense of fairness. Measured by the appearance of impartiality and the opportunities provided for participation, processes by which responsibility is decided by employees of the same agency that initiated the proceedings without meaningful input from the subjects of such decisions are arguably the ones with the greatest potential for being seen as unjust. An informal agency determination made without any prior notice to the target party would fall into this category. At the other end of the continuum are processes using third-party neutrals as the decisionmakers, in which a party is allowed to offer evidence and challenge that presented by others, in which liberal discovery is permitted, in which the rules of procedure and the criteria for decisionmaking are clearly described, and in which there are opportunities to have the decisions reviewed or at least reconsidered if desired. Ordinary civil litigation would fit this description quite well.

Table 8.7 presents an overview of the features of various procedures within the six frameworks of interest that speak to the perception of fairness, distinguishing those features, when necessary, by whether they benefit a PRP or a claimant. Some of the procedural mechanisms in the table use a trial in open court as the primary decisionmaking tool for determining responsibility and claim value. This includes litigation under Montreal (against the airline), Price-Anderson (against the plant operator), the NCVIA (against the vaccine manufacturer or distributor after completion of the VICP process), and OPA (against the designated responsible party brought either by claimants for their own losses and expenses or by the Coast Guard or EPA for reimbursement of OSLTF payments, as well as other expenses). Ordinary civil litigation provides a long-standing structure for reaching a decision that essentially incorporates every single fairness bell and due-process whistle available under the current state of U.S. law. This is not to say, however, that both sides see civil litigation, as employed, as always just and equitable. Unfavorable rulings by the judge managing the case, lengthy delays, high transaction costs in terms of legal fees and expert testimony, concerns about the underlying substantive law, or adverse outcomes can negatively color the experience for participants in any particular case. But compared to some of the other frameworks in the table, these types of actions employ essentially the same procedures as found in other court cases throughout the United States each year and have at least a sense of ordinariness about them.

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## Table 8.7. Fairness-Related Features of the Responsibility Determination Process

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>Civil lawsuit of claims against a PRP</td>
<td>Full due-process rights</td>
<td>Can seek appellate review</td>
</tr>
</tbody>
</table>
| OPA: Designation of responsible parties | Informal internal agency determination of a PRP’s status | For claimants: Not relevant because claimants do not participate  
For PRPs: Limited ability to challenge or submit evidence in advance of a decision; might have no knowledge of action being taken | For claimants: Not applicable  
For PRPs: Limited opportunity for immediate reconsideration; might be able to challenge during subsequent agency civil reimbursement action |
| OPA: PRP claim resolutions | Informal internal PRP determination of claims | For claimants: Can satisfy the initial claiming requirement with minimal request, but standards for bringing a successful claim are not always clear  
For PRPs: Considerable control over claim evaluation | For claimants: None for the underlying decision, but, if a claimant remains unsatisfied, the claimant can proceed de novo against the OSLTF administratively or against the PRP in district court  
For PRPs: Not relevant because the PRP alone makes the decision to pay or deny the claim |
| OPA: Agency claim resolutions | Semiformal internal agency determination of claims against the trust fund in lieu of a PRP | For claimants: Agency regulations specifically address claim procedures.  
For PRPs: Not directly relevant because the responsible party is not usually involved | For claimants: Can request reconsideration of the decision or seek limited review in district court; if a claimant remains unsatisfied, that claimant can seek appellate review or proceed de novo against the PRP in district court  
For PRPs: Not as part of this process, although defenses could be put forth if an agency seeks reimbursement through court action |
<p>| OPA: Agency-initiated civil reimbursement actions | Civil lawsuit brought by an agency against a PRP for claims previously paid | Full due-process rights | Can seek appellate review |
| OPA: Claim resolution through litigation | Civil lawsuit of claims against a PRP | Full due-process rights | Can seek appellate review |</p>
<table>
<thead>
<tr>
<th>Price-Anderson</th>
<th>Civil lawsuit of claims against a PRP</th>
<th>Full due-process rights</th>
<th>Can seek appellate review</th>
</tr>
</thead>
</table>
| Swine Flu Act: Agency claim resolutions | Semiformal internal agency determination of claims against the United States | **For claimants:** Agency staff created claim procedures without specific regulatory authority.  
**For PRPs:** Not directly relevant following substitution of the United States as defendant-payor | **For claimants:** Can request reconsideration; if a claimant remains unsatisfied, that claimant can proceed de novo against the United States in district court  
**For PRPs:** Not directly relevant following substitution of the United States as defendant-payor |
| Swine Flu Act: Claim resolution through litigation | Civil lawsuit of claims against the United States | **For claimants:** Full due-process rights  
**For PRPs:** Not directly relevant following substitution of the United States as defendant-payor | **For claimants:** Can seek appellate review  
**For PRPs:** Not directly relevant following substitution of the United States as defendant-payor |
| NCVIA: Agency claim resolutions | Formal adjudication of claims against the United States | **For claimants:** Adjudication by third-party neutral; claim procedures specifically addressed by rules of court and agency regulations; attorneys' fees paid even if claim is unsuccessful; judicial oversight of proceedings but limited due-process rights (e.g., discovery is at the discretion of the special master)  
**For PRPs:** Not directly relevant given that any payments will come from the trust fund | **For claimants:** Can seek review of special-master decisions by a judge of the U.S. Court of Federal Claims, then seek appellate review; if a claimant remains unsatisfied, that claimant can proceed de novo against the PRP in district court  
**For PRPs:** Not directly relevant given that any payments will come from the trust fund |
| NCVIA: Claim resolution through litigation | Civil lawsuit of claims against a PRP | Full due-process rights | Can seek appellate review |
| Smallpox vaccine acts: Agency claim resolutions | Semiformal internal agency determination of claims against the United States | **For claimants:** Agency regulations specifically address claim procedures.  
**For PRPs:** Not directly relevant following substitution of the United States as defendant-payor | **For claimants:** The claimant could request reconsideration of the decision, although appellate review would not be permitted; if a claimant remains unsatisfied, that claimant can proceed de novo against the United States in district court  
**For PRPs:** Not directly relevant following substitution of the United States as defendant-payor |
|------------------------|--------------------------------------|----------------------------------|------------------------|
| Smallpox vaccine acts: Claim resolution through litigation | Civil lawsuit of claims against the United States | **For claimants:** Full due-process rights  
**For PRPs:** Not directly relevant following substitution of the United States as defendant-payor | **For claimants:** Can seek appellate review  
**For PRPs:** Not directly relevant following substitution of the United States as defendant-payor |

Lawsuits filed by those alleging personal injuries initiated after the completion of the administrative claim resolution processes under the Swine Flu Act and the smallpox vaccine acts would also employ standard rules of civil procedure. From the perspective of a PRP, however, these features are largely irrelevant to its legal and financial position. Under both of these frameworks, the United States has substituted itself as the defendant in the action and would be responsible for both the costs of litigation and any compensation paid out, absent some malfeasance or lack of cooperation on the part of the vaccine manufacturer or other actors enjoying the protections afforded by these statutes. Manufacturers and others might play a role of some kind, such as appearing as witnesses or by assisting in the United States’ defense, but, ultimately, the outcome will be of only academic interest to them. Obviously, the United States itself would have a substantial interest in whether it receives a fair shake in the proceedings (and, like claimants, could seek review of a lower court ruling by a federal court of appeal), although it might be argued that, in at least smallpox vaccine act litigation, the balance has already been tipped far in its favor from the very start given a claimant’s inability to employ a strict-liability theory in what is essentially a product liability action.

Perhaps one step down on the fairness appearance ladder are situations that involve some sort of adjudication using ALJs (or their equivalent) and relatively formal rules and procedures. This description most closely fits the manner in which claims presented under the NCVIA are considered, given that a special master of the U.S. Court of Federal Claims is the adjudicator, a body of published decisions helps guide future rulings, procedural requirements are clearly described by both court rules and administrative regulations, the parties are usually represented by counsel, and decisions can be reviewed by a Court of Federal Claims judge and then appealed to the court of appeal for the federal circuit. Although some features of this process clearly distinguish it from routine civil litigation (discovery, for example, is not a matter of right but is at the discretion of the special master) and there have always been criticisms from some quarters that the resulting decisions are inherently biased in favor of the respondents, the procedural certainty offered to claimants is extensive.

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454 See, e.g., “Vaccine Court’ Keeps Claimants Waiting,” 2014:

Meanwhile, many doctors hired by the government to defend vaccine safety in court have ties to the pharmaceutical industry. . . . Lawmakers designed vaccine court to favor payouts, but the government fights legitimate claims and fails its obligation to publicize the court, worried that if they concede a vaccine caused harm, the public will react by skipping shots.
In contrast are semiformal agency determinations, in which the decisionmaker has some sort of preexisting relationship with what might be thought of as an interested party. Claims submitted against the OSLTF under OPA are evaluated and ruled on by NPFC, but NPFC is a headquarters unit of the Coast Guard, the same entity that is likely to have made the original decision to designate a specific entity or individual as the responsible party. Furthermore, the Coast Guard receives appropriations from the OSLTF to cover what NPFC describes as “certain administrative, operational, personnel, enforcement, and research and development costs.”

The administrative claim processing performed as part of the Swine Flu Act and the smallpox vaccine acts both involved HHS making the final decision as to whether a claim against the United States was compensable.

Another aspect of these semiformal agency determinations is that usually promulgated regulations describe the specific processes required to present claims and the types of proof that would be needed. Not only do these regulations present a road map for claimants to follow; they place limits on the decisionmaker's ability to act in a possibly arbitrary manner. Agency actions outside the scope of these formally adopted rules provide a dissatisfied claimant with a potential basis for challenging the final decision. Such regulations are in effect for claims made to NPFC as part of OPA and to HHS as part of the smallpox vaccine acts. But none was promulgated during the haste to set up the claiming process for the Swine Flu Act. Although there were what might be characterized as “generic” regulations already in place covering any claim made under the FTCA, as well as any claim made against DOJ, the specific procedures and criteria used to evaluate a vaccine claim were developed by DOJ and modified on an ad hoc basis by the department as it saw fit. Although such an approach is certainly a flexible one and might be of some benefit to all parties during sharp spikes in claims or other unanticipated events, rule changes made seemingly on the fly are unlikely to promote a sense of fairness among participants.

In the claim processing performed as part of the Swine Flu Act and the smallpox vaccine acts, the vaccine manufacturer or distributor has no direct interest or role because of the substitution of the United States as the respondent to the claimant's petition. This lack of immediate interest in the proceedings would also be true for administrative claim processing under OPA and the NCVIA because any compensation to be paid actually comes out of the existing trust fund, not the pockets of any private party. That said, the situation for responsible parties under OPA and the NCVIA (defined here as the source of the discharge in oil pollution incidents and the vaccine manufacturer or distributor for vaccine incidents, respectively) are distinct from the two other vaccine frameworks because the agency's decision does have possible financial implications. Claimants who exit the administrative process unsatisfied in some way could attempt to recover any uncompensated damages or expenses through a civil lawsuit filed in district court. The trier of fact's decision in such litigation would be de novo, in that an adverse outcome in an underlying administrative claim process would not be factored

For a similar view of the potential conflicts arising from having ALJs work for an agency that is a party in the proceedings, see Eaglesham, 2015.

455 U.S. Coast Guard, 2016.
into a ruling on liability. In the case of the NCVIA, it could be argued that the responsible party’s interests are aligned with that of a vaccine injury claimant in terms of the agency’s decision, in that an award of acceptable value to that claimant ends the threat of future litigation in which the responsible party would be exposed financially. Responsible parties under OPA are at risk no matter how the claim processing turns out because, even if a claimant is satisfied with an award from the OSLTF, the responsible party would still face the prospect of an action by the United States to reimburse any payments from the fund.

This raises the question of whether, in the interests of fairness, a responsible party ought to have a role in any administrative claim processing in which there are potential future financial consequences for that party, even if the immediate impacts are negligible. Responsible parties are not without considerable advantages when responding to postclaim litigation by utilizing certain enhanced liability protections, such as bars against allegations of design defects under the NCVIA or financial limits under OPA. That said, any litigation runs risks, and, even if successful in their defense, responsible parties will incur significant transaction costs. Moreover, in the case of actions to reimburse the OSLTF, although responsible parties can challenge the underlying decision that made the designation of their status, they can argue only that a specific award out of the fund was an arbitrary and capricious act on the part of NPFC, a more difficult threshold to clear than simply convincing the trier of fact that the agency made an erroneous decision on a claim. Providing at least the opportunity for a responsible party to intervene in an earlier administrative process in which a claimant is seeking compensation from the fund—a proceeding in which the responsible party has only a possible future interest—would address some of these issues, but there are advantages to locking them out altogether. For one thing, in many instances, the responsible party under OPA is absent, is without assets, or has already rejected or ignored the claim. For another, incorporating the input of yet another actor into a process that is supposed to be a streamlined and efficient alternative to ordinary tort litigation might well be a source of additional delay and transaction costs.

OPA does provide two examples of processes in which the appearance of fairness might be limited. For claimants, the law requires that they first present their requests for compensation to the officially designated responsible party prior to utilizing NPFC procedures or filing a lawsuit. OPA requires the responsible party to set up and advertise some sort of claim evaluation mechanism, although there is scant guidance on what that mechanism should look like, what a claimant must do to be successful, or the criteria that the responsible party must utilize to judge a submitted claim. Some have argued that, in order to avoid “uncertainty, ambiguity, and a lack of transparency regarding how and when claims will be paid,” OPA should be amended to establish minimum requirements for oil discharge–related claim processing on the part of a responsible party, to authorize the issuance of regulations with detailed standards and procedures for such processing, and to have responsible parties submit their plans for handling claims for prior government approval.456

The other example is only relevant from the responsible party’s perspective. The means by which an agency under OPA identifies and subsequently designates a responsible party soon after an oil discharge is discovered is arguably the least fair, in outward appearance, of all of the processes listed in Table 8.7. The party is unlikely to have any meaningful input into that decision, even presuming that it is on sufficient notice that a determination was in progress. It is possible to immediately ask for a reconsideration when responding to the initial notice of designation, but a perhaps more prudent strategy would be to forgo challenging the decision overtly until the scope of possible financial exposure can be assessed. That is because those designated as responsible parties who fail to cooperate fully could lose the protection of the liability cap, and, according to one commentator, even a few hours delay in accepting that responsibility could have adverse consequences.457

Leakage to Civil Litigation

Another area we wish to explore in this chapter involves the degree to which the frameworks fully address the responsibility-assignment needs of the types of incidents for which they were designed—in other words, the extent to which ancillary litigation was avoided (Table 8.8). Note that, in all of these frameworks, the potential exists for significant levels of litigation over matters related to the underlying adverse event. This might include, for example, lawsuits over insurance coverage or coresponsible party contribution. Table 8.8 describes only litigation initiated by the individuals and entities that might also bring claims for damages, remediation, or reimbursement against the types of responsible parties that were the focus of the six frameworks of interest.

Montreal is perhaps the most “leaky” in this regard because aviation litigation is a target-rich environment, especially in the period following the disaster, when so much about the circumstances leading up to the incident is still unknown. There are few downsides to filing suit against many types of defendants in addition to the airline, thus allowing for flexibility in amending complaints as more information is made available. The spillover is perhaps greatest in situations in which aspects of Montreal prevent claims for damages from employing local laws believed to be especially generous, as we discussed in the context of the Asiana incident.

At the other end of the spectrum are the Swine Flu Act and the smallpox vaccine acts with a low potential for extraframework litigation, because the rules (especially in the form of liability protections) are structured in such a way as to make administrative relief the only realistic avenue to any compensation at all.

457 Holmen, 2001, fn. 84.
Table 8.8. Litigation Potential Outside of the Framework

<table>
<thead>
<tr>
<th>Framework</th>
<th>Potential for Ancillary Litigation</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Convention</td>
<td>High</td>
<td>Litigation against an airframe, engine, or component manufacturer; FAA; first responders; and similar entities fall outside of the convention.</td>
</tr>
<tr>
<td>OPA</td>
<td>Variable</td>
<td>There is no significant restriction on claimants to pursue recovery from a designated responsible party via lawsuit; other actors believed to be at fault can be sued without liability cap concern, but the potential is probably minor for incidents with damages well within the liability cap.</td>
</tr>
<tr>
<td>Price–Anderson</td>
<td>Low</td>
<td>Nuclear incident definition is very broad, although diminished property value claims could be an important exception.</td>
</tr>
<tr>
<td>Swine Flu Act</td>
<td>Low</td>
<td>There is little reason to go outside the act.</td>
</tr>
<tr>
<td>NCVIA</td>
<td>Moderate</td>
<td>The trend in appellate opinions has been to make the act the exclusive remedy for all listed vaccine claims, but there have been many attempts to advance autism and thimerosal lawsuits.</td>
</tr>
<tr>
<td>Smallpox vaccine acts</td>
<td>Low</td>
<td>There is little reason to go outside the act.</td>
</tr>
</tbody>
</table>

Price–Anderson has also had low leakage historically because the definition of what constitutes a nuclear incident is extremely broad, and the focus of the act’s liability shield is really the incident rather than just certain parties, which essentially means that no actors with potential liability for the radiation release will be subject to a lawsuit separate from one brought against the plant’s owner or operator. But one possibly major chink in Price–Anderson’s seemingly impregnable armor involves claims of reduced property values in the vicinity of the plant despite the lack of any actual physical damage or confirmed exposure to radiation. The Rocky Flats litigation suggests that appellate courts might hold such claims as outside of the Price–Anderson framework and possibly yield large-value verdicts and settlements against a power plant owner or operator experiencing a widely publicized radiation incident. One interesting question is whether the relatively modest payout related to the TMI litigation would have been far more substantial had homeowners on either side of the Susquehanna River brought lawsuits alleging diminished property values utilizing state nuisance law theories. There is probably no question at all, however, that such theories will be at the center of a storm of litigation after the next notorious nuclear event.

The NCVIA presents a similar situation to the other two vaccine actions in terms of leakage generally, but its history has been notably marked by significant external litigation, primarily with autism and thimerosal claims, although, generally, such cases are unsuccessful. It is important to remember that the spike in these types of cases has ebbed markedly because more-recent appellate opinions and VICP rulings have essentially plugged the holes that once allowed large-scale autism-spectrum disorder claims to move forward.
Our sense from the OPA experience is that it does a fairly complete job of absorbing the litigation demand in the majority of oil discharges. But it does seem that, when the magnitude of the event approaches or exceeds the liability caps of responsible parties, ancillary actions are more likely, with the extreme case being *Deepwater Horizon*, in which the resulting explosion in individual and class litigation completely swamped the OPA model. Policymakers concerned about spillover litigation might wish to revisit the current thresholds for both financial coverage and liability exposure.

### Justifying the Consequences of Change

As Table 8.9 suggests, postdisaster frameworks can offer PRPs and those who incur losses various advantages and disadvantages compared to having their legal relationships determined by traditional tort liability.\(^{458}\) In the discussion that follows, we describe some of the rationales that have been offered in support of these outcomes.

#### Table 8.9. Potential Consequences of a Postdisaster Framework

<table>
<thead>
<tr>
<th>Impact for Parties</th>
<th>Consequences for Potentially Responsible Parties</th>
<th>Consequences for Parties Claiming Losses</th>
</tr>
</thead>
</table>
| Positive           | • Limit liability and potential financial exposure  
                     • Make financial exposure more predictable | • Create a stable source for compensating losses  
                     • Make the recovery of losses more efficient (faster and at lower cost) and certain |
| Negative           | • Reduce the ability to deny responsibility or avoid contributing to compensation | • Limit possibility of recovering full tort damages |

### Potentially Responsible Parties

A framework can change the existing rules of tort law and procedure so that, in the aftermath of a disaster, a party’s liability to others for injuries and damages is limited in some way. Such limitations can be in the form of a blanket prohibition on all liability (e.g., the United States is substituted as the defendant), a limit on financial exposure in the aggregate (e.g., a cap on total liabilities arising out of a single incident), the utilization of other sources for paying at least some portion of claims (such as required contributions from other members of the same industry), restrictions on particular types of claims (e.g., a prohibition on punitive-damage awards) or on particular theories (e.g., no recovery for “unavoidable” side effects), or means to discourage formal litigation or encourage administrative resolution (e.g., requiring claims to first be submitted to an agency). Such limitations on liability obviously have the potential to

\(^{458}\) Table 8.9 sets forth only those consequences that are of direct interest to parties who are either potentially responsible for the adverse event or who claim that they have suffered losses as a result. More-generalized effects, such as facilitating regional economic recovery or reducing incentives for safety, are not included.
reduce a party’s financial responsibility once a disaster strikes, but they also reduce the amount of uncertainty regarding the magnitude of that responsibility even before the onset of the adverse incident. This reduction can improve the operation of insurance markets. Reduced uncertainty can lower the risk premium that insurers seek to charge on their policies, thus increasing the policies’ attractiveness to potential policyholders.

But why should some, but not all, businesses receive the benefit of these limitations? We have already discussed the apparent motivations behind establishing various liability limitations in our example frameworks: Foster the growth of commercial airlines through the Warsaw Convention and later Montreal, facilitate maritime activities involving oil propulsion or production or trade by protecting shipowners and certain other parties from unlimited liability through OPA, encourage commercial nuclear power by facilitating insurance protection for owners and operators through Price–Anderson, secure the production of swine flu vaccine by facilitating insurance protection for manufacturers through the Swine Flu Act, and secure the production of childhood and smallpox vaccines by removing manufacturers’ concerns (whether actual or possible) over potential liability through the NCVIA and the smallpox vaccine acts. Although all of these activities are undoubtedly important contributors to the U.S. economy or security, there are no similar protections for commercial passenger bus lines, land-based oil operations, fossil-fuel power plants, or the manufacturing of nonvaccine pharmaceuticals, all of which are arguably just as important to the U.S. national welfare and potentially just as dangerous. A serious incident arising from any of these unprotected activities, such as a motor coach crash injuring or killing all passengers aboard or a massive explosion at a coal-fired power generator that affected the surrounding community, would proceed through tort litigation in the usual manner, and the parties found to be responsible at trial would have, at least in theory, potentially unlimited liability.

The arguments that are sometimes advanced for singling out certain industries or activities for special treatment fall into two categories: first, that the industry or activity cannot grow or even simply continue without some sort of shield to reduce the liability risk in future actions, and second, that incidents in the past have created the potential for considerable liability on the part of some actors and that, if such liability was allowed to attach, there would be undesirable economic consequences for those actors. Arguments for passage of the frameworks we examined closely generally fell into the first category, as do most of the other congressional initiatives described in Chapter Three. In contrast, retrospective protections (meaning that the PRPs’ acts took place largely prior to the time of passage) were the goal of the 9/11 Acts, as well as the Atomic Testing Liability Act (substituting the United States for government contractors in future litigation regarding nearly five decades of nuclear weapon testing) and, at least until recently, the General Aviation Revitalization Act of 1994 (prohibiting product liability claims against manufacturers of small aircraft built or last modified at least 18 years prior; by 2017, however, at least some covered aircraft would have been built after the 1994 enactment). But no matter whether the protections are intended to be prospective or

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459 Arguably, the Black Lung Benefits Act of 1972 could also be considered a type of framework with retrospective application. One of its provisions is that the last coal mine in which the worker was
retrospective, underneath all of these arguments is an assumption that the championed industry or activity is both particularly important to the nation and particularly vulnerable to the legal consequences of an adverse event it might trigger.

Some assert that this last aspect—a heightened level of risk—is the precise reason that special liability protections are unwise. They argue that immunizing enterprises so that they can take on risks without shouldering the full costs of an adverse outcome is an excellent recipe for moral hazard. With limited downside risk, there will be fewer incentives to consider safety issues in product design, plant operations, employee training, and the like. In their view, liability limitations have the ironic consequence of actually increasing risk in already-risky businesses.

Another reason given for avoiding significant liability limitations is that, to the extent that such limits actually affect how individuals and businesses recover from a mass adverse event, taxpayers will eventually bear some of the costs, indirectly through such institutions as FEMA, Medicare, and Social Security disability benefits or directly through dedicated compensation programs. In this view, it is not an appropriate function of government to bail out those whose negligent conduct has caused widespread harm or to subsidize extremely dangerous activities that have a frightening potential for catastrophic destruction.

One counterargument to these views is that injury and damage claims against certain industries can be addressed in a very different way from what might be needed against other enterprises. In this view, the historical goals of tort law might not be as compelling when the industry is “closely regulated and highly monitored,” when criminal and civil penalties are in place and

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460 Less common are arguments related to the issue of fairness, in which the extension of liability protections might be characterized as the “right thing to do.” One such example involves the Atomic Testing Liability Act’s indemnification of government contractors for their roles in conducting nuclear tests, given that the contractors were simply acting as the “instruments of national policy to assist in an entirely governmental task” in which the “government sets policy, makes decisions, and controls activities and circumstances” (H.Rept 98-124, Part 1 [1983]).


462 See, e.g., Folkers, 2001:

In reality, Price–Anderson offers an aging nuclear power fleet under increased energy market competition the principle of limited liability as a growing disincentive to safety. A deteriorating nuclear power plant provided with a full liability exemption is more likely to take short cuts that pit profit-margins against safety-margins as a routine course of business.

463 Garvin Law Firm, 2011: “Unfortunately, as soon as caps in any type of action go into effect the burden for paying the expenses of the seriously injured often quickly shifts to taxpayers.”

464 National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, 2011, pp. 245–246:

The amount of potential damage caused by a major spill clearly exceeds the existing caps, and one cannot fairly assume that the responsible party causing a future spill will, like BP, have sufficient resources to fully compensate for that damage. Nor should the spill’s victims or federal taxpayers have to pay the bill for industry’s shortcomings.
specific to the industry to provide strong deterrence, and when an catastrophic event would cause “severe economic dislocation” to a company's “enormous capital investment and source of income.” In other words, a cap on liability granted to an industry that is already highly regulated and extremely expensive to operate would have little downside effect on safety, in part because the economic consequences to the responsible party arising from an airliner crash, supertanker spill, or nuclear plant explosion are so great.

In addition, proponents of liability protections assert that such limitations help level the playing field so that potentially lucrative activities do not become the exclusive territory of the largest corporations. Without such protections, smaller entities, it is argued, would be unable to afford sufficient insurance coverage, let alone self-insure against worst-case-scenario losses. With smaller competitors driven out of the marketplace, prices would undoubtedly rise. Proponents sometimes assert their beliefs that the proper scale for any cost-benefit analysis is worldwide, arguing that international conventions and foreign-state legal systems already offer companies operating out of other countries significant liability protections. They claim that, as a result, U.S. companies would be at a competitive disadvantage in the global marketplace in the conduct of these risky but important activities without the benefit of similar limitations.

Price increases would be one negative result of the reduced level of competition, it is argued, but, to the extent that foreign entities become the predominant supplier of a vital good or service, the health security or defense of the United States could also be at risk.

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465 President Commission on Catastrophic Nuclear Accidents, 1990, § 3, p. 34.
466 Liability and Financial Responsibility for Oil Spills Under the Oil Pollution Act of 1990 and Related Statutes: Hearing Before the Committee on Transportation and Infrastructure, House of Representatives, June 9, 2010 (testimony of Charles B. Anderson):

So we would be faced with the same situation as we had back in 1990 where basically the wheels of commerce would come to a grinding halt if we had unlimited liability or if we had a one-size-fits-all liability limit to third-party damages. Those risks really would not be insurable or would be insurable at an astronomical cost to the industry, and that would cause smaller operators . . . probably to cease their operations.

467 See, e.g., Faulk, 2010, p. 576, discussing the enactment of the Limitation of Liability Act:

Earlier in the [19th] century, European nations acted to protect their vessel owners by limiting their liability against catastrophic losses. These protections were viewed as essential because the existing insurance markets were deemed inadequate to protect international maritime commerce. Since the European protections placed American ship owners at a competitive disadvantage, Congress decided to provide similar protection for American interests.

468 See, e.g., IOM and NRC, 1985, p. 31:

The withdrawal of current U.S. vaccine manufacturers [primarily as a result of liability concerns] could lead to reliance for supply on foreign manufacturers, if they were willing to distribute their products in the United States. A variety of factors could cause problems in this situation. Geographical distance could result in delays in licensing submissions and other communications, and lengthen the chain of supply. Vaccine stability problems could occur if the distribution were particularly slow. Language barriers also could produce problems, especially in the resolution of highly technical issues. Political considerations might arise during a shortage if a foreign manufacturer felt a primary obligation to meet the needs of its home country before exporting vaccine, . . . These factors provide added support for the committee's presumption that a healthy U.S. vaccine industry is a necessity. Reliance on foreign manufacturers as sole-source suppliers is not a desirable situation, although they could provide beneficial competition in a stronger U.S. market.
caps argue that, although smaller companies (or U.S. companies generally, if the competition threat is global) might be forced to engage in other activities because of fiscal responsibility challenges, it is their inability to fully internalize social costs that is the true root of the problem, not the absence of special liability protections.\footnote{469} Moreover, it is asserted that liability protections granted to some industries but not others essentially constitute a form of government subsidization that distorts the marketplace.\footnote{470}

Higher prices for the end user are another concern voiced by proponents of liability restrictions. Without such protections, it is claimed, the costs of insurance would rise for companies engaged in risky but necessary activities, costs that would eventually be passed along to consumers.\footnote{471} A common counterargument is that such increases are necessary in order to have the product or service priced in a way that reflects the true long-term costs of production and consumption. If prices rise to a point at which consumers will refrain from purchase, the market is making a strong statement that the activity is too risky using current technologies and practices.\footnote{472}

Proponents also argue that liability limitations usually contain numerous exceptions (such as in instances of gross negligence, willful misconduct, reckless actions, violation of government regulations, and the failure to cooperate with government agencies) and that piercing the protections as part of a lawsuit is relatively easy to accomplish in appropriate instances.\footnote{473}

\begin{itemize}
\item \footnote{469} See, e.g., Tuytel and Dyke, 2011, p. 11:
\begin{quote}
The fact that higher limits or unlimited liability might make companies hesitant to develop, participate in, or invest in projects in high-risk industries can be seen in a positive light. If the extent of the potential for liability from some high-risk activities is deemed unacceptable by companies and investors, it may be for the best that these activities are not pursued, particularly by parties unable to bear the potential liability.
\end{quote}

See also Thompson, 2010 (regarding the effect on smaller offshore oil drilling operations from removing existing liability caps): “If you’re a smaller company that can’t stand the heat, get out of the mile-underwater reservoir.”.

\item \footnote{470} See, e.g., Schrage, 1995:
\begin{quote}
How can anyone argue that limiting liability is not a form of subsidy? When the government directly intervenes to change the legal risk-reward ratios that industry considers before designing, building and shipping a product—or making a public offering in the securities markets—it is not merely being “pro-business,” it is penalizing some industries at the expense of others.
\end{quote}

\item \footnote{471} See, e.g., Thompson, 2010:
\begin{quote}
If we make companies responsible for 100 percent of damages, they might pay more on both safety measures and insurance . . . . That could discourage smaller start-ups and raise the cost of exploration and drilling, which might eventually come back to consumers in the form of higher prices.
\end{quote}

\item \footnote{472} See, e.g., Koplow, 2011, pp. 77–78:
\begin{quote}
One economic response to this problem would be to include the price of risk of the entire nuclear fuel cycle into insurance contracts or other methods of syndicating risk, and let prices rise where they may. If insurance coverage were not available or only available at very high costs, innovative risk management tools such as risk pooling . . . or catastrophe bonds could be developed. If even these tools proved to be inadequate or too expensive, markets would be directed toward alternative and less expensive ways to meet the demand for energy services . . . .
\end{quote}

\item \footnote{473} S.Rept 104-292 (1996), p. 21:
\end{itemize}
Opponents counter that, if removing the shield is as commonplace as asserted, why bother with limitations in the first place?\textsuperscript{474}

Variations on the arguments set forth above are sometimes employed when the PRP is a government agency. In such instances, some have suggested, caps on damages or total exposure or the use of other measures to reduce payouts help “protect the taxpayers who ultimately bear the costs of tort liability. . .\textsuperscript{475} Arguments are also made that, in contrast to private enterprises, in which unfettered tort exposure “can serve as an incentive for them to make their products or services safer, because the greater liability threatens their profits,” agencies have “no profits to protect.”\textsuperscript{476} Instead, heavy regulation, oversight by public officials, and open debate over budgets are said to already provide agencies “with a strong incentive to provide safe operations, as they must maintain public support if they are to secure more funding each year.”\textsuperscript{477}

It is interesting to note that many of the arguments voiced by proponents of liability limitations in the narrow context of alternative frameworks for addressing the consequences of an adverse event are quite similar to those employed by advocates of comprehensive changes across the entire tort system, especially regarding class actions, medical liability, product liability, punitive damages, and noneconomic damages. One aspect that often distinguishes these alternative frameworks from more-general proposals for what is sometimes characterized as tort reform is the fact that the liability protections in the types of frameworks of interest to this report can be accompanied by provisions that actually impair a party’s ability to deny some sort of financial responsibility for loss or avoid contributing to compensation.\textsuperscript{478} Under Montreal, for example, carriers are strictly liable for injury claims below the current threshold of about $153,000, thus eliminating the difficult task of proving negligence. Absent narrowly drawn circumstances, vessel and oil production facility owners and operators are deemed responsible under OPA for maritime oil discharges from their property and are strictly liable to claimants up to their

Under present law, ships over 5,000 gross tons can be held liable for oil spill damages of up to $10 million. However, this $10 million cap does not apply if a shipper violates applicable safety, construction or operating requirements. Shipowners and insurers have argued that this exception is very broad, and effectively subjects shippers to unlimited liability for oil spills based on a shipper’s simple negligence.

\textsuperscript{474} See, e.g., Thompson, 2010:
   But the fact is that the liability cap already has so many holes that it’s practically irrelevant, anyway. First drilling operations are subject to numerous complex federal regulations, and any violation, no matter how small, nixes the cap. Second, states without liability caps. . . can already sue past the $75 million mark. Third, penalties paid under criminal law. . . are not covered by the cap. Oil companies know the law. They know the liability ceiling is leaky and that major oil spills will run them far past the $75 million mark. Time to kill the cap.

\textsuperscript{475} H.Rept 105-251 (1997), p. 21.

\textsuperscript{476} S. Klein, 2015, p. 4.

\textsuperscript{477} S. Klein, 2015, p. 4.

\textsuperscript{478} Some have argued that liability caps can be “a way to ‘compensate’ for the introduction of strict liability, to ensure that the operator’s liability does not exceed its assets and/or that third party insurance will be available, and to avoid over-deterrence of the risk-generating activities” (Organisation for Economic Co-operation and Development, 2003, p. 228).
liability limits, including claims for economic loss that would be unavailable in traditional tort litigation. Although it would require an ENO declaration to make it happen, claimants could also proceed using theories of strict liability against commercial nuclear power plant owners and operators under Price–Anderson. In addition, other owners and operators across the country would be on the hook for as much as $121 million each in contributions to cover losses incurred by a member of the same industry. But not all of the frameworks reviewed contained means to offset the liability protections granted to favored parties with some sort of increased level of responsibility. Two of the three vaccine-related frameworks essentially absolved a PRP of any financial consequences by substituting the United States as defendant or respondent (Swine Flu Act and the smallpox vaccine acts), and, although the third (the NCVIA) offered a form of strict liability in an administrative setting, it applied to only a narrow set of circumstances, and the money to pay claims came not from the manufacturer or distributor directly but from a per-dose excise tax on all covered vaccines.

**Parties Claiming Losses**

Depending on framework design, potential claimants might find themselves in a more advantageous position than if they had no option other than the traditional tort system. One problem with the existing liability process is that a party can be determined to be fully responsible for the losses of another, but nevertheless not be in a financial position to deliver ordered levels of compensation. Research has shown that, for a variety of reasons, plaintiffs who are successful at trial eventually receive less than the amount contained in the trier of fact’s verdict, experiencing reductions of more than one-third for serious cases. In the aftermath of a major disaster with perhaps thousands of competing claims targeted at the same defendant (which, in turn, is likely to have incurred significant losses as well), sufficient assets might not be available to pay everyone full compensation. Some frameworks address this possibility by requiring minimum levels of insurance coverage in order for enterprises to operate legally, postincident assessments against members of the same industry, the creation of trust funds financed through taxes assessed on related products, and, ultimately, through congressional appropriations. The compensation a claimant ultimately receives might not equal what is theoretically possible in tort, but it is very likely that the money will be there when the time comes to pay up.

There is also the potential promise of a more efficient and effective system for making compensation decisions than what might happen through lawsuits and trials. The process for making an OPA claim against NPFC for property damage or removal efforts is a relatively simple one for individuals and small-business entities: There is no required format for submission other than it being in written form; clear instructions and helpful documentation are available from the NPFC website; and attorney assistance is not required. Attorney representation would be a prudent choice for a claimant in all of the other frameworks we reviewed, especially when the matter involved claims of personal injury or death, but the

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480 U.S. Coast Guard, 2012a, p. 5.
administrative processes set up for seeking compensation through the NCVIA and the smallpox
vaccine acts offer at least the potential for a more streamlined path to a resolution of the claim
when the injuries and times of onset are listed in the programs' respective vaccine tables.

From a claimant's perspective, the flip side of these potentially positive features is, of course,
the same liability limitations that work to the benefit of a PRP. Although it might be easy in the
shadow of some impending national crisis to suggest that a particular industry or activity be
shielded from the full brunt of tort law, additional arguments need to be advanced to justify
treating certain individuals and businesses differently from other claimants with similar losses.

One such point of view is based on the presumption that the current tort liability system is
seriously flawed, with frivolous lawsuits, bloated claims, hired-gun experts, avaricious
attorneys, juries with near-limitless discretion, and a lack of objective guidelines for calculating
noneconomic loss and punitive damages, all helping to create what is claimed to be the most
expensive legal system in the industrialized world, one that stifles entrepreneurship and
smothers innovation. Under this view, restrictions on recoveries, such as caps on certain types
of awards or restriction on strict-liability theories, make perfect sense in the context of
alternative frameworks intended to address disaster-related liability because they are also
believed to make perfect sense in every other aspect of the civil justice system.481

A more nuanced case for affecting the ability to recover full tort damages is required to
rationalize why limitations are necessary for one particular situation but not in another. In the
case of Price–Anderson, under which all commercial nuclear power plant owners would at least
partly share the cost of a radiation release, it has been argued that, although “the costs of
retributive justice would not be borne by the actual wrongdoer,” the “entire nuclear utility
industry and, ultimately, its ratepayers” would nevertheless be on the hook for the disaster.482
As a result, a possible administrative claim process intended to provide “full compensation”
need give little weight to “regulatory, deterrence, and retributive concerns.”483 With such
concerns essentially off the table, there is no need to provide “recovery for all claims that might
be recognized under present commonlaw principles of tort,”484 such as claims for intangible
loss or punitive damages.

As suggested above, another explanation offered for differential treatment and limited
compensation is the availability of an administrative compensation plan that provides a surer
and faster resolution of claims. A similar “grand bargain” is said to have been reached in the
context of the development of workers’ compensation programs in the early 20th century, in
which an employee’s right to sue was eliminated in exchange for a guarantee of prompt medical

481 See, e.g., La Fetra, 2003 (arguing that the NCVIA, Biomaterials Access Assurance Act of 1998, and
General Aviation Revitalization Act of 1994 constitute the “three narrow areas in which Congress has
specifically addressed the prospect of tort litigation driving valuable products off the market”). For a
contrasting view, see Schwartz and Mahshigian, 1987 (arguing that the NCVIA does not serve as a role
model for future efforts to change product liability law).
482 Presidential Commission on Catastrophic Nuclear Accidents, 1990, Chapter Three.
483 Presidential Commission on Catastrophic Nuclear Accidents, 1990, Chapter Three.
484 Presidential Commission on Catastrophic Nuclear Accidents, 1990, Chapter Three.
treatment and easier access to limited compensation through an administrative process. For example, the NCVIA was asserted to involve “a number of compromises made by Congress in creating the program. In exchange for reduced standards of proof and less adversarial proceedings, the Vaccine Act sets the death benefit at $250,000, without requiring proof of actual wrongful death damages.” As we have seen, however, it is not always true that the time required to reach a decision in these specially created compensation programs will be less than what might have been required in a lawsuit, although the reasons for any delay can run the gamut from a lack of sufficient personpower to process incoming claims, to procedurally caused bottlenecks, to recalcitrant respondents, and to the claimant’s own doing, including seeking continuances or failing to submit required materials in a timely manner. In addition, the creation of a streamlined administrative remedy does not always result in “less adversarial proceedings,” as exemplified by hotly contested disputes over off-table claims under the NCVIA (the predominant type of claim at the present time) that approach traditional litigation in terms of aggressive advocacy on both sides.

485 Tembenis v. Sec’y of Dep’t of Health & Human Services, 733 F.3d 1190, 1198 (Fed. Cir. 2013).
Chapter Nine: Conclusions

The Long Shadow of Tort

The traditional U.S. civil litigation system might not always be the most effective and efficient means of assigning responsibility following a catastrophic event and providing just compensation to large numbers of affected individuals and entities.\footnote{See, e.g., Rhee, 2009, pp. 109–111 (“In times of mega-catastrophes, compensation through the tort system is infeasible and undesirable”).} Rapid injections of resources into affected areas could do much to help reduce human suffering and the potential for a self-reinforcing economic downturn, but routine litigation might not respond in a sufficiently timely manner. Civil litigation can also be slow in identifying and rectifying the underlying causes of the event, a potentially serious problem when the activity that produced the catastrophe is repeated daily. In addition, existing procedures for resolving disputes might not be well suited to handling the flood of claims that could arise following a major disaster, possibly generating substantial legal and other transaction costs, precious financial resources that could be much better put to other uses. Some also assert that the traditional tort regime serves to discourage certain important types of industries or economic activities that would likely be the targets of liability actions in the aftermath of a disaster. However, it is not clear that any of the example frameworks discussed in this report represent better alternatives to ordinary litigation for the specific types of incidents for which they were designed. Certainly, none has been universally championed as the preferred model for legislative efforts to mitigate catastrophic loss or encourage high-risk activities seen as vital to the national interest. But the histories of their development, the liability-related features that were eventually incorporated into enabling legislation and subsequent regulations, the stories that unfolded as the frameworks were put to the test, and the criticisms that arose from various quarters all offer important lessons for those who believe that some sort of alternative to traditional tort is needed in response to widespread losses. If policymakers wish to craft functional and fair programs in the future to address the legal consequences of a particular type of mass adverse event, they must learn from these prior initiatives.

An obvious threshold question is whether an alternative to traditional tort is, in fact, necessary for any particular type of mass adverse event. Although, as noted above, ordinary litigation can exhibit some potential shortcomings when it comes to dealing with widespread losses (issues related to finality or transaction costs, for example), an empirically sound comparison between tort and its many existing alternatives was beyond the scope of this report.\footnote{See Anderson, Heaton, and Carroll, 2010, for an excellent example of the depth of information that must be fully explored when comparing tort with alternative compensation systems.} Moreover, our case studies suggest that legislative decisions to impose an alternative program are often
strongly influenced by policy considerations that have little to do with dispassionate analyses of whether tort or a proposed program would fare better in terms of time to resolution or perceived fairness or some other metric, and a lot to do with concerns about the economic viability of a particular industry, product, or activity. At least within the confines of this particular report, we are not in a position to opine about whether such concerns are valid ones or whether the underlying issues in play (such as the promotion of childhood vaccinations or the development of nuclear power) justify changes to traditional tort that could have potentially adverse consequences for certain stakeholders (whether they be those incurring uncompensated losses through no fault of their own, businesses that are placed at a competitive disadvantage because of special protections granted to certain industries, taxpayers who might have to foot the balance of the total bill for a human-caused disaster, or the public as a whole with regard to diminished deterrence or reduced incentives for safety). Our sole interests here are to describe policy choices that have been utilized in the past and provide some guidance if similar choices are considered for adoption.

If additional alternative programs are indeed implemented in the future (regardless of the reasons for doing so), the U.S. tort liability system and its hallmark of fully featured due process in the context of court adjudication will nevertheless provide the backdrop for such legislatively enacted frameworks. Litigation will continue to be perceived as the primary safety valve for those who are dissatisfied with any alternative process (or any other means on which we have come to rely to deal with unanticipated losses, such as private insurance, government insurance, or government welfare). Even in automobile no-fault compensation systems, supposedly designed with dutiful precision to replace key aspects of traditional tort, there continues to be litigation over what the term no fault means in practice, who is actually eligible and who is ultimately responsible, and how to implement the rules regarding the decision about whether to compensate and to what degree. It is simply not possible for a legislature to impose an alternative regime so airtight in its restrictions that civil litigation is never an option; no matter what clever steps are taken, it is highly likely that competent counsel will find a way around the roadblocks or at least subject them to repeated challenges. And if access to the tort system is considered too difficult or expensive, injured parties who believe that they are without meaningful recourse will turn to other options to address their postdisaster needs, such as employer-funded health care, workers’ compensation, Medicare and Medicaid, the bankruptcy courts, or government disability benefits, thus placing undue stress on programs that were never designed to deal with catastrophe-level losses. Given that reality, 

\[488\] See, e.g., Bruggeman, 2010, p. 524 (“highly individualized and very generous tort system in the United States . . . remains the most prominent system for awarding financial compensation to victims” of human-caused disasters); and Rabin and Bratis, 2006, p. 353 (“Virtually without exception, injury victims suffering substantial loss assert tort claims even under circumstances where they have private insurance coverage and are entitled to baseline social welfare benefits”).

\[489\] There is evidence to suggest that the frequency of litigation in automobile no-fault systems is not that different from that found in traditional tort regimes. See Anderson, Heaton, and Carroll, 2010, p. 97:

We have also shown that, while auto cases represent a smaller proportion of cases actually reaching trial in no-fault states, attorney involvement in cases has increased modestly over time in no-fault and add-on states relative to tort states, and total auto litigation volume has become more comparable between tort and no-fault states.
policymakers desiring to create a functional model for determining responsibility should be less concerned with building an impregnable wall against ancillary litigation than on crafting an administrative process that serves as an attractive alternative to tort, so much so that those with potential claims will be incentivized to participate rather than to seek to opt out at any cost. It is not just a matter of providing adequate levels of compensation; claimants also need to feel that the process is fair, transparent, reasonably quick, and not unduly complicated. The expansive benefits and streamlined procedures employed by the VCF might not be a good fit for a framework attempting primarily to reduce overall financial expenditures, but the program provides a textbook example of how to treat those who have suffered losses with dignity, respect, and compassion within the context of a rigidly designed administrative process.\textsuperscript{490}

The other side of the coin involves those who are the subject of a responsibility determination. Some corporate defendants might perceive the tort system as particularly frustrating in the face of what is asserted to be asymmetrical litigation and outsized transactional expenses, but it does provide the same rights of discovery, open trial, and opportunities for appeal to both sides. In the context of a major disaster, in which the assignment of liability triggering significant financial implications might result from little more than informal administrative decisionmaking, having one’s day in court might be preferred. The same need to make an alternative approach attractive to claimants also applies to PRPs; if they perceive the process to be unfair, a waste of time and money, or less likely to resolve disputes with certainty and finality, they will either look elsewhere to adjudicate their disputes or refrain from conducting the types of activities the alternative framework was designed to support.

Creating a Viable Alternative to Traditional Tort

What does it take to put a comprehensive alternative responsibility-assignment system into effect in today’s political environment? Setting aside the Montreal Convention, which was the evolutionary follow-on to a regime essentially in place before World War II, and Price–Anderson, which had its genesis during the Eisenhower administration, the other four programs we reviewed (OPA and the three vaccine acts) were created during a time that better reflects our modern realities of well-funded stakeholders, vocal public interest groups, and near-instant media reporting. In such an atmosphere, it is not always a sure bet that legislators and their constituents will unquestionably support proposed bills that clearly favor certain industries or activities with enhanced liability protections while undercutting the ability of individuals and businesses to seek full compensation for loss in a civil court of law.

\textsuperscript{490} Not all reviews of the implementation of the VCF have been favorable (see, e.g., Berkowitz, 2006), but many critics have nevertheless acknowledged that the program’s actions toward those who suffered losses were admirable given the difficult circumstances:

Moreover, there is also general consensus that the person to whom widespread discretion for its implementation has been delegated, [the Special Master], has executed his duties, as much as he possibly can, with good judgment, commitment, and dedication to the victims whom the Fund aspires to compensate. (Priest, 2004, p. 527)

For a description of the VCF’s specific approach, see Feinberg et al., 2004.
Obviously, such potentially divisive legislation is, at least on occasion, successful in terms of enactment. The Swine Flu Act and the smallpox vaccine acts provide examples of one path to that success. In both situations, the nation was at war—in the former instance, with a virus that was possibly related to one that had killed tens of millions of people earlier in the century and, in the latter, with a deadly virus that was potentially in the hands of an unknown enemy at a time when the United States was gearing up for the invasion of Iraq. The speed and urgency with which both pieces of legislation moved through Congress effectively eliminated much in the way of debate about the programs' liability provisions, and, although there were those who were not happy with the language in the final versions of the bills, voting no was arguably tantamount to voting to leave the United States unprotected in the face of danger. The story of the consideration and passage of ATSSSA in the aftermath of the 9/11 disaster has been told many times, but it too reflects a period in U.S. history when the nation was essentially on a war footing.\footnote{Had the requisite political will to move the act from a blank sheet of paper to fully considered legislation just 11 days after the attacks not been present on both sides of the aisle, the mere idea of a program designed to cap the liabilities of two private corporations at $100 million each at a cost of $7 billion of taxpayer money for compensatory purposes would have been unthinkable.} Had the requisite political will to move the act from a blank sheet of paper to fully considered legislation just 11 days after the attacks not been present on both sides of the aisle, the mere idea of a program designed to cap the liabilities of two private corporations at $100 million each at a cost of $7 billion of taxpayer money for compensatory purposes would have been unthinkable.

In the absence of hostilities or looming plague, when the motivation is not as urgent and the threat is relatively abstract, how can a comprehensive framework for addressing the legal consequences of a disaster be realized? If the proposal would change long-standing rules for dispute resolution with possibly negative consequences for large numbers of individuals and businesses, it seems clear that there must be a sufficient quid pro quo offered to potential victims to soften the blow somewhat. It is difficult to imagine the sweeping liability protections contained in OPA and the NCVIA successfully moving through the legislative process without a parallel compensation system accompanying the congressional proposals. Although the interests of the oil and shipping industries and vaccine manufacturers were clearly of primary importance to policymakers, completely undercutting potential claimants would have raised howls of protest from many quarters, especially in the shadow of the events in Prince William Sound the previous year and the debacle that characterized the rollout of President Ford's vaccine initiative a decade earlier.

That said, reference to the list in Chapter Three of other frameworks created by Congress over the past quarter-century or so to address aspects related to an adverse event suggests that including a viable compensation program into the mix is not always needed for passage. Excluding those that were examined in Chapters Four through Seven, of the remaining 21 frameworks discussed in Chapter Three, only five contain mechanisms for facilitating compensation claims in some way, while three others essentially preserve the existing right to proceed in tort in some manner.\footnote{Excluding those that were examined in Chapters Four through Seven, of the remaining 21 frameworks discussed in Chapter Three, only five contain mechanisms for facilitating compensation claims in some way, while three others essentially preserve the existing right to proceed in tort in some manner.} The other 13 legislative initiatives simply impose some sort

\footnote{See, e.g., discussions in Peck, 2003, and Lewinsohn, 2005. The five frameworks with some sort of facilitated (or at least some sort of alternative) compensation program include the FTCA (without which there would be no meaningful way to sue the federal government for tort claims), the 9/11 Acts, the Federal Black Lung Program, the Radiation Exposure Compensation Act (and associated Energy Employees Occupational Illness Compensation Fund), and...}
of liability shield without creating any sort of offsetting opportunities for those who would find
the courthouse door at least partially shut when looking for full redress of their grievances. But,
for the most part, the potential footprints of these 13 frameworks are limited in that the
number of claimants arising from any single adverse event or product stream is likely to be
relatively small.493 The narrowly defined incidents in most of these 13 frameworks include, for
example, the use of an AED, the actions of a teacher or principal, the donation of food for the
needy, product defect claims brought by those aboard small private planes, and the misuse of a
firearm. In two of these 13, the types of losses fall outside the realm of personal injury. Without
question, there can be serious, even fatal, consequences arising from any of these events, but
the cumulative impact would never approach the level of widespread property damage,
personal injuries, and economic loss that could be associated with such incidents as
commercial jetliner crashes, supertanker breaches, radiation releases from nuclear power
plants, or side effects arising from a nationwide vaccination program.

One notable exception to the foregoing pattern was the Amtrak Reform and Accountability Act
of 1997, which included a provision that limited liability in potential rail-related disasters
without addressing the compensation side of the equation.494 Earlier versions of the legislation,
“intended to rescue Amtrak from the brink of bankruptcy,”495 contained limits on allowable
noneconomic damages (no more than $250,000 more than the economic loss) and punitive
damages (no more than the greater of $250,000 or three times the economic loss). These
limitations were criticized as allowing railroads “to take shortcuts that surely will result in less
safety and more death, and injury on the rails” and discriminate “against the elderly, the poor,
children and women . . . whose injuries often involve mostly non-economic losses.”496 Shortly
before final passage of the bill, the proposed limits on noneconomic and punitive damages
were dropped in favor of a presumably more palatable aggregate cap roughly approximating
Amtrak’s existing reserve of $200 million for any exposure resulting from a catastrophic
accident.

But, although $200 million might have seemed to be a generous liability ceiling at the time, the
global cap was tested about a decade later in the context of the September 2008 crash of a
passenger train and freight train in Chatsworth, California, that killed 25 passengers and

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493 Note that we focus here on the number of claimants, not the number of individuals or entities that
might receive liability protections. The Volunteer Protection Act of 1997 had widespread liability
implications for tens of millions of volunteers located across the United States. But the potential harm
that might be triggered by a single volunteer in a single event is likely to be narrow in scope.


495 “Amtrak Bill Clears in Final Hours,” 1998.

496 Claybrook, 1997.
crewmembers and injured more than 100. The judge overseeing the distribution of a settlement fund consisting of precisely Amtrak’s liability limits opined that an additional $64 million would be necessary to provide claimants with what the judge would have personally awarded (in addition, the judge believed that the total verdicts would have ranged between $320 million and $350 million had the cases gone to jury trial), and, as a result, there would not be “enough money to compensate the victims for future medical care and past pain and suffering.” Some also believe that the May 2015 derailment of an Amtrak train in Philadelphia in which eight were killed and more than 200 were injured might have involved aggregate losses exceeding the $200 million cap. In the months following the Philadelphia incident, pressure mounted on Congress to modify the liability limitations set in 1997, and, in December 2015, it passed legislation to increase the cap to $295 million (roughly the cap’s value in 1997 dollars) and to let the limit rise annually thereafter by the rate of inflation. Notably, the increase was specifically made retroactive to May 2015 in order to apply to the Philadelphia derailment, although some have asserted that the increased cap will be insufficient to cover all claims in this matter.

The Amtrak story provides a relatively recent example of what happens when legislators attempt to modify the rules surrounding postdisaster tort claims without properly considering the potential consequences of an event or situation that might be unlikely or unpleasant to think about but is nevertheless within the realm of the possible. Similar problems with planning ahead can be found in the Swine Flu Act saga, when an unexpected surge in GBS claims overwhelmed an already-stressed administrative claim handling program that had been largely developed on the fly. A procedural fix that attempted to clean out the backlog by moving to a strict-liability standard for some types of claims was not very effective, and it was really only the shutdown of the inoculation campaign that slowed the conveyor belt of additional claimants.

The experience regarding the smallpox vaccine acts was not dissimilar. The substitution of the United States for vaccine manufacturers and administrators as the responsible party (and thus blocking claims for strict liability and punitive damages) was presented as a take-it-or-leave-it proposition during HSA’s consideration, and legislators who were even aware of the insertion of its provisions just before final vote had little option other than grumbling. But within just a matter of weeks, a groundswell of concern about the lack of any realistic compensation process began to push the administration to concede the need for change if it wanted its vaccination program to have any meaningful penetration into the target population. Nevertheless, SEPPA’s quick movement toward passage a few months later left many of the most-important details for the compensation scheme up to the discretion of the HHS Secretary; in other words, legislators

497 Bartholomew and Strauss, 2011; Williams, 2011.
498 Jones, 2015.
500 “The [plaintiffs] point to the deaths and serious injuries in the case, along with plaintiffs’ claims to punitive damages, as sufficient to allow a determination that the maximum value of the claims exceeds $295 million” (In re Amtrak Train Derailment in Philadelphia, Pennsylvania, No. 15-MD-2654, 2016 WL 1359725, at *6 [E.D. Pa. Apr. 6, 2016]). See also Halsey, 2015.
knew they were voting for some sort of necessary benefit-delivery system, but they really did not know what it would look like. Because the rate of claims that SEPPA received was about 155 per 100,000 vaccinees, compared with about nine claims per 100,000 under the Swine Flu Act, it was probably best for all concerned that only about 10 percent of the target of 400,000 recipients ever received the smallpox vaccine.

The key takeaway from these examples is that something more than just strong political will is needed to make long-term changes in the traditional legal relationship between those who bear some responsibility for the genesis of a disaster and those who actually have to endure its consequences. It is certainly possible to enact a framework that reduces the liability exposure of a favored party without including some sort of corresponding compensation program. In the shadow of a looming national emergency or when it is likely that the restrictions would adversely affect few individuals or businesses, widespread political opposition during the run-up to passage might well be muted. But when these new rules are actually put to the test following a disaster and stories begin to circulate of otherwise-blameless families and enterprises finding themselves without full legal recourse, the subsequent pressure to radically change the framework or repeal it altogether might be irresistible. If the claim side of the equation is not addressed in a manner that is widely perceived to be fair, in a time of crisis, the sustainability of the larger framework will be in doubt.

**Key Needs for a Successful Framework**

All of the example frameworks we discussed in Chapters Four through Eight contained the following features in varying forms:

- a set of underlying goals for making the effort to change traditional tort
- various protections for individuals and entities who would otherwise find themselves embroiled as defendants in litigation
- narrowly drawn definitions for identifying those individuals and entities
- a description of the circumstances under which those protections could be denied
- a program or changes in existing rules to address the losses incurred by members of the public, government bodies, and private organizations that would otherwise be handled by the traditional tort system
- narrowly drawn definitions of those who would be eligible for such compensation
- a means to fund such compensation both in terms of payout and in terms of the resources required to handle expected workload
- appropriate procedural protections for both PRPs and claimants to provide a meaningful sense of fairness.

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501 See, e.g., Apelbaum and Ryder, 1999, who argue that federal tort legislation in which no compensation quid pro quo is offered in exchange for liability restrictions (which they characterize as embodying a “third wave” of congressional efforts to change tort rules) is designed to have limited application, in part because a broader footprint would generate opposition: “Political constraints have mandated that the third wave reforms enacted to date be relatively narrow and modest in their scope.”
But despite the above-described commonalities, the frameworks we reviewed arguably differed significantly in how well they served to address the goals originally intended by policymakers and how they were received by those who shoulder the consequences of whatever activity or industry received special consideration. To the extent that any of the example frameworks were perceived as inadequate or flawed when implemented, it is often because their designers did not fully flesh out necessary details in their haste to change the status quo or because they did not consider how the program’s features would play out under real-world conditions and when involving actual, rather than just theoretical, stakeholders. Indeed, none was free from criticism during their design phases or operation. For example, Montreal has been called to task for creating multiple victim tiers because two people sitting in the same row on the same plane with the same losses might have to advance their claims through different regimes and receive different compensation simply because of where they live. Some have been very vocal with their concerns about the potential for a truly horrific catastrophe falling under the OPA or Price–Anderson frameworks to trigger losses that greatly exceed the limits of liability for the parties that are most likely to be at fault, thus possibly leaving some innocent victims with uncompensated financial consequences or dependent on government and philanthropic largesse. Price–Anderson's reliance on the government’s arguably vague promises of covering damages larger than the combined tiers of insurance and industry assessments has been asserted to be a type of counterproductive subsidy for a fundamentally dangerous industry. The now-defunct Swine Flu Act was the subject of considerable criticism for its failure to include a more generous, more efficient, and more organized loss adjudication process. The NCVIA has drawn fire for essentially immunizing manufacturers for design defects, which is said to have reduced the need to do research and development while creating pernicious incentives when it comes to improving product safety. Some also assert that the act’s claim consideration is quite slow and costly compared to the promises made at its inception of a speedy and inexpensive process. Finally, the remedies available under the smallpox vaccine acts were said to be insufficient to allay volunteer concerns about compensation and encourage a high vaccination rate.

The strengths and weakness in our example frameworks suggest that policymakers must address fundamental issues during the design phase. To start with, policymakers must assess how well any proposed framework would operate in the context of a truly horrific incident with widespread destruction and suffering. For the most part, frameworks described in Chapters Four through Seven were in effect during times of relative quiet, when agencies were generally able to marshal sufficient resources to keep staff on top of any incoming caseloads, and when the rules of procedure and the criteria for decisionmaking had the breathing-room opportunity to adapt to unanticipated events. As a result, we have only limited information about what might take place in the context of a dramatic and unforeseen spike in demand, with perhaps two exceptions.

First was Price–Anderson’s experience with TMI. The act was designed from day 1 to act as the primary foundation for addressing legal questions arising from a major release of radiation from a commercial power plant, but, because an ENO declaration was never issued for this partial meltdown, the signature features of the legislation in terms of dealing with a staggering
flood of claims were never utilized. The number of individual lawsuits never reached more than a few thousand, and, although there certainly were class actions with hundreds of thousands of potential class members, the total payouts for the event to residents and others in the area were less than $100 million, a modest sum relative to the potential harm that might be spawned from a true ENO. Nevertheless, what happened during even this limited crisis was enough to give policymakers pause, and subsequent amendments were made to address problems that had never been fully considered, such as the possible need to consolidate all related claims before a single adjudicator or the harms that might result from a panicked evacuation of a metropolitan area. How Price-Anderson will actually work when a massive radiation leak actually affects an entire region is unknown, but some have argued that its use of an individualized approach to damages and causation (rather than a schedule of compensation for certain covered losses) would result in a costly and drawn-out process, perhaps taking years to complete.\footnote{502}

OPA was, and continues to be, put to the test as a result of Deepwater Horizon. The geographical footprint of the liability issues that developed as a result of the blowout has been unprecedented outside of product liability litigation, and, as this is written, each day seems to bring news of some sort of development in courts located across the Gulf states. As is true with much of the civil justice system in this country, no one involved on any side of the equation seems particularly pleased with the results, and it will be quite some time before the final chapters are written about the incident and its legal aftermath. Nevertheless, much of the uncertainty that has marked the process was an outgrowth of the fact that many key legal issues surrounding OPA's application in an event of magnitude similar to (let alone exceeding) an Exxon Valdez were still unsettled law two decades after its passage.\footnote{503} If nothing else, at the end of the day, Deepwater Horizon will have shaken the dust off of OPA, so, if and when the United States faces a similar challenge in the future, the road map to resolution should be clearer.

All of this suggests that policymakers need to think long and hard about whether the programs they are championing will work as planned when subjected to stresses arising not from the most likely worst-case scenario (the one imagined during program design) but instead from the worst-possible-case scenario. A type of red-team analysis might be required, one that forces designers to imagine events unfolding in which the potential number of people affected by an incident increases by factors of 10, 100, or even 1,000 over the most-generous estimates or in which the incident’s geographical footprint grows from a single community to multiple states or even to people spread throughout the country. A key test would be whether, under such assumptions, the program could continue to operate as intended, whether additional resources or guidance could be provided as needed to adequately respond to the unanticipated demand,

\footnote{502 See, e.g., Presidential Commission on Catastrophic Nuclear Accidents, 1990, Chapter Two; and Rabin, 1993, pp. 956–957.}

\footnote{503 Indeed, in terms of its limits on total payouts arising from a single incident, OPA was enacted with the knowledge that it would not be capable of fully addressing the financial consequences of a second Exxon Valdez-like incident, let alone the legal consequences. See, e.g., U.S. Government Accountability Office, 2007, p. 34.}
or whether it would breakdown completely and lead to irresistible pressure on legislators to jettison the entire framework.

A framework can change the rules of tort, but it cannot completely tilt the balance of the new regime in favor of one type of stakeholder over another and survive for any length of time without undermining the political consensus that supported its creation. Framework designers must incorporate realistic means for claimants to seek redress of losses that are no longer available through traditional tort remedies. This does not imply that claimants must always collect every penny that might be awarded in a trial verdict, but completely blocking access to meaningful compensation within the framework is not an option. Although it is true that some of the congressionally enacted legislation described in Chapter Three simply provides immunity to certain types of individuals or entities without addressing the consequences of those liability restrictions, as a general rule, such programs are unlikely to be utilized in more than a handful of small-scale incidents. In an actual disaster, in which claims affected by the restrictions can number into the thousands or even hundreds of thousands, a framework that ignores the need to adequately address loss will likely need a significant and sometimes-messy overhaul soon after launch. The early experience of the smallpox vaccine acts, in which the administration appears to have assumed that utilizing private health insurance and workers’ compensation benefits would be a sufficient and no-cost (at least to PRPs) avenue for satisfying claimants turned away from courthouse doors, underscores the dangers of ignoring the problem.

It is also important to make sure that the program can operate effectively the moment the disaster first unfolds. Trust funds financed by excise taxes and the like might take a considerable amount of time before there is enough money to pay even a few claims. Failing to account for inflation or changes in economic behavior when building a trust fund of a size sufficient to handle potential demand under current or future conditions can lead to serious problems. Even non–trust fund programs can be slow in getting started, as the four-year delay between passage of PREPA and the actual appropriation of monies for the compensation fund will attest. And although it would be wasteful to keep an expensive bureaucracy running along in anticipation of going fully live after the onset of the incident, there must at least be realistic plans for quickly and adequately staffing administrative programs for deciding responsibility or processing claims when needed. Equally important would be to have clear guidelines in place for making claims and evaluating their merit long before the need arises. A postdisaster environment in which large numbers of individuals and businesses are queuing up to recover their financial losses or in which PRPs require an immediate decision as to their liability in order to move forward with remedial efforts is not the time to start the rulemaking process or form a study committee.

To facilitate an appropriately rapid response when the need arises, legislators should provide adequate guidance to administrators to implement a program that accurately reflects legislative intentions and expectations. Administrative agencies are certainly in the best position to develop the detailed procedures that PRPs and claimants must follow, but they should not be given unlimited latitude when determining the substantive rules for liability determinations and compensation decisions. Such foundational issues should be addressed through open debate by
elected representatives seeking consensus rather than by bureaucrats who might have their own agendas in mind. Price–Anderson, for example, requires that, following a truly horrific nuclear catastrophe, the president develop a plan to “provide for full and prompt compensation for all valid claims.” Unfortunately, the act is silent as to what full compensation means, and it is not unrealistic to assume that an administrative interpretation of the term could be a source of considerable controversy during a nuclear crisis, perhaps leading to litigation and unnecessary delay.

In the same vein, legislators should highlight the framework’s primary goals and purposes. Administrators need this sort of general road map to help guide their design decisions, judges require it as well to more accurately interpret how the law should be applied, and the public at large is no less deserving of legislative transparency. It should be made crystal clear whether the framework is primarily intended to “protect certain industries from litigation costs”; “provide stability to the country”; “compensate victims of certain private harms”; “provide reparations to political targets”; “process claims efficiently”; “distribute compensation based on principles of equity, equality, or need”; “create incentives to encourage behavior that lowers” risk; or achieve some other purpose.  

Every framework we discussed required some commitment of government resources, whether it involved providing judges and courtrooms, the creation and financing of large trust funds, the development of an administrative bureaucracy for processing claims, or even making vague assurances that it will “take whatever action is determined to be necessary (including approval of appropriate compensation plans and appropriation of funds) to provide full and prompt compensation to the public for all public liability claims resulting from a disaster” of considerable magnitude. Such government commitments to follow through on program infrastructure and funding must be realistic and firm. If the commitments are seen as weak, stakeholders might not be able to rely on them when planning for the future (such as when assessing insurance needs); if the commitments actually turn out to be weak when the day comes for the promises to be kept (such has failing to hire sufficient numbers of claim examiners after a disaster and, as a result, allowing a backlog to develop), the success of the entire framework can be in doubt.

Planners have to consider the possibility that the most attractive and obvious deep pocket might no longer exist after the dust settles. What happens when the proximate cause for losses incurred across a region is essentially assetless or has vanished? OPA’s experience with major oil spills in which only 65 percent of total costs could be recovered from responsible parties provides a real-world example of this potential. In a truly horrific catastrophe, the responsible

504 Grey, 2006, p. 736. Another consideration might be whether a compensation program within the framework is intended to provide “distributive justice” or “responsibility-based justice.” Goldberg, 2012, argues that, if distributive justice is the goal, compensation levels need only be sufficient to get victims back on their feet (for example, there need not be full recovery for pain and suffering) via a process that is “cookie-cutter and fast.” Responsibility-based justice, on the other hand, would seek to make the victim whole via a “more fulsome process to ensure that the claimant really is a victim and that the person against whom a claim is made really is a responsible party” (p. 586).

party, to put it bluntly, might no longer exist. Designing a program to operate successfully even if a responsible party has not been identified or is no longer financially viable is a critical need. Moreover, there might be instances in which a dispassionate factfinder reaches the conclusion that, in fact, there is no one responsible, at least not as a practical matter, but lives and businesses have nevertheless been disrupted. Making sure that some sort of credible governmental backstop is in place seems like a necessary component of any framework that purports to deal with the liability consequences arising from a potential catastrophe.

Program designers must also anticipate a potential for strong resentment from various quarters regarding the rules for liability limitations and compensation. Business competitors (such as hydroelectric power producers) of favored parties that enjoy special liability protections under a framework (such as nuclear power plant operators) might feel that they have been placed at a significant disadvantage, given their continuing need to plan (and pay) for risk that program participants can ignore to some degree. Claimants forced to utilize administrative claim programs instead of ordinary litigation or who are subject to limitations on recoverable damages will question why they must shoulder a disproportional share of the burden necessary in furtherance of some sort of public policy goal, compared with others who might suffer identical losses from events outside the scope of the framework. And even within the program, there might be various eligibility tiers in which, for example, one group of claimants is given the presumption of strict liability while another might have to prove every element of negligence to recover. If these apparent inequities are believed to be critical features of a framework that is intended to be an alternative to traditional tort, then stakeholders, policymakers, and the general public need to be firmly convinced of their importance in addressing the consequences of a disaster. Indeed, making the strongest public case possible for these program features might be nearly as important as designing them correctly. In the words of one knowledgeable observer, achieving political consensus is a key requirement for ensuring the effectiveness of any tort system alternative.\footnote{Feinberg, 2012, p. 576.}

What would happen if the program were seen as an inadequate solution for the needs of large numbers of individuals and organizations? Parties will not hesitate to bypass the framework in favor of alternative approaches that they perceive to be fairer, quicker, more certain, capable of greater finality, or less expensive. What is to stop the local courts from being clogged with refugees from a system that has ground to a halt? Policymakers need to plan for some sort of backstop solution to deal with a mass exodus from any alternative process, perhaps considering a way to consolidate massive numbers of claims before a single court, or having procedures in place to rapidly ramp up the hiring of special masters to help move cases along. The approach taken in the original version of Price–Anderson in which a governmental declaration that the event had met a set of criteria triggered original jurisdiction in federal court for all related claims might provide a useful example.

Finally, perhaps to state the obvious, any alternative responsibility-assignment framework that seeks to change the rules regarding traditional tort, especially if affecting state tort claims,
must be designed from the start to withstand almost certain appellate challenge. It is beyond the scope of this report to fully explore the landscape of legal theories that could be utilized in arguments seeking to invalidate a framework’s provisions, but potential candidates might include the Commerce Clause (for example, that the activity being regulated primarily involved intrastate—rather than interstate—commerce), the Fifth Amendment and Section 5 of the Fourteenth Amendment (that the new rules are unfair and serve to deny due process, especially with regard to the lack of a quid pro quo in the form of a compensation program), the Seventh Amendment (that the new rules adversely affect the right to trial by jury without providing an adequate administrative remedy), and the Tenth Amendment (that the new rules directly compel states to enact and enforce federal regulatory programs). Such concerns are not unique to the establishment of a disaster-related responsibility framework; similar arguments are commonly advanced against a wide variety of federal legislation. The problem is that there is a strong likelihood that such challenges will be raised only after the onset of a mass adverse event and the first demands for compensation arise, thus throwing a potential monkey wrench into a program—one that is, one hopes, designed to address widespread losses and suffering—at the very same time that the program is needed most. Presumably, all federal legislation is drafted with a good-faith intent to comply with existing constitutional and statutory requirements, but, in the aftermath of a catastrophe, a long, drawn-out cycle of appellate challenges and subsequent legislative corrections to fix ill-considered language is not a process the public welfare can afford.

Looking Forward

It is worth reflecting how fortunate this country was to have some of the best legal minds in play when drafting ATSSSA legislation following the 9/11 attacks during a time when there was unanimity of purpose and a credible spirit of compromise. The protections granted to the airline industry could not have happened as quickly and as effectively without an accompanying benefit program as different from any past legislative initiative as September 11th was from the previous day. But to get to that point, it is instructive to note, the drafters of the initial proposal did not start from scratch. Instead, they looked to the Price–Anderson Act because it “seemed a more promising model” than other frameworks then in effect, and the way in which the Supreme Court had viewed the nuclear incident benefit regime “was utterly appealing for the task of creating a compensation program,” ensuring “that plaintiffs who might give up their right to trial by jury would still have an opportunity to seek full compensation without needing to prove fault in a manner that was constitutionally sound.” The drafters were wise enough to draw on an existing framework for their legislative considerations and tailor its details to meet their immediate needs, rather than trying to crib something together that might have unintended consequences down the line solely because there was no time to plan ahead.

The nation was also fortunate to have a person available for appointment to the post of special master for the VCF who had decades of hands-on experience administering large-scale compensation programs. In what has been described as one of the “major shortcomings” of ATSSSA, the legislation provided scant guidance on how the VCF was to be actually implemented, what criteria would be used for compensation decisions, and what its primary function should be. The special master’s unique background and expertise was invaluable for designing a workable scheme in the shortest possible time, and, as a result, he and his colleagues were able to issue interim regulations less than a month after his appointment. We might not be so lucky next time, in terms of both the speed with which regulations are adopted in the wake of a tragedy and how well they work when put into practice. It is for this reason that policymakers need to be familiar with how various responsibility-assignment mechanisms have worked and understand where their shortcomings might have been, receive that education long before the next catastrophe strikes, and have some concrete ideas of what a program should look like instead of starting with a blank page.

In that light, essentially three options are available to policymakers in the context of planning for legal determinations following a disaster. First, they could cross their fingers and hope that what is already in place will work for a catastrophe of regional or national proportions. To the extent that existing frameworks, such as OPA and Price–Anderson, are insufficient to handle the load or do not apply, the tort system is not unfamiliar with the problem of addressing the consequences of mass adverse events, although, as measured by the eight years needed to resolve most Hurricane Katrina–related litigation, the process will be anything but rapid. They could wait until events unfold, when they would have the best idea of who is affected, what their specific needs are, and what features would be most helpful. Such an ex post ad hoc approach maximizes the amount of political will that would be needed to move a radical

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508 Kenneth R. Feinberg had overseen mass-tort compensation programs and settlements involving claims over asbestos exposure, the use of Agent Orange defoliants, and the use of the drug diethylstilbestrol during pregnancy.

509 Robert Ackerman wrote,

The Fund’s two major shortcomings were legislatively derived: (1) a failure on the part of Congress to clearly articulate whether the Fund was to serve primarily as a distributive justice mechanism to provide emergency relief to disaster victims or as a corrective justice measure providing victim compensation on the tort model; (2) a failure to provide a mechanism for review of the determinations made by the Fund’s administrators.

(Ackerman, 2005, pp. 138–139)

510 Feinberg was appointed special master on November 26, 2001, and interim regulations for notice and comment were published on December 21 (Reville and Goulka, 2012, p. 83).

511 Although few resources are available for drafting effective legislation that achieves public policy goals through the granting of liability protections to favored parties or making other changes in the traditional rules for adjudicating disputes, compensation delivery has been the subject of much study. For a very useful description of the challenges faced by various compensation programs and a discussion of best practices in this area, see CPR Institute for Dispute Resolution, 2011. For an equally useful description of one possible postcatastrophe compensation program, see Presidential Commission on Catastrophic Nuclear Accidents, 1990.

512 Schleifstein, 2013.
proposal through an otherwise-sluggish and suspicious legislature. An argument could be made that, even with foreknowledge that certain actors were considering plans to use hijacked civilian airliners as instruments of mass terror, an idea like the September 11th Victim Compensation Fund of 2001 would never have made it out of committee before the tragic events of that day unfolded. The problem is that the window of opportunity will be short, and little time would be available for any sort of thoughtful consideration of viewpoints or exploration of alternative approaches.

Something between these two extremes is most advisable. The United States could take steps now to develop a template of general rules and policies for a comprehensive framework that can be easily and quickly adapted to the particular circumstances of any sort of future disaster. Imagine, for example, an OPA-like scheme that had already been discussed, tweaked, and vetted, ready to be applied the moment that a one-two-three punch like the March 2011 Tōhoku earthquake, tsunami, and reactor meltdown hits with enough power to overwhelm traditional American jurisprudence. In this period of relative calm, the United States has the time and resources to come up with a plan that can benefit from the considerable body of research on these issues, from an effort to build consensus across a wide range of stakeholders, and from reasoned debate without the usual pressure to just do something—anything—in the immediate aftermath of a crisis. It has that luxury now, and it would be irresponsible not to take advantage of that good fortune.

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513 Robert Rabin wrote,

Absent the sense of urgency that is triggered by a perceived crisis in the delivery of public health services, for example, or the human devastation of an unprecedented terrorist attack, legislative embrace of a tort replacement system has been hard to come by. (Rabin, 2005, p. 733)
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FEMA—See Federal Emergency Management Agency.


IOM—See Institute of Medicine.

IOM and NRC—See Institute of Medicine and National Research Council.


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The traditional U.S. civil litigation system might not always be the most effective and efficient means for assigning responsibility following a catastrophic event and providing just compensation to large numbers of affected individuals and entities. Some have argued that an approach designed to be better suited to handle the flood of claims that arise following a major disaster is needed, one that rapidly injects resources into affected areas and minimizes the generation of substantial legal and other transaction costs while extending liability protections to certain types of industries or economic activities.

This report reviews various alternatives to relying exclusively on traditional civil litigation to assign responsibility for the causes of a catastrophe believed to have a human origin and to determine the types of losses that a designated responsible party must reimburse. It reviews examples of circumstances in which statutory substitutes for the traditional tort system have been adopted for dealing with at least some of the consequences of widespread harm, describing the approaches taken and providing assessments of how these substitute systems have operated in practice. The authors’ goal is to provide a resource that policymakers can consult when planning how to respond after a major adverse event should they conclude that traditional civil litigation might not be the best way to assign responsibility. The authors do not, however, address the underlying question of whether an alternative to ordinary litigation is actually needed for any particular type of adverse event.