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The Impact of Environmental Liabilities on Privatization in Central and Eastern Europe: A Case Study of Poland

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INTRODUCTION

The Central and Eastern Europe (CEE) countries are breaking up their centrally planned economies at a record pace by selling formerly state-owned industrial enterprises to private sector investors. Privatization is expected to create more profit-oriented and efficient industries, a predicate for sustained long-term economic growth. This transformation from public to private ownership presents tremendous challenges to these new democracies as they struggle to create market economies and democratic institutions.

Among the most serious problems faced by the newly emerging economies in privatizing their industrial sectors is financing the cleanup and disposal of the hazardous wastes generated by these industries during the Cold War era.¹ The cost of cleaning up these wastes has been estimated in the hundreds of billions of dollars.² Who should bear the tremendous costs of this cleanup?

The new national governments are the heirs apparent to this environmental nightmare. Yet, their resources are hopelessly inadequate to meet the pressing problems of high unemployment and social welfare, much less to finance the necessary environmental cleanup measures. Furthermore, foreign aid, once

¹ See, e.g., Shelley Bookspan, *When the Smoke Clears: Environmental Restoration in Central and Eastern Europe*, 21 REAL EST. L.J. 407, 408 (1993) (stating that major issue is how to pay for environmental restoration without repelling investors); Margaret Bowman & David Hunter, *Environmental Reforms in Post-Communist Central Europe: From High Hopes to Hard Reality*, 13 MICH. J. INT'L L. 921, 966 (1992) (noting Western investors' concern over environmental liability and cleanup standards in CEE countries); Julie Scott, *Environmental Liability and Privatization in Eastern Europe*, EUR. ENVTL. L. REV., June 1992, at 22, 22-23 (stating that difficult liability issues in CEE privatization are far from being resolved). See generally, Ruth Greenspan Bell & Thomas Adam Kolaja, *Capital Privatization and the Management of Environmental Liability Issues in Poland*, 48 BUS. LAW. 943 (1993) (examining Polish government attempts to manage environmental liability issues arising during privatization); Elzbieta M. Zechenter, *The Socio-Economic Transformation of Poland: Privatization and the Future of Environmental Protection*, 6 GEO. INT'L ENVTL. L. REV. 99 (1993) (arguing that environmental protection issues should be directly addressed in privatization process).

² See, e.g., David R. Berz & Anne Margaret Connolly, *The Economics of Cleaning Up the Countries of the Eastern Bloc*, RECORDER, Dec. 30, 1992 at 6 (estimating CEE cleanup costs in hundreds of billions of dollars); D. H. Cole, *Cleaning Up Krakow: Poland's Ecological Crisis and the Political Economy of International Environmental Assistance*, 2 COLO. J. INT'L ENVTL. L. & POL'Y 205, 234 (1991) (same); G. Nelson Smith III, *The Real Challenge to the Polish Revolution: Cleaning the Polish Environment Through Privatization and Preventive Market-Based Incentives*, 19 PEPP. L. REV. 553, 558 (1992) (same).

believed to be readily available, has not been forthcoming for environmental cleanup needs.³ Pushing the costs of environmental cleanup onto the new private investors would present an expedient way of addressing the CEE countries' environmental problems.

Potential purchasers of state-owned companies in the CEE countries do not want to shoulder the burden of financing the cleanup of some of the most polluted areas in the world.⁴ Businesses already view investment in these new market economies as a highly risky proposition. New investment would be likely to disappear in any nation that attempted to shift the full burden of cleaning up its environmental problems onto private investors.

Poland was the first of these newly emerging democracies to face this issue when it began its privatization program in 1990.⁵ Many of its state-owned businesses produced tremendous quantities of pollutants and have serious hazardous waste cleanup problems.⁶ Potential investors in these businesses quickly re-

³ See Berz & Connolly, *supra* note 2, at 7-8 (surveying Western government appropriations for environmental cleanup in CEE countries); see also Cole, *supra* note 2, at 236-37 (noting that, of approximately \$9 billion of general economic assistance to Poland from Western nations, only about \$200 million is earmarked for environmental reclamation and protection); Smith, *supra* note 2, at 578-79, 587-88 (noting that, although various aid agencies allocate money for environmental projects in CEE countries, these amounts fund only small portion of total cleanup cost). See generally Barry Newman, *Disappearing Act: West Pledged Billions of Aid to Poland — Where Did It All Go?*, WALL ST. J., Feb. 23, 1994, at A1, A8 (explaining that much foreign aid to CEE countries is spent on Western consultants with disappointing results).

⁴ Joseph C. Bell, *Privatization in Central and Eastern Europe*, in 14th ANNUAL INSTITUTE FOR CORPORATE COUNSEL: DOING BUSINESS AND INVESTING ABROAD 385 (PLI Corp. L. & Practice Course Handbook Series No. 752, 1991) available in WESTLAW, 752 PLI/CORP 385, at *19; see also Michael Gruson & Georg F. Thoma, *Investments in the Territory of the Former German Democratic Republic: A Change of Direction*, 14 FORDHAM INT'L L.J. 1139, 1154 (1991) (stating that investors' fear of environmental liability in former East Germany is major impediment to investment); Bowman & Hunter, *supra* note 1, at 966 (describing investors' concerns over widespread industrial pollution in region).

⁵ See Bowman & Hunter, *supra* note 1, at 967 (noting that Poland has arguably advanced furthest in its privatization process). Polish privatization of state-owned enterprises involves strategic trade sales, initial public offerings, liquidation, mass privatization, restructuring, and joint ventures. Bell & Kolaja, *supra* note 1, at 944-45.

⁶ See Smith, *supra* note 2, at 558-65. Poland has been called the most polluted country in the world. See, e.g., Cole, *supra* note 2, at 206. Environmental pollution and degradation costs the Poles \$3.4 billion per year, or roughly ten percent of their annual national income. Smith, *supra* note 2, at 564; Cole, *supra* note 2, at 207.

requested that the Polish government indemnify them against potential environmental liability claims. They also asked the government to set standards for future emissions. The Polish government responded by devising stopgap policies for allocating cleanup responsibilities and regulating ongoing pollution levels.

The measures that the Polish government has taken, including creating escrow accounts to hold environmental cleanup funds and limited indemnification agreements, leave investors uncertain about their future liability for environmental problems. This uncertainty is compounded by the lack of clear standards in Polish law about permissible ongoing pollution levels.⁷ These undefined and potentially escalating environmental liabilities make private investors hesitant to undertake major investments in privatization projects.

This paper uses auction theory to analyze the impact of existing pollution cleanup problems and of evolving liability rules on the Polish government's privatization efforts.⁸ It begins with an overview of the existing system for privatizing Polish companies and an examination of Poland's environmental regulations. This discussion concludes that Poland has not articulated its environmental cleanup standards, leaving investors uncertain over their potential liabilities.

The next three sections address what liability standards Poland should adopt to accomplish its dual goals of maximizing state revenues from the sale of its enterprises and financing the environmental cleanup. Section II introduces the basic principles of auction theory and the negative effects of uncertainty on auction proceeds.

⁷ See *infra* notes 26-44 and accompanying text (outlining Polish environmental regulation). In addition, potential investors face considerable difficulty in determining which agency is responsible for governmental environmental liability policy. For example, even though the Ministry of Privatization has primary responsibility for privatization, other agencies and governmental units, such as the Ministry of Environmental Protection and the Ministry of Justice, may control parts of the process for privatizing certain entities. Bell & Kolaja, *supra* note 1, at 945. Furthermore, the divisions within the Ministry of Privatization may each promote conflicting policies and goals. *Id.*

⁸ In a forthcoming paper, Robert G. Hansen and I examine liability rules for future pollution and the choice between strict liability and negligence standards for ongoing emissions. See RANDALL S. THOMAS & ROBERT G. HANSEN, THE EFFICIENCY OF SHARING LIABILITY FOR HAZARDOUS WASTE: THE EFFECTS OF UNCERTAINTY OVER DAMAGES (1994) (Tuck Business School Working Paper).

These principles are then applied in Section III to compare the Polish government's existing system of minimal pre-auction⁹ environmental audits with a more redundant comprehensive environmental testing policy. This analysis shows that a more extensive governmental testing system is preferable to the present policy because it reduces the spread between the bidders' value estimates for the companies being sold and thereby maximizes auction revenues. It also enables the Polish government to identify the country's worst hazardous waste sites and target them for priority cleanup.

Section IV contrasts the Polish system with the American and German environmental liability regimes. It begins with an analysis of the American CERCLA system of joint and several liability and finds that this system also leaves investors uncertain about the extent of their future environmental liabilities.¹⁰ Next, the German approach for environmental liabilities of companies based in former East Germany is examined.¹¹ This system, if it operates as the government intends, will greatly reduce investor uncertainty, but will still have significant drawbacks.

Auction theory predicts that the uncertainty over environmental liabilities created by the Polish and American systems will reduce the auction proceeds to the seller by more than the expected value of these liabilities. In other words, uncertainty about prospective environmental liabilities causes potential buyers to lower their offering prices by more than the expected

⁹ Given the difficulty in modeling the vast array of procedures used in selling Polish companies, this paper assumes that Polish companies are sold through an auction process, as is often the case.

¹⁰ For example, the American system is based on a strict liability standard as set forth in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767 (1980) (codified as amended at 42 U.S.C. §§ 9601-9675 (1988) [hereafter CERCLA], as amended by Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986) [hereafter SARA]). CERCLA establishes joint and several, strict liability for damages caused by hazardous substances for current and prior owners and operators of hazardous substance sites. *See id.*

¹¹ German law is intended to release investors in the new Eastern states from liability for past environmental damage resulting from preexisting waste sites. The law was designed to alleviate the fears of potential investors that they would acquire immeasurable environmental risks. Under one provision, investors may apply for an exemption from liability. However, the exemption does not represent a clear guarantee and leaves open a number of difficult questions. *See infra* notes 81-116 and accompanying text (discussing German environmental liability regime).

costs of the environmental cleanup. As a result, both the American and Polish environmental liability schemes unnecessarily reduce auction revenues.

The German system, while creating certainty that the level of environmental liabilities will be zero, fails to generate any private cleanup activity. Although a relatively wealthy country like Germany can perhaps afford to make the large state-financed expenditures necessary to clean up contaminated properties, Poland does not have the resources to support such a program. Furthermore, adoption of the German system would place the heavy burden of administering the entire national cleanup program on the Polish government, a task that it is poorly equipped to handle.

Instead of recommending either the German or American models, this Article proposes a new hybrid environmental liability regime for Poland. Under the proposed policy, developed country and multinational aid agencies would be asked to pay for the initial environmental audits for each state-owned enterprise. These agencies could finance environmental audits as part of their programs to encourage foreign companies to invest in Poland. In this way, aid donors could advance the dual objectives of economic development and environmental cleanup at a comparatively low cost and without undue governmental intervention.

The Polish government would then negotiate with the winning bidders in the auctions to pay a fixed amount of the cleanup costs for the properties that they purchase, with the national government financing any further needed cleanup. This policy allows the state to negotiate flexibly over what portion of the cleanup costs it will assess against a purchaser and what portion it will absorb itself. This policy would be advantageous to Poland and the private investors as it would maximize auction revenues while also insuring that both the private and public sectors would bear some of the costs of financing a cleanup of the Polish environment.

This policy is subject to the criticism, however, that it does not provide for the cleanup of existing, but unknown, hazardous wastes that are not discovered in the environmental audit process. One potential solution to this problem is to require winning bidders to cover these excess environmental liabilities up to

a certain cost. Winning bidders could buy environmental liability insurance (ELI), or self-insure if they conclude that they are better off doing so. ELI could be sold by the private sector, the Polish government, or one of the multinational aid agencies.

The Article concludes by examining whether an ELI scheme would work. After describing the common features and problems of existing ELI plans, it analyzes which of three potential sponsors would be best suited to create and run such an insurance system. It finds that, at present, Poland lacks a private sector with the capacity to issue insurance for excess environmental cleanup costs. Furthermore, while the Polish government could sell this insurance itself, it does not currently have the administrative and technical skills needed to establish such a program. Without question, multinational aid agencies are the natural candidates to run an ELI program, particularly because they could best spread its political and economic risks over a larger pool of insured companies by developing a regional program for all of the CEE countries. Nevertheless, such an ELI program would be difficult to implement and costly to administer. Thus, the Polish government may need to finance this portion of the cleanup out of future tax revenues as a cost of encouraging greater private investment in Poland today.

I. POLISH PRIVATIZATION AND ENVIRONMENTAL LIABILITIES: AN AD HOC SYSTEM?

A. *Overview of Privatization of Polish Enterprises*¹²

The Polish government uses a "sectoral approach" in privatizing state-owned enterprises.¹³ To begin the privatization

¹² The following laws provide the legal basis for privatization in Poland: 23 Dec. 1988 Foreign Investment Law (Dz.U Nr 41, poz. 325); 13 July 1990 Act on Privatization of State Owned Enterprises (Dz.U Nr 51, poz. 298) [hereafter Privatization Act], and 14 June 1991 Foreign Investment Law (Dz.U Nr 60, poz. 253). Bell & Kolaja, *supra* note 1, at 944 n.5; see also, Jerzy Rajski, *Privatization in Poland*, in *PRIVATIZATION IN CENTRAL AND EASTERN EUROPE* 35, 35-53 (P. Sarcevic ed., 1992) (outlining Polish privatization process).

¹³ The Ministry of Privatization introduced the sectoral approach in the summer of 1991. Bell & Kojala, *supra* note 1, at 946. This approach allows the Ministry to evaluate and prepare for sale all enterprises categorized within the same general area of commerce. *Id.* The sectoral approach helps to stop investors from merely purchasing the best company in a given sector in order to establish a monopoly position in that area of commerce. *Id.*

The sectoral approach is not the only method of privatization in Poland. Businesses

process, the Ministry of Privatization chooses a commercial sector in the Polish economy. The Ministry then "commercializes" given enterprises within that sector by turning those entities into joint stock or limited liability companies which the Polish government treasury owns in their entirety.¹⁴

A lead consultant, usually an investment bank or management consulting firm, is chosen through a competitive tender process to carry out the services needed for privatization.¹⁵ These range from conducting an analysis of the company to managing the privatization.¹⁶ Following commercialization of the enterprise, the lead consultant conducts a due diligence inquiry which establishes a "working value" for the entity.¹⁷

To evaluate the potential environmental liabilities of each company, the consultant (or its subcontractors) performs an environmental audit.¹⁸ No act or regulation specifies how these environmental audits are to be conducted. But generally, the environmental consultants visit the site, obtain background information in order to determine if the company's premises are contaminated, review company production history and compliance with existing permits, and check current environmental

with a value of \$10 million or less are privatized through a liquidation method that favors domestic investors. *Id.* at 959. These transactions are not analyzed as closely as the larger sectoral privatization. In fact, past liquidation transactions have entirely ignored environmental liability and compliance because domestic investors are not accustomed to considering issues such as environmental liability. *Id.* Instead, the Ministry merely asks domestic investors to accept all liabilities as a condition of approving the transaction, and the investors accept, perhaps due to their lack of understanding of the potential consequences. *Id.* at 959-60.

¹⁴ *Id.* at 947. During this step, the Ministry of Privatization dissolves the entity's "workers' council" and forms a supervisory board. The resulting enterprise assumes all rights and responsibilities formerly held by the state-owned entity from which it arose. *Id.*

¹⁵ In a competitive tender process, the Polish government solicits bids from firms and determines the winner by evaluating various factors, including cost. *See id.* at 948-49 (describing Polish government procedure for selling state-owned businesses).

¹⁶ *Id.* at 947. The consultant chooses subcontractors and other consultants to perform environmental audits and to compile information which enables the Ministry of Privatization to determine the best method for privatizing a given entity. *Id.*

¹⁷ *Id.* The working value gives the government a valuation reference point, taking into consideration financial, legal, and environmental valuation aspects. *Id.*

¹⁸ *Id.* The Privatization Act requires that "an economic and financial study be prepared for the purpose of asset valuation as well as establishing whether the implementation of organizational, economic, or technical changes is required." *Id.* at 947-48 (quoting Privatization Act, *supra* note 13, art. 20, para. 1); *see also* Bowman & Funtner, *supra* note 1, at 967 (discussing process by which assessment reports are generated).

management practices.¹⁹ Most importantly, however, these initial audits do not generally involve sampling of soil, air, or water.²⁰

Once the initial valuation and environmental studies are completed, the company is ready for sale. The government has a choice of three sale mechanisms: (1) auction; (2) a public stock offering; or (3) negotiated sale following public invitation.²¹ Polish law requires the lead consultant to conduct a thorough search for potential investors, but does not specify how the lead consultant should solicit bids and what information it can provide bidders.²²

As soon as a sufficiently large pool of potential investors has been identified, they submit preliminary indications of interest which are used to develop a short list of potential investors.²³ Investors on this short list are given access to the company and its management to conduct their own due diligence investigations. Upon completion of their due diligence investigations, those investors that remain interested submit bids for the company. When choosing between bids, the Ministry of Privatization considers several factors including: (1) the amount of cash in the bid; (2) the investors' business plan for operating the company; (3) the timing of the proposed investment; (4) the impact of the investors' plans on workers; and (5) the investors' willingness to negotiate to assume financial responsibility for environmental liabilities.²⁴

The last factor, environmental liabilities, raises an important concern. The costs of cleaning up past environmental damage may be extensive and are legally the responsibility of the state. The Polish government, however, has relatively limited resources

¹⁹ Bell & Kolaja, *supra* note 1, at 948.

²⁰ *Id.* The prospective purchasers pay for this initial audit and all other pre-privatization environmental investigations. *Id.* The initial audits are, however, rather superficial and relatively inexpensive. *Id.*

²¹ *Id.* at 948 n.22 (citing Privatization Act, *supra* note 13, at art. 23).

²² *Id.* at 948.

²³ *Id.* at 949.

²⁴ *Id.* The government gives greatest weight to the cash payment and the investors' plan for improving the entity. *Id.* However, if offers are approximately the same, the last three factors may be determinative. *Id.* But see Bowman & Hunter, *supra* note 1, at 966 (noting that lack of credit, political and social uncertainties, economic chaos, and lack of hard currency return guarantees may be more important factors).

to commit to such cleanups. The government knows that potential investors will be discouraged if they are uncertain over where responsibilities for environmental contamination will fall. Despite this serious problem, the government has not systematically addressed this issue.

When choosing among bids, the government considers how potential investors propose to handle environmental damage, and specifically, which investors will assume some responsibility for environmental cleanup. After evaluating the bids, the government presents a final decision to the Minister of Privatization, who must approve the transaction. The parties then prepare a sale document that includes the conditions of the contractual negotiations as well as surrounding environmental commitments.²⁵

B. Polish Environmental Regulation

The Polish regulatory scheme divides environmental regulation into three categories: (1) current discharges by operating enterprises; (2) past on-site pollution; and (3) past pollution that has either migrated into surrounding areas or could do so.²⁶ For existing on-site contamination, the investor has legal responsibility under most circumstances, although the Polish government has not specified cleanup standards.²⁷ Uncertainty about what Polish environmental standards require creates a major problem. The problem is that without knowing the level of contamination and the cost of cleanup for a given site, it is very difficult to prepare a bid. Participants in this process have assumed that cleanup standards are unlikely to be stricter than the strictest Western European standards.²⁸

²⁵ Bell & Kolaja, *supra* note 1, at 951. The sale document also delineates all the assumptions that the two sides made in proceeding with the bargaining. The "heads of agreement" contain standard sales language, such as warranties, and a stipulation that the Ministry has authority to sell the entity. *Id.* The contract also includes any agreements associated with environmental issues and attachments, including the legal analysis the government performed during the due diligence effort. *Id.*

²⁶ *Id.* For an overview of Polish environmental regulations, see Bowman & Hunter, *supra* note 1, at 930-37.

²⁷ Bell & Kolaja, *supra* note 1, at 952-53. However, agreements to date between investors and the Polish government have not required investors to clean up existing contamination. *Id.*

²⁸ Smith, *supra* note 2, at 571. The rationale for using European Community (EC)

However, investors have been unable to obtain accurate cost estimates because of the complex administrative structure used in defining the scope of Polish environmental regulations, and the potentially broad scope of Polish environmental law.²⁹

The first step in defining an investor's potential liability for existing on-site contamination is to conduct an environmental audit. The scope of the initial environmental audit, and the rules for estimating the cost of cleanup, are negotiated between the Ministry of Privatization and the lead consultant.³⁰ At this point, the government selects an environmental consultant who will conduct the environmental audit under the supervision of the Ministry of Privatization.³¹ The Ministry tells the consultant what testing is required, what kind of analysis should be done, and what cleanup standard to use as a point of reference for cost estimates.³² Investors may later perform an additional, more detailed site examination.³³

Once the environmental audit is completed, the Ministry of Privatization negotiates the cleanup obligations with each individual investor.³⁴ The principal technique for paying for environmental cleanup is to set a portion of the company's purchase price aside in a restricted escrow account that must be used within a specified time period for cleanup activities.³⁵ The

standards is that all of the CEE countries, including Poland, aspire to join the EC. *Id.* Thus, they try to adopt pollution standards that are consistent with existing European standards. *Id.*; Bowman & Hunter, *supra* note 1, at 970.

²⁹ Bell & Kolaja, *supra* note 1, at 953. For example, the Polish Environmental Protection Act authorizes a regional district government environmental inspectorate to require that a site be returned to its "proper state." *Id.* (citing 31 Jan. 1980 Act on Protection and Shaping of the Environment (Dz.U Nr 3, poz. 6, art. 82)).

Currently, no regulations, guidelines, or interpretations define the proper state standard. Potentially, however, this standard could justify a very stringent environmental liability regime. Further complicating the matter is the possibility that the 49 district government inspectors may interpret the proper state standard differently. *Id.*

³⁰ *Id.*

³¹ *Id.*

³² *Id.* The reference standard, which is often based on Dutch or German standards, helps develop a common understanding between the investor and the government about potential cleanup costs. *Id.* However, the actual standards used in managing the cleanup itself have not yet been established. *Id.* at 953 n.27.

³³ *Id.* at 953. In this second, more in-depth examination, the investor may direct the auditor to collect soil or water samples. *Id.* at 953-54.

³⁴ *Id.* at 953. To date, no contractual agreement has established a standard which a given investor must meet when performing the actual cleanup. *Id.* at 955.

³⁵ *Id.* at 954. The Ministry of Privatization will not agree to an escrow account arrange-

investor's potential liability for environmental cleanups is capped at the amount placed in the escrow account. Investors may only use such escrow funds for cleanup of past contamination identified in the due diligence analysis, or for past contamination identified during the time period of the escrow account.³⁶ Escrow accounts allow the government to provide funds to pay for site cleanup while also defining and limiting the total amount of money to be applied to remediation.³⁷

Although most investors accept these escrow arrangements, many request governmental indemnification against any additional responsibility for environmental cleanup. The Ministry has been willing to grant indemnity only on rare occasions, for a limited duration, and for relatively small amounts.³⁸

ment if the responsible parties have not yet performed a site assessment and if no factual basis for evaluating the extent of environmental liability exists. *Id.*

³⁶ *Id.* at 957. Escrow agreements do not allow investors to use the funds for process-related investments or to address future contamination. Sometimes, the Ministry requires investors to make matching contributions each time they draw from the accounts. This matching amount is negotiated as part of the transaction agreement and is generally used to provide an incentive for investors to use the most cost-effective cleanup practices. The government may also restrict such escrow accounts by requiring investors to: (1) secure cleanup activities through competitive tenders; and (2) invite Polish firms to bid in such tenders. *Id.* at 958.

Managing escrow accounts is problematic because the government has not established account management procedures. The Ministry of Privatization attempted to require that the accounts be held in domestic banks. However, Polish banks are inexperienced in managing such accounts, there are a limited number of qualified accountants and financial managers, and the Ministry itself does not have the ability to track accounts. Investors must therefore arrange for escrow account management. *Id.* at 958-59.

³⁷ *Id.* at 958. The government has used escrow accounts to resolve issues that otherwise might have impeded transactions. In structuring escrow accounts, the Ministry has sought to give investors an incentive to pursue cost-effective and timely cleanups. Under such escrow agreements, the government requires that remediation activities begin within twelve months of the date of sale or else all funds will revert to the treasury. *Id.*

³⁸ *Id.* at 954. To date, the government has granted indemnity only where the audit has indicated little basis for concern and where indemnification appeared to facilitate the transaction. *Id.* As with escrow accounts, the government will not grant indemnity without a site assessment. *Id.* The Ministry has also rejected requests for indemnity against potential enforcement actions for future violations. *Id.* at 955 n.29. Investors often seek indemnity in circumstances in which an entity may bring an enforcement action against them or in which a third party may enter a claim against them. *Id.* at 954. When calculating the potential amount of liability, the government assumes that Polish law will establish the required cleanup standard. *Id.* The government also assumes that Polish standards will be less stringent than other potential standards. *Id.* at 953 n.28, 954; see also Bowman & Hunter, *supra* note 1, at 967 (stating Poland's general policy not to fully indemnify purchasers for environmental liability).

Cleanup standards are established only when the actual cleanup begins.³⁹ With no clear Polish policy on the matter, the government looks to other nations' standards as well as the identity of the particular investor when setting the actual guidelines. Thus, the government tends to use different standards for each transaction. As a result, most investors assume strict standards when they estimate cleanup costs.⁴⁰

Investors are also concerned about potential liability for past pollution that has caused off-site damage. The Ministry of Privatization has addressed these concerns by offering time-limited indemnity against third-party claims.⁴¹ To qualify for indemnity, an investor must show that the environmental damage is causally linked to the state's operation of the facility, or that it occurred before the end of the remediation period.

Under current government policy in Poland, investors are responsible for controlling current emissions from their facilities.⁴² In principle, this gives the investor a strong incentive to implement a cost effective program to bring the facility into compliance with environmental requirements. However, the Polish government makes it difficult for investors to determine what they need to do to comply with environmental regulations. At a minimum, the investor can establish a baseline level of allowable pollution emissions by referring to the initial environmental audit. Frequently, the investor will also perform a follow-up audit. Beyond this point though, Polish law is vague. The Ministry of Privatization requires investors to work out environmental compliance agreements with all of the necessary governmental units.⁴³ Given the Polish government's administrative structure, this is difficult for investors.⁴⁴

³⁹ Bell & Kolaja, *supra* note 1, at 955. When negotiating, the parties only make assumptions about cleanup standards to estimate cleanup costs. *Id.*

⁴⁰ *Id.* at 955 n.30. As a result of uncertain cleanup standards in Polish law, the level of intensity with which investors approach site cleanup will be driven by concerns about unknown levels of liability rather than by an intention to comply with well-defined standards. *See infra* notes 45-51 and accompanying text (discussing effect of uncertainty on auction proceeds).

⁴¹ *Id.* at 957.

⁴² *Id.* at 952. The Ministry of Privatization has rejected proposals to make the government, rather than the investor, responsible for bringing the enterprise into compliance with environmental standards. *Id.*

⁴³ *Id.*

⁴⁴ This difficulty arises because, while the privatization process is overseen centrally

Investors formulate bids based on their estimates of the value of the companies being sold and the liabilities associated with them. Potential bidders are wary of purchasing companies with significant hazardous waste cleanup problems because of the uncertainty surrounding the cleanup costs. If they knew what these costs would be, these bidders could build them into their calculations of the company's value and bid accordingly. However, if bidders are uncertain about the amount of their potential liability, they may choose not to bid, or to drastically lower their bids. The next Section explores the effect of uncertainty over environmental liabilities on the sale of Polish companies.

II. UNCERTAIN ENVIRONMENTAL LIABILITIES ARTIFICIALLY DEPRESS AUCTION REVENUES

Auctioning Polish companies accomplishes two important objectives for the Polish government: it allocates companies to the users who value them most and it maximizes revenue for the Polish government. Environmental liabilities will reduce auction revenues because rational bidders will reduce their bids by the amount of their expected cleanup costs. Thus, the revenue that the Polish government receives from the sale of the state-owned enterprises can be thought of as: (1) the expected value of the company without environmental liabilities; (2) minus the winning bidder's expected environmental cleanup costs. The uncertainty surrounding the second component, the expected cost of environmental liabilities, is the key to analyzing the effects of different environmental liability regimes.

Uncertainty about environmental liabilities reduces auction revenues disproportionately to the actual cost of the liabilities. To illustrate the effects of this uncertainty on auction revenues, this Article first looks at how uncertainty impacts auction revenues in a common-value auction.⁴⁵ It assumes that for any com-

from Warsaw, the forty-nine district governments of Poland are responsible for granting and enforcing permits. *Id.*

⁴⁵ In order to discuss the effects of uncertainty on auctions, it is easiest to deal with a common-value model. Auction theory currently includes two polar models: the common-value model and the independent private values model. In the former, the value of the item being sold is uncertain but is the same to all bidders; in the latter, each bidder knows

pany being auctioned, all potential private investors are equally capable of operating the enterprise should they win the auction. This assumption facilitates the analysis but is not critical to the results.

To model the price that the Polish government will receive for any enterprise that it sells, some terminology must be defined. Let $E(v)$ equal the expected value of the company being sold. Assume that v , the true value of the company, will only be known ex post, so that there will be uncertainty over the value of v ex ante. Given these assumptions, common-value auction theory states that $E(p) < E(v)$, where $E(p)$ is the expected price in the auction.⁴⁶ In other words, uncertainty reduces the expected price in the auction below the expected value of the company being sold.

There are two related explanations for this result. The first derives from the "winner's curse" phenomenon.⁴⁷ The winner's curse in a common-value auction refers to the frequently observed fact that the winning bidder will generally be the bidder who thinks the item for sale is worth the most. The winning bidders will have value estimates that tend to be biased high, leading them to overestimate the value of the item.⁴⁸ Rational bidders recognize that auctions select the highest-valued bidder, and therefore they bid lower in the auction to compensate for this bias. This insures that if they win the auction, they do not suffer the winner's curse. This leads to lower bidding by all

the value of the item to himself but each bidder's value will be different (hence the term "independent private values"). Most real auctions will have both common-value and independent private value characteristics. A model that deals with such auctions has been developed. See Paul R. Milgrom & Robert J. Weber, *A Theory of Auctions and Competitive Bidding*, 50 *ECONOMETRICA* 1089 (1982). But such a model is considerably more complex than a simple common-value model. Adopting Milgrom and Weber's model would not change any of this Article's conclusions.

⁴⁶ See Douglas K. Reece, *Competitive Bidding for Offshore Petroleum Leases*, 9 *BELL J. ECON.* 369, 380 (1978) (formally proving relationship between $E(p)$ and $E(v)$).

⁴⁷ The winner's curse has also been raised as a possible explanation for bidder overpayment for takeover targets. Richard Roll, *The Hubris Hypothesis of Corporate Takeovers*, 59 *J. BUS.* 197, 197-200 (1986); Lynn A. Stout, *Are Takeover Premiums Really Premiums? Market Price, Fair Value, and Corporate Law*, 99 *YALE L.J.* 1235, 1274 (1990).

⁴⁸ For any given amount of information that a bidder possesses, its value estimate for the item being sold will be defined as the average value that the bidder estimates the item to have.

bidders, thereby putting downward pressure on auction prices. As a result, $E(p) < E(v)$.

Uncertainty over the true value of the item being sold is the second explanation for this result. Where there is uncertainty over an item's true value, bidders will arrive at different estimates of its expected value. A bidder will therefore have an incentive to bid low, knowing it is highly likely that the next-highest bidder's value estimate will be significantly lower. The size of the difference between bidders' value estimates determines how much profit-maximizing bidders will bid beneath their true value estimates.

The differences between bidders' value estimates will be larger as the variation of their value estimates increases. Bids will be relatively close to value estimates when the differences between value estimates are small because the highest-valued bidder wants to top the next-highest bidder and win the auction. However, when the differences in bidders' value estimates are large, the bidders can strategically reduce their bids by a significant amount because there is little risk of losing to the next-highest bidder.

Several economists have explored the effects of uncertainty on auction revenues in the sale of public offshore oil drilling leases.⁴⁹ They find significant adjustments in bidder behavior to take into account the winner's curse and uncertainty over the value of the leases being sold. These adjustments result in higher profits for the bidder and lower auction revenues for the seller.

In short, uncertainty over the value of the companies being sold means that the Polish government will not obtain a price equal to the true value of the company via an auction. The winning bidder expects to profit by participating in auctions,

⁴⁹ See, e.g., Otis W. Gilley & Gordon V. Karels, *The Competitive Effect in Bonus Bidding: New Evidence*, 12 BELL J. ECON. 637 (1981) (reconciling differences between bidding theory models and empirical studies); Kenneth Hendricks & Robert H. Porter, *An Empirical Study of an Auction With Asymmetric Information*, 78 AM. ECON. REV. 865 (1988) (finding firms on neighboring tracts have advantage of better information and use it when bidding against non-neighbors).

and thus to obtain a slice of this value. The transaction cost⁵⁰ of using an auction is the difference $E(v) - E(p)$.

These costs must be balanced against the benefits of auctions. Let $E(s)$ equal the expected value of the company under the current ownership, and recall that v is the true ex post value of the company. In other words, v is the value of the company once it is being operated by new management after the auction. In that case $E(v) > E(s)$, for s will be less than v if private owners value the company more than the state does — a fundamental assumption that underlies the Polish efforts to privatize.

The more important question is whether $E(s)$ exceeds $E(p)$. In other words, is the price that the Polish government receives in the auction greater than the value of the company as a state-owned enterprise? Unfortunately, theory alone does not answer this question.

To address this problem, we must look more closely at the effects of uncertainty about environmental liabilities on auction prices. Auction theory states that a seller can maximize the expected proceeds from the auction by reducing bidder uncertainty. Stated differently, as bidders' uncertainty over the item's value decreases, $E(p)$ increases.⁵¹

Uncertainty surrounding a company's environmental cleanup liabilities could be reduced in two ways: first, by undertaking more extensive pre-auction testing to determine the level of existing pollution; and second, by fixing the size and scope of investors' cleanup responsibilities. This Article addresses each of these methods below.

⁵⁰ Transaction costs in this context can be thought of as the full cost of selling the company, including the buyer's expected profit.

⁵¹ See Milgrom & Weber, *supra* note 45, at 1102 (formally proving relationship between bidder uncertainty and $E(p)$); see also R. Preston McAfee & John McMillan, *Auctions and Bidding*, 25 J. ECON. LITERATURE 699, 722 (1987) (restating relationship between bidder uncertainty and $E(p)$).

In its most extreme form, uncertainty over environmental liability could lead bidders to reduce their valuations of the companies being sold to below zero. This would lead bidders to choose not to participate in the auction. Reducing the number of bidders in the auction would result in lower auction prices. Kenneth R. French & Robert E. McCormick, *Sealed Bids, Sunk Costs, and The Process of Competition*, 57 J. BUS. 417, 439 (1984). This is particularly likely to be the case with "negative asset enterprises," that is, those companies whose environmental liabilities exceed their market value. See Bell & Kolaja, *supra* note 1, at 958.

III. IMPROVING PRE-AUCTION ENVIRONMENTAL TESTING INCREASES AUCTION REVENUES

One source of uncertainty about the value of the Polish companies being auctioned is that the bidders do not know the extent of on-site pollution. Under the existing Polish system, the only pre-auction information bidders receive about environmental contamination is the initial environmental audit conducted under the supervision of the Ministry of Privatization. However, this audit is a low-cost, preliminary survey paid for by the company being sold.⁵² It serves only to approximate the upper limit of environmental cleanup costs for transactional purposes.

Potential investors could undertake their own follow-up investigation by commissioning a more in-depth examination of the site.⁵³ This would permit them to collect soil, air, and water samples or to look more closely at specific pollution problems. Unfortunately, these studies are very expensive.⁵⁴ A potential bidder is unlikely to decide to undertake such a study unless the company being sold is large and very attractive.

Potential bidders' uncertainty about the environmental liabilities of these companies can be reduced by providing more complete pre-auction information about the scope of the environmental cleanup problem. This will have the effect of decreasing the difference between $E(p)$ and $E(v)$.⁵⁵ To illustrate this point, suppose there is a sealed-bid auction where n bidders are contending to purchase a Polish company of uncertain value. Consider two possible scenarios. In the first case, assume that all bidders have identical information about the company's value. This implies that all bidders have the same expected value, $E(v)$, for the company.

Given these assumptions, a rational bidding strategy is for all bidders to submit a bid of $E(v)$.⁵⁶ Even though this bid leaves

⁵² Bell & Kolaja, *supra* note 1, at 948.

⁵³ See *supra* note 33 and accompanying text (describing possible steps in follow-up investigations).

⁵⁴ Jonathan R. Nash, *Environmental Law: An Economic Approach to the Availability Of Hazardous Waste Insurance*, 1991 ANN. SURV. AM. L. 455, 492 n.261 (1992) (stating that in United States, companies selling environmental liability insurance require Superfund site inspections that may take up to two years to complete and cost an average of \$850,000).

⁵⁵ See *supra* notes 51-52 and accompanying text.

⁵⁶ This strategy will result in a "Nash equilibrium," where the bidders have no incentive

bidders with no expected profit, any bidder that unilaterally deviates from this strategy will either win for sure but at a loss, or lose with equal certainty. Thus, if the Polish government can insure that each bidder has identical information, it will obtain the company's expected value through an auction.

On the other hand, what happens if bidders have different value estimates? In this second scenario, suppose that the bidders' value estimates are viewed as independent draws from a probability distribution the mean of which equals the item's true value. In an equilibrium, bidders will generally find it optimal to bid less than their estimated values. This means that the Polish government will receive less than the company's expected value. This illustrates how uncertainty and heterogeneous information leads bidders to reduce their bids strategically: By lowering their bids below their estimated value, the bidders will be reducing their probability of winning by less than one.

To raise auction prices, the Polish government needs to insure that all bidders have similar value estimates. Making bidders' information more homogeneous decreases the difference between $E(p)$ and $E(v)$. Giving all bidders common pertinent information, such as an appraiser's value estimates of a company, is a favored technique for reducing information disparities. This common information gives all bidders a similar basis for estimating the value of these corporate assets. This important relationship between information and expected selling prices can be stated as follows. Assume we have an auction of a company with value v , which is the same for all bidders, where v is unknown *ex ante* to the bidders but the bidders have value estimates which are identically and independently distributed according to a probability function $F(v)$. In this situation, if all bidders follow Nash equilibrium bidding strategies, providing additional information to all bidders concerning the item's value will increase the expected selling price.⁵⁷

to switch to different bids, given that other bidders do not deviate from this strategy. ERIC RASMUSEN, *GAMES AND INFORMATION: AN INTRODUCTION TO GAME THEORY* 33 (1989). The equilibrium in the text is a *weak* Nash equilibrium in that there are other bids besides $E(v)$ that give bidders the same expected profit (which is zero). Of course, if all bidders were to bid something other than $E(v)$, there would be an incentive for any one bidder to change his strategy.

⁵⁷ See Milgrom & Weber, *supra* note 45, at 1102-03 (proving relationship between infor-

This relationship implies that the Polish government could maximize its auction revenues by providing all bidders with information about the scope of environmental liabilities faced by the companies it is selling.⁵⁸ The better this information is, the more likely that potential bidders will have the same value estimates and the lower the gap will be between $E(p)$ and $E(v)$.

Unfortunately, these environmental audits are expensive and Poland lacks the resources to undertake them at present. One possible solution to this problem is to ask developed country and multinational aid agencies to pay for the initial environmental audits for each state-owned enterprise. These agencies could finance environmental audits as part of their programs to encourage companies to invest in Poland. In this way, aid donors could advance the dual objectives of economic development and environmental cleanup at a comparatively low cost and without undue governmental intervention.

Some countries, such as the United States, encourage their domestic businesses to invest in the CEE countries by subsidizing the companies' investigation of these markets. For example, the Overseas Private Investment Corporation (OPIC) provides pre-investment services to U.S. investors exploring the feasibility of investing in the CEE countries. Under existing programs, OPIC will award grants of up to \$150,000, or 50% of the costs of a feasibility study of a CEE market, to an eligible American investor.⁵⁹ The U.S. could easily adopt programs like OPIC's to cover the costs of environmental audits of Polish companies that American investors are considering buying. This would help the Polish government and further American objectives of increasing American investment in the CEE countries.

mation and expected selling prices); McAfee & McMillan, *supra* note 51, at 722 (restating relationship between information and expected selling prices); see also Bruce A. Markell, *Owners, Auctions, and Absolute Priority in Bankruptcy Reorganizations*, 44 STAN. L. REV. 69, 110-11 (1991) (applying this result in bankruptcy context).

⁵⁸ See Smith, *supra* note 2, at 574-75 (arguing that CEE countries should institute program of environmental audits so that they can identify environmental problems, take full advantage of available Western cleanup technology, provide investors with information concerning environmental problems, and reduce investors' concerns about environmental liabilities).

⁵⁹ See *OPIC Commits \$6 Million For CIS Business Studies*, WORLD ENV. REP. Aug. 20, 1993, at 132-33.

Instituting a strong system of environmental audits would also achieve an important environmental objective: identifying the worst hazardous waste sites for priority cleanup. Given the Polish government's lack of resources to finance environmental cleanups, it must decide which sites to handle first. Without environmental audits, the government cannot know where to target its cleanups.

IV. HOW DO DIFFERENT LIABILITY REGIMES AFFECT AUCTION REVENUES?

Even the best pre-auction environmental audit is of limited value to potential bidders if they cannot estimate their cleanup costs. To determine their cleanup costs, investors need to know two things. First, what level of cleanup is required? In other words, what environmental quality standards should they achieve, with what technology, and within what time frame? Second, what portion of these costs are they legally responsible for? Unfortunately, the Polish government has yet to address either issue.

The first question, while critical for developing cost estimates, is a policy issue that lies largely beyond the scope of this Article.⁶⁰ However, one point is apparent: to reduce investor uncertainty, Poland should determine what level of cleanup it will require and make that clear to investors. Because of the government's ambiguous policy, investors have assumed that cleanup standards will be no harsher than the toughest Western European standards.⁶¹ If investors believe they will have to meet Western European environmental standards, and Poland subsequently adopts laxer standards, auction revenues will be needlessly reduced by overestimates of potential environmental liabilities. Clearly, the Polish government would reduce the level of

⁶⁰ To answer this question, policymakers will need to make some hard choices between low cost technologies that contain pollution and higher cost measures that cleanup pollution. For example, toxic waste sites can be excavated and incinerated if high cost cleanup technology is used. Alternatively, a cheaper impermeable wall could be built around the toxic waste site to contain the problem and reduce human health risks. See Scott, *supra* note 1, at 23 (comparing costs of complete cleanup with costs of containment). The remainder of this Article assumes that the Polish government has determined the appropriate technological solution.

⁶¹ Bell & Kolaja, *supra* note 1, at 953.

uncertainty surrounding environmental liabilities by defining its cleanup standards.

As the seller of these companies, the Polish government wants to adopt a legal standard that maximizes auction revenues while still financing the cleanup of the existing hazardous waste sites. From the auctioneer's perspective, the existing Polish law is the worst of all worlds. Investors are operating in a country that has not yet formulated unambiguous legal standards for environmental cleanup.⁶² This leaves them uncertain about the appropriate level of cleanup responsibilities.

Two alternative legal regimes for Poland are considered here: a strict liability regime similar to that adopted in the United States, and a "no liability" policy like Germany's. Each of these policies has different effects on the revenues that the government realizes from the sale of state-owned industries.

A. *The United States: Strict Liability Under CERCLA*

In 1980, the United States Congress enacted CERCLA expressly "(1) to provide for cleanup if a hazardous substance is released into the environment or if such release is threatened, and (2) to hold responsible parties liable for the costs of these cleanups."⁶³ CERCLA authorized the Environmental Protection Agency (EPA) to remove, or cause the removal of, any hazardous contaminant whenever there is a release or a "sub-

⁶² *Id.*

⁶³ Lynda J. Oswald & Cindy A. Schipani, *CERCLA and the "Erosion" of Traditional Corporate Law Doctrine*, 86 NW. U. L. REV. 259, 267-68 (1992) (quoting H.R. REP. NO. 253 (III), 99th Cong., 1st Sess. 15 (1986), reprinted in 1986 U.S.C.C.A.N. 3038, 3038); Michael D. Green, *Successors and CERCLA: The Imperfect Analogy to Products Liability and an Alternative Proposal*, 87 NW. U. L. REV. 897 (1993) (comparing successor liability under CERCLA with products liability claims); see also SARA, *supra* note 11 (amending CERCLA).

CERCLA was designed to address what Congress considered to be deficiencies in the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901-87 (1992) [hereafter RCRA]. Green, *supra*, at 900-01. RCRA was previously the primary statute addressing hazardous wastes. Oswald & Schipani, *supra*, at 264 n.20. RCRA was created, among other things, to stop open dumping and to encourage the cleanup of existing open dumps. RCRA's primary shortcoming proved to be the fact that it applies to hazardous waste problems created by current and future production and storage activities, but only applies to past acts where the contaminated site currently poses an "imminent hazard." Green, *supra*, at 900-01. RCRA "is prospective and applies to past sites only to the extent that they are posing an imminent hazard." Oswald & Schipani, *supra*, at 264 n.21 (quoting H.R. REP. NO. 1016, 96th Cong., 2d Sess., pt. 1, at 18 (1980), reprinted in 1980 U.S.C.C.A.N. 6119, 6120).

stantial threat of release" of any contaminant "which may present an imminent and substantial danger to the public health or welfare."⁶⁴ CERCLA also created a "Superfund," or Hazardous Substance Fund, that Congress intended the EPA to use to study and cleanup contaminated sites, to recover costs of cleanups from responsible parties, and to order such parties to take remedial action.⁶⁵

CERCLA is retroactive and imposes strict liability on responsible parties.⁶⁶ It does not contain any express provisions for successor corporation liability⁶⁷ but does hold past and present owners and operators of vessels or facilities strictly liable for costs associated with cleaning up contaminated sites.⁶⁸ Thus, in a sense, CERCLA contains its own successor liability provision because it makes past *and* present owners liable for cleanup costs.⁶⁹ An asset purchaser that buys assets that include a hazardous substance site is therefore liable under the express provisions of CERCLA.

Successor liability remains important in determining how these cleanup costs are allocated.⁷⁰ If there were no CERCLA

⁶⁴ 42 U.S.C. § 9604(a)(1) (1992).

⁶⁵ Lorelei Joy Borland, *Environmental Statutes Which May Impact Business Transactions*, in THE IMPACT OF ENVIRONMENTAL REGULATIONS ON BUSINESS TRANSACTIONS 1990 (PLI Corp. L. & Practice Course Handbook Series, Dec. 1990 - Mar. 1991), available in WESTLAW, 716 PLI/CORP. 9, at *3; see also Oswald & Schipani, *supra* note 63, at 265 n.29 (describing CERCLA attempts to rectify earlier regulatory weaknesses).

⁶⁶ GAIL S. PORT, CERCLA LITIGATION & LIABILITY UPDATE 1 (1992); Green, *supra* note 63, at 901. In addition, CERCLA § 9607 makes four statutorily defined classes of persons jointly and severally liable for hazardous substance release response costs: (1) current owners and operators of the facility; (2) former owners and operators, but only for releases occurring during their ownership or operation; (3) "persons who arranged for the disposal of hazardous substances," and; (4) "transporters of hazardous substances who also selected the disposal site." Allen Kezsbom et al., "Successor" and "Parent" Liability for Superfund Cleanup Costs: *The Evolving State of the Law*, 10 VA. ENVTL. L.J. 45, 45 n.2 (1990) (restating 42 U.S.C. § 9607(a)(1)-(4) (1992)); see also Port, *supra*, at 1; Oswald & Schipani, *supra* note 63, at 268-69 (discussing CERCLA § 9607).

⁶⁷ Kezsbom, *supra* note 66, at 45.

⁶⁸ Green, *supra* note 63, at 903; see *supra* note 66 and accompanying text (outlining classes of persons subject to joint and several CERCLA liability).

⁶⁹ See Green, *supra* note 63, at 904 n.43 (listing commentators who have noted CERCLA contains successor liability provision because it makes past and present owners liable for cleanup costs).

⁷⁰ *Id.* at 904. Green gives an example where hazardous substances have been disposed of on a site over a twenty year period. During the first ten years, A owned the site. A then sold all of its assets, including the site, to B at the end of year ten. B operated the site for

successor liability, a company purchasing the assets of a predecessor corporation would be liable only for the cleanup costs for hazardous substances disposed of on the site during the period in which the successor company owned the site. The net effect of CERCLA successor liability is to make the successor corporation liable for the cleanup costs of substances disposed of on the site prior to the time that the successor company purchased the site.⁷¹

The American courts have held successor corporations, and not the taxpayer, responsible for cleaning up contaminated sites, relying on the legislative history of the statute and the intent of Congress in creating CERCLA.⁷² For example, in the leading case, *Smith Land & Improvement Corp. v. Celotex Corp.*,⁷³ the Third Circuit stated that "Congressional intent supports the conclusion that, when choosing between the taxpayers or a successor corporation, the successor should bear the cost We believe it in line with the thrust of the legislation to permit — if not require — successor liability under traditional concepts."⁷⁴

the next ten years of disposal. CERCLA makes B liable for the cleanup of the second ten years of waste as an owner of the site. B will be liable, however, for the first ten years of waste only if it is liable as a successor in interest to A. *See id.*

⁷¹ *Id.*

⁷² Kezsbom, *supra* note 66, at 46.

⁷³ 851 F.2d 86 (3d Cir. 1988), *cert. denied*, 488 U.S. 1029 (1989); *see also*, Green, *supra* note 63 at 907-08 (explaining *Celotex* holding).

⁷⁴ *Celotex*, 851 F.2d at 92. Commentators have vigorously debated whether CERCLA has caused the courts to stretch the traditional frontier of corporate law doctrine. *See, e.g.*, Green, *supra* note 63 at 908-13 (contrasting successor liability in products liability cases with successor liability under CERCLA); Daniel H. Squire et al., *Corporate Successor Liability Under CERCLA: Who's Next?*, 43 Sw. L.J. 887 (1990) (examining extent to which courts will hold corporate successors jointly and severally liable for their predecessors' polluting activities); Tom McMahon & Kate Moertl, *The Erosion of Traditional Corporate Law Doctrines in Environmental Cases*, 3 NAT. RESOURCES & ENV'T 29 (1988) (arguing that courts have eroded traditional corporate law protections of shareholders and successor corporations under CERCLA); Todd W. Rallison, Comment, *The Threat to Investment in the Hazardous Waste Industry: An Analysis of Individual and Corporate Shareholder Liability Under CERCLA*, 1987 UTAH L. REV. 585 (discussing corporate and individual shareholders' potential liability for CERCLA cleanup costs). Some commentators have argued that under CERCLA, the courts may impose liability based on a party's mere status as a corporate officer, shareholder, or parent corporation without regard to the nature of the person's actions or involvement. Oswald & Schipani, *supra* note 63, at 260-61. Other scholars have argued, however, that CERCLA does not expand traditional corporate law doctrine. *See, e.g., id.* at 260-61 (arguing that active involvement in violation by corporate party is still prerequisite to finding liability under CERCLA).

A variety of arguments have been advanced in favor of strict successor liability under CERCLA.⁷⁵ Only one of these arguments deserves serious discussion: corporate successor liability under CERCLA serves as a conduit to transfer the liability for the proper disposal and cleanup of hazardous substance sites to the predecessor company at the time of the asset purchase because future buyers will discount the price that they pay for these assets to take into consideration these CERCLA costs.⁷⁶ In this manner, predecessor corporations will be forced to assume the real costs of their acts and internalize these externalities.⁷⁷

CERCLA's strict liability will be economically efficient if a purchaser can accurately calculate these potential disposal and cleanup costs. If a firm value for these costs can be calculated, then the prospective purchaser will simply deduct those costs from its bid for the predecessor entity, and the owners of the predecessor entity will bear the full costs of their previous activities. However, even if potential purchasers carefully investigate the potential liabilities of the predecessor entity, their research may fail to uncover or accurately determine the extent of the potential environmental liabilities. In these circumstances, purchasers will have to decide whether to purchase the predecessor entity even though they are uncertain about the true extent of these liabilities.

This uncertainty is partially alleviated by CERCLA's innocent purchaser defense.⁷⁸ This defense excuses a prudent purchaser of property from cleanup liability if "[a]t the time the defendant

⁷⁵ See Green, *supra* note 63, at 908-18 (arguing that only legitimate justification for successor liability is to funnel liability back to responsible entity).

⁷⁶ See *id.* at 906, 913-18 (arguing that successor liability forces predecessor corporations to assume cleanup costs by reducing asset purchase prices paid by successors).

⁷⁷ See A. MITCHELL POLINSKY & STEVEN SHAVELL, OPTIMAL CLEANUP AND LIABILITY AFTER ENVIRONMENTALLY HARMFUL DISCHARGES, (Harvard Law and Economics Program Working Paper No. 99, September 1992) (concluding that making firms responsible for cleanup and strictly liable for any remaining harm will lead to socially optimal outcome).

⁷⁸ See Oswald & Schipani, *supra* note 63, at 267. This defense is codified at 42 U.S.C. § 9601(35)(A)-(B) (1992). CERCLA also incorporates specific statutory defenses that a defendant may use to avoid liability. Oswald & Schipani, *supra* note 63, at 266. A party may avoid liability under CERCLA where the damages occurred due to an act of God, an act of war, an act or omission of a third party not related directly or indirectly to the defendant, or any combination of these actions, or where a federally permitted release caused the damages. 42 U.S.C. § 9607(b) (1992).

acquired the facility the defendant did not know and had no reason to know that any hazardous substance which is the subject of the release or threatened release was disposed of on, in, or at the facility.”⁷⁹

In order to establish that the purchaser had no reason to know of the release or threatened release of the hazardous substance, CERCLA requires that “the defendant must have undertaken, at the time of acquisition, all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice in an effort to minimize liability.”⁸⁰ This defense permits acquiring corporations to safeguard themselves from future liabilities for unknown environmental problems by taking reasonable precautions to uncover prospective problems before purchasing another company.

Unfortunately, the validity of a successor company’s “innocent purchaser” defense can only be established after it has purchased the predecessor company *and* after an environmental cleanup problem has been uncovered. Faced with an unsafe environmental condition, courts may be tempted in hindsight to find that a successor company failed to exercise due care and should be liable for cleaning up any waste problem. This sharply curtails the usefulness of this defense as a method of reducing a purchaser’s uncertainty about the extent of its potential CERCLA liabilities. Thus, under current American law, most purchasers of potentially contaminated sites will face uncertainty about their future CERCLA liabilities.

⁷⁹ 42 U.S.C. § 9601(35)(A)(i) (1992).

⁸⁰ 42 U.S.C. § 9601(35)(B) (1992). To determine whether a purchaser “had no reason to know,” the statute directs courts to consider: 1) any specialized knowledge or experience of the defendant; 2) the relationship of the property’s purchase price to the value it would have had if not contaminated; 3) commonly known or reasonably ascertainable information about the property; 4) the obviousness of the presence of contamination at the property; and 5) the ability a party would have to detect the contamination if it used “appropriate” inspection. *Id.*

B. *Environmental Law in Germany: What Liability for Buyers of Former East German Companies?*

When compared with the United States, Germany has comparatively less intricate hazardous waste laws.⁸¹ In recent years, Germany has developed two approaches to environmental liability.⁸² First, environmental liability is governed by specific, limited provisions which protect natural resources, air, water, and the general environment.⁸³ Under the second approach, civil liability provisions of the German Civil Code are used to enforce environmental regulation.⁸⁴

Currently there is no law in Germany that specifies single liability standards for waste and contaminated property like CERCLA does in the United States.⁸⁵ However, several different

⁸¹ See G. Nelson Smith III, *A Comparative Analysis of European and American Environmental Laws: Their Effects on International Blue Chip Corporate Mergers and Acquisitions*, 14 HASTINGS INT'L & COMP. L. REV. 573, 590-91 (1991) (discussing German hazardous waste law). European countries generally have less environmental regulation because environmental liability has only recently become a matter of central concern for these nations. *Id.* at 589.

⁸² Caroline London & Brizay London, *Environmental Liability Under the Laws of EC Member States*, in THE IMPACT OF ENVIRONMENTAL LAW ON REAL ESTATE AND OTHER COMMERCIAL TRANSACTIONS: U.S./EUROPE 255, 258 (5th Annual ALI-ABA Course of Study, Sept. 24-26, 1992).

⁸³ *Id.*

⁸⁴ *Id.* For example, under Article 906 of the German Civil Code, an installation owner may be held strictly liable for environmental impairment to another landowner's property. *Id.* at 264-65. However, this Article is subject to many restrictions which limit its importance. The injured landowner does not have a cause of action if the emissions are either not substantial or are substantial but are the result of "customary" local activity. *Id.* Therefore, for example, an owner does not have a cause of action against a neighboring installation if his property is located in a highly industrialized area. *Id.*

⁸⁵ *Id.* at 258.

laws join to form a liability structure which has implications for investors purchasing firms in Germany.⁸⁶

1. Federal Waste Disposal Act

In 1972, The Federal Republic of Germany passed the Federal Waste Disposal Act (the Act).⁸⁷ Amended in 1986, the Act defines and regulates the authorities responsible for controlling pollution, and gives the conditions and requirements for the collection, treatment, and disposal of certain substances and wastes.⁸⁸

The Act states that "waste shall be so disposed of that the welfare of the community shall not be impaired."⁸⁹ This language is very similar to that in European Community Council

⁸⁶ See *id.* at 265-66 (outlining relevant German law). In addition to the statutes discussed below, the North Rhine-Westphalia's Police and Administrative Law must be taken into account. This law holds two types of individuals liable for pollution emanating from derelict industrial sites or former dump sites. *Id.* at 266. First, "the person whose dump site operation has endangered public safety" may be held liable. *Id.* Second, "a person acting in his or her capacity as owner or operator" may be held liable "for any danger resulting from the state of the dump site." *Id.* In either case, German courts will apply strict, unlimited liability to the parties held responsible for pollution originating from dump sites. *Id.* Persons falling into either category will be held strictly liable even where: (1) technical knowledge which could have indicated the danger was either absent or too limited; (2) the site operators were not aware of the danger; or (3) state authorities did not properly supervise the site. *Id.*

Under this scheme, a purchaser of a polluted site could be held strictly liable for damages committed by former owners for activities of which the purchaser had no knowledge. The purchaser may, however, bring an action against the actual polluter to recover the costs incurred in cleaning up the site. *Id.* at 266.

⁸⁷ Gesetz über die Vermeidung und Entsorgung von Abfällen (Abfallgesetz-Abfg) vom 27. August 1986, 1986 BGBI. I 1410, corrected at 1501). See Smith, *supra* note 81, at 591 n.99 (citing the Act).

⁸⁸ Smith, *supra* note 81, at 590-91.

⁸⁹ *Id.*

Directive (ECCD) 75/422.⁹⁰ The government is responsible for protecting the public from improper disposal of these wastes.⁹¹

2. The Environmental Liability Act of 1990

In 1990 Germany enacted a new civil liability law called the Environmental Liability Act of 1990 (ELA).⁹² This act presents

⁹⁰ Directives promulgated by the Economic Community (EC) merely offer principles intended to give member countries a framework for establishing their own individual environmental policies. *Id.* at 589. However, the Treaty of Rome binds member states to ensure that EC directives are implemented. *Id.* (citing F. James Handley, *Hazardous Waste Exports: A Leak In the System of International Legal Controls*, 19 ENVTL. L. REP. 10171 (1989)). Each individual country has discretion as to which methods it will use to implement these directives. *Id.*

One of the primary EC waste directives is the Council of European Communities Directive on Waste, 75/442/EEC (1975) [hereafter Council Directive 75/442]. Smith, *supra* note 81, at 589. Enacted in 1975, it encourages member countries to ensure that waste is disposed of without injuring humans or the environment. *Id.* at 590 (citing Council Directive 75/442 art. 4). However, this directive has a limited impact on hazardous waste due to explicit exclusions and a limiting definition. This directive excludes:

- a) radioactive waste;
- b) waste resulting from prospecting, extraction, treatment, and storage of mineral resources and the working of quarries;
- c) animal carcasses and the following agricultural waste: fecal matter and other substances used in farming;
- d) waste waters, with the exception of waste in liquid form;
- e) gaseous affluent emitted into the atmosphere;
- f) waste covered by specific community rules.

Id. at 590 n.95 (quoting Council Directive 75/442 art. 2, sec. 2).

Council Directive 75/442 defines waste as "any substance or object which the holder disposes of or is required to dispose of pursuant to the national law in force." *Id.* at 588-89 (quoting Council Directive, 75/442, art. 1). In addition, individual member states are allowed to "adopt specific rules for particular categories of waste" and are given individual power to determine their own precise method of managing waste disposal. *Id.* at 590-91 (quoting Council Directive 75/442, art. 2).

⁹¹ The German provision differs from Council Directive 75/442 in that the waste generator "is required to make the wastes available to the public authority required to dispose of it." Smith, *supra* note 81, at 591. Therefore, the local government is often the party that disposes of these wastes. *Id.*

Germany requires specific licensing of facilities before they can be used to treat, store, or deposit particular types and quantities of waste. *Id.* In addition, individuals who collect and transport waste products must also be licensed and wastes may not be collected for transportation until the disposal facility has explicitly certified that it will accept the wastes. *Id.* The German federal government reserves the power to issue special decrees requiring harmful items to be specifically labeled or returned to their manufacturers. *Id.* Germany also requires that by-products that are an unavoidable result of certain processes or which are not reusable be disposed of in special facilities. *Id.*

⁹² Gesetz uber die Umwelthaftung (Environmental Liability Act), (enacted Nov. 7,

a single statutory scheme for dealing with damage resulting from impacts on water, soil, and air.⁹⁵ The ELA provides for civil damages for "wrongful death, personal injury, or property damage caused by an environmental impact."⁹⁴ Under the ELA, operators of specifically named facilities are strictly liable for waste emissions which result in injuries.⁹⁵ Because of the difficulty plaintiffs have experienced establishing fault in the past, the legislature considered it necessary to include a provision providing for strict liability.⁹⁶

The ELA applies to approximately one hundred listed plants, including those governed by the Pollution Control Act, which covers chemical manufacturing, paint shops, pharmaceutical installations, cooling towers, furnaces, and gas turbines.⁹⁷ Section 1 of the ELA provides that the "owner" of a facility will be held strictly liable for injuries to anyone resulting from an environmental impact emitted from any of the specifically listed facilities.⁹⁸ Causation alone determines liability; no finding of fault is required.⁹⁹ Polluters are strictly liable regardless of whether the emission was "intended, negligent, known, un-

1990 and effective as of Jan. 1, 1991); William C. Hoffman, *Germany's New Environmental Liability Act: Strict Liability for Facilities Causing Pollution*, 38 NETH. INT'L. L. REV. 27, 27 (1991) (explaining Environmental Liability Act).

⁹⁵ Hoffman, *supra* note 92, at 27.

⁹⁴ *Id.* Environmental impacts can include damage caused by any substance, vibration, noise, pressure, radiation, gas, steam or warmth, or any other substance or effect emitted or discharged into the ground, air, or water. London & London, *supra* note 82, at 261. "Impact" is interpreted broadly as "a change in the physical, chemical, or biological quality of water, ground or air." *Id.* (quoting Landsberg-Lulling, *Umwelthaftungsrecht*, Bundesanzeiger Schaeffer Verlag, 1991, at 105). Under the ELA, courts will not consider damage caused by an installation which has "broken down" to be the result of an environmental impact. *Id.*

⁹⁵ London & London, *supra* note 82, at 260; Hoffman, *supra* note 92, at 32.

⁹⁶ London & London, *supra* note 82, at 260.

⁹⁷ *Id.*

⁹⁸ Hoffman, *supra* note 92, at 32. Under the ELA, liability attaches as a result of legal ownership or other rights to the installation, or where a party is found to have economic control of the installation. London & London, *supra* note 82, at 260. Under ELA art. I, liability applies to the possessor or "*inhaber*" of a particular installation. *Id.* Under German caselaw, an *inhaber* can be any person who operates an installation for his own account and assumes all costs relating to maintenance of the facility. *Id.* Generally, the *inhaber* is the plant owner. *Id.* at 261. German courts will hold the *inhaber* liable for damage caused by an "*Umwelteinwirkung*," or, environmental impact resulting from the plant's operation. *Id.*

⁹⁹ Hoffman, *supra* note 92 at 32.

known, 'sudden and accidental,' or 'gradual.'"¹⁰⁰ The ELA also provides for joint and several liability in cases where multiple defendants are liable for the injury at issue.¹⁰¹ In addition, it has extraterritorial reach so that businesses operating in the vicinity of Germany could be held liable under its provisions.¹⁰²

In order to bring an action under the ELA, a party must establish three elements: (1) the defendant operates a "facility,"¹⁰³ (2) an environmental discharge was emitted from the defendant's facility, and (3) this environmental discharge caused the damage at issue.¹⁰⁴ Even if all of these elements are established, ELA liability is subject to several specific exclusions.¹⁰⁵ A party will not be held liable under the ELA when the emission results from an act of God, the damage is insubstantial, or the impairment is "reasonable according to the local conditions."¹⁰⁶ Article 16 of the ELA provides that any party that is liable for damage to property may also be required to pay to restore the environment and landscape to its original state.¹⁰⁷ Further-

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.* at 38.

¹⁰³ Under the ELA, a facility is defined as a "permanent structure such as a place of business or warehouse," and also includes any "machines, instruments, vehicles, and other mobile technical structures," as well as "outbuildings which stand in a spacial or technical relation to a facility or part thereof and could be significant for the occurrence of an environmental impact." *Id.* at 33. The ELA also applies to facilities no longer being used and to facilities which are not finished. *Id.* ELA Appendix 1 contains a list of ninety-six types of facilities grouped into ten general categories. This list specifically includes facilities engaged in the processing, manufacture, or handling of certain materials. *Id.* The ELA defines an environmental impact as "material, vibration, noise, pressure, rays, gasses, steam, heat, or other phenomena which are emitted into soil, air, or water." *Id.* at 34.

¹⁰⁴ *Id.* at 33. Causation is the most difficult element to prove under the ELA. *Id.* at 34-35. With this difficulty in mind, ELA section 6 creates a presumption of causation. *Id.* Section 6(1) stipulates that causation will be presumed when there is a prima facie showing that a particular facility is "inherently suited to cause the damage." *Id.* The defendant bears the burden of rebutting the causation presumption. *Id.*

The defendant may rebut the causation presumption by showing that the facility was "properly operated" or that the facility "fulfilled all 'special operational duties' and that no disruption of operations occurred." *Id.* In order to fulfill all special operational duties, the facility must demonstrate that it fulfilled all "applicable administrative regulatory duties aimed at preventing pollution." *Id.* The ELA also includes a "sub-presumption" which can help a defendant overcome the presumption of causation and allows for specific defenses to the presumption, thus making it not an entirely insurmountable obstacle for a defendant. *Id.* at 35-36.

¹⁰⁵ *Id.* at 32.

¹⁰⁶ *Id.*

¹⁰⁷ London & London, *supra* note 82, at 262-63. Where such restoration is required, un-

more, under the ELA, operators will not be held liable for "non-material" or aesthetic damages.¹⁰⁸

3. The Impact of the ELA on Corporate Environmental Liability for Buyers of Former East German Companies

For investors in former East Germany, the ELA will not usually be a concern. Although the ELA applies to the entire territory of the former East Germany, a law passed on March 22, 1992, releases investors in the new eastern states from any liability for environmental damage resulting from waste sites.¹⁰⁹ The legislature considered this law necessary to alleviate the fears of potential investors that they would acquire immeasurable environmental liabilities.¹¹⁰ Under this provision, investors may apply for an exemption from liability.¹¹¹ However, the exemption does not represent a clear guarantee of immunity from environmental liabilities and leaves open a number of difficult questions.¹¹²

First and foremost, the exemption is not automatically issued by law. The process of getting an exemption from the authorities can be administratively burdensome and time consuming.¹¹³ In addition, exemptions are subject to the following restrictions: (1) they are available to buyers of "old" plants but they do not apply to the premises upon which the plant sits; (2) they only cover damage caused before July 1, 1990, and not contamination resulting from activities conducted after that date; and (3) they do not release the buyer once and for all from fu-

der the ELA, the measures may be demanded even where the cost of restoration is disproportionate to the value of the land. *Id.* The statute of limitations applicable to claims for damages under the ELA is three years beginning when the injured party acquires knowledge of the damage and the identity of the person responsible, or thirty years after the occurrence of the damage if there is no such knowledge. *Id.*

¹⁰⁸ *Id.* at 262.

¹⁰⁹ *Id.* at 263; Bernd Kunth, *Environmental Law of Germany*, in INTERNATIONAL ENVIRONMENTAL LAW AND REGULATION 26-27 (J. Andrew Schlickman et al. eds., 1992).

¹¹⁰ London & London, *supra* note 82, at 263.

¹¹¹ *Id.*

¹¹² Kunth, *supra* note 109, at 26-27; see also Gruson & Thoma, *supra* note 4, at 478 nn.100-02 (explaining that exemption does not fully cover environmental liabilities under private law to third parties).

¹¹³ Kunth, *supra* note 109, at 26-27.

ture liabilities for an environmental cleanup.¹¹⁴ An environmental cleanup fund will be created in the future and private investor contributions to this fund have not yet been determined.¹¹⁵

In former West Germany, the ELA's impact on corporate successor liability appears to be limited. On the one hand, it creates joint and several liability for corporate successors where an ongoing violation is occurring. This could cause corporate successors to be liable for the misdeeds of their predecessor corporations. On the other hand, it applies only prospectively: it excludes pollution occurring before the Act's effective date. This eliminates a successor corporation's potential liability for most environmental problems.

In addition, potential purchasers have limited liability for environmental problems. The Act limits the potential amount of liability for each case to DM 320 million.¹¹⁶ This cap allows a successor corporation to at least calculate a worst case scenario for the potential environmental liabilities associated with an acquisition.

C. *Liability Regimes That Promote Certainty Increase Auction Revenues*

Does either the American model or the German model provide a good alternative for Polish policymakers? From the point of view of maximizing auction revenues, the American CERCLA system has serious problems. CERCLA's strict liability fixes all cleanup responsibility for environmental contamination on the winning bidder in the auction. If bidders are provided with an accurate and in-depth environmental audit before bidding, then they will have a solid basis for estimating their liability for *known* on-site pollution. Yet, even the best audit could fail to uncover all on-site contamination or to establish the level of pollution that migrated from the site to other sites. If the new owners know they will be strictly liable for cleaning

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ Hoffman, *supra* note 92, at 32-33. Under German law, compensation paid by an operator for death or bodily injury may not exceed DM 160 million. London & London, *supra* note 82, at 262.

up these further spills, but are unable to determine the extent of this future liability, they will reduce their bids by more than the expected value of this future liability.¹¹⁷ Finally, CERCLA's innocent purchaser defense reduces, but does not eliminate, this uncertainty for many properties.¹¹⁸ The defense is not available to purchasers who knowingly buy contaminated properties.

Even for those purchasers who believe that their new properties are pollution-free, the validity of a successor company's innocent purchaser defense can only be established after it has purchased the predecessor company *and* after an environmental cleanup problem has been uncovered.¹¹⁹ When an unsafe environmental condition is found, courts may be tempted in hindsight to find that a successor company failed to exercise due care and should be liable for cleaning up any waste problem. This leaves purchasers uncertain about the extent of their potential environmental liabilities.

CERCLA's strict liability even lacks a sound policy justification when applied to the privatization in Poland. Proponents of CERCLA's strict liability regime claim it provides a conduit for funneling liability for past environmental contamination to the private companies responsible for the contamination by forcing successor companies to take future cleanup costs into account in making their bids.¹²⁰ Thus, the negative externalities of production are internalized by having the actual polluter bear these costs.

In the case of Poland, all of the actual polluters were state-owned industries. Even if strict liability worked perfectly in forcing private investors to value these pollution costs and reduce their bids by exactly the correct amount, and as noted above it would not, a much simpler means of transferring this liability to the state exists. Poland could simply agree that private investors would assume no cleanup liability for past

¹¹⁷ See *supra* notes 45-51 and accompanying text (explaining that uncertainty over extent of environmental liability will decrease auction revenues disproportionately).

¹¹⁸ See *supra* notes 78-80 and accompanying text (discussing innocent purchaser defense).

¹¹⁹ See *supra* notes 78-80 and accompanying text (discussing innocent purchaser defense).

¹²⁰ See *supra* note 76 and accompanying text (noting that buyers discount auction bids to account for uncertain environmental cleanup liability).

pollution levels and the state could shoulder the entire burden of this cleanup.

Germany has adopted an approach somewhat like this for investors in the former East German companies. Under German law, investors in the new eastern states can obtain significant relief from environmental risks if they are granted a liability waiver by the proper authorities.¹²¹ If such waivers were automatically granted to new investors, releasing them from all liability for environmental cleanup, this system would eliminate investor uncertainty about their future environmental liabilities.

In practice, the German system does not extend this far. These liability exemptions can only be obtained after a long and burdensome administrative process, and are subject to several limitations. The most significant of these limitations is that investors are not permanently released from future liability. Instead, they are told they will have to pay an as yet undetermined amount into a cleanup fund in the future.¹²² The amount of this potential liability is presumably capped at the same DM 320 million level that exists for purchasers of West German companies. Thus, if Poland adopted the existing German system, potential purchasers of Polish companies would still face significant and uncertain levels of environmental cleanup costs.

Yet, even if the German model provided a complete environmental liability exemption for past pollution, it would not be a suitable system for Poland. First, the Polish government has little information about pollution levels beyond what it obtains in the superficial initial environmental audits. All other information is generated by the purchasers themselves through their own environmental studies. The government has extremely limited capacity to check the accuracy of these private studies.

Bidders can minimize their current expenditures on environmental cleanup by understating the size of the problems with little fear of getting caught because they know there is no effective governmental monitoring. However, under the current system, understating these liabilities today may simply defer the

¹²¹ See *supra* notes 109-14 and accompanying text (summarizing law of German liability waivers).

¹²² See *supra* notes 113-14 and accompanying text (discussing liability exemption limitations).

cleanup expenses until later when the property is sold or more effective governmental environmental testing measures are instituted. In the end, the investors will bear these costs.

If potential bidders know they will have no cleanup liabilities for past contamination, they will have strong incentives to overestimate the scope of the current environmental problems. These new owners may say that their industries had generated massive amounts of contamination in the past, and thereby overstate baseline pollution levels. This will reduce their potential burden for pollution that is created after they take over the business. If after several years they sell the business and the new buyers conduct an environmental audit as part of the sale, or the government creates a well-functioning monitoring system, their cleanup costs will be minimized.

The second problem with releasing investors from liability for environmental cleanup costs is the difficulty Poland would have financing cleanups. Suppose that an auction of a company is conducted, and that the Polish government institutes an environmental auditing system that establishes the scope and cost of cleaning up the company's existing environmental problems. Assume that investors know that they have no responsibility for cleanup, and therefore their bids for the company are increased by the net amount of the cleanup costs they would have incurred. If all of these assumptions hold, at the conclusion of the auction, the Polish government should be able to take the additional monies it receives in the auction and use them to finance its own cleanup program. Ideally, Poland could use these monies to target cleanup of areas of the greatest risk to human health and the environment.¹²³

Politics and a weak governmental administrative structure make it unlikely this kind of targeting would occur. Faced with declining output, rising inflation, and increasing unemployment, the pressure on the Polish government to divert these funds to other high priority uses may prove irresistible. Even if these pressures could be overcome, the internal structure of the government would need to be drastically strengthened for it to

¹²³ See Bowman & Hunter, *supra* note 1, at 967-68 n.215 (suggesting that Poland focus on spending its limited resources in cleaning up highest risk properties first, rather than spending these funds according to which properties are privatized first).

be capable of supervising a massive environmental cleanup program.¹²⁴ Instead, Polish policy should be directed toward keeping both the private and public sectors involved in resolving environmental cleanup problems, while at the same time reducing the pervasive uncertainties that surround the problem today.

V. DEVELOPING A HYBRID POLICY THAT MAXIMIZES AUCTION PROCEEDS AND PROVIDES FOR ENVIRONMENTAL CLEANUP

Both of the environmental liability regimes analyzed above have negative aspects to them. A better approach for Poland would be to adopt a hybrid policy whereby private investors are responsible for environmental cleanup costs up to a negotiated, but fixed, level. For costs above that amount, the Polish government would need to obtain revenues from other sources to finance the cleanup. This system could be implemented quickly and would provide for an immediate cleanup of existing pollution problems.

The regulatory system for handling environmental liabilities of privatized companies could operate as follows. Before commencing an auction, the Polish government would use a reputable third party to conduct an environmental audit. This audit would calculate the expected cost of cleaning up (at the appropriate technological level) the existing contamination on the property. This environmental audit might be financed by a developed country aid agency as part of a program to encourage investment by its private sector in Poland.¹²⁵

Bidders would be advised of the estimated cleanup costs, and of the amount of their contribution toward this cleanup. As a policy matter, the Polish government might decide that it would bear a portion of these costs itself to encourage investors to buy Polish companies. The amount, if any, the government would pay could be varied by negotiation.¹²⁶

¹²⁴ See Smith, *supra* note 2, at 573-74 (stating, ". . . even if it did possess the time and money, Poland lacks the necessary expertise to ensure an effective remediation" of existing environmental waste sites).

¹²⁵ See *supra* note 59 and accompanying text (describing how aid agencies can finance audits).

¹²⁶ See Berz & Connolly, *supra* note 2, at 4 (recommending that all former Soviet-bloc

From the investors' point of view, this revision of Polish policy would be advantageous. Private investors' environmental liability would be capped at the agreed amount. From the private investor's perspective, this eliminates the environmental cleanup cost uncertainties from its calculations of the company's value.

The proposed policy would also raise the prices received in privatization auctions by reducing bidder uncertainty.¹²⁷ As noted above, reducing bidder uncertainty maximizes auction revenues by narrowing the range of bidders' estimates of the value of a company and squeezing bidder profits.¹²⁸ While adopting the German model could accomplish the same objective of minimizing uncertainty, it places too much responsibility on the Polish government to insure that the additional auction revenues are spent on environmental cleanup activities and not diverted to other pressing needs.

The policy would stimulate an immediate cleanup of the worst environmental waste sites. Ideally, the Polish government could press the winning bidders to begin cleaning up the worst and most dangerous hazardous waste sites immediately. An escrow system could be used for the monies dedicated to cleanup, whereby the new owners would have to initiate cleanup activities within a short time period or forfeit the money to the government while still retaining responsibility for the cleanup. This would reduce the Polish government's involvement in the cleanup process and reduce the administrative problems of bringing about the cleanup.

Once the investors knew how much cleaning up they needed to do, they would have strong incentives to engage in the most cost-effective pollution remediation programs possible. The Pol-

countries conduct routine environmental audits to identify potential environmental liabilities and that these liabilities should be addressed in purchase agreements). *But see id.* at 4 (noting that these negotiations would only serve to reduce, not eliminate, investors' potential liability so that "investors [could] buy into these developing markets with some degree of protection, at least with respect to pre-existing problems."). Addressing assessed environmental liabilities in purchase agreements would probably not eliminate the impact of investor uncertainty on auction revenues, however. *See supra* notes 45-51 and accompanying text (discussing impact of uncertainty on auction revenues).

¹²⁷ *See supra* notes 45-51 and accompanying text (describing impact of uncertainty on auction revenues).

¹²⁸ *See supra* notes 55-57 and accompanying text (discussing how reducing range of bidders' value estimates leads to lower bidder profits in auctions).

ish government would also know its financial responsibilities for cleanup activities.

Furthermore, the proposed policy would help clarify Polish environmental policy in several ways. Environmental audits would generate reliable information about the existing contamination levels at the companies that are being privatized. Any coherent environmental policy must begin by establishing the extent of the existing problems so that priority sites can be identified.

Second, reforms along the lines suggested would clarify the environmental policy choices that need to be made by the Polish government. In particular, hard choices need to be made about the appropriate level of cleanup activities to be undertaken. These costs may be prohibitive, in which case Poland could decide to engage in a lower cost containment policy. Furthermore, the trade-offs between encouraging more private investment and generating a higher level of environmental cleanup would be made explicit through the Polish government's willingness to negotiate reductions in cleanup costs in return for greater levels of private investment.

The Polish government would also be free to vary the amount of environmental cleanup costs that it assessed bidders for selected companies. For example, some Polish companies may be "negative asset enterprises," that is, companies whose assessed environmental liabilities exceed their expected purchase prices, even though they are viable businesses.¹²⁹ If the Ministry of Privatization wants to nurture these businesses and create employment possibilities for workers, it could choose to stretch out investors' financing of the expense of environmental liability over time to encourage them to purchase such businesses.¹³⁰

¹²⁹ See Bell & Kolaja, *supra* note 1, at 958 (defining negative asset enterprise as one where environmental liability exceeds expected purchase price).

¹³⁰ See *id.* (stating that Polish government will nurture business and spread out environmental costs for purchasers).

VI. HOW TO HANDLE FUTURE DEMANDS FOR ADDITIONAL ENVIRONMENTAL CLEANUP: ENVIRONMENTAL LIABILITY INSURANCE?

Not all existing pollution may be discovered by even the best environmental audits, not to mention audits that are hastily conducted, or overly limited in their scope. If the Polish government adopts the proposed legal regime, it will have released the new private investors from any obligation to pay for the cleanup of these undiscovered wastes.

How can the Polish government finance the cleanup of existing pollution that is not uncovered in the environmental audit process? The German regime leaves open the possibility that private investors will have to make future payments into a cleanup fund.¹³¹ The amounts of these payments have yet to be determined by the German government, but presumably they will relate to the size of the cleanup costs incurred by the government. However, the amount of this liability is uncertain, which reintroduces the same forms of uncertainty in the auction process that were discussed earlier.¹³²

One solution to this problem is to require winning bidders to cover these excess environmental liabilities up to a certain fixed amount. Winning bidders could buy environmental liability insurance (ELI), or self-insure if they conclude that they are better off doing so. The Polish government could add this requirement for winning bidders without creating serious bidder uncertainty (and disproportionately reducing auction revenues) so long as the cost of this insurance is fixed at a predetermined level.

The key to implementing this system would be developing a commercially viable ELI scheme in Poland. At present, no ELI policies are available there. The last two parts of this Article explore what entity would be best suited to run such a scheme and whether it would work.

¹³¹ See *supra* note 115 and accompanying text (noting German law provision for creating environmental cleanup fund).

¹³² See *supra* notes 45-51 and accompanying text (describing effect of uncertainty on auction revenues).

A. *The Key Features of an Effective Environmental Liability Insurance Program*

Even the largest companies buy liability insurance to protect themselves against certain types of environmental claims. This environmental liability insurance must perform several functions: (1) transfer risk from parties who are comparatively risk-averse to insurers who are relatively more willing to bear risk; (2) spread risks by combining individual uncorrelated risks in a pool created by the insurer so that the insurer can diversify its own risk and operate a risk-sharing arrangement; and (3) perform a risk allocation function by charging premiums that reflect the level of risk posed by each enterprise that is insured.¹³³ Environmental liability insurance will perform these functions well only where uncertainty about the scope of the risks to be insured is neither complete (in which case the insurance is simply a gamble) nor zero (in which case there is no need for the insurance).

An insurer must be able to quantify the impact of existing liability rules on its insureds and anticipate potential changes in those rules.¹³⁴ In the case of Poland, the ELI policy proposed would be limited in its scope to the risks associated with cleaning up existing but unidentified pollution and the excess cleanup costs for identified pollution. Insurers will need to be able to predict the average of these costs for a large group of companies with some accuracy in order to write these policies. The insurer may also bear the risk that the government will strengthen environmental liability rules in the future, thereby increasing excess cleanup costs.

For insurers to predict the costs of cleaning up existing but unidentified pollution and excess cleanup costs for identified pollution, they will need to have solid data on existing levels of pollution and some ability to monitor production of new pollution. One way they could obtain such information is by helping to finance the environmental site assessment studies that are being prepared prior to the auction of the companies. Participation in the environmental auditing process would give

¹³³ Kenneth S. Abraham, *Environmental Liability and the Limits of Insurance*, 88 COLUM. L. REV. 942, 945-46 (1988).

¹³⁴ *Id.* at 955.

them the most accurate information available for establishing a pollution baseline.¹³⁵ Furthermore, buyers would need to accept the insurers' monitoring of their operations as a condition of renewal of their environmental liability insurance. Thus, insurers will have the information they need to assess these risks.

The risk of a change in Polish environmental law is a much harder risk for the insurer to predict. The Polish government can minimize this risk for each privatized company by binding itself to fixed cleanup standards that define what pollution is and what adequate cleanup standards are.¹³⁶ This would reduce the insurable risk to the risk of a change of government where the new government does not honor the previous government's commitments. From the insurers' perspective, they can insure against this risk by: (1) selling policies in several countries and thereby spreading the risk of a change of government over a larger pool of policies; and (2) inserting cross default provisions¹³⁷ in their insurance policies with other contracts that the new governments are unlikely to allow to default, such as, World Bank or International Monetary Fund loans. Multinational aid agencies could adopt both of these measures more easily than other types of insurers.

If insurers can calculate all of these risks well enough to write these policies, we can identify the general features of an appropriate environmental liability insurance system in Poland. To begin with, it is useful to look at how these policies are currently written. Many companies currently underwrite environmental liability insurance policies in the United States.¹³⁸ The two basic types of American environmental lia-

¹³⁵ As a condition of the sale, buyers could be required to accept the site assessment's evaluation of existing pollution. If the buyer believes that the levels found by the site assessment team are inaccurate, the Polish government could give the buyers a chance to submit additional information about existing pollution to the insurer prior to the finalization of the site assessment report.

¹³⁶ See Nash, *supra* note 54, at 492 n.261 (discussing difficulties insurers face when estimating environmental risks). This is a difficult task even in countries where modern environmental cleanup technologies are widely available; administrative changes in cleanup technology requirements make it very difficult for insurers to predict future risks. *Id.*

¹³⁷ For example, cross default provisions in two contracts might specify that if a default occurs on the first contract, then the second contract is also considered to be in default.

¹³⁸ See generally, KENNETH S. ABRAHAM, ENVIRONMENTAL LIABILITY INSURANCE LAW: AN

bility insurance policies are Comprehensive General Liability (CGL) policies, and Environmental Impairment Liability (EIL) policies.¹³⁹

Liability insurance policies contain either "claims-made" coverage or occurrence-type coverage (also called accident-based coverage). Historically, Comprehensive General Liability (CGL) insurance policies were occurrence policies,¹⁴⁰ although in recent years they have become claims-made policies.¹⁴¹

ANALYSIS OF TOXIC TORT AND HAZARDOUS WASTE INSURANCE COVERAGE ISSUES (1991) (discussing environmental liability insurance law and practice in United States); Bruce Howard & Mark Harrigan, *Environmental Due Diligence: Recent Developments in the Process, Databases, and Insurance*, in ENVIRONMENTAL AUDITS: EVALUATING AND RESPONDING TO ENVIRONMENTAL CONCERNS 203 (PLI Corp. L. & Practice Course Handbook Series No. 761, 1992) available in WESTLAW, 761 PLI/Corp. 203. (examining recent developments in U.S. environmental liability insurance market).

¹³⁹ Michael L. Rodburg, *Case Management and Other Pretrial Considerations: The Insured's Perspective*, in ENVIRONMENTAL INSURANCE COVERAGE CLAIMS AND LITIGATION 1994 523 (PLI Com. L. & Practice Course Handbook Series No. 690, 1991), available in WESTLAW, 690 PLI/Comm. 523, at *4, 6. Several other types of policies, such as Commercial Property Insurance and Pollution Liability policies, can also cover environmental liabilities. However, for the purposes of this paper, the two types of policies discussed contain the basic features that need to be examined. For further discussion of these policies, see ABRAHAM, *supra* note 138, at 96-72 (explaining CGL and EIL policies).

¹⁴⁰ ABRAHAM, *supra* note 138, at 23-24; Turner T. Smith, Jr., *Environmental Damage Liability Insurance - A Primer*, 39 BUS. LAW. 333, 341 (1983).

¹⁴¹ Howard & Harrigan, *supra* note 138, at 223; Rodburg, *supra* note 139, at 4. Before 1966, environmental liability insurance policies were accident-based, meaning that they provided broad coverage for personal injury and property damage caused by accidents. *Id.* Starting in 1966, policies became occurrence-based. *Id.* Policies generally defined an occurrence as an "accident, including injurious exposure to conditions, which results, during the policy period, in bodily injury or property damage neither expected nor intended from the standpoint of the insured." *Id.*

In the early 1970's, insurance companies introduced a "pollution exclusion clause" under which insurance would no longer apply "to bodily injury or property damage arising out of the discharge, dispersal, release, or escape of smoke, vapors, soot, fumes, acids, alkalides, toxic chemicals, liquids or gases, waste materials, or irritants, contaminants, or pollutants into or upon land, the atmosphere, or any water course or body of water, but this exclusion does not apply if such discharge, dispersal, release, or escape is sudden and accidental." *Id.* In 1982, companies changed the "pollution exclusion" clause so that the new clause would exclude coverage for releases which were sudden and accidental, unexpected or unattended. *Id.* At this time, "claims-based" environmental liability insurance arose. *Id.*

Occurrence-based CGL's currently continue to exist, however, and are the subject of extensive litigation. See generally Thomas C. Gilchrist, *Insurance Coverage for Pollution Liability in the United States and the United Kingdom: Covering Troubled Waters*, 23 CASE W. RES. J. INT'L L. 109 (1991) (comparing pollution liability insurance approaches in U.S. and Great Britain and noting greater volume of litigation in U.S.).

Occurrence policies provide "coverage against liability arising out of injury or damage that occurs during the policy period, regardless of when a claim alleging such liability is actually lodged against the insured."¹⁴² Claims-made policies require that the claimholder discover and make the claim within the term of the policy.¹⁴³ Some policies are triggered only when the government brings an action against the insured, while other policies simply require that the named insured or other insureds discover the environmental damage during the term of the policy.¹⁴⁴

Most American policies only cover costs associated with unknown prior conditions. Therefore, these policies do not cover claims resulting from known existing conditions. Some policies also cover "new contamination" that occurs after the policy is put in place.¹⁴⁵ All CGL policies sold today require that an engineering firm approved by the insurance company perform a pre-acquisition site assessment.¹⁴⁶ Any contamination discovered in this environmental audit is not covered by the policy.

Premiums on current American CGL policies range from \$20,000 to \$25,000 per year.¹⁴⁷ Most policies have limits ranging from \$10,000,000 to \$15,000,000 and deductibles range from \$10,000 to \$25,000 per discovery of contamination.¹⁴⁸

Most CGL policies do not cover loss caused by pollution conditions which existed before the inception of the policy if any officer or employee of the insured company responsible for environmental control or compliance knew or could have reasonably foreseen that the pollution conditions could have caused such a claim.¹⁴⁹ Most such policies also exclude coverage for fines, penalties, bodily injury, and property

¹⁴² ABRAHAM, *supra* note 138, at 23. The length of the coverage period with occurrence policies gives rise to "long-tail" liability, that is, liability imposed many years after the injury or damage that results in liability occurs. *Id.* These long-tail liabilities have been the source of much litigation in the U.S. *Id.*

¹⁴³ Howard & Harrigan, *supra* note 138, at 223.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

damage.¹⁵⁰ CGL policies generally will pay the lesser of: (1) the difference between the appraised value of the property if it were "clean" and the value of the property when it is contaminated; (2) costs of cleanup; or (3) policy limits.¹⁵¹

In the late 1970s, American insurance companies developed Environmental Impairment Liability (EIL) policies to cover gradual pollution events excluded by CGL policies with pollution exclusion clauses.¹⁵² Most EIL policies contain claims-made triggers for their coverage.¹⁵³ Such policies typically cover on and off-site property damage, bodily injury, and other loss caused by "environmental impairment."¹⁵⁴ These policies define "environmental impairment" to include virtually any release of any contaminant.¹⁵⁵

However, these policies were readily available only until the mid-1980s. Today they are hard to find, prohibitively expensive, or offer only very limited coverage in the United States.¹⁵⁶ The present market for EIL coverage is very limited.¹⁵⁷ Similarly, the availability of environmental liability insurance under CGL policies has contracted severely in recent years. We need to examine the reasons for the disappearance of EIL policies in the United States to insure a similar situation does not develop in Poland.

The American environmental liability insurance market has been plagued by three main problems: adverse selection, moral hazard, and generalized uncertainty. Adverse selection is the tendency for large numbers of higher risk applicants to seek

¹⁵⁰ *Id.* Some policies also exclude defense costs, defined as "those costs incurred in an action brought by a third party against the insured." *Id.* at 224.

¹⁵¹ *Id.* These policies may also cover "first and third parties." *Id.* First parties include property owners; third parties include adjacent property owners' claims where the insured causes contamination to a third party's property. *Id.*

¹⁵² Rodburg, *supra* note 139, at 6.

¹⁵³ ABRAHAM, *supra* note 138, at 24.

¹⁵⁴ Rodburg, *supra* note 139, at 6.

¹⁵⁵ ABRAHAM, *supra* note 138, at 25. EIL policies (1) apply to directors, officers, and employees acting within the scope of their employment; (2) do not cover claims for long-term discharges, long release times, or long latency periods; and (3) often exclude use of waste facilities on or off-site, or owned waste facilities. Rodburg, *supra* note 139, at 6.

¹⁵⁶ Rodburg, *supra* note 139, at 6.

¹⁵⁷ *Id.* When an individual desires to purchase a policy, the insurance agent will mix and match several different policies in order to create the coverage the entity desires. Howard & Harrigan, *supra* note 138, at 223.

coverage, driving low-risk policyholders to drop out of the pool, and leading the cost of coverage to rise.¹⁵⁸ Environmental liability insurance policies typically exclude certain classes of higher risk businesses to reduce this problem.

For Polish companies that are being privatized, the adverse selection problem could be minimized by forcing all purchasers to buy the insurance as a condition of sale. Also, if the insurance company is also conducting the initial environmental audits, then it will have the best information about the level of the risks posed and can price its policies to charge the higher risk businesses accordingly. However, some companies would undoubtedly prefer to self-insure and could probably do so at a lower cost. For these companies, being forced to buy ELI would impose an additional cost and reduce their bids in the auction. These costs would need to be balanced against the effects of the adverse selection problem to determine which policy was preferable.

Moral hazard arises out of the tendency of insured parties to use "less care to avoid insured losses than that party would exercise if the losses were uninsured."¹⁵⁹ If the insurer is unable to obtain information about changes in the risks posed by insureds after they obtain coverage, this reduces the insured's incentives to avoid losses. Here again, insurers usually provide for exclusions and conditions in environmental liability policies to fight moral hazard problems.

In the Polish context, an insured's ongoing level of care should not affect the insurance company's liability for the cleanup of *existing* pollution except in one limited circumstance. This exception could arise if after the new owners take over the business, they generate new pollution and subsequently claim that it was pre-existing unidentified pollution. While the Polish government lacks the incentives and resources to effectively police this type of abuse, private insurers have better incentives to act as monitors of ongoing pollution emissions. In the event they uncover abuses, they could cancel their coverage. Nevertheless, even if the insurers are diligent monitors, it seems

¹⁵⁸ ABRAHAM, *supra* note 138, at 21-22.

¹⁵⁹ *Id.* at 21.

likely that some abuses will occur and go undetected. This is a second likely source of losses for insurers in this area.

The most severe problem in the American environmental liability insurance market has been excessive uncertainty about the frequency and severity of environmental losses that will be suffered. Excessive uncertainty causes problems for insurers because they cannot accurately estimate their probable success in diversifying risks through pooling, nor can they accurately determine the correct price to charge for their risk-bearing services.¹⁶⁰ In the United States, CERCLA and other statutory environmental liabilities may have created excessive uncertainty in the environmental insurance market.

This problem can be limited if Poland accepts the limited liability regime proposed in this article. The only risks that ELI would cover are cleanup costs in excess of those estimated in the initial environmental audit and the costs of cleaning up existing but undiscovered pollution. If the insurer conducts the initial audit, it can minimize both these risks with accurate cost estimates and careful studies. Poland must avoid creating other forms of liability for past pollution that would make these liabilities more difficult for insurers to predict.¹⁶¹

In summary, the problems that have plagued the American environmental liability insurance market cannot be entirely avoided in Poland, even if that country chooses to adopt policies consistent with those proposed in this Article. It seems likely that ELI insurers will suffer from adverse selection and moral hazard problems similar to those that American insurers are currently experiencing. Given the fragility of the American ELI market, it remains to be seen whether any entity would offer the insurance policies needed to implement the program proposed for Poland.

¹⁶⁰ Abraham, *supra* note 133, at 942, 955-56.

¹⁶¹ *Id.* at 957-58. For example, unanticipated retroactive strict liability can adversely affect insurers by making it difficult to assess the risks that are being insured against and by undermining insurers' confidence that they can predict the future legal regime. *Id.*

B. Implementing ELI in Poland: The Need for Multinational Aid Agency Involvement

In Poland, environmental liability insurance could be underwritten by three different types of entities: private sector insurers, the Polish government itself, or multinational aid agencies. Which one of these groups is the best candidate to issue the needed insurance?

At the present, there is no private insurance industry in Poland that would be capable of writing environmental liability insurance. Developing a private sector in Poland will take many years, and a lot of capital, before private insurance can be a potential solution. In fact, the American experience suggests that even the existence of such preconditions for a successful insurance industry does not mean it would be willing to provide this type of insurance.

A second alternative is that the Polish government could accept this role. There are several disadvantages to this route. First, the Polish government would be insuring only privatized companies in Poland, a relatively small pool of companies over which to spread the insurable risks. Second, the Polish government lacks the money to finance the initial environmental audits, and the administrative and technical structure needed to run an insurance program. Finally, the existing Polish government cannot credibly insure against the risk of a change of its environmental liability standards caused by a change of government. Only an outside third party, such as an international aid agency, could offer such insurance.

International aid agencies are the logical choice to act as insurers to underwrite environmental liability insurance policies in Poland. These agencies could create regional insurance organizations that would spread the insurable risks of excess cleanup costs, and the less insurable risks of change of liability regimes,¹⁶² over all of the CEE countries. Furthermore, by acting as a primary insurer in these markets, these aid agencies could slowly develop a reinsurance market by selling some of

¹⁶² Furthermore, the regional insurance agencies could insert cross default provisions into their loans that would prohibit individual countries from making opportunistic changes in their environmental laws. This would minimize the likelihood of individual countries increasing the level of uninsurable uncertainty about environmental liabilities.

their liabilities in a secondary market to private insurance companies that would otherwise refuse to get involved in these countries.¹⁶³

International aid agencies have several other advantages over other parties as insurers. First, they have the funds to finance the initial environmental audits needed to facilitate the smooth functioning of an insurance scheme and to increase auction revenues from the ongoing privatization efforts. These audits would also provide insurers with the information that they need to underwrite these risks. Second, most international aid agencies have administrative personnel with experience running large technical organizations. While these personnel may not be experienced in insurance issues, they could easily subcontract for the necessary skilled personnel to run such a regional insurance program. Third, many of these international aid agencies have the financial resources necessary to undertake this project. Any group that takes on the task of creating an insurance market where none has existed before would need substantial financial resources to support the environmental audits needed and to have credibility in the insurance market.

At least three major multinational aid agencies are currently positioned to finance environmental liability insurance programs in the Central and Eastern European countries: the European Bank for Reconstruction and Development (EBRD); the United States Agency for International Development (USAID), and the World Bank. The EBRD's mandate is to promote private initiative and democracy in countries converting to market-based economies.¹⁶⁴ It has over \$12 billion of financial capital to invest in Central and Eastern Europe, and the former Soviet Union.¹⁶⁵ Additionally, the EBRD has an environmental policy requiring projects considered by the Bank to be evaluated in terms of their environmental impact.¹⁶⁶ This could be extended

¹⁶³ In this sense, the regional insurance organizations would be acting to give their insureds indirect access to the commercial insurance markets. See ABRAHAM, *supra* note 138, at 17-18 (discussing alternative methods of risk spreading in insurance industry).

¹⁶⁴ See *European Bank Is a Potential Source of Procurement Opportunities for U.S. Firms*, BUSINESS AMERICA, July 13, 1992, at 22 (discussing EBRD's investment priorities and role in economic development in CEE nations).

¹⁶⁵ *Id.*

¹⁶⁶ Chris A. Wold & Durwood Zaelke, *Promoting Sustainable Development and Democracy in*

to cover the financing of environmental audits and the development of ELI programs.

USAID has a broader global focus, with regional bureaus in Africa, Asia, Latin America and the Caribbean, and the Near East.¹⁶⁷ Its budget includes nearly \$6.5 billion per year for all of its programs, with over half of these monies earmarked for developing countries.¹⁶⁸ USAID has recently shifted its policy towards consideration of environmental issues, and each of its regional bureaus has adopted an environmental strategy.¹⁶⁹ If some portion of USAID's massive resources could be redirected toward financing environmental audits and supporting ELI programs, it would go a long way toward enacting the types of reforms envisioned in this Article.

The World Bank, comprised of the International Bank for Reconstruction and Development (IBRD) and its affiliates, committed over \$21.7 billion in 1992 to projects and disbursed over \$16.3 billion.¹⁷⁰ The Bank aims "to help raise standards of living in developing countries by channeling financial resources to them from developed countries," and is committed to addressing environmental waste problems because "liability for past environmental damage" creates uncertainty for potential investors.¹⁷¹ Thus, the World Bank has stated that there is "an urgent need to establish [environmental] priorities" in Central and Eastern Europe.¹⁷² As with the other donors discussed, the potential for World Bank financing of Polish environmental audits and ELI programs is good.

Yet, even assuming that the multinational aid agencies rise to the challenge of financing environmental audits and providing ELI, the American and Western European experience with ELI suggests that these insurance schemes are not likely to break even financially. Instead, by providing this insurance at a loss,

Central and Eastern Europe: The Role of the European Bank for Reconstruction and Development, 7 AM. U. J. INT'L L. & POL'Y 559, 567-68 (1992).

¹⁶⁷ Susan Holly, *Focus on the Environment*, UNITED STATES DEP'T OF STATE DISPATCH, Dec. 7, 1992, at 872.

¹⁶⁸ Gary M. Ernsdorff, *The Agency for International Development and NEPA: A Duty Unfulfilled*, 67 WASH. L. REV. 133, 135 (1992).

¹⁶⁹ Holly, *supra* note 167, at 872.

¹⁷⁰ WORLD BANK, 1992 ANNUAL REPORT 17 (1993).

¹⁷¹ *Id.* at 17, 139.

¹⁷² *Id.* at 139.

international donors may be simply creating a covert subsidy for privatization through the stabilization of the insurance market. This suggests that international donors should proceed initially with an ELI scheme on a pilot project basis until they can determine the real costs and benefits of this form of aid.

What is the effect on Poland if no viable ELI scheme can be put into place and it has released the private investors from responsibility for the cleanup of existing but unknown pollution? In this worst case scenario, Poland may have to self-finance the cleanup of these hazardous wastes through higher taxes on future incomes or by diverting government spending from other areas in the future. However, at least it will have encouraged immediate private investment in its economy that can create new jobs and raise current income levels, while at the same time insuring that some environmental cleanup occurs promptly. Given the difficult policy choices that Poland faces, that may be the best that it can do at present.

CONCLUSION

Privatization in Poland and the other CEE nations is proceeding slowly with potentially large and uncertain environmental liabilities surrounding many of the companies that are being sold to the private sector. Investors need assurances that they will not face catastrophic future environmental liabilities before they will make major investments in private industry in these nations. On the other hand, Poland and the other CEE governments want to increase state revenues from the sale of these companies and produce funds for environmental cleanup.

Auction theory shows that these countries can achieve the results they want and yet induce private investment by adopting an environmental policy that: (1) requires a thorough environmental audit to determine the costs of cleaning up existing pollution; and (2) makes investors bear a fixed amount of these cleanup costs, while the national government is responsible for the remainder of the cleanup. This policy allows the state to negotiate flexibly over what portion of the cleanup costs it will assess against a purchaser and what portion it will absorb itself.

This policy could be criticized for not providing funds to cleanup existing but unknown pollution that is not uncovered in

the environmental audits. One possible solution to this problem is to require winning bidders to buy ELI insurance for a fixed price. If the ELI approach is adopted, multinational aid agencies could act as underwriters for the environmental liability insurance and help finance the initial environmental audits. Aid agencies are the natural candidates for this role because they can form regional insurance agencies that would spread these risks over a large pool of companies from different countries. Furthermore, this new role for aid agencies offers them a unique opportunity to encourage economic development, while also facilitating environmental cleanup.

However, the fragility of the ELI markets in America suggests that such markets in Poland are unlikely to be profitable. Before the international aid community makes a substantial resource commitment to subsidization of this type of insurance, it should first determine its costs and benefits through pilot projects.

