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Testimony

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Testimony of Chiara Trabucchi

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Thank you for the invitation to testify in today's hearing on matters relating to U.S. bank involvement with physical commodities. I am a Principal with Industrial Economics, Incorporated in Cambridge, Massachusetts. My expertise is in finance and economics, with specific focus on environmental risk management and financial assurance frameworks. Founded in 1981, Industrial Economics is a privately-owned professional services firm expert in the areas of financial and natural resource economics. The clients of the firm span the private and public sectors.

As requested by the Subcommittee in its November 4, 2014 letter, the focus of my testimony is on the environmental and catastrophic event risks that confront Financial Holding Companies (FHCs) involved in physical commodity activities, as well as mitigating strategies to manage these risks. To frame my testimony on these issues, I begin with an overview of financial assurance and environmental risk management.

Overview: Financial Assurance and Environmental Risk Management

The U.S. has a history of legislating liability and financial risk management regimes.[1] These regimes require that businesses remain financially responsible for consequences arising during the operational life of their facilities, and in many cases through post-closure and long-term stewardship. In so doing, businesses are obligated to demonstrate the ability to manage such risks, both technically and financially.

[1] See, for example, Oil Pollution Act § 1001(11), 33 U.S.C. 2701(11)(2007), 26 U.S.C. 9509 (Oil Spill Liability Trust Fund); Atomic Energy Act (including Price-Anderson Nuclear Industries Indemnity Act) 42 U.S.C. § 2210; Comprehensive Environmental Response, Compensation, and Liability Act § 221, 42 U.S.C. 9631 (2007); Superfund Amendments and Reauthorization Act § 517, 42 U.S.C. 9601 (11)(2006), 26 U.S.C. 9507 (Hazardous Substance Superfund).

Prudent risk management dictates consideration of who will finance the obligations arising from environmental and catastrophic risks, before such risks result in injury to private and public sector interests. Traditional financial assurance models presume that the owners or operators of industrial facilities are active business entities capable of setting aside the funds today to pay for future obligations.[2]

The prescriptive financial assurance requirements that underpin U.S. environmental regulation track to the expected value of probable loss, and are designed to incentivize businesses to site and operate their facilities in a safe and environmentally sound manner. Firms are more likely to undertake design and operating decisions that minimize environmental and remediation expenditures if they are held financially accountable and are not insulated from the consequences of their actions. Firms that fail to dedicate sufficient resources to infrastructure improvements and fail to maintain adequate financial assurances are less likely to be able to respond suitably to an environmental or catastrophic event, and the cost of doing so may be left for the U.S. taxpayers to absorb.

Environmental and Catastrophic Event Risks

There are various circumstances under which FHCs are permitted to hold interests in nonbanking organizations, including those engaged in commodities-related activities.[3] As I understand, such interests may be held pursuant to three provisions of the Bank Holding Company Act, as amended by the Gramm-Leach-Bliley Act, including complementary authority,[4] merchant banking authority,[5] or grandfather authority.[6]

Businesses involved with physical commodity activities face specialty or nonstandard risks. Incidents documented in the public record evidence that activities involving the

[2] Financial assurance refers to steps that businesses take to ensure that funds for incident-related expenditures are adequate and accessible when needed.
[3] See 79 FR 13 (Jan. 21, 2014), pp. 3329-3336. Complementary Activities, Merchant Banking Activities, and Other Activities of Financial Holding Companies Related to Physical Commodities.
[4] 12 U.S.C. § 1843(k)(1)(B).
[5] 12 U.S.C. § 1843(k)(4)(H).
[6] 12 U.S.C. § 1843(o).

extraction, storage, transport, or refining of natural resources can cause several types of injury including, for example, human health effects, fatality, ecological damage, property damage, business interruption, or surface/subsurface trespass. The means by which injury occurs often vary by commodity type; however, common pathways include pipeline rupture or explosion, impoundment failure, mine collapse, contaminant release, industrial accident, mechanical failure, transport accident, or explosive decomposition.[7]

Many factors will influence the degree of injury including, for example, the type, magnitude and duration of the incident; proximity of workers, businesses or residents to the incident; site topography and geology; the presence of protected or sensitive environmental resources; weather and atmospheric conditions; proximity to sources of potable surface or groundwater; and the efficacy of incident response efforts.

The interplay between the type of commodity, nature of the event, and degree of injury will shape the risk profile and the magnitude of financial consequences associated with compensatory and natural resource damages, incident response, site clean-up and reconstruction, and environmental remediation and restoration. History has shown that catastrophic events involving environmentally sensitive commodities can result in incident-response costs and compensatory damages that exceed the market value of the commodity involved; a single environmental or catastrophic event can result in billions of dollars in incident-related expenditures.[8] In some cases, financial impacts can exceed the available capital and financial assurances of the businesses involved, resulting in bankruptcy.[9]

[7] See, for example, Kalamazoo River Oil Spill (Michigan, 2010); Deepwater Horizon Oil Spill (Gulf of Mexico, 2010); Kirtland Air Force Base Jet Fuel Spill (New Mexico, 1999) San Bruno PG&E Corporation Pipeline Explosion (California, 2010); TVA Kingston Fossil Plant Coal Fly Ash Spill (Tennessee, 2008).

[8] See, for example, BP p.l.c., Annual Report and Form 20-F for fiscal year ended December 31, 2013 (Mar. 6, 2014); PG&E Corporation, Form 10-K for fiscal year ended December 31, 2013 (Feb. 11, 2014); and Tennessee Valley Authority, Form 10-K for fiscal year ended September 30, 2013 (Nov. 18, 2013).

[9] See, for example, *In re Asarco LLC et al.,* U.S. Bankruptcy Court for the Southern District of Texas, Case no. 05-21207, December 10, 2009; *In re Kaiser Aluminum Corp.*, Bankr. D. Del. No. 02-10429, August 22, 2003; and *In re: Tronox Inc. et al.*, U.S. Bankruptcy Court for the Southern District of New York, Case no. 1:09-bk-10156.

Environmental Risk Management Strategies

As noted, activities in physical-commodity markets create a suite of risks to private and public sector interests. Prudent risk management dictates that firms operating in these sectors establish risk mitigation strategies to minimize the likelihood of an environmental event, and if an event should occur, have the financial resources to remain financially responsible for their actions.

Essentially, firms should demonstrate the ability to assume and manage risks inherent to their industry. By doing so, the firm is able to assure shareholders, whether private or public, that the value of their investment will not erode, and with time, will gain value. Traditional environmental financial assurance models require that risks be bounded, quantified and accounted for either directly as an expense, or indirectly through third-party financial instruments (letters of credit, surety bonds, insurance, to name a few). Many third-party financial assurance instruments establish limits of liability; and, in some cases, exclusions for certain types of cost reimbursement.[10]

Adopting prudent financial assurance standards that are based on probable loss scenarios tailored to the risks posed by activities in physical-commodity markets can help ensure that funds are adequate and accessible when needed. Analytic tools exist to estimate the expected range of dollar values for potential damages on a site-specific, event-specific basis. Firms in the risk management industry commonly use these tools to derive probable loss scenarios that provide a measure of 'how bad it could get' if an adverse event were to occur. These analyses also can inform the amount of financial assurances, or committed capital, that is necessary to minimize financial exposure from an environmental or catastrophic event. A

[10] For example, in the context of environmental insurance, the nature of the policy, extent of allowable coverage and the degree to which exclusions exist for incident-related damages will dictate the degree to which the third-party assurance adequately protects the business from financial exposure should an environmental or catastrophic event occur. Further, should a court determine that a responsible party acted with "gross negligence" or engaged in "willful misconduct" the magnitude of incident-related expenditures may be significant, and third-party assurances may no longer be accessible to defray such expenditures.

responsible firm will ensure that it maintains sufficient financial assurance to cover the costs of such an outcome.

Firms with business ventures in physical commodity markets also may employ the following risk mitigating strategies in an effort to avoid the need for, or minimize the amount of, third-party financial assurances or committed capital.

One strategy involves reliance on the 'corporate veil' as a legal shield.[11] In the context of environmental risk management, this strategy involves establishing a series of holding companies, whereby the facility engaged in activities directly related to the physical commodity is sheltered behind a series of corporate veils. It also may involve spinning off the liabilities of a physical commodity business into a shell corporation to shield assets from financial exposure. The top-tier parent company believes itself shielded from the actions of its lower level subsidiary by virtue of the successive layers of corporate veils. In so doing, the parent company attempts to insulate itself from financial exposure arising from legacy environmental liabilities or catastrophic events occurring at the subsidiary facility. However, if the corporate veil between parent and facility is pierced, then the parent company may be held directly liable for the actions of the facility.[12]

Courts consider a variety of factors when determining whether the corporate veil may be pierced, and a parent company may be held directly liable for the actions of its facility.[13]

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[11] The presumption of a corporate veil, i.e., parents and subsidiaries are separate and distinct corporate entities, is a fundamental precept of corporate law. FHCs tend to conduct complementary commodities activities through non-banking subsidiaries. However, the use of a corporate veil as a legal shield does not necessarily translate to a de facto shield from financial responsibility. See, for example, Tronox Inc. v. Kerr McGee Corp. et al., case number 1:09-ap-01198, in the U.S. Bankruptcy Court for the Southern District of New York; Anadarko Petroleum Corporation, Form 10-K for fiscal year ended December 31, 2013 (Feb. 28, 2014); Press Release, Anadarko Petroleum Corporation, Anadarko Announces Settlement of Tronox Adversary Proceeding (Apr. 3, 2014) *available at* *http://www.anadarko.com/investor/pages/newsreleases/newsreleases.aspx?release-id=1915674*

[12] Another strategy employed by businesses is to hire a third-party contractor to store and transport the commodities through a lease or marketing arrangement. The ultimate parent company believes itself insulated by virtue of contracting the services. However, if the corporate veil between parent company and contractor is pierced, then the parent company may be held directly liable for the actions of the contractor. In addition, the parent company may be at greater financial risk if agreements exist that indemnify or release the contractor from liability.

[13] See *United States v. Bestfoods,* 524 U.S. 51, (1998)

These factors are highly case-specific, and may involve the presence of: 1) a *joint venture*, wherein direct liability may be attributed to a parent company if it operates the subsidiary's facility alongside, or in the stead of the subsidiary; 2) a *parent company agent*, wherein an employee of the parent company that has no position in the subsidiary may effectuate direct liability if that individual manages or directs activities at the subsidiary's facility; or 3) *dual officers and directors*, wherein parent company officers, who also serve as officers for the subsidiary, act in a way that is inconsistent with the norms of corporate behavior such that the dual officer is acting in a manner that is "plainly contrary to the interests of the subsidiary yet nonetheless advantageous to the parent."[14]

FHCs relying on the corporate veil as a risk mitigation strategy to avoid environmental liability may adversely impact the public in several ways. The assignment of 'liability' as it relates to environmental and catastrophic event risks informs the risk premium applied by FHCs when assessing whether a physical commodity activity represents a viable business venture. Generally, the greater the belief in one's legal shield, and attendant insulation from financial exposure, the lower the risk premium that is attached to the venture and the greater the likelihood that investment in environmentally risky ventures will proceed.

FHCs also may limit disclosure of the contingent liability associated with an environmental or catastrophic event, if they assume that they are legally shielded from the attendant financial consequences. As a result, shareholders may be deprived of important information regarding their investments. By relying on the strength of its legal shield, the FHC also may believe that it can act with impunity, avoiding or delaying infrastructure improvements and retaining insufficient financial assurance to hedge its environmental exposures.

To the degree the legal shield fails, and insufficient resources exist for the FHC to meet its financial responsibilities, then some or all of the burden for responding to an environmental incident may well rest with the U.S. taxpayers. To the degree the legal shield holds, and the

[14] Id.

subsidiary facility is insufficiently capitalized to meet its financial responsibilities, the U.S. taxpayers may be required to bear the financial burden associated with unfunded portions of the residual long-tailed liability.

A second risk mitigation strategy is to engage in physical commodity activities in foreign markets with less sophisticated regulatory and legal regimes than those present in the U.S. In so doing, the top-tier parent company believes that it, and the U.S. taxpayer, is insulated from environmental risks manifesting at the foreign subsidiary. However, the financial consequences of environmental or catastrophic events do not respect national borders. The financial crisis of 2008 highlighted the speed with which a global market contagion can take effect when a large corporation undervalues, and subsequently neglects to hedge, its long-tailed risks.

A third risk mitigation strategy is to assume expected loss scenarios at zero or near zero, under the presumption that ownership of the asset or physical system will transfer to another entity prior to an event occurring. Merchant banking investments can be held only for a limited amount of time.[15] Thus, FHCs may downward estimate their environmental risk exposure on the basis that the physical asset forms part of its portfolio only on a short-term basis. To the extent the FHC does record a probable loss, it may hedge only the lost market value of the commodities involved, and not the expected value of incident-response costs and compensatory damages. Further, the FHC may argue that even if deemed liable for an environmental event, the "amount" of liability is negligible when measured against its capital structure. The consequential impact is that the firm limits full disclosure of its environmental exposure, and potentially minimizes the amount of capital committed for financial assurance, placing greater risk of an unfunded liability with the U.S. taxpayers.

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[15] 12 U.S.C. § 1843(k)(4)(H).

Risk mitigation strategies that presume a limit of liability, whereby the FHC may be financially responsible but only for a discount on the dollar, contribute to moral hazard.[16] If the FHC believes itself insulated from risk, it may act less prudently with respect to the nature and scope of its involvement in physical commodity related activities. Further, the failure to recognize the breadth of potential exposure arising from its involvement in physical commodity activities coupled with the failure to maintain sufficient financial assurances to adequately hedge such exposure could compromise the financial soundness of the FHC and its subsidiary depository institutions. The consequential impact may be an inappropriate risk transfer to the public in the event the FHC and its nonbanking subsidiary are unable to meet their financial obligations. To the degree the affected FHC is a global systemically important bank (G-SIB), a risk transfer of this sort may send a potentially destabilizing shock through the financial markets.

The Impact of Transitory Investments in Physical Commodities

As I understand, of the 12 FHCs authorized to engage in one or more complementary commodities activities, 11 also are designated as G-SIBs.[17] Further, pursuant to automatic authority under section 4(o) of the Bank Holding Company Act, two of these 11 FHCs engage in a potentially broader range of activities involving environmentally sensitive physical commodities.[18]

When considering whether or not to invest in a business venture, financiers seek value creation. Returns on investment in physical-commodity ventures will reflect the cash flows generated by the project, attendant legacy environmental liabilities, and the terminal value of the assets comprising the project, i.e., either salvage, or sale. Investments with positive cash flows, minimal costs, and high terminal values represent attractive value propositions.

[16] Moral hazard refers to the specific situation where the risks of an unplanned event increase, because the responsible party is (partially) insulated from being held fully liable for resulting harm. If facilities are not held completely responsible for the consequences of their actions, arguably they will be less careful in their operating decisions, engaging in a less safe and less environmentally sound manner. Thus, the potential for environmental risk increases, because the chance of an unpredictable event occurring due to poor operating decisions increases.
[17] *See* 79 FR 13 (Jan. 21, 2014). p. 3332
[18] Id.

However, these investment goals tend not to align with the investment horizon of long-lived assets in physical commodity sectors. In general, the payback period for infrastructure improvements in commodity-related industries conflicts with short-term profit targets focused on maximizing near-term investment returns.

As noted, FHCs that make merchant banking investments in industrial facilities, such as power plants, pipelines, natural gas facilities, or refineries, expect to hold these assets for a relatively short period of time. The transitory nature of these investments suggests they may be less inclined to dedicate the financial resources, time, and expertise needed for operational and environmental improvements.

In so doing, the FHC is positioned to keep costs low and cash flows strong. However, any reluctance to make capital improvements can place the FHC at potentially greater risk of environmental and financial consequences when compared to peers that upgrade their infrastructure. By virtue of delaying or avoiding infrastructure improvements, the FHC may reap a short-term competitive advantage over market participants who do undertake long-term infrastructure investments. In addition, the ‘sticky’, illiquid nature of physical-commodity related assets coupled with the failure to keep current on infrastructure upgrades may render it challenging to find a buyer who is willing to absorb the risk profile of potentially long-tailed, legacy liabilities.

Supervisory Standards

There are varying degrees of supervisory standards imposed by the Board of Governors of the Federal Reserve System (Board) with respect to FHC involvement in physical commodity activities. As I understand, the nature and applicability of these standards vary depending on the statutory authority under which the FHC is engaged in such activities. For example, the Board placed prudential limits in orders permitting FHCs to engage in commodity-related activities under complementary authority. Specifically, the Board limited the total market value of all commodities so held to no more than five percent of the FHCs consolidated Tier 1 capital.[19] Conversely, with respect to FHCs engaged in commodity-related activities pursuant to section 4(o) grandfather authority, the limit is relaxed by statute to not more than five percent of the FHC's total consolidated assets.[20]

The ability of FHCs to meet either set of prescribed capital ratios may be immaterial if they have undervalued the long-tailed environmental risk exposure of their investments, either because they believe they will be legally insulated from liability or because they are "too big to fail." In the event the strength of the capital ratio is diluted, and risky investments proceed because the potential financial consequences of prospective environmental liabilities are undervalued, then some or all of an unfunded liability may be left for the U.S. taxpayers to bear in the event of an environmental or catastrophic event. Further, to the degree FHCs are broadly diversified, invested in a range of commodity-related activities with aggressive environmental risk profiles across an array of industrial sectors, their financial risk exposure may increase. If subsidiary institutions of G-SIBs also are separately financing the financial assurance instruments of other companies engaged in commodity-related activities, the negative impact of an environmental or catastrophic event on the stability of the financial holding company may be compounded.

Conclusion

FHCs involved in physical commodity activities should be required to appropriately value the breadth of their exposure to an environmental or catastrophic event, record these exposures in a transparent fashion on their financial statements, and maintain adequate financial assurances to offset the consequences of such exposure. Imposing financial standards on FHCs that are based on probable loss scenarios tailored to the specific environmental and catastrophic risks posed by activities in physical-commodity markets, on an event-specific and site-specific basis, will increase the likelihood that funds for incident-related expenditures will be adequate and accessible when needed. Tightening approval of complementary activities,

[19] See, for example, "Order Approving Notice to Engage in Activities Complementary to a Financial Activity," in response to a request by Citigroup, Inc. 89 Fed. Res. Bull. 508, 509 (Dec. 2003).
[20] 12 U.S.C. 1843(o)(2)

tightening controls with respect to the duration and nature of merchant banking investments, denying applications that involve environmentally sensitive commodities with long-tailed risk profiles, and eliminating the ability of any FHC to own or operate facilities engaged in the extraction, transportation, storage or distribution of commodities will further mitigate the risk exposure facing FHCs from environmental or catastrophic events.

Ultimately, the public requires assurances that FHCs engaged in physical commodity related activities will be accountable for their actions and not avoid their financial responsibilities by seeking shelter behind a legal shield or by underappreciating the long-tailed risks of their involvement. Shareholders are entitled to transparency. They require assurance that companies are correctly accounting for, and suitably disclosing, the environmental risks associated with their activities, as well as maintaining sufficient financial assurance to appropriately hedge such risks. The U.S. taxpayers have the right to expect that businesses operating in commodity-related sectors will manage their operations in a safe and environmentally sound manner and remain financially accountable for incident-related expenditures if an adverse event should occur.