Written Testimony of

Saule T. Omarova, Associate Professor of Law, University of North Carolina at Chapel Hill

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LARGE U.S. BANKING ORGANIZATIONS' ACTIVITIES IN PHYSICAL COMMODITY AND ENERGY MARKETS: LEGAL AND POLICY CONSIDERATIONS

I am an Associate Professor of Law at the University of North Carolina at Chapel Hill, where I teach subjects related to U.S. and international banking law and financial sector regulation. Since entering the legal academy in 2007, I have written articles examining various aspects of U.S. financial sector regulation, with a special focus on systemic risk containment and structural aspects of U.S. bank regulation. For six years prior to becoming a law professor, I practiced law in the Financial Institutions Group of Davis Polk & Wardwell and served as a Special Advisor on Regulatory Policy to the U.S. Treasury's Under Secretary for Domestic Finance.

For the past fourteen months, I've been working on a research project examining the involvement of large U.S. banking organizations in physical commodities and energy markets. The working draft of my article, entitled "The Merchants of Wall Street: Banking, Commerce, and Commodities" is available on the Social Science Research Network, at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2180647. This written testimony represents an abbreviated version of that article. For further details and full citations, please see the text of the article.

I. The Legal Background: Separation of Banking from Commerce

One of the core principles underlying and shaping the elaborate regime of U.S. bank regulation is the principle of separation of banking and commerce. Pursuant to that principle, U.S. commercial banks generally are not permitted to conduct any activities that do not fall within the relatively narrow band of the statutory concept of "the business of banking."[1] In addition, under the Bank Holding Company Act of 1956 ("BHCA"), all bank holding companies ("BHCs") – i.e., companies that own or control U.S. banks – are generally restricted in their ability to engage in any business activities other than banking or managing banks, although they may conduct certain financial activities "closely related" to banking through their non-depository subsidiaries.[2] The Gramm-Leach-Bliley Act of 1999 ("GLBA") amended the BHCA to allow certain BHCs qualifying for the status of "financial holding company" ("FHC") to conduct broader activities that are "financial in nature," including securities dealing and insurance underwriting.[3] All BHCs (including their subset, FHCs) are subject to extensive regulation and supervision by the Board of Governors of the Federal Reserve System (the "Board"), an agency in charge of administering and implementing the BHCA.

In effect, the entire system of U.S. bank and BHC regulation is designed to keep institutions that are engaged in deposit-taking and commercial lending activities from conducting, directly or through some business combination, any significant non-financial activities, or from holding significant interests in any general commercial enterprise. The main arguments in favor of maintaining this legal wall between the "business of banking" and purely commercial business activities have traditionally included the needs (1) to preserve the safety and soundness of insured depository institutions, (2) to ensure a fair and efficient flow of credit to productive economic enterprise (by, among other things, preventing unfair competition and conflicts of interest), and (3) to prevent excessive concentration of financial and economic power in the financial sector. The BHCA, which was originally envisioned as explicitly anti-monopoly legislation, embodies and seeks to implement these policy objectives.

Of course, in practice, the relationship between banking and commerce in the United States has never been simple, as the legal wall separating them has never been completely impenetrable. Numerous exemptions from the general statutory restrictions on affiliations, such as the exemption for unitary thrift holding companies or companies controlling certain state-chartered industrial banks, historically have allowed a wide variety of commercial firms to own and operate deposit-taking institutions. Banks and BHCs, in turn, have always been allowed at least some degree of involvement in non-financial activities, subject to various statutory and regulatory conditions and limitations. For example, BHCs are generally permitted to invest in up to 5% of any class of voting securities of any non-financial company – an exception designed to allow banking organizations to take small, non-controlling stakes in commercial businesses as passive investors.[4]

In the last decade, however, there has been a qualitative change in the practice of mixing banking and commerce, at least within the structure of large, systemically important FHCs. Thus, large U.S. FHCs – including Goldman Sachs, Morgan Stanley, and JPMorgan Chase & Co. ("JPMC") – have emerged as major merchants of physical commodities and energy, notwithstanding the legal wall designed to keep them out of any non-financial business. As explained in greater detail below, these three FHCs currently own and operate what appear to be significant businesses trading in crude oil, gas, refined petroleum products, electric power, metals, and other physical commodities. In conducting these activities, they function as traditional commodity merchants rather than purely financial intermediaries. That's why it is important to understand how the law has failed to prevent, and apparently has enabled, this extensive entry of banking organizations into the sphere of general commerce.

In an important sense, the story begins with passage of the GLBA in 1999. The GLBA is best known for partially repealing the Glass-Steagall Act and thereby opening the door to a mixing of commercial with investment banking. More significantly for present purposes, however, the GLBA also opened the door to a greater mixing of banking with commerce. Under the BHCA, as amended by the GLBA, there are currently three main sources of legal authority for FHCs (but not all BHCs) to conduct purely commercial activities, despite the general separation of banking from commerce: (1) merchant banking authority; (2) "complementary" powers; and (3) "grandfathered" commodities activities. In order to engage, directly or through any subsidiary, in any non-financial, commercial activity – including producing, refining, storing, transporting, or distributing any physical commodity – an FHC has to "fit" that activity within the legal confines of at least one of these three statutory exceptions created by the GLBA.

A. Merchant Banking Powers

The merchant banking authority permits an FHC to acquire or control, directly or indirectly, up to 100% of any kind of ownership interest – including equity or debt securities, partnership interests, trust certificates, warrants, options, or any other instruments evidencing ownership – in any entity that engages in purely commercial, as opposed to financial, activities.[5] By creating this new investment authority, the GLBA sought to enable FHCs to conduct a broad range of securities underwriting, investment banking, and merchant banking activities, subject to statutory conditions and limitations. At the height of the hightech stock boom, the GLBA's grant of merchant banking powers allowed FHCs to compete with securities firms and venture-capital funds by investing in technology start-ups.

The statute, however, does not define the term "merchant banking." In 2001, the Board and the Department of Treasury jointly issued a final rule implementing Section 4(k)(4(H) of the BHCA (the "Merchant Banking Rule").[6] The Merchant Banking Rule defines "merchant banking" activities and investments as those activities and investments that are not otherwise authorized under Section 4 of the BHCA.[7] In effect, the merchant banking power serves as a catch-all authority for FHCs to invest in commercial enterprises, as long as any such investment meets the following key requirements:

(1) the investment is not made or held, directly or indirectly, by a U.S. depository institution (such as a bank subsidiary of the FHC);
(2) the investment is made "as part of a bona fide underwriting or merchant or investment banking activity," which includes investments made for the purpose of appreciation and ultimate resale;
(3) the FHC either (i) is or has a securities broker-dealer affiliate, or (ii) has both (A) an insurance company affiliate that is predominantly engaged in underwriting life, accident and health, or property and casualty insurance (other than credit-related insurance), or providing an issuing annuities and (B) a registered investment adviser affiliate that provides investment advice to an insurance company;
(4) the investment is held "only for a period of time to enable the sale or disposition thereof on a reasonable basis consistent with the financial viability of the [FHC's] merchant banking investment activities;" and
(5) the FHC does not "routinely manage or operate" any portfolio company in which it made the investment, except as may be necessary in order to obtain a reasonable return on investment upon resale or disposition.

At least in theory, the requirement that a permissible merchant banking investment be made as part of a *bona fide underwriting or investment banking activity* imposes an important functional limitation on merchant banking activities. Even though an FHC is permitted to acquire full ownership of a purely commercial firm, the principal purpose of its investment must remain purely financial: making a profit upon subsequent resale or disposition of its ownership stake. The Board made clear that merchant banking authority was *not* designed to allow FHCs to enter the nonfinancial business conducted by any portfolio company. This explicitly stated statutory requirement "preserves the financial nature of merchant banking investment activities and helps further the [ ] purpose of maintaining the separation of banking and commerce."[8]

Another important requirement that shapes the practical usefulness of the merchant banking authority to FHCs investing in commercial companies is *the holding period* for merchant banking investments, which is generally limited to a maximum of ten years. If the investment is made through a qualifying private equity fund, the maximum holding period is fifteen years. In certain exigent circumstances, the FHC may petition the Board to allow it to hold the investment for some limited time in excess of the applicable holding period. Explicit limits on the duration of merchant banking investments underscore the principally financial nature of this activity.

Finally, the prohibition on FHCs' involvement in the *routine management and operation* of portfolio companies they own or control under the merchant banking authority is designed to serve as an additional safeguard against mixing banking and commerce. The Merchant Banking Rule lists the indicia of impermissible routine management or operation of a portfolio company, which include certain kinds of management interlocking[9] and contractual restrictions on the portfolio company's ability to make routine business decisions, such as hiring non-executive officers or employees or entering into transactions in the ordinary course of business.[10] Arrangements that do not constitute routine management or operation of a portfolio company include contractual agreements restricting the portfolio company's ability to take actions not in the ordinary course of business;[11] providing financial, investment, and management consulting advice to, and underwriting securities of, the portfolio company;[12] and meeting with the company's employees to monitor or advise them in connection with the portfolio company's performance or activities.[13] Importantly, the Merchant Banking Rule specifically allows an FHC to elect any or all of the directors of any portfolio company, as long as the board of directors does not participate in the routine management or operation of the portfolio company.[14]

B. Activities "Complementary" to a Financial Activity

As discussed above, the main justification for allowing FHCs to own or control commercial companies under the merchant banking authority is the notion of merchant banking as a fundamentally financial activity. However, the GLBA also contains a separate grant of authority for FHCs to conduct activities that are clearly not financial in nature but are determined by the Board to be "complementary" to a financial activity. The statute requires that the Board also determine that any such complementary activity "not pose a substantial risk to the safety or soundness of depository institutions or the financial system generally."[15]

Procedurally, the Board makes these determinations on a case-by-case basis. Any FHC seeking to acquire more than 5% of the voting securities of any class of a company engaged in any commercial activity that the FHC believes to be complementary to a financial activity must apply for the Board's prior approval by filing a written notice. In the notice, the FHC must specifically describe the proposed commercial activity; identify the financial activity for which it would be complementary and provide detailed information sufficient to support a finding of "complementarity;" describe the scope and relative size of the proposed activity (as measured by the expected percentages of revenues and assets associated with the proposed activity); and discuss the risks the proposed commercial activity "may reasonably be expected" to pose to the safety and soundness of the FHC's deposit-taking subsidiaries.[16]

The notice must also describe the public benefits that engaging in the proposed activity "can be reasonably expected" to produce. In making its determination, the Board is required to make a specific finding that the proposed activity would produce public benefits that outweigh its potential adverse effects.[17] The statutory list of such public benefits includes "greater convenience, increased competition, or gains in efficiency."[18] The Board must balance these benefits against such dangers as "undue concentration of resources, decreased or unfair competition, conflicts of interests, unsound banking practices, or risk to the stability of the United States banking or financial system."[19]

The legislative history of this provision shows that the industry deliberately sought the inclusion of the "complementary" clause as an open-ended source of legal authority for banking organizations to engage in any commercial activities that may become feasible or potentially profitable in the future. In congressional hearings, financial services industry representatives stressed "the importance of having the flexibility to engage in nominally commercial activities, particularly those related to technology and telecommunications, that support and complement [their] core business."[20] This is how the then Vice-Chairman of J.P. Morgan & Co. described the industry's vision of "complementary" business activities:

> The world of finance has changed. Information services and technological delivery systems have become an integral part of the financial services business. Financial firms use overcapacity in their back office operations by offering services to others such as telephone help lines or data processing for commercial firms. These activities may not be strictly "financial," yet they utilize a financial firm's resources and complement its financial capabilities in a manner that is beneficial to the firm without adverse policy implications.
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> Financial firms also engage in activities that arguably might be considered non-financial, but which enhance their ability to sell financial products. One example is American Express, which publishes magazines of interest to cardholders – *Food & Wine* and *Travel & Leisure*. *Travel & Leisure* magazine is complementary to the travel business (an activity permitted within the definition of financial in H.R. 10) in that it gives customers travel ideas which the company hopes will lead to ticket purchases and other travel arrangements through American Express Travel Services. Similarly, *Food & Wine* promotes dining out, as well as purchases of food and wine, all of which might lead to greater use of the American Express Card. These activities are complementary to financial business and thus should be permissible for financial holding companies.[21]

The industry's frequent references to *Travel and Leisure* and *Food and Wine* magazines effectively framed the congressional debate on "complementary" activities as a debate about relatively low-risk, low-profile activities, such as publishing and financial data dissemination. In reality, however, the possibility of having a flexible, undefined statutory category of permissible commercial activities was especially attractive to financial institutions seeking to take advantage of the dot-com boom and potentially expand into far riskier Internet ventures.[22] From the industry's perspective, an intentionally open-ended "complementary" authority was the key to such an expansion.

In April 1999, the Senate introduced its version of the reform bill that for the first time included the "complementary powers" provision. In June 1999, the House bill was amended to incorporate a similar authorization of "complementary" activities but only "to the extent that the amount of such complementary activities remains small in relation to the authorized activities to which they are complementary."[23] This express limitation disappeared from the final version enacted into law as part of the GLBA, leaving the Board free to set its own conditions for FHCs' complementary activities.

The Board has described the intended scope and purpose of its own authority to approve certain activities as complementary to an FHC's financial activity in relatively cautious terms, as allowing individual FHCs "to engage, *to a limited extent*, in activities that appear to be commercial if a *meaningful connection* exists between the proposed commercial activity and the FHC's financial activities and the proposed commercial activity would not pose *undue risks* to the safety and soundness of the FHC's affiliated depository institutions or the financial system."[24]

Curiously, between 2000 and 2012, the Board used its authority almost exclusively to approve physical commodity and energy trading activities as complementary to FHCs' financial activity of trading in commodity derivatives.[25] It seems that, after the GLBA was enacted, FHCs discovered that trading crude oil and wholesale electricity "complemented" their traditional financial activities much better than publishing travel and culinary magazines. This phenomenon raises critical questions about the scope and practical operation of the undefined and intentionally broad statutory concept of "complementarity."

C. Grandfathered Commodities Activities

In addition to granting FHCs potentially broad and vaguely defined merchant banking and "complementary" powers, the GLBA contains a special grandfathering provision for commodities activities. Section 4(o) of the BHCA explicitly authorizes any company that becomes an FHC after November 12, 1999, to continue conducting "activities related to the trading, sale, or investment in commodities and underlying physical properties,"[26] subject to the following conditions:

(1) the company "lawfully was engaged, directly or indirectly, in any of such activities as of September 30, 1997, in the United States;"
(2) the aggregate consolidated assets of the company attributable to commodities or commodity-related activities, not otherwise permitted to be held by an FHC, do not exceed 5% of the company's total consolidated assets (or such higher percentage threshold as the Board may authorize); and
(3) the company does not permit cross-marketing of products and services between any of its subsidiaries engaged in the grandfathered commodities activities and any affiliated U.S. depository institution.

The vague phrasing of this section seems to allow a qualifying new FHC to conduct not only virtually any kind of commodity trading but also any related commercial activities (for example, owning and operating oil terminals and metals warehouses), if it engaged in any commodities business – even if on a very limited basis and/or involving different kinds of commodities – prior to the 1997 cut-off date. Potentially, so broadly stated an exemption may open the door for large financial institutions to conduct sizeable commercial activities of a kind typically not allowed for banking organizations.[27]

To date, the outer limits of the commodities grandfathering clause have not been tested. It is difficult to assess, therefore, whether and to what extent this seemingly inconspicuous provision may be used to deal the final deathblow to the principle of separation of banking and commerce. The legislative history of this special grandfathering clause, however, provides valuable context in which to place analysis. It is also highly instructive from the point of view of the political economy of U.S. financial services regulation.

The grandfathering of pre-existing commodities trading activities was originally proposed in 1995 by Congressman Jim Leach as part of a broader set of provisions establishing a new charter for "wholesale financial institutions" ("WFIs"), which could conduct a wide range of banking activities but, importantly, *could not take federally-insured retail deposits*.[28] Under the proposal, companies that owned or controlled one or more WFIs (but not FDIC-insured banks) – Wholesale Financial Holding Companies ("WFHCs") – would be regulated and supervised by the Board but less stringently than regular FHCs.[29] These provisions of the House bill were designed specifically to create a so-called "two-way street" for investment banks, to enable them to acquire commercial banks and offer their institutional clients wholesale banking services, without becoming subject to the full range of activity restrictions under the BHCA.[30] Because WFIs and their parent-companies – dubbed "woofies" – would not have access to federal deposit insurance and, therefore, were not likely to pose any significant potential threat to the deposit insurance fund, the proposal authorized them to engage in a broader set of non-financial activities than regular FHCs backed by FDIC insurance. One of these explicit trade-offs involved the grandfathering of woofies' pre-existing commodities trading and related activities.[31]

Curiously, both Goldman and J.P. Morgan were among the big banks and securities firms that strongly pushed for the passage of the "woofie" charter. The proposal, however, became a subject of intense political contention in Congress. In contrast to the House bill, the Senate version of the reform legislation did not contain "woofie" provisions.[32] In April 1999, however, Senator Phil Gramm introduced an amendment that effectively replicated the commodity grandfathering provision for "woofies" in the House bill – but *without* any reference to "woofies."[33] In the Conference, the entire subtitle of the House bill dealing with "woofies" was dropped. The Senate's broader version of the commodity grandfathering clause, however, remained in the text of the GLBA and became the current Section 4(o) of the BHCA. Thus, an initially limited concession to financial institutions that were explicitly denied access to federal deposit insurance became an open-ended exemption available to all newly-registered FHCs fully backed by the federal government guarantees.

To sum up, the GLBA created significant opportunities for U.S. banking organizations to play a much more direct and active role in purely commercial sectors of the economy. In the years following the passage of the GLBA, large U.S. FHCs have used these statutory provisions to enter and grow operations in physical commodity and energy markets.

II. From the GLBA to the Global Financial Crisis: Physical Commodity Trading as "Complementary" to FHCs' Financial Activities

Even before the enactment of the GLBA, U.S. commercial banks and their affiliates had become actively involved in trading and dealing in financial derivatives – publicly traded futures and various over-the-counter contracts – linked to the prices of commodities. Since the mid-1980s, the OCC has been aggressively interpreting the bank powers clause of the National Bank Act to include derivatives trading and dealing as part of the "business of banking."[34] Similarly, under the BHCA, trading in commodity derivatives is generally treated as a financial activity that raises no controversial legal issues. Handling *physical* commodities, however, was a much different matter. Even physical settlement of permissible commodity derivatives – which necessitated taking ownership, transporting, and storing actual crude oil or iron ore – presented a problem in light of the general principle of separating banking from commerce. FHCs seeking to engage in physical trades had to find a specific legal authority to do so.

In the early 2000s, global commodities markets began experiencing an unprecedented price boom, which coincided with the increased push by large U.S. financial institutions to establish large-scale physical commodity trading operations. Between 2003 and 2008, several large U.S. FHCs and foreign banks successfully obtained Board orders allowing them to trade physical commodities as an activity "complementary" to the financial activity of trading and dealing in commodity derivatives.

In 2003, Citigroup became the first to receive Board approval of its physical commodities trading as a "complementary" activity.[35] Under the Board's order, Citigroup was allowed to purchase and sell oil, natural gas, agricultural products, and other non-financial commodities in the spot market and to take and make physical delivery of commodities to settle permissible commodity derivative transactions. The Board based its determination on four main considerations. First, the Board found that the proposed activities "flowed" from FHCs' legitimate financial activities, essentially providing them with an alternative method of fulfilling their obligations under otherwise permissible derivatives transactions. Second, permitting these activities would make FHCs more competitive vis-à-vis other financial firms not subject to regulatory restrictions on physically-settled derivatives transactions. Third, the proposed activities would enable FHCs to offer a full range of commodity-related services to their clients in a more efficient manner. Finally, conducting physical commodity activities would enhance FHCs' understanding of the commodity derivatives market.

To minimize the safety and soundness risks that this type of commercial activity may pose, the Board imposed a number of conditions on Citigroup's commodity-trading business. First, the market value of any commodities owned by Citigroup may not exceed 5% of its consolidated Tier 1 capital.[36] This market value limitation is generally meant to ensure that physical commodity trading does not grow too big, at least in relative terms. Second, Citigroup may take or make delivery only of those commodities for which derivatives contracts have been approved for trading on U.S. futures exchanges by the Commodity Futures Trading Commission ("CFTC"), unless the Board specifically allows otherwise. This requirement was designed to prevent Citigroup from dealing in finished goods and other items, such as real estate, which lack the fungibility and liquidity of exchange-traded commodities. Third, the Board made clear that Citigroup must conduct its physical commodity trading business in compliance with the applicable securities, commodities, and energy laws.

Finally, the Citigroup Order stated that the FHC was not authorized to (i) own, operate, or invest in facilities for the extraction, transportation, storage, or distribution of commodities; or (ii) process, refine, or otherwise alter commodities. The expectation was that Citigroup would use storage and transportation facilities owned and operated by unrelated third parties. The purpose of this important limitation is to minimize non-financial risks inherent in physical commodity trading: storage risk, transportation risk, and potentially serious environmental and legal risks associated with these activities. The Board relied on specific representations from Citigroup to the effect that it would exercise heightened care in avoiding these non-financial risks. Thus, Citigroup represented that it would require the owner of any vessel carrying oil on behalf of Citigroup to carry the maximum insurance for oil pollution available from a protection and indemnity club and to obtain a substantial amount of additional pollution insurance. Similarly, it promised to require all third-party storage facilities to carry a significant amount of oil pollution insurance from a creditworthy insurance company. Citigroup would also place age limitations on vessels and develop a comprehensive backup plan in the event any owner of a vessel or storage facility fails to respond adequately to an oil spill.

In subsequent years, the Board granted similar orders authorizing physical commodity trading activities on the part of FHCs and foreign banks treated as FHCs for purposes of the BHCA. These grants of complementary powers allowed large non-U.S. banks – such as UBS, Barclays, Deutsche Bank, and Societe Generale – to expand their worldwide physical commodities businesses by adding U.S. operations, albeit on a limited scale. In 2005, JPMC also obtained an order permitting the FHC to engage in physical commodity trading activities as complementary to its booming financial derivatives business.[37] In all of these cases, the Board imposed the same standard set of conditions and limitations originally articulated in the Citigroup Order.

In 2008, The Royal Bank of Scotland ("RBS"), then the U.K.'s largest banking group, received the Board's order authorizing a wide range of physical commodities and energy trading activities as complementary to RBS's financial derivatives activities.[38] RBS sought these expanded powers in connection with its acquisition of a 51% equity stake in a joint venture with Sempra Energy, a U.S. utility group. The joint venture, RBS Sempra Commodities ("RBS Sempra"), was set up to conduct a worldwide business of trading in various physical commodities – including oil, natural gas, coal, and non-precious metals – and be an active player in power markets in Europe and North America.

In the RBS Order, the Board significantly relaxed the standard limitations and expanded the scope of permissible trading in physical commodities. Thus, the Board allowed RBS to take and make physical deliveries of nickel, even though nickel futures were not approved for trading on U.S. futures exchanges by the CFTC. The Board reasoned that contracts for nickel were actively traded on the London Metals Exchange ("LME"), a major non-U.S. exchange subject to regulation comparable to the regulation of the U.S. futures exchanges. The Board also authorized physical trading in a long list of physical commodities – including natural gasoline, asphalt, kerosene, and other oil products and petrochemicals – despite the fact that contracts for these commodities have not been approved for trading on any major exchange. In authorizing physical trading in these commodities, the Board relied on the fact that these commodities were fungible and that contracts for them were traded in sufficiently liquid over-the-counter markets (through individual brokers and on alternative trading platforms).

The Board authorized RBS to hire third parties to refine, blend, or otherwise alter the commodities. In effect, this removed the ambiguity in previous orders by explicitly allowing RBS, for example, to sell crude oil to an oil refinery and then buy back the refined oil product. The Board determined that this activity essentially posed the same risks as hiring a third party to operate a storage or transportation facility, as permitted under previous orders. In addition, RBS made a specific commitment that it would not have exclusive rights to use the alteration facility.

The Board also permitted RBS to enter into long-term electricity supply contracts with large industrial and commercial customers. The Board noted that, while most commodities traded by FHCs were limited to wholesale markets, electric power could much more easily reach small retail customers. To ensure that RBS remained a wholesale electric power intermediary dealing only with sophisticated customers, the RBS Order specified the minimum consumption levels for customers to whom RBS was allowed to sell electricity on a long-term basis.

Finally, in the RBS Order and in two separate orders issued to a Belgian-Dutch bank, Fortis, the Board specifically approved so-called energy management and energy tolling services these institutions sought to perform in the United States.[39] RBS and Fortis were authorized to provide certain energy management services – consisting of transactional and advisory services – to owners of power generation facilities under Energy Management Agreements ("EMA"). FHC-permissible energy management services generally entail acting as an intermediary for a power plant owner to facilitate purchases of fuel and sales of power by the plant, as well as advising the owner on risk-management strategies. Thus, the energy manager – Fortis or RBS – would buy fuel for the plant from third parties and sell it to the plant in a mirror transaction. It would then purchase the power generated by the plant and resell it in the market. In effect, the energy manager would provide credit and liquidity support for the plant owner, including the posting of any required collateral for transactions. In addition, the manager also would assume responsibility for administrative tasks in connection with, and the hedging of exposure under, fuel and power transactions.[40]

These FHC-permissible energy management services, however, were subject to several conditions designed to limit the safety and soundness risks of such activities. Thus, the Board required that the revenues attributable to the FHC's energy management services not exceed 5% of its total consolidated operating revenues. The Board also required that all EMAs, pursuant to which the FHC engages in these activities, include certain mandatory provisions. For example, the EMA must mandate that the plant owner approve all contracts for purchases of fuel and sales of electricity, although the owner may be allowed to grant a standing authorization to the manager to enter into contracts that meet certain owner-specified criteria. The owner must retain responsibility for the day-to-day maintenance and management of the power generation facility, including hiring employees to operate it. The owner must also retain the right to (i) market and sell power directly to third parties, although the manager may have the right of first refusal; and (ii) determine the facility's power output level at any given time. In addition, the FHC is prohibited, directly or through its subsidiaries, from guaranteeing the financial performance of the power plant and from bearing any risk of loss if the plant is not profitable.

Energy tolling is generally similar to energy management. Under these arrangements, an FHC (the "toller") makes fixed periodic (usually, monthly) "capacity payments" to the power plant owner, to compensate the owner for its fixed costs, in exchange for the right to all or part of the plant's power output. The plant owner retains control over the day-to-day operation of the power plant. The toller pays for the fuel needed to produce the power it directs the owner to produce. The owner receives a marginal payment for each megawatt hour produced by the plant, as compensation for its variable costs plus a profit margin.

The Board approved energy tolling as a complementary activity because it found it to be an "outgrowth" of the relevant FHC's permissible commodity derivatives activities. The Board reasoned, in a familiar fashion, that permitting energy tolling would provide the FHC with valuable information on the energy markets, which would help it to manage its own commodity risk, and allow the FHC to compete more effectively with other financial firms not subject to the BHCA.

These competitors, of course, were Goldman and Morgan Stanley, at the time independent investment banks. The recent financial crisis, however, brought both of these firms under the direct jurisdiction of the Board as new FHCs – and raised the potential salience of U.S. banking institutions' commodity trading activities to a whole new level.

III. The "Game-Changing" Impact of the Crisis: Morgan Stanley, Goldman Sachs, and JPMC

One of the most profound and least appreciated consequences of the recent financial crisis is the emergence of a powerful trio of large FHCs with extensive physical commodities business operations: Morgan Stanley, Goldman, and JPMC. Two extraordinary crisis-driven phenomena led to this result: the emergency conversion of Morgan Stanley and Goldman into BHCs and the once-in-a-lifetime acquisition by JPMC of the commodity assets of two failing institutions, Bear Stearns and RBS.

On September 21, 2008, Morgan Stanley and Goldman received approval to register as BHCs subject to the Board's regulation and supervision, in a desperate effort to bolster investor confidence and avoid potential creditor runs on their assets. In the midst of the unfolding crisis, the Board approved these firms' applications to become BHCs almost literally overnight, without putting them through its normal, lengthy and detailed review process. It is highly unlikely that, at the time of the conversion, the Board focused on these firms' extensive physical commodities assets and activities – or gave full consideration to the question of how to deal with such activities in the long run.

JPMC followed a different route to the top of the Wall Street commodities game. In 2008, the firm acquired the physical commodity trading assets of failing Bear Stearns. In 2009-2010, JPMC bought the global commodities business of nationalized RBS. In a few short years, the firm's aggressive growth strategy transformed it into one of the three biggest U.S. banking organizations dominating global commodity markets.[41]

Thus, in the wake of the financial crisis, the Board finds itself facing a qualitatively different commodities business conducted by three of the largest U.S. banking organizations. Under the BHCA, a newly-registered BHC has up to five years from the registration date either to divest its impermissible nonbanking activities or to bring such activities into compliance with BHCA requirements.[42] The statutory five-year grace period for the non-conforming commodity activities of Goldman and Morgan Stanley ends in the fall of 2013, at which point the Board must make a potentially fateful decision whether these firms will be able to continue – and further expand – their commodity and energy merchant businesses. This decision requires a thorough understanding of the nature and scope of these institutions' actual involvement in physical commodities and energy markets.

A. The Informational Gap

Crucially, however, there is no meaningful public disclosure of banking organizations' assets and activities related to physical commodities and energy. Hence, it is important to preface discussion of what is at stake in the Board's coming decision with a note on the scarcity of information available to those who might wish to weigh in, including Congress.

Three difficulties explain why the American public does not yet have a full picture of what is happening in this space. The first difficulty is that publicly traded financial institutions – including all of the largest FHCs – typically report their assets, revenues, profits, and other financial information for the entire business segment, of which commodities trading is only a part. For instance, Goldman includes commodities in its Fixed Income, Currencies and Commodities division, which is included in the firm's Institutional Client Services business segment.[43] The same is true of Morgan Stanley, which includes commodities operations in its Fixed Income and Commodities division within the Institutional Securities business segment.[44] Neither firm provides full financial information attributable specifically to its commodities divisions.

The second difficulty is that, to the extent FHCs include in their regulatory filings financial information specific to their commodities operations, such information usually pertains to both commodity-linked derivatives operations and trading in physical commodities. As a result, most financial information reported under the "commodities" rubric relates to the derivatives business, leaving one to guess what is going on in the firms' physical commodities businesses. Because of this reporting pattern, industry analysts' estimates of the revenues or profits generated by large FHCs' commodities trading desks often include the estimated revenues and profits from purely financial transactions in commodity derivatives. More broadly, this disclosure format tends to de-emphasize – and thus make even less visible – the fact that financial institutions often act not only as dealers in purely financial risk but also as traditional commodity merchants.

Currently, large FHCs are required to report to the Board, on a quarterly basis, only one financial metric directly related to their physical commodities operations: the gross market value of physical commodities in their trading inventory.[45] These mandatorily reported data provide a hint of the potential scale of these activities. For instance, a look at this line item in JPMC's filings reveals a significant growth in the market value of physical commodities the company holds for trading purposes. Thus, as of March 31, 2009, JPMC reported the gross fair value of physical commodities in its inventory as a relatively modest $3.7 billion.[46] By September 30, 2009, the amount had doubled to $7.9 billion.[47] By the end of 2009, the number had further increased to slightly over $10 billion.[48] At the end of 2010, the reported amount reached above $21 billion.[49] As of December 31, 2011, JPMC reported the gross fair value of physical commodities in its inventory at approximately $26 billion.[50] As of March 31, 2012, the gross fair value of physical commodities in JPMC's inventory had slightly decreased to $17.2 billion.[51] At the end of 2012, that number was $16.2 billion.[52]

Morgan Stanley's regulatory filings show that, as of March 31, 2009, the gross fair value of physical commodities it held in inventory was slightly below $2.5 billion.[53] The reported value of this line item in Morgan Stanley's reports rapidly increased to $10.3 billion as of September 30, 2011,[54] before going slightly down to approximately $9.6 billion as of March 31, 2012.[55] At the end of 2012, the gross fair value of physical commodities in Morgan Stanley's inventory was about $7.3 billion.[56]

Goldman's filings show more fluctuations in the gross fair value of physical commodities in the firm's inventory during the same three-year period. Thus, as of March 31, 2009, Goldman reported $1.2 billion in this line item.[57] At the end of the next quarter, the number fell to $682 million.[58] It peaked at the end of 2010 at over $13 billion.[59] As of March 31, 2012, Goldman reported the gross fair value of its physical commodities inventory at $9.5 billion.[60] At the end of 2012, Goldman's number rose to $11.7 billion.[61]

As issuers of publicly traded securities, FHCs include the same data in their quarterly reports filed with the SEC. The gross market value of FHCs' physical commodity trading inventory, however, measures solely their current exposure to commodity price risk.[62] It does not provide a full picture of these organizations' actual involvement in the business of producing, extracting, processing, transporting, or storing physical commodities. To a great extent, this nearly exclusive regulatory focus on commodity price risk reflects the underlying assumption that U.S. banking organizations do not conduct any commodity-related activities that could potentially pose any additional risks to their safety and soundness or create systemic vulnerabilities. If one assumes that banking organizations act only as arms' length buyers and sellers of physical commodities, strictly for the purpose of providing *financial* risk management services to their clients, then it is logical to conclude that sudden price fluctuations in commodity markets are the main source of potential risk from such activities. In the absence of detailed information on U.S. banking organizations' actual commodities assets and operations, however, this assumption becomes dangerously unreliable.[63]

Gaps in the current system of public disclosure and regulatory reporting explain the near-absence of reliable, detailed data on the precise nature and full scope of U.S. banking organizations' physical commodity operations. The traditional lack of transparency in global commodity markets and the inherently secretive nature of the commodity trading industry create a third source of difficulties for understanding what exactly U.S. FHCs do, and how significant their role is, in these markets. A handful of large, mostly Switzerland-based commodities trading houses – including Glencore, Vitol, Trafigura, Mercuria, and Gunvor – dominate the global trade in oil and gas, petroleum products, coal, metals, and other products. Nearly all of these publicity-shy commodities trading firms are privately owned. They do not publicly report results of their financial operations and generally refrain from disclosing information about the structure or performance of their investments. Secrecy has always been an important attribute of the traditional commodities trading business, in which access to information is vital to commercial success and having informational advantage often translates into windfall profits. Given this lack of transparency and secretive nature of the commodities trading business, it is nearly impossible for an industry outsider – and even for most insiders – to gauge accurately the relative size and importance of U.S. FHCs as traders and dealers in the global markets for physical commodities.[64]

With these information-related caveats in mind, it is nevertheless possible to piece together enough data to get a sense of the *potential* significance of Goldman's, Morgan Stanley's, and JPMC's physical commodities businesses.

B. Morgan Stanley: Oil, Tankers, and Pipelines

During the years preceding the latest financial crisis, Morgan Stanley built a significant business trading in oil, gas, electric power, metals, and other commodity products. According to industry estimates, Morgan Stanley's commodities unit generated $17 billion in revenue over the past decade, trading both financial contracts and physical commodities.[65] Unlike Goldman, Morgan Stanley "has remained resolutely a merchant-trader, focusing on the business of storing or transporting raw materials."[66] According to a 2008 research report, traditional client "flow" business – market-making, selling indices to investors, and commodity risk hedging – constituted only about 10-15% of the firm's commodities activities.[67] About half of Morgan Stanley's commodities business is reportedly in crude oil and oil products, while about 40% is in power and gas.

Morgan Stanley has been using physical assets in trading energy and commodities since the mid-1980s. In the early 1990s, Morgan Stanley's oil trader, Olav Refvik, struck deals to buy and deliver oil and oil products to large commercial users around the globe and earned the nickname "King of New York Harbor" for accumulating a record number of leases on storage tanks at the key import hub, which gave the firm a great market advantage. During the same period, Morgan Stanley constructed power plants in Georgia, Alabama and Nevada, which allowed it to become a major electricity seller.

In the mid-2000s, Morgan Stanley began aggressively expanding its energy infrastructure investments, especially in oil and gas transportation and logistics. In 2006, Morgan Stanley acquired full ownership of Heidmar Inc., a Connecticut-based global operator of commercial oil tankers. Although Morgan Stanley sold 51% of equity in 2008, it still retained a 49% stake. Heidmar operates a fleet of more than 100 double-hull vessels and provides transportation and logistics services to major oil companies around the world.[68]

In September 2006, Morgan Stanley acquired, in a leveraged buyout, the full ownership of TransMontaigne Inc., a Denver-based oil-products transportation and distribution company. TransMontaigne markets "unbranded gasoline, diesel fuel, heating oil, marine fuels, jet fuels, crude oil, residual fuel oils, asphalt, chemicals and fertilizers."[69] The company is affiliated with a fuel terminal facility operator, TransMontaigne Partners L.P., which operates oil terminals in several U.S. states and Canada.[70] In 2005, the last year TransMontaigne was a publicly listed company, it reported revenues of about $8.6 billion and assets of slightly less than $1.2 billion.[71] Forbes estimated the company's 2011 revenues at $12 billion.[72]

Both Heidmar and TransMontaigne are subsidiaries of Morgan Stanley Capital Group Inc. ("MS Capital Group"), Morgan Stanley's commodities and energy trading arm through which it holds equity stakes in multiple commodity businesses. According to Morgan Stanley's own description of its physical commodities business activities in its SEC filings,

> In connection with the commodities activities in our Institutional Securities business segment, we engage in the production, storage, transportation, marketing and trading of several commodities, including metals (base and precious), agricultural products, crude oil, oil products, natural gas, electric power, emission credits, coal, freight, liquefied natural gas and related products and indices. In addition, we are an electricity power marketer in the U.S. and own electricity generating facilities in the U.S. and Europe; we own TransMontaigne Inc. and its subsidiaries, a group of companies operating in the refined petroleum products marketing and distribution business; and we own a minority interest in Heidmar Holdings LLC, which owns a group of companies that provide international marine transportation and U.S. marine logistics services.[73]

The SEC filings of TransMontaigne Partners, the only publicly-traded subsidiary of MS Capital Group and TransMontaigne, provide a fascinatingly detailed picture of one significant facet of Morgan Stanley's physical commodities business: "oil terminaling and transportation."[74] TransMontaigne Partners owns and operates a vast infrastructure, including numerous crude oil and refined products pipelines and terminals along the Gulf Coast, in the Midwest, in Texas, along the Mississippi and Ohio Rivers, and in the Southeast. The company receives refined oil products and liquefied natural gas from customers via marine vessels, ground transportation, or pipelines; stores customers' products in its tanks located at the terminals; monitors the volume of stored products in its tanks; provides product heating and mixing services; and transports the refined products out of its terminals for further distribution.

In 2011, TransMontaigne Partners earned over $152 million in revenues, of which almost $107 million came from its affiliates.[75] The company's primary customers are its indirect parent-entities, MS Capital Group and TransMontaigne. This is how the company described the business activities of MS Capital Group:

> Morgan Stanley Capital Group is a leading global commodity trader involved in proprietary and counterparty-driven trading in numerous commodities markets including crude oil and refined products, natural gas and natural gas liquids, coal, electric power, base and precious metals and others. Morgan Stanley Capital Group has been actively trading crude oil and refined products for over 20 years and on a daily basis trades millions of barrels of physical crude oil and refined products and exchange-traded and over-the-counter crude oil and refined product derivative instruments. Morgan Stanley Capital Group also invests as principal in acquisitions that complement Morgan Stanley's commodity trading activities. Morgan Stanley Capital Group has substantial strategic long-term storage capacity located on all three coasts of the United States, in Northwest Europe and Asia.[76]

TransMontaigne Partners' SEC filings offer a rare glimpse into Morgan Stanley's sprawling network of assets and activities in the energy sector. Ownership of critical infrastructure assets – including terminals, pipelines, and marine vessels – greatly facilitates Morgan Stanley's trading of energy and commodities, in both physical and derivatives markets. At the same time, such a direct and active involvement in the business of oil and gas processing, storage, and transportation creates significant risks for Morgan Stanley. Global energy prices are notoriously volatile and depend on a complex interplay of various factors, including geopolitical ones. More importantly, however, these activities expose the firm to potential legal liability, financial loss, and reputational damage in the event of industrial accidents, oil spills, explosions, terrorist acts, or other catastrophic events that cause serious environmental harms.[77] It is difficult to quantify the extent of this risk, especially in the case of potential large-scale environmental disaster, but it is not difficult to imagine that it may be potentially fatal even for a large company with a formidable balance sheet. For a financial institution whose main business depends greatly on its reputation and market perceptions of the quality of its credit, even a remote risk of such an event may be too much to live with.

C. Goldman Sachs: Metals, Warehouses, and Other Things

Wall Street's biggest commodities dealer by revenues, Goldman is "credited with attracting the investors to the asset class with the creation of the Goldman Commodity Index in 1991."[78] According to industry estimates, the firm's commodities business – including derivatives and physical trading – generated annual revenues of $3-4 billion between 2006 and 2008.[79]

Goldman's commodities trading business goes back at least to 1981, when the firm bought its principal commodities trading subsidiary, J. Aron & Co., which at the time specialized mostly in trading futures and options on precious metals and coffee.[80] In the 1980s-90s, Goldman focused primarily on client-driven financial transactions in commodities and built a dominant position in the energy futures and OTC derivatives markets. In the first decade of this century, however, Goldman has also been expanding into physical commodities, with ventures into coal and shipping trading. For example, in early 2005, the press reported that Goldman had bought 30 electricity-generating plants.[81] At least in part, this may have been a reference to Goldman's 2003 acquisition of Cogentrix Energy LLC, a major power producer based in Charlotte, North Carolina. At the time, Cogentrix owned and operated 26 coal- and natural gas-fired power plants.[82]

During the same period, Goldman reportedly made significant acquisitions in the oil and gas sector, including a significant stake in Kinder Morgan, Inc. ("KMI"), a major oil transportation and terminaling company that controls approximately 37,000 miles of pipelines and 180 terminals handling crude oil, natural gas, and refined petroleum products.[83] According to KMI's SEC filings, at the end of 2011, Goldman owned (through several controlled funds) 19.1% of the company's common stock.[84] In addition, the report listed each of the two managing directors of Goldman who also served on KMI's board of directors as holders of 19.1% of the company's common stock.[85] It appears that Goldman has similarly structured private equity investments in other energy companies, including Cobalt International Energy Inc. ("CIE"), a Houston-based deep-water oil exploration and production company.[86]

Even after becoming an FHC subject to the activities restrictions of the BHCA and the consolidated supervision by the Board, Goldman continued to acquire significant hard assets in the commodities sector. For instance, in May 2012, the Financial Times reported that Goldman made a $407 million deal with Brazil's Vale, to acquire full ownership of Vale's Colombian coal assets, including the El Hatillo coal mine, Cerro Largo coal deposit, and a coal port facility on Colombia's Atlantic coast. The deal also included an 8.43% equity stake in the railway connecting the mines to the port.[87]

Goldman's subsidiary, GS Power Holdings LLC, holds another prized asset in Goldman's commodities empire: Metro International Trade Services LLC ("Metro"). Metro is a metals warehousing company that owns and operates nineteen warehouses in the Detroit metropolitan area, as well as warehousing facilities in Europe and Asia. By acquiring Metro in February 2010, Goldman gained control of one of the largest metals warehouses in the global network of storage facilities approved by the LME. This acquisition strategically positioned the firm in the middle of the global metals trading chain. Storing large quantities of metal generates lucrative rental income for warehousing companies like Metro. The warehousing business is particularly profitable during economic downturns when slackening demand forces producers to hold more of their commodity inventories in storage. Not surprisingly, Goldman was not the only commodity trader that rushed to acquire large LME-approved warehouses in the wake of the global financial crisis.[88] The recent entry of financial institutions effectively turned this traditionally low-profile industry run by dispersed independent operators into yet "another arm of Wall Street."[89]

This transformation has caused serious turbulence in the global market for aluminum, the second most widely used metal in the world after steel.[90] Aluminum producers store their metal in LME-approved warehouses and then sell their metal to industrial users. The buyers claim their purchased quantities of aluminum from the warehouse, which must deliver it to the specific buyer.[91] Ownership of the key LME warehouses by large commodity traders with integrated financial and physical metals operations allows them to control the supply of aluminum to commercial users and, as a result, to control prices.[92] This led other market participants to worry about unfair advantage for such firms, as they now can use their knowledge of how much metal is stored, as well as their ability to control delivery of physical metal to consumers, to determine their own trading strategies.

Goldman and its subsidiary Metro became the key figures in a recent ugly battle over global aluminum prices. In mid-2011, Metro reportedly stored nearly half of the global inventories of the industrial aluminum.[93] Months-long delivery delays at the firm's storage facilities in Detroit caused much discontent among big commercial users of aluminum, such as the soft-drink giant Coca-Cola and the aluminum sheet-maker Novelis. In mid-2011, Coca-Cola filed a complaint with the LME alleging that Goldman intentionally limited the releases of aluminum from its Metro-operated warehouses in order to inflate the price of aluminum. In addition to potentially enabling Goldman to sell its own aluminum at artificially inflated prices, holding aluminum in the warehouse generates additional fees for Metro, as the buyers have to pay for each day their purchased metal stays in the warehouse.[94]

In response to these complaints, the LME doubled the minimum delivery rates for large warehouses, including Metro. Nevertheless, warehousing bottlenecks and record-high aluminum premiums continued to wreak havoc in global aluminum markets. By mid-2013, the reported waiting time for aluminum in Detroit was longer than 460 days.[95] In July 2013, the LME's new leadership proposed another change to its rules to require warehouses experiencing logjams to deliver out more metal than they take in.[96] The new rule, however, is expected to become effective only starting in April 2014.

D. JPMC: The New "Whale?"

Unlike Morgan Stanley and Goldman, JPMC has always been a regulated BHC subject to activity restrictions. As discussed above, in 2005, JPMC received the Board's approval to trade physical commodities as an activity "complementary" to its commodity derivatives business. Under the terms of the Board's approval, however, JPMC did not have legal authority to own, operate, or invest in any physical assets and facilities for the extraction, transportation, processing, storage, or distribution of commodities.

The financial crisis became the key turning point for JPMC, which emerged from it significantly larger and even more systemically important than before the crisis. In 2008, JPMC bought the key assets of Bear Stearns, an independent investment bank on the verge of failure. As part of the deal, JPMC acquired commodity trading assets and operations, including a significant network of electric power generating facilities owned by Arroyo Energy Investors L.P., a commodities subsidiary of Bear Stearns.

After acquiring Bear's energy assets, JPMC's CEO Jamie Dimon and the head of commodities operations Blythe Masters began aggressively expanding the firm's physical commodities business. In 2008, the firm started trading physical oil and looking at "more ways to boost its presence in energy markets."[97] In addition to hiring more people in its commodities and energy trading and investment team, JPMC started drawing plans for strategically expanding its metals and energy operations in Asia.

JPMC's once-in-a-lifetime chance to become a major player in commodities came in late 2009, when the European Commission ordered nationalized RBS to divest its riskier assets, including its 51% stake in RBS Sempra, a large U.S. commodities and energy trading company. In July 2010, JPMC bought RBS Sempra's global oil, global metals and European power and gas businesses. In addition to bringing in approximately $1.7 billion of net assets, the $1.6 billion acquisition nearly doubled the number of clients of JPMC's commodities business and enabled the firm "to offer clients more products in more regions of the world."[98]

In November 2010, JPMC also bought RBS Sempra's North American power and gas business, which added further strength to the operations the firm inherited from Bear Stearns. This purchase propelled JPMC into the top tier of natural gas and power marketers in North America.[99] Several months after closing the deal, the firm boasted having control of "a diverse network of physical assets, including 70 billion cubic feet per day of storage capacity – an increase of almost 100% since the purchase – and almost double the transport capacity it had had previously."[100]

By late 2010, JPMC had emerged as a formidable contender for the title of the dominant Wall Street energy and commodities trading house, previously shared by Morgan Stanley and Goldman. JPMC's official website describes the firm as one of the leading energy market-makers in the world:

> We are active in both the physical and financial markets worldwide for crude oil and oil-refined products, coal, power and gas, and have extensive capabilities in the voluntary and mandatory emissions markets. […]. Our geographically diverse physical asset portfolio includes more than 40 North American locations. In addition, we are one of the largest natural gas traders in the U.K. and European markets, with daily volumes of approximately 100 million therms.[101]

In addition to oil, gas, and electric power assets, JPMC's crisis-driven acquisitions allowed the firm to become a significant force in global markets for metals. In late 2011, JPMC bought a stake in LME from the bankrupt futures firm, MF Global, and became the exchange's largest shareholder. As part of its Sempra deal, JPMC acquired control of Henry Bath, a UK-based metals warehousing company that owns and operates one of the largest LME-approved global metal storage networks. According to the company's own description,

> Today, Henry Bath, a subsidiary of JP Morgan, engages in the storage and shipping of exchange traded metals and soft commodities. It offers warehousing, shipping transportation and customs clearance services. The company stores and issues exchange traded warrants for commodities, including aluminium, copper zinc, lead, nickel, tin, steel billets, cocoa, coffee and plastics.[102]

Media reports indicate that JPMC has been building up its metals warehousing business in order to strengthen the competitive position of Henry Bath vis-à-vis Glencore's Pacorini and Goldman's Metro. The reports of JPMC moving large amounts of metal from other warehouses into its own suggest that the firm may be rebuilding its stocks and consolidating its warehousing business in key European locations. This is likely to exacerbate the conflict within the aluminum industry over the unprecedented degree of power that the largest warehousing companies like Henry Bath and Metro exercise over global aluminum prices.

JPMC may be in a particularly sensitive situation because of its controversial move to market the first exchange-traded fund ("ETF") backed by physical copper.[103] JPMC has been reportedly buying up copper since 2010, in anticipation of its ETF launch.[104] The firm's ability to remove from the market and store in its own warehouses vast quantities of this critically important metal potentially lends more credibility to the fears of market cornering expressed by the opponents of JPMC's ETF plan. It makes it difficult for JPMC to argue that trading copper-backed ETF shares would not artificially inflate global copper prices.

JPMC's newly acquired physical commodity and energy assets and operations, however, raise a more fundamental legal question as to whether the firm has the statutory authority to own such assets and to conduct such operations in the first place. The Board's original order authorizing JPMC's physical commodity trading does not allow JPMC to own or operate any assets involved in generating, storing, transporting, or processing commodities. In fact, even energy tolling and energy management were outside of the scope of that original authorization. Presumably, as part of its Sempra acquisition, JPMC had to obtain the Board's approval to continue the commodities activities permissible under the RBS Order. Unfortunately, it is difficult to locate any public records showing how and when the Board amended its original authorization, to allow JPMC to conduct "complementary" commodities activities of RBS, including energy tolling and energy management.

It appears that JPMC generally conducts its physical commodity operations subject to Board-imposed limitations. According to the firm's SEC filings, it entered into operating leases for "premises and equipment" used for "energy-related tolling service agreements."[105] JPMC also enters into various forms of "supply and off-take" contracts with producers and processors of commodities, such as oil refineries. These contracts are functionally similar to energy management arrangements JPMC and other FHCs have with electric power plants under the "complementary" authority grants. Thus, in April 2012, business media reported that Delta Airlines was planning to purchase Conoco's idle Trainer oil refinery, in order to lower its jet fuel costs, and that JPMC agreed to finance the entire production process through a supply and off-take agreement. Under the arrangement, JPMC would purchase and pay for delivery of the crude for the refinery's operation, sell the jet fuel to Delta at a wholesale price, and then sell other refined products on the open market. In July 2012, JPMC entered into a similar supply and off-take arrangement with the largest oil refinery on the East Coast, owned and operated by Sunoco and Carlyle. These transactions significantly reduce refineries' working capital needs and offload the risk on JPMC, which has far greater balance-sheet capacity.[106] In effect, JPMC contractually replicates owning oil refineries without violating the letter of the law.

Nevertheless, some of JPMC's recently acquired physical commodity operations appear to exceed the boundaries of the Board's "complementary" power grants. In April 2012, JPMC sold its metals-concentrate trading unit to Connecticut-based Freepoint. The sale was reportedly part of the mandatory divestment by JPMC of RBS Sempra's commercial assets and activities impermissible for FHCs under the BHCA.[107] The firm's ownership and operation of Henry Bath, however, continue to present a potential problem in this regard.

JPMC's speedy rise to the top of the Wall Street commodity-trading circle has created new legal and reputational risks for the firm. In the summer of 2012, the FERC launched an investigation into JPMC's electric power trading practices. The agency began its probe in response to complaints from electric power grid operators in California and the Midwest in 2011, alleging that JPMC's power traders had intentionally bid up wholesale electricity prices by more than $73 million. Artificial inflation of wholesale prices benefits power generators (which is functionally JPMC's role) but translates into higher power prices for households and other end-users. As recent FERC enforcement actions demonstrate, the focus of today's fraud prevention in power markets is on more subtle trading strategies that seek to manipulate the price of physical power in order to increase the value of the manipulator's financial bets. JPMC's role as the leading global energy derivatives dealer potentially exacerbates concern over the firm's traders engaging in this type of Enron-reminiscent market manipulation.[108]

Even in the absence of conclusive evidence of any wrongdoing on the part of JPMC, however, the very fact of FERC's investigation – and potentially severe regulatory sanctions – raises uncomfortable questions about the potential impact of the firm's newly expanded energy operations on its overall institutional culture and reputation. These concerns become particularly acute in the context of the infamous "London Whale" scandal that exposed deep problems with JPMC's risk management practices. Both cases demonstrate the inherent difficulty of drawing regulatory distinctions among various transactions based on the firm's intentions and proclaimed business purposes. Just like a legitimate hedge can become a lucrative bet under favorable market conditions, so can financing-and-risk-management arrangements with oil refineries and power generators become a profitable proprietary business of energy merchanting.

How the law should deal with this complex reality is one of the key questions in today's financial services regulation reform.

IV. Potential Legal and Policy Implications of Allowing This Trend to Continue

Even a cursory overview of publicly available information shows that the current commodity operations of Morgan Stanley, Goldman, and JPMC defy carefully drawn pre-crisis regulatory boundaries of FHC-permissible physical commodities activities – and, if permitted to continue, effectively nullify the principle of separating banking from commerce. Broadly, there are two potential ways to resolve this doctrinal tension: either FHCs' commercial activities must be curtailed, or the law should be changed to reflect FHCs' newly acceptable role as global commodity merchants.

Unfortunately, the BHCA does not provide a clear and effective *legal* framework for making a fundamental policy decision on the socially efficient degree of mixing banking and commercial commodities activities. There are, however, important *policy* reasons to suggest that such mixing, at least to the degree it is done today, may be socially undesirable and inefficient. Some of these policy concerns grow out of the traditional rationales for the separation of banking and commerce, while others reflect broader regulatory principles and normative commitments.

A. The Indeterminacy of the Current Statutory Framework

Under the BHCA, as amended by the GLBA, it is likely that all (or nearly all) of the existing physical commodity assets and activities of Goldman, Morgan Stanley, and JPMC can be permitted to continue as compliant with the formal requirements of the statute. However, while technically plausible, such an interpretation brings to the surface a deep tension within the existing legal regime between the *letter* and the *spirit* of the law.

The commodity grandfathering provision of Section 4(o) of the BHCA potentially provides the greatest latitude for Morgan Stanley and Goldman, as two FHCs qualifying for this exemption, to continue owning and operating their extensive commodity assets "and underlying physical properties." On its face, Section 4(o) does not impose any qualitative limits on grandfathered activities: the language of the provision is broad and open to expansive interpretation. Yet, as discussed above, the legislative history of this grandfathering provision, originally conceived as a special concession to "woofies" – financial institutions without access to FDIC-insured retail deposit-taking – indicates that it was not conceived to operate as a completely open-ended commodity-business license for banking organizations. It is doubtful that, at the time the GLBA was passed, Congress actually envisioned the current extent and depth of these firms' physical commodities operations.

In the alternative, Morgan Stanley, Goldman, and JPMC can seek the Board's approval of their existing commodities activities as complementary to FHC-permissible financial activities, such as commodity derivatives. As discussed above, the BHCA does not define what "complementary" means and leaves it largely to the Board's discretion to determine whether any particular activity fits that description. An examination of published Board orders shows the regulator's general reluctance to allow FHCs to incur non-financial risks associated with owning and operating oil rigs, coal mines, refineries, storage tanks, pipelines, and tankers. As is the case with any agency policy, however, the Board's position may change in response to various internal and external factors. Moreover, even if the Board insists on its pre-crisis determination that "complementary" commodity trading activities exclude direct ownership and operation of physical assets, the practical impact of that seemingly bright-line border may be rather limited. FHCs can (and do) use various forms of "sale and lease-back" or "supply and off-take" arrangements to replicate the effects of owning and operating individual key links in the commodity supply chain.[109]

Finally, FHCs can use merchant banking authority to keep, and even expand, their current physical commodity assets. Merchant banking is a potentially tempting choice, because it can be used without the Board's pre-approval: the FHC can make the determination that it holds certain investments under that statutory authority. As discussed above, FHC-permissible merchant banking investments must meet certain statutory requirements intended to prevent FHCs from actively running the commercial businesses of their portfolio companies. The holding period limitations and the prohibition on FHCs' involvement in "routinely managing" portfolio companies' businesses seem tough in principle but are not necessarily "deal-killers." It is not difficult to structure specific investments to meet the formal statutory criteria without giving up real control. It is difficult to ascertain, however, whether these investments are, in fact, truly passive private equity interests acquired purely for the purposes of profitable resale. In practice, FHCs can – and most likely do – exercise informal influence on portfolio companies' business decisions, which may be just as effective as a formal management role.

It may be tempting to assume that the post-crisis regulatory reforms mandated by the Dodd-Frank Act – such as, e.g., the Volcker Rule – impose (at least, prospectively) effective limits on FHCs' commercial activities. Yet, there is little basis for any such assumption at this point. Although the Dodd-Frank Act reiterated Congress's general commitment to the principle of separation of banking and commerce, the new law does not directly address the issue of the proper scope of FHC-permissible non-financial activities. It is not clear whether and how the regulatory implementation of the Act will ultimately affect large FHC's physical commodities operations.

B. Potential Policy Concerns and Implications

Even though, as a technical matter of law, the U.S. FHCs' current physical commodity-trading and related activities may be fully permissible under the BHCA, there are several compelling policy reasons to resolve the resulting doctrinal tension in favor of explicitly curtailing such activities. In the absence of comprehensive and detailed information on the precise nature and scale of individual FHCs' physical commodity interests and activities, it is difficult to arrive at a definitive conclusion in this regard. Nevertheless, the potential gravity of these policy concerns demands their prompt and thorough investigation.

1. Safety and Soundness; Systemic Risk

From the perspective of safety and soundness of individual banking organizations, there is at least one straightforward, plausible argument for allowing FHCs to conduct physical commodities trading as a diversification strategy. Diversifying their business activities by investing in oil pipelines and metals warehouses should make FHCs less vulnerable to periodic crises in financial markets. Trading, transporting, storing, and processing physical commodities are volatile businesses, and that volatility is expected to continue for the foreseeable future. It is a reliably profitable business, as global commodity prices have been rising since the early 2000s and, despite sudden ups and downs, are generally expected to continue rising in response to increasing global demand. Intermediating physical commodities trading is the surest way to profit from these trends.

As professional intermediaries, financial institutions appear to be perfectly positioned to assume that lucrative role. Large FHCs have huge balance sheets, access to cheaper financing, superior access to information and in-house research capacity, and sophisticated financial derivatives trading capabilities. To the extent that utilizing these unique advantages allows FHCs to be more efficient, low-cost suppliers of physical commodities and related logistics services, allowing them to perform that function should produce economic benefits for the FHCs and their customers.[110]

This traditional economic efficiency-based argument, however, misses or ignores a crucial fact – namely, that running a physical commodities business also diversifies the sources and spectrum of risk to which FHCs become exposed as a result. Let us imagine, for example, that an accident or explosion on board an oil tanker owned and operated by one of Morgan Stanley's subsidiaries causes a large oil spill in an environmentally fragile area of the ocean. As the shocking news of the disaster spreads, it may lead Morgan Stanley's counterparties in the financial markets to worry about the firm's financial strength and creditworthiness. Because the full extent of Morgan Stanley's clean-up costs and legal liabilities would be difficult to estimate upfront, it would be reasonable for the firm's counterparties to seek to reduce their financial exposure to it. In effect, it could trigger a run on the firm's assets and bring Morgan Stanley to the verge of liquidity crisis or collapse.

But there is more. What would make this hypothetical oil spill particularly salient is a shocking revelation that the ultimate owner of the disaster-causing oil tanker was not Exxon-Mobil or Chevron but Morgan Stanley, a major U.S. banking organization not commonly associated with the oil business. That revelation, in and of itself, could create a far broader controversy that would inevitably invite additional public scrutiny of the commodity dealings of Goldman, JPMC, and other Wall Street firms. Thus, in effect, an industrial accident could potentially cause a major systemic disturbance in the financial markets. These hidden contagion channels make our current notion of interconnectedness in financial markets seem rather quaint by comparison. FHCs' expansion into the oil, gas, and other physical commodity businesses introduces a whole new level of interconnections and vulnerabilities into the already fragile financial system.

The basic economic efficiency-based argument may also be overstating the claim that forcing U.S. FHCs out of the physical commodity and energy business would leave consumers' needs in those markets unmet. Traditional commodity trading companies will almost certainly step in to fill any such gap. These non-bank commodity traders may not be able to offer the same "fully integrated risk management" services to industrial clients by assuming nearly all financial risk (and logistical headaches) inherent in such clients' commodity-driven businesses. That possibility lends some support to the argument for letting banks act as super-intermediaries, or commodity traders *plus*.

At the same time, however, it begs the real question as to *why* banks are able to out-compete other commodity traders in this realm, or where that all-important *plus* comes from. Huge balance sheets, high credit ratings, and access to plentiful and relatively cheap financing – these factors enable large banking organizations to absorb their clients' commodity-related risks at a lower cost than anyone else could. These unique advantages ultimately stem from the fact that, by taking deposits and serving as the main channel for the flow of payments and credit throughout the economy, banks perform a "special" public service and, therefore, enjoy a special public subsidy through access to federal deposit insurance, special liquidity facilities, and other forms of implicit government guarantees. In this context, the discussion should focus not on a factual question whether banks are in the best position to offer these services more efficiently but on a normative question: should banks be offering them at all?

If banks' superior ability to provide commodity-related services is rooted in the federal subsidy, the answer to that question is not as simple as the efficiency argument assumes.[111] If taxpayers are the party ultimately conferring this precious economic benefit on banks, taxpayers also have the right to stop banks from abusing that benefit by engaging in risky commercial activities unrelated to their "special" functions. The choice of moving into the physical commodities business does not belong solely to bank executives – the choice ultimately belongs to the taxpaying, bank-subsidizing public. If JPMC's management wants to be free to make profits by drilling for and shipping crude oil, it should be able to do so without the estimated $14 billion in annual federal subsidy it receives as a "special" banking institution.[112]

2. Conflicts of Interest, Market Manipulation, and Consumer Protection

Banks' extensive involvement in physical commodity activities also raises significant concerns with respect to potential conflicts of interest and market integrity. One of the key policy reasons for separating banking from commerce is the fear of banks unfairly restricting their commercial-market competitors' access to credit, the lifeblood of the economy. Without reliable empirical data, it is difficult to assess the extent to which this obvious form of conflict of interest currently presents a problem in the commodities sector. Yet, there is a heightened danger that banks may use their financial market power to gain an unfair advantage in commodities markets, and vice versa.

Goldman's role in the ongoing aluminum warehousing crisis provides an instructive example. As discussed above, Coca-Cola complained that Goldman intentionally created a bottleneck at its Metro warehouses in order to drive up market prices for aluminum and sell their own metal stock at the inflated price. It is curious, however, that more industrial end-users did not publicly complain, a lot sooner and louder, about this potential conflict-of-interest situation. It is very likely that commercial companies deliberately avoided an open confrontation with Goldman because it was a Wall Street powerhouse with which they had – or hoped to establish – important credit and financial-advisory relationships. If they were facing Metro as an independent warehousing operator, they might have felt less pressure to keep quiet – and to continue paying high aluminum premia. This form of subtle counterparty coercion may be difficult to detect and police but it raises a legitimate question for further inquiry.

Moreover, metal warehousing operations are only one element in a large financial conglomerate's complex business strategy involving trading in metals and related financial contracts. Goldman is one of the largest traders of derivatives in the metals markets. Unlike an independent warehouse operator, Goldman can potentially use its storage capabilities not only to generate rental income but also to move commodity prices in a way that would benefit its derivatives positions. This directly implicates serious issues of market integrity. As one of the world's biggest dealers in commodity derivatives, Goldman can devise and execute highly sophisticated trading strategies across multiple markets. The ability to influence prices of physical assets underlying derivatives, in effect, completes the circle. It makes Goldman's derivatives profits not so much a function of its traders' superior skills or executives' talents, but primarily a function of the firm's *structural market power*.

It should be noted here that one of the fundamental drivers of the value of any derivative is the degree of volatility of the value of the underlying asset. If the value of the underlying asset is predictably stable, neither hedgers nor speculators would have any reason to enter into derivative contracts tied to that value. Conversely, the higher the volatility, the higher the demand for derivatives instruments allowing transfer of the underlying risk. This basic fact reveals the fundamental incentive for a derivatives dealer with sufficient market power in the underlying physical commodity markets to maintain price volatility in such markets, regardless of the fundamentals of supply and demand, as the necessary condition of continuing viability and profitability of its commodity derivatives business.

Market manipulation in commodities markets has long been a hot button issue. In contrast to securities market, commodities markets are particularly vulnerable to so-called market power-based manipulation that may not involve fraud or deceptive conduct.[113] A large trader can significantly move prices of futures and underlying physical commodities not only by "cornering" the market in a particular product but also by placing very large sell/buy orders in excess of available liquidity. This salience of market power in commodities market manipulation underscores the potential dangers of allowing large financial institutions to dominate both commodity derivatives markets and the related cash commodity markets.

Finally, artificially high premia for industrial aluminum translate into higher consumer prices for a wide range of products, from soft drinks to automobiles. Similarly, if JPMC's commodity traders did, in fact, inflate wholesale power prices in California, their manipulative conduct accounts for retail consumers' higher electricity bills. Generally, commodity price inflation is a major component of consumer price inflation. To the extent that banks' direct involvement in physical commodity markets distorts traditional supply-and-demand dynamics and contributes to commodity price volatility, it becomes an important matter of consumer protection.

An unsustainable rise in consumer prices, driven by the rising prices of basic commodities, has significant macro-economic consequences. The recent spikes in nationwide gasoline and heating oil prices illustrate these systemic effects. Despite the general prevalence of traditional supply-and-demand theories, there is also a legitimate argument that a significant factor explaining these prices is purely financial speculation in oil.[114] Large financial intermediaries enable and amplify such speculation by creating, marketing, and dealing in commodity-linked financial products. Indirectly, these intermediaries' physical commodities operations contribute to speculative bubbles in key commodities, which ultimately increase the cost of living for the ordinary Americans. Because rises in the costs of basic goods tend to disproportionally affect the poor, this artificially-created price volatility can widen socio-economic disparities that have tangible and potentially grave consequences for social cohesion and civil unity. From this perspective, large FHCs' physical commodities businesses raise potential concerns not only as a matter of consumer protection but also as a matter of macro-prudential regulation and even political stability.

3. Concentration of Economic and Political Power

Concerns with potential conflicts of interest, market manipulation, and consumer protection are closely connected to the broader policy concern with excessive concentration of economic power. That concern looms especially large in the context of FHCs' physical commodity trading.

It is difficult to overestimate the importance of this issue for the long-term health and vitality of the U.S. economy and of American democracy. Writing almost a century ago, Justice Brandeis famously warned against the dangers of combination – or "concentration intensive and comprehensive" – that gave financial institutions direct control over industrial enterprises.[115] Brandeis saw the "subtle and often longconcealed concentration of distinct functions, which are beneficial when separately administered, and dangerous only when combined in the same persons" as a great threat to economic and political liberties.[116]

The global financial crisis of 2008-2009 demonstrated the continuing salience of Brandeis's concerns. The taxpayer-funded bailout of large financial conglomerates whose risky activities had contributed to – and, indeed, largely created – the crisis reignited the century-old debate on the role of "financial oligarchy" in American politics.[117] Not surprisingly, one of the central themes in post-crisis regulatory reform is the prevention of future bailouts of "too big to fail" financial institutions. The ongoing transformation of large U.S. financial institutions into leading global merchants of physical commodities and energy, however, significantly complicates the reformers' task. By giving banks that are already "too big to fail" an additional source of leverage over the economy – and, consequently, the polity – it elevates the dangers inherent in cross-sector concentration of economic power to a qualitatively new level. When large financial conglomerates that control access to money and credit also control access to such universal production inputs as raw materials and energy, their already outsized influence on the entire economic – and, by extension, political – system may reach alarming proportions.

For these reasons, in rethinking the foundational principle of separating banking and commerce, especially in the context of energy and commodity activities, it is critically important to remember Brandeis's warnings. Reassessing and reasserting the original antitrust spirit of U.S. bank holding company regulation may be the necessary first step in the right direction.

4. Institutional Governability and Regulatory Capacity

An examination of FHCs' physical commodity activities also highlights potential problems such activities pose from the perspective of regulatory design, regulatory process, and firm governability.

Understanding what exactly large U.S. FHCs own and do in global commodity markets is the critical first step toward developing an informed regulatory approach to this issue. Under the current regulatory disclosure system, there is no reliable way to gather and evaluate this information. Existing public disclosure is woefully inadequate to understand and evaluate the nature and scope of U.S. banking organizations' physical commodities trading assets and activities. It may not be feasible or desirable to mandate detailed disclosure of every commercial activity of a large FHC, but when it comes to energy and other key commodities, what is hidden from the public view may be highly consequential.[118] It is imperative, therefore, to mandate *full public disclosure* of financial institutions' direct and indirect activities and investments in physical commodities and energy.

Simply mandating more disclosure, however, will not be enough. The recent crisis has demonstrated the limits of disclosure as a regulatory tool, especially in the context of complex markets, institutions, and instruments. Complexity is one of the fundamental drivers of systemic risk, and managing complexity is one of the key challenges in today's financial services sector. Large U.S. financial conglomerates are already complex, in terms of their corporate structure, risk management, and the breadth and depth of financial services and products they offer. Allowing these firms to run extensive commercial operations that require specialized technical and managerial expertise adds to their internal complexity. Firm-wide coordination and monitoring of operations, finances, risks, and legal and regulatory compliance become all the more difficult in that context. This is particularly true of capital-intensive, operationally complex, and potentially high-risk physical commodity activities. An effective integration of these operations may be further complicated by potential shifts in corporate culture. Thus, the traditionally aggressive risk-taking culture of commodity traders (think Enron) may push the already questionable ethics of bankers beyond the limits of prudency and legality. All of these factors present serious challenges for large *financial firms' internal governance and governability*.

More importantly, mixing banking with physical commodity trading creates potentially insurmountable challenges from the perspective of *regulatory efficiency and capacity*. Direct linkages, through the common key dealer-banks, between the vitally important and volatile financial market with the vitally important and volatile commodity and energy market may amplify the inherent fragility of both markets, as well as the entire economy. Who can effectively regulate and supervise this new super-market? And how should it be done?

The U.S. system of financial services regulation is already highly fragmented and ill-suited to detecting and reducing systemic risk across different *financial* markets and products. The expansion of FHCs' activities into yet more new areas subject to extensive regulation under very different regulatory schemes – environmental regulation, workplace safety regulation, utility regulation – lays the foundation for jurisdictional conflicts on an unprecedented scale. In addition to the several federal bank regulators, the SEC and CFTC, banking organizations become subject to regulation by the DOE, the FERC, the Environmental Protection Agency, the Federal Trade Commission, and possibly other federal and state agencies. Yet, none of these many overseers are likely to see the whole picture, leaving potentially dangerous gaps in the regulation and supervision of these systemically important super-intermediaries. An additional complicating factor is the high strategic and geopolitical significance of energy trading. The flow of oil and gas in global markets is as much a matter of foreign policy and national security as it is a matter of business. Accordingly, the State Department could also be expected to insist on a say in the affairs of large U.S. FHCs that import and export oil, gas, and other strategically important commodities.

In terms of substantive regulatory oversight, the situation is equally discouraging. In addition to being the umbrella regulator for BHCs, the Board is now primarily responsible for prudential regulation and supervision of all SIFIs. As discussed above, physical commodities activities expose financial institutions to qualitatively different, and potentially catastrophic, risks. In addition, commodities operations create potential new channels of contagion and systemic risk transmission. Yet the Board is not equipped to regulate and supervise companies that own and operate extensive commodity trading assets: oil pipelines, marine vessels, or metal warehouses.

It is not enough to pay lip service to these concerns by simply requiring FHCs to conduct their commercial activities in compliance with the applicable securities, commodities, energy, and other laws and regulations. Those regulatory schemes are not designed with SIFIs in mind and, therefore, do not address the unique risks – enterprise-wide and systemic – posed by their activities. Realistically, however, the Board has little choice but rely on FHCs' promises to comply with such parallel regulatory regimes. Without the necessary expertise and a clear legal mandate, neither the Board nor any other financial regulator can be expected to exercise meaningful oversight of large financial institutions' commodity businesses and the risks they generate. This natural limit on regulatory capacity is an important reason for serious reconsideration of FHCs' role in physical commodities markets.

V. Conclusion

This testimony has described the legal, regulatory, and policy aspects of an ongoing transformation of large U.S. FHCs into global merchants of physical commodities and energy. In the absence of detailed and reliable information, it is difficult to draw definitive conclusions as to the social efficiency and desirability of allowing this transformation to continue. What we can already ascertain about U.S. financial institutions' physical commodity assets and activities, however, raises potentially serious public policy concerns that must be addressed through fully informed public deliberation. Even if big U.S. FHCs were, in fact, to scale down their physical commodity operations either in response to current regulatory developments or as a temporary market adjustment, it would not obviate the need for such deliberation. Addressing these policy concerns in a timely, open, and publicly minded manner remains a task of the utmost importance, both as an economic matter and as a matter of democratic governance.

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[1] 12 U.S.C. §24 (Seventh).
[2] 12 U.S.C. §§1841-43.
[3] 12 U.S.C. §1843(k)(1)(A).
[4] 12 U.S.C. § 1843(c)(6),(7).
[5] 12 USC § 1843(k)(4)(H).
[6] 12 C.F.R. Part 225, Subpart J.
[7] The Merchant Banking Rule provides the following definition:

> Section 4(k)(4)(H) of the Bank Holding Company Act (12 U.S.C. 1843(k)(4)(H)) and this subpart authorize a financial holding company, directly or indirectly and as principal or on behalf of one or more persons, to acquire or control any amount of shares, assets or ownership interests of a company or other entity that is engaged in any activity not otherwise authorized for the financial holding company under section 4 of the Bank Holding Company Act. For purposes of this subpart, shares, assets or ownership interests acquired or controlled under section 4(k)(4)(H) and this subpart are referred to as "merchant banking investments."

12 C.F.R. § 225.170.
[8] 66 Fed. Reg. 8466, 8469 (Jan. 31, 2001).
[9] 12 C.F.R. § 225.171(b)(1). An FHC is deemed to be engaged in the routine management or operation of a portfolio company if (1) any director, officer, or employee of the FHC or certain of its subsidiaries (including depository institutions, securities broker-dealers, and merchant banking subsidiaries) serves as, or has the responsibilities of, an executive officer of a portfolio company; or (2) any executive officer of the FHC or any of the same subsidiaries as mentioned above serves as, or has the responsibilities of, an officer or employee of the portfolio company. *Id.* An FHC is presumed to be routinely managing or operating a portfolio company if (1) any director, officer, or employee of the FHC serves as, or has the responsibilities of, a non-executive officer or employee of a portfolio company; or (2) any officer or an employee of the portfolio company is supervised by any director, officer, or employee of the FHC (other than in that person's capacity as a director of the portfolio company). 12 C.F.R. § 225.171(b)(2). An FHC may rebut these presumptions by providing the Board with sufficient information showing the absence of routine management or operation. 12 C.F.R. § 225.171(c).
[10] 12 C.F.R. § 225.171(b)(1).
[11] 12 C.F.R. § 225.171(d)(2).
[12] 12 C.F.R. § 225.171(d)(3)(i),(ii).
[13] 12 C.F.R. § 225.171(d)(3)(iii).
[14] 12 C.F.R. § 225.171(d)(1). The portfolio company must employ officers and employees responsible for routinely managing and operating its affairs. An FHC may engage, on a temporary basis, in the routine management or operation of a portfolio company only if such actions are necessary to save the economic value of the FHC's investment and to obtain a reasonable return on such investment upon its resale or disposition. 12 U.S.C. § 1843(k)(4)(H)(iii); 12 C.F.R. § 225.171(e).
[15] 12 U.S.C. § 1843(k)(1).
[16] 12 C.F.R. § 225.89(a).
[17] 12 C.F.R. § 225.89(b)(3).
[18] 12 U.S.C. § 1843(j)(2)(A).
[19] *Id.* This list essentially reiterates the policy concerns underlying the principle of separation of banking from commerce.

[20] *The Financial Services Act of 1998--H.R. 10: Hearing before the S. Comm. on Banking, Housing, and Urban Affairs*, 105th Cong. 172 (1998) (prepared statement of John G. Heimann, Chairman, Global Financial Institutions, Merrill Lynch & Co., Inc., on behalf of the Fin. Servs. Council).

[21] *H.R. 10—The Financial Services Modernization Act of 1999: Hearings Before the Comm. On Banking and Fin. Servs.*, 106th Cong. 294-95 (1999) (prepared testimony of Michael E. Patterson, Vice Chairman, J.P. Morgan & Co., Inc., on behalf of the Financial Servs. Council).

[22] As the CEO of Bank One Corp. put it, "The area on the commerce side that is most interesting to me is what is happening on the Internet." *H.R. 10—The Financial Services Modernization Act of 1999: Hearings Before the Comm. On Banking and Fin. Servs.*, 106th Cong. 18 (1999) (testimony of John B. McCoy, President and CEO, Bank One Corporation).

[23] H.R. 10, 106th Cong. § 102 (as reported by H. Comm. on Banking & Fin. Servs., June 15, 1999) (internal citations omitted).). An earlier House Committee Report included a similar provision. *See* H.R. Rep. No. 106-74, pt. 1, at 5 (Mar. 23, 1999).

[24] 68 Fed. Reg. 68,493 (Dec. 9, 2003) (emphasis added).

[25] As of mid-2012, the Board approved only one other type of activity – certain disease management and mail-order pharmacy services – as complementary to a financial activity of underwriting and selling health insurance. Wellpoint, Inc., 93 Fed. Res. Bull. C133 (2007). Wellpoint, which was not a BHC, submitted an application to the FDIC to obtain deposit insurance for its new Utah-chartered industrial bank. Although owning an industrial bank would not make Wellpoint a BHC subject to the BHCA's activity restrictions, Wellpoint had to request the Board's determination because, at the time, the FDIC-imposed temporary moratorium on providing deposit insurance to new industrial banks prohibited approval of any such applications unless the applicant (Wellpoint, in this instance) engaged exclusively in FHC-permissible activities. *See* Moratorium on Certain Industrial Bank Applications and Notices, 72 Fed. Reg.5290 (Feb. 5, 2007).

[26] 12 U.S.C. § 1843(o).

[27] The statutory 5% limit on the FHC's total consolidated assets attributable to the grandfathered commodities activities is designed to prevent a dramatic shift in the business profile of such an FHC from financial to purely commercial commodities activities. In absolute terms, however, even such a small fraction of total consolidated assets of a large FHC may allow for a considerable expansion of its commercial business of owning, producing, transporting, processing, and trading physical commodities. Such an expansion may very well implicate the fundamental policy concerns underlying the principle of separation of banking and commerce.

[28] Financial Services Competitiveness Act of 1995,104 H.R. 1062 (Version 1), Sec. 109.

[29] *Id.* In the 1995 versions of the House bill, these WFI holding companies were referred to as "Investment Bank Holding Companies." *Compare* 104 H.R. 1062 (Version 1), Sec. 109 *with* 105 H.R. 10 (version 3), Sec. 131.

[30] This is how an American Bankers Association report described the 1997 proposal:

> To allow for two-way affiliations between banks and securities firms, a new type of holding company would be permitted. This would be the investment bank holding company. These companies would have still wider powers than the new bank holding company format would bring, but the separation between banking and commerce would still be retained. These special holding companies could own wholesale financial institutions (WFIs, also known as "woofies") which would be uninsured but also not subject to standard bank holding company firewalls.

Steve Cocheo, *Outlook Brightens for New Banking Laws*, ABA BANKING JOURNAL, Feb. 27, 1997, at 10.

[31] Goldman lobbied for specific inclusion of the commodity grandfathering clause in the "woofie" provisions of the House bill because of its existing investment in J. Aron, a commodity trading company. In fact, at the time, the commodity grandfathering provision was "widely viewed as the "Goldman" exception." Martin E. Lybecker, *Financial Holding Companies and New Financial Activities Provisions of the Gramm-Leach-Bliley Act*, in BACK TO THE FUNDAMENTALS: INSURANCE REGULATION, BROKER-DEALER REGULATION, AND INVESTMENT ADVISER REGULATION (ABA CENTER FOR CLE NAT'L INSTITUTE, NOV. 8-10, 2001), fn. 11.

[32] S. 900, 106th Cong. (as placed on the Senate calendar, Apr. 28, 1999).

[33] S. Rep. 106-44 (Apr. 28, 1999), at.3.

[34] Saule T. Omarova, *The Quiet Metamorphosis: How Derivatives Changed the "Business of Banking,"* 63 U. MIAMI L. REV. 1041 (2009).

[35] Citigroup, Order Approving Notice to Engage in Activities Complementary to a Financial Activity, 89 Fed. Res. Bull. 508 (2003) [Citigroup Order].

[36] In 2003, Citigroup reported its total consolidated Tier 1 capital of nearly $66.9 billion. *See* Citigroup Inc., Form 10-K, Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, for the fiscal year ending on December 31, 2003, at 56. This puts the numerical limit for the market value of the physical commodities held by Citigroup for 2003 at slightly above $3.1 billion.
[37] JPMorgan Chase & Co., 92 Fed. Res. Bull. C57 (2006). Bank of America and Wachovia received Board approvals to conduct physical commodities trading in 2006-07.
[38] The Royal Bank of Scotland Group plc, 94 Fed. Res. Bull. C60 (2008) [RBS Order].
[39] Fortis S.A./N.V., 94 Fed. Res. Bull. C20 (2008) [Fortis Order]; the RBS Order; Board Letter Regarding Fortis S.A/N.V. (May 21, 2008) [2008 Fortis Order].
[40] The administrative tasks include, among other things, arranging for third parties to provide fuel transportation or power transmission services, coordinating fuel purchases and power sales, negotiating and monitoring contracts with the plant owner's counterparties.
[41] *Morgan Stanley May Sell Part of Commods Unit: CNBC*, REUTERS, June 6, 2012, Among non-U.S. financial institutions, only UK's Barclays and Germany's Deutsche Bank currently compete with Morgan Stanley, Goldman and JPMC in global commodity markets.
[42] 12 U.S.C. § 1843(a)(2).
[43] The Goldman Sachs Group, Inc., 2011 Form 10-K, at 1- 4. The firm's Institutional Client Services activities are organized by asset class and include both "cash" and "derivative" instruments. Cash instruments refer to trading in the assets underlying derivative contracts, such as "a stock, bond or a barrel of oil." *Id*. at 3. The firm's annual report does not provide details on their physical commodity operations and simply lists commodity products FICC trades: "Oil and natural gas, base, precious and other metals, electricity, coal, agricultural and other commodity products." The report states that FICC generally facilitates client transactions and makes markets in commodities. *Id.* at 115.
[44] Morgan Stanley, 2011 Form 10-K, at 2-3. According to the company's description of its activities,

> The Company invests and makes markets in the spot, forward, physical derivatives and futures markets in several commodities, including metals (base and precious), agricultural products, crude oil, oil products, natural gas, electric power, emission credits, coal, freight, liquefied natural gas and related products and indices. The Company is a market-maker in exchange-traded options and futures and OTC options and swaps on commodities, and offers counterparties hedging programs relating to production, consumption, reserve/inventory management and structured transactions, including energy-contract securitizations and monetization. The Company is an electricity power marketer in the U.S. and owns electricity-generating facilities in the U.S. and Europe.

[45] *See* "Consolidated Financial Statements for Bank Holding Companies - FR Y-9C," Schedule HC-D ("Trading Assets and Liabilities"), Item M.9.a.(2) ("the "Gross Fair Value of Physical Commodities held in Inventory"). Form FR Y-9C is a quarterly report filed with the Board by BHCs with total consolidated assets of $500 million or more. 12 U.S.C. § 1844; 12 C.F.R. § 225.5(b).
[46] JPMC, FR Y-9C, March 31, 2009, Schedule HC-D, Item M.9.a.(2).
[47] JPMC, FR Y-9C, September 30, 2009, Schedule HC-D, Item M.9.a.(2).
[48] JPMC, FR Y-9C, December 31, 2009, Schedule HC-D, Item M.9.a.(2).
[49] JPMC, FR Y-9C, December 31, 2010, Schedule HC-D, Item M.9.a.(2).
[50] JPMC, FR Y-9C, December 31, 2011, Schedule HC-D, Item M.9.a.(2).
[51] JPMC, FR Y-9C, March 31, 2012, Schedule HC-D, Item M.9.a.(2).
[52] JPMC, FR Y-9C, December 31, 2012, Schedule HC-D, Item M.9.a.(2).
[53] Morgan Stanley, FR Y-9C, March 31, 2009, Schedule HC-D, Item M.9.a.(2).
[54] Morgan Stanley, FR Y-9C, September 30, 2011, Schedule HC-D, Item M.9.a.(2).
[55] Morgan Stanley, FR Y-9C, March 31, 2012, Schedule HC-D, Item M.9.a.(2).
[56] Morgan Stanley, FR Y-9C, December 31, 2012, Schedule HC-D, Item M.9.a.(2).
[57] Goldman Sachs Group, FR Y-9C, March 31, 2009, Schedule HC-D, Item M.9.a.(2).
[58] Goldman Sachs Group, FR Y-9C, June 30, 2009, Schedule HC-D, Item M.9.a.(2).
[59] Goldman Sachs Group, FR Y-9C, December 31, 2010, Schedule HC-D, Item M.9.a.(2).
[60] Goldman Sachs Group, FR Y-9C, March 31, 2012, Schedule HC-D, Item M.9.a.(2).
[61] Goldman Sachs Group, FR Y-9C, December 31, 2012, Schedule HC-D, Item M.9.a.(2).
[62] Similarly, the VaR data included in FHCs' SEC filings provide a measure of their exposure to commodity price risk.
[63] There may be ways to collect some information on FHCs' physical commodities activities from a wide variety of diverse sources, including statistical records maintained by the Department of Energy ("DOE"), FERC, or other

non-financial regulators. However, theoretical availability of these disparate data does not cure the fundamental informational deficiency in this area. Even if it can be located, with significant effort, such amalgamation of data is not likely to create a complete and reliable picture of large FHCs' commodity operations and assets.

[64] This is especially true of oil and gas markets. Currently, the markets for trading crude oil and oil products are dominated by three groups of players: major oil companies (Royal Dutch Shell, Total, and British Petroleum), independent commodity trading houses (Vitol, Gunvor, Glencore, Trafigura, and Mercuria), and financial institutions (Morgan Stanley, Goldman). *See*, LITASCO SA, International Oil Markets Market and Oil Trading (Sept. 19, 2008), http://www.litasco.com/_library/pdf/social_acts/international_oil_market_and_oil_trading.pdf. Although these three types of oil traders have significantly different business structures and profiles, they have been converging in some important respects. Thus, the trading arms of oil majors and commodity trading houses have been developing active financial derivatives trading and dealing capabilities to supplement their traditional operations in physical markets. Recent media reports indicate that independent commodity trading companies have also been acquiring both upstream (oil production) assets and downstream (refining and processing) assets. Javier Blas, *Trading houses: Veil slowly lifts on a secretive profession*, FIN. TIMES, May 23, 2011; Javier Blas, *Commodities traders face growing pains*, FIN. TIMES, Apr. 26, 2012. It is nearly impossible, however, to ascertain how big or important financial institutions' physical oil and gas trading operations are vis-à-vis the other two groups, in large part because that would require access to potentially sensitive non-public information on the oil companies' and trading houses' operations and activities. In an informal interview with the author, a professional oil industry consultant who wished to remain anonymous claimed that even a rough estimate would require a lot of sophisticated and prohibitively expensive investigative work not dissimilar to industrial espionage.

[65] *Morgan Stanley May Sell Part of Commods Unit: CNBC*, REUTERS, June 6, 2012.

[66] Matthew Robinson & Scott DiSavino, *Deal or no deal, Morgan Stanley commodity trade shrinks*, REUTERS, Jun. 7. 2012.

[67] *Id.*

[68] http://www.heidmar.com/what-we-do/.

[69] http://www.transmontaigne.com/about-tmg/.

[70] http://www.transmontaigne.com/about-tmg/. TransMontaigne is the general partner of TransMontaigne Partners L.P., a publicly-traded Delaware limited partnership.

[71] CNN Money, Fortune 500 Rankings 2006, http://money.cnn.com/magazines/fortune/fortune500/snapshots/1452.html.

[72] http://www.forbes.com/lists/2011/21/private-companies-11_TransMontaigne_7I0O.html. The estimate excludes the revenues generated by the company's publicly traded subsidiaries.

[73] Morgan Stanley, Form 10-K, Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, for the fiscal year ending on December 31, 2011, at 27.

[74] TransMontaigne Partners L.P., Form 10-K, Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, for the fiscal year ending on December 31, 2011.

[75] http://sec.gov/Archives/edgar/data/1319229/000104746912005319/a2208753z10-ka.htm#aa3, at 73.

[76] *Id.*

[77] According to Morgan Stanley's own description of the risk factors specific to its physical commodities business in its annual report,

> As a result of these activities, we are subject to extensive and evolving energy, commodities, environmental, health and safety and other governmental laws and regulations. In addition, liability may be incurred without regard to fault under certain environmental laws and regulations for the remediation of contaminated areas. Further, through these activities we are exposed to regulatory, physical and certain indirect risks associated with climate change. Our commodities business also exposes us to the risk of unforeseen and catastrophic events, including natural disasters, leaks, spills, explosions, release of toxic substances, fires, accidents on land and at sea, wars, and terrorist attacks that could result in personal injuries, loss of life, property damage, and suspension of operations.

Morgan Stanley, Form 10-K, December 31, 2011, at 27.

[78] Jack Farchy, *Goldman and Clive Capital to launch commods index*, FIN. TIMES, June 12, 2011.

[79] Javier Blas, *Commodities Trading Loses its Goldman Queen*, FIN. TIMES, Jan. 12, 2012.

[80] *J. Aron & Co. Reduces Staff*, N. Y. TIMES, Aug. 19, 1983.

[81] Ann Davis, *Morgan Stanley Trades Energy Old-Fashioned Way: In Barrels*, WALL ST. J., Mar. 2, 2005.

[82] Ryan Dezember, *Carlyle to Acquire Cogentrix from Goldman*, WALL ST. J., Sept. 7, 2012. According to media, "Goldman sold off most of those plants—and built and sold others—during the last decade as Cogentrix transformed

into more of a developer of power plants." *Id.* In September 2012, Goldman reportedly agreed to sell Cogentrix to a private equity firm, Carlyle Group L.P., on undisclosed terms.

[83] Kinder Morgan, Inc., 2011 Form 10-K, at 5**.** In investing in KMI, Goldman teamed up with two private equity partners, The Carlyle Group ("Carlyle") and Riverstone Holdings LLC ("Riverstone"). *Id*.

[84] *Id*., at 121-22.

[85] It is difficult to ascertain whether and to what extent this ownership structure and board membership give Goldman effective control over KMI's management and operations. It appears that, for regulatory purposes, Goldman treats its investment in KMI as a merchant banking investment permissible to FHCs under the BHCA. In the context of Goldman's overall commodities trading business, however, one may legitimately question whether Goldman's stake in KMI is truly a passive, purely financial investment made solely for the purpose of reselling it at a profit.

[86]According to the 2011 SEC filings, Goldman held a common equity stake in CIE through several controlled funds, and two of its managing directors in the merchant banking division served on CIE's board. The firm originally invested in CIE in partnership with Carlyle and Riverstone. Cobalt International Energy Inc., 2011 Form 10-K, at 5*;* Cobalt International Energy Inc., Schedule 14A, Proxy Statement (filed on Mar. 22, 2012), at 10-17.

[87] Joe Leahy, *Goldman in Deal to Buy Vale's Coal Assets*, FIN. TIMES, May 28, 2012.

[88] Glencore, bought metals warehousing assets of Italy-based Pacorini Group, while JPMC acquired the UK-based Henry Bath as part of its purchase of RBS Sempra's assets. *See* Tatyana Shumski & Andrea Hotter, *Wall Street Gets Eyed in Metal Squeeze*, WALL ST. J., June 17, 2011.

[89] *Id.*

[90] Jack Farchy, *Banks force aluminium market shake-up*, FIN. TIMES, Sept. 12, 2012 ("The arrival of investment banks in the aluminium market has triggered a shake-up in the $100bn industry that is forcing producers from Alcoa to Rusal and consumers such as BMW and Coca-Cola to change the way they do business. The increasingly dominant role of banks including Goldman, JPMorgan and Deutsche Bank – as well as traders such as Glencore– has prompted a surge to record levels in the premium consumers pay for metal over the benchmark price set at the London Metal Exchange.").

[91] The LME rules set the minimum delivery rates for its warehouses. If the demand for delivery of aluminum out of a particular warehouse significantly exceeds the rate at which the warehousing company actually releases it, the resulting bottleneck prevents the industrial users of aluminum from getting their purchased metal.

[92] Financial institutions like Goldman Sachs can also use their warehouses to store vast quantities of physical metals in so-called "financing" deals. This strategy allows financial institutions to secure a guaranteed return. Removing a large portion of physical metal from the market, however, creates artificial shortages of aluminum for commercial purchase and inflates its market price.

[93] Pratima Desai, Clare Baldwin, *Goldman's New Money Machine: Warehouses*, REUTERS.COM, Jul. 29, 2011 (stating that, in the first six months of 2011, "Metro warehouses in Detroit took in 364,175 tonnes of aluminum and delivered out 171,350 tonnes," which "represented 42 percent of inventory arrivals globally and 26 percent of the metal delivered out.").

[94] Trefis Team, *Metals Warehousing Pays Off for Goldman Sachs*, FORBES, July 8, 2011 ("Goldman charges 42 cents to store a metric ton of aluminum in its facilities for a day, which translates into $150 in annual revenues for every metric ton it stores. With millions of tons in storage, the industry is expected to rake in $1 billion in storage revenues each year. Goldman Sachs which is estimated to hold 900,000 tons in its facilities can make $138 million in revenues from its storage business alone.").

[95] Laura Clarke & Matt Day, *New Stab at Metals Gridlock*, WALL ST. J., July 2, 2013, C1.

[96] Jack Farchy, *LME takes aim at warehousing queues*, FIN. TIMES, July 1, 2013.

[97] Sambit Mohanty, *JPMorgan to Start Physical Oil Trade; Eyes $200 Oil*, REUTERS, May 15, 2008.

[98] JPMorgan Chase & Co., 2011 Form 10-K, at 184.

[99] Gregory Meyer, *JPMorgan buys RBS Sempra Commodities' trading book*, FIN. TIMES, Oct. 7, 2010 ("In the second quarter [of 2010], RBS Sempra ranked the fifth-largest North American gas marketer by volume, after BP, Royal Dutch Shell, Conoco-Phillips and Macquarie, According to Platt's. JPMorgan was 12th.").

[100] J.P.Morgan, *Energy Risk Names J.P.Morgan "Oil &Products House of the Year"* (Jul. 1, 2011), *available at* http://www.jpmorgan.com/cm/cs?pagename=JPM_redesign/JPM_Content_C/Generic_Detail_Page_Template&cid=1309472621690&c=JPM_Content_C.

[101] http://www.jpmorgan.com/pages/jpmorgan/investbk/solutions/commodities/energy.

[102] Mike Jackson, *Henry Bath & Son: A Company and family History* (2010), *available at* http://www.henrybath.com/assets/_files/documents/jun_11/HENRYBATH__1308588481_Complete_Henry_Bath_History.pdf.

[103] Jack Farchy, *Copper ETF would "wreak havoc,"* FIN. TIMES, May 23, 2012. The SEC approved JPMC's plan to market its copper-backed ETF in December 2012. See http://www.sec.gov/rules/sro/nysearca/2012/34-68440.pdf.

[104] Louise Armitstead & Rowena Mason, *JPMorgan as mystery trader that bought £1-bn-worth of copper on LME,* TELEGRAPH, Dec. 4, 2010. In April 2012, JPMC reportedly held 30-40% of total copper positions on the LME. *CESCO week: Glencore, JPMorgan hold dominant copper position as back flares – sources,* METALBULLETIN.COM, Apr. 18, 2012.

[105] JPMC, 2011 10-K, Note 30, at 289. This probably reflects the general practice among FHCs engaged in physical commodity trading under the Board's "complementary" orders. To avoid legally owning or operating any physical assets involved in the marketing chain, JPMC probably enters into some form of a sale-and-lease-back contract, whereby an unaffiliated third party is the legal owner of the physical facilities and operates those facilities under a lease agreement with JPMC.

[106] According to Blythe Masters, the head of JPMC's commodities unit, it is this "risk and balance sheet capacity" that puts big banks in the unique position to do these supply and off-take deals. Non-bank commodity trading houses typically use about 75-80% of their credit lines, which leaves them little room for taking on new deals, while maintaining a comfortable cushion against sudden price rises. *See* Gregory Meyer, *Wall Street banks step up oil trade role*, FIN. TIMES, July 15, 2012.

[107] Because metal concentrate *futures* were not traded on major organized commodity exchanges, the Board excluded metal concentrates from the scope of its original order approving RBS's "complementary" activities.

[108] On September 20, 2012, the FERC initiated official proceeding accusing J.P. Morgan Ventures Energy Corporation, JPMC's commodity trading arm, in intentionally providing misleading information to the regulator. FERC, News Release (Sept. 20, 2012), *available at* http://www.ferc.gov/media/news-releases/2012/2012-3/09-20-12-E-24.asp.

[109] While these arrangements may potentially reduce direct risks to individual FHCs' safety and soundness, their proliferation implicates other policy concerns the Board must consider in granting "complementary" powers to FHCs: excessive concentration of market power, conflicts of interest, and increased systemic risk.

[110] By assuming this role of a "super-intermediary," financial institutions effectively – and far more successfully – adopted the business model pioneered by Enron. *See* William W. Bratton & Adam Levitin, *A Transactional Genealogy of Scandal: From Michael Milken to Enron to Goldman Sachs* (Aug. 13, 2012), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2126778.

[111] In June 2012, when Moody's downgraded JPMC's credit rating by three levels, the rating agency was quoted as saying that:

> JPMC benefitted from the assumption that there's a "very high likelihood" the U.S. government would back the bank's bondholders and creditors if it defaulted on debt… Without the implied federal backing, JPMorgan's long-term deposit rating would have been three levels lower and its senior debt would have dropped two more steps.

Dawn Kopecki, *JPMorgan Trading Loss Drove Three-Level Standalone Cut*, BLOOMBERG.COM, June 21, 2012.

[112] *See* Editorial, *Dear Mr. Dimon, Is Your Bank Getting Corporate Welfare?* BLOOMBERG.COM, June 18, 2012. Section 23A of the Federal Reserve Act, which imposes quantitative and qualitative limitations on transactions between federally insured depository institutions and their affiliates, should theoretically prevent the leakage of this public subsidy from banks to their commodity-trading non-bank affiliates. 12 U.S.C. § 371c. As the recent crisis demonstrated, however, the practical effectiveness of this statutory firewall is subject to considerable doubt. *See* Saule T. Omarova, *From Gramm-Leach-Bliley to Dodd-Frank: the Unfulfilled Promise of Section 23A of the Federal Reserve Act*, 89 N. C. L. Rev.1683 (2011).

[113] Craig Pirrong, *Energy Market Manipulation: Definition, Diagnosis, and Deterrence*, 31 ENERGY L. J. 1, 2 (2010).

[114] *See, e.g.,* Robert Lenzner, *Speculation in Crude Oil Adds $23.39 To The Price Per Barrel*, FORBES, Feb 27, 2012; Joseph P. Kennedy II, *The High Cost of Gambling on Oil*, N.Y. TIMES, Apr. 10, 2012.

[115] LOUIS D. BRANDEIS, OTHER PEOPLE'S MONEY: AND HOW THE BANKERS USE IT (1933), at 3.

[116] *Id.* at 4.

[117] *See, e.g.,* SIMON JOHNSON & JAMES KWAK, THIRTEEN BANKERS (2010); Matt Taibbi, *Why Isn't Wall Street In Jail?* ROLLING STONE, Feb. 16, 2011.

[118] The Dodd-Frank Act requires SIFIs to submit to federal regulators enterprise-wide recovery and resolution plans, or "living wills," to help their orderly resolutions in the event of failure. Dodd-Frank Act 165(d). Goldman, Morgan Stanley, JPMC, and other large FHCs have already submitted their living wills to the Board in July 2012. These documents should provide an exhaustive description of each institution's corporate structure and core business activities. They could give regulators the necessary information on these firms' physical commodity assets and operations. It is not clear, however, whether this is actually the case, as the bulk of the information in these resolution plans is confidential. None of the publicly available portions of the living wills filed to date contain any relevant information on this issue. *See*, http://www.federalreserve.gov/bankinforeg/resolution-plans.htm.