Key Issues in Derivatives Reform

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Summary

Financial derivatives allow users to manage or hedge certain business risks that arise from volatile commodity prices, interest rates, foreign currencies, and a wide range of other variables. Derivatives also permit potentially risky speculation on future trends in those rates and prices. Derivatives markets are very large—measured in the hundreds of trillions of dollars—and they grew rapidly in the years before the recent financial crisis. The events of the crisis have sparked calls for fundamental reform.

Derivatives are traded in two kinds of markets: on regulated exchanges and in an unregulated over-the-counter (OTC) market. During the crisis, the web of risk exposures arising from OTC derivatives contracts complicated the potential failures of major market participants like Bear Stearns, Lehman Brothers, and AIG. In deciding whether to provide federal support, regulators had to consider not only the direct impact of those firms failing, but also the effect of any failure on their derivatives counterparties. Because OTC derivatives are unregulated, little information was available about the extent and distribution of possible derivatives-related losses.

The OTC market is dominated by a few dozen large financial institutions who act as dealers. Before the crisis, the OTC dealer system was viewed as robust, and as a means for dispersing risk throughout the financial system. The idea that OTC derivatives tend to promote financial stability has been challenged by the crisis, as many of the major dealers required infusions of capital from the government.

Derivatives reform legislation before Congress would require the OTC market to adopt some of the practices of the regulated exchange markets, which were able to cope with financial volatility in 2008 without government aid. A central theme of derivatives reform is requiring OTC contracts to be cleared by a central counterparty, or derivatives clearing organization. Clearinghouses remove the credit risk inherent in bilateral OTC contracts by guaranteeing payment on both sides of derivatives contracts. They impose initial margin (or collateral) requirements to cover potential losses initially. They further impose variation margin to cover any additional ongoing potential losses. The purpose of posting margin is to prevent a build-up of uncovered risk exposures like AIG's. Proponents of clearing argue that if AIG had had to post initial margin and variation margin on its trades in credit default swaps, it would likely have run out of money before its position became a systemic threat that resulted in costly government intervention.

Benefits of mandatory clearing include greater market transparency, as the clearinghouse monitors, records and usually confirms trades. Clearing may reduce systemic risk, by mitigating the possibility of nonpayment by counterparties. There are also costs to clearing. Margin requirements impose cash demands on "end users" of derivatives, such as nonfinancial firms who used OTC contracts to hedge risk. H.R. 4173, as passed by the House, and Title VII of the comprehensive financial reform proposal, the Restoring American Financial Stability Act of 2010 (RAFSA), as amended and passed by the Senate Committee on Banking, Housing and Urban Affairs, provide exemptions from mandatory clearing for certain categories of market participants. If exemptions are too broad, then systemic risks, as well as default risks to dealers and counterparties, may remain. The bills seek to balance the competing goals of reducing systemic risk and preserving end users' ability to hedge risks through derivatives, without causing those derivatives trades to become too costly. This report analyzes the issues of derivatives clearing and margin and end users, and it discusses the various legislative approaches to the end-user issue. This report will be updated as events warrant.

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General Background

Derivative contracts are an array of financial instruments with one feature in common: their value is linked to changes in some underlying variable, such as the price of a physical commodity, a stock index, or an interest rate. Derivatives contracts—futures contracts, options, and swaps[1]—gain or lose value as the underlying rates or prices change, even though the holder may not actually own the underlying asset.

Thousands of firms use derivatives to manage risk. For example, a firm can protect itself against increases in the price of a commodity that it uses in production by entering into a derivative contract that will gain value if the price of the commodity rises. A notable instance of this type of hedging strategy was Southwest Airlines' derivatives position that allowed it to buy jet fuel at a low fixed price in 2008 when energy prices reached record highs. When used to hedge risk, derivatives can protect businesses (and sometimes their customers as well) from unfavorable price shocks.

Others use derivatives to seek profits by betting on which way prices will move. Such speculators provide liquidity to the market—they assume the risks that hedgers wish to avoid. The combined trading activity of hedgers and speculators provides another public benefit: price discovery. By incorporating all known information and expectations about future prices, derivatives markets generate prices that often serve as a reference point for transactions in the underlying markets.

Although derivatives trading had its origins in agriculture, today most derivatives are linked to financial variables, such as interest rates, foreign exchange, stock prices and indices, and the creditworthiness of issuers of bonds. The market is measured in the hundreds of trillions of dollars, and billions of contracts are traded annually.

Derivatives have also played a part in the development of complex financial instruments, such as bonds backed by pools of other assets. They can be used to create "synthetic" securities—contracts structured to replicate the returns on individual securities or portfolios of stocks, bonds, or other derivatives. Although the basic concepts of derivative finance are neither new nor particularly difficult, much of the most sophisticated financial engineering of the past few decades has involved the construction of increasingly complex mathematical models of how markets move and how different financial variables interact. Derivatives trading is often a primary path through which such research reaches the marketplace.

Since 2000, growth in derivatives markets has been explosive (although the financial crisis has caused some retrenchment since 2008). Between 2000 and the end of 2008, the volume of derivatives contracts traded on exchanges,[2] such as futures exchanges, and the notional value of total contracts traded in the over-the-counter (OTC) market[3] grew by 475% and 522%,

[1] For a description of the mechanics of these contracts, see CRS Report R40646, *Derivatives Regulation in the 111th Congress*, by Mark Jickling and Rena S. Miller.

[2] See Bank for International Settlements (BIS), Table 23B, for year 2000 turnover for derivative financial instruments traded on organized exchanges, available at http://www.bis.org/publ/qtrpdf/r_qa0206.pdf. For December 2008 figures for derivatives traded on organized exchanges, see BIS Quarterly Review, September 2009, International Banking and Financial Market Developments, available at http://www.bis.org/publ/qtrpdf/r_qt0909.pdf.

[3] See Bank for International Settlements (BIS), Statistical Annex, Table 19, December, 2000 figure for notional amount of total OTC contracts, available at http://www.bis.org/publ/qtrpdf/r_qa0206.pdf. See Bank for International (continued...)

respectively. By contrast, during nearly unprecedented credit and housing booms, the respective value of corporate bonds and home mortgages outstanding grew by 95% and 115% over the same period.[4]

Market Structure and Regulation

Although the various types of derivatives are used for the same purposes—avoiding business risk, or hedging, and taking on risk in search of speculative profits—the instruments are traded on different types of markets. Futures contracts are traded on exchanges regulated by the Commodity Futures Trading Commission (CFTC); stock options on exchanges under the Securities and Exchange Commission (SEC);and swaps (and some options) are traded OTC, and they are not regulated by anyone.

Exchanges are centralized markets where all the buying interest comes together. Traders who want to buy, or take a long position, interact with those who want to sell, or go short, and deals are made and prices reported throughout the day. In the OTC market, contracts are made bilaterally, typically between a dealer and an end user, and there is generally no requirement that the price, the terms, or even the existence of the contract be disclosed to a regulator or to the public.

Derivatives can be volatile contracts, and the normal expectation is that there will be big gains and big losses among traders. As a result, there is a problem of market design. How do the longs know that the shorts will be able to meet their obligations, and vice versa? A market where billions of contracts change hands is impossible if all traders must investigate the creditworthiness of the other trader, or counterparty. The way this credit risk—often called counterparty risk—is managed is a key element of the current reform proposals.

The exchanges deal with the issue of credit risk through a clearinghouse. Once the trade is made on the exchange floor (or electronic network), it goes to the clearinghouse,[5] which guarantees payment to both parties. The process is shown in **Figure 1**. Traders then do not have to worry about counterparty default: the clearinghouse stands behind all trades. How does the clearinghouse ensure that it can meet its obligations?

Clearing depends on a system of margin, or collateral. Before the trade, both the long and short traders have to deposit an initial margin payment with the clearinghouse to cover potential losses. Then at the end of each trading day, all contracts are repriced, or "marked to market," and all those who have lost money (because prices moved against them) must post additional margin (called variation or maintenance margin) to cover those losses before the next trading session. This is known as a margin call: traders must make good on their losses immediately, or their broker may close out their positions when trading opens the next day. The effect of the margin system is that no one can build up a large paper loss that could damage the clearinghouse in case

(...continued)

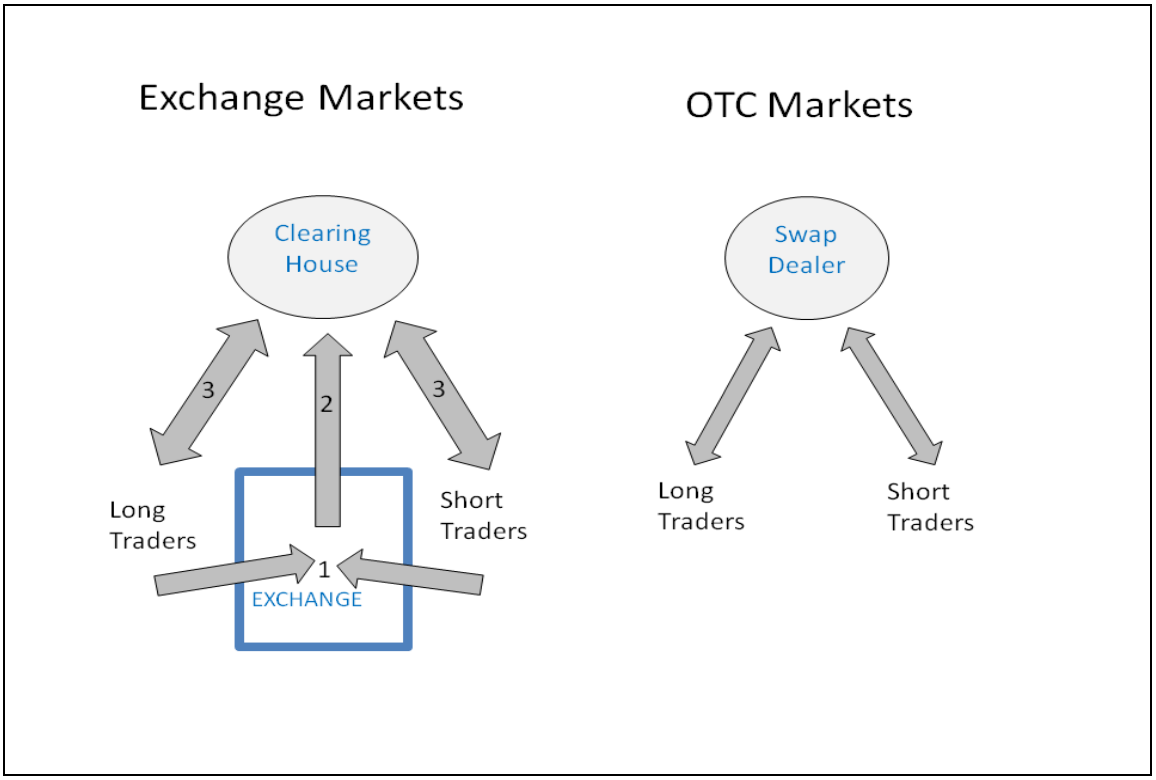
Settlements (BIS), BIS Quarterly Review, September 2009, Statistical Annex, Table 19, for December 2008 figure for notional amount of total OTC contracts, available at http://www.bis.org/publ/qtrpdf/r_qa0909.pdf.

[4] Federal Reserve, *Flow of Funds Accounts of the United States*, September 17, 2009, accessible at http://www.federalreserve.gov/releases/z1/Current/z1r-1.pdf.

[5] Also referred to as a central counterparty or as (in the statutory phrase) a derivatives clearing organization (DCO).

of default: it is certainly possible to lose large amounts of money trading on the futures exchanges, but only on a "pay as you go" basis.

Figure 1. Derivatives Market Structures: Exchange and Over-the-Counter (OTC)



Source: CRS.

In the OTC market, as shown in the right side of **Figure 1**, there is a network of dealers rather than a centralized marketplace. Firms that act as dealers stand ready to take either long or short positions, and make money on spreads and fees. The dealer absorbs the credit risk of customer default, while the customer faces the risk of dealer default. In this kind of market, one would expect the dealers to be the most solid and creditworthy financial institutions, and in fact the OTC market that has emerged is dominated by two or three dozen firms—very large institutions like JP Morgan Chase, Goldman Sachs, Citigroup, and their foreign counterparts. Before 2007, such firms were generally viewed as too well diversified or too well managed to fail; since 2008, they are more likely considered too big to be allowed to fail.

In the OTC market, some contracts require collateral or margin, but not all. There is no standard practice: all contract terms are negotiable. A trade group, the International Swaps and Derivatives Association (ISDA) publishes best practice standards for use of collateral, but compliance is voluntary.

The terms "collateral" and "margin" are similar—both are forms of a downpayment against potential losses to guard against a counterparty's nonpayment—but technically they are not interchangeable. A margining agreement requires that cash or very liquid securities be deposited immediately with the counterparty. After this initial deposit, margin accounts are marked-to-market, usually daily. In the event of default, the counterparty holding the margin can liquidate the margin account. By contrast, collateral arrangements usually require the counterparty to

perfect a lien against the collateral.[6] The range of assets allowable under a collateral agreement is usually wider than what is allowed under margining arrangements.[7] Settlement of collateral shortfalls tends to be less frequent than under margining arrangements.[8]

Because there is no universal, mandatory system of margin, large uncollateralized losses can build up in the OTC market. The best-known example in the crisis was AIG, which wrote about $1.8 trillion worth of credit default swaps guaranteeing payment if certain mortgage-backed securities defaulted or experienced other "credit events."[9] Many of AIG's contracts did require it to post collateral as the credit quality of the underlying securities (or AIG's own credit rating) deteriorated, but AIG did not post initial margin, as this was deemed unnecessary because of the firm's triple-A rating. As the subprime crisis worsened, AIG was subjected to margin calls that it could not meet. To avert bankruptcy, with the risk of global financial chaos, the Federal Reserve and the Treasury put tens of billions of dollars into AIG, the bulk of which went to its derivatives counterparties.[10]

Derivatives Reform

The AIG case illustrates two aspects of OTC markets that are central to derivatives reform proposals. First, as noted above, AIG was able to amass an OTC derivatives position so large that it threatened to destabilize the entire financial system when the firm suffered unexpected losses, and the risks of default to AIG derivatives counterparties grew. In a market with mandatory clearing and margin, in which AIG would have been required to post initial margin to cover potential losses, there is a stronger possibility that AIG would have run out of money long before the size of its position reached $1.8 trillion.

Second, because OTC contracts are not reported to regulators, the Fed and the Treasury lacked information about which institutions were exposed to AIG, and the size of those exposures. Uncertainty among market participants about the size and distribution of potential derivatives losses flowing from the failure of a major dealer was a factor that exacerbated the "freezing" of credit markets during the peaks of the crisis, and made banks unwilling to lend to each other.

A basic theme in the derivatives reform proposals before the 111th Congress is to get the OTC market to act more like the exchange market—in particular, to have bilateral OTC swaps cleared by a third-party clearing organization. There are some widely recognized benefits to clearing:

- Reduction of counterparty risk—collateral or margin collected by the clearinghouse prevents risk build-ups that could trigger systemic disruptions, and

[6] To perfect a lien means following certain procedures required by law in order to create a security interest that is enforceable.

[7] Office of the Comptroller of the Currency, *Risk Management of Financial Derivatives*, January, 1997, Appendix J, "Credit Enhancements", p. 183, accessible at http://www.occ.treas.gov/handbook/deriv.pdf.

[8] Ibid.

[9] The credit events that trigger credit swap payments may include ratings downgrades, debt restructuring, late payment of interest or principal, as well as default.

[10] For an account of this process, see Office of the Special Inspector General for the Troubled Asset Relief Program ("SIGTARP"), *Factors Affecting Efforts to Limit Payments to AIG Counterparties*, November 17, 2009.

- Transparency—because information on trades and positions is centralized in the clearinghouse, regulators will know who owes what to whom, improving the ability to respond to a crisis. In addition, as price information becomes public, dealer spreads should narrow, reducing the costs of hedging and other transactions.

At the same time, there are costs associated with a clearing regime that requires all participants to post margin. Firms that use derivatives to hedge business risks take positions that move in the opposite direction to the underlying market. In the example of Southwest Airlines, imagine that energy prices had dropped sharply, instead of rising as they actually did. The reduced fuel costs would have been good for the airline's bottom line, but its derivatives position would have lost money, and had the contracts been cleared, it would have had to post margin to cover those losses. Such losses would not threaten the firm's solvency, because it would still be effectively paying a price for fuel that allowed it to operate at a profit.[11] However, the margin demands could have created liquidity problems. In the current debate, "end users" of OTC derivatives argue that the costs of posting margin may prevent them from hedging, leaving them exposed to greater business risks.

End Users

The derivatives title of H.R. 4173, the Wall Street Reform and Consumer Protection Act of 2009, as passed by the House on December 11, 2009,[12] and the derivatives title of the Restoring American Financial Stability Act, as amended and passed by the Senate Banking Committee on March 22, 2010,[13] both include exemptions from clearing requirements intended to avoid placing burdensome costs on end users of derivatives. *End user* is not a term defined in statute or in either bill. In general, it refers to any OTC derivatives counterparty that is not a dealer or a major market participant, although in the current debate it sometimes appears to refer primarily to nonfinancial firms that use derivatives to hedge the risks of their businesses. How much of the OTC market do they account for?

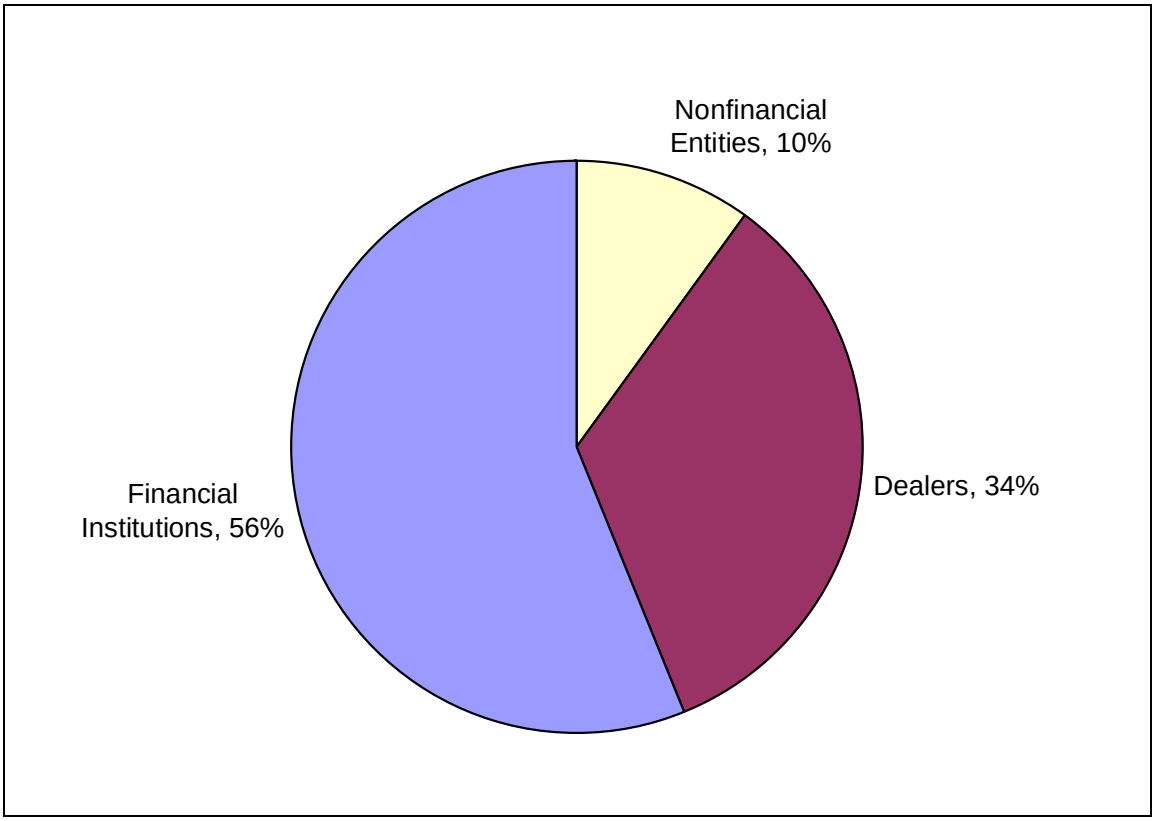
[11] In other words, a hedging strategy locks in the price that prevails at the time the contract is made. If the firm loses money at that price, it will not hedge.

[12] H.R. 4173.

[13] The Restoring American Financial Stability Act, accessible at http://banking.senate.gov/public/_files/ChairmansMark31510AYO10306_xmlFinancialReformLegislationBill.pdf.

Figure 2. OTC Swap Counterparties

June 2009



Source: Bank for International Settlements.

Notes: Includes OTC interest rate, foreign currency, and equity contracts.

The Bank for International Settlements publishes data on counterparties in several OTC markets. As of June 2009, 34% of OTC contracts were between reporting dealers, 56% were between dealers and other financial institutions, and the remaining 10% involved dealers and nonfinancial entities (see **Figure 2**).[14]

Thus, nearly two-thirds of OTC derivatives involve an end user. If all end users are exempted from the requirement that OTC swaps be cleared, the market structure problems raised by AIG still remain. That is, if individual dealer firms that retain large amounts of credit risk get into trouble, the government will continue to face an unsatisfactory choice: allow the dealer to fail, and risk panic and cascading failures among interconnected dealers and counterparties, or provide a taxpayer bailout, with the undesirable consequence of reducing incentives for private parties to manage risk prudently.

Derivatives reform legislation seeks to strike a balance. Although the primary goal is to eliminate the problem of derivatives dealers that are too big or too interconnected to fail, the bills provide

[14] The markets covered are interest rate, foreign exchange, and equity derivatives (excluding credit default swaps). The total notional value of these contracts was $493 trillion. Bank for International Settlements, *Semiannual OTC derivatives statistics at end-June 2009*, accessible at http://www.bis.org/statistics/derstats.htm.

exemptions for end users whose derivatives positions are intended to hedge business risk and who are not thought to pose systemic risk. The bills differ in the way they define classes of market participants who are to be subject to the mandatory clearing requirement (as well as other forms of regulation) and in the way the exemptions are structured.

Legislative Proposals and Exemptions for End Users

The Derivative Markets Transparency and Accountability Act was passed by the House as Title III of its comprehensive financial reform bill, H.R. 4173. The Senate Committee on Banking, Housing and Urban Affairs amended and passed a draft comprehensive financial reform bill on March 22, 2010[15]. In the Senate, Title VII of this bill, called the Restoring American Financial Stability Act (RAFSA), deals with the regulation of OTC derivatives. Both the House and Senate proposals use the Obama Administration's proposed legislative language as a base text, but depart from the model in significant ways.

Table 1 below sets out a comparison of the derivatives provisions and exemptions in H.R. 4173, as passed by the House, and the Restoring American Financial Stability Act of 2010,as amended and passed by the Senate Committee on Banking, Housing and Urban Affairs on March 22, 2010.

[15] Accessible at: http://banking.senate.gov/public/_files/ChairmansMark31510AYO10306_xmlFinancialReformLegislationBill.pdf.

Table 1. Comparison of Derivatives Titles of H.R. 4173, as Passed by the House, and Restoring American Financial Stability Act, as Amended by the Senate Committee On Banking, Housing and Urban Affairs

Provision	H.R. 4173, Title III, as passed by the House	Restoring Financial Stability Act (as amended by Senate Committee on Banking, Housing, and Urban Affairs)
Who wields regulatory authority?	After consulting with the Securities and Exchange Commission (SEC) and prudential regulators such as the Federal Reserve, Office of the Comptroller of the Currency (OCC), and Federal Deposit Insurance Corporation (FDIC), the Commodities Futures Trading Commission (CFTC) has rule-making authority over swaps. SEC has rule-making authority over security-based swaps after consulting with CFTC and Prudential Regulators. The CFTC and the SEC are not required to undertake joint rule-making on most issues. If, however, one of the agencies feels that the other one is encroaching upon its territory, that agency can file a petition for review of the rule by the D.C. Circuit U.S. Court of Appeals. The Treasury, CFTC,and SEC shall conduct a joint study of the desirability and feasibility of establishing, by January 1, 2012, a single regulator for financial derivatives. (§3005)	CFTC and SEC may need to undertake joint rulemaking to define the following terms: swap, security-based swap, major swap participant, major security-based swap participant, swap dealer, security-based swap dealer, eligible contract participant. If the CFTC and SEC are unable to arrive at any joint rulemakings, the Financial Stability Oversight Council will resolve the issue by agreeing with either the SEC or CFTC, or by setting out a compromise position. (§ 711)
How is swap defined?	Amends the Commodity Exchange Act (CEA) to include a very broad definition of swaps. Foreign exchange swaps and forward contracts are excluded. Any transaction with the U.S. government or a federal government agency expressly backed by the full faith and credit of the U.S. government as a counterparty is excluded. Identified banking products, under the Legal Certainty for Bank Products Act of 2000 are excluded from the definition of "security-based swap," from CFTC regulation, and from coverage by the Commodity Exchange Act.	Very similar broad definition of swaps. Also excludes from swaps foreign exchange swaps and forwards. Also, any transaction with the U.S. government as a counterparty is excluded, or with a U.S. government agency expressly backed by full faith and credit of the U.S. government..

Provision	H.R. 4173, Title III, as passed by the House	Restoring Financial Stability Act (as amended by Senate Committee on Banking, Housing, and Urban Affairs)
Who is a "major swap participant"?	A major swap participant is anyone who is not a swap dealer that: maintains a substantial net position in outstanding swaps, excluding positions held primarily for hedging, reducing or otherwise mitigating its commercial risk, including operating and balance sheet risk; or whose outstanding swaps create substantial net counterparty exposure among the aggregate of its counterparties that could expose those counterparties to significant credit losses. (§ 3201) BUT NOTE: § 3307 of this same Act later differently defines a major swap participant as anyone who is not a swap dealer that: maintains a substantial net position in outstanding swaps, excluding positions held primarily for hedging, reducing or otherwise mitigating its commercial risk; or whose outstanding swaps create substantial net counterparty exposure that could have serious adverse effects on the financial stability of the U.S. banking system or financial markets. (§3307) NOTE: The CFTC will define by rule or regulation the following terms: substantial net position, substantial net counterparty exposure, and significant credit losses.	A major swap participant is anyone who is not a swap dealer and: who maintains a substantial net position in outstanding swaps, excluding positions held primarily for hedging, reducing, or otherwise mitigating commercial risk; or whose failure to perform under the terms of its swaps would cause significant credit losses to its swap counterparties. (§ 711) The CFTC will implement this definition by rule or regulation "in a manner that is prudent for the effective monitoring, management and oversight of the financial system." (§ 711)
Who is a "major security-based swap participant"?	Defined the same as in section 3(a)(67) of the Securities Exchange Act of 1934.	Amends the Securities Exchange Act of 1934 to define "major security-based swap participant" as anyone who is not a security-based swap dealer and: who maintains a substantial net position in outstanding security-based swaps excluding positions held primarily for hedging, reducing or otherwise mitigating commercial risk; or whose failure to perform under the terms of its security-based swaps would cause significant credit losses to its security-based swap counterparties. The SEC will implement the definition by rule or regulation "in a manner that is prudent for the effective monitoring, management and oversight of the financial system." (§ 751)

Provision	H.R. 4173, Title III, as passed by the House	Restoring Financial Stability Act (as amended by Senate Committee on Banking, Housing, and Urban Affairs)
Which derivatives must be cleared?	A swap must be cleared if a registered derivatives clearing organization (DCO) will accept the swap for clearing, and if the CFTC has determined that the type of swap should be required to be cleared. The CFTC will initiate its own review of all categories of swaps and determine which categories should be required to be cleared regardless of whether a DCO has applied to clear them. (§3103 (j)) EXCEPTION: There is a fairly broad, automatic exception to the clearing requirement for so-called "end users"—which means a counterparty who is not a swap dealer or a major swap participant (MSP). This says that the clearing requirement shall not apply to a swap if one of the counterparties to the swap is not a swap dealer or major swap participant; and is using swaps to hedge or mitigate commercial risk, including operating or balance sheet risk; and notifies the CFTC how it generally meets its financial obligations associated with entering into non-cleared swaps. (§3103)	A DCO chooses which category of swaps it will offer to clear. The DCO then must submit to the CFTC a list of the type or category of swaps it wishes to clear; the CFTC must make the application public, and issue a decision within 90 days. Within 6 months of this Title's enactment, the CFTC and SEC must jointly adopt rules identifying which classes or categories of swaps that a DCO has not sought to clear should still be cleared. EXCEPTION: There is no automatic exception to the clearing requirement for "end users." Instead, the CFTC may choose permissively, by rule or order, to allow an exception to the clearing requirement and/or the exchange-trading requirement if one counterparty is not a MSP nor a swap dealer and does not meet the eligibility requirements of any derivatives clearing organization that offers to clear the swap. (§ 713, (9)) The CFTC may only act by rule or order to exempt a swap from clearing and/or exchange-trading requirements if the CFTC has first notified the Financial Stability Oversight Council, and the Council has not objected on the grounds that it would pose a threat to the stability of the U.S. financial system. (Manager's Amendment, p. 23)

Provision	H.R. 4173, Title III, as passed by the House	Restoring Financial Stability Act (as amended by Senate Committee on Banking, Housing, and Urban Affairs)
What rules apply to clearinghouses?	All DCOs must register with the CFTC. The CFTC may exempt a DCO from the registration requirement if the CFTC finds that the DCO is subject to comparable, comprehensive supervision and regulation on a consolidated basis by a prudential regulator or the appropriate governmental authorities in the organization's home country. DCOs registered with the SEC, whose principal business is clearing securities and options on securities, are exempt from CFTC registration unless the CFTC finds the DCO is not subject to comparable, comprehensive regulation. Each DCO must designate a compliance officer reporting to the DCO's board or senior officer. The compliance officer will be responsible for addressing any conflicts of interest; handle non-compliance problems; prepare an annual report on compliance with DCO core principles, which are set out in the act. (§3101) CORE PRINCIPLES for DCOs include: The DCO must have sufficient financial resources to meet all its financial obligations to the members of, and participants in, the organization, notwithstanding a default by the member or participant creating the largest financial exposure for the DCO in extreme but plausible market conditions. Participation and membership requirements of the DCO shall be objective, publicly disclosed, and permit fair and open access. Margin required from all members and participants shall be sufficient to cover potential exposures in normal market conditions. In terms of settlement procedures, the DCO must strictly limit its exposure to settlement bank risks, such as credit and liquidity risks from the use of banks to effect money settlements.	A DCO must allow for nondiscriminatory clearing of a swap executed on an unaffiliated alternative swap execution facility or designated contract market. The DCO must prescribe that all swaps with the same terms and conditions that are accepted for clearing by the DCO are "fungible and may be offset with each other." (§ 713) Similar provisions for core principles of DCOs. A DCO in general must register with the CFTC. A DCO may be exempt from registration with the CFTC in some cases if this DCO is subject to comparable regulation by the SEC, FINRA, or a comparable foreign regulator.

Provision	H.R. 4173, Title III, as passed by the House	Restoring Financial Stability Act (as amended by Senate Committee on Banking, Housing, and Urban Affairs)
What rules apply to clearinghouses? (continued)	The DCO must have the ability to comply with the terms and conditions of any permitted netting or offset arrangements with other clearing organizations. The DCO shall maintain records for five years. The DCO shall make public daily settlement prices, volume, and open interest for all contracts it settles or clears. "Restricted owners"—meaning any swap dealers, MSPs, or their associates identified as systemically significant under the Financial Stability Improvement Act in H.R. 4173—are not allowed to acquire beneficial ownership in a DCO to the degree that their stake would lead to restricted owners in the aggregate being able to cast 20% or more of votes on any matter. (§ 3306)	Added to March 15, 2010 version: The CFTC and SEC will jointly adopt rules mitigating conflicts of interest involving swap dealers and major swap participants and DCO's or alternative swap execution facilities that clear trades in which the swap dealer or MSP has a material debt or equity investment. (§ 717) Added to March 15, 2010 version: A swap dealer, futures commission merchant or DCO must segregate funds taken in as customer's initial margin or collateral. The swap dealer must not pledge, rehypothecate or otherwise encumber the initial margin or collateral. (§ 4t) No provisions explicitly restricting ownership.
What exchange-trading requirements are there?	A swap that is required to be cleared must be traded either on a designated contract market (for example, a regulated futures exchange), or through a swap execution facility registered with the CFTC. EXCEPTION: This requirement does not apply if no designated contract market or swap execution facility makes the swap available for trading. In this case, the swap will still be subject to reporting and record-keeping requirements. Core principles for a swap execution facility are set out in the act. These include monitoring trading activities, adopting position limits, providing information to the CFTC upon request, keeping business records for five years, making data public on trading volume, prices, and other information as required by the CFTC. (§3109)	A swap that is required to be cleared must be traded either on a designated contract market (for example, a regulated futures exchange), or through a swap execution facility registered with the CFTC. (§713 (8)) EXCEPTION: This requirement does not apply if no designated contract market or swap execution facility makes the swap available for trading. (§713 (8)) For security-based swaps, the SEC in consultation with the Financial Stability Oversight Council, may by rule or order exempt the swap if one of the counterparties to the swap: Is not a security-based swap dealer or major security-based swap participant and Does not meet the eligibility requirements of any clearing agency that clears the swap. (§ 753) March 15, 2010 version added a definition of "alternative swap execution facility" as: An electronic trading system with pre-trade and post-trade transparency in which multiple participants have the ability to execute or trade swaps by accepting bids and offers made by other participants that are open to multiple participants in the system, but which is not a designated contract market. (§ 753)

Provision	H.R. 4173, Title III, as passed by the House	Restoring Financial Stability Act (as amended by Senate Committee on Banking, Housing, and Urban Affairs)
What capital and margin requirements are there?	Each registered swap dealer which is a regulated bank, and each major swap participant for which there is a prudential regulator shall meet such minimum capital requirements and minimum initial and variation margin requirements (for uncleared swaps) as the prudential regulators shall prescribe by rule or regulation. Non-bank swap dealers and major swap participants without a prudential regulator shall meet such minimum capital requirements and minimum initial and variation margin requirements as the CFTC shall prescribe. There are no provisions authorizing the CFTC, SEC or banking regulators to impose capital or margin requirements for uncleared swaps on "end users" who are neither swap dealers, security-based swap dealers, major swap participants nor security-based swap participants.	Same provision, except instead of Prudential Regulators, the draft refers to the primary financial regulatory agency (described in § 2 of the Financial Stability Act). (§ 717(e)) Capital requirements will be set higher for bank and non-bank swap dealers and major swap participants for swaps that are not cleared. EXCEPTION: The primary financial regulatory agency may exempt a bank swap dealer or major swap participant, by rule or order, from this margin requirement for uncleared derivatives only if: one of the counterparties is not a swap dealer, major swap participant, security-based swap dealer, or a major security-based swap participant; and is using the swap as part of an effective hedge under generally accepted accounting principles; and is predominantly engaged in activities that are not financial in nature, as defined in § 4(k) of the Bank Holding Company Act of 1956. For non-bank swap dealers and major swap participants, the SEC and CFTC jointly can offer such an exemption, under the same three conditions. The primary financial regulators or the CFTC and SEC may only exempt an uncleared swap from margin requirements if they have first notified the Financial Stability Oversight Council, and the Council has not objected on the grounds that it would pose a threat to the stability of the U.S. financial system. (Manager's Amendment, p. 24)
What reporting requirements are there?	All swaps that are not accepted for clearing by any derivatives clearing organization shall be reported either to a swap repository, or, if there is no repository that would accept the swap, to the CFTC. Swaps entered into before enactment of this act shall be reported within 6 months to a swap repository or to the CFTC. Swaps entered into after enactment of this act shall be reported within three months, or other time period the CFTC may prescribe by rule.	All uncleared swaps must satisfy reporting requirements. (p. 424) They must either be reported to a swap repository, or, if there is no repository that would accept the swap, then they must make such reports as the CFTC will require.
What record-keeping requirements are there?	For any uncleared swaps, records must be kept for such a period of time as the CFTC may prescribe. The records will be open to inspection by the CFTC, SEC, appropriate federal banking regulator, DOJ, and the Financial Services Oversight Council.	Contains similar provision.

Provision	H.R. 4173, Title III, as passed by the House	Restoring Financial Stability Act (as amended by Senate Committee on Banking, Housing, and Urban Affairs)
How will regulation of energy commodities be affected?	CFTC and Federal Energy Regulatory Commission (FERC) will negotiate Memorandum of Understanding to resolve overlapping jurisdiction related to derivatives, conflicting regulation, and establish information-sharing on market manipulation investigations. (§ 3009) Includes a provision that nothing in this act will limit any statutory authority of FERC to regulate transactions not executed on registered clearing or trading facilities. Includes a provision that nothing in this act will limit or affect statutory enforcement powers of FERC. § 3113 mandates position limits be imposed for many swaps, including many commodity swaps. This would make many commodity swaps subject to position limits just as many commodity futures currently are.	No mention of FERC in the act. Similarly, mandates position limits be used for many swaps (including commodity swaps such as many energy swaps).
Changes to federal insolvency laws affecting banking institutions?	CFTC, SEC and Prudential Regulators are required to submit recommendations to Congress for changes to laws to improve legal certainty over customer rights to margin or collateral held in custody by an insolvent swaps clearinghouse; to harmonize treatment of commodities brokers and securities broker-dealers in federal insolvency laws; and facilitate portfolio margining by entities that are both securities broker-dealers and futures commission merchants. (§ 3006)	Very similar provision, although Prudential Regulators are replaced with the primary financial regulatory agency (described in § 2 of the Financial Stability Act).
What about international harmonization?	CFTC, SEC and Prudential Regulators shall consult and coordinate with foreign regulatory authorities to establish consistent international standards. They may enter into information-sharing agreements with foreign regulators. If the CFTC or SEC determines that foreign regulation of swaps undermines the financial stability of the United States, then either of them, in consultation with the Treasury, can prohibit an entity in that country from participating in U.S. swap markets. (§ 3008)	CFTC, SEC, the primary financial regulatory agency, Treasury and the proposed Financial Stability Oversight Council shall consult and coordinate with foreign regulatory authorities to establish consistent international standards. They may enter into information-sharing agreements with foreign regulators.

Source: Analysis by CRS.

Some basic elements are present in both the House and Senate bills. First, transactions between swap dealers and major swap participants (MSPs) must be cleared, as long as a derivatives clearing organization will accept the swap and the appropriate regulators approve the swap for clearing. The purpose of this exception is twofold: (1) clearinghouses should not be forced to clear contracts that might pose risks to their solvency (as might be the case if a contract were highly customized, complex, difficult to price, or if the risk exposure of a class of contracts were concentrated in a single dealer), and (2) the regulatory approval requirement ensures that there will not be a "race to the bottom" among clearinghouses, in which competition for market share and clearing fees leads to imprudent risk taking.

While generally similar, the bills differ in some crucial elements, particularly in the exemption from the mandatory clearing requirement, which has featured prominently in the political debate. "End-users" of derivatives—financial and nonfinancial firms that use the contracts to reduce, or hedge, business risks—argue that the cost of hedging will become excessive if they are forced to post margin or collateral to a clearinghouse. The scope of the exemptions for end-users in the bills is determined in three ways:

- **Who must clear?** Both bills require clearing only of swaps that are accepted by a derivatives clearing organization and approved for clearing by regulators. In addition, H.R. 4173 automatically exempts swaps where one counterparty is (1) neither a swap dealer nor a major swap participant; (2) using swaps to hedge commercial risk; and (3) notifies regulators how it normally meets its financial obligations in connection to uncleared swaps. RAFSA does not automatically exempt swaps from clearing, but instead gives regulators the rule-making authority to exempt swaps if one counterparty is neither a swap dealer nor a major swap participant and does not meet the eligibility requirements of any derivatives clearing organization that clears the swap.[16]
- **Who is a major swap participant (MSP)?** In both bills, the exemption to mandatory clearing is not available to MSPs, but the definitions of MSP differ significantly. To "end users," the definition of a "major swap participant" is crucial because it determines the scope of exemptions from the clearing requirement.

  H.R. 4173 actually contains two different definitions of an MSP—first in Section 3101, the "Definitions" section, and then later, in Section 3307.[17] Based on H.R. 4173's first definition, an MSP is one who maintains a substantial net position in outstanding swaps (excluding positions held primarily for hedging or mitigating commercial risk, including operating and balance sheet risk), or whose outstanding swaps create substantial net counterparty exposure among the aggregate of its counterparties that could expose those counterparties to significant credit losses.[18] H.R. 4173 directs regulators to define the "substantial" and "significant" thresholds at levels appropriate to entities that are systemically important or can significantly impact the financial system through counterparty credit risk. Under this definition of an MSP, regulators would presumably

[16] Since membership in a clearinghouse requires substantial amounts of capital, the provision thus exempts smaller financial and nonfinancial firms. It is worth noting that the exemption in H.R. 4173 is automatic, while under RAFSA the regulators are given discretion.

[17] For the exact definitions, please see **Table 1** above.

[18] Section 3101 of H.R. 4173.

define the threshold amount at a fairly high level, to be systemically significant. Also, the exclusion of swaps held to mitigate commercial, operating or balance sheet risk would presumably exclude many swaps, as well.

RAFSA similarly defines an MSP as one who maintains a substantial net position in outstanding swaps, excluding positions held primarily for hedging, reducing, or otherwise mitigating commercial risk; or whose failure to perform under the terms of its swaps would cause significant credit losses to its swap counterparties. However, there is no provision equivalent to H.R. 4173's requirement that "substantial net positions" or "significant losses" be defined by regulators at a level that would indicate risk to the financial system as a whole.

- **Margin for uncleared swaps**. RAFSA directs regulators to impose margin requirements on uncleared swaps.[19] The regulators may issue rules exempting swaps from this requirement at their discretion, as long as one of the counterparties is neither a swap dealer nor an MSP, is using the swap as part of an effective hedge under generally accepted accounting principles (GAAP),[20] and is predominantly engaged in activities that are not financial in nature.[21] H.R. 4173 does not explicitly authorize regulators to impose margin requirements on end-users who are exempted from the clearing requirement.[22]

Because both bills allow regulators substantial discretion in writing rules and defining terms, it is impossible to say with precision how much of the currently unregulated OTC derivatives market would be moved onto centralized clearinghouses under either bill. It appears, however, that the exemptions granted by H.R. 4173 may be broader in scope and could result in a greater share of swaps continuing to trade OTC than would be the case under RAFSA's provisions.

For example, H.R. 4173 automatically exempts from the clearing requirement trades in which one party is neither a swap dealer nor a major swap participant, whereas the Senate bill allows the regulator the discretion to create such an exemption, but does not require the regulator to do so. Another example is that H.R. 4173 does not give regulators the authority to impose margin requirements on uncleared derivatives, while the Senate bill allows regulators to do so. Also, under H.R. 4173, the regulators must establish a threshold for what constitutes a "substantial net position" of outstanding swaps, for the purpose of the clearing requirement, at a level that would threaten overall financial stability, while the Senate bill does not contain such a minimum threshold.

[19] Section 717(e) of RAFSA.

[20] GAAP hedging, under FAS 133, requires that there be a close correspondence between changes in the value of a derivative used to hedge and the asset or transaction that is being hedged. Absent such a correspondence, the swap will be treated as a speculative trading position.

[21] Section 717(e)(4) of RAFSA.

[22] Section 3107 of H.R. 4173 allows regulators to impose capital and margin requirements on MSPs and on swap dealers only. Such capital and margin requirements must (1) help ensure the safety and soundness of the swap dealer or major swap participant; and (2) be appropriate for the risk associated with the non-cleared swaps held as a swap dealer or major swap participant.

Safeguards Applicable to Uncleared OTC Swaps

If end-user exemptions are too broad, some portion of the systemic risks posed by the unregulated OTC markets will remain. In recognition of this, the House and Senate bills to differing degrees provide additional safeguards against the impact of defaults by traders (or dealers) in uncleared swaps. One such safeguard is that, in addition to the clearing requirement, dealers and MSPs will be subject to prudential capital requirements under the House and Senate proposals, to cushion them against the impact of derivatives losses. Under both proposals, swap dealers and MSPs that are banks will have capital requirements and margin requirements set by their primary banking regulator. Non-bank swap dealers and MSPs will have capital and margin requirements set by the CFTC and SEC.

Another safeguard, as mentioned, has to do with the imposition of margin requirements on uncleared contracts. The bills direct the regulators to impose initial and variation margin requirements on contracts that are not cleared through a derivatives clearing organization. Again, a range of exemptions would apply to certain end users:

- Under H.R. 4173, there is no explicit authority to impose capital or margin requirements on swaps with end users.
- The Senate Banking Committee proposal permits regulators to exempt uncleared swaps from margin only if one of the counterparties is (1) not a swap dealer or an MSP, (2) using the swap as a hedge in accordance with GAAP, and (3) predominantly engaged in nonfinancial activities. Such exemptions would also allow the Financial Stability Oversight Council to veto the exemption. There is no explicit authority in the Senate proposal to allow regulators to exempt MSPs or swap dealers from capital requirements.

Hypothetical Examples

To give some hypothetical examples, a small nonfinancial hedger whose counterparty was a dealer like Goldman Sachs would probably not qualify as an MSP under any of the definitions. In the event that the firm defaulted, the effect on the dealer would probably not be material or significant.

In the case of a large industrial company, like Coca-Cola, it is more difficult to judge the effect, especially because regulatory discretion would be involved in administering the provisions of the statute. A company like Coca-Cola is likely to have very large derivatives positions to hedge foreign exchange, interest rate, and commodity price risk, and risks incurred by the financial assets on its balance sheet. By size alone, its positions could meet the "substantial net position" test of the Senate proposal, as determined by a regulator. But it might also characterize its position as hedging commercial risk, and so be excluded from the definition. It is less likely that its outstanding net position in swaps would pose a risk to the financial system as a whole, however—as per the House proposal's minimum-threshold standard that the regulator must follow in setting the level of swaps that constitute a substantial net position.

Assuming that Coca-Cola's outstanding net position in swaps did meet the minimum threshold in either the House or Senate bills, a question would then be whether a hypothetical default by Coca-Cola on its derivatives obligations would cause significant or material harm to its

counterparties—under the first definition given in H.R. 4173,[23] and also under the definition in the Senate proposal. Under the second definition given in H.R. 4173,[24] the question would be whether a hypothetical default by Coca-Cola on its derivatives obligations would cause such harm to the financial system as a whole. In both cases, regulators would need to exercise judgment on a number of factors: was the position concentrated with a single dealer, or dispersed among a number of firms? What, under current market conditions, was the capacity of the dealer or dealers to absorb a loss of a given size? Was the financial system able to withstand the shock at that particular time?

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[23] Section 3101 of H.R. 4173.

[24] Section 3307 of H.R. 4173.