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United States Government Accountability Office
Washington, DC 20548

January 30, 2009

The Honorable Collin Peterson
Chairman
Committee on Agriculture
House of Representatives

Subject: *Issues Involving the Use of the Futures Markets to Invest in Commodity Indexes*

Until mid-2008, prices for a broad range of physical commodities, from crude oil to crops such as wheat, had increased dramatically for several years—raising concerns and leading to a debate over the possible causes. Some market participants and observers have attributed the price increases to fundamental economic factors related to supply and demand. Others have suggested that the price increases resulted from speculation in the futures contracts by hedge funds and investors in commodity indexes. Like stock indexes, commodity indexes track the composite price of a basket of long futures positions in physical commodities.¹ The indexes' investment strategy is passive, remaining the same regardless of whether prices are falling, rising, or flat. Two commonly referenced commodity indexes are the Standard & Poor's Goldman Sachs Commodity Index (S&P GSCI) and Dow Jones-American International Group Commodity Index (DJ-AIGCI), which are based on a broad range of physical commodities, including energy products, agricultural products, and metals. Since around the mid-2000s, pension plans, endowments, and other institutional investors increasingly have used investments in commodity indexes to obtain exposure to commodity prices as an asset class, typically to diversify their portfolios or hedge inflation risk.²

Your letter asked us to examine various issues surrounding how commodity-index futures trading is addressed by various laws and regulations. Futures exchange regulations that can affect such trading include margins, or performance bonds,

¹A futures contract is an agreement to purchase or sell a commodity for delivery in the future. A long futures position is one in which the holder has bought a futures contract and is obligated to take delivery of the commodity in the future. However, few contracts actually result in delivery, because the vast majority of contracts are offset by making an equal but opposite trade before the delivery date.

²Inflation risk is the risk associated with the return from an investment not covering the loss in purchasing power caused by inflation.

which are deposits that futures traders make with their broker to ensure that they can meet the financial obligations associated with their futures positions. To prevent excessive speculation that could cause unwarranted changes in futures prices, the Commodity Futures Trading Commission (CFTC) and futures exchanges place limits on the size of futures positions—the number of contracts—that a trader may hold. In agreement with your office, this report addresses

- whether the federal law governing futures trading prohibits investors from using the futures markets to gain an exposure to commodity indexes,
- whether the federal law governing pension plans prohibits them from investing in commodities through the futures markets,
- how margins have affected the ability of investors to obtain exposures to commodity indexes, and
- how position limits have affected the ability of investors to obtain exposures to commodity indexes.

In addition, we agreed with your office to review recent studies analyzing the effect of commodity index futures trading on commodity prices.

On December 16, 2008, we briefed your office on the results of this work. This letter summarizes the briefing. The enclosures contain the full briefing, including our scope and methodology, and a bibliography of the studies we reviewed. In response to questions asked during the briefing, we have added information to the enclosed briefing slides to provide additional details on the percentage of total outstanding futures positions accounted for by index traders, the scope and nature of contract position limit exemptions, and the scope of the federal law covering pension funds.

We conducted this performance audit from September 2008 through January 2009 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Since around mid-2000s, institutional and retail investment in commodities has grown significantly. However, determining the actual amount of such investment is difficult, in part because no comprehensive data are available on all such investments. Based on recently collected data, CFTC estimated that the aggregate net amount of all commodity index trading (combined over-the-counter (OTC) and exchange-traded derivatives) was \$200 billion as of June 30, 2008, of which \$161

billion was tied to commodities traded on U.S. futures markets and the remainder was tied to commodities traded on foreign futures markets.

To gain exposure to a commodity index, investors can take a direct approach by taking long positions in the individual futures contracts making up the index. Investors also can take long positions in futures contracts linked to a commodity index, such as futures on the S&P GCSI or DJ-AIGCI. Some investors may find the direct approach to be difficult, however, because of the need to roll over their futures positions periodically.³ As an alternative, investors can gain exposure to a commodity index by using a swap dealer (e.g., large bank) to enter into an over-the-counter (OTC) swap linked to an index.⁴ In addition, investors can gain exposure to a commodity index by investing in other vehicles that track a commodity index, such as a commodity pool, mutual fund, or exchange-traded fund or note.

To regulate commodity futures and option markets in the United States, Congress created CFTC as an independent agency in 1974. Under the Commodity Exchange Act (CEA), the primary mission of CFTC includes fostering open, competitive, and financially sound futures markets and protecting market users and the public from fraud, manipulation, and abusive practices related to the sale of commodity futures and options.⁵ This mission is achieved through a regulatory scheme that is based on federal oversight of industry self-regulation. Prompted partly by the growth of the OTC derivatives markets, the Commodity Futures Modernization Act of 2000 amended CEA to provide, among other things, for regulated markets and markets largely exempt from regulation. The regulated markets include futures exchanges that have self-regulatory surveillance and monitoring responsibilities as self-regulatory organizations and also are subject to oversight by CFTC.

Summary

Although the use of the futures markets by institutional investors to gain long-term exposure to commodities represents a new type of speculation, the CEA—the law governing futures trading—does not prohibit this activity. Futures markets historically have been used by commercial firms to manage price risk and speculators to profit from price movements. In a regulatory response to some funds that sought approval to conduct investing in commodity indexes, CFTC staff noted that the use of the futures markets by funds to provide their investors with a commodity-index exposure represented a legitimate and potentially useful investment strategy.

³Unlike a passive portfolio of stocks, a passive futures portfolio requires regular transactions because futures contracts expire. For example, in the case of the S&P GSCI, futures contracts near to expiration are rolled forward (i.e., exchanged for futures contracts with the next applicable expiration date) at the beginning of their expiration months.

⁴For example, under a typical commodity index swap, the investor agrees to pay the Treasury bill rate, plus a management fee, to a swap dealer, and the dealer agrees to pay the total return of a specified commodity index, such as the S&P GSCI or DJ-AIGCI, to the investor.

⁵See section 3 of the Commodity Exchange Act, 7 U.S.C. § 5 (2004).

Under the federal law governing private pension plans—the Employee Retirement Income Security Act (ERISA)—such plans may invest in commodity indexes using futures contracts or other derivatives but must determine that such investments are, among other things, prudent. Although ERISA does not prohibit pension plans from investing in futures, it sets certain minimum standards for pension plans sponsored by private employers.⁶ A 1996 opinion issued by the Department of Labor recognized that derivatives might be a useful tool for managing a variety of risks and broadening investment alternatives in a plan’s portfolio. But the opinion also noted that investments in certain derivatives might require a higher degree of sophistication and understanding on the part of plan fiduciaries than other investments.

Commodity index investors generally have not been directly subject to futures margins (or performance bonds), because they primarily have used OTC swaps, not futures contracts, to obtain their exposure. Instead, the swap dealers that provide commodity index exposures to investors through swaps are subject to futures margins if they use exchange-traded futures to hedge their risk exposure from these swaps. Moreover, such dealers may have entered into other OTC transactions that offset their index exposures and, as a result, may not use futures to hedge their index exposures in full. Futures exchanges, not CFTC, generally set margins, which are based on the price volatility of the underlying commodity of a futures contract and typically are small relative to a contract’s market value. Both the buyer and seller of a futures contract post margin, which serves to ensure that they can meet their contractual obligations; moreover, futures margin is not an extension of credit. If margin requirements on index-related futures were increased, two of the largest swap dealers told us that the cost of providing investors with commodity index exposures using OTC swaps would increase and might lead investors to use alternatives to OTC swaps, such as commodity index funds. They also said that once institutional investors have decided to allocate a portion of their portfolios to commodities, they will choose the most efficient way to do so. According to the market participants we spoke with, imposing higher margins on index-related futures positions also could raise challenges. For example, swap dealers use futures to hedge their net exposure—the residual risk remaining after a dealer internally nets OTC swaps with offsetting exposures—and may not be able to untangle and identify the futures positions that are attributable specifically to commodity index swaps.

Similarly, index investors largely have not been restricted by contract position limits that are used to prevent excessive speculation in the futures markets. Such investors primarily have obtained their index exposures through OTC swaps that are not subject to futures speculative position limits. Further, swap dealers have

⁶Among other things, ERISA (1) requires plans to provide information to participants and the federal government about the plan, (2) sets minimum standards regarding who may participate and when they may participate, (3) sets responsibility standards and requires accountability for people who run or provide investment advice to plans, (4) guarantees payment of certain benefits if a defined benefit plan is terminated without sufficient assets to pay accumulated benefits, and (5) gives the Secretary of Labor the authority to bring legal actions to enforce title I of ERISA.

received exemptions from CFTC that allow them to hold index-related futures positions in excess of speculative position limits.⁷ Position limits prohibit traders from holding a futures position above a specified limit, unless the traders have received an exemption. With an exemption, a swap dealer can enable an investor to use an OTC swap to take a position that is greater than the level the investor would be permitted to take if the position were held solely in the futures market. The swap dealer can, then, take a futures position in excess of a position limit to hedge its exposure from the OTC swap. In a September 2008 report, CFTC noted that the mix of commercial and noncommercial activity by swap dealers called into question whether the swap dealers should receive hedge exemptions from position limits for some of their activity. In that regard, the CFTC Commission instructed the agency's staff to develop a proposed rulemaking that would address whether the swap dealers should receive a more limited exemption. CFTC staff told us that the Commission has not set a time frame for issuing the proposal.

Although not included in the enclosed briefing slides, we also are providing information on the results of our review of studies analyzing the impact that index traders and other futures speculators have had on commodity prices. Through our literature search, we identified eight empirical studies and three qualitative studies. (See the bibliography for a list of the studies we reviewed.) Unlike the empirical studies, the qualitative studies do not use experimental or statistical controls to evaluate the causal relationship between speculative trading and commodity prices and, thus, do not provide a systematic way to assess the empirical veracity of the causal relationship. Importantly, the eight empirical studies we reviewed generally found limited statistical evidence of a causal relationship between speculation in the futures markets and changes in commodity prices—regardless of whether the studies focused on index traders, specifically, or speculators, generally. Four of the studies used CFTC's publicly available Commitments of Traders (COT) data in their analysis, and their findings should not be viewed as definitive because of limitations in that data. For example, the public COT data are issued weekly, and analyses using such data could miss the effect of daily or intraday changes in futures positions on prices. Also, these data generally aggregate positions held by different groups of traders and, thus, do not allow the effect of individual trader group positions on prices to be assessed. Two of the studies we reviewed involved CFTC staff and used non-public COT data that included positions reported more frequently and separated positions held by different trader groups.⁸ However, similar to the studies that used the public COT data, the studies using the non-public data also found limited evidence that speculation was affecting commodity prices. In addition, all of the empirical studies we reviewed generally employed statistical techniques that were designed to detect a very weak or even spurious

⁷CFTC speculative position limits apply only to certain "designated" agricultural commodities listed in CFTC Regulation 150.2. CFTC regulations list certain types of positions that may be exempted from (and thus may exceed) these speculative position limits. The exemptions include bona fide hedging transactions or positions.

⁸These studies, while not addressing all the data limitations, provide for a better evaluation of the causal relationship between positions and commodity prices.

causal relationship between futures speculators and commodity prices. As result, the fact that the studies generally did not find statistical evidence of such a relationship appears to suggest that such trading is not significantly affecting commodity prices at the weekly or daily frequency.

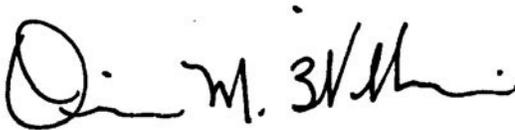
Agency Comments

We provided a draft of this letter and the attached briefing to CFTC for comment. CFTC provided technical comments, which we incorporated as appropriate.

As we agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution of it until 30 days from the date of this letter. At that time, we will provide copies of this report to interested congressional committees. We also are sending a copy of this report to the Acting Chairman of CFTC. In addition, this report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512- 8678 or williamso@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in enclosure II.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Orice M. Williams". The signature is fluid and cursive, with a large initial "O" and "M".

Orice M. Williams
Director, Financial Markets and Community Investment

Briefing to the Staff of the House Committee on Agriculture



**Briefing to Staff of the
House Committee on Agriculture**

**Issues Involving the Use of the Futures
Markets to Invest in Commodity Indexes**

December 16, 2008
(with subsequent additions after that date)



Briefing Outline

- Objectives, scope, and methodology
- Background
- Summary
- Investments in Commodity Indexes under The Commodity Exchange Act (CEA)
- Investment in Commodity Indexes under The Employee Retirement Income Security Act (ERISA)
- Margins and index investors
- Position limits and index investors
- Appendix I: Position limits and accountability levels
- Appendix 2: Net long positions held by index traders



Objectives, Scope, and Methodology

- Our objectives were to examine
 - whether the CEA prohibits investors from using the futures markets to gain an exposure to commodity indexes,
 - whether ERISA prohibits pension plans from investing in commodities through the futures markets,
 - how margins have affected the ability of investors to obtain exposures to commodity indexes, and
 - how position limits have affected the ability of investors to obtain exposures to commodity indexes.
- To accomplish our objectives, we
 - reviewed sections of the CEA and CFTC regulations, including proposed rules and comment letters; exchange rules on position limits and margins (performance bonds); and congressional testimonies, studies, and other material by CFTC, academics, GAO, and others about the futures markets;



Objectives, Scope, and Methodology

- Reviewed sections of ERISA; an opinion of the Department of Labor's (DOL) Employee Benefits Security Administration, which is responsible for enforcing certain ERISA provisions, on the use of derivatives by pension plans; and congressional testimonies, GAO reports, and other material on investment in commodity indexes by pension funds;
- interviewed CFTC staff, as well as officials representing two swap dealers, an asset management firm, three futures exchanges, and an industry trade association;
- analyzed CFTC's Commitments of Traders (COT) and supplemental reports to develop summary information about the futures positions, or contracts, held by index traders,
- assessed the reliability of the CFTC data and determined the data were sufficient for our purposes; and
- reviewed and analyzed data on publicly traded index funds, including their public filings, and the investment policies and holdings of three pension plans.



Background

- Investing in commodities by institutions has become more popular since the mid-2000s but has been common since the 1970s.
 - Pension plans, endowments, foundations, and other institutional investors generally have invested in commodities to diversify their portfolios and hedge inflation risk.
 - Investors have gained commodity exposure through commodity indexes, which measure the returns on a basket of various commodity futures contracts.
 - Two common commodity indexes are the S&P Goldman Sachs Commodity Index (S&P GSCI) and Dow Jones-AIG Commodity Index (DJ-AIGCI).
- Investors can invest in commodity indexes by
 - taking long positions in individual futures contracts that make up an index or futures contracts linked to an index,
 - entering into an over-the-counter (OTC) swap linked to an index, or
 - investing in a vehicle that tracks an index, such as a commodity pool, mutual fund, or exchange-traded fund or note.



Background

- CFTC recently estimated that the net notional value of the portion of commodity index trading tied to the U.S. futures markets was \$161 billion as of June 30, 2008.
- The U.S. futures markets are regulated under the CEA by CFTC.
 - The CEA's primary objectives include preventing manipulation, abusive trading practices, and fraud.
 - The CEA authorizes CFTC to oversee futures exchanges (called designated contract markets) and other entities. Our discussion focuses solely on futures contracts traded on designated contract markets.



Summary

- Using futures markets to make long-term investments in commodity indexes represents a new type of speculation but is not prohibited under the CEA.
- Under ERISA, pension plans may invest in commodity indexes using futures contracts or other derivatives but must determine that such investments are, among other things, prudent.
- Index investors generally have not been directly subject to margins, because they have used primarily OTC swaps, not futures contracts, to obtain their exposure. Two swap dealers told us that increasing margins on index-related futures positions would increase the cost of swaps but might not cause investors to significantly reduce their index exposure.
- Index investors generally have not been restricted by position limits, because (1) they have obtained their index exposures primarily through OTC swaps not subject to position limits, and (2) swap dealers have received exemptions from CFTC that allow them to hold index-related futures positions in excess of the position limits. CFTC is currently deciding whether it should limit the exemptions.



The CEA Does Not Prohibit the Use of the Futures Markets for Index Investing

- Futures markets historically have been used by commercial firms to manage price risk and speculators to profit from price movements.
 - Futures markets serve a public interest by providing price discovery and risk-shifting.
 - The proper and efficient functioning of the futures markets requires participation by speculators and hedgers.
 - CFTC has adopted regulations designed to prevent excessive speculation and operates various programs to monitor the markets for manipulation and protect the economic functions of the markets.
- However, the use of the futures markets by pension funds and other institutional investors to gain long-term exposure to commodity indexes as an asset class represents a new type of speculation.
 - CFTC staff told us that the use of the futures markets for index trading does not violate any provisions of the CEA or CFTC regulations.
 - In two regulatory letters issued in 2006, CFTC staff stated that the use of the futures markets by funds to provide their investors with a commodity-index exposure represented a legitimate and potentially useful investment strategy.



ERISA Does Not Prohibit Pension Plans from Investing in the Futures Markets

- Investment decisions of private sector pension plans must comply with ERISA.
- Under ERISA, a fiduciary must observe a prudent man standard of care and, among other things,
 - act solely in the interest of the plan participants and beneficiaries and in accordance with plan documents;
 - invest and administer the plan with the care, skill, and diligence of a prudent man with knowledge of such matters; and
 - diversify plan investments to minimize the risk of large losses.
- Under ERISA, the prudence of any investment is considered in the context of the total plan portfolio. Thus, a relatively risky investment may be considered prudent if it is part of a broader strategy to balance the risk and expected return to the portfolio.
- Public sector pension plans must follow requirements established for them under applicable state law. While states generally have adopted standards similar to the ERISA prudent man standard, specific provisions of law and regulation vary from state to state.



ERISA Does Not Prohibit Pension Plans from Investing in the Futures Markets

- In 1996, a DOL official issued an opinion on the use of derivatives by pension plans under ERISA.
 - Under the DOL opinion, derivatives were defined to include futures contracts and OTC swaps. The opinion also covered plan investments in pooled funds that used derivatives.
 - According to the DOL opinion, derivative investments are subject to the fiduciary responsibility rules in the same manner as are any other plan investments. Thus, plan fiduciaries must determine that a derivatives investment is, among other things, prudent and made solely in the interest of the plan's participants and beneficiaries.
- The DOL opinion recognized that derivatives may be a useful tool for managing a variety of risks and for broadening investment alternatives in a plan's portfolio but noted that investments in certain derivatives may require a higher degree of sophistication and understanding on the part of plan fiduciaries than other investments.
- Under ERISA, a plan participant or beneficiary may bring civil action in court to get, among other things, appropriate relief from a breach of fiduciary duty.



**Margins Generally Have Not Limited
Investors' Ability to Gain Index Exposure**

- CEA generally does not grant CFTC authority to establish margins (also called performance bonds) for futures contracts.
- Futures exchanges set margins for their futures contracts.
 - To enter into a futures contract, both traders (buyer and seller) must post a margin deposit with their broker, which is intended to serve as a performance bond and ensure that they can meet the financial obligations associated with their positions. Unlike securities margins, futures margins are not extensions of credit.
 - Futures margins typically are based on the price volatility of the underlying commodity of a futures contract and vary across contracts.
 - Each futures exchange has a clearing house that is the counterparty to every futures trade.
 - The margining system and clearing house help to protect and maintain the financial integrity of futures markets.
- CFTC data and other evidence indicate that index investors have gained their index exposure primarily through OTC swaps and index funds and, as a result, have not been directly subject to margins.



Margins Generally Have Not Limited Investors' Ability to Gain Index Exposure

- Some index investors obtain their exposure through index funds, such as commodity pools, exchange-traded funds, or mutual funds. In turn, such funds may use futures, OTC swaps, or other products to obtain their exposure.
- Our analysis of two periods of CFTC's COT data shows that swap dealers generally hold the majority of the index-related futures positions, indicating that index investors primarily use OTC swaps to obtain their exposure. Dealers then use futures to hedge their exposure.
- For example, in 10 of the 12 futures covered by CFTC's September 23, 2008 data, swap dealers accounted for 80 percent or more of the total net long futures positions, or contracts, held by index traders.

Exchange and contract	Percent of total net long index-related positions, or contracts, held by		Number of net long index-related positions, or contracts, held by		Percent of total long positions held by index traders
	Dealers	Funds	Dealers	Funds	
CBOT – soybean oil	97%	3%	66,374	2,127	24%
ICE US – cotton	92	8	82,328	7,030	27
ICE US – coffee	90	10	46,913	4,998	31
CME – lean hogs	85	15	83,465	14,209	45
CBOT – soybeans	84	16	113,065	21,543	28
ICE US – sugar	84	16	257,587	49,844	37
CBOT – wheat	83	17	137,699	27,985	47
CME – live cattle	83	17	109,285	23,137	46
ICE US – cocoa	82	18	17,965	3,845	18
CBOT – corn	82	18	261,364	56,563	22

Source: GAO analysis of CFTC data.



**Margins Generally Have Not Limited
Investors' Ability to Gain Index Exposure**

- Increasing margins would increase the costs of trading futures for swap dealers and other index traders. But it might not cause institutional investors to significantly reduce their index exposures and lead to a reduction in the number of index-related futures positions.
 - Officials at two swap dealers told us that higher margins would increase their hedging cost and thus the cost of swaps. They said investors might use alternatives to swaps, depending on the cost-impact of higher margins. If institutional investors decided to allocate a portion of their portfolios to commodities, they would find the most efficient way to do so.
 - Officials at an asset management firm told us they created funds that use futures contracts to track indexes for institutional investors and that the funds held collateral equal to the notional value of their futures positions. Thus, an increase in margins would not have a significant effect on the cost for the funds.
 - An exchange official said that index funds generally were not leveraged and were in the best position to meet a margin increase. A margin increase would impose no cost on such funds, because they hold fully collateralized accounts on behalf of their clients.



**Margins Generally Have Not Limited
Investors' Ability to Gain Index Exposure**

- Imposing higher margins on index-related futures positions could raise challenges.
 - Swap dealers use futures contracts to hedge their net exposure and may not be able to untangle and identify the futures positions that are attributable specifically to commodity index swaps.
 - Officials from a swap dealer told us that imposing separate margins on index-related futures positions could prevent dealers from internally netting transactions, potentially reducing market liquidity and increasing costs for other market participants.
 - Officials from another dealer told us that using margins by exchanges as a tool to moderate participation in the futures markets, instead of solely to protect the markets' financial integrity, could be problematic. If market liquidity was low, an exchange could have an incentive to lower margins to increase market liquidity at the expense of protecting the market's financial integrity.



**Position Limits Generally Have Not Limited
Investors' Ability to Gain Index Exposure**

- Limiting the size of positions that traders may hold in the futures markets is one method regulators use to prevent excessive speculation that could cause unwarranted changes in futures prices.
 - CFTC is authorized to fix limits on trading that may be done or positions that may be held on any exchange as necessary to diminish, eliminate, or prevent excessive speculation.
 - Position limits prohibit a trader from holding a futures position above a specified level, unless the trader has received an exemption. Exceeding a position limit without an exemption is a violation.
 - CFTC has set federal speculative position limits on nine agricultural commodities.
 - Exchanges have adopted position limits or position accountability rules for other commodities subject to CFTC oversight.
 - A position accountability rule sets a position level that triggers additional attention by an exchange. When a trader's position reaches or exceeds the accountability level, the trader is required to provide information to the exchange at its request.



**Position Limits Generally Have Not Limited
Investors' Ability to Gain Index Exposure**

- Holding a position that exceeds a position accountability level is not a violation. But the exchange may direct a trader to limit or reduce a position, and the trader's refusal to do so would be a violation.
- Exchanges may use accountability levels in lieu of position limits for contracts on financial instruments, intangible commodities, or certain tangible commodities that have large open interest, high daily trading volumes, and liquid cash markets.
- CFTC and exchanges may grant exemptions to parties who can show that their futures positions are bona fide hedges.
 - Before 1974, the hedging definition applied only to agricultural commodities. When CFTC was created and the definition of "commodity" under the CEA was expanded, Congress was concerned that the definition would fail to address developing risk-shifting needs. It repealed the definition and gave CFTC the authority to define bona fide hedging.
 - Under CFTC regulations, no transactions or positions will be classified as bona fide hedging unless their purpose is to offset price risks incidental to commercial cash or spot operations and they are established and liquidated in an orderly manner.



Position Limits Generally Have Not Limited Investors' Ability to Gain Index Exposure

- Position limits generally have not limited the level of commodity exposure that index investors may add to their portfolios.
 - The S&P GSCI and DJ-AIGCI collectively include 26 futures contracts, which are traded on six U.S. and two U.K. futures exchanges.
 - None of the contracts traded on the U.K. exchanges are subject to position limits or accountability levels.
 - All of the contracts traded on the U.S. exchanges are subject to position limits or accountability levels that apply to a single month or all months combined. (See app. I for additional information.)

- Examples of position limits or accountability levels include the following.

Exchange and contract	Position limit or accountability level	
	Single month	All months
CBOT – corn	13,500	22,000
CME – feeder cattle	1,500	none
COMEX – copper	5,000	5,000
ICE US – cotton	3,500	5,000
KCBOT – wheat	5,000	6,500
NYMEX – heating oil	5,000	7,000

Source: Exchange rules.



**Position Limits Generally Have Not Limited
Investors' Ability to Gain Index Exposure**

- The level of exposure to the S&P GSCI or DJ-AIGCI that an index investor could take on using futures contracts would be limited by the applicable position limits if the investor could not qualify for a hedge exemption.
- However, index investors can use OTC swaps, which are not subject to position limits, to take on a commodity exposure greater than the level permitted for futures contracts.
- CFTC staff recently reported that 18 index traders appeared to have an aggregate position in futures contracts and OTC derivatives that would have been above a position limit or exchange accountability level if all the positions were on-exchange.
- Swap dealers have qualified for hedge exemptions from position limits, helping them to provide index exposures to investors through swaps.
 - In 1991, CFTC granted a hedge exemption to a swap dealer that planned to provide a pension fund with an index exposure through an OTC swap and then use futures contracts to hedge its exposure. Because the futures positions the dealer would have to establish would have been greater than the position limits, it needed a hedge exemption.



**Position Limits Generally Have Not Limited
Investors' Ability to Gain Index Exposure**

- CFTC has granted hedge exemptions to 13 swap dealers for corn, cotton, soybeans, wheat, soybean oil, and soybean meal.¹ In its September 2008 report, CFTC staff identified 16 dealers as having significant commodity index swap business and 13 dealers that held sizeable futures positions but were not known to be engaged in significant commodity index swaps.
 - The exemptions apply to a specific firm and set the maximum level of futures positions that the firm may hold with respect to one or more specified commodities.
 - Firms receiving a hedge exemption are not required to make additional filings, unless requested by CFTC or they exceed their specified levels.
- CFTC has subjected the exemptions to conditions to protect the marketplace from potential ill effects, including that
 - the futures positions must offset specific price risk;
 - the futures positions passively track a commodity index;
 - the notional value of the futures positions cannot exceed the dollar value of the underlying risk; and
 - the futures positions cannot be carried into the spot month.

¹ The exemptions were granted by CFTC staff pursuant to delegated authority under CFTC regulations and bind the Commission and its staff with respect to the specific fact situation and persons addressed by the letter.



**Position Limits Generally Have Not Limited
Investors' Ability to Gain Index Exposure**

- To help two index funds use the futures markets to provide investors with an index exposure, CFTC staff provided the funds with relief from certain position limits under no-action letters issued in 2006.
 - Unlike the swap dealers, the index funds sought to use futures contracts to track a commodity index for their investors, not to hedge risk from a swap. As a result, CFTC staff did not believe that the index funds qualified for a hedge exemption.
 - Because the index fund futures positions represented a legitimate and potentially useful investment strategy, CFTC staff granted the funds no-action relief from position limits, subject to conditions similar to the ones imposed in the swap dealer exemptions.
- Like CFTC, the exchanges have provided hedge exemptions or other relief from exchange-set position limits.
 - The Chicago Board of Trade has issued index-hedge exemptions to 15 dealers and 5 risk-management exemptions to 2 index funds.
 - The Chicago Mercantile Exchange has issued index-hedge or risk-management exemptions to 13 entities.
 - The Commodity Exchange has issued 6 exemptions to 4 dealers.



Position Limits Generally Have Not Limited Investors' Ability to Gain Index Exposure

- Our analysis of two periods of CFTC's COT data indicates that swap dealers, on average, held positions in several agricultural futures markets in excess of position limits or accountability levels but that index funds, on average, did not. (See app. II for additional information.)
 - Because CFTC has granted hedge exemptions to swap dealers to manage price risk, the dealers are allowed to hold positions in excess of position limits.
 - We analyzed CFTC data covering January 26, 2006, and September 23, 2008.

- The average sizes of net long positions, or contracts, held by index traders on September 23, 2008, were as follows.

Exchange and contract	Average size of net long index-related position held by		Position limit or accountability level	
	Funds (contracts)	Dealers (contracts)	Single month	All months
CBOT – corn	4,714	18,669	13,500	22,000
CBOT – soybeans	1,958	8,076	6,500	10,000
CBOT – soybean oil	452	4,741	5,000	6,500
CBOT – wheat	2,544	9,836	5,000	6,500
CME – feeder cattle	585	138	1,500	None
CME – lean hogs	1,421	5,564	4,100	None
CME – live cattle	2,103	7,286	5,400	None
ICE US – coffee	417	3,351	5,000	5,000
ICE US – cocoa	481	1,283	6,000	6,000
ICE US – cotton	703	5,881	3,500	5,000
ICE US – sugar	4,984	18,399	10,000	15,000
KCBOT – wheat	1,133	1,092	5,000	6,500

Source: GAO analysis of CFTC data and exchange rules



**Position Limits Generally Have Not Limited
Investors' Ability to Gain Index Exposure**

- Without their hedge exemptions, swap dealers would have been prevented from holding positions in excess of the position limits, as some currently do.
- According to officials from a swap dealer, position limits can restrict the extent to which the firm can meet the needs of its clients and grow its business by limiting the level of futures positions it can hold at a particular time.
- Officials from another dealer told us position limits can make it more challenging for the firm to hedge its exposures but have not prevented it from growing its business. They said that the firm would use OTC derivatives or other options to hedge whenever it could not use futures because of position limits.



**Position Limits Generally Have Not Limited
Investors' Ability to Gain Index Exposure**

- CFTC recently has issued several proposals to change hedge exemptions for index traders.
 - In November 2007, CFTC proposed rules to create a new exemption from position limits for index funds and investors using futures to diversify risk. In June 2008, CFTC withdrew the proposal, in part to determine whether further consensus among the affected parties should be sought.
 - In a September 2008 report, CFTC noted that the mix of activity by swap dealers called into question whether they should receive hedge exemptions for some of their activity. CFTC recommended, as a matter of regulatory consistency and fairness, that its staff consider replacing the hedge exemption with a limited risk-management exemption.
 - CFTC staff told us that the agency plans to issue an advanced notice of proposed rulemaking on the hedge exemptions but has not set a time frame for doing so.
 - Officials from a swap dealer told us that if dealers were required to hold fewer futures positions, the flow of swap business would be redistributed but the related futures positions would not be reduced.



Appendix I: Position Limits and Accountability Levels for U.S. Futures Contracts Included in the S&P GSCI and DJ-AIGCI

Exchange	Commodity	Position Limits		Accountability Levels	
		Single Month	All Months	Single Month	All Months
Chicago Board of Trade	Corn	13,500	22,000	None	None
Chicago Board of Trade	Soybean oil	5,000	6,500	None	None
Chicago Board of Trade	Soybeans	6,500	10,000	None	None
Chicago Board of Trade	Wheat	5,000	6,500	None	None
Chicago Mercantile Exchange	Feeder cattle	1,500	None	None	None
Chicago Mercantile Exchange	Lean hogs	4,100	None	None	None
Chicago Mercantile Exchange	Live cattle	5,400	None	None	None
Commodity Exchange	Copper	None	None	5,000	5,000
Commodity Exchange	Gold	None	None	6,000	6,000
Commodity Exchange	Silver	None	None	6,000	6,000
ICE-US	Cocoa	None	None	6,000	6,000
ICE-US	Coffee	None	None	5,000	5,000
ICE-US	Cotton	3,500	5,000	None	None
ICE-US	Sugar	None	None	10,000	15,000
Kansas City Board of Trade	Wheat	5,000	6,500	None	None
New York Mercantile Exchange	Heating oil	None	None	5,000	7,000
New York Mercantile Exchange	Natural gas	None	None	6,000	12,000
New York Mercantile Exchange	RBOB oil	None	None	5,000	7,000
New York Mercantile Exchange	WTI crude oil	None	None	10,000	20,000

Source: Exchange rules.

Note: All of the above U.S. futures exchanges have position limits for the spot month, but these limits are not included in the table because index traders generally do not hold such positions.



Appendix II: Net Long Positions Held by Index Traders

Net Long Positions Held by Index Traders on September 23, 2008

Exchange	Commodity	Net long index-related futures contracts held by		Number of funds	Number of Dealers	Average size of the net long position held by		Position limits or Accountability Level	
		Funds	Dealers			Funds	Dealers	Single Month	All Months
Chicago Board of Trade	Corn	56,563	261,364	12	14	4,714	18,669	13,500	22,000
Chicago Board of Trade	Soybeans	21,543	113,065	11	14	1,958	8,076	6,500	10,000
Chicago Board of Trade	Soybean oil	1,807	66,374	4	14	452	4,741	5,000	6,500
Chicago Board of Trade	Wheat	27,985	137,699	11	14	2,544	9,836	5,000	6,500
Chicago Mercantile Exchange	Feeder cattle	4,097	1,791	7	13	585	138	1,500	None
Chicago Mercantile Exchange	Lean hogs	14,209	83,465	10	15	1,421	5,564	4,100	None
Chicago Mercantile Exchange	Live cattle	23,137	109,285	11	15	2,103	7,286	5,400	None
ICE US	Coffee	4,998	46,913	12	14	417	3,351	5,000	5,000
ICE US	Cocoa	3,845	17,965	8	14	481	1,283	6,000	6,000
ICE US	Cotton	7,030	82,328	10	14	703	5,881	3,500	5,000
ICE US	Sugar	49,844	257,587	10	14	4,984	18,399	10,000	15,000
Kansas City Board of Trade	Wheat	7,930	15,293	7	14	1,133	1,092	5,000	6,500

Source: GAO analysis of CFTC data and exchange rules.



Appendix II: Net Long Positions Held by Index Traders

Net Long Positions Held by Index Traders on January 26, 2006

Exchange	Commodity	Net long index-related futures contracts held by		Number of funds	Number of Dealers	Average size of the net long position held by		Position limits or Accountability Level	
		Funds	Dealers			Funds	Dealers	Single Month	All Months
Chicago Board of Trade	Corn	32,847	387,631	13	13	2,527	29,818	13,500	22,000
Chicago Board of Trade	Soybeans	11,893	115,151	11	13	1,081	8,858	6,500	10,000
Chicago Board of Trade	Soybean oil	4,045	63,260	4	13	1,011	4,866	5,000	6,500
Chicago Board of Trade	Wheat	19,706	179,093	13	13	1,516	13,776	5,000	6,500
Chicago Mercantile Exchange	Feeder cattle	2,922	4,457	6	10	487	446	1,500	None
Chicago Mercantile Exchange	Live cattle	14,981	79,112	12	13	1,248	6,086	5,400	None
Chicago Mercantile Exchange	Lean hogs	10,309	72,036	10	13	1,031	5,541	4,100	None
ICE US	Coffee	4,178	32,097	10	13	418	2,469	5,000	5,000
ICE US	Cocoa	4,708	8,020	6	12	785	668	6,000	6,000
ICE US	Cotton	7,079	74,446	9	13	787	5,727	3,500	5,000
ICE US	Sugar	20,068	133,588	7	13	2,867	10,276	10,000	15,000
Kansas City Board of Trade	Wheat	3,955	26,404	3	10	1,318	2,640	5,000	6,500

Source: GAO analysis of CFTC data and exchange rules.

GAO Contact and Staff Acknowledgments

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Staff Acknowledgments

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Our review of the recent literature focused on empirical studies analyzing the causal relationship between speculative futures trader positions and commodity prices in the United States. Because we were interested primarily in commodity index trader positions, we focused on studies completed after 2003, given that commodity index investment began to increase around mid-2000s and data on commodity index futures positions only became publicly available in early 2007. We also list qualitative studies, which did not evaluate causal claims in a systematic way (i.e., through the use of experimental or statistical controls).

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