# Investment Fund Activity in Commodities

Joshua Roberts

Australian Grains Industry Conference
Melbourne
July 30, 2013

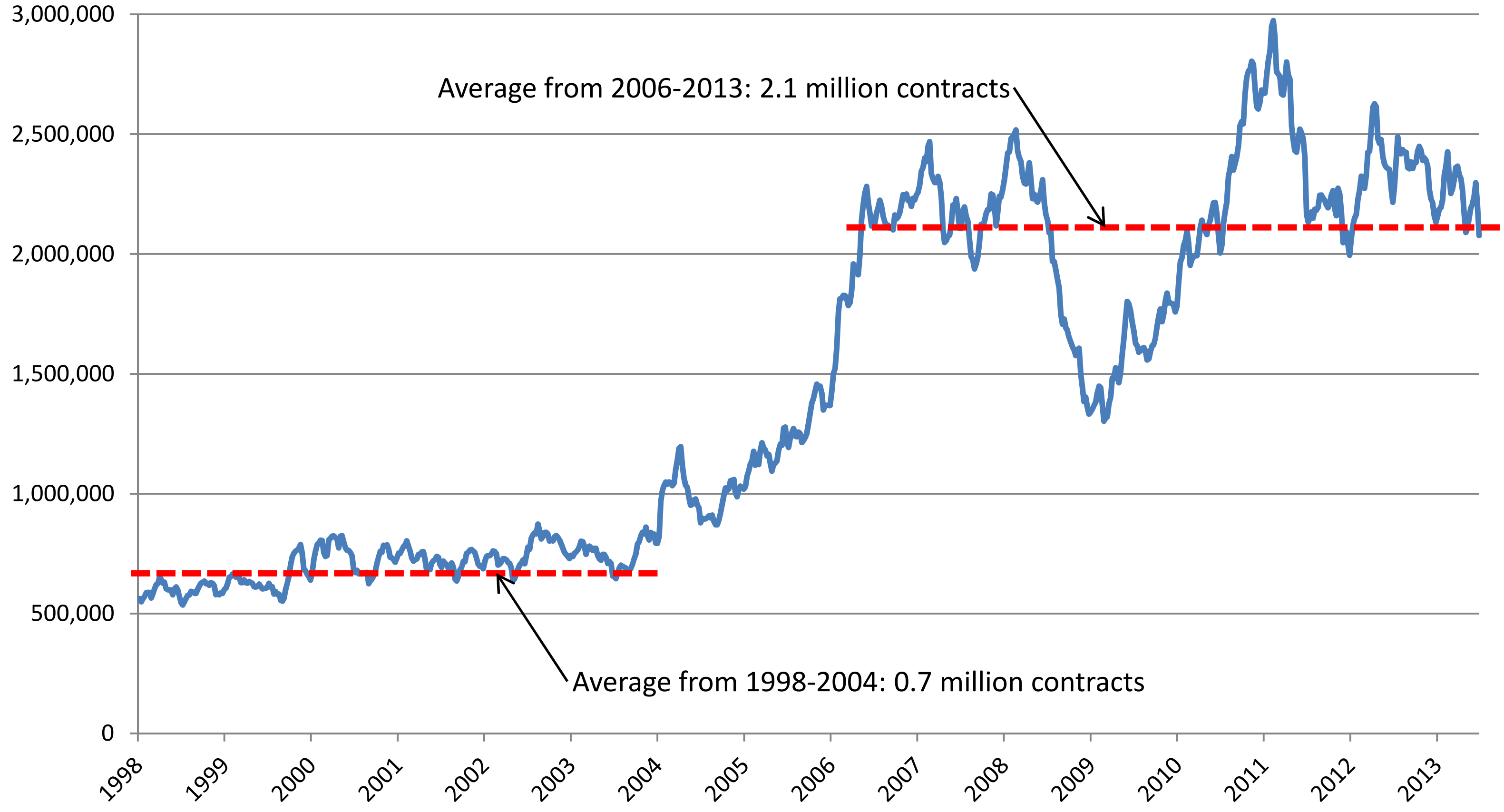
## CBOT Wheat Open Interest, in Contracts


Source: CBOT, Reuters

## CBOT Wheat Open Interest, Value in USD

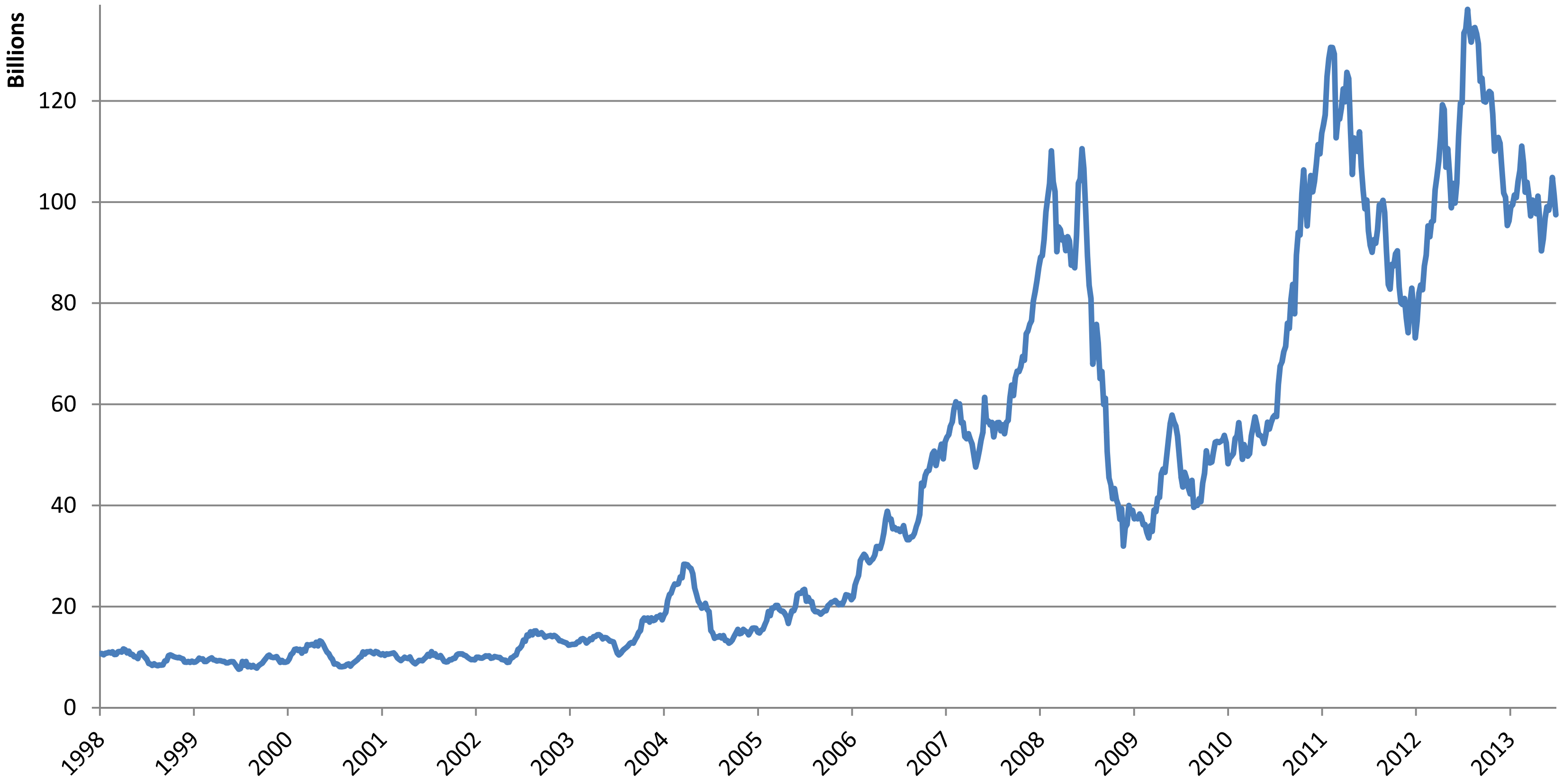

Source: CBOT, Reuters

## Aggregate Open Interest (Wheat + Corn + Beans), in Contracts




Source: CBOT, Reuters

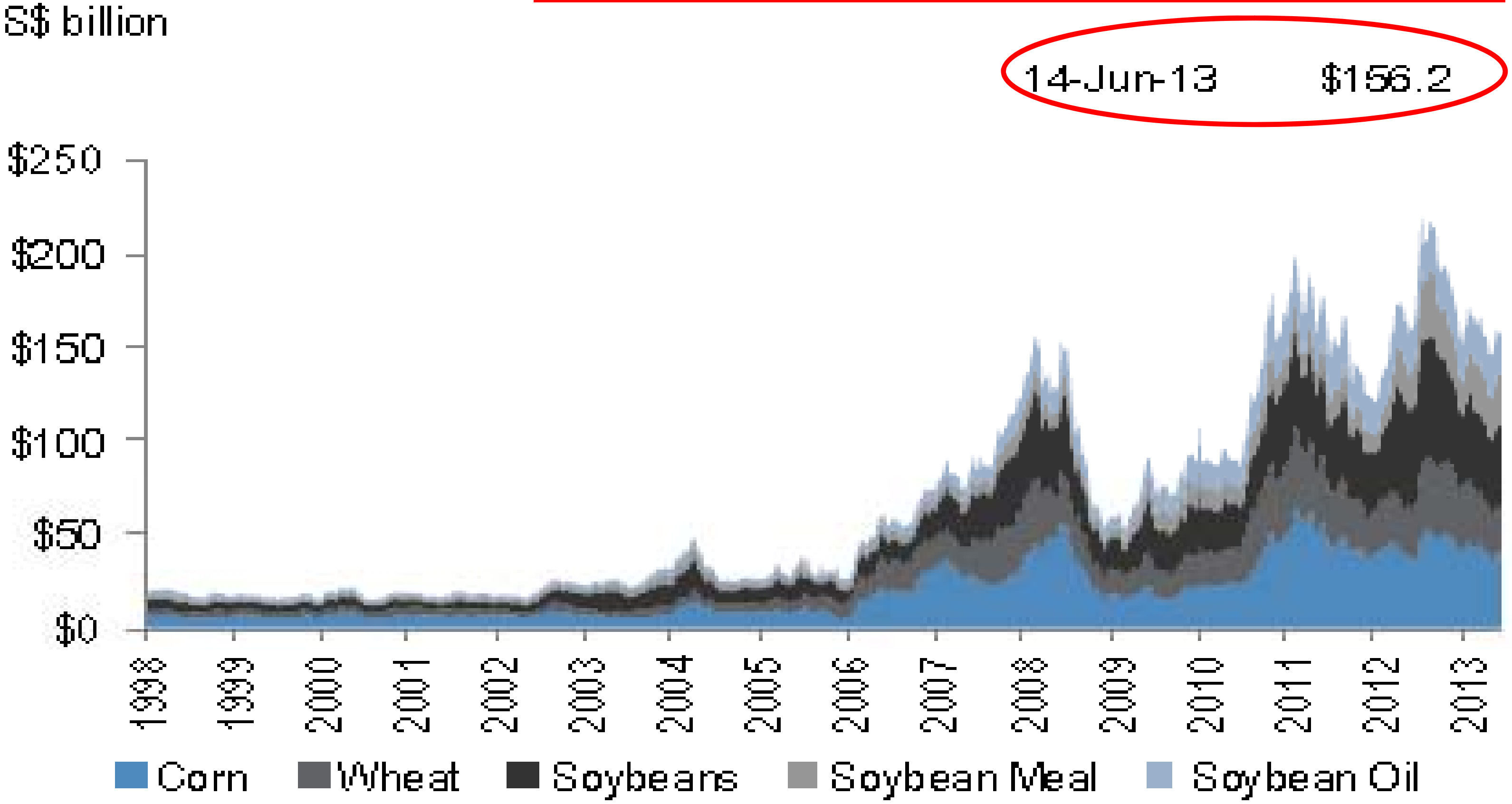
## Aggregate (Wheat + Corn + Beans) Open Interest, Value in USD




Source: CBOT, Reuters

**Estimated open interest: 25 global grains & oilseeds futures markets**

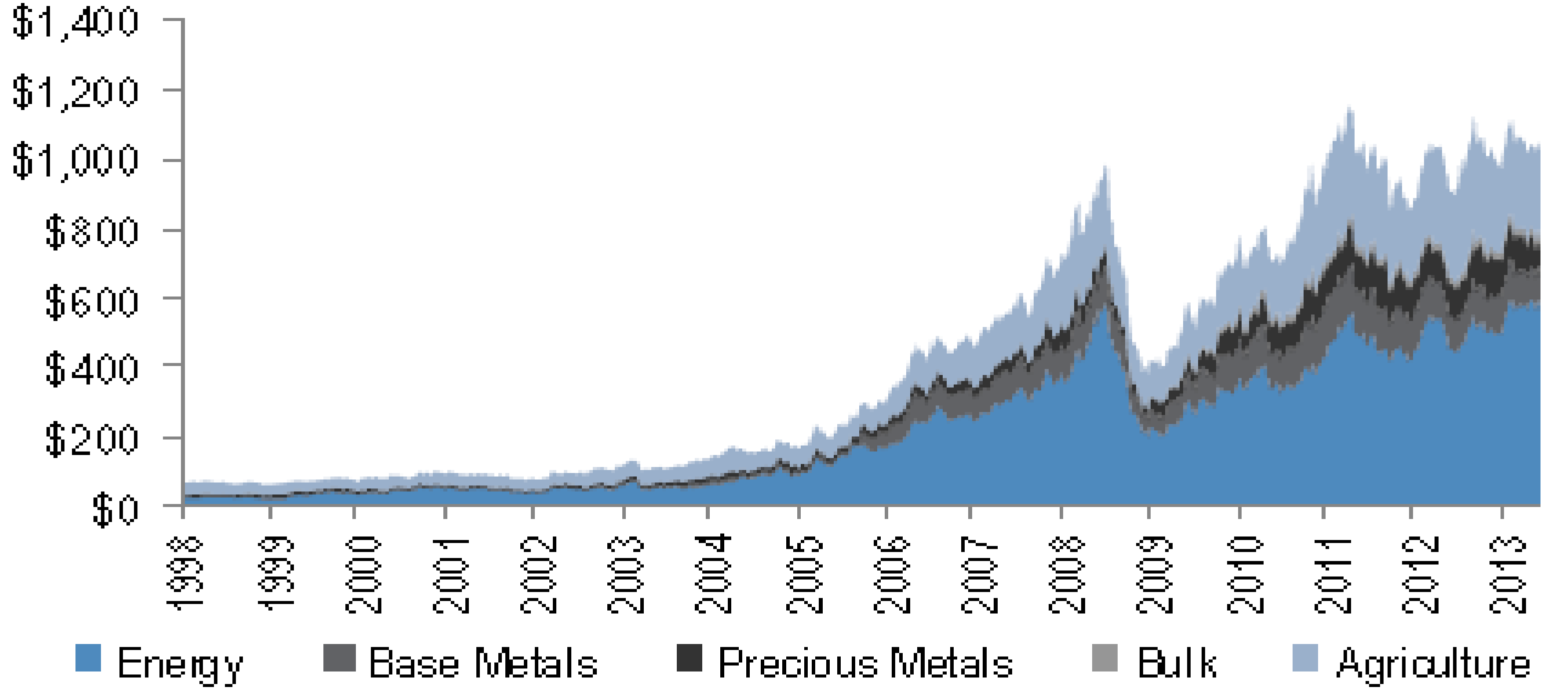
US$ billion




Source: Exchanges, J.P. Morgan Commodities Research

**Estimated open interest: 83 global commodity futures markets**
US$ billion

14-Jun-13 $1,048




Source: Exchanges, J.P. Morgan Commodities Research

**GSCI COLLATERALIZED FUTURES AS A HEDGING AND DIVERSIFICATION TOOL FOR INSTITUTIONAL PORTFOLIOS: AN UPDATE**

**PAUL D. KAPLAN**
*Vice President and Chief Ec*
*Ibbotson Associates*

**SCOTT L. LUMMER**
*Chief Investment Officer*
*The 401(k) Forum*

December 1997

Forthcoming in the *Journal*

February 11, 2005

**The Tactical and Strategic Value of Commodity Futures**

Claude B. Erb
*Trust Company of th*
*Los Angeles, CA 900*

Campbell R. Harve
*Duke University,*
*Durham, NC 27708*
*National Bureau of E*
*Cambridge, MA 021*

**Facts and Fantasies about Commodity Futures***

Gary Gorton
The Wharton School, University of Pennsylvania
and National Bureau of Economic Research

and

K. Geert Rouwenhorst
School of Management, Yale University

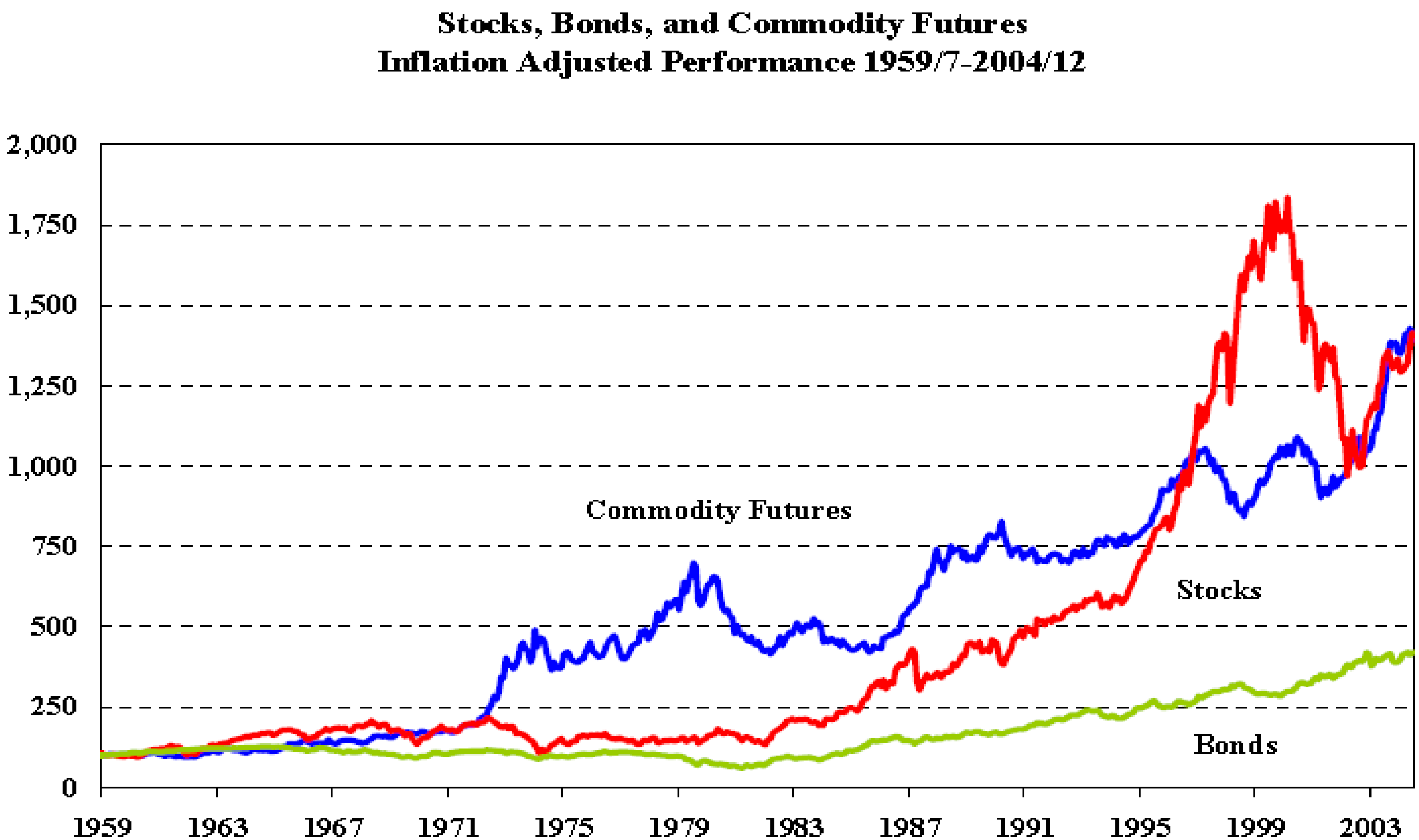
June 2004
This Draft: February 28, 2005

# Findings about Commodities* as an Asset Class

- Long-term returns that are similar to stocks (and better than bonds), with comparable volatility
- Zero or negative correlation with stocks and bonds
- Positive correlation to inflation and to changes in the rate of inflation

*Based on an equally weighted basket of commodity futures contracts

# Commodity futures returns are similar to stocks and better than bonds




Source: Gorton and Rouwenhorst

# Commodity futures returns are negatively correlated with stocks & bonds and positively correlated with inflation

**Correlation of Commodity Futures Returns with Stocks, Bonds, and Inflation**
**Overlapping Return Data 1959/7 – 2004/12**

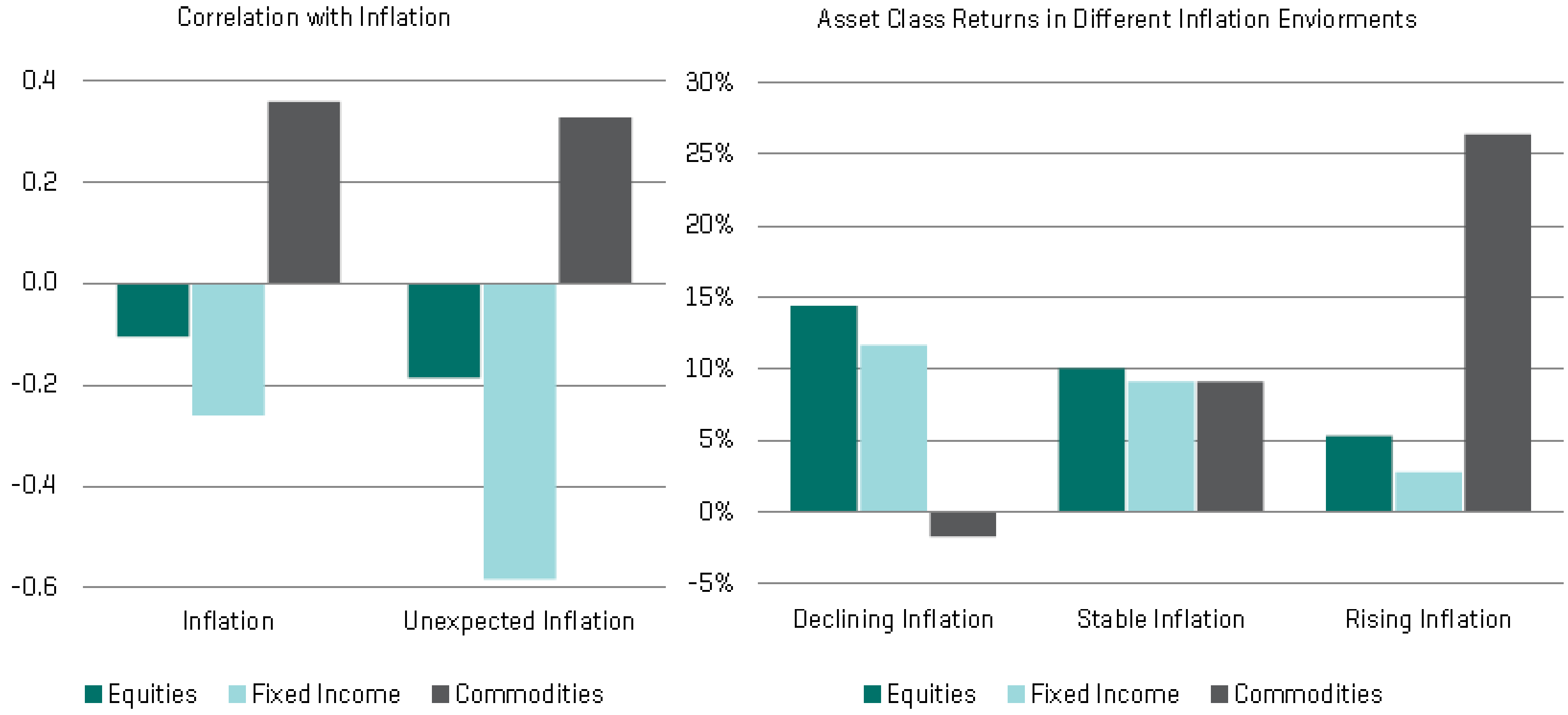
| | Stocks | Bonds | Inflation |
|---|---|---|---|
| Monthly | 0.05 | -0.14* | 0.01 |
| Quarterly | -0.06 | -0.27* | 0.14 |
| 1-year | -0.10 | -0.30* | 0.29* |
| 5-year | -0.42* | -0.25* | 0.45* |

**Correlation of Assets with Inflation 1959/7 – 2004/12**

| | Stocks | Bonds | Commodity Futures |
|---|---|---|---|
| Monthly | -0.15* | -0.12* | 0.01 |
| Quarterly | -0.19* | -0.22* | 0.14 |
| 1 – year | -0.19 | -0.32* | 0.29* |
| 5 – year | -0.25 | -0.22 | 0.45* |

Source: Gorton and Rouwenhorst

**Potential Inflation Protection Benefit from Commodities (1972 – 2012)**




Source: S&P DOW JONES INDICES, MSCI, Barclays, Federal Reserve. Data from December 1972 to June 2012. Periods of stable inflation include all calendar quarters where inflation rises or declines less than 0.25% from the previous quarter. Charts are provided for illustrative purposes. Past performance is no guarantee of future results.

THE WALL STREET JOURNAL. ONLINE

September 9, 2004

"Commodities have begun to emerge as a discrete asset class in their own right."
-- Stefan Weiser, Goldman-Sachs

THE GLOBAL PLAYER

By MICHAEL R. SESIT

# Commodities Enter Investment Mainstream

## Pension Funds, Universities Jump Into the Asset Class; High Returns, Low Risk

*September 9, 2004; Page C1*

PARIS -- Hedge funds and other speculators have taken some criticism for the soaring price of oil and other commodities.

But amid the din of the blame game, a broader and more-significant trend in the global investment community has largely been overlooked: Mainstream investors such as pension funds, insurance companies and university endowments -- even Harvard's -- are pumping more money into commodities.

These long-term institutional investors hold, on average, investments in energy, industrial and precious metals, livestock, agriculture and other commodities that are twice those of hedge funds, estimates Jeffrey Currie, head of commodities research at a London office of Wall Street securities firm Goldman Sachs Group Inc.

Often, those investments aren't directly in physical commodities themselves but in commodity-related and energy-related companies and in indexes linked to the price of commodities.

[1]Equally weighted index of commodity futures using data from the Commodity Research Bureau [2]S&P 500 index [3]Ibbotson corporate bond index

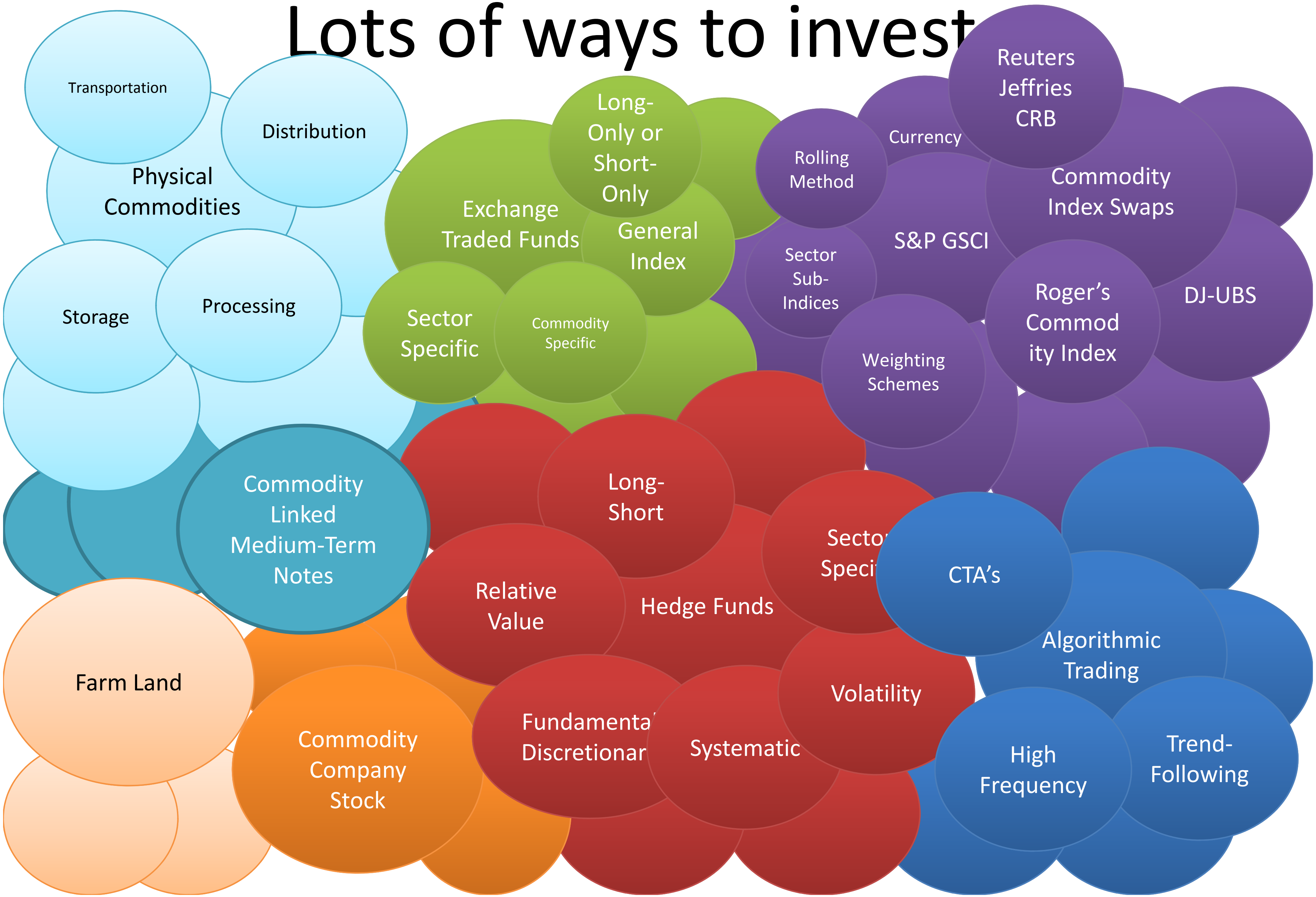
*Source: Yale International Center for Finance*

Market analysts conservatively figure that roughly 150 institutions have so-called passive investments pegged to the Goldman Sachs Commodity Index, up from fewer than 50 in 2000. Goldman estimates that more than $25 billion (€21 billion) is tied to the index, compared with $8 billion four years ago. American International Group Inc. estimates that an additional

## Considerations for institutional investors (e.g. Pension Funds, Endowments, Sovereign Wealth Funds)

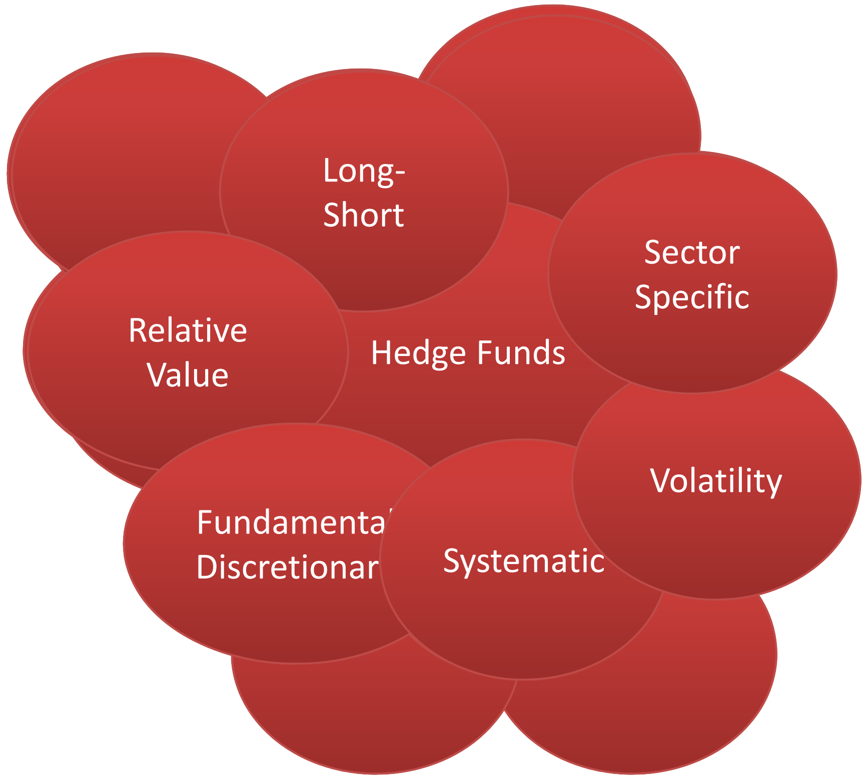
- Physical or Derivative (or Commodity Stock)?
- Basket or Individual Commodity (or Sector)?
- Fund or Managed Account?
- Futures or Swaps (or Notes)?
- Active or Passive (or a combination)?

# Lots of ways to invest

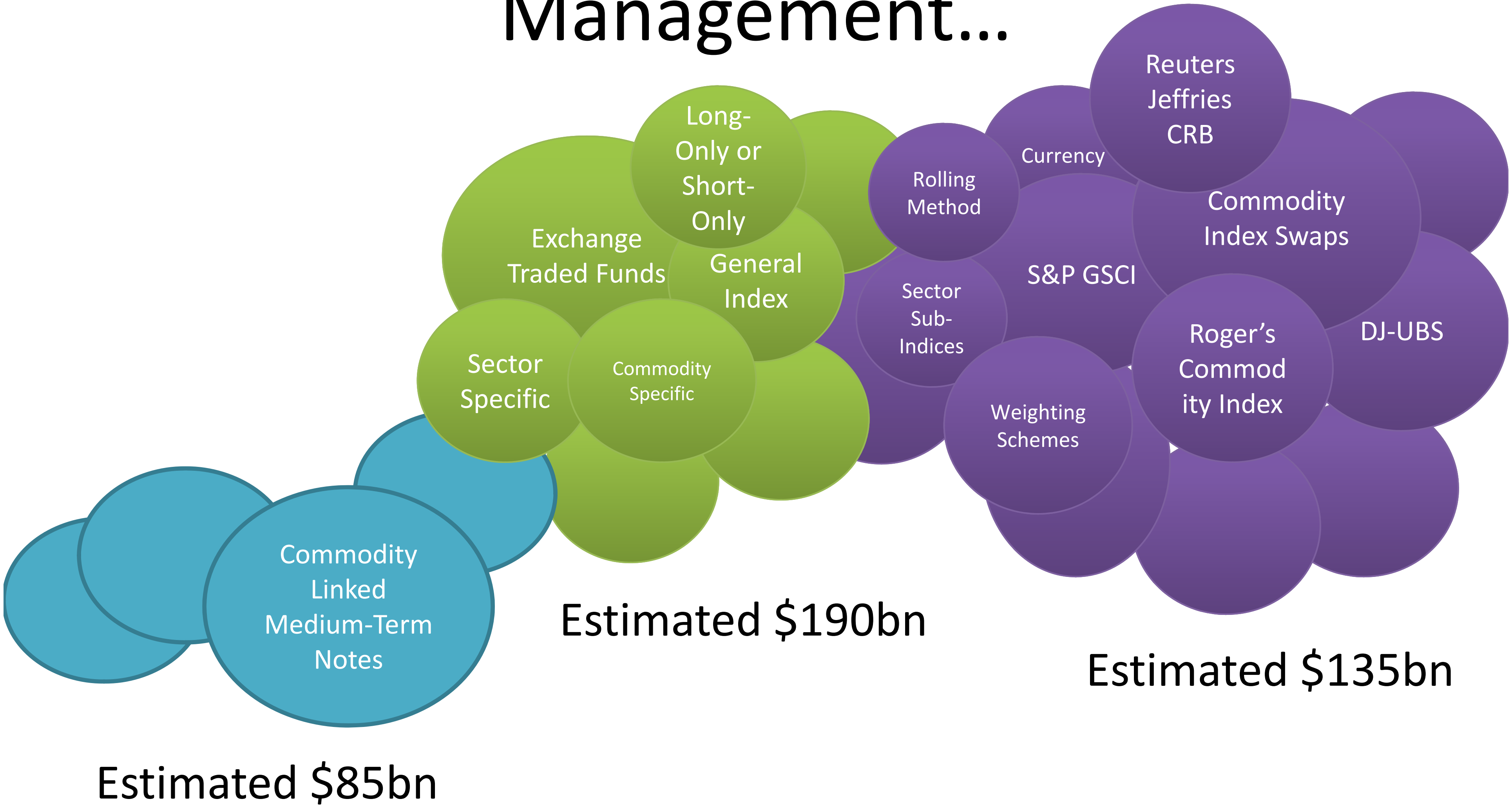


# Hedge Funds….

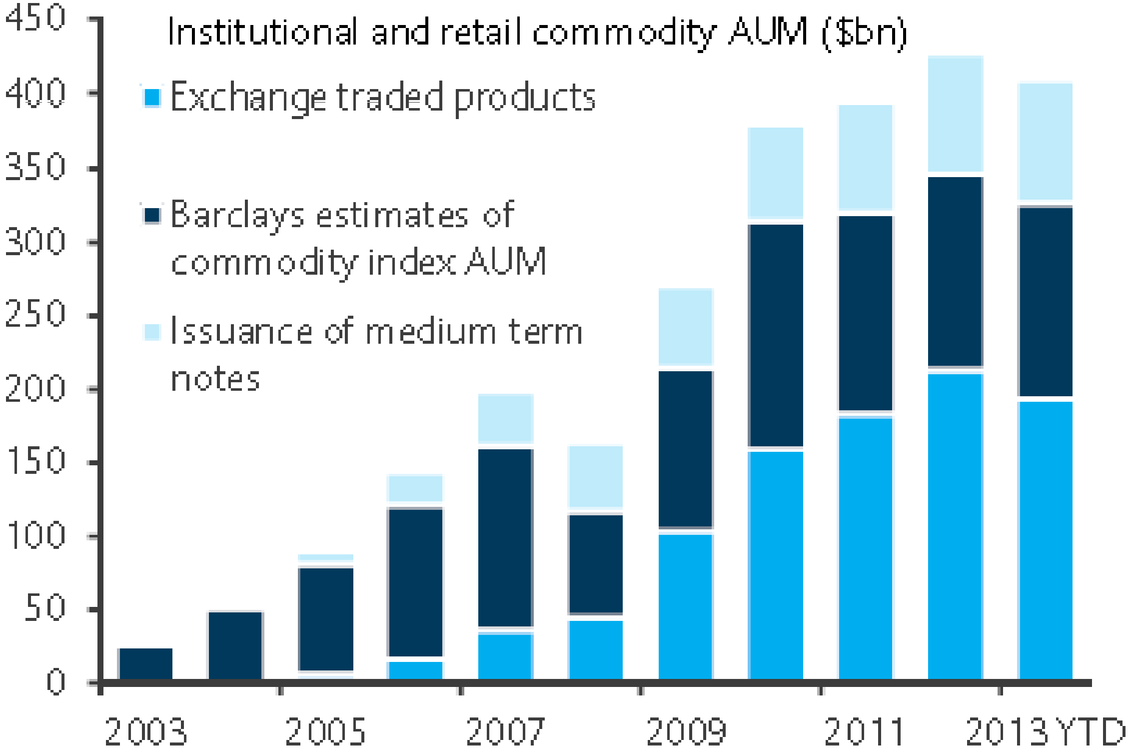
Estimated $40 billion of AUM in commodity-focused hedge funds, plus an unknown portion of the AUM of large multi-strategy hedge funds that include a commodities portfolio



# Commodity Assets Under Management…

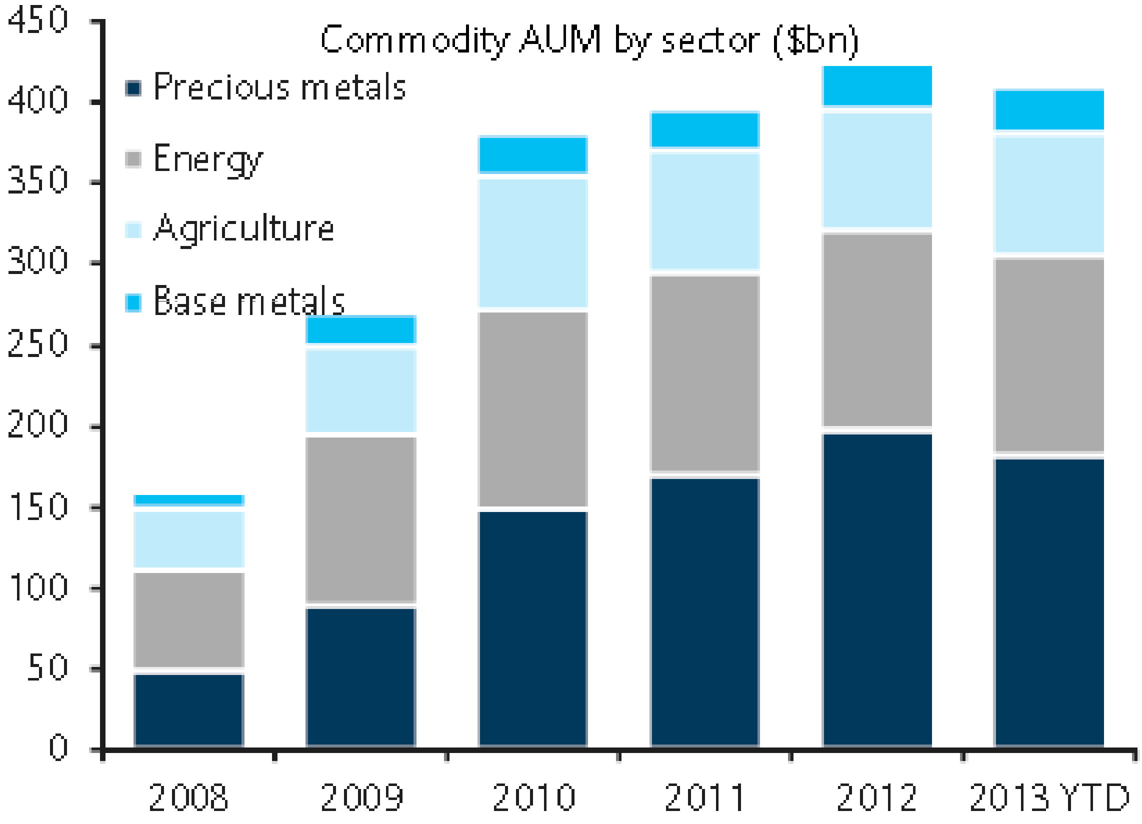


**Total commodity assets under management by type**




Source: Bloomberg, MTN-i, ETP issuer data, Barclays Research

**Total commodity assets under management by sector**

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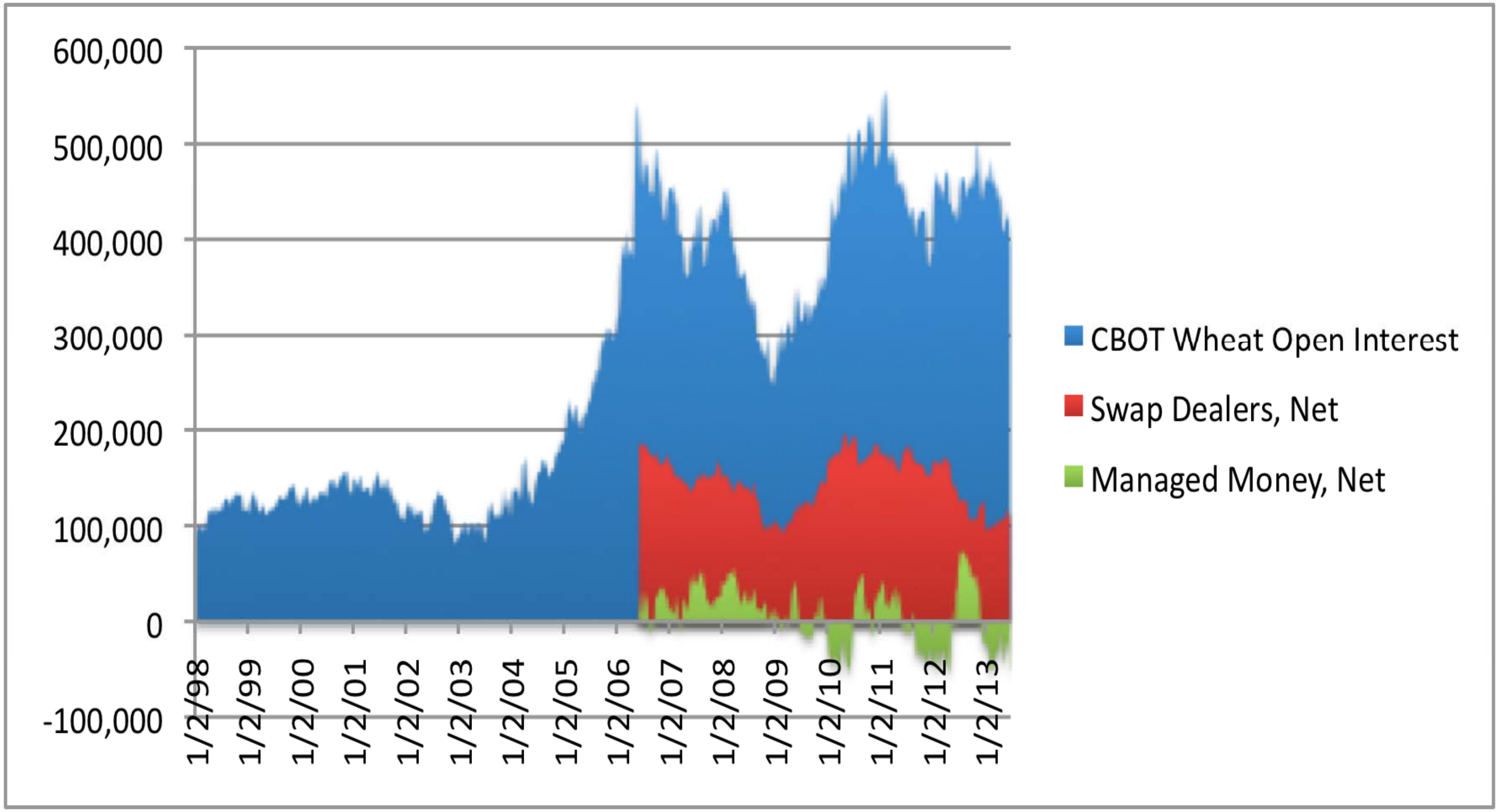



Source: CFTC, CBOT, Reuters

# Putting this in perspective…

| | |
|---|---|
| • Global Ag futures: | ~$ 150b |
| • Commodity-linked AUM: | ~$ 400b |
| • Global Commodity Futures: | ~$ 1,000b |
| | |
| • S&P 500: | ~$ 15,000b |
| • NYSE: | ~$ 21,000b |
| • Bloomberg World: | ~$ 45,000b |
| | |
| • Global Fixed Income: | ~$175,000b |

Source: Reuters, JP Morgan, McKinsey Global Institute

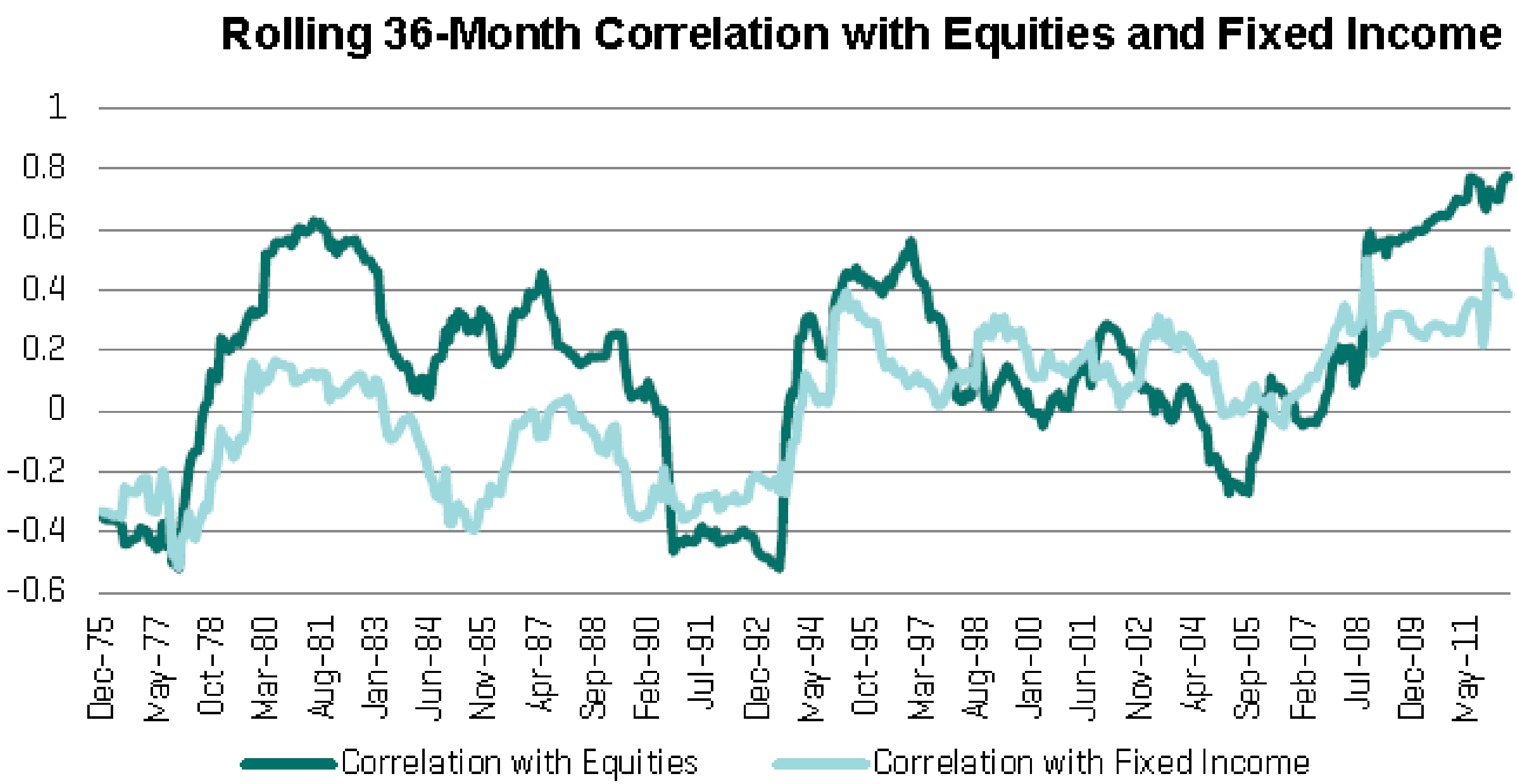
# Unintended consequences

More derivatives trading activity now occurs for reasons that have little or nothing to do with commodity supply and demand:

- Inflows and outflows
  - Systemic shocks, monetary policy, index rebalancing and reweighting, portfolio construction/reallocation, relative-value trading, risk management constraints
- Rolling index-linked contracts
- Systematic trading, including high frequency trading
- Almost a 24-hour market

# Recent Developments

- In the past few years, many of the key findings and assumptions underpinning the financialization of commodities have been called into question:
  - Lagging returns
  - Increased correlation
  - Low inflation
- Active management by hedge funds has produced generally below benchmark returns in the past few years, especially considering the fees involved. As a result, large redemptions have occurred, and are continuing.
- Very recent events have increased scrutiny of the presence of the largest bank holding companies in the physical commodity and commodity infrastructure businesses.




Source: S&P DOW JONES INDICES, MSCI, Barclays. Data from December 1972 to June 2012. This article uses MSCI World and Barclays Global Aggregate to represent equities and fixed income, respectively. The analysis period is chosen based on the availability of index data.

# Once a diversifier, commodities now correlate highly with equities

BY THAO HUA | AUGUST 6, 2012 | UPDATED 2:46 PM

*Pensions & Investments*

FINANCIAL TIMES MONDAY DECEMBER 5 2011

FTfm

## Narrative begins to lose its threads as risks increase

**Overview**

**Gregory Meyer** finds that caution is the watchword even if there is a strong long-term case to be bullish

ing as well as relationships between different contracts, were down 3 per cent in the year to October, according to the HFRX macro commodity index from Hedge Fund Research.

Several core commodity futures markets have suffered unnerving falls this year, often tied to government pronouncements rather than new information on supply

The New York Times

## U.S. Weighs Inquiry Into Big Banks' Storage of Commodities

By GRETCHEN MORGENSON and DAVID KOCIENIEWSKI

Published: July 22, 2013

Bloomberg

## JPMorgan Mulls Physical Commodities Exit Amid U.S. Review

By Dawn Kopecki - Jul 27, 2013 2:00 PM

JPMorgan Chase & Co. (JPM) said it plans to get out of the business of owning and trading physical commodities ranging from metals to oil, three days after a U.S. Senate panel questioned whether banks are abusing their ownership of raw materials to manipulate markets.

# Questions