



# Policy Responses to Commodity Price Movements

- Key Features of Report of the G20 Study Group on Commodities

April 7, 2012

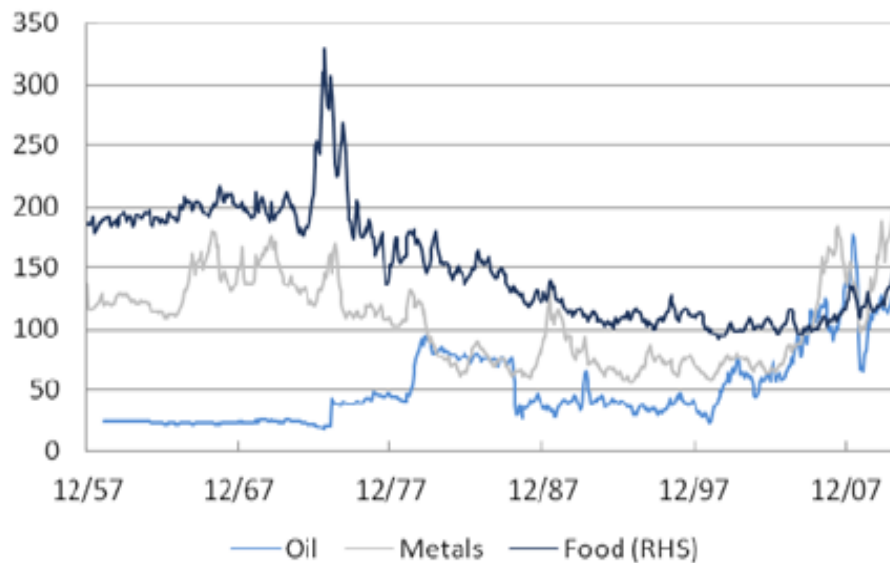
Hiroshi Nakaso

Assistant Governor, Bank of Japan

# 1. Commodity Price Developments (Overview)

- ◆ Prices of most commodity markets have recently reached high levels. The large swings in recent commodity prices have been associated with heightened short-term volatility.
- ✓ Recent trends in the price level and volatility appear less unusual in a long-term perspective.

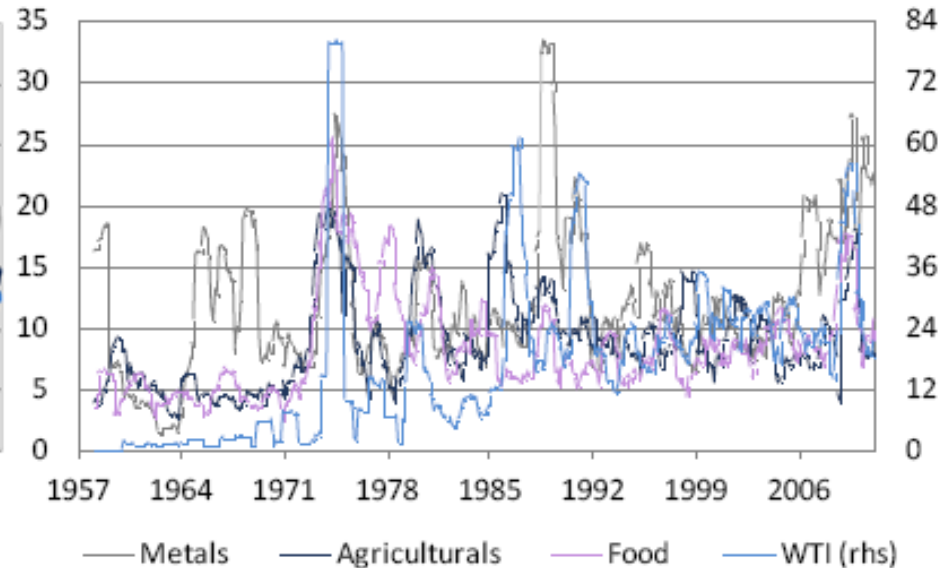
Commodity Prices



In US dollar terms; deflated by world export prices; Average 2005=100.

Volatility

Rolling one-year volatility on daily returns

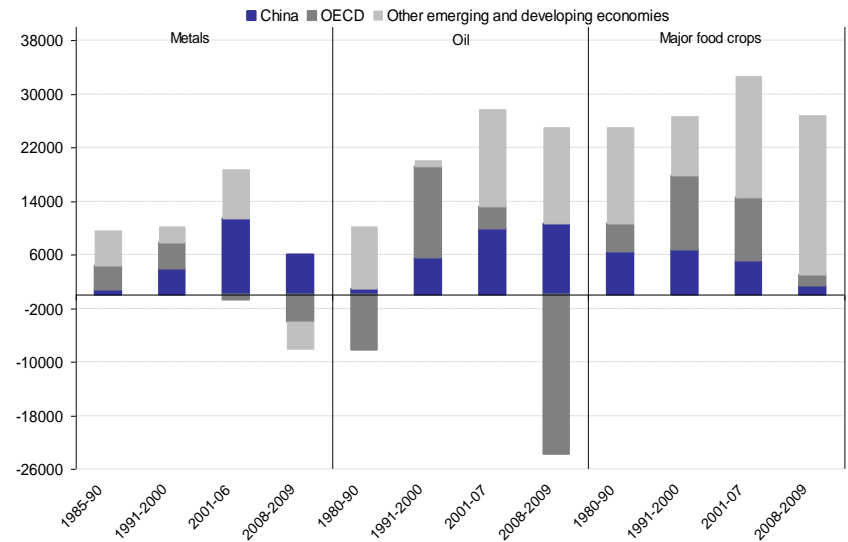
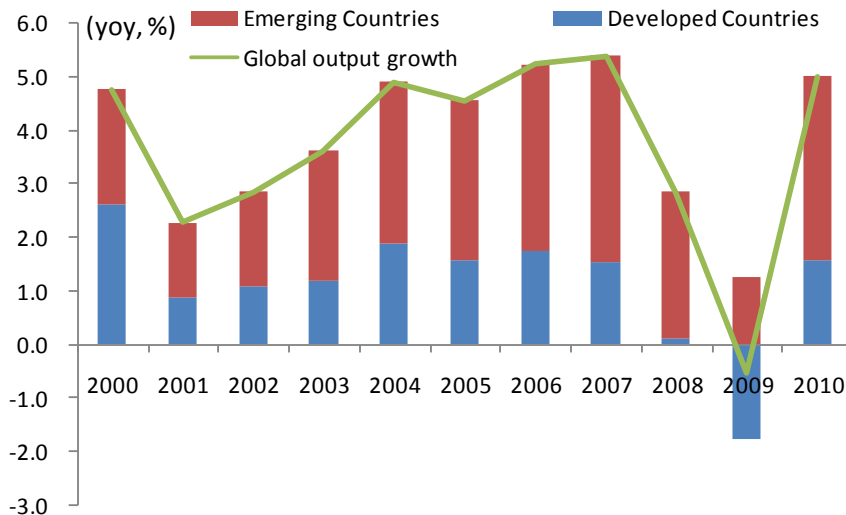


In per cent, annualized historical volatilities from percent changes (in real terms) of IMF Commodity indices over specified sample periods.

## 2. Supply/ Demand Fundamentals

- ◆ Strong commodity demand from EMEs
  - ✓ Increased contribution to global growth by EMEs
  - ✓ Changing dietary habit due to higher income per capita
  - ✓ Infrastructure investment due to rising urbanization and industrialization

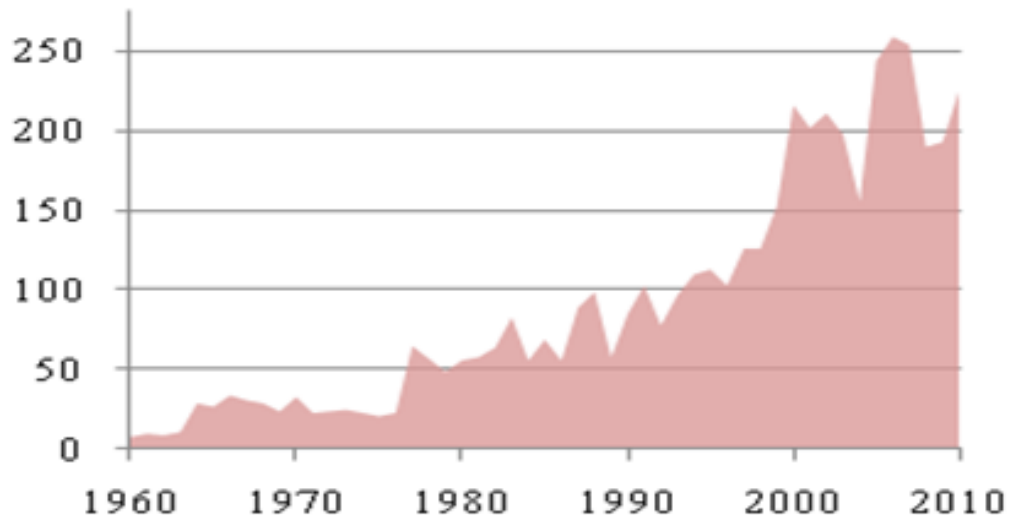
**Contribution to the GDP Growth and to the annual average consumption change**



## 2. Supply/ Demand Fundamentals (continued)

- ◆ Supply growth constraints
  - ✓ Relatively low size of investment
    - Commodity prices of the late 1980s and '90s lead to reduced global R&D investment and production.
  - ✓ Oligopolistic producer market structure (uneven distribution of natural resources)
  - ✓ Climate-related supply disruptions

Reported droughts, floods and extreme temperature



# 3. Policy Drivers

- ◆ Trade barriers (e.g. export restrictions / import restrictions)
  - ✓ Pros:
    - Help secure domestic food and energy security.
  - ✓ Cons:
    - Distort price signals and resource allocations both domestically and internationally.
    - Temporary measures can accentuate global supply/demand imbalance.
    - Permanent measures can lead to underinvestment by discouraging production elsewhere

### 3. Policy Drivers (continued)

- ◆ Subsidies (for producers / consumers)

- ✓ Pros:

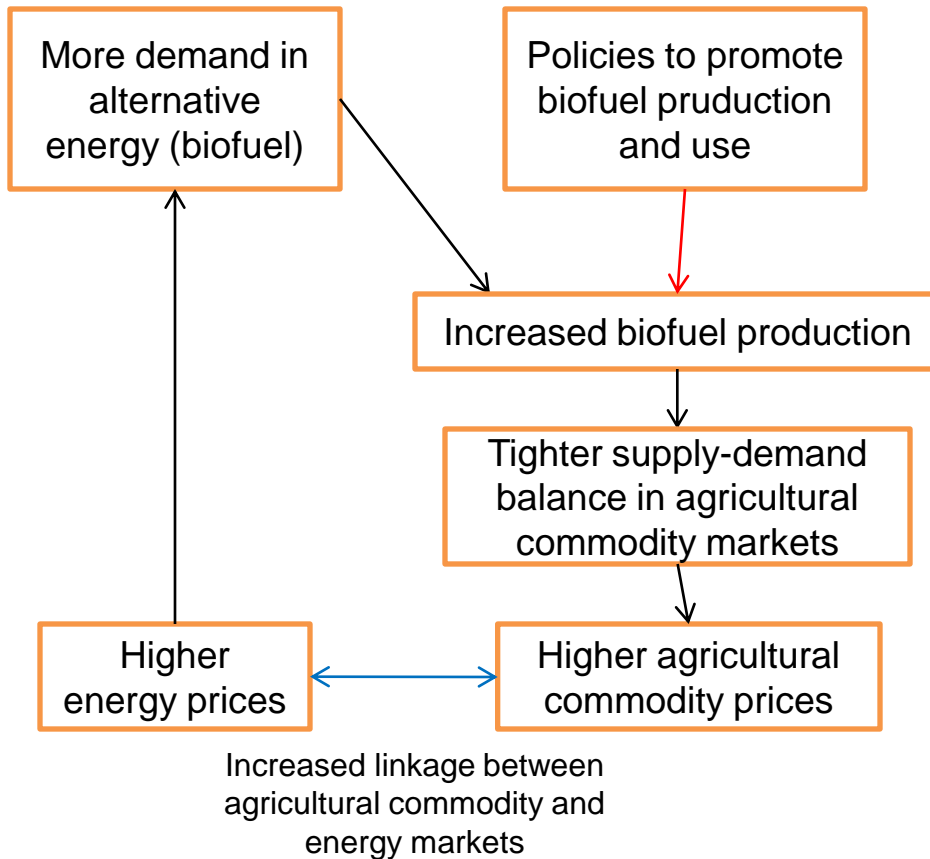
- Consumption subsidies can cushion the impact of rising world market prices on vulnerable populations.

- ✓ Cons:

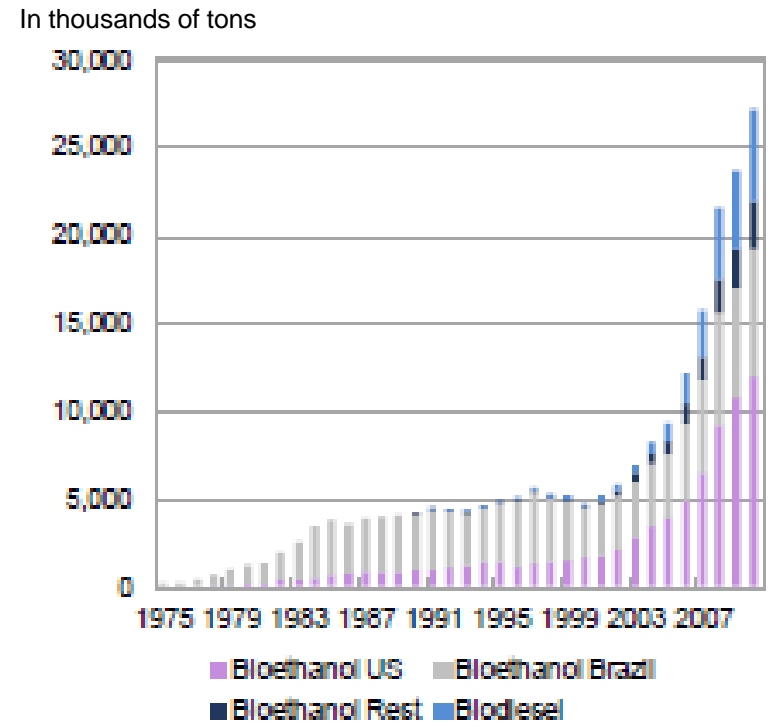
- Subsidies can distort world markets and may weaken investment elsewhere.
- Production subsidies can serve to blunt supply responsiveness by discouraging producers to improve productivity.

# 3. Policy Drivers (continued)

## ◆ Impact of Biofuel policies



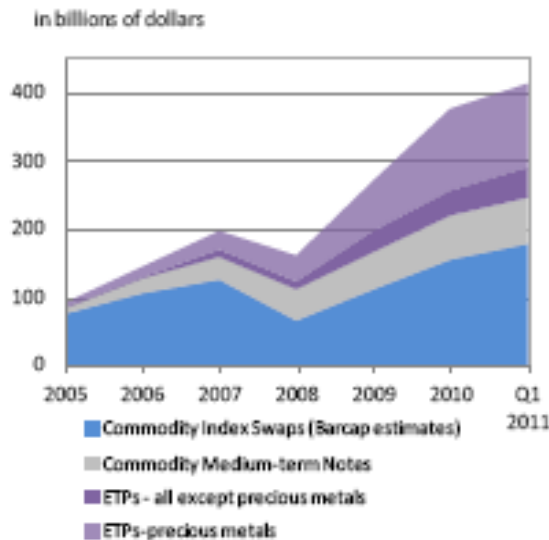
### Global Production of Biofuels



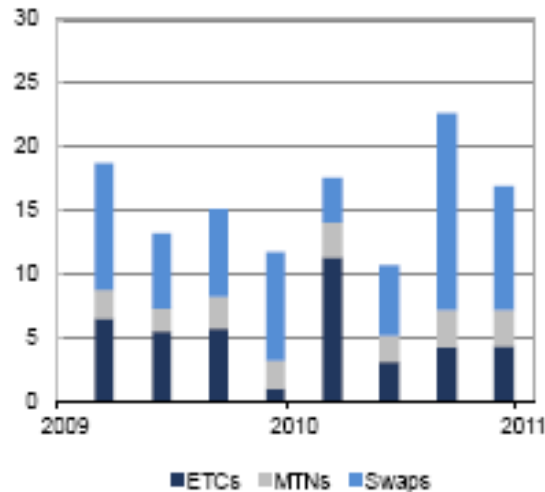
# 4. Role of Financial Markets

- ◆ Increased investments in commodity markets
  - ✓ Investments in commodity-related financial instruments have grown steadily over the last decade.
- ◆ Continued investment flows into commodity markets

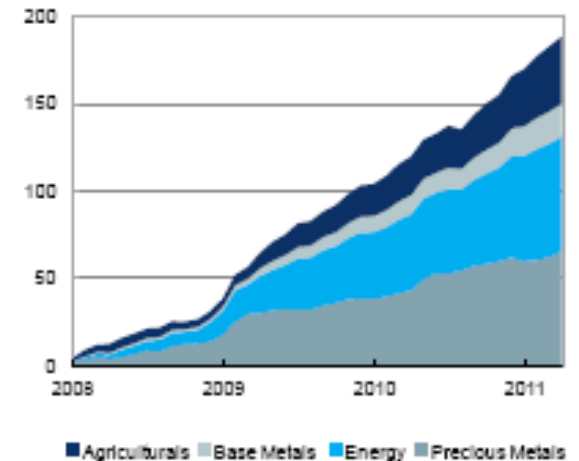
Assets under management



Quarterly flows by investment type



Cumulative flows by commodity type

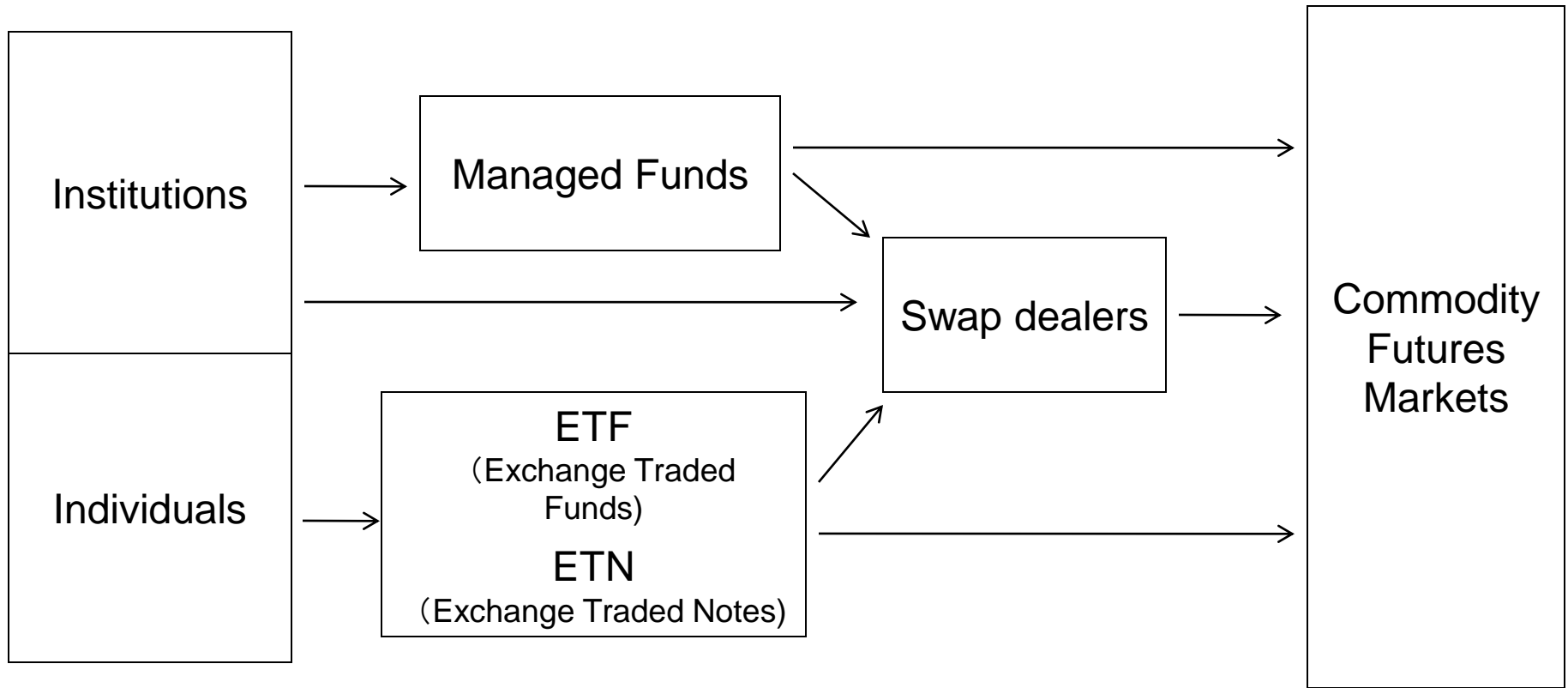


Source: Barclays capital



## 4. Role of Financial Markets (continued)

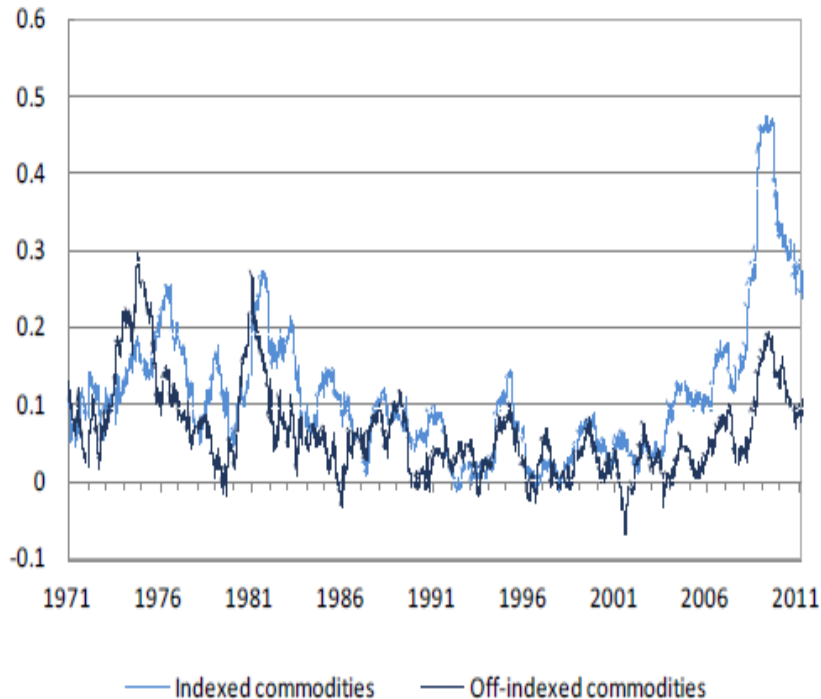
Flow of index investments into commodity futures markets



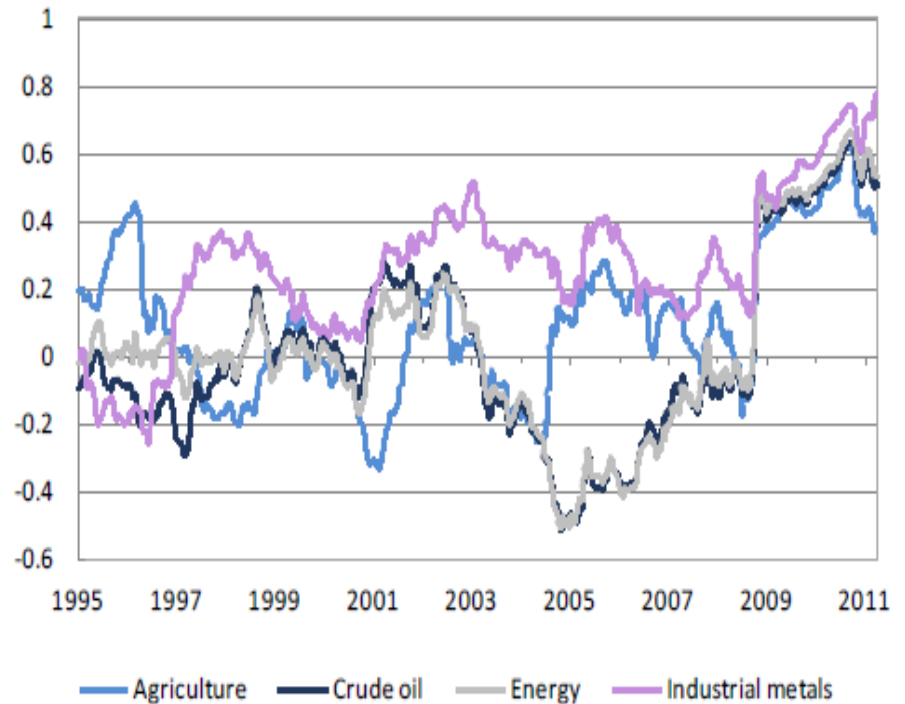
# 4. Role of Financial Markets (continued)

## ◆ Commodity price correlation

Average correlations of indexed and off-indexed commodities



Correlations between commodities and equities



Rolling two-year correlation on one-month returns between commodity indices (S&P GSCI) and equity index (S&P 500).

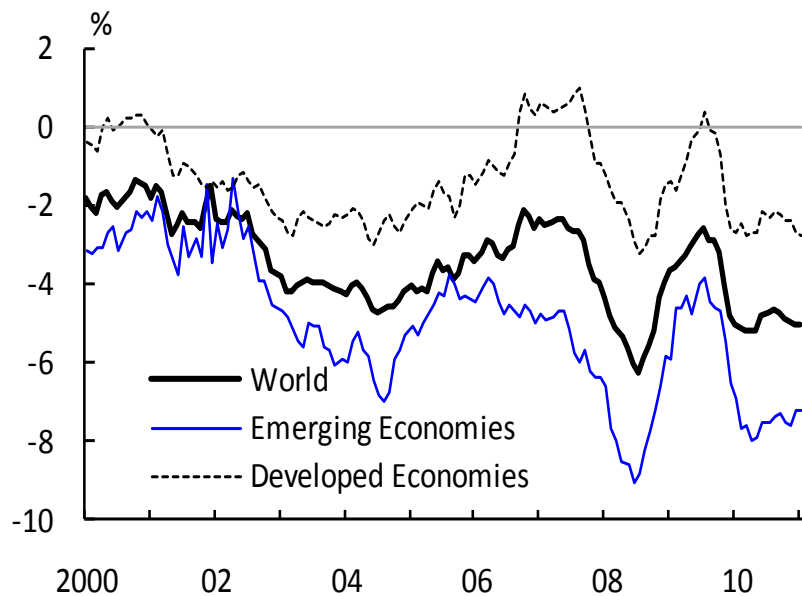
## 4. Role of Financial Markets (continued)

- ◆ Mixed views on the impact of financial factors on commodity price levels and volatility
  - ✓ A growing body of research supports the view that financial investors have affected price dynamics, especially over short time horizons.
  - ✓ On the other hand, there are many empirical studies denying the causal relationship between increased financial investments and commodity price developments.

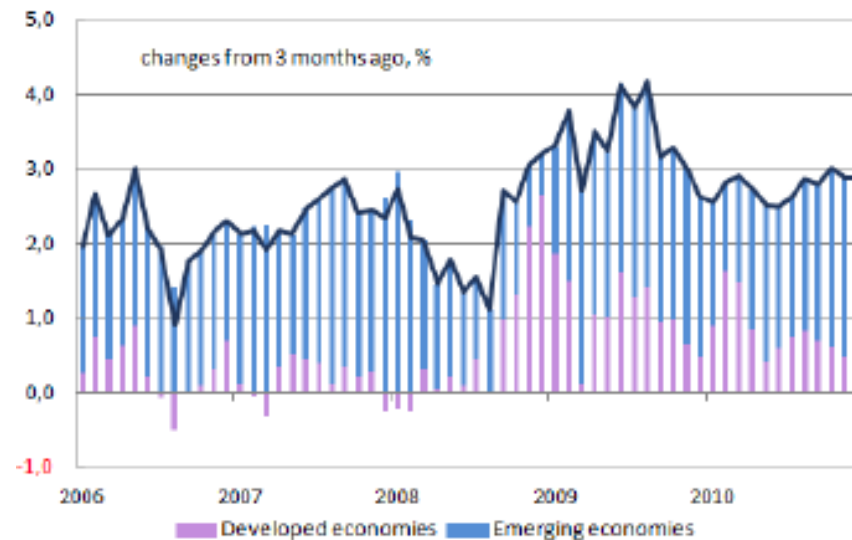
# 5. Global Monetary Expansion

- ◆ How relevant are globally accommodative monetary conditions?

### Global interest rate gap



### Global M1

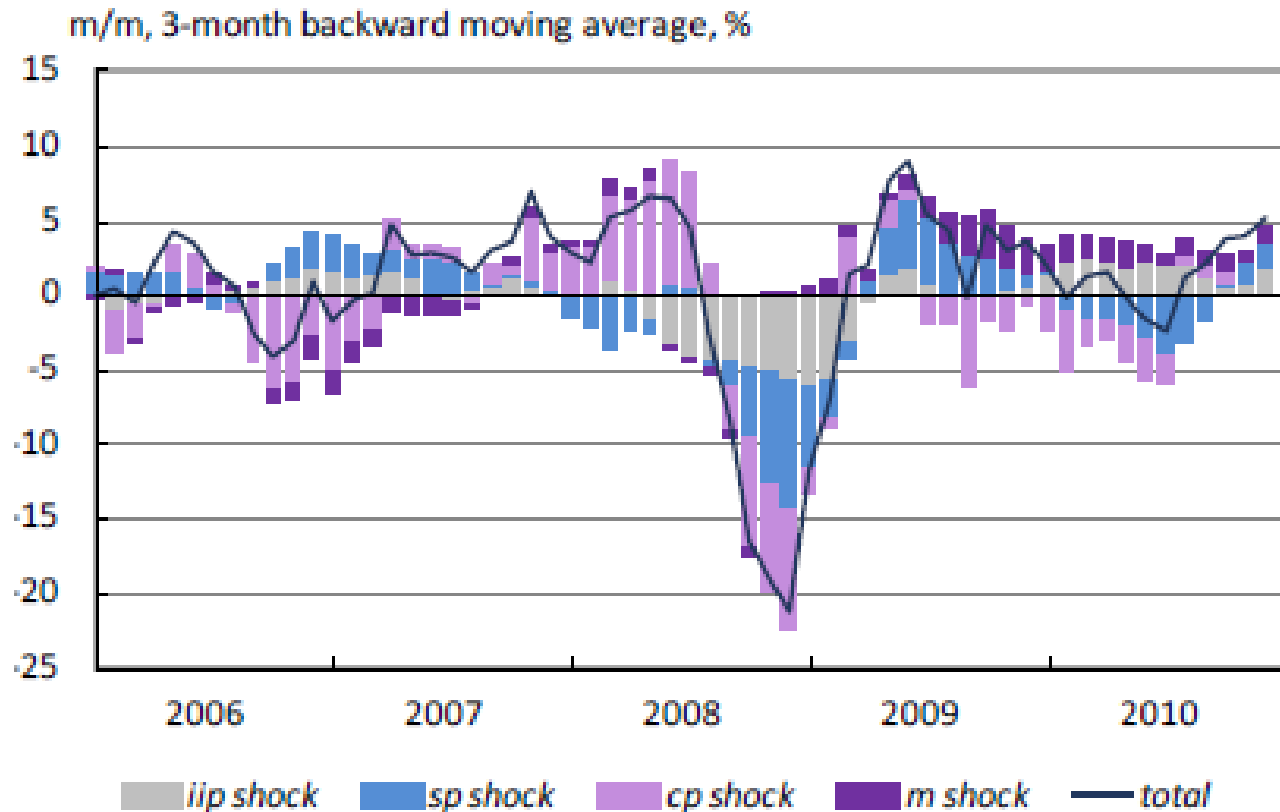


Interest rate gaps are estimated with relevant data published by the International Financial Statistics and the World Economic Outlook of the International Monetary Fund.

# 5. Global Monetary Expansion (continued)

## Decomposition of Changes in Commodity Prices

Global M1 ( $m$ ) as Monetary Policy shock



## 6. Summary and Policy Implications

- ◆ Global economic and financial integration has been the key factor driving commodity prices
- ◆ Globally accommodative monetary conditions also played a part
- ◆ Macroeconomic consequences must be carefully assessed

## 6. Summary and Policy Implications (continued)

- ◆ Supporting the proper functioning of global commodity markets
- ◆ Enhancing the stability of commodity markets
- ◆ Taking a global perspective in policy making