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Commodity Investments

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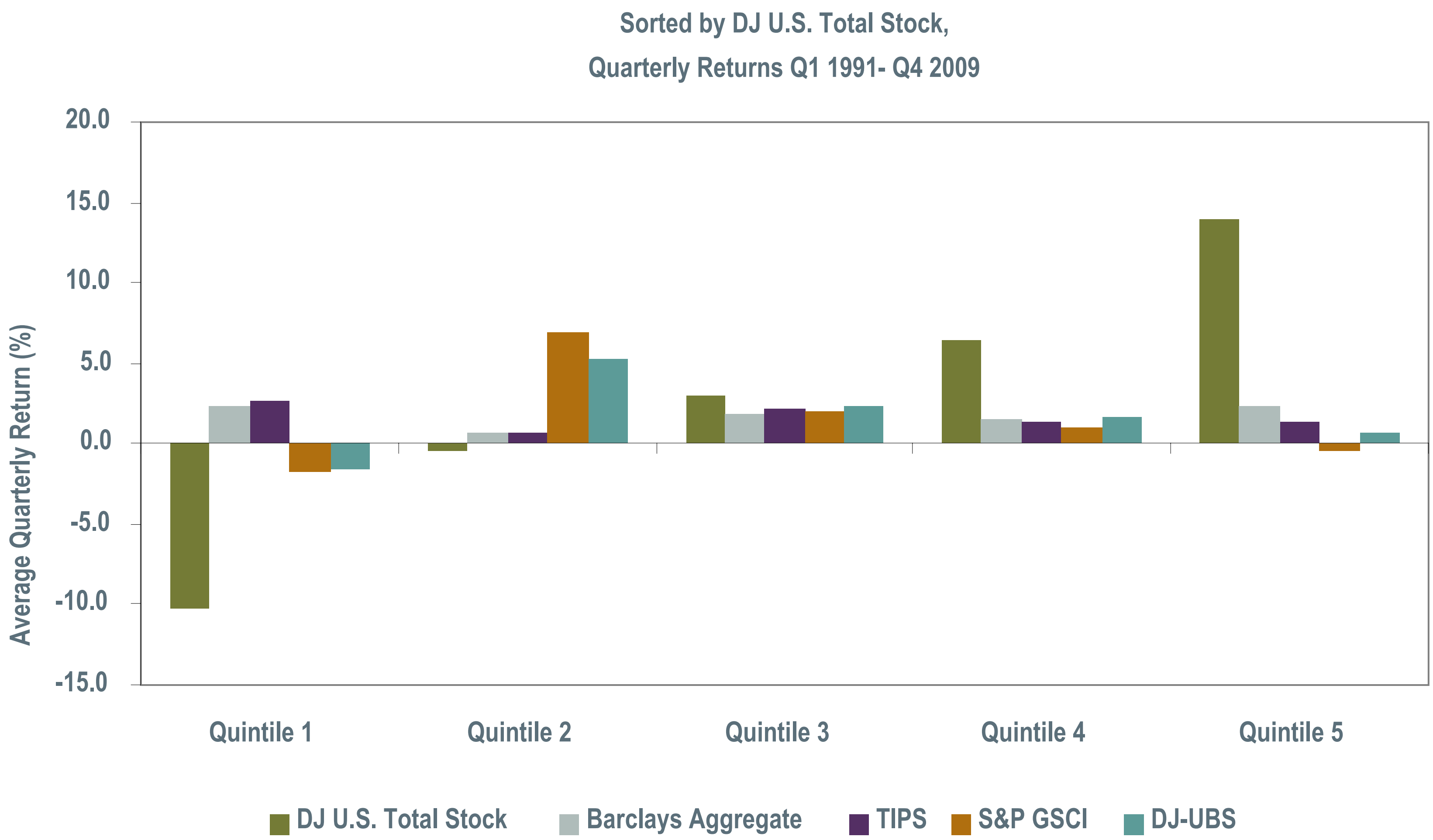
The Allure of Commodities

- The case for commodities:
  - Stock-like returns, and…
  - Low correlation results in …
  - Improved risk-adjusted return for a portfolio of stocks and bonds, and you also receive…
  - Inflation protection

Commodities Outperform in Weak Equity Markets



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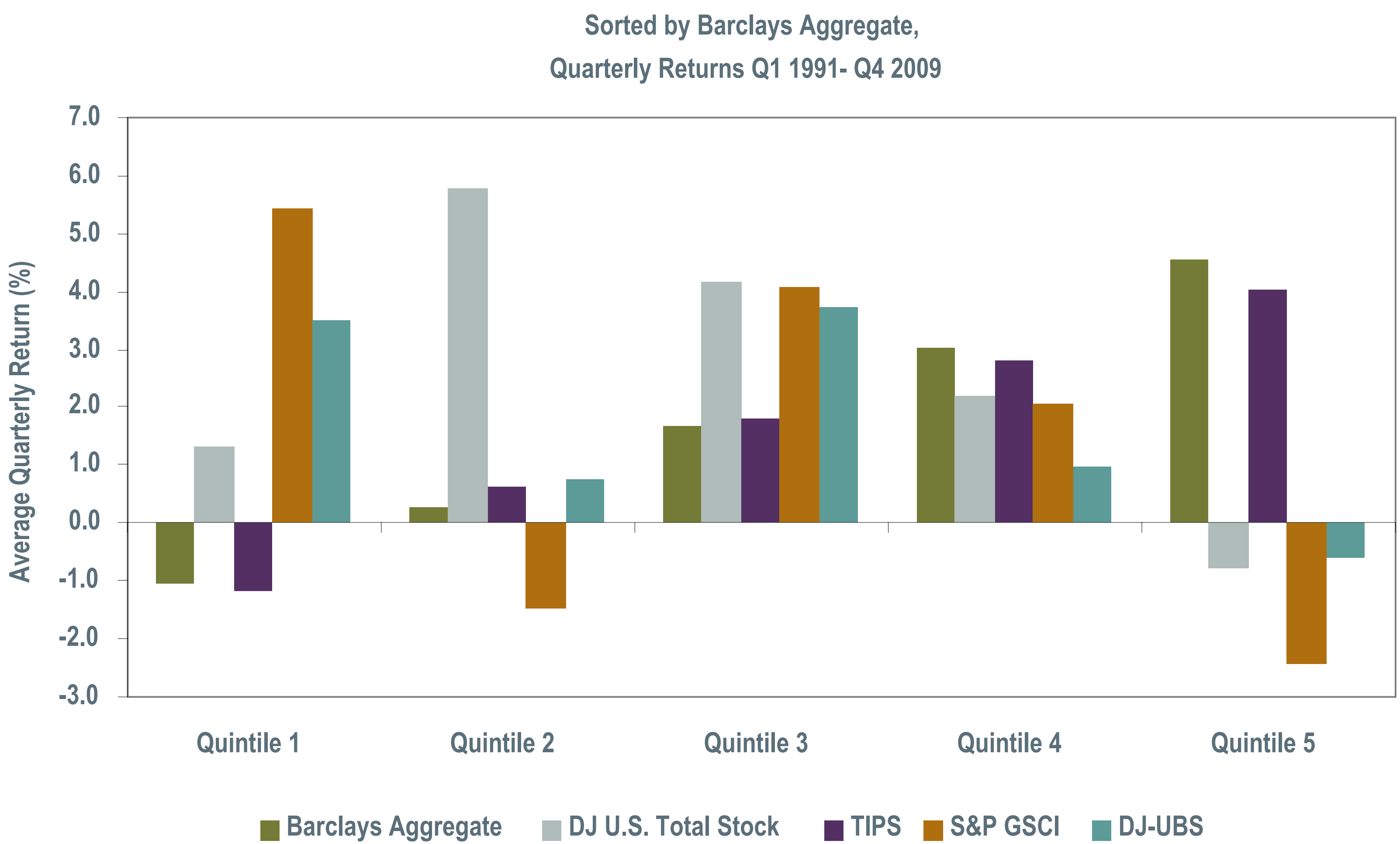
Commodities Outperform in Weak Bond Markets



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Choices for Commodities Investing

- Physical commodities
- Commodity stocks
- Commodity futures indices
- Active commodity managers

I. Physical Commodities

- Although available, investment in physical assets may not mechanically practical for institutional investors
  - Storage
  - Delivery
  - Regulation

II. Commodity Stocks

- Equity indices already have significant exposure to companies in a variety of commodity industries.
- Equity investors can gain exposure to commodities for which no futures contracts are available (water, coal, renewable energy, etc.)
- Commodity stocks priced like all other stocks:

  Price = EPS * P/E multiple

  Commodity Beta

  – EPS will be correlated to prices of commodities (unless output is hedged)

  Equity Beta

  – However, commodity stocks also have an equity market beta (through the P/E multiple)
- If diversification is the goal, an equity beta is undesirable

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Sources of Returns

- **Spot Return:** Change in price of underlying commodities (e.g., change in price of corn)
- **Roll Return:** Gains or losses from rolling futures contracts at expiration
- **Collateral Return:** Yield on cash investment held as collateral

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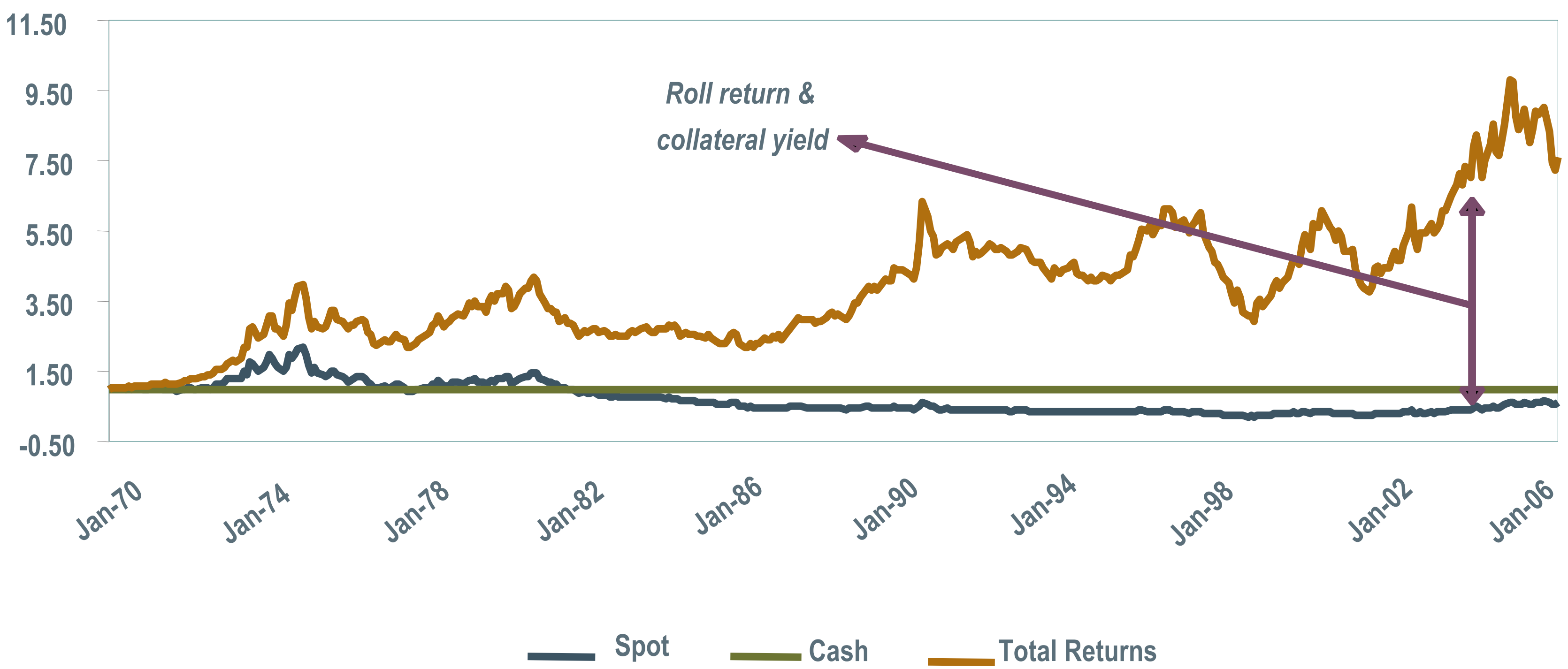
Ratio of Cumulative Wealth - Deflated by Cash (1970 - 2006)



- Roll return and collateral yield have accounted for a significant portion of the S&P GSCI total return since inception

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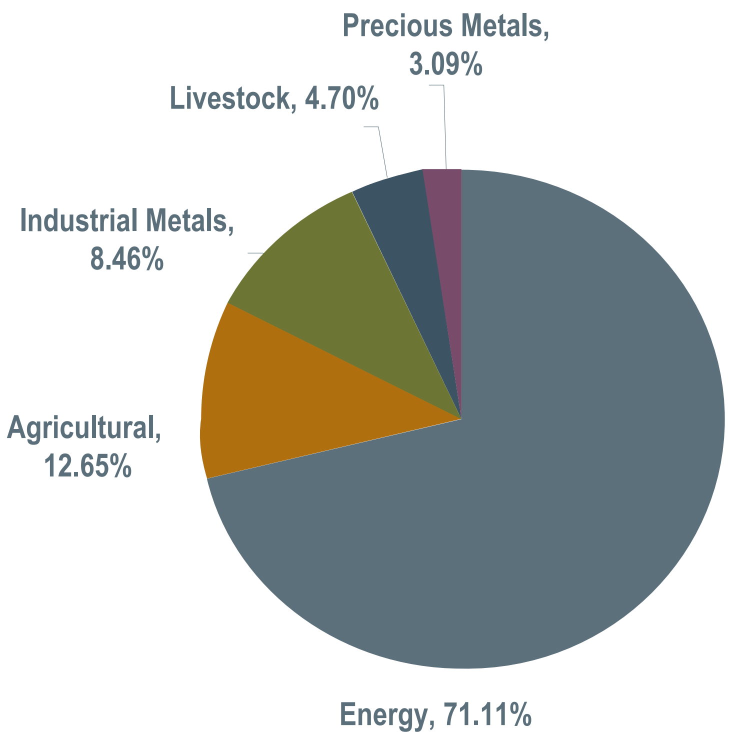
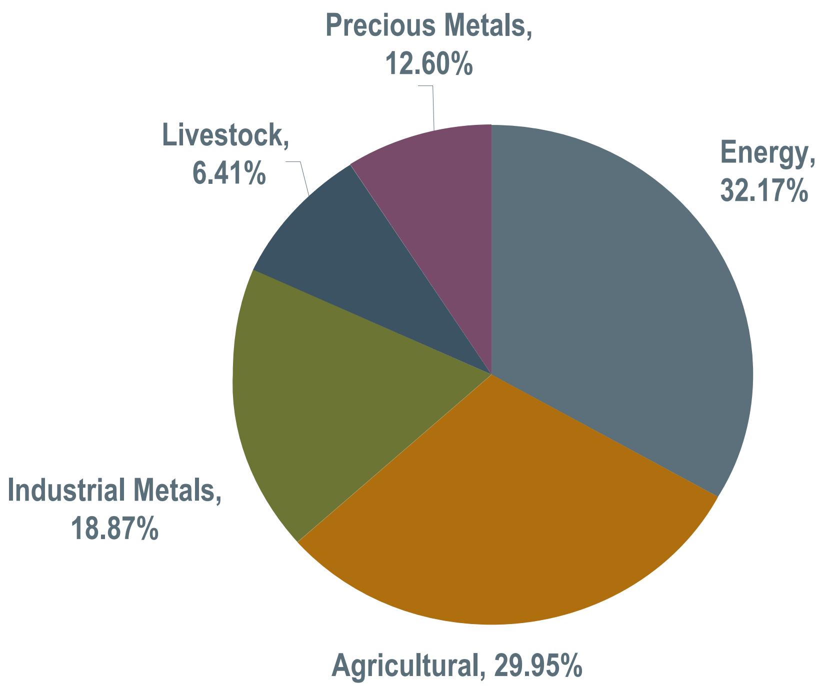
S&P GSCI Commodity Index



DJ UBS Commodity Index



As of February 2010

Commodity Futures Indices

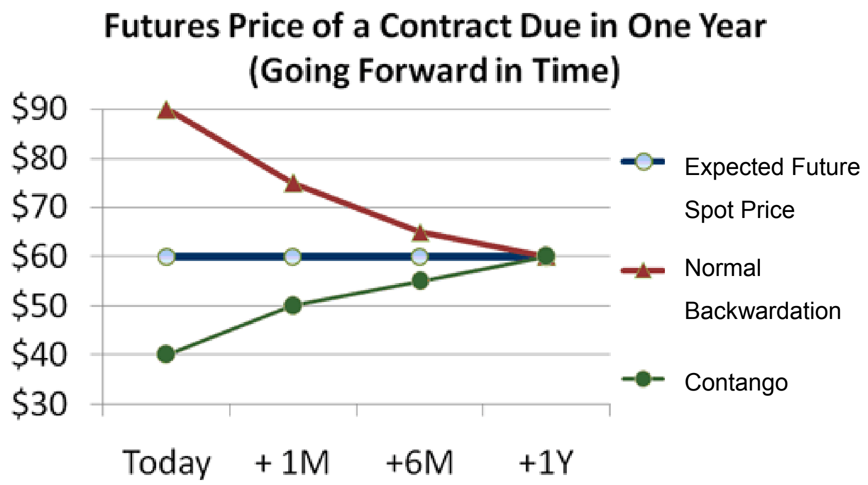
- Passive investments in commodity futures are suboptimal due to roll costs and contract selection
- Roll costs – Commodity futures indices roll on a specific schedule (the fifth through the ninth business day). This transparency increases trading costs.

The Roll

- Futures contracts have a finite life
- In order to maintain exposure, investors need to sell near-dated contracts and buy longer-dated contracts
- Moving from an expiring to a later dated futures position is referred to as rolling the futures contract
- Can result in a gain or a loss

The Shape of the Futures Curve

- **Contango:** When far-dated futures trade at a premium to the near-dated futures contract, the roll results in a loss
- **Backwardation:** When far-dated futures trade at a discount to the near-dated futures, the roll results in a profit (sell high, buy low)



Source: investopedia

- **A significant component of the return of the S&P GSCI has been attributable to backwardation, which provides positive returns from futures rolls**

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The Shape of the Futures Curve (cont'd.)

- Backwardation is normal in commodity markets – John Maynard Keynes
- Producers of commodities seek to hedge price risk of output
- Sell futures for less than the expected spot price to compensate buyers for bearing risk
- Can be viewed as an insurance premium paid to buyers to bear price risk

Contract Selection

- Futures indices trade only in the first or second contract month, regardless of the roll yield
- When curves are in contango (upward sloping) the roll yield is negative
- The roll yield is not constant across the curve, as some contracts may have negative roll yield while others have positive roll yield

Enhanced Indices

- Many enhanced index products are available
- Enhanced index products typically hold each commodity at its index weight
- Typical products offer roll and/or contract selection strategy enhancements
- Roll cost enhancement
  - Rolling contracts on days other than index funds may reduce trading costs
- Contract selection enhancement
  - Rather than trading only the first or second contract, these funds will invest in contracts in the first six to twenty-four months in a search for the largest possible roll yield in each market

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IV. Opportunities for Active Management

- Actively managed funds can add value through many strategies
  - Reweighting the commodity index
  - Taking short or no positions in some commodities
  - Trading calendar spreads or intramarket spreads
  - Investing in commodity stocks
  - Trading in physical commodities

Active Management Strategies

- Reweighting the commodity index
  - Fundamental analysis of supply and demand factors can predict relative performance
  - An increase in corn acreage is bullish for wheat relative to corn
- Taking short or no positions in some commodities
  - Commodity indices are always 100% long
  - When commodity prices are expected to decline, managers with the ability to short can benefit from falling prices

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Active Management Strategies (cont'd)

- Trading calendar spreads or intramarket spreads
  - Many spreads have fundamental relationships and a long pricing history
    - Refining margins
    - Soybean crush
    - Old crop/new crop
    - Summer/winter natural gas

Active Management Strategies (cont'd)

- Investing in commodity stocks
- Funds invest only in futures, only in stocks, or mix the two investment types
- Stocks are available in sectors without listed futures markets
  - Water, shipping, coal, emissions, uranium
- Funds may be tactical, seeking to overweight stocks vs. futures as a relative value trade
  - Oil futures trade at $80, Exxon implies $60

Active Management Strategies (cont'd)

- Trading in Physical Commodities
  - Agricultural and metals products have both physical and futures markets where investors may have positions
  - Ownership of physical energy products is highly regulated
  - Cash-futures spreads may pay investors for storage or delivery of cash commodities

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Conclusion

- Ennis Knupp prefers allocations to long-biased, actively managed funds that are predominately invested in commodity futures
- A portfolio of commodity futures managers would, ideally, earn alpha through a diversified set of active strategies
- Our chosen benchmark is the Dow Jones-UBS Commodity Index, which has a lower volatility of returns than the S&P GSCI Index with similar returns and diversification properties
- Commodity investments are an important part of any real asset portfolio, serving to hedge inflation in a different way than TIPS