Morningstar® Commodity Indexes

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For more information about all of Morningstar's indexes, visit http://indexes.morningstar.com or contact us:
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Investing in commodity futures is appealing to investors due to their ability to provide low correlations to traditional asset classes, a hedge against inflation, and diversification through superior returns when they are most needed.

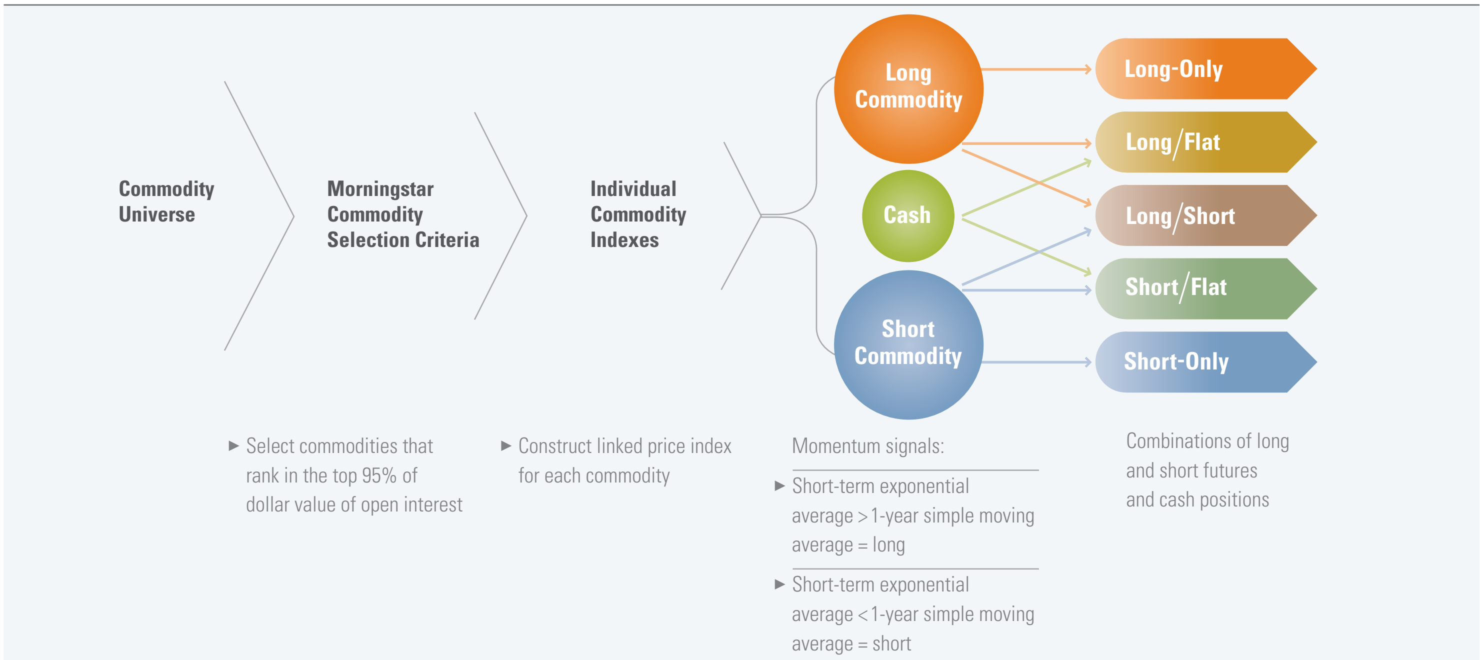
Economics of the Futures Markets
The commodity futures markets provide commercial producers and consumers of physical commodities with a means to transfer price risk to speculators or investors who have no direct commercial interest in the commodities themselves. Producers hedge price risk by taking short positions in futures contracts on the commodity that they produce. Conversely, consumers take long positions in the futures contracts on the commodities that they consume. Investors or speculators choose to go long or short on a commodity futures contract based on which side they believe they need to be in to make a profit.

Unlike the stock market, which has a net positive supply, commodity futures have a net supply of zero. Hence, there is no long-only "market" portfolio of commodity futures contracts that investors should use as a default passive strategy. The relationship among various players in the futures market can create situations in which long-only strategies may fail to generate consistent risk premiums, even in commodity bull markets. Given the economics of the commodities futures market, it makes sense for investors, both passive and active, to take both long and short positions. Furthermore, economic theory and empirical evidence suggest that commodities futures prices tend to exhibit momentum. Hence, when a commodity futures price is trending upward, it makes sense to take the long side and when a commodity futures price is trending downward, it makes sense to take the short side.

Morningstar Commodity Index Family
The Morningstar Commodity Index family consists of indexes that employ different strategic combinations of long futures, short futures, and cash (referred to as flat positions). The index family is based on a transparent, rules-based methodology that is designed to serve investors seeking a passive approach to commodities and support investment product creation.

Momentum Rule
For each commodity, we calculate a "linked" price series that incorporates both price changes and roll yield. At each monthly rebalancing, if the linked price exceeds its 12-month moving average, we take the long side in the subsequent month. Conversely, if the linked price is below

Morningstar Commodity Indexes Construction Process



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its 12-month moving average, we take the short side. An exception is made for commodities in the energy sector. If the signal for a commodity in the energy sector is short, the weight of that commodity is moved into cash; that is, we take a flat position. Energy is unique in that its price is extremely sensitive to geopolitical events and not necessarily driven purely by demand-supply imbalances.

- **The Morningstar Commodity Indexes**
  Morningstar® Long/Short Commodity℠ Index,
  a fully collateralized commodity futures index that uses the momentum rule to determine if each commodity is held long, short, or flat.
- Morningstar® Long/Flat Commodity℠ Index,
  a fully collateralized commodity futures index that is derived from the positions of the Long/Short index. It takes the same long and flat positions as the Long/Short index and replaces the short positions with flat positions.
- Morningstar® Short/Flat Commodity℠ Index,
  a fully collateralized commodity futures index that is derived from the positions of the Long/Short index. It takes the same short positions as the Long/Short index and replaces long positions with flat positions.
- Morningstar® Long-Only Commodity℠ Index,
  a fully collateralized commodity futures index that is long all eligible commodities.
- Morningstar® Short-Only Commodity℠ Index,
  a fully collateralized commodity futures index that is short in all eligible commodities.

Commodity Indexes Correlation Matrix
February 1991– February 2013

Index	1	2	3	4	5	6	7	8
1. Morningstar Long-Only	1.00							
2. Morningstar Long/Short	0.50	1.00						
3. Morningstar Long/Flat	0.81	0.87	1.00					
4. S&P GSCI	0.92	0.52	0.74	1.00				
5. Dow Jones-UBS	0.97	0.48	0.78	0.90	1.00			
6. S&P 500	0.27	-0.10	0.08	0.25	0.31	1.00		
7. BarCap US Agg. Bond	0.02	-0.07	-0.03	0.02	0.04	0.08	1.00	
8. U.S. 90-day T-bill	0.03	0.11	0.06	0.05	0.06	0.06	0.09	1.00

1.00 to 0.61 Extreme Positive	0.60 to 0.21 Positive	0.20 to -0.20 Moderate	-0.21 to -0.60 Negative	-0.61 to -1.00 Extreme Negative

Morningstar Commodity Index Construction

Index Eligibility

To be considered for inclusion in the Morningstar Commodity Index family, a commodity should have futures contracts traded on one of the U.S. exchanges and rank in the top 95% by the 12-month average of total dollar value of open interest.

Constituent Weighting

The weight of each individual commodity index in each of the composite indexes is the product of two factors: magnitude and the direction of the momentum signal. We initially set the magnitude based on the 12-month average of the dollar value of open interest of each commodity. We then cap the top magnitude at 10% redistributing any overage to the magnitudes of the remaining commodities. We chose this capped open-interest weighting system in order reflect the importance of each commodity in a global economy and keep the indexes diversified across commodities.

Reconstitution and Rebalancing

The Morningstar Commodity Indexes are reconstituted annually—the index membership is reset—effective on the third Friday of December of each year. The indexes are rebalanced monthly—the weights and direction of the position in the individual commodity indexes are adjusted—effective on the third Friday of the month.

Roll Methodology

We implement all contract rolls on the third Friday of each month to coincide with portfolio reconstitution and rebalancing and the rolling of the Treasury bills used for collateral. To make sure that we roll each contract before becoming committed to receive physical delivery, we select our contracts so that the delivery month is at least two months away.

Index Returns Calculations

- Index returns are available in two different formats: The Excess Return Index reflects the returns associated with price changes and roll yield of the underlying futures contracts.
- The Total Return Index represents excess returns plus interest earned on collateral as measured by the Morningstar® Treasury Bill™ Index.

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