

# Dow Jones-UBS Commodity Index<sup>SM</sup>

## A Primer on Index Calculation and Performance

A common question about the Dow Jones-UBS Commodity Indexes<sup>SM</sup> involves the index calculation and performance. Users might ask, for example: “Why did the Dow Jones-UBS Crude Oil Subindex<sup>SM</sup> close down yesterday, when The Wall Street Journal reported that the price of oil went up?” The answer lies in understanding 1) that the indexes are constructed of futures contracts and 2) how the index methodology accounts for the rolling of these contracts. The following general introduction to the index methodology provides information on these topics. The complete rules and definitions for calculating the Dow Jones-UBS Commodity Index<sup>SM</sup> and subindexes are provided in the Dow Jones-UBS Commodity Index<sup>SM</sup> Handbook, available at [www.djindexes.com](http://www.djindexes.com).

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### Index Composition

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The Dow Jones-UBS Commodity Indexes<sup>SM</sup> are composed of exchange-traded commodity futures contracts rather than physical commodities. By tracking commodity futures rather than commodity “spot” prices (meaning the prices quoted for immediate payment and delivery of physical commodities), the indexes are investable benchmarks, meaning they can generally be replicated using futures contracts. Spot prices, or indexes using spot prices, do not account for the effects of rolling futures contracts or the costs associated with actually holding physical commodities.

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### “Rolling” Defined

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Commodity futures contracts normally specify a certain date for delivery of the underlying physical commodity. As this date approaches, investors may replace the contracts having near-term expirations with contracts having more-distant expirations. For example, a light sweet crude oil futures contract purchased and held in October may specify a January expiration. As the expiration date approaches, the contract expiring in January may be replaced by a contract for delivery in March. This process is known as “rolling.”

To reflect the rolling process, the Dow Jones-UBS Commodity Index<sup>SM</sup> methodology specifies that as the futures contracts that comprise the indexes approach expiration, they are replaced by similar contracts with later expirations.

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### Index Performance vs. Near-Term Contract Performance

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Due to the roll schedule, the Dow Jones-UBS Commodity Indexes<sup>SM</sup> do not always track the price of the nearest-term futures contract. The Dow Jones-UBS Crude Oil Subindex<sup>SM</sup>, for example, typically tracks the nearest-term futures contract only part of the time, and at other times tracks a longer-term futures contract.

There are two factors that determine what contract is being tracked, and the resulting returns of the index:

1. The timing of the index roll, as defined by the index methodology
2. The relative price movements of the incoming contract and the outgoing contract

#### Factor #1: Timing of the Index Roll

The futures that underlie the indexes within the Dow Jones-UBS Commodity Index<sup>SM</sup> family roll approximately every other month. Each commodity has a schedule that defines what contracts are held at any time. For example, while Nymex Light Sweet Crude Oil futures have monthly expirations, the Dow Jones-UBS Crude Oil Subindex<sup>SM</sup> rolls every other month, to the contract that is two months longer in maturity. As a result, the Dow Jones-UBS Crude Oil Subindex<sup>SM</sup> will reflect 100% of the returns of the “nearby” contract only part of the time, and at other times will include returns for a longer-term future.

Rolls are implemented over a 5-day period—increasing the weighting of the new contract from 0% to 20%, 40%, 60%, 80% and finally 100%. The “Hedge Roll Period” begins on the fifth business day of the month and ends on the ninth business day. The DJ-UBSCI is calculated as if the weighting adjustments occur at the close of each day, with the adjusted weights used for the next day’s calculations.

**Example of 2009 Hedge Roll Dates and Contracts: Dow Jones-UBS Crude Oil Subindex<sup>SM</sup>**

Nymex Light Sweet Crude		
	Contract rolling out of...	Contract rolling into...
Feb 6-12	Mar '09 (CLH9)	May '09 (CLK9)
Apr 7-13	May '09 (CLK9)	Jul '09 (CLN9)
Jun 5-11	Jul '09 (CLN9)	Sep '09 (CLU9)
Aug 7-13	Sep '09 (CLU9)	Nov '09 (CLX9)
Oct 7-13	Nov '09 (CLX9)	Jan '10 (CLF0)
Dec 7-11	Jan '10 (CLF0)	Mar '10 (CLH0)

For the contract schedule of all Dow Jones-UBS Commodity Indexes<sup>SM</sup>, please see Exhibit 1. This table reflects the index rules and holiday schedule as of February 2009, and is subject to change.

**Example of Crude Oil Roll Period, December 2008**

Business day of the month	Date	Contract(s) the DJ-UBS Crude Oil Subindex <sup>SM</sup> tracks for performance
5th	Dec. 5, 2008	100% Jan '09
6th	Dec. 8, 2008	80% Jan '09 + 20% Mar '09
7th	Dec. 9, 2008	60% Jan '09 + 40% Mar '09
8th	Dec. 10, 2008	40% Jan '09 + 60% Mar '09
9th	Dec. 11, 2008	20% Jan '09 + 80% Mar '09
10th	Dec. 12, 2008	100% Mar '09

The daily settlement value of the index is calculated at the close of the trading day. During a roll period, once the daily value of the index has been calculated, the index is reconstituted to reflect the new contract weighting on the next business day. Additional rules regarding annual rebalancing and market disruptions are contained in the Dow Jones-UBS Commodity Index<sup>SM</sup> Handbook.

**Factor #2: Relative Prices of Contracts: Backwardation vs. Contango**

**Backwardation**

When the prices for exchange-traded futures contracts are lower in the distant delivery months than in the nearer delivery months, the market is said to be in “backwardation.” For example, the sale of a January contract would take place at a price that is higher than the purchase price of a March contract.

Holding other factors constant, backwardation generally has a positive impact on index values, as the lower longer-term future prices move higher over time to the shorter-term prices. This potential convergence over time is often referred to as a positive “roll yield”. For example, if the longer-term price was \$40 and the shorter-term prices remained at \$50, then one would expect, if other factors remained constant, to earn \$10 over time, which would theoretically be realized when the contract purchased at \$40 was later sold at \$50.

**Contango**

When the prices for exchange-traded futures contracts are higher in the distant delivery months than in the nearer delivery months, the market is said to be in “contango.” For example, the sale of a January contract would take place at a price that is lower than the purchase price of a March contract.

Holding other factors constant, contango generally has a negative impact on index values, as the higher longer-term future prices move lower over time to the shorter-term prices. This potential convergence over time is often referred to as a negative “roll yield”. For example, if the longer-term price was \$50 and the shorter-term prices remained at \$40, then one would expect, if other factors remained constant, to lose \$10 over time, which would theoretically be realized when the contract purchased at \$50 was later sold at \$40.

**EXHIBIT 1**

**Dow Jones-UBS Commodity Index<sup>SM</sup> Contract Schedule**

The following is a copy of Table G from the Dow Jones-UBS Commodity Index<sup>SM</sup> Handbook. The contracts under the current month are referred to as the “lead future”. The contracts under the next month are referred to as the “next future”. If the lead future and next future are different, then the index calculations are based on weightings that shift from the lead future to the next future at the closing prices on the fifth through ninth business days of each month.<sup>1,2</sup>

Commodity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	F	G	H	J	K	M	N	Q	U	V	X	Z
Natural Gas	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	NOV	NOV	JAN	JAN
Crude Oil	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	NOV	NOV	JAN	JAN
Unleaded Gas	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	NOV	NOV	JAN	JAN
Heating Oil	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	NOV	NOV	JAN	JAN
Live Cattle	FEB	APR	APR	JUN	JUN	AUG	AUG	OCT	OCT	DEC	DEC	FEB
Lean Hogs	FEB	APR	APR	JUN	JUN	JUL	AUG	OCT	OCT	DEC	DEC	FEB
Wheat	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	DEC	DEC	DEC	MAR
Corn	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	DEC	DEC	DEC	MAR
Soybeans	MAR	MAR	MAY	MAY	JUL	JUL	NOV	NOV	NOV	NOV	JAN	JAN
Soybean Oil	MAR	MAR	MAY	MAY	JUL	JUL	DEC	DEC	DEC	DEC	JAN	JAN
Aluminum	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	NOV	NOV	JAN	JAN
Copper	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	DEC	DEC	DEC	MAR
Zinc	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	NOV	NOV	JAN	JAN
Nickel	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	NOV	NOV	JAN	JAN
Lead	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	NOV	NOV	JAN	JAN
Tin	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	NOV	NOV	JAN	JAN
Gold	FEB	APR	APR	JUN	JUN	AUG	AUG	DEC	DEC	DEC	DEC	FEB
Silver	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	DEC	DEC	DEC	MAR
Platinum	APR	APR	APR	JUL	JUL	JUL	OCT	OCT	OCT	JAN	JAN	JAN
Sugar	MAR	MAR	MAY	MAY	JUL	JUL	OCT	OCT	OCT	MAR	MAR	MAR
Cotton	MAR	MAR	MAY	MAY	JUL	JUL	DEC	DEC	DEC	DEC	DEC	MAR
Coffee	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	DEC	DEC	DEC	MAR
Cocoa	MAR	MAR	MAY	MAY	JUL	JUL	SEP	SEP	DEC	DEC	DEC	MAR

<sup>1</sup>This contract schedule and roll methodology reflect the rules of the Dow Jones-UBS Commodity Index<sup>SM</sup> and its subindexes as of February 2009. This schedule and other index rules are subject to change over time.

<sup>2</sup>For the “Forward Month” versions of the Dow Jones-UBS Commodity Index<sup>SM</sup>, the contracts that would be included in the Dow Jones-UBS Commodity Index<sup>SM</sup> in one month’s, two months’ and three months’ time are included in the current month for the DJ-UBSCI One Month Forward, DJ-UBSCI Two Month Forward and DJ-UBSCI Three Month Forward Index, respectively. For example, the “Lead Future” for crude oil in March would be the May contract for the standard Dow Jones-UBS Commodity Index<sup>SM</sup>, the May contract for the DJ-UBSCI One Month Forward, the July contract for the DJ-UBSCI Two Month Forward, and the July contract for the DJ-UBSCI Three Month Forward.

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For more information on the Dow Jones-UBS Commodity Index<sup>SM</sup>, please contact:  
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