

# RICI<sup>®</sup> – Enhanced<sup>SM</sup> Index

*ABN Amro Bank NV has developed a series of intelligent rules-based commodity indexes in conjunction with well-known commodity commentator Jim Rogers. Unlike traditional commodity indexes, which use a passive roll mechanism approach, the RICI<sup>®</sup> – Enhanced<sup>SM</sup> indexes offer innovative strategies that provide optimised returns using different commodity futures curves and underlying fundamentals*

The RICI<sup>®</sup> – Enhanced<sup>SM</sup> is based on 37 commodities, which provides a high level of diversity, and consists of three sub-sector indexes: RICI<sup>®</sup> – Enhanced<sup>SM</sup> – Energy; RICI<sup>®</sup> – Enhanced<sup>SM</sup> – Agriculture; and RICI<sup>®</sup> – Enhanced<sup>SM</sup> – Metals. RICI<sup>®</sup> – Enhanced<sup>SM</sup> aims to deliver stable commodity exposure with optimised returns, while keeping the volatility at levels lower than traditional commodity indexes.

The weightings of the individual sectors and commodities in RICI<sup>®</sup> – Enhanced<sup>SM</sup> indexes have been adapted from the original Rogers International Commodity Index<sup>®</sup> nearly 1:1. The weighting of the agricultural sector has been increased compared with that of the Rogers International Commodity Index<sup>®</sup>, at the expense of the energy sector. The determination of the weightings for the individual commodities is based on the principle of expected economic significance and liquidity in the futures market. The weightings are reset at their initial starting levels on a semi-annual basis, and a general review of the index composition is carried out annually. As a stable and investable index, the RICI<sup>®</sup> – Enhanced<sup>SM</sup> is only modified on rare occasions.

The RICI<sup>®</sup> – Enhanced<sup>SM</sup> takes a 'bottom-up' approach, where each individual commodity has a tailor-made roll mechanism, where liquidity, seasonality/cyclicality and term structure are taken into consideration, with the aim of delivering a better risk-adjusted investment return in each commodity. By considering seasonality, for example, summer and winter are considered for energy contracts. This avoids the need to pay for the liquidity premium. This is done by investing in monthly contracts where players with inherent price risk (i.e. the producers) are ready to sell the forwards at a discount in order to close out this price risk.

The roll return accounts for a meaningful proportion of commodity index returns. Traditional commodity indexes are passive by investing in front month contracts and rolling them shortly before expiration. There is usually a standard monthly rolling schedule for all commodities. While this strategy has provided good returns previously, the prevailing contango effect (partly resulting from the dominance of passive index products) has worsened the negative roll return and, consequently, has increased the difference between spot index returns, and excess and total index returns.

When the relevant segment of the futures curve is in contango (usually experienced more at the front end of the curve – i.e. by front month contracts), as investors sell low-priced contracts to roll into

more expensive ones, the roll return is negative, thereby reducing exposure and investment returns. Traditionally backwardated markets such as energy moved into contango in 2005. The RICI<sup>®</sup> – Enhanced<sup>SM</sup> attempts to remedy the negative roll return by investing partially in longer-dated futures contracts (rather than front contracts only) where roll return is less negative or more positive, hence improving returns.

On any business day  $t$ , the expected roll return ( $ERR_t^{Exp}$ ) between two commodity contracts with consecutive contract expirations ( $Exp-1$  and  $Exp$ ) is given by:

$$ERR_t^{Exp} = \left( \frac{P_t^{Exp-1}}{P_t^{Exp}} \right)^{\frac{12}{MC[Exp-(Exp-1)]}} - 1$$

where:

- $P_t^{Exp-1}$  and  $P_t^{Exp}$  are the prices on day  $t$  of the commodity contract, with contract expiration  $Exp-1$  and  $Exp$ , respectively.
- $MC[Exp - (Exp-1)]$  is the month count between the two contract expirations.

RICI<sup>®</sup> – Enhanced<sup>SM</sup> can reasonably expect to deliver higher returns than front-month rolling indexes when curves are in contango, or deliver almost similar returns when markets are in backwardation, and still exhibit high correlation with traditional commodity indexes.

As a result, the intelligent use of commodity fundamentals has provided stable returns and outperformance of the RICI<sup>®</sup> – Enhanced<sup>SM</sup> against traditional commodity indexes.

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