COMMODITIES AS AN ASSET CLASS

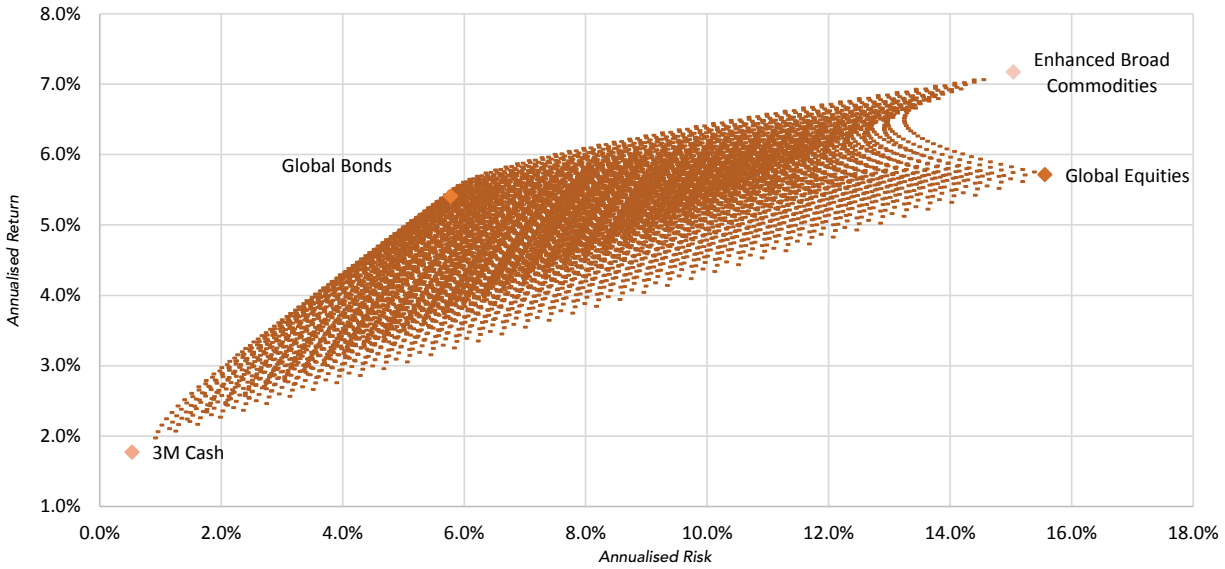
The traditional case for asset allocation has been based on using three core assets – equities, fixed income and cash. However, it has been long been noted that expanding the choice of investments beyond this can improve overall portfolio risk / return profiles. The key has been to find other assets that have suitably low correlation and this has tended to point investors in the direction of commodities. Whilst historically investors have focused on single commodities, with gold being the most notable example of portfolio allocations, today's choice of broad diversified exposures has increased the attractiveness of commodities as an asset class.

Commodities tend to be classified as part of the opportunity set of real return assets as they have a high correlation to and provide a hedge against inflation. Commodities are also unique in that they offer a natural return that is not based on manager skill or input but the fact that they are natural resources.

In addition to this aspect of the investment proposition represented by commodities, investors also increasingly allocate to commodities in order to gain from the diversification benefits due to the low correlation to other asset classes.

Commodities have increasingly found a role in the creation of multi-asset portfolios that have become more prominent as solutions for investors as they seek to balance portfolio risks, especially relative to equity mandates.

Portfolio Allocations



Sources: WisdomTree Europe, Bloomberg. Data from 30 December 2001 to 31 December 2015.

*Past performance is not indicative of future returns. *Based on Excel Solver Function.*

Global bonds represented by J.P. Morgan Agg Bond Index, Global Equities represented by MSCI World Index, 3M Cash represented by 3M US Cash Libor Index, Broad Commodities represented by Optimised Roll Commodity Index.

Various studies and simulations of portfolio allocations have shown that an allocation to broad commodity benchmarks enhances the overall risk return characteristics of portfolios. In the example of a mean variance optimised portfolio simulation using data over the past 14 years the optimal allocation to broad commodities would have been 8%. In practice client portfolios, where commodities feature on average have a strategic allocation of around 5%.

Broad Diversification Brings Benefits

Broad diversified commodities are notably more influential at bringing diversification benefits than either single commodities or individual sub groups of commodities as the broad index combines uncorrelated commodities that in aggregate create a significantly lower overall volatility profile. As can be seen in the cross-correlation matrix, correlations tend to be very low. Within sectors there are, as one might expect, some high correlations as exhibited by crude oil and gasoline, although it is also notable that the correlation between crude oil and natural gas is very low. In terms of absolute volatility a broad basket of commodities can exhibit much lower volatility than individual commodities and lower volatility than gold, which is often considered as a low volatility safe haven.

Correlation Matrix

		Energy			Industrial metals		Precious metals		Agriculture		
		Crude Oil	Natural Gas	Gasoline	Copper	Zinc	Gold	Silver	Corn	Live Cattle	Soybeans
Energy	Crude Oil	1.00	0.29	0.84	0.38	0.27	0.24	0.32	0.21	0.15	0.24
	Natural Gas		1.00	0.25	0.11	0.07	0.09	0.07	0.15	0.10	0.16
	Gasoline			1.00	0.36	0.26	0.21	0.29	0.20	0.11	0.24
Industrial metals	Copper				1.00	0.71	0.29	0.42	0.24	0.13	0.31
	Zinc					1.00	0.27	0.38	0.17	0.09	0.23
Precious metals	Gold						1.00	0.77	0.21	0.01	0.17
	Silver							1.00	0.25	0.03	0.23
Agriculture	Corn								1.00	0.07	0.63
	Live Cattle									1.00	0.11
	Soybeans										1.00

Sources: WisdomTree Europe, Bloomberg. Data from 31 May 2001 to 29 February 2016.

As alternative portfolio solution methodologies, such as risk parity, tactical asset allocation and target volatility, have evolved and become more prominent the benefits of allocating to broad commodities has also increased.

Understanding the nature of commodity indices

Commodity indices differ considerably in terms of methodology and therefore so does the resultant exposure to individual commodities, sectors and groups. Whilst these differences may appear to be subtle they can have a substantial impact on the diversification of the index and resultant volatility and performance. Passive investment in commodities represents one of the main ways that investors have chosen to access this asset class. The most prominent benchmark indices that investors use tend to be part of the Bloomberg Commodity Index family and the S&P GSCI indices. There are other less prominent indices such as the Thomson Reuters CRB Index and the Rogers International Commodity Index. These indices differ with respect to the number of commodities included, the weights of individual commodities and the types of capping rules put in place in order to mitigate concentration risk.

At WisdomTree we have chosen to base our Enhanced Commodity ETF on an index that uses as its starting weights the Bloomberg Commodity Index (BCOM). There are a number of reasons behind this choice but primarily this index represents a broad diversified exposure based on transparent selection and weighting criteria. It also aims to represent the importance of commodities from the perspective of the global economy.

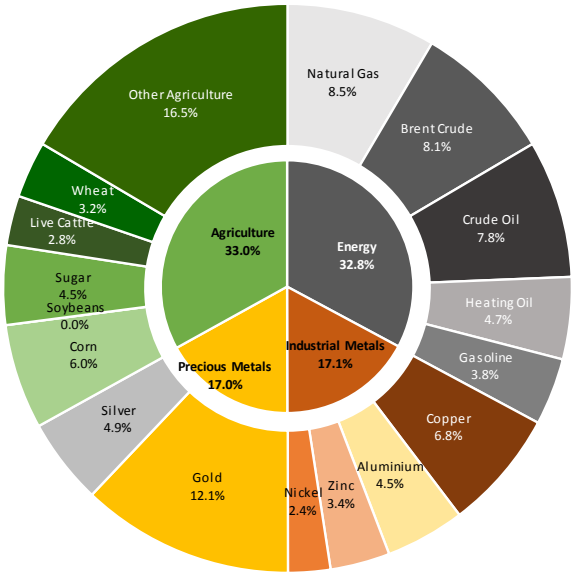
The underlying index has a unique combination of methodologies for measuring economic significance based on average production statistics, and liquidity, through the use of average turnover. Other additional factors such as diversification and continuity are also taken into account. The primary driver of weights is liquidity data as this reflects the value placed on the commodity by financial and physical market participants. Production data is an additional measure of the importance of a commodity for the global economy although production data alone may underestimate the significance of storable commodities. In the initial weights used to select commodities there is a 2/3 allocation to liquidity and 1/3 to production.

In order to ensure sufficient breadth in the selection process a total of 26 commodities are initially tested from six groups – energy, precious metals, industrial metals, livestock, grains and softs. The underlying diversification methodology ensures UCITS compliance with a cap on single commodity exposure set at 15% of the index. No single commodity, together with its derivatives, for example WTI and Brent, may account for more than 25% of the index. At a group level, such as energy, precious metals and other groups, there is a cap at 33% of the index. In order to enhance representation no single commodity can be less than 2% of the index, the latter rule helping to ensure greater diversification than would otherwise be the case.

The resultant index, based on the weights set at the start of the year is broadly diversified across 22 commodities. One feature of this methodology is the relatively low turnover in index weights with the historic turnover from the Commodity Index Percentage weights for BCOM being only 3.31% from 2015 to 2016. No single commodities were added or removed and there was also no material change to the group weights. Stable weights reduce turnover and with respect to the annual rebalance result in lower transaction costs.

Bloomberg Commodity Index weights

Top 10 Holding's



Sources: WisdomTree Europe, Bloomberg. Data as of 31 August 2016.

Gaining efficient access to commodities

Following on from defining commodities as an asset class from an investment perspective, and further establishing that the Bloomberg Commodity Index provides for a broad diversified benchmark, the challenge is to access the underlying exposures.

One of the fundamental characteristics of accessing commodity returns is that this has to be done by using futures contracts as it is not practical, apart from a few commodities such as gold and silver, to physically own the underlying exposures. Commodity indices assume that all exposures are accessed via exchange traded standardised commodity futures contracts on the individual commodity exposures. Futures contracts, whilst being efficient means of gaining access to the returns of the underlying commodities also incorporate other returns.

In fact holding futures means that investors are exposed to three components of returns: spot - the return associated with the spot price of the commodity; roll yield - the returns from maintaining futures exposure by rolling positions from one contract to another; and collateral yield - as futures positions are collateralised this represents the returns of 3-month US treasury bills.

Roll yields in greater detail

Futures contracts typically have standardised dates for expiry and in order for an index to maintain exposure to a commodity it is necessary, as contracts come close to expiry, to move from an existing contract to the next available contract. This process is known as rolling. The price of commodity futures is determined by a number of factors ranging from the cost of storage to expected supply and demand conditions.

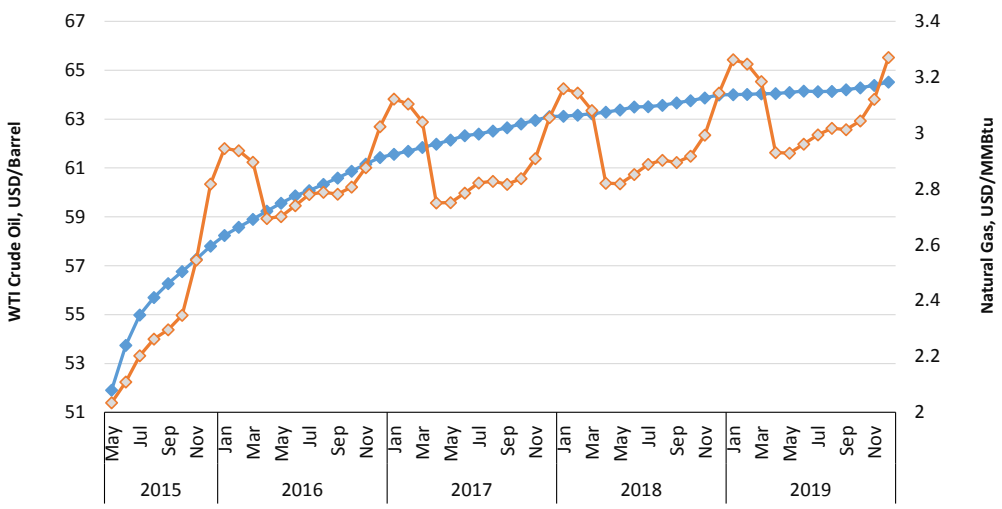
The "shape of the futures curve" reflects prices in forward months. When prices are rising the curve is said to be in contango, when prices in the future are lower the curve is said to be in backwardation. The roll yield is the return from moving from a contract that is about to expire into the next available contract. When the futures curve is in contango, and so forward prices are higher, then the roll yield is negative - an investor has to pay more to maintain the futures position. Conversely when the futures curve is in backwardation, and so forward prices are lower, then the roll yield is positive - an investor pays less to maintain the same futures exposure.

First generation commodity indices, which also tend to represent the main benchmark indices, employ very straightforward approaches to futures exposures and assume rolling the futures exposures on a monthly basis. This methodology, whilst simple to understand and implement, means that the main benchmark indices are fully exposed to the shape of the futures curve whether or not this represents an optimal way to maintain exposure.

Therefore when a commodity is in contango, total index returns will be reduced due to the need to roll into higher-price futures contracts. In this instance, rolling continuously into the near month contract creates substantial negative roll yields. In a normal supply environment, contango will still be the normal case for most commodities as the market reflects the cost of storage.

Crude oil and natural gas are both examples of two important components of commodity indices that have exhibited contango with respect to the forward pricing of futures contracts.

WTI Crude Oil and Natural Gas Remain in Contango



Sources: WisdomTree Europe, Bloomberg. Data as of 13 April 2016.
Past performance is not indicative of future returns.

Enhanced roll methodology

Given that roll costs can have a substantial impact on the returns of commodity indices a lot of work has gone into building smarter rolling methodologies that aim to add value by minimising the negative impact of roll returns. These strategies are known as curve enhancement as they aim to manage the exposure of the along the futures curve. At a very basic level, in the same way that rolling into the next available futures contract has the highest cost, rolling into contracts with longer maturities can help mitigate a substantial part of these costs.

Consequently roll strategies have evolved that roll on a pre-defined maturity, such as always using the three-month contract. This avoids the impact of always trading the front month contract but does not take into account the full opportunity set of available futures contracts or whether there is a better choice of contracts to own. Other methodologies do seek to use a broader set of futures contracts along the curve while taking into account the specifics of different commodities. Further developments in roll enhancements have included taking into account holding multiple contracts and not just a single contract, thereby investing along the curve.

The S&P GSCI Dynamic Roll methodology represents a best of breed approach to implementing the futures roll with a view to not only minimising negative roll yields for contracts in contango but maximising returns for those contracts in backwardation. In addition the methodology takes into account factors such as liquidity across the curve and the trade off between transaction costs and roll costs.

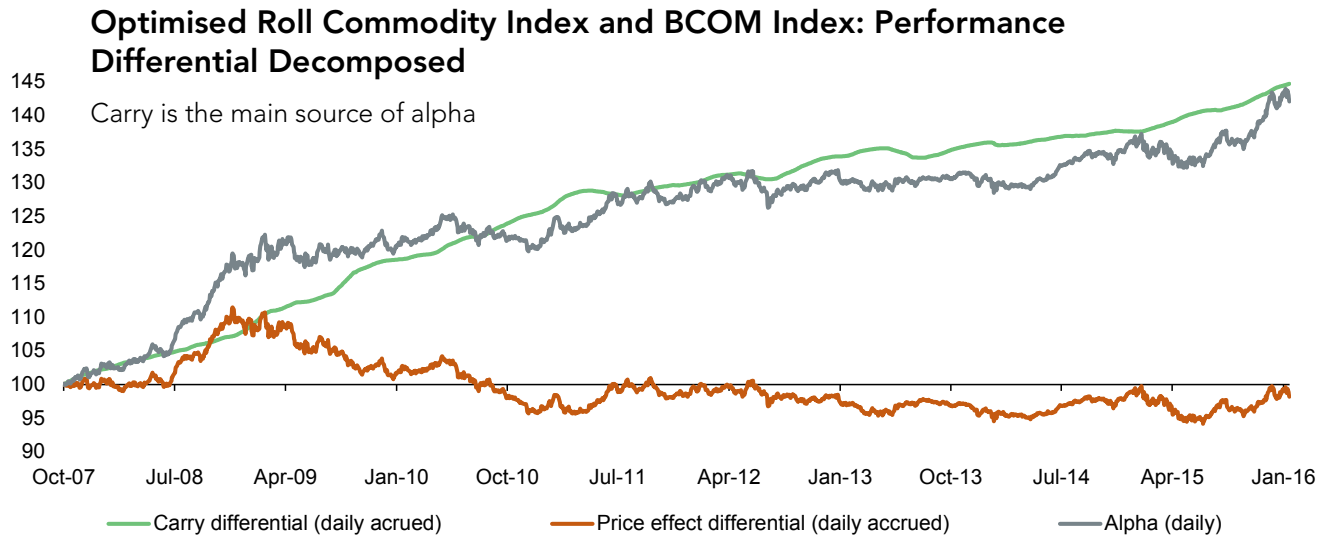
Therefore as distinct from naïve front month rolling methodologies the Dynamic Roll methodology determines for each specific commodity, for each month, a set of eligible futures contracts based on liquidity. For each commodity this can also change each month and may not be constant throughout the year to reflect seasonality and market conditions. Further enhancements are made so that the maximum maturity of the contracts is also not the same for all commodities again reflecting the nature of the futures market specific to each commodity. As rolling incurs costs the index methodology also avoids excessive rolling if the currently held futures contract is part of the set of optimal contracts.

Investors benefit from this roll methodology due to the fact that it is dynamic and reflects changes in market conditions and hence the evolution of the shape of the futures curve. Just as importantly the selection process is entirely systematic and rules based in a transparent way so that investors can readily observe the futures contracts that will be used and rolling into.

The WisdomTree Enhanced Commodity ETF

WisdomTree's Enhanced Commodity ETF tracks the Optimised Roll Commodity Total Return Index which combines initial Bloomberg Commodity Index weights with the S&P GSCI Dynamic Roll methodology. This combination of methodologies produces both a broadly diversified exposure to the commodity market and one that benefits from the enhancements derived from a smart roll methodology.

As shown by the chart on the next page, the benefits derived from the roll optimisation are one of the main drivers of returns over time. Overall the enhancements of having a dynamic roll methodology compared to a static front-month roll have delivered outperformance compared to the benchmark over time.



Source: WisdomTree Europe. Data from 15 October 2007 to 31 January 2016.

Past performance is not indicative of future returns.

The broad nature of the Bloomberg Commodity Index and the application of the dynamic roll methodology creates a better way to access commodities. On an annualised basis, the Optimised Roll Commodity Total Return index has outperformed all the major commodity indices. Just as importantly it has done so with significantly lower volatility. Investors now have the opportunity to gain access to this strategy through a cost effective, transparent UCITS compliant ETF from WisdomTree.

Period	Index	Avg. Ann. Return	Std. Dev.	Sharpe Ratio	Sharpe Ratio Rank
1-Year	Enhanced Roll Commodity Total Return	-11.4%	11.1%	-1.06	1
	S&P GSCI Total Return CME	-29.3%	18.8%	-1.58	5
	Bloomberg Commodity Index Total Return	-17.4%	13.7%	-1.31	2
	RJ/CRB Commodity Total Return Index	-19.4%	14.8%	-1.34	3
	Rogers International Commodity Index Total Return	-19.7%	15.8%	-1.27	4
3-Year	Enhanced Roll Commodity Total Return	-10.8%	10.5%	-1.06	1
	S&P GSCI Total Return CME	-20.8%	19.1%	-1.10	5
	Bloomberg Commodity Index Total Return	-13.8%	12.7%	-1.11	2
	RJ/CRB Commodity Total Return Index	-13.7%	14.2%	-0.99	3
	Rogers International Commodity Index Total Return	-14.9%	14.3%	-1.06	4
5-Year	Enhanced Roll Commodity Total Return	-10.4%	12.2%	-0.88	1
	S&P GSCI Total Return CME	-16.5%	19.2%	-0.88	5
	Bloomberg Commodity Index Total Return	-13.3%	14.6%	-0.93	2
	RJ/CRB Commodity Total Return Index	-12.9%	15.2%	-0.88	3
	Rogers International Commodity Index Total Return	-12.9%	15.9%	-0.83	4
10-Year	Enhanced Roll Commodity Total Return	-0.8%	15.7%	-0.25	1
	S&P GSCI Total Return CME	-10.3%	23.7%	-0.57	5
	Bloomberg Commodity Index Total Return	-6.0%	18.0%	-0.51	4
	RJ/CRB Commodity Total Return Index	-5.2%	18.6%	-0.45	2
	Rogers International Commodity Index Total Return	-4.9%	20.2%	-0.40	3
Since Inception	Enhanced Roll Commodity Total Return	6.1%	14.8%	0.04	1
	S&P GSCI Total Return CME	-3.9%	23.6%	-0.40	5
	Bloomberg Commodity Index Total Return	-0.6%	17.0%	-0.36	4
	RJ/CRB Commodity Total Return Index	0.9%	17.6%	-0.26	3
	Rogers International Commodity Index Total Return	1.7%	18.8%	-0.20	2

Sources: WisdomTree Europe, Bloomberg. Data from 31 May 2001 to 31 March 2016.

Past performance is not indicative of future returns.

Disclaimer

This document is issued by WisdomTree Europe Ltd ("WTE"), an appointed representative of Mirabella Advisers LLP, which is authorised and regulated by the Financial Conduct Authority ("FCA") in the United Kingdom. The UCITS products discussed in this document are issued by WisdomTree Issuer PLC (the "Issuer"), an umbrella investment company with variable capital having segregated liability between its funds and organised under the laws of Ireland as a public limited company. The Issuer has been authorised by the Central Bank of Ireland ("CBI") and is organised as an Undertaking for Collective Investment in Transferable Securities ("UCITS") under the laws of Ireland and shall issue a separate class of shares ("Shares") representing each fund. Investors should read the prospectus of the Issuer ("Prospectus") before investing and should refer to the section of the Prospectus entitled "Risk Factors" for further details of risks associated with an investment in the Shares. Any decision to invest should be based on the information contained in the Prospectus and after seeking independent investment, tax and legal advice. The Share may not be available in your market or suitable for you. This document does not constitute investment advice nor an offer for sale nor a solicitation of an offer to buy Shares. This document should not be used as the basis for any investment decision.

The price of any Shares may go up or down and an investor may not get back the amount invested. Past performance is not a reliable indicator of future performance. Any historical performance included in this document may be based on back testing. Back testing is the process of evaluating an investment strategy by applying it to historical data to simulate what the performance of such strategy would have been. However, back tested performance is purely hypothetical and is provided in this document solely for informational purposes. Back tested data does not represent actual performance and should not be interpreted as an indication of actual or future performance. The value of the Shares may be affected by exchange rate movements.

This document may contain independent market commentary prepared by WisdomTree Europe based on publicly available information. WisdomTree Europe does not warrant, guarantee or otherwise confirm the accuracy or correctness of any information contained herein and any opinions related to product or market activity may change.

This document is not, and under no circumstances is to be construed as, an advertisement or any other step in furtherance of a public offering of Shares in the United States or any province or territory thereof, where none of the Issuer or the Shares are authorised or registered for distribution and where no Prospectus of the Issuer has been filed with any securities commission or regulatory authority. Neither this document nor any copy hereof should be taken, transmitted or distributed (directly or indirectly) into the United States. Neither the Issuer nor any securities issued by it have been or will be registered under the United States Securities Act of 1933 or the Investment Company Act of 1940 or qualified under any applicable state securities statutes.