

WisdomTree Energy Transition Metals Commodity Index

1. Index Overview and Description

The WisdomTree Energy Transition Metals Commodity Index [referred to as “the Index”] is designed to track the performance of a diversified basket of commodities that are associated with energy transition themes. The Index was developed by WisdomTree, Inc. (“WTI”), in collaboration with third party specialists in the energy transition space.

The Index is reconstituted on an annual basis in January and with a quarterly review process which may lead to additional reconstitutions. Excess and Total Return versions of the Index are calculated and published.

2. Key Features

2.1. Membership Criteria

The universe of eligible commodities will be determined based upon the criteria listed below:

- To be eligible for inclusion in the Index, component commodities must be under coverage by the third-party specialists in energy transition and are associated with the energy transition themes, which include, but are not limited to Electric Vehicles, Transmission, Charging, Energy Storage, Solar, Wind, and Hydrogen.
- Commodities that are listed on one or more eligible futures exchanges and can be priced by the third-party independent index calculation agent.
- Commodities that have an active and liquid trading market, i.e., the commodity needs to have minimum \$15 million in terms of the average daily trading volume and / or open interests on the commodity futures contracts.

The Index assesses the exposure and growth metrics for each commodity within the usage in energy transition solutions:

- Exposure: this measures the amount of consumption in energy transition solutions versus the total production for each commodity.
- Growth: this measures the 3-year estimated forward consumption versus the current consumption within the energy transition solutions for each commodity.

Each component commodity receives an Intensity Rating, which is calculated as the 3-year estimated consumption within energy transition divided by the current total consumption and being rescaled to the range 0-1.

Eligible commodities are selected based on the representativeness of the energy transition themes and liquidity criteria as described above.

2.2 Index Components

Exposure to each commodity is achieved through investment in the relevant BNP Paribas Rolling Futures B0 Commodity Indices. The Index will review the eligible indices from time to time and might add sub-indices on additional commodities from other index providers to the Index Components list.

Standard future based commodity Indices are comprised of commodity futures contracts. A commodity future contract is an agreement either to buy or sell a set amount of a physical commodity at a predetermined price for delivery within a predetermined delivery period (which is generally referred to as a “delivery month”). In order to avoid the delivery process and maintain a long futures position, contracts nearing delivery must be sold and replaced by the purchase of contracts that have not yet reached the delivery period. This process is known as the “roll” and consists in “rolling” the current futures position into the future contracts with the nearest delivery (the front month contract).

The BNP Paribas Rolling Futures B0 Commodity Indices implement a standard roll methodology to get the exposure to front-months futures contracts for the relevant commodities. The details of the methodology can be found at <https://indx.bnpparibas.com/>

Index Components	Bloomberg Ticker	RIC Ticker	Commodity Exposure	Weight Cap	Rebalancing Cost
BNP Paribas Rolling Futures B0 LA Index	BNPIB0LA	.BNPIB0LA	Aluminum	100%	0%
BNP Paribas Rolling Futures B0 LX Index	BNPIB0LX	.BNPIB0LX	Zinc	100%	0%
BNP Paribas Rolling Futures B0 LN Index	BNPIB0LN	.BNPIB0LN	Nickel	100%	0%

BNP Paribas Rolling Futures B0 HG Index	BNPIB0HG	.BNPIB0HG	Copper	100%	0%
BNP Paribas Rolling Futures B0 GC Index	BNPIB0GC	.BNPIB0GC	Gold	100%	0%
BNP Paribas Rolling Futures B0 SI Index	BNPIB0SI	.BNPIB0SI	Silver	100%	0%
BNP Paribas Rolling Futures B0 LT Index	BNPIB0LT	.BNPIB0LT	Tin	100%	0%
BNP Paribas Rolling Futures B0 LL Index	BNPIB0LL	.BNPIB0LL	Lead	100%	0%
BNP Paribas Rolling Futures B0 PL Index	BNPIB0PL	.BNPIB0PL	Platinum	100%	0%
BNP Paribas Rolling Futures B0 PA Index	BNPIB0PA	.BNPIB0PA	Palladium	100%	0%
BNP Paribas Rolling Futures N0 CV Index	BNPXN0CV	.BNPXN0CV	Cobalt	5%	5%
BNP Paribas Rolling Futures N0 LF Index	BNPXN0LF	.BNPXN0LF	Lithium	1%	5.5%

2.3 Base Date and Base Value

The Index was established with a base value of 200 on 14 January 2021.

2.4 Calculation and Dissemination

The Excess Return Index (ER Index)

The value of the Excess Return Index on any index calculation date t (IER_t) is calculated in accordance with the following formula:

$$IER_t = IER_{t-1} \times \left(1 + \sum_{i=1}^N W_{t-1}^i \times \left(\frac{IC_t^i}{IC_{t-1}^i} - 1 \right) - |W_{t-1}^i - DW_{t-1}^i| \times RC^i \right)$$

If t is an index rebalancing date:

$$W_t^i = TW_r^i$$

Otherwise,

$$W_t^i = \min(DW_t^i, cap^i)$$

And

$$DW_t^i = W_{t-1}^i \times \frac{IC_t^i}{IC_{t-1}^i} \times \frac{IER_{t-1}}{IER_t}$$

Where

W_t^i is the daily weight for Index Component i on the index calculation date t ;

DW_t^i is the drifted weight for Index Component i on the index calculation date t ;

cap^i is the weight cap for Index Component i ;

RC^i is the rebalancing cost for Index Component i ;

IC_t^i is the settlement value for Index Component i on the index calculation date t ;

N is the number of Index Components comprised in the Index;

r is the index rebalancing date immediately preceding t

TW_r^i is the target weight for Index Component i on the index calculation date t ;

The Total Return Index (TR Index)

The value of the Total Return Index on any index calculation date t (ITR_t) is calculated in accordance with the following formula:

$$ITR_t = ITR_{t-1} \times \left(\frac{IER_t}{IER_{t-1}} + DCY_t - 1 \right)$$
$$DCY_t = \left(1 + FFER_{t-1} \times \frac{NCD(t-1, t)}{360} \right)$$

Where

IER_t is the excess return index value on the index calculation date t ;

DCY_t is the daily cash collateral return on the index calculation date t ;

$NCD(t-1, t)$ is the number of calendar days between index calculation date $t-1$ and t ;

$FFER_t$ is the most recent Fed Funds Effective Rate (expressed as an annual rate) as published in Federal Reserve Statistical Release H.15 (519), or any successor page (or on the Bloomberg ticker: FEDL01 Index).

The Index is calculated on an end-of-day basis based on the settlement values of the Index components determined by the designated third-party calculation agent. Currently, the Index is calculated by Solactive AG.

2.5 Weighting

The Index is weighted by the Intensity Rating, i.e., the target weight of each metal reflects its proportional share based on the Intensity Rating. The maximum weight of each commodity is capped at 40% at the rebalance.

The Index weighting also takes into account each commodity's liquidity profile (i.e., in terms of the average daily trading volume and / or open interests), such that commodities with lower liquidity will be capped to ensure the overall implied liquidity of the Index.

Between index rebalances, commodities with lower liquidity will also be capped at the Weight Cap defined in Section 2.2, and subject to adjustments as described in Section 2.6

2.6 Index Maintenance

Index Maintenance includes monitoring and implementing the adjustments due to market disruption or other events. Those events might require adjustment for the Weight Cap and / or Rebalancing Cost for the calculation of Index levels to ensure the underlying Index Components are tradable for users of the Index. The treatment of such events is evaluated by the Index provider from qualitative and quantitative characteristics of each component commodity.

2.7 Index Reconstitution

The Index periodically adjusts Index constituents and weightings (i.e., Index Reconstitution) to reflect changes to the commodities within the energy transition themes. The Index is expected to reconstitute / rebalance on an annual basis on the 9th business day in January.

Following the quarterly Index review process on the existing and potential new Index components, additional Index reconstitutions / rebalances might be called, following the announcement and implementation process below.

Reconstitution Month: January, April, July, October.

Reconstitution Announcement Date: The Index provider announces the next reconstitution date, the Index components and the target weights following the selection and weighting methodology described above, at least 10 business days before the Reconstitution Implementation Date.

Reconstitution Implementation Date: The addition / removal / re-weighting of the component commodity is implemented at the Index close on the 9th business day of the Reconstitution Month.

WisdomTree Battery Metals Commodity Index

1. Index Overview and Description

The WisdomTree Battery Metals Commodity Index [referred to as “the Index”] is designed to track the performance of a diversified basket of commodities that are associated with battery energy storage themes. The Index was developed by WisdomTree, Inc. (“WTI”), in collaboration with third party specialists in the battery energy storage space.

The Index is reconstituted on an annual basis in January and with a quarterly review process which may lead to additional reconstitutions. Excess and Total Return versions of the Index are calculated and published.

2. Key Features

2.1. Membership Criteria

The universe of eligible commodities will be determined based upon the criteria listed below:

- To be eligible for inclusion in the Index, component commodities must be under coverage by the third-party specialists in battery and are associated with the battery themes, which include, but are not limited to Electric Vehicles, Charging, and Energy Storage.
- Commodities that are listed on one or more eligible futures exchanges and can be priced by the third-party independent index calculation agent.
- Commodities that have an active and liquid trading market, i.e., the commodity needs to have minimum \$15 million in terms of the average daily trading volume and / or open interests on the commodity futures contracts.

The Index assesses the exposure and growth metrics for each commodity within the usage in battery solutions:

- Exposure: this measures the amount of consumption in battery energy storage solutions versus the total production for each commodity.
- Growth: this measures the 3-year estimated forward consumption versus the current consumption within the battery energy storage solutions for each commodity.

Each component commodity receives an Intensity Rating, which is calculated as the 3-year estimated consumption within battery divided by the current total consumption and being rescaled to the range 0-1.

Eligible commodities are selected based on the representativeness of the battery themes and liquidity criteria as described above.

2.2 Index Components

Exposure to each commodity is achieved through investment in the relevant BNP Paribas Rolling Futures B0 Commodity Indices. The Index will review the eligible indices from time to time and might add sub-indices on additional commodities from other index providers to the Index Components list.

Standard future based commodity Indices are comprised of commodity futures contracts. A commodity future contract is an agreement either to buy or sell a set amount of a physical commodity at a predetermined price for delivery within a predetermined delivery period (which is generally referred to as a “delivery month”). In order to avoid the delivery process and maintain a long futures position, contracts nearing delivery must be sold and replaced by the purchase of contracts that have not yet reached the delivery period. This process is known as the “roll” and consists in “rolling” the current futures position into the future contracts with the nearest delivery (the front month contract).

The BNP Paribas Rolling Futures B0 Commodity Indices implement a standard roll methodology to get the exposure to front-months futures contracts for the relevant commodities. The details of the methodology can be found at <https://indx.bnpparibas.com/>

Index Components	Bloomberg Ticker	RIC Ticker	Commodity Exposure	Weight Cap	Rebalancing Cost
BNP Paribas Rolling Futures B0 LA Index	BNPIBOLA	.BNPIBOLA	Aluminum	100%	0%
BNP Paribas Rolling Futures B0 LX Index	BNPIBOLX	.BNPIBOLX	Zinc	100%	0%
BNP Paribas Rolling Futures B0 LN Index	BNPIBOLN	.BNPIBOLN	Nickel	100%	0%
BNP Paribas Rolling Futures B0 HG Index	BNPIB0HG	.BNPIB0HG	Copper	100%	0%
BNP Paribas Rolling Futures B0 GC Index	BNPIB0GC	.BNPIB0GC	Gold	100%	0%
BNP Paribas Rolling Futures B0 SI Index	BNPIB0SI	.BNPIB0SI	Silver	100%	0%
BNP Paribas Rolling Futures B0 LT Index	BNPIBOLT	.BNPIBOLT	Tin	100%	0%
BNP Paribas Rolling	BNPIBOLL	.BNPIBOLL	Lead	100%	0%

Futures B0 LL Index					
BNP Paribas Rolling Futures B0 PL Index	BNPIB0PL	.BNPIB0PL	Platinum	100%	0%
BNP Paribas Rolling Futures B0 PA Index	BNPIB0PA	.BNPIB0PA	Palladium	100%	0%
BNP Paribas Rolling Futures N0 CV Index	BNPXN0CV	.BNPXN0CV	Cobalt	5%	5%
BNP Paribas Rolling Futures N0 LF Index	BNPXN0LF	.BNPXN0LF	Lithium	1%	5.5%

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Reconstitution Implementation Date: The addition / removal / re-weighting of the component commodity is implemented at the Index close on the 9th business day of the Reconstitution Month.