



BNP PARIBAS
CORPORATE & INSTITUTIONAL BANKING

BNP PARIBAS INDEX INDEX METHODOLOGY SUPPLEMENT

OPTIMISED ROLL COMMODITY INDICES

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BNP PARIBAS
CORPORATE & INSTITUTIONAL BANKING

| The bank for a changing world

This document (the “**BNP Paribas Index Methodology Supplement**”) supplements, forms a part of and is subject to the BNP Paribas Index Handbook dated 20 November 2015, as may be amended, adjusted, supplemented or replaced from time to time. The BNP Paribas Index Handbook and the BNP Paribas Index Methodology Supplement together comprise the “**BNP Paribas Index Rules**” for the BNP Paribas Index described herein. In the event of any inconsistency between the BNP Paribas Handbook and this BNP Paribas Index Methodology Supplement, this BNP Paribas Index Methodology Supplement will govern. Terms used herein, but not defined, bear the meaning set forth in the BNP Paribas Index Handbook.

Description of the BNP Paribas Index and objectives

Objectives

The main objective of each of these BNP Paribas Indices is to provide a broad and diversified UCITS compliant commodity exposure, tracking the performance of a basket of commodities. These commodities cover 4 broad commodity sectors: Energy, Agriculture, Industrial Metals and Precious Metals.

Exposure to each commodity is achieved through investment in the relevant S&P GSCI ® Dynamic Roll Indices, the S&P GSCI ® Gold and Silver indices as well as the Bloomberg ® Soybean Oil and Soybean Meal Indices.

The BNP Paribas Indices are rebalanced on a yearly basis, following any rebalancing of the Bloomberg Commodity Index and the weight of each commodity in each BNP Paribas Index reflects the weight such commodity in the Bloomberg Commodity Index and are calculated in accordance with the BNP Paribas Index methodology.

Excess and Total Return versions of the BNP Paribas Index are published.

The S&P GSCI Dynamic Roll Indices

Standard future based commodity Indices such as S&P ® GSCI 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).

Unlike traditional indices, the S&P GSCI ® Dynamic Roll Indices do not roll systematically on front month future contracts but use an optimised roll mechanism for determining their positioning. The aim of this mechanism is to minimize the potentially negative effect of rolling future contract by determining the most efficient roll on the future curve for each commodity. In market trading in contango (upward future curves) the mechanism will aim at minimizing the roll cost (or carry cost) and in backwardated market (downward future curves) the mechanism will aim at maximising the roll cost (or carry cost). The determination is fully systematic and made on a monthly basis.



BNP Paribas Index:	The Optimised Roll Commodity Index, Excess Return and Total Return versions.
BNP Paribas Index Status:	Public Index
BNP Paribas Index Family:	Commodity Index
Index Sponsor:	BNP Paribas
Index Calculation Agent:	S&P Dow Jones Indices LLC
BNP Paribas Index Launch Date	30 th July 2013
BNP Paribas Index Start Date	15 th May 2001
BNP Paribas Index Currency:	USD
BNP Paribas Index Composition	
BNP Paribas Index Components:	As described in Table 1 BNP Paribas Index Components
BNP Paribas Index Reference Rates:	As described in Table 1.B – BNP Paribas Index Reference Rates
BNP Paribas Index Component Weighting Determination Dates:	Yearly, on the last day of the January Roll Period of the Bloomberg Commodity Index, as defined in the Bloomberg Commodity Index Methodology
BNP Paribas Index Features	
Return Type:	Excess Return or Total Return, as appropriate.
Rebalancing:	Yearly, on the 2 nd BNP Paribas Index Level Calculation Date following the relevant BNP Paribas Index Component Weighting Determination Date (the “ BNP Paribas Index Rebalancing Date ”).
BNP Paribas Index Costs:	Not Applicable
Currency Conversion Mechanism:	Not Applicable.
Volatility Control Mechanism:	Not Applicable



Calculation and Publication of the BNP Paribas Index Level in respect of each BNP Paribas Index:	
Initial BNP Paribas Index Level:	100 as of the BNP Paribas Index Start Date. Historical backtesting is used to determine levels of the BNP Paribas Index for the period starting from the BNP Paribas Index Start Date, up to and including the BNP Paribas Index Launch Date
Frequency of calculation of BNP Paribas Index Level:	Daily
Timing of publication:	The Business Day following each BNP Paribas Index Level Calculation Date
BNP Paribas Index Publication Page:	<p>The Optimised Roll Commodity Index Excess Return Index:</p> <ul style="list-style-type: none"> - Bloomberg Ticker: EBCIWTE Index - Reuters Ticker: .EBCIWTE <p>The Optimised Roll Commodity Total Return Index:</p> <ul style="list-style-type: none"> - Bloomberg Ticker: EBCIWTT Index - Reuters Ticker: .EBCIWTT
Website where current composition of the BNP Paribas Index is published:	https://indices-globalmarkets.bnpparibas.com/product.aspx?id=Md6rK2I%2ffiPhJHVikQAhKQ%3d%3d
Index Methodology Supplement URL	https://indices-globalmarkets.bnpparibas.com/nr/EBCIWTE.pdf
<p>Price Disrupted Days Please see Section 4.3 “<i>Price Disrupted Days</i>” of the Handbook</p>	
<p>BNP Paribas Index Adjustment Events: Please see Section 5 “<i>BNP Paribas Index Adjustment Events and Consequences</i>” of the Handbook</p>	
<p>BNP Paribas Index Potential Adjustment Events: Please see Section 6 “<i>BNP Paribas Index Potential Adjustment Events and Consequences</i>” of the Handbook.</p>	



Annex - 1

The BNP Paribas Index Methodology for the Optimised Roll Commodity Index:

Calculation of the BNP Paribas Index Level in respect of the Total Return Index

On each BNP Paribas Index Level Calculation Date t , the Total Return Index Level (ITR_t) shall be calculated in accordance with the following formulae:

On the BNP Paribas Index Start Date ($t = t_0$):

$$ITR_{t_0} = 100$$

And for each BNP Paribas Index Level Calculation Date t subsequent to t_0 :

$$ITR_t = ITR_{t-1} \times \left(\frac{CSH_t}{CSH_{t-1}} + \frac{IER_t}{IER_{t-1}} - 1 \right)$$

Where:

- ITR_t is the Total Return Index Level on BNP Paribas Index Level Calculation Date t
- IER_t is the Excess Return Index Level on BNP Paribas Index Level Calculation Date t
- CSH_t is the Cash Amount Level on BNP Paribas Index Level Calculation Date t
- $t - 1$ is the BNP Paribas Index Level Calculation Date immediately preceding t

Cash Amount Level Calculation

On each BNP Paribas Index Level Calculation Date t , the Cash Amount Level (CSH_t) shall be determined in accordance with the following formulae:

On the BNP Paribas Index Start Date ($t = t_0$):

$$CSH_{t_0} = 100$$

And for each BNP Paribas Index Level Calculation Date t subsequent to t_0 :

$$CSH_t = CSH_{t-1} \times \left(\frac{1}{1 - \frac{91}{360} \times TBR_{t-1}} \right)^{\frac{NCD(t-1,t)}{91}}$$

Where:

- TBR_t is the BNP Paribas Index Reference Rate on BNP Paribas Index Level Calculation Date t ;
- $NCD(t - 1, t)$ is the number of calendar days between $t - 1$ and t ;
- And other terms are as previously defined

Calculation of the BNP Paribas Index Level in respect of the Excess Return Index

On each BNP Paribas Index Level Calculation Date t , the Excess Return Index Level (IER_t) shall be calculated in accordance with the following formulae:

On the BNP Paribas Index Start Date ($t = t_0$):

$$IER_{t_0} = 100$$



And for each BNP Paribas Index Level Calculation Date t subsequent to t_0 :

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

Where:

- DW_t^i is the Daily Weight for BNP Paribas Index Component i on BNP Paribas Index Level Calculation Date t ;
- IC_t^i is the Commodity Reference Price for BNP Paribas Index Component i on BNP Paribas Index Level Calculation Date t ;
- N is the number of BNP Paribas Index Components comprised in the BNP Paribas Index;
- And other terms are as previously defined.

Daily Weight Calculation

On each BNP Paribas Index Level Calculation Date t , the Daily Weight for each BNP Paribas Index Component (DW_t^i) shall be calculated in accordance with the following formulae:

If BNP Paribas Index Component i is **not** subject to a Limit Price Event on BNP Paribas Index Level Calculation Date t

$$DW_t^i = SDW_t^i$$

If BNP Paribas Index Component i is subject to a Limit Price Event on BNP Paribas Index Level Calculation Date t :

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

Where:

- SDW_t^i is the Sectorial Capped Daily Weight for the BNP Paribas Index Component i on BNP Paribas Index Level Calculation Date t ;
- And other terms are as previously defined.

Sectorial Capped Daily Weight Calculation

On each BNP Paribas Index Level Calculation Date t , the Sectorial Capped Daily Weight for each BNP Paribas Index Component (SDW_t^i) shall be determined in accordance with the following formulae:

If BNP Paribas Index Component i is constrained under constraint c then:

$$SDW_t^i = \text{MIN} \left[100\%; \frac{SC_c}{\text{ABS}(\sum_{i \in I_c} CDW_t^i)} \right] \times CDW_t^i$$

Otherwise:

$$SDW_t^i = CDW_t^i$$

Where:

- SC_c is the Sectorial Capped for constraint c , SC_1 is set to 35%, SC_2 and SC_3 are set to 20%
- I_c is the set of all BNP Paribas Index Components under constraint c as defined in Table 1.A
- CDW_t^i is the Capped Daily Weight for BNP Paribas Index Component i on date t
- And other terms are as previously defined.



Capped Daily Weight Calculation

On each BNP Paribas Index Level Calculation Date t , the Capped Daily Weight for each BNP Paribas Index Component (CDW_t^i) shall be calculated in accordance with following formulae:

$$CDW_t^i = \text{MIN}[Cap; UDW_t^i]$$

Where:

- UDW_t^i is the Unconstrained Daily Weight for BNP Paribas Index Component i on BNP Paribas Index Level Calculation Date t
- Cap is set to 20%
- And other terms are as previously defined.

Unconstrained Daily Weight Calculation

On each BNP Paribas Index Level Calculation Date t , the Unconstrained Daily Weight for each BNP Paribas Index Component (UDW_t^i) shall be calculated in accordance with the following formulae:

$$UDW_t^i = AW_r^i \times \frac{IC_t^i}{IC_r^i} \times \frac{RFB_r}{RFB_t}$$

And

$$RFB_t = \sum_{i=1}^N AW_r^i \times \frac{IC_t^i}{IC_r^i}$$

Where:

- r is the BNP Paribas Index Rebalancing Date immediately preceding t
- AW_r^i is the Annual Weight for BNP Paribas Index Component i on BNP Paribas Index Level Calculation Date r
- RFB_t is the Reference Basket Value on date t
- And other terms are as previously defined.

Annual Weight Calculation

The annual rebalancing of the BNP Paribas Index occurs on yearly basis on the BNP Paribas Index Rebalancing Date (r). The determination of the weights of the BNP Paribas Index Components occur on each BNP Paribas Index Weighting Determination (d) and the Annual Weight for each BNP Paribas Index Component (AW_r^i) shall be calculated by reference to the components of the Bloomberg Commodity Index in accordance with the following formulae:

$$AW_r^i = \frac{CIM_y^i \times FPD_d^i}{\sum_{k=1}^N CIM_y^k \times FPD_d^k}$$

Where:

- y is the calendar year in which BNP Paribas Index Weighting Determination Date d falls;
- CIM_y^i is the Commodity Index Multiplier for the relevant Commodity which is a BNP Paribas Index Component i and for year y .
- FPD_d^i is the price in USD, on BNP Paribas Index Weighting Determination Date d , of the Next Future Contract for the relevant Commodity which is a BNP Paribas Index Component i

The Commodity Index Multipliers and the Next Future Contract are as defined in the Bloomberg Commodity Index Methodology.



Annex 2

Table 1.A – BNP Paribas Index Components

	BNP Paribas Index Component	BNP Paribas Index Component Type	BNP Paribas Index Component Currency	Price Source	Index Sponsor	BBG Ticker	Constraint
1	S&P GSCI Crude Oil Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYCLP	1
2	S&P GSCI Brent Crude Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYBRP	1
3	S&P GSCI Heating Oil Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYHOP	1
4	S&P GSCI Unleaded Gasoline Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYHUP	1
5	S&P GSCI Natural Gas Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYNGP	
6	S&P GSCI Live Cattle Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYLCOP	
7	S&P GSCI Lean Hogs Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYLHP	
8	S&P GSCI Wheat Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYWHP	2
9	S&P GSCI Kansas Wheat Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYKWP	2
10	S&P GSCI Corn Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYCNP	
11	S&P GSCI Soybeans Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYSOP	3
12	BCOM Soybean Oil Sub-Index	Commodity Index	USD	Bloomberg	Bloomberg	BCOMBO	3
13	BCOM Soybean Meal Sub-Index	Commodity Index	USD	Bloomberg	Bloomberg	BCOMSM	3
14	S&P GSCI Coffee Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYKCP	
15	S&P GSCI Cocoa Dynamic Roll Index ER*	Commodity Index	USD	SPDJI	SPDJI	SPDYCCP	



16	S&P GSCI Sugar Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYSBP	
17	S&P GSCI Cotton Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYCTP	
18	S&P GSCI Aluminium Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYIAP	
19	S&P GSCI Zinc Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYIZP	
20	S&P GSCI Nickel Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYIKP	
21	S&P GSCI Copper Dynamic Roll Index ER	Commodity Index	USD	SPDJI	SPDJI	SPDYICP	
22	S&P GSCI Gold Index ER	Commodity Index	USD	SPDJI	SPDJI	SPGSGCP	
23	S&P GSCI Silver Index ER	Commodity Index	USD	SPDJI	SPDJI	SPGCSIP	

* Weight of S&P GSCI Dynamic Roll is null since 2005

Table 1.B – BNP Paribas Index Reference Rates

	BNP Paribas Index Reference Rate	Designated Maturity	Currency	Reference Price Source	Bloomberg Ticker
1	United States Auction Result 3 Month Treasury Bill High Discount	3-Month	USD	Bloomberg	USB3MTA



Annex 3 Information regarding data produced by backtesting

Historical performance of the BNP Paribas Index

The below table provides historical data with respect to the performance of the BNP Paribas Index during the time period specified.

The BNP Paribas Index Start Date is a date prior to the BNP Paribas Index Launch Date. The BNP Paribas Indices did not exist and the BNP Paribas Index Levels were not calculated or published prior to the BNP Paribas Index Launch Date.

For the period from, and including the BNP Paribas Index Start Date, to, but excluding the BNP Paribas Index Launch Date, the Index Calculation Agent has retrospectively calculated the theoretical levels of the BNP Paribas Indices. Such calculations and levels are calculated on materially the same basis as the BNP Paribas Index Methodology, using publicly available historical data. To the extent relevant data was not available, the Index Calculation Agent may use simulated inputs or inputs approximated by or with reference to substitute sources determined by the Index Sponsor to be appropriate. Such calculations and levels are provided for informational purposes only and are intended to demonstrate how the BNP Paribas Indices would have performed prior to the BNP Paribas Index Launch Date.

While such data is believed to be accurate, none of the Index Sponsor, the Index Calculation Agent nor any of their affiliates make any representation as to its accuracy or completeness. Any calculations or levels determined prior to the BNP Paribas Index Start Date are not indicative of the future performance of the BNP Paribas Indices. Any historical upward or downward trend in the calculations or levels determined prior to the BNP Paribas Index Start Date is not an indication that the BNP Paribas Index Level is more or less likely to increase or decrease at any time in the future. Any such information, data and/or calculations will be provided in the BNP Paribas Index Methodology Supplement.

For the period from, and including the BNP Paribas Index Launch Date, to and including the last date specified below, the BNP Paribas Index Levels are actual calculations performed by the Index Calculation Agent during such period. Any historical upward or downward trend in the BNP Paribas Index Level during such period is not an indication that the BNP Paribas Index Level is more or less likely to increase or decrease at any time in the future.

Historical Data for the Optimised Roll Commodity Index (until 30th September 2015)

Year/ Quarter		EBCIWTE (ER)		EBCIWTT (TR)	
		High	Low	High	Low
2001	Second	101.81	95.27	101.8408	95.6853
	Third	97.99	89.36	98.5982	90.4985
	Fourth	90.51	85.15	91.6996	86.4583



2002	First	94.61	86.09	96.7315	87.7751
	Second	96.48	89.83	98.6681	91.9126
	Third	101.22	94.07	104.3068	96.7457
	Fourth	106.31	96.77	110.0160	99.9969
2003	First	117.71	105.07	122.0462	109.0440
	Second	114.95	104.99	119.5805	108.9883
	Third	119.63	111.34	124.8026	115.9414
	Fourth	133.03	119.94	139.0637	125.1293
2004	First	150.30	133.75	157.4930	139.8676
	Second	157.71	145.54	165.5762	152.6242
	Third	163.40	151.69	172.3814	159.4326
	Fourth	170.90	158.38	180.5178	167.7276
2005	First	192.00	160.39	204.6454	170.1278
	Second	194.36	178.11	208.7415	190.7483
	Third	217.74	189.90	236.0246	204.4975
	Fourth	224.28	206.97	245.0786	225.3530
2006	First	232.23	217.18	255.1444	239.0804
	Second	260.04	227.94	289.3587	252.4410
	Third	256.97	234.19	289.1045	265.3281
	Fourth	264.55	234.78	302.6445	266.4599
2007	First	267.39	242.36	309.6407	278.7800
	Second	278.70	264.29	327.5400	307.5423
	Third	288.54	262.84	343.4953	311.4576
	Fourth	308.33	280.36	370.3617	334.1530
2008	First	366.77	304.49	442.9193	366.6233
	Second	399.39	337.09	484.5391	407.3407
	Third	407.32	302.25	494.3144	368.1352
	Fourth	304.65	208.29	371.2497	254.0786
2009	First	236.03	203.00	287.9271	247.7208



	Second	255.89	216.69	312.4330	264.5155
	Third	262.36	226.93	320.4237	277.1126
	Fourth	279.05	247.47	340.9439	302.3119
2010	First	288.21	256.19	352.1435	313.0367
	Second	279.31	253.39	341.3748	309.7628
	Third	286.31	254.49	350.1714	311.1360
	Fourth	326.43	283.66	399.3805	346.9363
2011	First	348.47	320.38	426.4883	391.9913
	Second	359.73	331.25	440.2849	405.4632
	Third	352.40	305.01	431.3607	373.3767
	Fourth	323.13	292.79	395.5646	358.4298
2012	First	322.57	304.07	394.9162	372.2423
	Second	314.93	279.90	385.6007	342.7749
	Third	329.32	294.28	403.3915	360.3955
	Fourth	323.13	306.65	395.8291	375.7226
2013	First	312.44	296.32	382.8515	363.1278
	Second	296.12	273.68	362.9070	335.4471
	Third	290.70	272.32	356.3348	333.7955
	Fourth	282.76	269.94	346.6105	330.9188
2014	First	297.51	269.95	364.7828	330.9644
	Second	301.34	291.34	369.5020	357.2309
	Third	297.70	267.83	365.0576	328.4498
	Fourth	270.40	239.38	331.6024	293.5788
2015	First	238.62	222.51	292.6486	272.9017
	Second	235.93	225.20	289.3725	276.2069
	Third	229.33	198.61	281.2825	243.6240
	Fourth				



Annex 4 – Annual Rebalancing of the BNP Paribas Index

Composition of the BNP Paribas Index as at November 2015

Following the annual review of the Bloomberg Commodity Index by its sponsor, the BNP Paribas Index Calculation will include or remove certain BNP Paribas Index Components, so the BNP Paribas Index composition reflects the composition of the Bloomberg Commodity Index.

Commodity / BNP Paribas Index Rebalancing Date	15-May-01	16-Jan-02	16-Jan-03	16-Jan-04
Crude Oil	16.581241062197500%	13.060053667203600%	14.180736813718200%	13.211336570916800%
Brent Crude	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Heating Oil	5.125189248648300%	4.477310936059610%	4.565381569229950%	3.940499376996320%
Unleaded Gasoline	6.246265548145860%	4.212352522619170%	4.672084645421950%	4.196004631640990%
Natural Gas	3.892733704744160%	9.273336810966980%	10.298325940512600%	10.832405103058300%
Live Cattle	5.050547041444340%	5.722227464708330%	5.490928178355770%	5.925245902888930%
Lean Hogs	3.966962560085820%	4.002269073461940%	4.432138657282130%	4.315959731849410%
Wheat	4.524770969947700%	4.758833472281110%	4.562324079379060%	4.899350572622090%
Kansas Wheat	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Corn	5.790149186150070%	6.501496127640960%	5.770792466953270%	6.479218494499900%
Soybeans	7.930463924123320%	8.986168989844620%	7.395220709814100%	7.814488953303420%
Soybean Oil	2.062682731756530%	1.959210934105400%	2.022671509524430%	2.581957985140900%
Soybean Meal	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Coffee	2.901848946433040%	2.949892775838770%	3.024380516996390%	2.983041113413050%
Cocoa	2.618271382667030%	1.880065359198400%	1.866577638203730%	1.995691526895690%
Sugar	1.895617783663110%	2.288486540536280%	2.559242022437170%	2.759802472875710%
Cotton	2.289512143264620%	2.975470802016080%	3.138759487237180%	3.095878104176880%
Aluminium	6.082009180883430%	6.322208600312380%	7.026680297365860%	6.976403277687830%
Zinc	1.970197577015190%	2.027567076030840%	2.081951970364030%	2.320775197187040%
Nickel	2.406192028651670%	2.005819020153690%	2.035434078766100%	1.868759451869020%
Copper	6.376180018724010%	6.070990881561670%	6.055689632519670%	5.736888907765170%
Gold	8.916545671526570%	7.671157263478030%	6.394742205727000%	5.868622852474370%
Silver	3.372619289927750%	2.855081681982170%	2.425937580191340%	2.197669772738160%

Commodity / BNP Paribas Index Rebalancing Date	18-Jan-05	18-Jan-06	18-Apr-06	17-Jan-07
Crude Oil	13.194471550658700%	12.846389013665100%	13.313420425716300%	11.445711914044800%



Brent Crude	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Heating Oil	3.952900461473900%	3.717788885434410%	3.990194938922850%	3.546637762097370%
Unleaded Gasoline	4.083226047814540%	3.929781768507870%	4.634917031021780%	3.613622061138020%
Natural Gas	12.769182238775300%	11.415029410638200%	9.021363351032280%	12.721658434876100%
Live Cattle	6.100246262361420%	6.054775897462380%	4.499228612840430%	6.159142411626380%
Lean Hogs	4.400663577610990%	4.426383358316290%	4.120101138150610%	3.224614222347030%
Wheat	4.752969107524270%	4.882753463848160%	5.046286352465480%	4.682754859516120%
Kansas Wheat	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Corn	5.566397555697490%	5.917249711125210%	6.418146535106780%	6.195289949133820%
Soybeans	7.487894938359450%	7.408727296489770%	6.916040119096570%	8.049016474981660%
Soybean Oil	2.59633323837720%	2.635548136738940%	2.605626906790840%	2.855645038574290%
Soybean Meal	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Coffee	3.090711015446160%	2.973612100802870%	2.498456569068680%	3.039465177151710%
Cocoa	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Sugar	2.783669903436410%	3.078512490610480%	3.167529518674940%	3.031135045945170%
Cotton	3.194612337078740%	3.248800124466840%	2.908414036397220%	3.146595084618890%
Aluminium	6.994709925500570%	7.240539762094080%	7.270013994552170%	6.947634217207750%
Zinc	2.678063573547330%	2.859836553771950%	3.889593670166310%	2.783849610048630%
Nickel	2.595047258254680%	2.794379049940600%	3.117492339245470%	2.941208811095890%
Copper	5.785672714178590%	6.020793838586250%	7.419368334993840%	6.265115175146420%
Gold	5.928393560431720%	6.528933569693820%	6.497825767964010%	7.029893565659380%
Silver	2.044834733472010%	2.020165567806740%	2.665980357793440%	2.321010184790490%

Commodity / BNP Paribas Index Rebalancing Date	16-Jan-08	16-Jan-09	19-Jan-10	18-Jan-11
Crude Oil	12.598537692406000%	13.578475036224700%	14.076204537204300%	14.798954998521900%
Brent Crude	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Heating Oil	3.681973796849020%	3.638572807365590%	3.491669104044000%	3.630303959647790%
Unleaded Gasoline	3.581761372301760%	4.219343015119620%	3.501151146540460%	3.441906215947260%
Natural Gas	12.426544857053900%	10.656368299814100%	11.429565240156000%	11.01288879290300%
Live Cattle	4.761456532254580%	4.593013357115710%	3.828991771328330%	3.524104044240520%
Lean Hogs	2.795649435373770%	2.665914964827730%	2.330896627545780%	2.116634485198500%
Wheat	4.623918619393890%	4.755428652214420%	4.551375239738620%	4.473896842411710%



BNP PARIBAS
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Kansas Wheat	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Corn	6.020725831718370%	5.330768465913240%	6.617512451252640%	7.286398425219660%
Soybeans	7.661379721827570%	7.896172960656760%	7.758761223611020%	7.898278656243340%
Soybean Oil	2.852014373049910%	2.872773022253950%	2.923864584520470%	2.888520417349690%
Soybean Meal	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Coffee	3.041809439937960%	3.159934819625490%	2.667397018717260%	2.349162295758860%
Cocoa	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Sugar	3.110629516862020%	3.023754109089570%	2.932377898262590%	3.449671120970290%
Cotton	2.478799367571280%	2.223890620041430%	2.045409337100780%	1.995947381050350%
Aluminium	7.098755977204790%	6.930982311221360%	5.936909237664210%	5.011016632106260%
Zinc	2.824732773726540%	3.249707614713020%	2.961253030840380%	2.791496457071820%
Nickel	2.806749237060110%	2.689822249951490%	2.398380033657660%	2.290529724765910%
Copper	7.245512333057300%	7.613572721619190%	7.722677818524240%	7.456407238208690%
Gold	7.558895097407540%	8.013773689403430%	9.408136392853160%	10.350497809047100%
Silver	2.830154024943660%	2.887731282829280%	3.417467306438110%	3.233384416950100%

Commodity / BNP Paribas Index Rebalancing Date	18-Jan-12	16-Jan-13	16-Jan-14	21-Jan-15
Crude Oil	9.531194694745610%	9.175555923486950%	8.372857398340000%	7.850022811856220%
Brent Crude	5.245147583505170%	5.673963796074100%	6.372920910070000%	7.236090900466560%
Heating Oil	3.453683727718180%	3.516875731918500%	3.669750652890000%	3.672693129370970%
Unleaded Gasoline	3.418854141992930%	3.401059019851580%	3.537976759740000%	3.729442046223670%
Natural Gas	9.547540059006410%	10.587842146780600%	9.529359383960000%	9.415217271988770%
Live Cattle	3.867219851709660%	3.282009354309570%	3.294710866620000%	3.067087376317420%
Lean Hogs	2.219939310337840%	1.907952205730890%	1.980437962030000%	1.899062076696170%
Wheat	4.844124135192770%	3.458242762496620%	3.204548385680000%	3.058620322050150%
Kansas Wheat	0.000000000000000%	1.328751607598590%	1.186995984360000%	1.089125600160010%
Corn	6.293685023723550%	7.349377549684900%	7.271267316890000%	7.075868966817170%
Soybeans	6.945202500842650%	5.536262353165370%	5.808088779620000%	5.333338649128970%
Soybean Oil	3.359949465647380%	2.732377509457350%	2.810968881380000%	2.831951256087060%
Soybean Meal	0.000000000000000%	2.625797494003120%	2.768010720420000%	2.529247538839290%
Coffee	2.646326984238650%	2.455854209835650%	2.352736639930000%	2.160591965160630%
Cocoa	0.000000000000000%	0.000000000000000%	0.000000000000000%	0.000000000000000%
Sugar	3.896218317612210%	3.840010376319090%	3.806397959010000%	4.143568959655410%



Cotton	2.017270654992740%	1.737768039970400%	1.557161118510000%	1.482678071426540%
Aluminium	6.161438359768400%	4.810828105681240%	4.635394749700000%	4.745507701522600%
Zinc	3.339868624176660%	2.452737799992070%	2.334792125490000%	2.367275259890420%
Nickel	2.729470557001720%	2.218679938769950%	2.174008904300000%	2.013560543271160%
Copper	7.574758516832890%	7.093850399530610%	7.437926180140000%	7.149598251649150%
Gold	10.021619896138600%	10.837562535034400%	11.658891942290000%	12.562542536323100%
Silver	2.886487594815970%	3.976641140308540%	4.234796378520000%	4.586908765098560%

