DB Commodity Backwardation Simplified Index

This Index Guide is only intended to be viewed by professional clients under the Markets in Financial Instruments Directive 2004/39/EC (MiFID) who have the knowledge and experience in financial and business matters and expertise to assess all relevant risks associated with the Index. Please see the 'Index Guide Disclaimers' section below for further information. Please refer to the Glossary section for the definition of various terms.

Summary

This section summarises a number of features of each Index. This section should be read as a summary introduction to the Index Guide and is no substitute for reviewing the Index Guide in full. This section is subject to the more detailed provisions set out in the remainder of this Index Guide. Capitalised terms not otherwise defined shall have the meanings given to them in the Glossary section.

The index suite covered in this Index Guide consists of two master indices,

- DB Commodity Backwardation Simplified Long USD ER Index ("***Long Index***")
- DB Commodity Backwardation Simplified Short USD ER Index ("***Short Index***")

and, their respective Euro-hedged augmentations,

- DB Commodity Backwardation Simplified Long EUR ER Index ("***Long EUR Index***")
- DB Commodity Backwardation Simplified Short EUR ER Index ("***Short EUR Index***")

The Long Index extracts maximum potential roll returns based on the implied roll yields generated by commodities across the following sectors - Energy, Industrial Metals, and Precious Metals. The allocation method achieves a diversified portfolio avoiding component concentration. The index is fixed leveraged at 140%.

The Short Index minimizes potential roll returns based on the implied roll yields generated by commodities across the following sectors - Energy, Industrial Metals, and Precious Metals. The allocation method achieves a diversified portfolio avoiding component concentration. The index is fixed leveraged at 140%.

The roll yield is a measure of how backwardated or contango a commodity is. A positive roll yield indicates a commodity that is backwardated whilst a negative roll yield indicates it is contango. If the price of a future is greater than the spot price, the market is in contango. If the price of a future is below the spot price, the market is in backwardation. As the futures contract gets closer to expiry, its price will converge towards the spot price. In contango markets, this results in the future price falling assuming a flat roll cost and no curve rotation. The opposite is true for a market in backwardation. In a long only index, contango markets will tend to cause a drag on returns while a market in backwardation will generate positive roll returns. Historically, commodities that have had a higher degree of backwardation have performed better than ones that are in contango. This is also a way to benefit from roll yield differentials across a cross section of commodities.

The Long Index takes hypothetical positions in 12 S&P GSCI Front Month Indices ("***S&P GSCI Indices***") as listed in Table 4. The Long Index is designed to maximize the potential roll contributions in backwardated markets and minimize the potential loss from rolling down the curve in contango markets. This is achieved by taking hypothetical overweight positions in the six most backwardated (least contangoed) S&P GSCI Indices.

The Short Index takes hypothetical positions in 12 S&P GSCI Front Month Indices ("***S&P GSCI Indices***") as listed in Table 4. The Short Index is designed to minimize the potential roll contributions in backwardated markets and maximize the potential loss from rolling down the curve in contango markets. This is achieved by taking hypothetical overweight positions in the six most contangoed (least backwardated) S&P GSCI Indices

Both the Long Index and the Short Index allocations are based on the allocations in the DB Commodity Backwardation Simplified USD ER Index (Bloomberg Ticker: *DBRCBWSE Index*) ("***the Base Index***"), such that each of the Long Index and the Short Index diversifies its allocation across commodities and avoids component concentration. WTI Crude Oil, Brent Crude Oil, Gasoil, and Heating Oil together comprise the Oil component. The other components are Natural Gas, Aluminum, Copper, Nickel, Zinc, Lead, Gold and Silver. The Base Index extracts potential returns based on the implied roll yields generated by commodities across the following sectors - Energy, Industrial Metals and Precious Metals.

The Long Index and the Short Index also take hypothetical positions in the same 12 S&P GSCI Indices as that taken by the Base Index.

Contact:
E-Mail - Index.data@db.com
Phone Number - +44 (0) 207 545 0505

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The implementation of the Long Index and the Short Index are described as follows:

- *Long Index*

  On each Index Selection Day, weights in the Base Index are segregated such that the commodities with negative weights are assigned a weight of zero and the positive weights are considered as is for selection. These segregated weights are then added to a leverage weight within each component, where the leverage weight in the Oil Component is equally distributed among the commodities in this component.

- *Short Index*

  On each Index Selection Day, weights in the Base Index are segregated such that the commodities with positive weights are assigned a weight of zero and the absolute of the negative weights are considered for selection. These segregated weights are then added to a leverage weight within each component, where the leverage weight in the Oil Component is equally distributed among the commodities in this component.

Relative weights in the Long Index and the Short Index are such that the largest component may only have a relative weight less than 31% and all other components may only have a relative weight of 13.10% or less.

Index Suite

The indices are calculated and published to Bloomberg in the following versions;

Table 1: Index Suite

Index Name	Return Type	Currency	Bloomberg Ticker
DB Commodity Backwardation Simplified Long USD ER Index	ER	USD	DBRCBWSL
DB Commodity Backwardation Simplified Long EUR ER Index	ER	EUR	DBRCBWEL
DB Commodity Backwardation Simplified Short USD ER Index	ER	USD	DBRCBWSS
DB Commodity Backwardation Simplified Short EUR ER Index	ER	EUR	DBRCBWES

Source: DBIQ

Key Index Information

Index Inception Date

3-Jan-2002

Index Live Date

7-Jun-2017

Index Business Day

Prior to 1 January 2010, “Index Business Day” means a day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business in New York City. Starting from and including 1 January 2010, “Index Business Day” means a day (other than a Saturday or Sunday) which is not a holiday in the CME Group New York Floor holiday calendar for the relevant year as published on the CME Group website or any Successor Source thereof.

Index Selection Day

Table 2: Index Selection Day

Index Name	Index Selection Day
DB Commodity Backwardation Simplified Long USD ER Index	1st Index Business Day of every month (or, if none, the 1st Index Business Day of the month prior to the Index Inception Date based on the calendar of the Index Business Day
DB Commodity Backwardation Simplified Short USD ER Index	1st Index Business Day of every month (or, if none, the 1st Index Business Day of the month prior to the Index Inception Date based on the calendar of the Index Business Day)

Source: DBIQ

Index Rebalancing Day

Table 3: Index Rebalancing Day

Index Name	Index Rebalancing Day
DB Commodity Backwardation Simplified Long USD ER Index	Rebalanced on the 2nd Index Business Day of every month
DB Commodity Backwardation Simplified Long EUR ER Index	Reweighted on the last Index Business Day of every month
DB Commodity Backwardation Simplified Short USD ER Index	Rebalanced on the 2nd Index Business Day of every month
DB Commodity Backwardation Simplified Short EUR ER Index	Reweighted on the last Index Business Day of every month

Source: DBIQ

Index Owner and Index Administrator

Each Index is a Deutsche Bank AG proprietary index. Each Index is the intellectual property of Deutsche Bank AG ("Deutsche Bank AG" or the "Index Owner", which expression shall include any successor in such capacity). The Index Owner owns the copyright and all other intellectual property rights to each Index and this Index Guide. Any use of these intellectual property rights must be with the prior written consent of the Index Owner.

Each Index will be governed by the Index Administrator. The initial Index Administrator shall be Deutsche Bank AG operating through Deutsche Bank Index Quant ("DBIQ"), a research unit within Deutsche Bank AG via its internal processes and the "Index Administrator" shall mean Deutsche Bank AG acting in such capacity or any successor thereto. The Index Administrator controls the creation and operation of the index administrative process, including all stages and processes involved in the production and dissemination of the Long Index, the Short Index, the Long EUR Index and the Short EUR Index.

The Index Administrator has implemented and maintains the DBIQ User Guidance and Administrator Handbook Overview (the "Overview"), which sets out a summary of the policies, procedures and controls implemented by the management of the Index Administrator to promote sound business practices for the lifecycle management of the Index Owner's proprietary benchmarks by the Index Administrator. The Overview also includes the Index Administrator's policy related to quality of benchmarks and input data management. Additional issues related to governance, controls, benchmark classification and risk controls, periodic reviews and conflicts of interest are also addressed.

The Overview is available on the DBIQ homepage under the following URL (the "DBIQ Website"):

https://index.db.com

Index Publication

The level of each Index on each relevant Index Business Day shall be published:

(i) on the DBIQ Website; and

(ii) where applicable, on Bloomberg under the Bloomberg ticker in respect of such Index as set out in Table 1 above.

Any such publication may be restricted by means determined as appropriate for such purpose by the Index Administrator in its sole and absolute discretion including, but not limited to, password protection on the DBIQ Website restricting access to a limited set of persons in accordance with arrangements agreed between the Index Administrator and such person. The Index Administrator may, at any time and without notice, change the frequency or method publication of an Index, as the case may be. The Index Administrator accepts no legal liability to any person for publishing or not continuing to publish for any period of time and level in respect of an Index at any particular place or any particular time.

Index Rules and Calculations

Underlying commodities, Relevant Exchange and the corresponding S&P GSCI Indices

Settlement Prices of the futures contracts are published by the Relevant Exchange for the relevant contract on the relevant short code in respect of such futures contract under "Reuters Symbol" in Table 4 or any Successor Source thereto. Levels of the S&P GSCI Indices are published on Reuters as per the RICs given in Table 4 or any Successor Source thereto

Table 4: Underlying commodities, Relevant Exchanges and the corresponding S&P GSCI Indices

Sector	Commodity Name	Reuters Symbol	Relevant Exchange	Corresponding S&P GSCI Name	S&P GSCI Reuters RIC
Energy	WTI Crude Oil	CL	NYMEX	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Crude Oil Index Excess Return	.SPGSCLP
	Brent Crude Oil	LCO	ICE	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Brent Crude Index Excess Return	.SPGSBRP
	Heating Oil	HO	NYMEX	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Heating Oil Index Excess Return	.SPGSHOP
	Natural Gas	NG	NYMEX	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Natural Gas Index Excess Return	.SPGSNGP
	Gas Oil	LGO	ICE	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Gas Oil Index Excess Return	.SPGSGOP
Industrial Metals	Aluminium	MAL	LME	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Aluminium Index Excess Return	.SPGSIAP
	Copper	MCU	LME	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Copper Index Excess Return	.SPGSICP
	Nickel	MNI	LME	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Nickel Index Excess Return	.SPGSIKP
	Zinc	MZN	LME	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Zinc Index Excess Return	.SPGSIZP
	Lead	MPB	LME	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Lead Index Excess Return	.SPGSILP
Precious Metals	Gold	GC	COMEX	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Gold Index Excess Return	.SPGSGCP
	Silver	SI	COMEX	Standard & Poor's (S&P) Goldman Sachs Commodity Index (GSCI) Silver Index Excess Return	.SPGSSIP

Source: DBIQ

Where “NYMEX” is the NYMEX CME Group, “ICE” is the Intercontinental Exchange and “LME” is the London Metal Exchange.

DB Commodity Backwardation Simplified Long USD ER Index

The Long Index is constructed based on the allocations in the Base Index, as of each Index Selection Day, and is calculated on all Index Business Days as follows:

$$ILL(t) = ILL(t-1) + \sum_{i=1}^{12} (ILo(t,i) - ILo(t-1,i)) * Ul(t-1,i)$$

Where:

t	=	Any Index Business Day t
i	=	Corresponds to the commodities listed in Table 4
s	=	Any Index Selection Day s
$ILL(t)$	=	Index level of the Long Index on t
$ILo(t,i)$	=	Index level of the S&P GSCI Index on t corresponding to commodity i
$Ul(t,i)$	=	Notional Holdings of the S&P GSCI Index corresponding to commodity i in the Long Index on t determined pursuant to sub-section “Index Rebalancing” below
$w_L(s,i)$	=	Weight of the S&P GSCI Index corresponding to commodity i in the Long Index, determined on s, as determined in the sub-section “Index Selection” below

Index Rebalancing

If t is an Index Rebalancing Day, the Notional Holdings of the S&P GSCI Index corresponding to commodity i, in the Long Index is calculated as follows,

$$Ul(t,i) = w_L(s,i) * \frac{ILL(t)}{ILo(t,i)}$$

On any other Index Business Day t the Notional Holdings in the Long Index remains constant:

$$Ul(t,i) = Ul(t-1,i)$$

The initial Notional Holdings in the Long Index applicable on the Index Inception Day are given under the Annex in Table 7.

Index Selection

Positive weights in the Base Index are segregated and allocated to the 12 underlying S&P GSCI Indices of the Long Index by adding a Leverage Weight across the commodity components, so as to derive the Long Index Weights.

Base Index Weights

The allocation in the Base Index is determined on every Index Selection Day on the basis of the implied roll yield based on a pre-defined futures contract schedule for each of the underlying commodities listed in Table 4. Commodities are ranked based on their implied roll yields such that the commodity with the highest roll yield is assigned rank one, and so on.

The underlying S&P GSCI Indices that take hypothetical positions in the Base Index are assigned equal positive weights that correspond to the top six ranked commodities and equal negative weights that correspond to the bottom six ranked commodities based on the implied roll yields.

The Base Index Weights $w(s,i)$ are calculated for each commodity i on each Index Selection Day s. The 12 commodities given in Table 4 are ranked based on their implied roll yields $IR_i(s)$, such that the commodity with the highest roll yield is assigned the first rank and so on. The roll yield for any commodity i is calculated as follows:

$$IR_i(s) = \left(\frac{PF0_i(s)}{PF3_i(s)}\right)^{\left(\frac{365}{daycount}\right)} - 1$$

Where:

i	=	Corresponds to the commodities listed in Table 4
s	=	Any Index Selection Day s
$PF0_i(s)$	=	Settlement Price, as on Index Selection Day s, of the front month futures contract picked based on the schedule given Table 5
$PF3_i(s)$	=	Settlement Price, as on Index Selection Day s, of the third month futures contract picked based on the schedule given in Table 6
$daycount$	=	is the number of calendar days from (but excluding) the expiry date of the front month futures to (and including) the expiry date of the 3rd Month futures contract , in each case, for commodity i
$IR_i(s)$	=	Implied Roll Yield of the commodity i on Index Selection Day s
$w(s,i)$	=	Base Index Weight of the commodity i in the Base Index determined as of s

The Base Index allocates a weight of 1/12 to the S&P GSCI Indices corresponding to the top six ranked commodities and is allocated a weight of -1/12 to the S&P GSCI Indices corresponding to the bottom six ranked commodities as per the RIC mapping given in Table 4.

The Base Index Weights $w(s,i)$ as of Index Selection Day s for each commodity i are used to derive the Long Index Weights as follows.

Long Index Weights

On every Index Selection Day, the Long Index Weights to be allocated towards the 12 S&P GSCI Indices in the Long Index are determined in the following steps:

Step 1 -

The positive weights are segregated from the Base Index Weights, such that the underlying commodity with a negative weight is assigned zero weight and rest considered as they are. We denote the Segregated Long Weights by $w^+(s,i)$ and determine them as follows:

$$w^+(s,i) = \max(w(s,i),0)$$

Where:

$w(s,i)$ = the Base Index Weight of the S&P GSCI Index corresponding to commodity i, determined under the sub section “Base Index Weights” above, on any Index Selection Day s

$w^+(s,i)$ = the Segregated Long Weight of the S&P GSCI Index corresponding to commodity i,

Max function selects the maximum between the Base Index Weight $w(s,i)$ and zero for each underlying commodity i

Step 2 -

The Segregated Long Weights under each component is added to a Leverage Weight equal to 1/10 such that the Leverage Weight added to the Segregated Long Weights in the Oil Component is equally distributed among the 4 commodities. The below mathematically describes the allocation of the Leverage Weight to the Segregated Long Weights across components:

(i) Oil Component: Brent Crude Oil, WTI Crude Oil, Heating Oil and Gas Oil

$$w_L(s,i) = w^+(s,i) + LW/4$$

(ii) Rest of the components,

$$w_L(s,i) = w^+(s,i) + LW$$

Where~~,~~:

$w_L(s,i)$ is the Long Index Weight of the S&P GSCI Index corresponding to commodity i, and is used to determine the Notional Holdings in the Long Index, as given in the sub-section “Index Rebalancing” above

LW is the Leverage Weight which is equal to 1/10

DB Commodity Backwardation Simplified Long EUR ER Index

The DB Commodity Backwardation Simplified Long EUR ER Index is the euro hedged version of the Long Index and is calculated on all Index Business Days as follows:

$$ILL_{EUR}(t) = \left(1 + \mathrm{Ret}ILer(t) + \mathrm{Ret}ILer(t) * FXr(t)\right) * ILL_{EUR}(r)$$

Where:

t	=	Any Index Business Day t
r	=	Previous Index Rebalancing Day which is the last Index Business Day of the previous month (or, if none, then the Index Inception Day)
$ILL_{EUR}(t)$	=	Index level of the DB Commodity Backwardation Simplified Long EUR ER Index on t

$$\mathrm{Ret}ILer(t) = \frac{ILL(t)}{ILL(r)} - 1$$

$ILL(t)$	=	Index level of the DB Commodity Backwardation Simplified Long USD ER Index on t

$$FXr(t) = \frac{FX(t)}{FX(r)} - 1$$

$FX(t)$	=	FX spot rate as published on Reuters screen USDEURFIX=WM at approximately 4 PM London Time on t (or, if not available, as determined by the Index Administrator by reference to such sources it deems appropriate)
$FX(r)$	=	FX spot rate as published on Reuters screen USDEURFIX=WM at approximately 4 PM London Time on r (or, if not available, as determined by the Index Administrator by reference to such sources it deems appropriate)

DB Commodity Backwardation Simplified Short USD ER Index

The Short Index is constructed based on the allocations in the Base Index, as of each Index Selection Day, and is calculated on all Index Business Days as follows:

$$ILS(t) = ILS(t-1) + \sum_{i=1}^{12} (ILo(t,i) - ILo(t-1,i)) * Us(t-1,i)$$

Where:

t	=	Any Index Business Day t
i	=	Corresponds to the commodities listed in Table 4
s	=	Any Index Selection Day s
$ILS(t)$	=	Index level of the Short Index on t
$ILo(t,i)$	=	Index level of the S&P GSCI Index on t corresponding to commodity i
$Us(t,i)$	=	Notional Holdings of the S&P GSCI Index corresponding to commodity i, in the Short Index on t determined pursuant to sub-section "Index Rebalancing" below
$w_S(s,i)$	=	Weight of the S&P GSCI Index corresponding to commodity i in the Short Index, determined on s, as determined in the sub-section “Index Selection” below

Index Rebalancing

If t is an Index Rebalancing Day, the Notional Holdings of the S&P GSCI Index corresponding to commodity i in the Short Index, is calculated as follows,

$$Us(t,i) = w_S(s,i) * \frac{ILS(t)}{ILo(t,i)}$$

On any other Index Business Day t the Notional Holdings in the Short Index remains constant:

$$Us(t,i) = Us(t-1,i)$$

The initial Notional Holdings in the Short Index applicable on the Index Inception Day are given under the Annex in Table 8.

Index Selection

The absolute value of the negative weights in the Base Index are segregated and allocated to the 12 underlying S&P GSCI Indices of the Short Index by adding a Leverage Weight across the commodity components, so as to derive the Short Index Weights.

Base Index Weights

The allocation in the Base Index is determined on every Index Selection Day on the basis of the implied roll yield based of a pre-defined futures contract schedule for each of the underlying commodities listed in Table 4. Commodities are ranked based on their implied roll yields such that the commodity with the highest roll yield is assigned rank one, and so on.

The underlying S&P GSCI Indices that take hypothetical positions in the Base Index are assigned equal positive weights that correspond to the top six ranked commodities and equal negative weights that correspond to the bottom six ranked commodities based on the implied roll yields.

The Base Index Weights $w(s,i)$ are calculated for each commodity i on each Index Selection Day s. The 12 commodities given in Table 4 are ranked based on their implied roll yields $IR_i(s)$, such that the commodity with the highest roll yield is assigned the first rank and so on. The roll yield for any commodity i is calculated as follows:

$$IR_i(s) = \left(\frac{PF0_i(s)}{PF3_i(s)}\right)^{\left(\frac{365}{daycount}\right)} - 1$$

Where:

i	=	Corresponds to the commodities listed in Table 4
s	=	Any Index Selection Day s
$PF0_i(s)$	=	Settlement Price, as on Index Selection Day s, of the front month futures contract picked based on the schedule given in Table 5
$PF3_i(s)$	=	Settlement Price, as on Index Selection Day s, of the third month futures contract picked based on the schedule given in Table 6
$daycount$	=	is the number of calendar days from (but excluding) the expiry date of the Front Month Futures Contract to (and including) the expiry date of the Third Month futures contract, in each case, for commodity i
$IR_i(s)$	=	Implied Roll Yield of the commodity i on Index Selection Day s
$w(s,i)$	=	Base Index Weight of the commodity i in the Base Index determined as of s

The Base Index allocates a weight of 1/12 to the S&P GSCI Indices corresponding to the top six ranked commodities and is allocated a weight of -1/12 to the S&P GSCI Indices corresponding to the bottom six ranked commodities as per the RIC mapping given in Table 4.

The Base Index Weights $w(s,i)$ as of Index Selection Day s for each commodity i are used to derive the Short Index Weights as follows.

Short Index Weights

On every Index Selection Day, the Short Index Weights to be allocated towards the 12 S&P GSCI Indices in the Short Index are determined in the following steps:

Step 1 -

The negative weights are segregated from the Base Index Weights, such that the underlying commodity with a positive weight is assigned zero weight and rest are denoted in their absolute form. We denote the Segregated Short Weights by $w^-(s,i)$ and determine them as follows:

$$w^{-}(s,i) = -\min(w(s,i),0)$$

Where:

$w(s,i)$ = the Base Index Weight of the S&P GSCI Index corresponding to commodity i, determined under the sub section "Base Index Weights", on any Index Selection Day s

$w^{-}(s,i)$ = the Segregated Short Weight of the S&P GSCI Index corresponding to commodity i

Min function selects the minimum between the Base Index Weight $w(s,i)$ and zero for each underlying commodity i

Step 2 -

The Segregated Short Weights under each component is added to a Leverage Weight equal to 1/10 such that the Leverage Weight added to the Segregated Short Weights in the Oil Component is equally distributed among the 4 commodities. The below mathematically describes the allocation of the Leverage Weight to the Segregated Long Weights across components:

(i) Oil Component: Brent Crude Oil, WTI Crude Oil, Heating Oil and Gas Oil

$$w_S(s,i) = w^{-}(s,i) + LW/4$$

(ii) Rest of the components,

$$w_S(s,i) = w^{-}(s,i) + LW$$

Where:

$w_S(s,i)$ is the Short Index Weight of the S&P GSCI Index corresponding to commodity i, and is used to determine the Notional Holdings in the Short Index, as given in the sub-section "Index Rebalancing" above

LW is the Leverage Weight which is equal to 1/10

DB Commodity Backwardation Simplified Short EUR ER Index

The DB Commodity Backwardation Simplified Short EUR ER Index is the Euro hedged version of the Short Index and is calculated on all Index Business Days as follows:

$$ILS_{EUR}(t) = \left(1 + \mathrm{Ret}ILer(t) + \mathrm{Ret}ILer(t) * FXr(t)\right) * ILS_{EUR}(r)$$

Where:

t	=	Any Index Business Day t
r	=	Previous Index Rebalancing Day which is the last Index Business Day of the previous month (or, if none, then the Index Inception Day)
$ILS_{EUR}(t)$	=	Index level of the DB Commodity Backwardation Simplified Short EUR ER Index on t

$$\mathrm{Ret}ILer(t) = \frac{ILS(t)}{ILS(r)} - 1$$

$ILS(t)$	=	Index level of the DB Commodity Backwardation Simplified Short USD ER Index on t

$$FXr(t) = \frac{FX(t)}{FX(r)} - 1$$

$FX(t)$	=	FX spot rate as published on Reuters screen USDEURFIX=WM at approximately 4 PM London Time on t (or, if not available, as determined by the Index Administrator by reference to such sources it deems appropriate)
$FX(r)$	=	FX spot rate as published on Reuters screen USDEURFIX=WM at approximately 4 PM London Time on r (or, if not available, as determined by the Index Administrator by reference to such sources it deems appropriate)

Disruption Events

(a) General

Disruption Event, in respect of an Index Business Day, means an event that would require the Index Administrator to calculate an Index Level on an alternative basis were such event to occur or exist on such day, all as determined by the Index Administrator in its sole and absolute discretion.

Without limitation, each of the following may be a Disruption Event if so determined by the Index Administrator in its sole and absolute discretion:

(i) *the Relevant Exchange fails to calculate and announce the relevant price in respect of the relevant futures contract in respect of a relevant S&P GSCI Index, invested in the S&P GSCI Index as per the contract schedule given in the S&P GSCI Methodology on the relevant Index Business Day;*

(ii) the relevant index sponsor (howsoever described) in respect of an S&P GSCI Index, fails to calculate and announce the relevant level in respect of the relevant S&P GSCI Index on the relevant Index Business Day;

(iii) trading in the relevant futures contract or options in respect of such futures contract, in each case, in respect of a relevant S&P GSCI Index is subject to material suspension or material limitation or the Relevant Exchange or relevant index sponsor (howsoever described) in respect of an S&P GSCI Index, in respect of such futures contract or options in respect of such futures contract is not open for trading for any reason (including a scheduled closure);

(iv) the permanent discontinuation of trading in the relevant futures contract or options in respect of such futures contract, in each case, in respect of a relevant S&P GSCI Index;

(iv) the permanent discontinuation publication of relevant S&P GSCI Index;

(v) any event in connection with which the Index Administrator is (or would be) unable to calculate the relevant Index level after using commercially reasonable efforts;

(vi) in respect of a relevant underlying commodity and the relevant exchange in respect of such underlying commodity, means a suspension or limitation imposed on trading by such exchange or otherwise including, without limitation, where such suspension or limitation is imposed by reason of movements in price reaching or exceeding limits permitted by such exchange, as determined by the Index Administrator (a "Limit Event"); or

(vii) Price Source Disruption:

(a) the relevant price source in respect of relevant futures contract or underlying commodity is temporarily or permanently discontinued, unavailable or not announced or published thereby preventing or restricting the availability of the information necessary for determining the relevant Index; or

(b) following the application of the processes in relation to any data obtained from the relevant price source in respect of relevant futures contract or underlying commodity, the Index Administrator determines in good faith and a commercially reasonable manner that such data does not accurately and reliably represent the interest purported to be measured by that data.

(b) Consequences of Limit Event Disruption

If a Limit Event in respect of a relevant futures contract in respect of a relevant S&P GSCI Index occurs on any Index Business Day, the Index Administrator may make the following adjustments and/or determinations in relation to the calculation of the relevant Index level in respect of such Index Business Days,

(i) the relevant Index level will be calculated using published levels of the relevant future prices and or the relevant S&P GSCI Index on such Index Business Days; and/or

(ii) if an Index Rebalancing Day has occurred with respect to the relevant Index during such Limit Event and if at least one of the disrupted futures contract is invested in the relevant S&P GSCI Index, following the end of the Limit Event the relevant S&P GSCI Index level will be recalculated using the close prices immediately following the Limit Event of the relevant futures contract in respect of the relevant S&P GSCI Index. Index levels and corresponding Notional Holdings in the relevant Index from (and including) the Index Business Day immediately following such a Limit Event will be based on the recalculated levels of the relevant S&P GSCI Index.

(c) Consequences of Disruption Events that are not Limit Events

If a Disruption Event in respect of a S&P GSCI Index occurs or subsists on an Index Business Day, that in the determination of the Index Administrator prevents or otherwise affects its determinations with respect to the S&P GSCI Index Level in respect of such S&P GSCI Index or any other relevant value that requires determination or calculation by the Index Administrator in relation to such Index Business Day, then, subject as provided in sub-paragraph (f) below:

(i) first, the Index Administrator may make such adjustments and/or determinations in relation to the Index (including, but not limited to, this Index Guide) and any relevant value as it may determine, in its sole and absolute discretion, appropriate to facilitate the calculation and publication of the relevant Index Level in respect of such Index Business Day;

(ii) secondly, if the Index Administrator determines that any such adjustment or determination referred to in sub-section (i) above cannot be made on such Index Business Day, then the Index Administrator may defer calculation and publication of the relevant Index Level until the next Index Business Day on which the Index Administrator determines, in its sole and absolute discretion, that no Disruption Event exists provided that where any such deferral of calculation and publication continues for a period of ten consecutive Index Business Days, then the Index Administrator may:

(a) calculate and publish the relevant Index Level relating to each Index Business Day falling in or after such period having regard to the then prevailing market conditions, the last reported price, value, rate or level of any instrument relating to the Index or any S&P GSCI Index and such other factor(s) and condition(s) that the Index Administrator considers relevant for the purpose of determining such Index Levels including, but not limited to, any modifications that the Index Administrator determines to be appropriate in relation to reconstitution relating to the Index; and/or

(b) permanently cease to calculate and publish the relevant Index Level as of the later of (x) the date when such Disruption Event commenced or (y) the Index Business Day following the last Index Business Day for which the Index Administrator calculated and published the relevant Index Level in accordance with sub-section (i) above (if any) and, in each case, as applicable, the Index shall terminate.

(d) Force Majeure Event

An event or circumstance (including, without limitation, a systems failure, natural or man-made disaster, act of God, armed conflict, act of terrorism, riot or labour disruption or any similar intervening circumstance) that is beyond the reasonable control of the Index Administrator and that the Index Administrator determines affects the Index, the Index Commodity in respect of such Index, any S&P GSCI Index or an exchange instrument in respect of any such S&P GSCI Index.

If a Force Majeure Event occurs on an Index Business Day, and subject as provided in sub-paragraph (f) below, the Index Administrator may, in its sole and absolute discretion:

(i) make such determinations and/or adjustments to the terms contained in this Index Guide as it considers appropriate to determine the relevant Index Level in respect of such Index Business Day; and/or

(ii) defer publication of the relevant Index Level in respect of such Index Business Day until the next Index Business Day on which it determines that no Force Majeure Event exists; and/or

(iii) permanently cancel publication of the relevant Index Level.

(e) Hedging Disruption Event

If the Index Administrator determines that it and/or any of its affiliates would be unable, after using commercially reasonable efforts, to: (a) acquire, establish, re-establish, substitute, maintain, unwind or dispose of any transaction(s) or asset(s) it deems necessary to hedge its position in relation to any securities issue, financial instrument or other relevant financial transaction relating to or calculated by reference to an Index; or (b) realise, recover or remit the proceeds of any such transaction(s) or asset(s) has occurred or exists on an Index Business Day, and subject as provided in sub-paragraph (f) below, the Index Administrator may, in its sole and absolute discretion:

(i) make such determinations and/or adjustments to the terms contained in this Index Guide as it considers appropriate to determine the relevant Index Level in respect of such Index Business Day; and/or

(ii) defer publication of the relevant Index Level in respect of such Index Business Day until the next Index Business Day on which it determines that no Hedging Disruption Event exists; and/or

(iii) permanently cancel publication of the relevant Index Level.

(f) Compliance with the Overview

Any such adjustments and/or determinations or decisions to permanently cease to calculate and publish an Index Level in respect of the Index pursuant to sub-paragraphs (c), (d) and (e) above shall be made by the Index Administrator as far as reasonably practicable in accordance with Section 10 (*Changes to and Retiring a Benchmark*) of the Overview.

Change in methodology

The Overview sets out the process for making changes to its benchmarks as a general matter and the internal oversight and approval processes which DBIQ will go through. It also sets out DBIQ's procedures for consulting on and notifying changes. Any such modification or change in methodology described in this Index Guide in accordance with the below shall be made in accordance with Section 10.1 (*Change to a Benchmark*) of the Overview.

In calculating and determining the value of the Index, the Index Administrator will, subject as provided below, employ the methodology described in this Index Guide and its application of such methodology shall be conclusive and binding. While the Index Administrator currently employs the above described methodology to calculate the Index, no assurance can be given that market, regulatory, judicial, financial, fiscal or other circumstances (including, but not limited to, any changes to or any suspension or termination of any constituent of the Index or any other events affecting transactions on the same or similar terms to any described in this Index Guide) will not arise that would, in the view of the Index Administrator, necessitate or make desirable a modification of or change to such methodology.

Accordingly:

(i) The Index Administrator shall be entitled to make such modifications and/or changes as it in its reasonable discretion deems appropriate, including (without limitation):

   (a) to correct any manifest error or proven error contained in this Index Guide; and/or

   (b) to cure, correct or supplement any defective provision contained in this Index Guide; and/or

   (c) if market, regulatory, juridical, financial, fiscal or other circumstances arise, and such circumstances would, in the determination of the Index Administrator, necessitate or make desirable such a modification or change of the methodology described in this Index Guide (including, but without limitation, a change in the frequency of calculation of any Index Level) in order for the Index to continue being calculated and determined notwithstanding the relevant circumstances. In deciding what is necessary the Index Administrator will consider and/or take into account what the Index Administrator determines to be the intended commercial purposes of the Index and/or any hedging transactions entered into by Deutsche Bank AG and/or any of its affiliates in relation to any financial transaction linked to the Index;

(ii) Further, and without limitation to the above provisions, the Index Administrator shall be entitled to make such modifications and/or changes as it in its reasonable discretion deems appropriate:

   (a) to preserve the intended commercial purpose of the Index, where such modification and/or change is of a formal, minor or technical nature; and/or

   (b) if market, regulatory, juridical, financial, fiscal or other circumstances arise, and in the determination of the Index Administrator, such modifications and/or changes would assist in maintaining the intended commercial purpose of the Index and/or would ensure that the Index can continue to be calculated and determined by the Index Administrator in light of such circumstances. In making such determination, the Index Administrator may consider and/or take into account any hedging transactions entered into by Deutsche Bank AG and/or any of its affiliates in relation to any financial transaction linked to the Index.

In making such modifications however the Index Administrator will:

(i) ensure that such modifications or changes pursuant to (i) or (ii) above will result in a methodology that is consistent in its intended commercial purpose with the methodology described in this Index Guide; and

(ii) limit any such modification or change to the terms of the Index and/or method of calculating the Index Level.

The Index Administrator may, in its discretion, at any time and without notice, terminate the calculation and publication of the Index pursuant to Section 10.2 (*Benchmark Retirement*) of the Overview.

Any such modification or change will be published by means of a revised Index Guide or other notice, on the DBIQ website, https://index.db.com in accordance with Section 10.1 (*Change to a Benchmark*) of the Overview.

Glossary

"*Base Index Weight*" means, the weight, in respect of each S&P GSCI Index, generated under the sub-section "Base/Index Weights" of the sub-section "Index Selection"

"Front Month Futures Contracts" means, the Futures Contracts considered in the selection of the Base Index Weights as described in the sub section "Index Selection", and are based on the schedule given in Table 5

"*Long Index Weight*" means, the weight, in respect of each S&P GSCI Index, generated under the sub-section "Index Selection " of the Long Index

"Notional Holdings in the Long Index" means, Notional Holdings of the underlying of the Long Index as mathematically formulated under the sub-section "Index Rebalancing" of the Long Index

"***Notional Holdings in the Short Index***" means, Notional Holdings of the underlying of the Short Index as mathematically formulated under the sub-section "Index Rebalancing" of the Short Index

"***Relevant Exchange***" means, in respect of a commodity, the entity that publishes the Settlement Prices of the futures contracts

"***Roll Yield***" means, the return generated by rolling by Third Month Futures Contracts over the First Month Futures Contracts according to their respective futures schedules as defined in Table 6 and Table 5, respectively determined as set out in sub-section "Base Index Weights" of the sub-section "Index Selection" of the Long Index and/or the Short Index

"***Segregated Long Weight***" means, the positive weights, in respect of the Base Index, otherwise, if weight is negative, in respect of the Base Index, it is considered as zero weight, for each Index Selection Day, as described in the sub section "Index Selection" of the Long Index

"***Segregated Short Weight***" means, the absolute of the negative weights, in respect of the Base Index, otherwise, if weight is positive, in respect of the Base Index, it is considered as zero weight, as of each Index Selection Day, as described in the sub section "Index Selection" of the Short Index

"***Settlement Price***" means, in respect of a commodity, the official settlement price of a futures contract in respect of such commodity as published by the Relevant Exchange listed in Table 4

"***Short Index Weight***" means, the weight, in respect of each S&P GSCI Index, generated under the sub-section "Index Selection" of the Short Index

"***Successor Source***" means, in relation to any display page, other published source, information vendor or provider:

(i) the successor display page, other published source, information vendor or provider that has been officially designated by the sponsor of the original page or source; or

(ii) if the sponsor of the original page or source has not officially designated a successor display page, other published source, service or provider (as the case may be), the successor display page, other published source, service or provider, if any designated by the relevant information vendor or provider (if different from such sponsor).

"***Third Month Futures Contracts***" means, the futures contracts considered in the selection of the Base Index Weights as described in the sub section "Index Selection", and are based on the schedule given in Table 6

Appendix

Table 5: Front Month Futures Contract Schedule

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
LCO	J	K	M	N	Q	U	V	X	Z	F+	G+	H+
LGO	H	J	K	M	N	Q	U	V	X	Z	F+	G+
HO	H	J	K	M	N	Q	U	V	X	Z	F+	G+
NG	H	J	K	M	N	Q	U	V	X	Z	F+	G+
CL	H	J	K	M	N	Q	U	V	X	Z	F+	G+
MAL	H	J	K	M	N	Q	U	V	X	Z	F+	G+
MPB	H	J	K	M	N	Q	U	V	X	Z	F+	G+
MCU	H	J	K	M	N	Q	U	V	X	Z	F+	G+
MNI	H	J	K	M	N	Q	U	V	X	Z	F+	G+
MZN	H	J	K	M	N	Q	U	V	X	Z	F+	G+
GC	J	J	M	M	Q	Q	Z	Z	Z	Z	G+	G+
SI	H	K	K	N	N	U	U	Z	Z	Z	H+	H+

Source: DBIQ

Table 6: Third Month Futures Contract Schedule

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
LCO	N	Q	U	V	X	Z	F+	G+	H+	J+	K+	M+
LGO	M	N	Q	U	V	X	Z	F+	G+	H+	J+	K+
HO	M	N	Q	U	V	X	Z	F+	G+	H+	J+	K+
NG	M	N	Q	U	V	X	Z	F+	G+	H+	J+	K+
CL	M	N	Q	U	V	X	Z	F+	G+	H+	J+	K+
MAL	M	N	Q	U	V	X	Z	F+	G+	H+	J+	K+
MPB	M	N	Q	U	V	X	Z	F+	G+	H+	J+	K+
MCU	M	N	Q	U	V	X	Z	F+	G+	H+	J+	K+
MNI	M	N	Q	U	V	X	Z	F+	G+	H+	J+	K+

MZN	M	N	Q	U	V	X	Z	F+	G+	H+	J+	K+
GC	M	Q	Q	Z	Z	Z	Z	G+	G+	J+	J+	M+
SI	N	N	U	U	Z	Z	Z	H+	H+	H+	K+	K+

Source: DBIQ

Annex

Table 7: Initial Notional Holdings in the Long Index

Commodity Name	S&P GSCI Index Reuters RIC	Initial Notional Holdings
WTI Crude Oil	.SPGSCLP	0.007576
Brent Crude Oil	.SPGSBRP	0.047247
Heating Oil	.SPGSHOP	0.070303
Natural Gas	.SPGSNGP	0.006342
Gas Oil	.SPGSGOP	0.014218
Aluminium	.SPGSIAP	0.251337
Copper	.SPGSICP	0.099212
Nickel	.SPGSIKP	0.254285
Zinc	.SPGSIZP	0.281964
Lead	.SPGSILP	0.339655
Gold	.SPGSGCP	0.593028
Silver	.SPGSSIP	0.734348

Source: DBIQ

Table 8: Initial Notional Holdings in the Short Index

Commodity Name	S&P GSCI Index Reuters RIC	Initial Notional Holdings
WTI Crude Oil	.SPGSCLP	0.032828
Brent Crude Oil	.SPGSBRP	0.010903
Heating Oil	.SPGSHOP	0.016224
Natural Gas	.SPGSNGP	0.011627
Gas Oil	.SPGSGOP	0.061611
Aluminium	.SPGSIAP	0.460784
Copper	.SPGSICP	0.181889
Nickel	.SPGSIKP	0.138701
Zinc	.SPGSIZP	0.516935
Lead	.SPGSILP	0.185266
Gold	.SPGSGCP	0.323470
Silver	.SPGSSIP	0.400554

Source: DBIQ

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