RBC Capital Markets

Strategy Information

RBC Broad Basket Scarcity Allocator Long/Short Alpha Strategy – F3 [1]

Section 1. General Information

- **Strategy Name:** RBC Broad Basket Scarcity Allocator Long/Short Alpha Strategy – F3
- **Strategy Ticker:** RBCABAE3
- **First Calculation day of the Strategy:** 03/01/2007
- **Base Level of the Strategy:** 100

Section 2. List of Included Strategies

- Please see Section A1 of Appendix A.

Section 3. Underlying Strategy Weights

- **Underlying Strategy Weight Method:** Monthly
- **Underlying Strategy Weights:** Please see Section A1 of Appendix A.

Section 4. Rebalance Schedule

- **Rebalance Schedule:** 1st Strategy Business Day of Every Month

Section 5. Return Multipliers

- **Contract Months:** Please see Section A1 of Appendix A.

Section 6. Additional Target Weight and Contract Month Change

- None

[1] The "RBC Quantitative Investment Strategy – Basket of Commodity Strategies Excess Return Strategy" dated May 8, 2017 (the "Strategy Methodology"), is specifically incorporated by reference into, and forms an integral part of this RBC Broad Basket Scarcity Allocator Long/Short Alpha Strategy (the "Strategy Information"). For greater certainty, the Disclaimer on page A of the Strategy Methodology applies equally to this Strategy Information.

Strategy Information – Appendix A

RBC Broad Basket Scarcity Allocator Long/Short Alpha Strategy – F3

Section A1. Underlying Strategy, Weights and Return Multipliers

Underlying Strategy	Symbol (Bloomberg)	Position	Underlying Strategy Weight (%)	Return Multiplier
RBC Broad Basket Scarcity Allocator Beta Strategy – F3	RBCABBE3	Long	100%	1
RBC Enhanced Commodity EGE0 Strategy	RBCAEGE0	Long	100%	-1

Strategy Information

RBC Broad Basket Scarcity Allocator Beta Strategy – F3[2]

Section 1. General Information

- **Strategy Name:** RBC Broad Basket Scarcity Allocator Beta Strategy – F3
- **Strategy Ticker:** RBCABBE3
- **Strategy Type:** Excess Return
- **First Calculation day of the Strategy:** 03/01/2007
- **Base Level of the Strategy:** 100

Section 2. List of Included Commodities and Definition of Commodity Sectors

- Please see Section A1 of Appendix A.

Section 3. Target Weights of Included Commodities

- **Target Weight Method:** Please see Table 3.1 below.

Table 3.1: Target Weight Method

Commodity Sector	Target Weight Method
Energy	Dynamic
Base Metals	Dynamic
Agriculture	Dynamic
Precious Metals	Monthly
Livestock	Monthly

- **Target Weight:** Please refer to Section 3.1 for the commodities with monthly target weight method. Please refer to Section 3.2 for the commodities with dynamic target weight method.

Section 3.1. Target Weight for Commodities with Monthly Method

- **Target Weight Calculation Day:** 1st Strategy Business Day in each Month
- **Base Target Weight:** Please see Section A1 of Appendix A.
- **Target Weights for the Current Period:** The Target Weight for the current period is equal to the Base Target Weight. Please see Section A1 of Appendix A.

Section 3.2. Target Weight for Commodities with Dynamic Method

- **Target Weight Assignment Method:** Method 1

[2] The following documents are specifically incorporated by reference into, and form an integral part of the RBC Commodity Strategy – Broad Basket Scarcity Allocator Beta – F3 (the "Strategy Information"): the "RBC Quantitative Investment Strategy - Excess Return and Total Return Strategy" dated Sep 26, 2018 (the "Strategy Methodology"); the "RBC Quantitative Investment Strategy - Signal Generation - Backwardation Measure" dated July 6, 2018; the "RBC Quantitative Investment Strategy - Weight Assignment" dated July 6, 2018. For greater certainty, the Disclaimer on page A of the Strategy Methodology applies equally to this Strategy Information.

Note: Please see the “RBC Commodity Strategy Weight Assignment” document for the details about the selected weight assignment method.

- **Weight Assignment Calculation Day:** 1st Strategy Business Day in each Month
- **Base Target Weight:** Please see Section A1 of Appendix A.
- **Weight Assignment Signal:** Backwardation Measure

Note: Please see the “RBC Commodity Strategy Backwardation Measure” document for the calculation of the Backwardation Measure signals.

  - **Backwardation Measure Calculation Day:** 1st Strategy Business Day in each Month
  - **Near Month Contract:** Please see Table 3.2 below for the Near Month Contracts used in calculating the Backwardation Measure in the year of 2018. The table of Near Month Contract can change at any time, typically once per year. The tables used in previous years may be provided upon request.

Table 3.2: Near Month Contract used in Calculating the Backwardation in the Year of 2018

	Month											
Strategy Commodity	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Aluminium	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1
Coffee	H1	H1	H1	K1	K1	N1	N1	U1	U1	Z1	Z1	Z1
Copper (US)	H1	H1	H1	K1	K1	N1	N1	U1	U1	Z1	Z1	Z1
Corn	H1	H1	H1	K1	K1	N1	N1	U1	U1	Z1	Z1	Z1
Cotton	H1	H1	H1	K1	K1	N1	N1	V1	V1	V1	Z1	Z1
Crude – Brent	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2	G2
Crude – WTI	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2
Heating Oil	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2
Kansas Wheat	H1	H1	H1	K1	K1	N1	N1	U1	U1	Z1	Z1	Z1
Natural Gas	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2
Nickel	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1
Soybeans	F1	H1	H1	K1	K1	N1	N1	Q1	U1	X1	X1	F2
Soybean Meal	F1	H1	H1	K1	K1	N1	N1	Q1	U1	V1	Z1	Z1
Soybean Oil	F1	H1	H1	K1	K1	N1	N1	Q1	U1	V1	Z1	Z1
Sugar	H1	H1	K1	K1	N1	N1	V1	V1	V1	H2	H2	H2
Unleaded Gasoline	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2
Wheat	H1	H1	H1	K1	K1	N1	N1	U1	U1	Z1	Z1	Z1
Zinc	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1

- **Tie Breaking Rules for Ties in Weight Assignment Ranking:** Breaking ties by following lexicographic order of the Strategy Commodity Symbol specified in the table below.

Table 3.3: Commodity Symbols used for Tie Breaking

Strategy Commodity	Symbol
Crude – Brent	CO
Crude – WTI	CL
Heating Oil	HO
Natural Gas	NG
Unleaded Gasoline	XB
Aluminium	LA
Copper (US)	HG
Nickel	LN
Zinc	LX

Coffee	KC
Corn	CN
Cotton	CT
Kansas Wheat	KW
Soybeans	SO
Soybean Meal	SM
Soybean Oil	BO
Sugar	SB
Wheat	WC
Gold	GC
Silver	SI
Lean Hogs	LH
Live Cattle	LC

- **Order of the Filtered Commodity Set:** Please see Table 3.3 below for the Order of the Filtered Commodity Set.

Table 3.4: Order of the Filtered Commodity Set

Commodity Sector	Order of the Filtered Commodity Set
Energy	2
Base Metals	2
Agriculture	3

- **Target Weights for the Current Period:** Please see Section A1 of Appendix A.

Section 4. Commodity Sector Weighting

- **Commodity Sector Weighting for the Current Period:** Please see Section A3 of Appendix A.

Section 5. Contract Month Selection

- **Contract Month Selection Method:** Static
- **Contract Months:** Please see Table 5.1 Below.

Table 5.1: Contract Months

	Month											
Strategy Commodity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Aluminium	K	N	N	U	U	X	X	F	F	H	H	K
Cocoa	K	N	N	U	U	Z	Z	Z	H	H	H	K
Coffee	K	N	N	U	U	Z	Z	Z	H	H	H	K
Copper	K	N	N	U	U	Z	Z	Z	H	H	H	K
Corn	K	N	N	U	U	Z	Z	Z	H	H	H	K
Cotton	K	N	N	Z	Z	Z	Z	Z	H	H	H	K
Crude (Brent)	N	N	U	U	X	X	F	F	H	H	K	K
Crude (WTI)	K	N	N	U	U	X	X	F	F	H	H	K
Feeder Cattle	K	Q	Q	Q	V	V	F	F	F	H	H	K
Gasoil	K	N	N	U	U	X	X	F	F	H	H	K
Gold	M	M	Q	Q	Z	Z	Z	Z	G	G	J	J
Heating Oil	K	N	N	U	U	X	X	F	F	H	H	K
Kansas Wheat	K	N	N	U	U	Z	Z	Z	H	H	H	K
Lead	K	N	N	U	U	X	X	F	F	H	H	K

Lean Hogs	M	M	N	Q	V	V	Z	Z	G	G	J	J
Live Cattle	M	M	Q	Q	V	V	Z	Z	G	G	J	J
NG_HH	K	N	N	U	U	X	X	F	F	H	H	K
Nickel	K	N	N	U	U	X	X	F	F	H	H	K
Platinum	N	N	N	V	V	V	F	F	F	J	J	J
Silver	K	N	N	U	U	Z	Z	Z	H	H	H	K
Soy Beans	K	N	N	X	X	X	X	F	F	H	H	K
Soybean Meal	K	N	N	Z	Z	Z	Z	F	F	H	H	K

Section 6. Hedge Roll Weight Schedule

- **Hedge Roll Weight Method:** Static
- **Hedge Roll Weight Schedule:** Please see Table 6.1 below.

Table 6.1: Hedge Roll Weight Schedule

	Business Day Count					
	4	5	6	7	8	9
Any Strategy Commodity	1	4/5	3/5	2/5	1/5	0

Section 7. Portfolio Weight Generation

- **Portfolio Weight Generation Method:** Method 1
- **Portfolio Weight Generated for Current Period:** Please see Section A1 of Appendix A.
- **Rebalance Reference Month:** Every Month
- **Reference Commodity:** Gold, with Portfolio Weight = 100

Strategy Information – Appendix A

RBC Commodity Strategy – Broad Basket Scarcity Allocator Beta Strategy – F3

Section A1: Strategy Commodities, Sector Definition, Base Target Weights and Current Target Weights as of July 2018

Strategy Commodity	Commodity Sector	Symbol (Bloomberg)	Base Target Weight* (%)	Current Target Weight (%)	Current Portfolio Weight
Crude – Brent	Energy	CO	8.78%	0.00%	0
Crude – WTI	Energy	CL	8.60%	17.01%	2608.77025
Heating Oil	Energy	HO	3.91%	0.00%	0
Natural Gas	Energy	NG	8.37%	17.01%	65696.24671
Unleaded Gasoline	Energy	XB	4.36%	0.00%	0
Aluminium	Base Metals	LA	4.33%	8.38%	43.90622014
Copper (US)	Base Metals	HG	6.58%	0.00%	0
Nickel	Base Metals	LN	3.23%	0.00%	0
Zinc	Base Metals	LX	2.62%	8.38%	32.58761948
Coffee	Agriculture	KC	2.28%	0.00%	0
Corn	Agriculture	C	6.11%	0.00%	0
Cotton	Agriculture	CT	1.56%	9.57%	126752.5115
Kansas Wheat	Agriculture	KW	0.00%	0.00%	0
Soybeans	Agriculture	S	5.38%	0.00%	0
Soybean Meal	Agriculture	SM	3.11%	9.57%	320.8664767
Soybean Oil	Agriculture	BO	2.41%	9.57%	357658.5838
Sugar	Agriculture	SB	2.73%	0.00%	0
Wheat	Agriculture	W	5.13%	0.00%	0
Gold	Precious Metals	GC	11.41%	11.41%	100
Silver	Precious Metals	SI	3.39%	3.39%	2352.128048
Lean Hogs	Livestock	LH	1.72%	1.72%	32173.35954
Live Cattle	Livestock	LC	4.00%	4.00%	40020.49804

***** Calculated on each Weight Assignment Calculation Day, the Base Target Weights for this Strategy are the implied equivalent weights from the RBCAEGE0 strategy. Please see the documentation of the RBCAEGE0 strategy for details.

Section A2: Commodity Sector Weightings

Commodity Sector	Weighting
Energy	34.02%
Base Metals	16.76%
Agriculture	28.71%
Precious Metals	14.80%
Livestock	5.72%

Strategy Information

RBC Commodity Strategy – ECE0 ER

Section 1. General Information

- **Strategy Name:** RBC Commodity Strategy – ECE0 ER
- **Strategy Ticker:** RBCAECE0
- **Strategy Type:** Excess Return
- **First Calculation day of the Strategy:** 01/17/2007
- **Base Level of the Strategy:** 100

Section 2. List of Included Commodities

- Please see Section A1 in Appendix A.

Section 3. Target Weights of Included Commodities

- **Target Weight Method:** Annual
- **Target Weights for Current Period:** Please see Section A1 in Appendix A.

Section 4. Commodity Sector Weighting

- **Commodity Sector Weighting for Current Period:** Please see Section A2 in Appendix A.

Section 5. Contract Month Selection

- **Contract Month Selection Method:** Static
- **Contract Months:** Please see Table 5.1 below.

Table 5.1: Contract Months

	Month											
Strategy Commodity	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Aluminum	H	H	K	K	N	N	U	U	X	X	F	F
Coffee	H	H	K	K	N	N	U	U	Z	Z	Z	H
Copper (US)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Corn	H	H	K	K	N	N	U	U	Z	Z	Z	H
Cotton	H	H	K	K	N	N	Z	Z	Z	Z	Z	H
Crude – Brent	H	K	K	N	N	U	U	X	X	F	F	H
Crude – WTI	H	H	K	K	N	N	U	U	X	X	F	F
Gold	G	J	J	M	M	Q	Q	Z	Z	Z	Z	G
Heating Oil	H	H	K	K	N	N	U	U	X	X	F	F
Lean Hogs	G	J	J	M	M	N	Q	V	V	Z	Z	G
Live Cattle	G	J	J	M	M	Q	Q	V	V	Z	Z	G
Natural Gas	H	H	K	K	N	N	U	U	X	X	F	F
Nickel	H	H	K	K	N	N	U	U	X	X	F	F
Silver	H	H	K	K	N	N	U	U	Z	Z	Z	H
Soybeans	H	H	K	K	N	N	X	X	X	X	F	F
Soybean Meal	H	H	K	K	N	N	Z	Z	Z	Z	F	F

Soybean Oil	H	H	K	K	N	N	Z	Z	Z	Z	F	F
Sugar	H	H	K	K	N	N	V	V	V	H	H	H
Unleaded Gasoline	H	H	K	K	N	N	U	U	X	X	F	F
Wheat	H	H	K	K	N	N	U	U	Z	Z	Z	H
Zinc	H	H	K	K	N	N	U	U	X	X	F	F

Section 6. Hedge Roll Weight Schedule

- **Hedge Roll Weight Method:** Static
- **Hedge Roll Weight Schedule:** Please see Table 6.1 below.

Table 6.1: Hedge Roll Weight Schedule

	Business Day Count					
	4	**5**	**6**	**7**	**8**	**9**
Any Strategy Commodity	1	4/5	3/5	2/5	1/5	0

Section 7. Portfolio Weight Generation

- **Portfolio Weight Generation Method:** Method 1
- **Portfolio Weight Generated for Current Period:** Please see Section A1 in Appendix A.
- **Rebalance Reference Month:** Every January
- **Rebalance Calculation Day:** 4th Business Day in each Rebalance Reference Month
- **Reference Commodity:** Gold, with Portfolio Weight = 100

Strategy Information – Appendix A

RBC Commodity Strategy – ECE0 ER - 10/24/2018

Section A1: Strategy Commodities, Target Weights and Generated Portfolio Weights

Strategy Commodity	Symbol (Bloomberg)	Target Weight (%)	Generated Portfolio Weight
Aluminum	LA	4.5%	22.67
Coffee	KC	2.6%	22448.74
Copper (US)	HG	7.15%	24536.32
Corn	C	6.13%	19331.67
Cotton	CT	1.45%	20627.17
Crude – Brent	CO	7.57%	1257.29
Crude – WTI	CL	7.31%	1319.3
Gold	GC	11.97%	100
Heating Oil	HO	3.66%	19856.53
Lean Hogs	LH	2.21%	32173.36
Live Cattle	LC	4.36%	40020.5
Natural Gas	NG	8%	32316.48
Nickel	LN	2.76%	2.44
Silver	SI	3.67%	2352.13
Soybeans	S	5.95%	6795.61
Soybean Meal	SM	3.03%	104.38
Soybean Oil	BO	2.74%	90104.23
Sugar	SB	3.53%	259596.87
Unleaded Gasoline	XB	3.75%	22966.41
Wheat	W	4.56%	11727.65
Zinc	LX	3.09%	10.2

Section A2: Commodity Sector Weightings

Commodity Sector	Weighting
Energy	30.29%
Base Metals	17.5%
Precious Metals	15.64%
Grains	22.41%
Softs	7.59%
Livestock	6.57%

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