

# Review of 2020 S&P GSCI Index Rebalancing

## **S&P GSCI ADVISORY PANEL MEETING**

**Pro-Forma 2020 S&P GSCI Rebalance**

**Final results will be published in November 2019**

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**S&P Dow Jones  
Indices**

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# Table Of Contents

<b>1. Overview</b>	<b>4</b>
<b>2. World Production Quantity Sources</b>	<b>5</b>
<b>3. World Production Issues &amp; Resolutions</b>	<b>6</b>
<b>4. World Production Averages</b>	<b>8</b>
<b>5. WPA Comparison Table (2015 – 2020)</b>	<b>9</b>
<b>6. Investment Support Level</b>	<b>10</b>
<b>7. 2020 S&amp;P GSCI CPW Calculation – Pro Forma</b>	<b>12</b>

## **Table Of Contents (Cont.)**

<b>8. 2020 S&amp;P GSCI CPW Comparison</b>	<b>13</b>
<b>9. 2020 ACRP Comparison</b>	<b>14</b>
<b>10. Yearly Volume Comparison</b>	<b>15</b>
<b>11. 2020 Dollar Weight Comparison – Pro Forma</b>	<b>16</b>
<b>12. 2020 Sector Weight Comparison – Pro Forma</b>	<b>17</b>
<b>13. Open Interest Comparison</b>	<b>18</b>
<b>14. Component Candidate Screening Review</b>	<b>19</b>

# Overview

- No membership changes
- Investment Support Level: **US\$ 230 billion**
- Minimal changes to sector weights
- Largest percent weight increases: **Corn, Live Cattle and Gas Oil**
- Largest weight percent decreases: **WTI Crude Oil, Brent Crude Oil and Heating Oil**
- **WTI Crude Oil** will continue to hold the largest weight in the index.
- Largest World Production Average increase: **Live Cattle (5.9%)**
- **Cotton** was the only commodity with World Production Average decrease (**-3.6%**)
- Largest percentage volume increase: **Coffee (17.88%)**
- Largest percentage volume decrease: **Soybeans (-15.28%)**

# World Production Quantity Sources

- Copper data provided by ICSG
- Lead data provided by ILZSG
- No additional changes to reported sources for 2020

WORLD PRODUCTION QUANTITY SOURCES	
Commodity	Source
Wheat	FAOSTATS
Corn	FAOSTATS
Soybeans	FAOSTATS
Lean Hogs	FAOSTATS & UN data
Cattle	FAOSTATS & UN data
Coffee	FAOSTATS
Sugar	USDA
Cocoa	FAOSTATS
Cotton	USDA
Gold	USGS - MYB
Silver	USGS - MYB
Crude Oil	UN Data
Natural Gas	UN Data
Aluminum	USGS - MYB
Copper	USGS - MYB & International Copper Study Group
Lead	USGS - MYB & International Lead and Zinc Study Group
Nickel	USGS - MYB
Zinc	USGS - MYB

# World Production Issues & Resolutions

## Copper

### Issue

- The 2016 USGS Metals Yearbook World Production data will not be made available.

### Resolution

- Utilized data from the International Copper Study Group to formulate an estimate for the 2016 Copper World Production data.
  - Obtained the International Copper Study Group 2013 – 2016 World Production data to calculate a year-over-year percentage change.
  - Compared the yearly percentage change between the International Copper Study Group and the USGS Metals Yearbook to confirm the trends are similar. The 3-year average percent return difference between the two sources was 0.46%.
  - Applied the 3-year average percent return difference to the 2016 International Copper Study Group world Copper production to calculate an estimate of the 2016 USGS Metals Yearbook Copper World Production.

# World Production Issues & Resolutions (Cont.)

## Lead

### Issue

- The 2016 USGS Metals Yearbook World Production data will not be made available.

### Resolution

- Utilized data from the International Lead and Zinc Study Group to formulate an estimate for the 2016 Lead World Production data.
  - Obtained the International Lead and Zinc Study Group 2014 – 2016 World Production data to calculate a year-over-year percentage change.
  - Compared the yearly percentage change between the International Lead and Zinc Study Group and the USGS Metals Yearbook to confirm the trends are similar. The 2-year average percent return difference between the two sources was 4.7%.
  - Applied the 2-year average percent return difference to the 2016 International Lead and Zinc Study Group world Lead production to calculate an estimate of the 2016 USGS Metals Yearbook Lead World Production.

# World Production Averages

WORLD PRODUCTION AVERAGE COMPARISONS				
Commodity	WPQ Units	2019 WPA	2020 WPA	Percentage Change
Wheat	M ton	710,379,591	722,164,585	1.7%
Corn	M ton	964,917,628	1,016,567,342	5.4%
Soybeans	M ton	281,947,576	296,726,183	5.2%
Lean Hogs	1000 M ton	41,004,075	41,552,392	1.3%
Cattle	M ton	56,877,204	60,238,537	5.9%
Coffee	M ton	8,756,024	8,941,803	2.1%
Sugar	M ton	173,191,200	173,720,600	0.3%
Cocoa	M ton	4,515,547	4,651,853	3.0%
Cotton	M ton	25,568,018	24,660,238	-3.6%
Gold	1 Kg	2,894,000	2,984,000	3.1%
Silver	1 M ton	25,680	26,220	2.1%
Crude Oil	1000 M ton	3,718,068,764	3,779,857,044	1.7%
Natural Gas	1 Petajoule	36,612	37,478	2.4%
Aluminum	1000 M ton	58,178,000	61,248,000	5.3%
Copper	1000 M ton	21,300,000	22,073,200	3.6%
Lead	1000 M ton	10,480,000	10,549,000	0.7%
Nickel	1 M ton	1,870,000	1,944,000	4.0%
Zinc	1000 M ton	13,220,000	13,340,000	0.9%



# WPA Comparison Table (2015 – 2020)

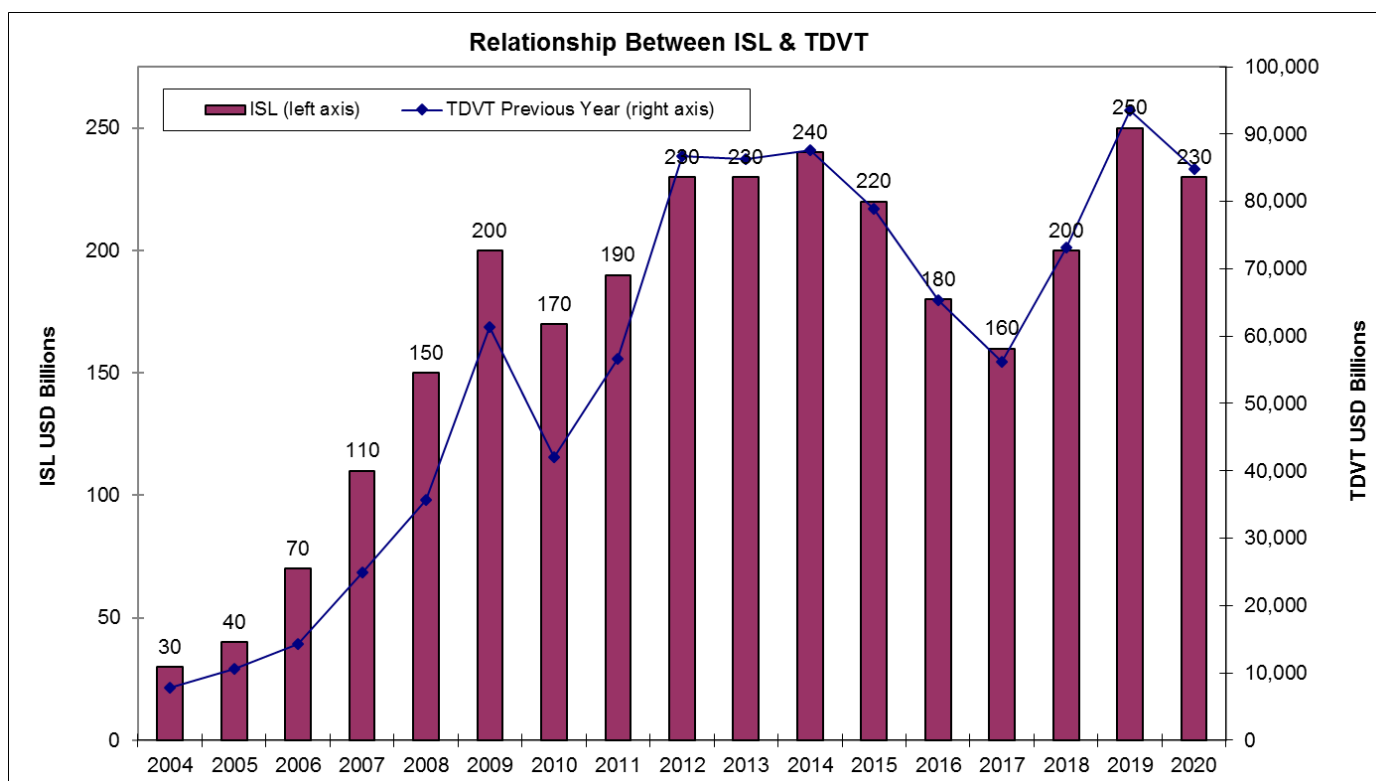
**WORLD PRODUCTION AVERAGE COMPARISON TABLE**

Commodity	Unit	2015	2016	2017	2018	2019	2020
Wheat	1000 M ton	666,466,762	678,027,825 1.7%	684,023,002 0.9%	690,423,419 0.9%	710,379,591 2.9%	722,164,585 1.7%
Corn	1000 M ton	835,882,151	852,546,224 2.0%	889,771,187 4.4%	932,688,170 4.8%	964,917,628 3.5%	1,016,567,342 5.4%
Soybeans	1000 M ton	240,278,555	244,561,496 1.8%	253,588,379 3.7%	270,502,922 6.7%	281,947,576 4.2%	296,726,183 5.2%
Lean Hogs	1000 M ton	38,541,813	39,767,313 3.2%	40,561,411 2.0%	40,600,373 0.1%	41,004,075 1.0%	41,552,392 1.3%
Cattle	1000 M ton	49,637,826	51,514,494 3.8%	53,177,821 3.2%	54,796,100 3.0%	56,877,204 3.8%	60,238,537 5.9%
Coffee	1000 M ton	8,245,923	8,381,239 1.6%	8,556,349 2.1%	8,677,280 1.4%	8,756,024 0.9%	8,941,803 2.1%
Sugar	1000 M ton	157,463,200	158,969,400 1.0%	161,909,000 1.8%	168,296,600 3.9%	173,191,200 2.9%	173,720,600 0.3%
Cocoa	1000 M ton	4,277,231	4,498,280 5.2%	4,482,378 -0.4%	4,499,853 0.4%	4,515,547 0.3%	4,651,853 3.0%
Cotton	1000 M ton	25,013,039	25,278,836 1.1%	25,818,139 2.1%	26,509,414 2.7%	25,568,018 -3.6%	24,660,238 -3.6%
Gold	1 Kg	2,470,000	2,544,000 3.0%	2,644,000 3.9%	2,790,000 5.5%	2,894,000 3.7%	2,984,000 3.1%
Silver	1 M ton	22,300	23,420 5.0%	24,480 4.5%	24,700 0.9%	25,680 4.0%	26,220 2.1%
Crude Oil	1000 M ton	3,604,790,667	3,623,323,516 1.4%	3,642,593,890 0.5%	3,661,383,369 0.5%	3,718,068,764 1.5%	3,779,857,044 1.7%
Natural Gas	1 Petajoule	32,783	33,382 1.7%	34,398 3.0%	35,300 2.6%	36,612 3.7%	37,478 2.4%
Aluminum	1000 M ton	45,816,000	47,090,000 2.8%	48,692,000 3.4%	52,096,000 7.0%	58,178,000 11.7%	61,248,000 5.3%
Copper	1000 M ton	18,660,000	19,100,000 2.4%	19,680,000 3.0%	20,440,000 3.9%	21,300,000 4.2%	22,073,200 3.6%
Lead	1000 M ton	9,170,000	9,484,000 3.4%	9,894,000 4.3%	10,322,000 4.3%	10,480,000 1.5%	10,549,000 0.7%
Nickel	1 M ton	1,442,000	1,516,000 5.1%	1,658,000 9.4%	1,784,000 7.6%	1,870,000 4.8%	1,944,000 4.0%
Zinc	1000 M ton	12,080,000	12,380,000 2.5%	12,580,000 1.6%	12,860,000 2.2%	13,220,000 2.8%	13,340,000 0.9%

# Investment Support Level

- **Purpose of ISL:**

- Estimate for liquidity
- Trigger for CPW Changes
- Not an accurate estimate of commodity investment space



# ISL Commentary

- ISL recommendation level: **US\$ 230 billion**
- **8% decrease** from recommended level of **US\$ 250 billion** for 2019

## ISL DETERMINATION CALCULATION MODEL

Year	ISL	% Change In ISL	TDVT	% Change In TDVT	% Change In TDVT Captured By ISL Change
2004	30	0.00%	7828.4	33.82%	0.00%
2005	40	33.33%	10582.1	35.18%	94.76%
2006	70	75.00%	14301.3	35.15%	213.39%
2007	110	57.14%	24964	74.56%	76.64%
2008	150	36.36%	35670.6	42.89%	84.79%
2009	200	33.33%	61399.1	72.13%	46.21%
2010	170	-15.00%	41984.7	-31.62%	47.44%
2011	190	11.76%	56608.4	34.83%	33.78%
2012	230	21.05%	86698.5	53.15%	39.61%
2013	230	0.00%	86253.4	-0.51%	0.00%
2014	240	4.35%	87565.9	1.52%	285.73%
2015	220	-8.33%	78917.0	-9.88%	84.37%
2016	180	-18.18%	65320.9	-17.23%	105.53%
2017	160	-11.11%	56214.9	-13.94%	79.70%
2018	200	25.00%	73173.6	30.17%	82.87%
2019	250	25.00%	93533.4	27.82%	89.85%
2020	<b>230</b>	<b>-8.00%</b>	<b>84814.5</b>	<b>-9.32%</b>	<b>85.82%</b>

## ISL AVERAGE CALCULATION

Average Excluding Current Year	<b>84.99%</b>
Average With Current Year	<b>85.29%</b>

# 2020 S&P GSCI CPW Calculation – Pro Forma

- All data subject to revisions based on revised data from designated sources
- Official 2020 S&P GSCI CPW announcement – **First Thursday of November**

**2020 S&P GSCI CONTRACT PRODUCTION WEIGHT CALCULATION - PRO FORMA**

Symbol	Commodity	CF	Contract Size	Lot Size	ISL	WPA	Volume	TQT	% TQT	CPW	ACRP	TDW	RPDW	TDVT <sup>(b)(1)</sup>	TVM
W	Chicago Wheat	36.7437	5000	100	230	722,164,585	31,586,965	4,298,283,107	0.68112471	<b>18073.64</b>	4.8925	88425.2837	2.85%	772.7	117.8
KW	Kansas Wheat	36.7437	5000	100	230	722,164,585	14,787,751	2,012,283,875	0.31887529	<b>8461.355</b>	4.59625	38890.5029	1.25%	339.8	117.8
C	Corn	39.3683	5000	100	230	1,016,567,342	105,875,479	13,446,793,359		<b>40020.53</b>	3.800208333	152086.3516	4.90%	2011.7	178.4
S	Soybeans	36.7437	5000	100	230	296,726,183	51,251,633	6,974,206,871		<b>10902.82</b>	8.835	96326.4147	3.11%	2264	316.9
KC	Coffee	2204.623	37500	100	230	8,941,803	14,392,155	244,806,397		<b>19713.30</b>	1.022583333	20158.4920	0.65%	551.9	369.2
SB	Sugar	2204.623	112000	100	230	173,720,600	37,179,960	1,888,828,847		<b>382988.4</b>	0.123091667	47142.6805	1.52%	512.6	146.6
CC	Cocoa	1	10	1	230	4,651,853	11,611,458	116,114,580		<b>4.651853</b>	2279.666667	10604.6742	0.34%	264.7	336.6
CT	Cotton	2204.623	50000	100	230	24,660,238	8,136,483	184,532,299		<b>54366.53</b>	0.718983333	39088.6290	1.26%	292.5	100.9
LH	Lean Hogs	2204.623	40000	100	230	41,552,392	15,206,501	275,902,066		<b>91607.36</b>	0.6951875	63684.2916	2.05%	422.9	89.5
LC	Live Cattle	2204.623	40000	100	230	60,238,537	16,988,912	308,241,581	0.789203635	<b>104808.8</b>	1.152979167	120842.3629	3.90%	783.5	87.4
FC	Feeder Cattle	2204.623	50000	100	230	60,238,537	3,630,192	82,331,356	0.210796365	<b>27994.45</b>	1.441666667	40358.6654	1.30%	261.7	87.4
CL	WTI Crude Oil	7.33	1000	1	230	3,779,857,044	354,052,948	48,301,902,865	0.488688973	<b>13539.79</b>	57.9675	784867.7768	25.31%	20523.6	352.6
HO	Heating Oil	315	42000	1	230	3,779,857,044	41,858,730	5,581,164,000	0.056466788	<b>67232.46</b>	1.970875	132506.7746	4.27%	3464.9	352.6
RB	RBOB Gasoline	354.9	42000	1	230	3,779,857,044	50,769,899	6,008,272,071	0.060788005	<b>81545.36</b>	1.7234	140535.2734	4.53%	3674.9	352.6
LCO	Brent Crude Oil	7.33	1000	1	230	3,779,857,044	227,091,767	30,981,141,473	0.313448152	<b>8684.505</b>	65.7375	570897.6474	18.41%	14928.4	352.6
LGO	Gas Oil	1	100	1	230	3,779,857,044	79,672,838	7,967,283,800	0.080608082	<b>304.6870</b>	605.7083333	184551.4550	5.95%	4825.9	352.6
NG	Natural Gas	947086.289	10000	1	230	37,478	133,428,622	1,408,833		<b>35495.32</b>	2.830333333	100463.5874	3.24%	3776.5	506.9
MAL	Aluminum	1	25	1	230	61,248,000	64,412,185	1,610,304,625		<b>61.24800</b>	1868.770833	114458.4760	3.69%	3009.3	354.5
MCU	Copper	1	25	1	230	22,073,200	36,885,728	922,143,200		<b>22.07320</b>	6120.479167	135098.5607	4.36%	5644	563.3
MNI	Nickel	1	6	1	230	1,944,000	23,539,853	141,239,118		<b>1.944000</b>	12801.25	24885.6300	0.80%	1808	979.7
MPB	Lead	1	25	1	230	10,549,000	12,170,998	304,274,950		<b>10.54900</b>	1992.791667	21021.9593	0.68%	606.4	388.9
MZN	Zinc	1	25	1	230	13,340,000	30,777,795	769,444,875		<b>13.34000</b>	2608.791667	34801.2808	1.12%	2007.3	777.7
GC	Gold	32.15075	100	1	230	2,984,000	78,037,247	242,722,944		<b>95.93784</b>	1319.666667	126605.9695	4.08%	10298.3	1096.8
SI	Silver	32150.75	5000	1	230	26,220	22,923,350	3,564,979		<b>842.9927</b>	15.43383333	13010.6088	0.42%	1769	1833.3

# 2020 S&P GSCI CPW Comparison

## 2020 S&P GSCI CPW COMPARISON

Symbol	Commodity	2019 CPW	2020 CPW	% Change
W	Chicago Wheat	18541.59	18073.64	<b>-2.52%</b>
KW	Kansas Wheat	7560.385	8461.355	<b>11.92%</b>
C	Corn	37987.17	40020.53	<b>5.35%</b>
S	Soybeans	10359.80	10902.82	<b>5.24%</b>
KC	Coffee	19303.73	19713.30	<b>2.12%</b>
SB	Sugar	381821.3	382988.4	<b>0.31%</b>
CC	Cocoa	4.515547	4.651853	<b>3.02%</b>
CT	Cotton	56367.84	54366.53	<b>-3.55%</b>
LH	Lean Hogs	90398.53	91607.36	<b>1.34%</b>
LC	Live Cattle	97906.06	104808.8	<b>7.05%</b>
FC	Feeder Cattle	27486.73	27994.45	<b>1.85%</b>
CL	WTI Crude Oil	13354.41	13539.79	<b>1.39%</b>
HO	Heating Oil	69816.19	67232.46	<b>-3.70%</b>
RB	RBOB Gasoline	74548.34	81545.36	<b>9.39%</b>
LCO	Brent Crude Oil	8616.139	8684.505	<b>0.79%</b>
LGO	Gas Oil	289.0299	304.6870	<b>5.42%</b>
NG	Natural Gas	34674.30	35495.32	<b>2.37%</b>
MAL	Aluminum	58.17800	61.24800	<b>5.28%</b>
MCU	Copper	21.30000	22.07320	<b>3.63%</b>
MNI	Nickel	1.870000	1.944000	<b>3.96%</b>
MPB	Lead	10.48000	10.54900	<b>0.66%</b>
MZN	Zinc	13.22000	13.34000	<b>0.91%</b>
GC	Gold	93.04427	95.93784	<b>3.11%</b>
SI	Silver	825.6313	842.9927	<b>2.10%</b>

# 2020 ACRP Comparison

- Modest price increases for the **Livestock sector**
- Price decreases within the **Energy sector**

2020 ACRP COMPARISON				
Symbol	Commodity	2019 ACRP	2020 ACRP	% Change
W	Chicago Wheat	480.1458333	489.25	1.90%
KW	Kansas Wheat	487.75	459.625	-5.77%
C	Corn	369.1875	380.0208333	2.93%
S	Soybeans	975.5	883.5	-9.43%
KC	Coffee	120.2625	102.2583333	-14.97%
SB	Sugar	12.99833333	12.30916667	-5.30%
CC	Cocoa	2262.083333	2279.666667	0.78%
CT	Cotton	80.22166667	71.89833333	-10.38%
LH	Hogs	67.82291667	69.51875	2.50%
LC	Live Cattle	114.2520833	115.2979167	0.92%
FC	Feeder Cattle	148.34375	144.1666667	-2.82%
CL	WTI Crude Oil	63.625	57.9675	-8.89%
HO	Heating Oil	2.049266667	1.970875	-3.83%
RB	RBOB Gasoline	1.934016667	1.7234	-10.89%
LCO	Brent Crude Oil	69.46	65.7375	-5.36%
LGO	Gas Oil	618.1041667	605.7083333	-2.01%
NG	Natural Gas	2.884416667	2.830333333	-1.88%
MAL	Aluminum	2148.645833	1868.770833	-13.03%
MCU	Copper	6711.541667	6120.479167	-8.81%
MNI	Nickel	13132.375	12801.25	-2.52%
MPB	Lead	2398.9375	1992.791667	-16.93%
MZN	Zinc	3117.5	2608.791667	-16.32%
GC	Gold	1287.358333	1319.666667	2.51%
SI	Silver	16.33975	15.43383333	-5.54%

# Yearly Volume Comparison

- Strong reported volume across **Livestock sector**
- Relatively flat and lower reported volume within **Energy and Metals sectors**

2020 YEARLY VOLUME COMPARISON				
Symbol	Commodity	2019 Volume	2020 Volume	% Change
W	Chicago Wheat	37,158,770	31,586,965	-14.99%
KW	Kansas Wheat	15,151,592	14,787,751	-2.40%
C	Corn	96,248,095	105,875,479	10.00%
S	Soybeans	60,495,352	51,251,633	-15.28%
KC	Coffee	12,209,162	14,392,155	17.88%
SB	Sugar	34,900,273	37,179,960	6.53%
CC	Cocoa	12,146,385	11,611,458	-4.40%
CT	Cotton	8,971,540	8,136,483	-9.31%
LH	Lean Hogs	13,058,432	15,206,501	16.45%
LC	Live Cattle	16,106,052	16,988,912	5.48%
FC	Feeder Cattle	3,617,367	3,630,192	0.35%
CL	WTI Crude Oil	366,314,870	354,052,948	-3.35%
HO	Heating Oil	45,597,060	41,858,730	-8.20%
RB	RBOB Gasoline	48,687,638	50,769,899	4.28%
LCO	Brent Crude Oil	236,342,973	227,091,767	-3.91%
LGO	Gas Oil	79,281,661	79,672,838	0.49%
NG	Natural Gas	135,212,565	133,428,622	-1.32%
MAL	Aluminum	62,857,998	64,412,185	2.47%
MCU	Copper	37,695,548	36,885,728	-2.15%
MNI	Nickel	24,102,683	23,539,853	-2.34%
MPB	Lead	13,426,192	12,170,998	-9.35%
MZN	Zinc	34,375,067	30,777,795	-10.46%
GC	Gold	85,511,976	78,037,247	-8.74%
SI	Silver	24,429,904	22,923,350	-6.17%
<b>Total Volume</b>		<b>1,503,899,155</b>	<b>1,466,269,449</b>	<b>-2.50%</b>

# 2020 Dollar Weight Comparison – Pro Forma

## 2020 COMMODITY DOLLAR WEIGHT COMPARISON - PRO FORMA

Symbol	Commodity	2019 CPW	2020 CPW	2020 ACRP	2019 TDW	2020 TDW	2019 RPDW	2020 RPDW	Difference (basis pts)
W	Chicago Wheat	18541.59	18073.64	4.8925	89026.67182	88425.2837	2.77%	2.85%	8
KW	Kansas Wheat	7560.385	8461.355	4.59625	36875.77784	38890.50292	1.15%	1.25%	11
C	Corn	37987.17	40020.53	3.800208333	140243.8832	152086.3516	4.36%	4.90%	54
S	Soybeans	10359.80	10902.82	8.835	101059.849	96326.4147	3.14%	3.11%	-4
KC	Coffee	19303.73	19713.30	1.022583333	23215.14829	20158.49203	0.72%	0.65%	-7
SB	Sugar	381821.3	382988.4	0.123091667	49630.40531	47142.68047	1.54%	1.52%	-2
CC	Cocoa	4.515547	4.651853	2279.666667	10214.54361	10604.67422	0.32%	0.34%	2
CT	Cotton	56367.84	54366.53	0.718983333	45219.22071	39088.62896	1.41%	1.26%	-15
LH	Lean Hogs	90398.53	91607.36	0.6951875	61310.91967	63684.29158	1.91%	2.05%	15
LC	Live Cattle	97906.06	104808.8	1.152979167	111859.7133	120842.3629	3.48%	3.90%	42
FC	Feeder Cattle	27486.73	27994.45	1.441666667	40774.84603	40358.66542	1.27%	1.30%	3
CL	WTI Crude Oil	13354.41	13539.79	57.9675	849674.3363	784867.7768	26.42%	25.31%	-112
HO	Heating Oil	69816.19	67232.46	1.970875	143071.991	132506.7746	4.45%	4.27%	-18
RB	RBOB Gasoline	74548.34	81545.36	1.7234	144177.732	140535.2734	4.48%	4.53%	5
LCO	Brent Crude Oil	8616.139	8684.505	65.7375	598477.0149	570897.6474	18.61%	18.41%	-20
LGO	Gas Oil	289.0299	304.6870	605.7083333	178650.5855	184551.455	5.56%	5.95%	40
NG	Natural Gas	34674.30	35495.32	2.830333333	100015.1288	100463.5874	3.11%	3.24%	13
MAL	Aluminum	58.17800	61.24800	1868.770833	125003.9173	114458.476	3.89%	3.69%	-20
MCU	Copper	21.30000	22.07320	6120.479167	142955.8375	135098.5607	4.45%	4.36%	-9
MNI	Nickel	1.870000	1.944000	12801.25	24557.54125	24885.63	0.76%	0.80%	4
MPB	Lead	10.48000	10.54900	1992.791667	25140.865	21021.95929	0.78%	0.68%	-10
MZN	Zinc	13.22000	13.34000	2608.791667	41213.35	34801.28083	1.28%	1.12%	-16
GC	Gold	93.04427	95.93784	1319.666667	119781.3164	126605.9695	3.72%	4.08%	36
SI	Silver	825.6313	842.9927	15.43383333	13490.60903	13010.60883	0.42%	0.42%	0



# 2020 Sector Weight Comparison – Pro Forma

## S&P GSCI SECTOR WEIGHTS

Sector	2019 Weight	2020 Weight	Difference (basis pts)
Energy	62.63%	61.71%	-92
Agriculture	15.41%	15.89%	48
Livestock	6.65%	7.25%	60
Industrial Metals	11.16%	10.65%	-51
Precious Metals	4.14%	4.50%	36

- Largest sector percentage increase: **Livestock**
  - Attributed to percentage weight increases in **Live Cattle and Lean Hogs**
- Largest percentage decrease: **Energy**
  - Attributed to percentage weight decreases in **WTI Crude Oil and Brent Crude Oil**

# Open Interest Comparison

## 2020 YEARLY OPEN INTEREST COMPARISON

Symbol	Commodity	Aug. 2018 OI	Aug. 2019 OI	% Change
W	Chicago Wheat	418,460	332,090	-20.64%
KW	Kansas City Wheat	257,520	280,932	9.09%
C	Corn	1,509,670	1,370,539	-9.22%
S	Soybeans	744,889	593,975	-20.26%
KC	Coffee	286,703	240,078	-16.26%
SB	Sugar	963,063	991,933	3.00%
CC	Cocoa	226,974	258,302	13.80%
CT	Cotton	237,179	206,106	-13.10%
LH	Lean Hogs	208,644	240,786	15.41%
LC	Live Cattle	273,162	296,941	8.71%
FC	Feeder Cattle	42,069	37,370	-11.17%
CL	WTI Crude Oil	2,142,185	1,931,707	-9.83%
HO	Heating Oil	350,037	382,005	9.13%
RB	RBOB Gasoline	421,013	370,854	-11.91%
LCO	Brent Crude Oil	2,247,680	2,365,932	5.26%
LGO	Gas Oil	1,104,479	1,067,131	-3.38%
NG	Natural Gas	1,514,868	1,226,414	-19.04%
MAL	Aluminum	853,943	890,116	4.24%
MCU	Copper	408,303	386,156	-5.42%
MNI	Nickel	297,244	334,932	12.68%
MPB	Lead	137,851	133,827	-2.92%
MZN	Zinc	354,139	292,643	-17.36%
GC	Gold	433,775	565,772	30.43%
SI	Silver	195,132	205,232	5.18%

<b>Total Open Interest</b>	<b>15,628,982</b>	<b>15,001,773</b>	<b>-4.01%</b>
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Sources: CFTC & LME Exchange

CFTC Data for US futures (total long positions only)

CFTC data for ICE - Europe Exchange (total positions reported only)

Exchange data for LME (total positions)

# Component Candidate Screening Review

## CONTRACTS TESTED FOR INCLUSION

Soybean Oil	Mont Belvieu LDH Propane (OPIS) Futures (B0)
Soybean Meal	E-Micro Gold Futures (MGC)
Nonfat Dry Milk	Coal (API2) CIF ARA (ARGUS-McCloskey) (MTF)
Hard Red Spring Wheat	Oman Crude Oil
Brent Crude Oil Last Day Financial (BZ)	ICE WTI Crude
Copper (HG)	ICE NYH (RBOB) Gasoline (Monthly)
Platinum (PL)	ICE Heating Oil
Natural Gas (Henry Hub) Last-day Financial (HH)	Tin (SN)
E-mini Crude Oil (QM)	Brent Oil
Natural Gas (Henry Hub) Penultimate Financial (HP)	Robusta Coffee - 10 Tonne
Chicago Ethanol (Platts) (CU)	White Sugar
Palladium Futures (PA)	

# Component Candidate Screening Review (Cont.)

## Eligibility Criteria for inclusion:

- RPDW – at least 1% for a contract that is not included in S&P GSCI
- TDVT – minimum **US\$ 15 billion** for contracts not represented in S&P GSCI  
minimum **US\$ 30 billion** for components not represented in S&P GSCI
- TQT – minimum **25%** for components not represented in S&P GSCI
- TVM Lower Level – 30 for Contracts not represented in S&P GSCI
- TVM Upper Level – 200 for components not represented in S&P GSCI

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S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the Index is set at a fixed value for calculation purposes. The Launch Date designates the date upon which the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at [www.spdji.com](http://www.spdji.com) for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Back-tested information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income, or commodities markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

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