

Review of 2024 S&P GSCI Rebalance

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S&P GSCI ADVISORY PANEL MEETING
Pro Forma 2024 S&P GSCI Rebalance
Final results will be published in November 2023



**S&P Dow Jones
Indices**

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Table Of Contents

| | | |
|-----|--|----|
| 1. | <i>Overview</i> | 3 |
| 2. | <i>World Production Quantity Sources</i> | 4 |
| 3. | <i>World Production Issues & Resolutions</i> | 5 |
| 4. | <i>World Production Issues & Resolutions (Cont.)</i> | 6 |
| 5. | <i>World Production Averages (WPA)</i> | 8 |
| 6. | <i>WPA Comparison Table (2019 – 2024)</i> | 9 |
| 7. | <i>Investment Support Level (ISL)</i> | 10 |
| 8. | <i>ISL Commentary</i> | 11 |
| 9. | <i>2024 S&P GSCI CPW Calculation – Pro Forma</i> | 12 |
| 10. | <i>2024 S&P GSCI CPW Comparison</i> | 13 |
| 11. | <i>2024 ACRP Comparison</i> | 14 |
| 12. | <i>Yearly Volume Comparison</i> | 15 |
| 13. | <i>2024 Dollar Weight Comparison – Pro Forma</i> | 16 |
| 14. | <i>2024 Sector Weight Comparison – Pro Forma</i> | 17 |
| 15. | <i>Component Candidate Screening Review</i> | 18 |
| 16. | <i>Additional Commodity Candidate Testing</i> | 19 |
| 17. | <i>Component Candidate Eligibility Criteria</i> | 20 |

Overview

- No membership changes
- Investment Support Level: **US\$270 billion**
- Large increase to Livestock sector; Large decrease to Energy sector
- Largest percent weight increases: **Live Cattle, Brent Crude Oil & Feeder Cattle**
- Largest percent weight decreases: **WTI Crude Oil & Natural Gas**
- **Brent Crude Oil** will now hold the largest weight
- Largest World Production Average increase: **Lean Hogs (15.4%)**
- Largest World Production Average decrease: **Silver (-4.2%)**
- Largest percentage volume increase: **Sugar (25.4%)**
- Largest percentage volume decrease: **Nickel (-36.9%)**

World Production Quantity Sources

- Nickel 2020 production data provided by International Nickel Study Group
- Cattle 2020 production data provided exclusively by UN Data due to change in data reporting
- Lean Hogs 2020 production data provided by UN Data due to change in data reporting
- No additional changes to reported sources for 2024

| WORLD PRODUCTION QUANTITY SOURCES | |
|-----------------------------------|---|
| Commodity | Source |
| Wheat | FAOSTAT |
| Corn | FAOSTAT |
| Soybeans | FAOSTAT |
| Lean Hogs | FAOSTAT and UN Data |
| Cattle | UN Data & U.S. Department of Agriculture (USDA) |
| Coffee | FAOSTAT |
| Sugar | U.S. Department of Agriculture (USDA) |
| Cocoa | FAOSTAT |
| Cotton | U.S. Department of Agriculture (USDA) |
| Gold | U.S. Geological Survey (USGS) |
| Silver | U.S. Geological Survey (USGS) |
| Crude Oil | UN Data |
| Natural Gas | UN Data |
| Aluminum | U.S. Geological Survey (USGS) |
| Copper | U.S. Geological Survey (USGS) |
| Lead | U.S. Geological Survey (USGS) |
| Nickel | U.S. Geological Survey (USGS) & International Nickel Study Group (INSG) |
| Zinc | U.S. Geological Survey (USGS) |

World Production Issues & Resolutions

Nickel

Issue

- U.S. Geological Survey (USGS) 2020 World Production data will not be made available

Resolution

- Utilized 2020 Nickel Production data from the International Nickel Study Group (INSG)
- We will compare the 2020 Production data from INSG to the USGS data once made available

World Production Issues & Resolutions (Cont.)

Cattle

Issue

- Change in data reporting from UN Data; no longer reported as Industrial Production

Resolution

- UN Data is now more robust and reported as true World Production
- ALW and ADW data from USDA no longer needed to apply conversion factor
- Data will be incorporated one year at a time

World Production Issues & Resolutions (Cont.)

Lean Hogs

Issue

- Change in data reporting from UN Data
- Directly references FAOSTAT as the data source
- Additional countries now provided, most notably China

Resolution

- Due to the large percentage of production represented by China Lean Hogs, 20% of the production will be rolled in annually starting with the 2024 rebalance, along with the additional countries
- The World Production excluding China data will be incorporated one year at a time
- By Year 5, 100% of China production will be accounted for in the first year and all subsequent years used in the calculation of the World Production Average
- By Year 10, all the years and countries will be used in calculating World Production Average, including the full production total of China Lean Hogs

World Production Average (WPA)

WORLD PRODUCTION AVERAGE COMPARISONS

| Commodity | WPQ Units | 2023 WPA | 2024 WPA | Percentage Change |
|-------------|-------------|---------------|---------------|-------------------|
| Wheat | M ton | 751,938,281 | 754,797,305 | 0.4% |
| Corn | M ton | 1,116,902,063 | 1,137,644,091 | 1.9% |
| Soybeans | M ton | 339,964,995 | 346,297,758 | 1.9% |
| Lean Hogs | 1000 M ton | 43,826,446 | 50,568,169 | 15.4% |
| Cattle | M ton | 64,585,598 | 66,261,157 | 2.6% |
| Coffee | M ton | 9,583,155 | 10,014,257 | 4.5% |
| Sugar | M ton | 177,615,400 | 178,439,200 | 0.5% |
| Cocoa | M ton | 5,170,340 | 5,303,011 | 2.6% |
| Cotton | M ton | 24,644,954 | 25,324,820 | 2.8% |
| Gold | 1 Kg | 3,226,000 | 3,210,000 | -0.5% |
| Silver | 1 M ton | 27,340 | 26,180 | -4.2% |
| Crude Oil | 1000 M ton | 3,898,368,579 | 3,851,970,991 | -1.2% |
| Natural Gas | 1 Petajoule | 41,624 | 43,171 | 3.7% |
| Aluminum | 1000 M ton | 67,890,000 | 69,000,000 | 1.6% |
| Copper | 1000 M ton | 23,840,000 | 24,280,000 | 1.8% |
| Lead | 1000 M ton | 11,220,000 | 11,640,000 | 3.7% |
| Nickel | 1 M ton | 2,093,800 | 2,162,800 | 3.3% |
| Zinc | 1000 M ton | 13,520,000 | 13,580,000 | 0.4% |

WPA Comparison Table (2019 – 2024)

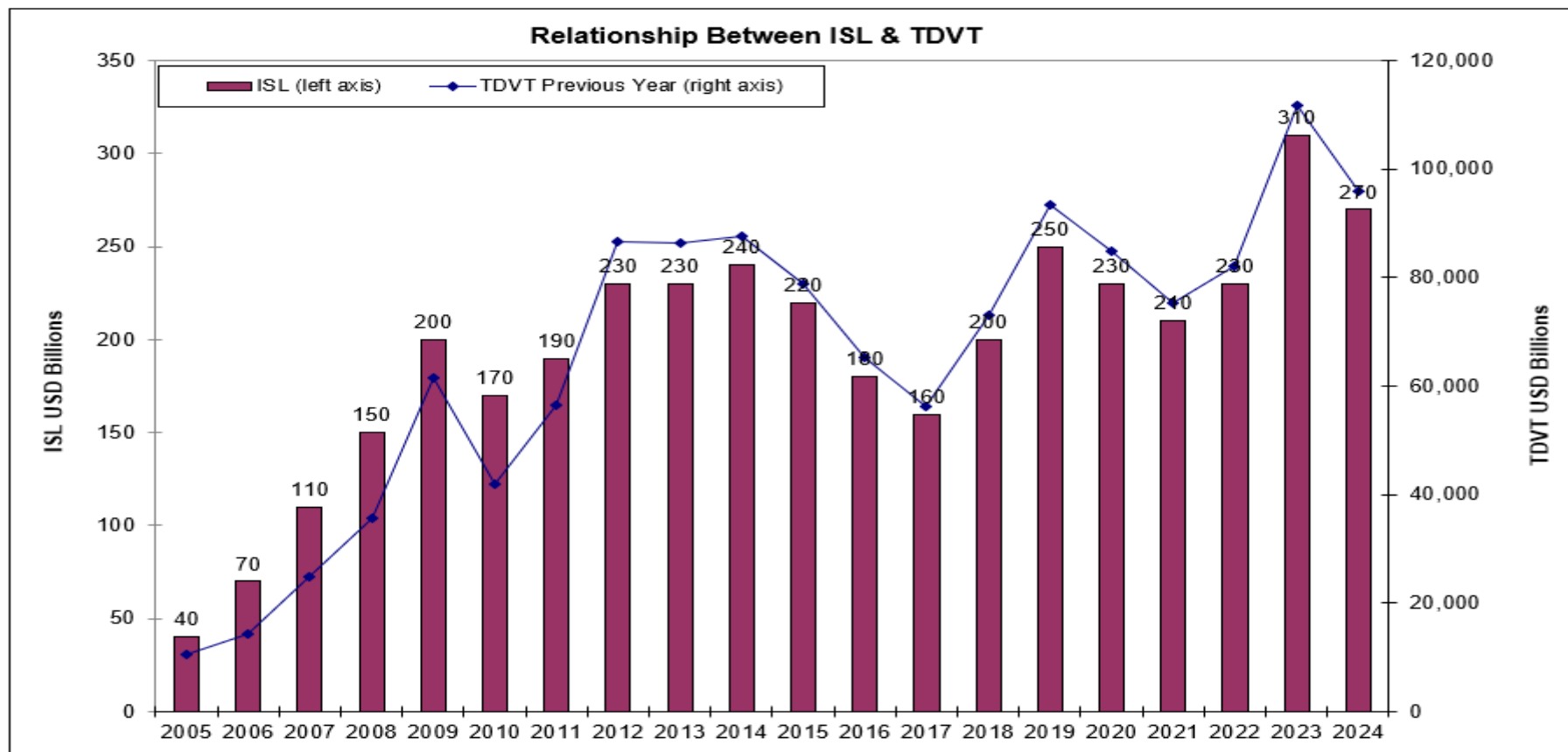
WORLD PRODUCTION AVERAGE COMPARISON TABLE

| Commodity | Unit | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | | | | | |
|-------------|-------------|---------------|---------------|-------|---------------|------|---------------|-------|---------------|-------|---------------|-------|
| Wheat | 1000 M ton | 710,379,591 | 722,164,585 | 1.7% | 740,527,832 | 2.5% | 744,992,805 | 0.6% | 751,938,281 | 0.9% | 754,797,305 | 0.4% |
| Corn | 1000 M ton | 964,917,628 | 1,016,567,342 | 5.4% | 1,079,790,527 | 6.2% | 1,096,590,952 | 1.6% | 1,116,902,063 | 1.9% | 1,137,644,091 | 1.9% |
| Soybeans | 1000 M ton | 281,947,576 | 296,726,183 | 5.2% | 319,193,687 | 7.6% | 333,936,604 | 4.6% | 339,964,995 | 1.8% | 346,297,758 | 1.9% |
| Lean Hogs | 1000 M ton | 41,004,075 | 41,552,392 | 1.3% | 42,099,187 | 1.3% | 42,882,833 | 1.9% | 43,826,446 | 2.2% | 50,568,169 | 15.4% |
| Cattle | 1000 M ton | 56,877,204 | 60,238,537 | 5.9% | 61,910,132 | 2.8% | 63,586,878 | 2.7% | 64,585,598 | 1.6% | 66,261,157 | 2.6% |
| Coffee | 1000 M ton | 8,756,024 | 8,941,803 | 2.1% | 9,007,432 | 0.7% | 9,376,819 | 4.1% | 9,583,155 | 2.2% | 10,014,257 | 4.5% |
| Sugar | 1000 M ton | 173,191,200 | 173,720,600 | 0.3% | 174,081,600 | 0.2% | 176,971,200 | 1.7% | 177,615,400 | 0.4% | 178,439,200 | 0.5% |
| Cocoa | 1000 M ton | 4,515,547 | 4,651,853 | 3.0% | 4,808,290 | 3.4% | 5,013,083 | 4.3% | 5,170,340 | 3.1% | 5,303,011 | 2.6% |
| Cotton | 1000 M ton | 25,568,018 | 24,660,238 | -3.6% | 24,662,720 | 0.0% | 24,585,384 | -0.3% | 24,644,954 | 0.2% | 25,324,820 | 2.8% |
| Gold | 1 Kg | 2,894,000 | 2,984,000 | 3.1% | 3,108,000 | 4.2% | 3,184,000 | 2.4% | 3,226,000 | 1.3% | 3,210,000 | -0.5% |
| Silver | 1 M ton | 25,680 | 26,220 | 2.1% | 26,600 | 1.4% | 27,600 | 3.8% | 27,340 | -0.9% | 26,180 | -4.2% |
| Crude Oil | 1000 M ton | 3,718,068,764 | 3,779,857,044 | 1.7% | 3,817,246,522 | 1.0% | 3,866,576,722 | 1.3% | 3,898,368,579 | 0.8% | 3,851,970,991 | -1.2% |
| Natural Gas | 1 Petajoule | 36,612 | 37,478 | 2.4% | 38,268 | 2.1% | 39,758 | 3.9% | 41,624 | 4.7% | 43,171 | 3.7% |
| Aluminum | 1000 M ton | 58,178,000 | 61,248,000 | 5.3% | 63,580,000 | 3.8% | 65,892,000 | 3.6% | 67,890,000 | 3.0% | 69,000,000 | 1.6% |
| Copper | 1000 M ton | 21,300,000 | 22,073,200 | 3.6% | 22,764,800 | 3.1% | 23,580,000 | 3.6% | 23,840,000 | 1.1% | 24,280,000 | 1.8% |
| Nickel | 1 M ton | 1,870,000 | 1,944,000 | 4.0% | 1,996,000 | 2.7% | 2,016,000 | 1.0% | 2,093,800 | 3.9% | 2,162,800 | 3.3% |
| Lead | 1000 M ton | 10,480,000 | 10,549,000 | 0.7% | 10,849,600 | 2.8% | 11,020,000 | 1.6% | 11,220,000 | 1.8% | 11,640,000 | 3.7% |
| Zinc | 1000 M ton | 13,220,000 | 13,340,000 | 0.9% | 13,600,000 | 1.9% | 13,440,000 | -1.2% | 13,520,000 | 0.6% | 13,580,000 | 0.4% |

Investment Support Level (ISL)

- Purpose of ISL:

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



ISL Commentary

- ISL recommendation level: **US\$ 270 billion**
- **12.9% decrease** from recommended level of **US\$ 310 billion** for 2023

| ISL DETERMINATION CALCULATOR 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 | 230 | -8.00% | 84814.5 | -9.32% | 85.82% |
| 2021 | 210 | -8.70% | 75288.6 | -11.23% | 77.42% |
| 2022 | 230 | 9.52% | 82045.7 | 8.97% | 106.12% |
| 2023 | 310 | 34.78% | 111800.3 | 36.27% | 95.91% |
| 2024 | 270 | -12.90% | 96029.9 | -14.11% | 91.47% |

2024 S&P GSCI CPW Calculation – Pro Forma

- All data subject to revisions based on revised data from designated sources
- Official 2024 S&P GSCI CPW announcement – **November 2023**

2024 S&P GSCI CONTRACT PRODUCTION WEIGHT CALCULATION - PRO FORMA

| Symbol | Component | Commodity | CF | Contract Size | Lot Size | ISL | WPA | Volume | TQT | % TQT | CPW | ACRP | TDW | RPDW | TDVT (bill) | TVM |
|--------|-------------|-----------------|-----------|---------------|----------|-----|---------------|-------------|----------------|-------------|----------|-------------|-------------|--------|-------------|--------|
| W | Wheat | Chicago Wheat | 36.7437 | 5000 | 100 | 270 | 754,797,305 | 27,895,354 | 3,795,936,991 | 0.720511308 | 19982.69 | 7.2475 | 144824.5458 | 3.17% | 1010.9 | 117.9 |
| KW | Wheat | Kansas Wheat | 36.7437 | 5000 | 100 | 270 | 754,797,305 | 10,820,699 | 1,472,456,367 | 0.279488692 | 7751.352 | 8.528333333 | 66106.1136 | 1.45% | 461.4 | 117.9 |
| C | Corn | Corn | 39.36825 | 5000 | 100 | 270 | 1,137,644,091 | 78,819,315 | 10,010,517,994 | 1 | 44787.06 | 6.112291667 | 273751.5736 | 6.00% | 2408.8 | 148.7 |
| S | Soybeans | Soybeans | 36.7437 | 5000 | 100 | 270 | 346,297,758 | 58,317,802 | 7,935,755,245 | 1 | 12724.26 | 14.21916667 | 180928.3737 | 3.97% | 4146.2 | 387.2 |
| KC | Coffee | Coffee | 2204.623 | 37500 | 100 | 270 | 10,014,257 | 10,504,770 | 178,683,101 | 1 | 22077.66 | 1.764791667 | 38962.4704 | 0.85% | 695.2 | 301.5 |
| SB | Sugar | Sugar | 2204.623 | 112000 | 100 | 270 | 178,439,200 | 38,733,818 | 1,967,768,465 | 1 | 393391.2 | 0.218975000 | 86142.8380 | 1.89% | 950 | 186.3 |
| CC | Cocoa | Cocoa | 1 | 10 | 1 | 270 | 5,303,011 | 13,691,487 | 136,914,870 | 1 | 5.303011 | 2881.083333 | 15278.4166 | 0.33% | 394.5 | 436.2 |
| CT | Cotton | Cotton | 2204.623 | 50000 | 100 | 270 | 25,324,820 | 9,143,335 | 207,367,314 | 1 | 55831.68 | 0.829616667 | 46318.8923 | 1.02% | 379.3 | 138.4 |
| LH | Lean Hogs | Lean Hogs | 2204.623 | 40000 | 100 | 270 | 50,568,169 | 12,624,162 | 229,048,903 | 1 | 111483.7 | 0.861333333 | 96024.6269 | 2.10% | 434.9 | 76.5 |
| LC | Cattle | Live Cattle | 2204.623 | 40000 | 100 | 270 | 66,261,157 | 15,595,258 | 282,955,553 | 0.759469708 | 110944.0 | 1.645333333 | 182539.8613 | 4.00% | 1026.4 | 95 |
| FC | Cattle | Feeder Cattle | 2204.623 | 50000 | 100 | 270 | 66,261,157 | 3,951,317 | 89,614,347 | 0.240530292 | 35136.87 | 2.108291667 | 74078.7702 | 1.62% | 416.5 | 95 |
| CL | Crude Oil | WTI Crude Oil | 7.33 | 1000 | 1 | 270 | 3,851,970,991 | 240,382,527 | 32,794,342,044 | 0.39853409 | 11252.59 | 78.28 | 880852.7452 | 19.31% | 18817.1 | 360.9 |
| HO | Crude Oil | Heating Oil | 315 | 42000 | 1 | 270 | 3,851,970,991 | 37,958,633 | 5,061,151,067 | 0.061505769 | 74629.31 | 2.941616667 | 219530.8221 | 4.81% | 4689.7 | 360.9 |
| RB | Crude Oil | RBOB Gasoline | 354.9 | 42000 | 1 | 270 | 3,851,970,991 | 39,867,472 | 4,718,044,024 | 0.057336152 | 78382.22 | 2.552375 | 200060.8188 | 4.39% | 4273.8 | 360.9 |
| LCO | Crude Oil | Brent Crude Oil | 7.33 | 1000 | 1 | 270 | 3,851,970,991 | 242,358,095 | 33,063,860,164 | 0.401809416 | 11345.07 | 83.3525 | 945639.9472 | 20.73% | 20201.2 | 360.9 |
| LGO | Crude Oil | Gas Oil | 1 | 100 | 1 | 270 | 3,851,970,991 | 66,500,226 | 6,650,022,600 | 0.080814572 | 311.2954 | 839.625 | 261371.4002 | 5.73% | 5583.5 | 360.9 |
| NG | Natural Gas | Natural Gas | 975609.75 | 10000 | 1 | 270 | 43,171 | 115,543,943 | 1,184,325 | 1 | 42118.17 | 3.754083333 | 158115.1200 | 3.47% | 4337.6 | 463.5 |
| MAL | Aluminum | Aluminum | 1 | 25 | 1 | 270 | 69,000,000 | 53,827,566 | 1,345,689,150 | 1 | 69.00000 | 2313.5125 | 159632.3625 | 3.50% | 3113.3 | 329.5 |
| MCU | Copper | Copper | 1 | 25 | 1 | 270 | 24,280,000 | 31,719,943 | 792,998,575 | 1 | 24.28000 | 8430.004167 | 204680.5012 | 4.49% | 6685 | 551.8 |
| MNI | Nickel | Nickel | 1 | 6 | 1 | 270 | 2,162,800 | 9,451,826 | 56,710,956 | 1 | 2.162800 | 23829.29167 | 51537.9920 | 1.13% | 1351.4 | 443 |
| MPB | Lead | Lead | 1 | 25 | 1 | 270 | 11,640,000 | 12,247,698 | 306,192,450 | 1 | 11.64000 | 2114.498333 | 24612.7606 | 0.54% | 647.4 | 444.5 |
| MZN | Zinc | Zinc | 1 | 25 | 1 | 270 | 13,580,000 | 20,798,938 | 519,973,450 | 1 | 13.58000 | 2779.214167 | 37741.7284 | 0.83% | 1445.1 | 646.9 |
| GC | Gold | Gold | 32.15075 | 100 | 1 | 270 | 3,210,000 | 55,854,797 | 173,727,820 | 1 | 103.2039 | 1879.391667 | 193960.5496 | 4.25% | 10497.3 | 914.4 |
| SI | Silver | Silver | 32150.75 | 5000 | 1 | 270 | 26,180 | 18,030,514 | 2,804,058 | 1 | 841.7066 | 22.88825 | 19265.1911 | 0.42% | 2063.4 | 1809.7 |

2024 S&P GSCI CPW Comparison

2024 S&P GSCI CPW COMPARISON

| Symbol | Commodity | 2023 CPW | 2024 CPW | % Change |
|--------|-----------------|----------|----------|----------|
| W | Chicago Wheat | 19263.74 | 19982.69 | 3.73% |
| KW | Kansas Wheat | 8365.251 | 7751.352 | -7.34% |
| C | Corn | 43970.54 | 44787.06 | 1.86% |
| S | Soybeans | 12491.57 | 12724.26 | 1.86% |
| KC | Coffee | 21127.24 | 22077.66 | 4.50% |
| SB | Sugar | 391575.0 | 393391.2 | 0.46% |
| CC | Cocoa | 5.170340 | 5.303011 | 2.57% |
| CT | Cotton | 54332.83 | 55831.68 | 2.76% |
| LH | Lean Hogs | 96620.79 | 111483.7 | 15.38% |
| LC | Live Cattle | 110633.0 | 110944.0 | 0.28% |
| FC | Feeder Cattle | 31753.94 | 35136.87 | 10.65% |
| CL | WTI Crude Oil | 12079.15 | 11252.59 | -6.84% |
| HO | Heating Oil | 75458.02 | 74629.31 | -1.10% |
| RB | RBOB Gasoline | 82553.26 | 78382.22 | -5.05% |
| LCO | Brent Crude Oil | 10693.69 | 11345.07 | 6.09% |
| LGO | Gas Oil | 319.4099 | 311.2954 | -2.54% |
| NG | Natural Gas | 39421.14 | 42118.17 | 6.84% |
| MAL | Aluminum | 67.89000 | 69.00000 | 1.63% |
| MCU | Copper | 23.84000 | 24.28000 | 1.85% |
| MNI | Nickel | 2.093800 | 2.162800 | 3.30% |
| MPB | Lead | 11.22000 | 11.64000 | 3.74% |
| MZN | Zinc | 13.52000 | 13.58000 | 0.44% |
| GC | Gold | 103.7183 | 103.2039 | -0.50% |
| SI | Silver | 879.0015 | 841.7066 | -4.24% |

2024 ACRP Comparison

| 2024 ACRP COMPARISON | | | | |
|----------------------|-----------------|-------------|-------------|----------|
| Symbol | Commodity | 2023 ACRP | 2024 ACRP | % Change |
| W | Chicago Wheat | 868.6666667 | 724.75 | -16.57% |
| KW | Kansas Wheat | 909.6041667 | 852.8333333 | -6.24% |
| C | Corn | 651.1458333 | 611.2291667 | -6.13% |
| S | Soybeans | 1460.375 | 1421.916667 | -2.63% |
| KC | Coffee | 223.8875 | 176.4791667 | -21.18% |
| SB | Sugar | 18.74833333 | 21.8975 | 16.80% |
| CC | Cocoa | 2492.333333 | 2881.083333 | 15.60% |
| CT | Cotton | 117.9533333 | 82.96166667 | -29.67% |
| LH | Hogs | 95.66458333 | 86.13333333 | -9.96% |
| LC | Live Cattle | 136.3395833 | 164.5333333 | 20.68% |
| FC | Feeder Cattle | 167.2854167 | 210.8291667 | 26.03% |
| CL | WTI Crude Oil | 91.4525 | 78.28 | -14.40% |
| HO | Heating Oil | 3.100816667 | 2.941616667 | -5.13% |
| RB | RBOB Gasoline | 2.817091667 | 2.552375 | -9.40% |
| LCO | Brent Crude Oil | 94.36333333 | 83.3525 | -11.67% |
| LGO | Gas Oil | 912.6041667 | 839.625 | -8.00% |
| NG | Natural Gas | 6.056416667 | 3.754083333 | -38.01% |
| MAL | Aluminum | 2835.175 | 2313.5125 | -18.40% |
| MCU | Copper | 9230.270833 | 8430.004167 | -8.67% |
| MNI | Nickel | 23762.83333 | 23829.29167 | 0.28% |
| MPB | Lead | 2211.320833 | 2114.498333 | -4.38% |
| MZN | Zinc | 3560.584167 | 2779.214167 | -21.94% |
| GC | Gold | 1822.708333 | 1879.391667 | 3.11% |
| SI | Silver | 22.27158333 | 22.88825 | 2.77% |

Yearly Volume Comparison

- Overall total volume decrease
- Volume increases for 12 commodities
- Sugar with the largest increase of 25.38%
- Volume decreases for the other 12 commodities
- Nickel with the largest decrease of 36.86%

| 2024 YEARLY VOLUME COMPARISON | | | | |
|-------------------------------|-----------------|---------------|---------------|----------|
| Symbol | Commodity | 2023 Volume | 2024 Volume | % Change |
| W | Chicago Wheat | 26,360,640 | 27,895,354 | 5.82% |
| KW | Kansas Wheat | 11,447,067 | 10,820,699 | -5.47% |
| C | Corn | 79,291,279 | 78,819,315 | -0.60% |
| S | Soybeans | 50,787,076 | 58,317,802 | 14.83% |
| KC | Coffee | 10,771,144 | 10,504,770 | -2.47% |
| SB | Sugar | 30,892,952 | 38,733,818 | 25.38% |
| CC | Cocoa | 12,458,531 | 13,691,487 | 9.90% |
| CT | Cotton | 8,416,885 | 9,143,335 | 8.63% |
| LH | Lean Hogs | 11,277,750 | 12,624,162 | 11.94% |
| LC | Live Cattle | 14,145,607 | 15,595,258 | 10.25% |
| FC | Feeder Cattle | 3,248,065 | 3,951,317 | 21.65% |
| CL | WTI Crude Oil | 276,138,308 | 240,382,527 | -12.95% |
| HO | Heating Oil | 41,072,054 | 37,958,633 | -7.58% |
| RB | RBOB Gasoline | 44,934,017 | 39,867,472 | -11.28% |
| LCO | Brent Crude Oil | 244,465,728 | 242,358,095 | -0.86% |
| LGO | Gas Oil | 73,019,472 | 66,500,226 | -8.93% |
| NG | Natural Gas | 121,684,838 | 115,543,943 | -5.05% |
| MAL | Aluminum | 55,050,458 | 53,827,566 | -2.22% |
| MCU | Copper | 28,650,419 | 31,719,943 | 10.71% |
| MNI | Nickel | 14,970,108 | 9,451,826 | -36.86% |
| MPB | Lead | 10,270,597 | 12,247,698 | 19.25% |
| MZN | Zinc | 22,746,030 | 20,798,938 | -8.56% |
| GC | Gold | 54,308,012 | 55,854,797 | 2.85% |
| SI | Silver | 16,615,349 | 18,030,514 | 8.52% |
| Total Volume | | 1,263,022,386 | 1,224,639,495 | -3.04% |

2024 Dollar Weight Comparison – Pro Forma

| 2024 COMMODITY REFERENCE PERCENTAGE DOLLAR WEIGHT COMPARISON - PRO FORMA | | | | | | | | |
|--|-----------------|----------|----------|-------------|-------------|-----------|-----------|--------------|
| Symbol | Commodity | 2023 CPW | 2024 CPW | 2024 ACRP | 2024 TDW | 2023 RPDW | 2024 RPDW | RPDW BP Diff |
| W | Chicago Wheat | 19263.74 | 19982.69 | 7.2475 | 144824.5458 | 3.307% | 3.175% | -13 |
| KW | Kansas Wheat | 8365.251 | 7751.352 | 8.528333333 | 66106.11364 | 1.504% | 1.449% | -5 |
| C | Corn | 43970.54 | 44787.06 | 6.112291667 | 273751.5736 | 5.658% | 6.001% | 34 |
| S | Soybeans | 12491.57 | 12724.26 | 14.21916667 | 180928.3737 | 3.605% | 3.966% | 36 |
| KC | Coffee | 21127.24 | 22077.66 | 1.764791667 | 38962.47039 | 0.935% | 0.854% | -8 |
| SB | Sugar | 391575.0 | 393391.2 | 0.218975 | 86142.83802 | 1.451% | 1.888% | 44 |
| CC | Cocoa | 5.170340 | 5.303011 | 2881.083333 | 15278.41661 | 0.255% | 0.335% | 8 |
| CT | Cotton | 54332.83 | 55831.68 | 0.829616667 | 46318.89226 | 1.266% | 1.015% | -25 |
| LH | Lean Hogs | 96620.79 | 111483.7 | 0.861333333 | 96024.62693 | 1.826% | 2.105% | 28 |
| LC | Live Cattle | 110633.0 | 110944.0 | 1.645333333 | 182539.8613 | 2.981% | 4.001% | 102 |
| FC | Feeder Cattle | 31753.94 | 35136.87 | 2.108291667 | 74078.77021 | 1.050% | 1.624% | 57 |
| CL | WTI Crude Oil | 12079.15 | 11252.59 | 78.28 | 880852.7452 | 21.83% | 19.31% | -252 |
| HO | Heating Oil | 75458.02 | 74629.31 | 2.941616667 | 219530.8221 | 4.624% | 4.812% | 19 |
| RB | RBOB Gasoline | 82553.26 | 78382.22 | 2.552375 | 200060.8188 | 4.595% | 4.385% | -21 |
| LCO | Brent Crude Oil | 10693.69 | 11345.07 | 83.3525 | 945639.9472 | 19.94% | 20.73% | 79 |
| LGO | Gas Oil | 319.4099 | 311.2954 | 839.625 | 261371.4002 | 5.760% | 5.729% | -3 |
| NG | Natural Gas | 39421.14 | 42118.17 | 3.754083333 | 158115.1200 | 4.718% | 3.466% | -125 |
| MAL | Aluminum | 67.89000 | 69.00000 | 2313.5125 | 159632.3625 | 3.803% | 3.499% | -30 |
| MCU | Copper | 23.84000 | 24.28000 | 8430.004167 | 204680.5012 | 4.348% | 4.487% | 14 |
| MNI | Nickel | 2.093800 | 2.162800 | 23829.29167 | 51537.99202 | 0.983% | 1.130% | 15 |
| MPB | Lead | 11.22000 | 11.64000 | 2114.498333 | 24612.76060 | 0.490% | 0.540% | 5 |
| MZN | Zinc | 13.52000 | 13.58000 | 2779.214167 | 37741.72838 | 0.951% | 0.827% | -12 |
| GC | Gold | 103.7183 | 103.2039 | 1879.391667 | 193960.5496 | 3.736% | 4.252% | 52 |
| SI | Silver | 879.0015 | 841.7066 | 22.88825 | 19265.19109 | 0.387% | 0.422% | 4 |

2024 Sector Weight Comparison – Pro Forma

2024 S&P GSCI RPDW SECTOR WEIGHTS - PRO FORMA

| Sector | 2023 Weight | 2024 Weight | Sector RPDW BP Diff |
|-------------------|-------------|-------------|---------------------|
| Energy | 61.47% | 58.43% | -303 |
| Agriculture | 17.98% | 18.68% | 70 |
| Livestock | 5.86% | 7.73% | 187 |
| Industrial Metals | 10.58% | 10.48% | -9 |
| Precious Metals | 4.12% | 4.67% | 55 |

- Largest sector percentage increase: **Livestock**
 - Attributed to percentage weight increases in **Live Cattle** and **Feeder Cattle**
- Largest sector percentage decrease: **Energy**
 - Attributed to percentage weight decreases in **WTI Crude Oil** and **Natural Gas**

Component Candidate Screening Review

| CONTRACTS TESTED FOR INCLUSION | | | |
|--------------------------------|--------------|---|--------------|
| Commodity | Exchange | Commodity | Exchange |
| Soybean Meal | CBOT | WTI Light Sweet Crude Oil | ICE - Europe |
| Soybean Oil | CBOT | Tin | LME |
| Random Lumber | CME Group | Hard Red Spring Wheat | MGEX |
| Aluminum | COMEX | Argus Propane Far East Index | NYMEX |
| Copper | COMEX | Brent Crude Oil Last Day Financial | NYMEX |
| E-Micro Gold Futures | COMEX | Chicago Ethanol (Platts) | NYMEX |
| miNY Gold | COMEX | E-mini Crude Oil | NYMEX |
| Silver (1,000 oz) | COMEX | Micro WTI Crude Oil | NYMEX |
| Robusta Coffee 10 Tonne | ICE - Europe | Mont Belvieu LDH Propane (OPIS) | NYMEX |
| White Sugar | ICE - Europe | Mont Belvieu Normal Butane (OPIS) | NYMEX |
| gC Newcastle Coal | ICE - Europe | Natural Gas (Henry Hub) Last-day Financial | NYMEX |
| Heating Oil | ICE - Europe | Natural Gas (Henry Hub) Penultimate Financial | NYMEX |
| NYH (RBOB) Gasoline (Monthly) | ICE - Europe | Palladium | NYMEX |
| Rotterdam Coal | ICE - Europe | Platinum | NYMEX |

Additional Commodity Candidate Testing

ADDITIONAL COMMODITY TDVT TESTING FOR 2024 REBALANCE

| Symbol | Commodity | Contract Size | Units | Volume | ACRP | TDVT (bill) | TDVT | Pass/Fail |
|--------|---|---------------|-------|---------|-------------|-------------|------|-----------|
| OCB | Cobalt Metal | 2204.62 | USD | 31,375 | 18.68083333 | 1.3 | 15 | FAIL |
| HRC | U.S. Midwest Domestic Hot-Rolled Coil Steel | 20 | USD | 302,826 | 861 | 5.2 | 15 | FAIL |
| CMHC | Steel HRC FOB China | 10 | USD | 51,643 | 581.6008333 | 0.3 | 15 | FAIL |
| SRR | Steel Rebar | 10 | USD | 85,718 | 649.4875 | 0.6 | 15 | FAIL |
| SSC | Steel Scrap | 10 | USD | 635,191 | 389.1683333 | 2.5 | 15 | FAIL |
| LTH | Lithium | 1000 | USD | 2,809 | 63.00833333 | 0.2 | 15 | FAIL |

Component Candidate Eligibility Criteria

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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