# Commodity Price Outlook \& Risks 

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## www.imf.org/commodities

This monthly report presents a price outlook and risk assessment for selected commodities as depicted in futures and options markets.

Outlook. Futures markets show most commodity prices remaining flat or declining over the next 12 months, with the exception of gasoline, natural gas, and some food products. Oil prices are expected to decline due to an expected rise in non-OPEC supplies, and possible recovery from outages in OPEC nations. Copper and gold futures prices are flat but soybean and soybean meal prices are expected to fall on the prospect of a large South American crop in 2014.

Risks. The likelihood of per barrel prices for WTI falling below $\$ 90$ and Brent below $\$ 100$ next year (12 months forward) is about 40 percent compared to 50 percent a month ago. Yet the risk of WTI rising above $\$ 150$ has declined to 0.8 percent from 0.6 percent, while the likelihood of WTI above $\$ 110$ has decreased to 13.5 percent from 16.4 percent, indicating declining overall risks for WTI. The probability of Brent prices rising above $\$ 160$ has increased to 1.2 percent to 0.7 percent from a month ago, while the probability of Brent below $\$ 60$ is 1.2 percent compared to 0.3 percent a month ago, indicating a slight increase in risks for Brent futures.

The likelihood of per troy ounce gold prices below $\$ 900$ (12 months forward) has increased to 5.2 percent from 3.3 percent a month ago, and the probability of gold above $\$ 1800$ has declined to 3.0 percent from 4.3 percent a month ago reflecting weakening investor demand. Copper price tail-risks ( 12 months forward) have increased as the likelihood of per pound prices below $\$ 2.0$ increased to 1.4 percent from 1.0 percent a month ago, and the likelihood of copper above $\$ 5.5$ also increased slightly to 0.5 percent from 0.4 percent.

The likelihood of per bushel soybean prices below $\$ 9$ has decreased to 7.1 percent from 8.8 percent, and prices above $\$ 17$ also decreased to 1.0 percent from 1.1 percent a month ago, showing a small decline of tail risks. The likelihood of corn prices below $\$ 2.50$ has decreased to 0.8 percent from 10.7 percent, and prices above $\$ 7.50$ also decreased to 1.0 percent from 8.6 percent, indicating a large decline of tail risks.

> Contents. Fan charts (pages 2-3) show historical and forward futures prices (red line), with calculated confidence intervals of $+/-2$ standard deviations (in purple/blue). Confidence intervals are derived from prices of options on December 10, 2013. Likelihoods of spot prices rising/falling from specified price thresholds occurring at the 3-, 6-, 9- and 12-month forward (or closest available) horizons for each commodity are shown in tabular form (pages 4-5). In addition to price thresholds, the probability of each commodity spot price rising/falling by a certain percentage is shown (pages 6-7). Relevant contract specifications for each commodity are also shown (page 8).

[^0]
## Selected Commodities—Market Price Outlook and Risks

$\longmapsto 95 \%$ confidence interval


Natural Gas

(U.S. cents a pound)


Brent Crude Oil


Gasoline


Gold


## Selected Commodities—Market Price Outlook and Risks (concluded)



## Options-based Price Thresholds

| WTI Crude Oil |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| (probabilities in percent; prices in U.S. dollars a barrel) |  |  |  |  |
| Threshold | Months Forward |  |  |  |
| Prices | 3 | 6 | 9 | 12 |
| $<50$ | 0.0 | 0.0 | 0.3 | 1.1 |
| $<60$ | 0.0 | 0.0 | 1.6 | 3.4 |
| $<70$ | 0.1 | 0.0 | 5.0 | 8.0 |
| $<80$ | 0.9 | 2.1 | 12.9 | 18.8 |
| $<90$ | 10.4 | 22.6 | 34.7 | 41.8 |
| $>100$ | 39.0 | 34.9 | 34.4 | 31.3 |
| $>110$ | 5.5 | 8.2 | 13.5 | 13.5 |
| $>120$ | 0.8 | 1.0 | 4.8 | 5.2 |
| $>130$ | 0.2 | 0.1 | 2.0 | 2.1 |
| $>140$ | 0.1 | 0.0 | 1.0 | 1.1 |
| $>150$ | 0.0 | 0.0 | 0.5 | 0.6 |

U.S. Natural Gas

| (probabilities in percent; prices in U.S. dollars an MMBtu) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Threshold | Months Forward |  |  |  |
| Prices | 3 | 6 | 9 | 12 |
| $<2.50$ | 0.1 | 0.5 | 1.8 | 0.4 |
| $<3.00$ | 2.1 | 5.2 | 9.1 | 3.9 |
| $<3.50$ | 12.6 | 20.7 | 25.2 | 15.9 |
| $>4.00$ | 60.6 | 54.3 | 52.9 | 63.0 |
| $>4.50$ | 29.5 | 30.1 | 32.3 | 39.6 |
| $>5.00$ | 10.8 | 13.9 | 17.5 | 21.1 |
| $>5.50$ | 3.4 | 5.5 | 8.7 | 9.8 |
| $>6.00$ | 1.0 | 1.9 | 4.1 | 4.1 |
| $>6.50$ | 0.3 | 0.6 | 1.9 | 1.6 |
| $>7.00$ | 0.1 | 0.2 | 0.9 | 0.6 |
| $>7.50$ | 0.0 | 0.1 | 0.4 | 0.2 |

Copper
(probabilities in percent; prices in U.S. dollars a pound)

| Threshold | Months Forward |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Prices | 3 | 6 | 9 | 12 |
| $<1.5$ | 0.0 | 0.0 | 0.0 | 0.1 |
| $<2.0$ | 0.0 | 0.1 | 0.5 | 1.4 |
| $<2.5$ | 0.6 | 2.0 | 5.8 | 8.8 |
| $<3.0$ | 12.7 | 27.3 | 32.2 | 35.4 |
| $>3.5$ | 14.1 | 25.6 | 28.3 | 29.8 |
| $>4.0$ | 1.1 | 4.3 | 7.7 | 10.0 |
| $>4.5$ | 0.1 | 0.4 | 1.9 | 3.1 |
| $>5.0$ | 0.0 | 0.1 | 0.5 | 1.1 |
| $>5.5$ | 0.0 | 0.0 | 0.2 | 0.5 |
| $>6.0$ | 0.0 | 0.0 | 0.0 | 0.2 |
| $>6.5$ | 0.0 | 0.0 | 0.0 | 0.1 |

Brent Crude Oil

| (probabilities in percent; prices in U.S. dollars a barrel) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Threshold | Months Forward |  |  |  |
| Prices | 3 | 6 | 9 | 12 |
| $<60$ | 0.0 | 0.0 | 0.5 | 1.2 |
| $<70$ | 0.0 | 0.0 | 1.5 | 3.3 |
| $<80$ | 0.2 | 0.7 | 4.3 | 7.4 |
| $<90$ | 1.5 | 7.4 | 14.1 | 17.8 |
| $<100$ | 12.7 | 28.5 | 35.0 | 38.2 |
| $>110$ | 41.3 | 41.7 | 39.9 | 37.9 |
| $>120$ | 7.2 | 17.4 | 19.6 | 18.9 |
| $>130$ | 1.3 | 5.4 | 8.2 | 8.5 |
| $>140$ | 0.4 | 1.3 | 3.3 | 4.0 |
| $>150$ | 0.1 | 0.2 | 1.4 | 2.1 |
| $>160$ | 0.0 | 0.0 | 0.7 | 1.2 |

Gasoline

| (probabilities in percent; prices in U.S. dollars a gallon) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Threshold | Months Forward |  |  |  |
| Prices | 3 | 6 | 9 | 12 |
| $<1.50$ | 0.0 | 0.0 | 0.0 | 1.3 |
| $<1.75$ | 0.0 | 0.1 | 0.4 | 4.2 |
| $<2.00$ | 0.2 | 1.0 | 2.9 | 10.5 |
| $<2.25$ | 3.3 | 4.7 | 11.1 | 24.3 |
| $<2.50$ | 18.9 | 14.9 | 27.2 | 45.4 |
| $>2.75$ | 40.8 | 62.8 | 49.5 | 32.7 |
| $>3.00$ | 9.9 | 33.0 | 26.2 | 16.4 |
| $>3.25$ | 1.9 | 12.4 | 11.5 | 7.7 |
| $>3.50$ | 0.3 | 3.5 | 4.4 | 3.5 |
| $>3.75$ | 0.0 | 1.0 | 1.7 | 1.8 |
| $>4.00$ | 0.0 | 0.3 | 0.6 | 0.9 |


|  | Gold <br> (probabilities in percent; prices in U.S. dollars a troy ounce) |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Threshold | Months Forward |  |  |  |
| Prices | 3 | 6 | 9 | 12 |
| $<900$ | 0.1 | 0.3 | 3.6 | 5.2 |
| $<1000$ | 0.7 | 3.0 | 8.2 | 10.8 |
| $<1100$ | 5.8 | 14.0 | 19.5 | 22.7 |
| $<1200$ | 28.9 | 36.2 | 38.9 | 40.9 |
| $<1300$ | 65.3 | 61.6 | 60.3 | 60.2 |
| $>1400$ | 10.0 | 18.1 | 22.1 | 23.7 |
| $>1500$ | 2.1 | 6.8 | 11.4 | 13.3 |
| $>1600$ | 0.5 | 2.2 | 6.1 | 7.7 |
| $>1700$ | 0.1 | 0.6 | 3.5 | 4.6 |
| $>1800$ | 0.0 | 0.1 | 2.2 | 3.0 |
| $>1900$ | 0.0 | 0.0 | 1.5 | 2.1 |

# Options-based Price Thresholds (concluded) 

| Corn |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| (probabilities in percent; prices in U.S. dollars a bushel) |  |  |  |  |
| Threshold | Months Forward |  |  |  |
| Prices | 3 | 6 | 9 | 12 |
| $<2.5$ | 0.2 | 0.1 | 0.3 | 0.8 |
| $<3.0$ | 2.5 | 2.3 | 3.1 | 2.9 |
| $<3.5$ | 13.2 | 12.1 | 14.2 | 10.4 |
| $<4.0$ | 34.5 | 32.1 | 34.5 | 25.9 |
| $>4.5$ | 40.2 | 43.2 | 41.9 | 52.7 |
| $>5.0$ | 20.4 | 23.0 | 22.8 | 32.6 |
| $>5.5$ | 9.0 | 10.7 | 11.0 | 18.1 |
| $>6.0$ | 3.5 | 4.3 | 4.7 | 9.1 |
| $>6.5$ | 1.2 | 1.6 | 1.9 | 4.4 |
| $>7.0$ | 0.4 | 0.5 | 0.7 | 2.1 |
| $>7.5$ | 0.1 | 0.2 | 0.2 | 1.0 |

Rough Rice
(probabilities in percent; prices in U.S. dollars a hundredweight)

| Threshold | Months Forward |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Prices | 3 | 6 | 9 | 12 |
| $<0.08$ | 0.0 | 0.0 | 0.0 | 0.0 |
| $<0.10$ | 0.0 | 0.0 | 0.0 | 0.1 |
| $<0.12$ | 0.1 | 0.3 | 4.9 | 7.0 |
| $<0.14$ | 11.3 | 13.3 | 40.0 | 44.6 |
| $>0.16$ | 36.7 | 38.1 | 16.2 | 14.7 |
| $>0.18$ | 4.6 | 6.3 | 2.0 | 1.9 |
| $>0.20$ | 0.2 | 0.4 | 0.1 | 0.1 |
| $>0.22$ | 0.0 | 0.0 | 0.0 | 0.0 |
| $>0.24$ | 0.0 | 0.0 | 0.0 | 0.0 |
| $>0.26$ | 0.0 | 0.0 | 0.0 | 0.0 |
| $>0.28$ | 0.0 | 0.0 | 0.0 | 0.0 |

Soybeans

| (probabilities in percent; prices in U.S. dollars a bushel) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Threshold | Months Forward |  |  |  |
| Prices | 3 | 6 | 9 | 12 |
| $<8$ | 0.0 | 0.1 | 0.9 | 3.3 |
| $<9$ | 0.1 | 0.4 | 2.9 | 7.1 |
| $<10$ | 0.3 | 2.1 | 10.2 | 16.9 |
| $<11$ | 1.2 | 9.8 | 27.2 | 35.1 |
| $<12$ | 9.1 | 28.3 | 50.7 | 56.9 |
| $>13$ | 59.3 | 46.3 | 27.6 | 24.3 |
| $>14$ | 20.7 | 23.8 | 12.9 | 11.9 |
| $>15$ | 4.1 | 10.4 | 5.3 | 5.4 |
| $>16$ | 0.6 | 3.8 | 1.9 | 2.3 |
| $>17$ | 0.2 | 1.3 | 0.6 | 1.0 |
| $>18$ | 0.1 | 0.5 | 0.2 | 0.4 |


| Coffee |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| (probabilities in percent; prices in U.S. dollars a pound) |  |  |  |  |
| Threshold | Months Forward |  |  |  |
| Prices | 3 | 6 | 9 | 12 |
| $<0.6$ | 0.0 | 0.2 | 0.7 | 0.7 |
| $<0.7$ | 0.0 | 0.8 | 1.7 | 1.8 |
| $<0.8$ | 0.1 | 4.0 | 4.7 | 5.0 |
| $<0.9$ | 3.1 | 13.1 | 12.3 | 12.4 |
| $<1.0$ | 19.0 | 29.1 | 26.1 | 25.0 |
| $>1.1$ | 49.1 | 51.1 | 56.2 | 59.0 |
| $>1.2$ | 19.4 | 32.2 | 38.1 | 42.4 |
| $>1.3$ | 5.3 | 18.5 | 24.2 | 28.8 |
| $>1.4$ | 1.0 | 9.7 | 14.7 | 18.8 |
| $>1.5$ | 0.2 | 4.8 | 8.8 | 12.2 |
| $>1.6$ | 0.0 | 2.3 | 5.5 | 7.9 |

## Wheat

(probabilities in percent; prices in U.S. dollars a bushel)

| Threshold | Months Forward |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Prices | 3 | 6 | 9 | 12 |
| $<4$ | 0.0 | 0.6 | 0.7 | 0.6 |
| $<5$ | 0.3 | 5.2 | 4.4 | 8.3 |
| $<6$ | 21.4 | 32.6 | 25.6 | 32.5 |
| $>7$ | 12.6 | 25.4 | 36.2 | 37.5 |
| $>8$ | 0.5 | 6.3 | 13.0 | 15.9 |
| $>9$ | 0.0 | 1.9 | 5.6 | 5.6 |
| $>10$ | 0.0 | 0.7 | 2.9 | 1.7 |
| $>11$ | 0.0 | 0.2 | 1.6 | 0.5 |
| $>12$ | 0.0 | 0.1 | 0.8 | 0.1 |
| $>13$ | 0.0 | 0.0 | 0.4 | 0.0 |
| $>14$ | 0.0 | 0.0 | 0.2 | 0.0 |

Soybean Meal

| (probabilities in percent; prices in U.S. dollars a short ton) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Threshold | Months Forward |  |  |  |
| Prices | 3 | 6 | 9 | 12 |
| $<200$ | 0.0 | 0.1 | 0.2 | 7.4 |
| $<250$ | 0.0 | 2.1 | 3.4 | 20.9 |
| $<300$ | 0.1 | 10.6 | 16.3 | 38.3 |
| $<350$ | 4.0 | 28.8 | 39.9 | 55.7 |
| $<400$ | 29.1 | 51.0 | 64.1 | 69.7 |
| $>450$ | 29.7 | 29.2 | 18.0 | 19.7 |
| $>500$ | 6.9 | 15.7 | 8.0 | 12.5 |
| $>550$ | 0.9 | 7.6 | 3.2 | 7.8 |
| $>600$ | 0.1 | 3.5 | 1.2 | 4.8 |
| $>650$ | 0.0 | 1.5 | 0.4 | 2.9 |
| $>700$ | 0.0 | 0.6 | 0.1 | 1.8 |

## Options-based Probabilities of Price Changes

## (in percent)

| WTI Crude Oil |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Price | Months Forward |  |  |  |
| changes | 3 | 6 | 9 | 12 |
| $-50 \%$ | 0.0 | 0.0 | 0.2 | 0.9 |
| $-30 \%$ | 0.1 | 0.0 | 4.1 | 6.8 |
| $-10 \%$ | 5.4 | 14.7 | 27.9 | 35.3 |
| $+10 \%$ | 10.7 | 13.5 | 18.3 | 17.7 |
| $+30 \%$ | 0.4 | 0.2 | 2.6 | 2.8 |
| $+50 \%$ | 0.0 | 0.0 | 0.6 | 0.7 |
| $+100 \%$ | 0.0 | 0.0 | 0.0 | 0.0 |

U.S. Natural Gas

| Price | Months Forward |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| changes | 3 | 6 | 9 | 12 |
| $-50 \%$ | 0.0 | 0.0 | 0.3 | 0.0 |
| $-30 \%$ | 1.8 | 4.4 | 8.2 | 3.4 |
| $-10 \%$ | 27.4 | 35.6 | 38.5 | 28.2 |
| $+10 \%$ | 21.9 | 24.0 | 26.8 | 32.9 |
| $+30 \%$ | 3.3 | 5.4 | 8.6 | 9.7 |
| $+50 \%$ | 0.5 | 0.9 | 2.4 | 2.1 |
| $+100 \%$ | 0.0 | 0.0 | 0.1 | 0.0 |


| Copper |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Price <br> changes | 3 | 6 | 9 | 12 |
| $-50 \%$ | 0.0 | 0.0 | 0.0 | 0.3 |
| $-30 \%$ | 0.1 | 0.4 | 2.4 | 4.3 |
| $-10 \%$ | 10.1 | 24.5 | 29.6 | 33.1 |
| $+10 \%$ | 6.7 | 17.6 | 21.2 | 23.3 |
| $+30 \%$ | 0.4 | 1.2 | 3.4 | 5.1 |
| $+50 \%$ | 0.0 | 0.1 | 0.6 | 1.2 |
| $+100 \%$ | 0.0 | 0.0 | 0.0 | 0.1 |


| Price <br> changes | Months Forward |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 3 | 6 | 9 | 12 |
| $-50 \%$ | 0.0 | 0.0 | 0.3 | 0.6 |
| $-30 \%$ | 0.1 | 0.2 | 2.8 | 5.6 |
| $-10 \%$ | 8.3 | 23.4 | 30.4 | 33.7 |
| $+10 \%$ | 7.2 | 17.4 | 19.6 | 18.9 |
| $+30 \%$ | 0.3 | 1.0 | 2.8 | 3.5 |
| $+50 \%$ | 0.0 | 0.0 | 0.6 | 1.0 |
| $+100 \%$ | 0.0 | 0.0 | 0.1 | 0.1 |

Gasoline

| Price <br> changes | 3 | 6 | 9 | 12 |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| $-50 \%$ | 0.0 | 0.0 | 0.0 | 0.5 |
| $-30 \%$ | 0.0 | 0.3 | 1.2 | 6.6 |
| $-10 \%$ | 10.3 | 9.9 | 20.0 | 36.8 |
| $+10 \%$ | 14.4 | 39.8 | 31.1 | 19.5 |
| $+30 \%$ | 0.4 | 4.0 | 4.9 | 3.8 |
| $+50 \%$ | 0.0 | 0.3 | 0.6 | 0.9 |
| $+100 \%$ | 0.0 | 0.0 | 0.0 | 0.0 |

Gold

| Price | Months Forward |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| changes | 3 | 6 | 9 | 12 |
| $-50 \%$ | 0.0 | 0.0 | 0.2 | 0.4 |
| $-30 \%$ | 0.0 | 0.1 | 2.7 | 4.0 |
| $-10 \%$ | 7.4 | 16.2 | 21.5 | 24.7 |
| $+10 \%$ | 17.5 | 25.3 | 28.4 | 29.6 |
| $+30 \%$ | 0.4 | 2.1 | 5.9 | 7.4 |
| $+50 \%$ | 0.0 | 0.1 | 1.8 | 2.5 |
| $+100 \%$ | 0.0 | 0.0 | 0.1 | 0.3 |

## Options-based Probabilities of Price Changes (concluded) <br> (in percent)

| Corn |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Price | Months Forward |  |  |  |
| changes | 3 | 6 | 9 | 12 |
| $-50 \%$ | 0.0 | 0.0 | 0.0 | 0.4 |
| $-30 \%$ | 2.5 | 2.3 | 3.1 | 2.9 |
| $-10 \%$ | 27.6 | 25.5 | 28.0 | 20.7 |
| $+10 \%$ | 31.0 | 34.0 | 33.2 | 43.9 |
| $+30 \%$ | 7.8 | 9.4 | 9.8 | 16.4 |
| $+50 \%$ | 1.4 | 1.9 | 2.2 | 4.9 |
| $+100 \%$ | 0.0 | 0.0 | 0.0 | 0.3 |

Rough Rice

| Price | Months Forward |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| changes | 3 | 6 | 9 | 12 |
| $-50 \%$ | 0.0 | 0.0 | 0.0 | 0.0 |
| $-30 \%$ | 0.0 | 0.0 | 0.5 | 0.9 |
| $-10 \%$ | 10.7 | 12.7 | 39.0 | 43.6 |
| $+10 \%$ | 14.2 | 16.7 | 5.9 | 5.4 |
| $+30 \%$ | 0.1 | 0.3 | 0.1 | 0.1 |
| $+50 \%$ | 0.0 | 0.0 | 0.0 | 0.0 |
| $+100 \%$ | 0.0 | 0.0 | 0.0 | 0.0 |

Soybeans

| Price | Months Forward |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| changes | 3 | 6 | 9 | 12 |
| $-50 \%$ | 0.0 | 0.0 | 0.4 | 1.6 |
| $-30 \%$ | 0.1 | 0.8 | 5.0 | 10.3 |
| $-10 \%$ | 11.0 | 30.7 | 53.0 | 59.0 |
| $+10 \%$ | 6.0 | 12.5 | 6.4 | 6.4 |
| $+30 \%$ | 0.1 | 0.8 | 0.3 | 0.6 |
| $+50 \%$ | 0.0 | 0.1 | 0.0 | 0.1 |
| $+100 \%$ | 0.0 | 0.0 | 0.0 | 0.0 |


| Coffee |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Price <br> changes | 3 | 6 | 9 | 12 |
| $-50 \%$ | 0.0 | 0.1 | 0.3 | 0.4 |
| $-30 \%$ | 0.0 | 1.5 | 2.4 | 2.7 |
| $-10 \%$ | 8.7 | 20.3 | 18.5 | 18.1 |
| $+10 \%$ | 29.8 | 39.4 | 45.1 | 48.9 |
| $+30 \%$ | 1.7 | 11.7 | 16.9 | 21.2 |
| $+50 \%$ | 0.0 | 2.6 | 6.0 | 8.6 |
| $+100 \%$ | 0.0 | 0.1 | 1.1 | 1.8 |

Wheat

| Price <br> changes | 3 | 6 | 9 | 12 |
| :---: | :---: | :---: | :---: | :---: |
|  | 0.0 | 0.0 | 0.1 | 0.0 |
| $-30 \%$ | 0.0 | 1.8 | 1.7 | 2.7 |
| $-10 \%$ | 9.6 | 22.3 | 17.5 | 25.0 |
| $+10 \%$ | 11.6 | 24.4 | 35.1 | 36.6 |
| $+30 \%$ | 0.2 | 4.2 | 9.8 | 11.7 |
| $+50 \%$ | 0.0 | 1.0 | 3.8 | 2.8 |
| $+100 \%$ | 0.0 | 0.0 | 0.5 | 0.0 |


| Soybean Meal |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Price <br> changes | 3 | 6 | 9 | 12 |
| $-50 \%$ | 0.0 | 0.8 | 1.4 | 14.9 |
| $-30 \%$ | 0.6 | 17.9 | 26.2 | 46.5 |
| $-10 \%$ | 41.8 | 57.5 | 70.4 | 73.4 |
| $+10 \%$ | 5.3 | 14.1 | 7.0 | 11.7 |
| $+30 \%$ | 0.1 | 3.5 | 1.2 | 4.8 |
| $+50 \%$ | 0.0 | 0.7 | 0.2 | 1.9 |
| $+100 \%$ | 0.0 | 0.0 | 0.0 | 0.2 |

## Commodity Derivative Contract Specifications



[^1]
[^0]:    ${ }^{1}$ Prepared by Akito Matsumoto, Daniel Rivera Greenwood, Marina Rousset, and Shane Streifel.

[^1]:    Sources: Chicago Board of Trade, ICE, Bloomberg, L.P.

