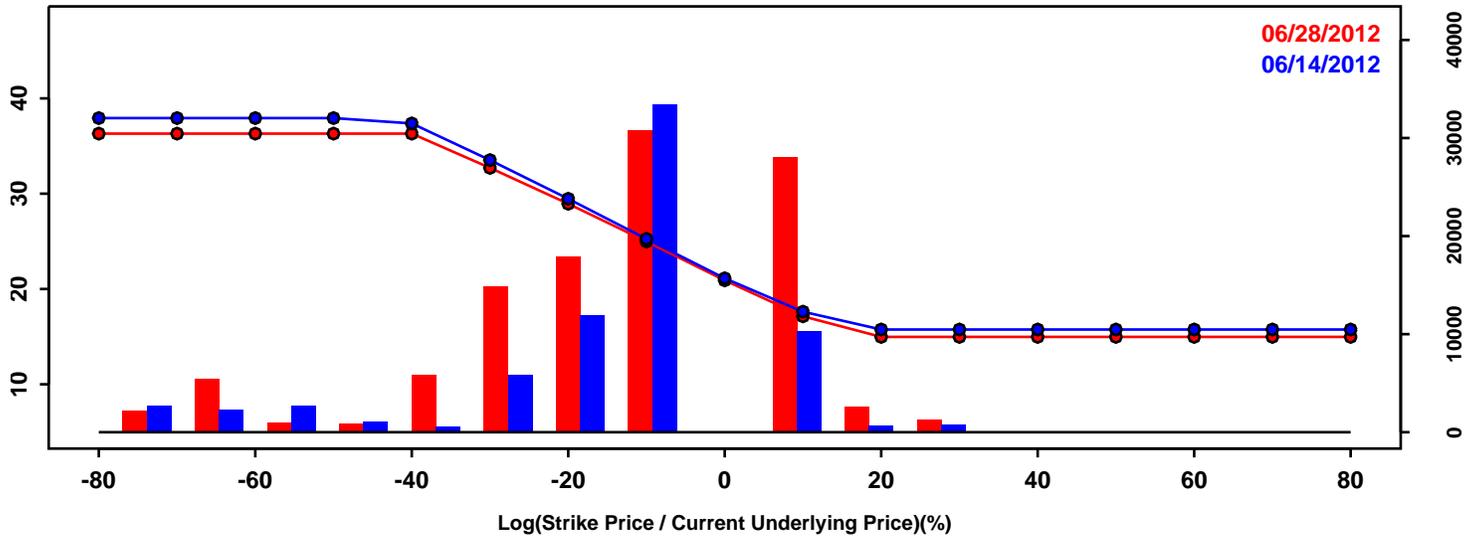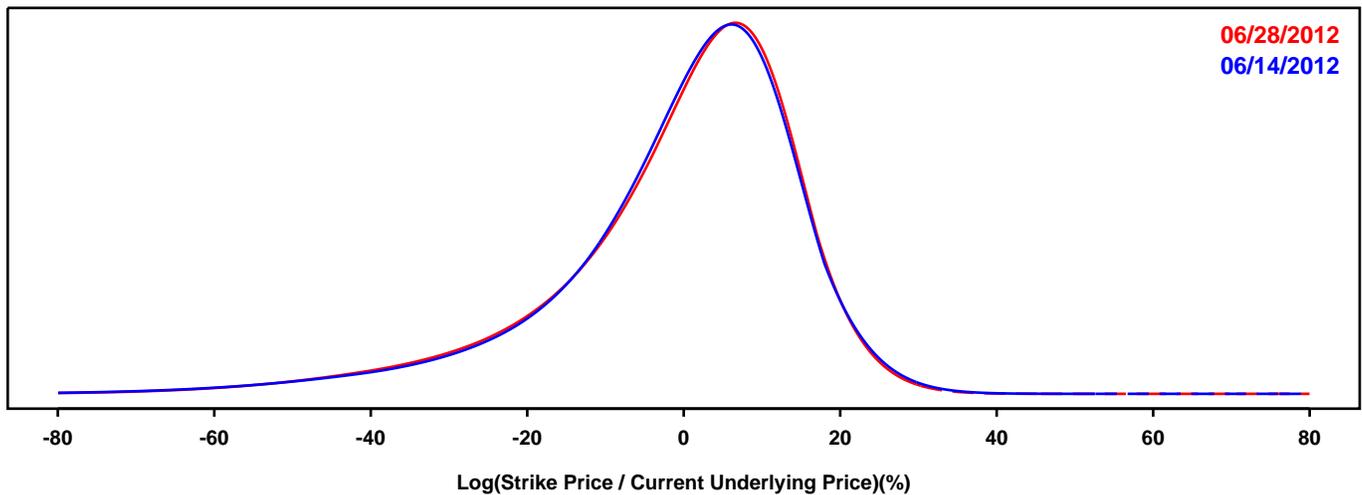# RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

*Log returns are based on the risk neutral density function of the underlying asset
derived from options that expire in approximately 6 months.*

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Risk Neutral PDF of the Log Return Distribution

Probability of a Large Change

Decrease <=20%   **Increase >= 20%**

Statistics of the Log Return Distributions

	06/14/2012	06/28/2012	Change
10th Pct	-21.20%	-21.81%	-0.61%
50th Pct	2.26%	2.39%	0.13%
90th Pct	15.51%	15.43%	-0.08%
Mean	-0.76%	-0.83%	-0.07%
Std Dev	15.95%	15.93%	-0.02%
Skew	-1.32	-1.29	0.04
Kurtosis	2.83	2.46	-0.36

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

Log returns are based on the risk neutral density function of the underlying asset
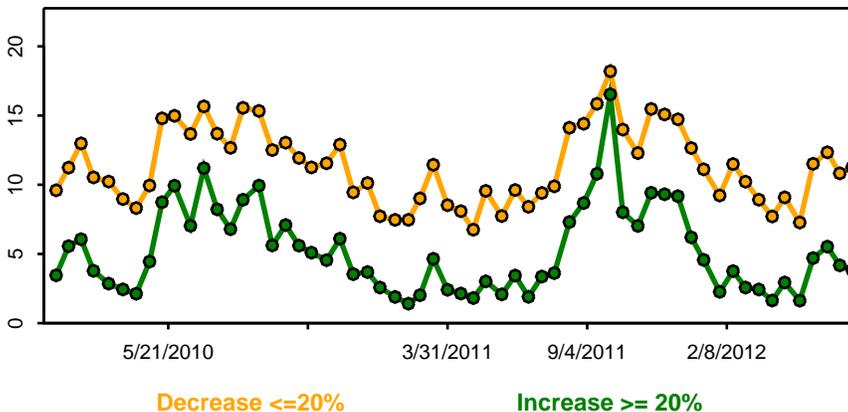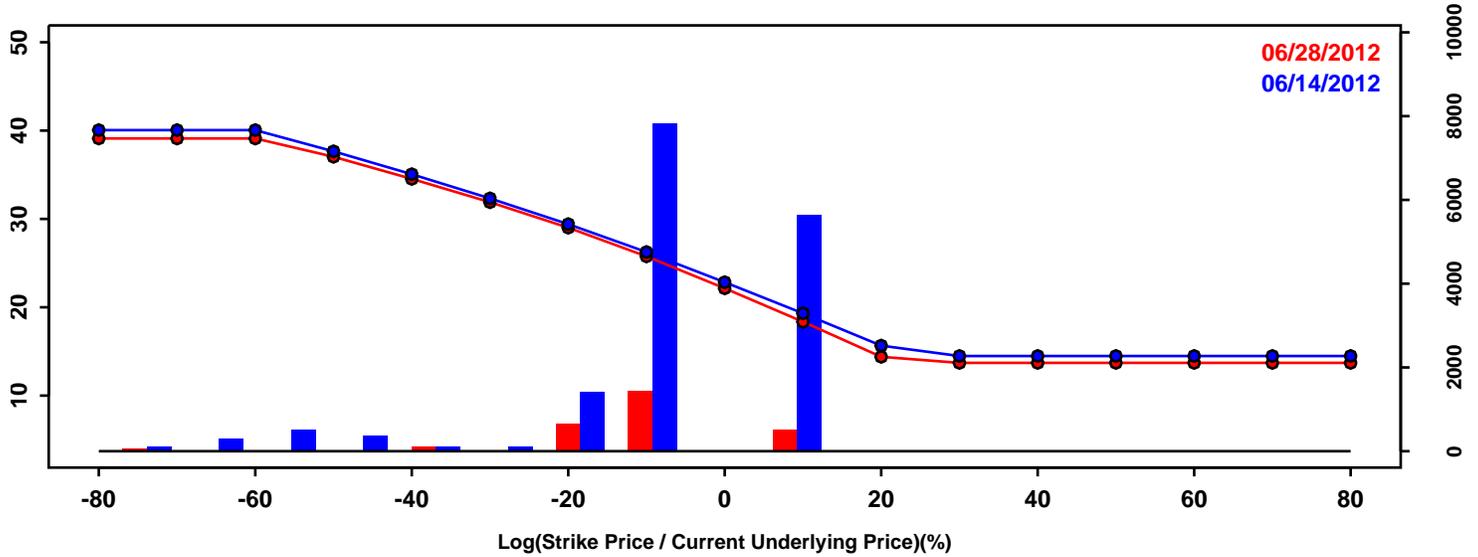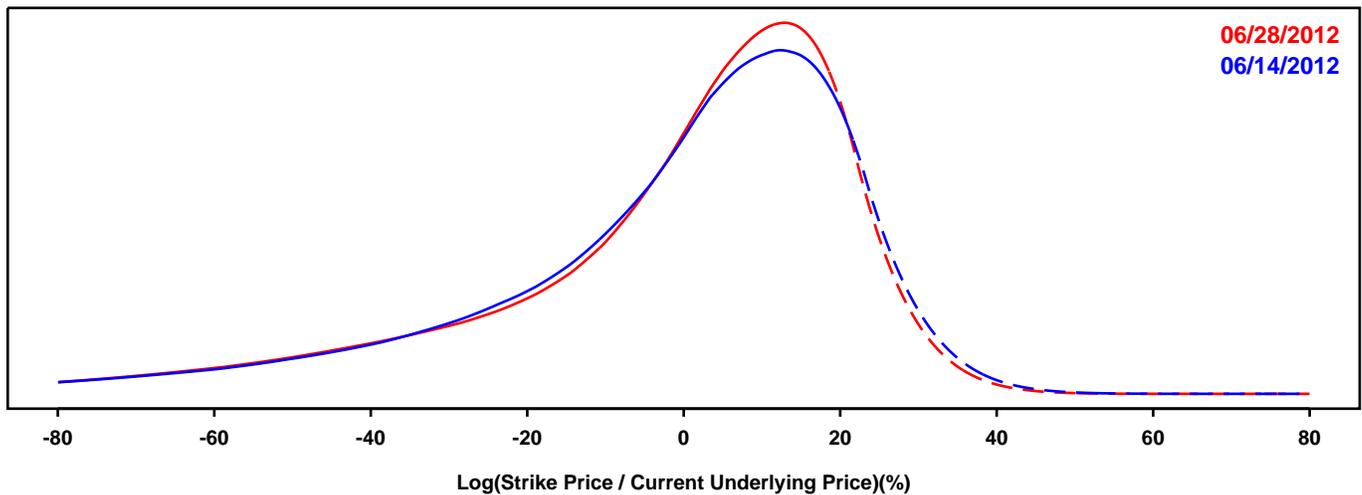*derived from options that expire in approximately 12 months.*

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Log(Strike Price / Current Underlying Price)(%)

Risk Neutral PDF of the Log Return Distribution

Log(Strike Price / Current Underlying Price)(%)

Probability of a Large Change

Decrease <=20%   **Increase >= 20%**

Statistics of the Log Return Distributions

	06/14/2012	06/28/2012	Change
10th Pct	-36.46%	-37.11%	-0.65%
50th Pct	4.51%	4.81%	0.30%
90th Pct	23.04%	22.04%	-1.00%
Mean	-1.72%	-1.85%	-0.13%
Std Dev	25.35%	25.09%	-0.26%
Skew	-1.41	-1.46	-0.05
Kurtosis	2.51	2.54	0.03

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES (WTI)

*Log returns are based on the risk neutral density function of the underlying asset
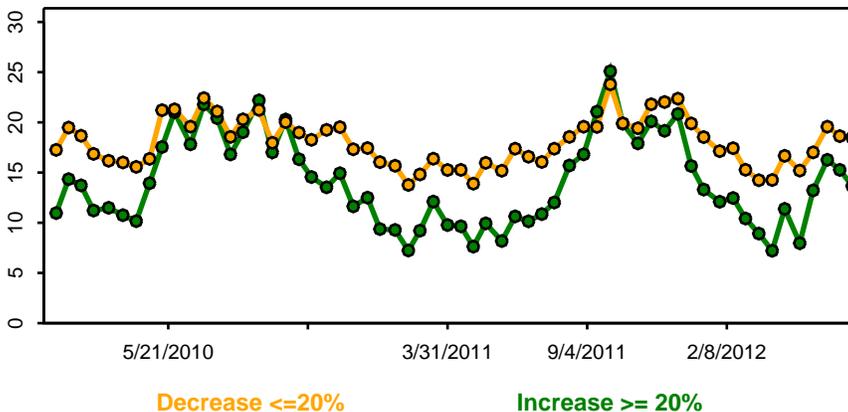derived from options that expire in approximately 6 months.*

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Risk Neutral PDF of the Log Return Distribution

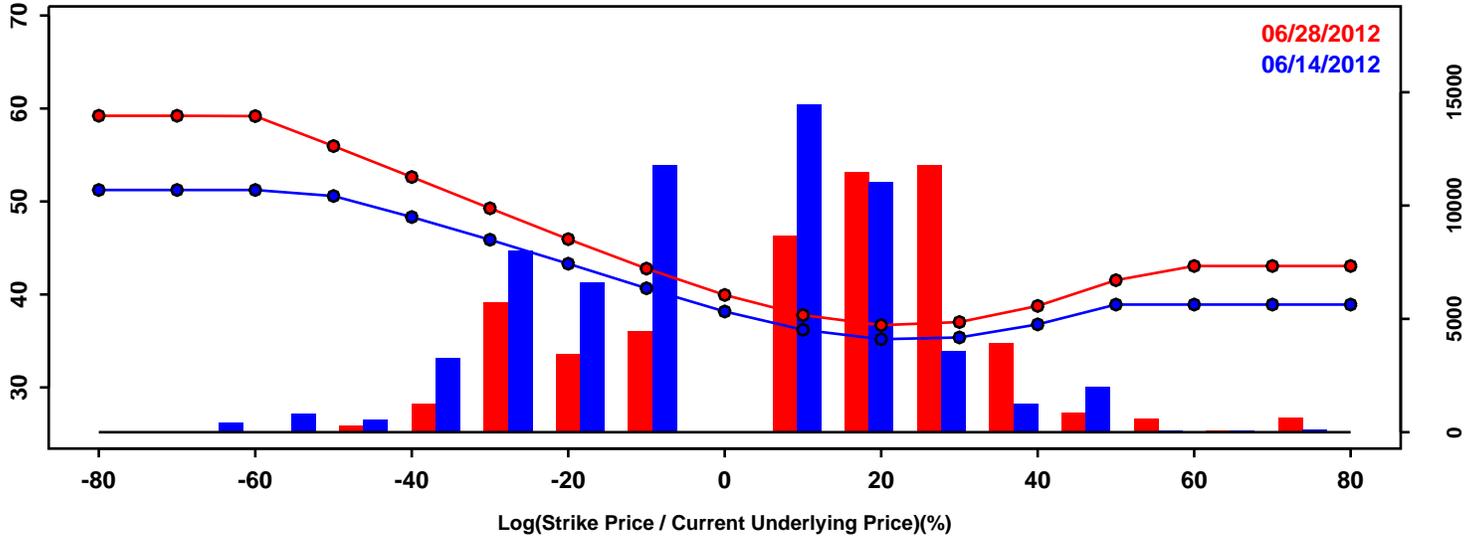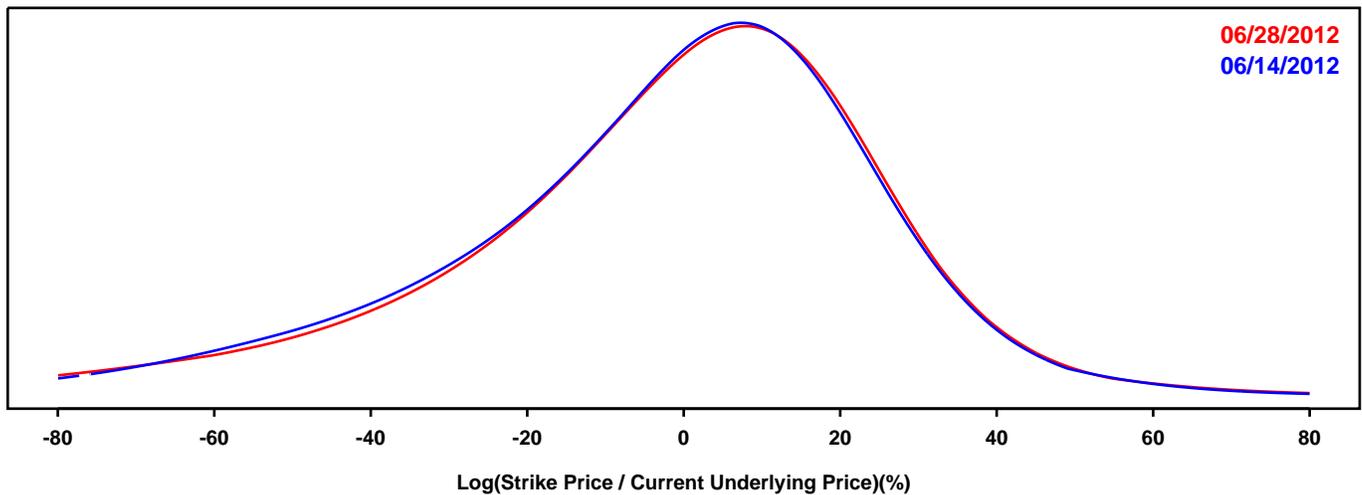

Probability of a Large Change
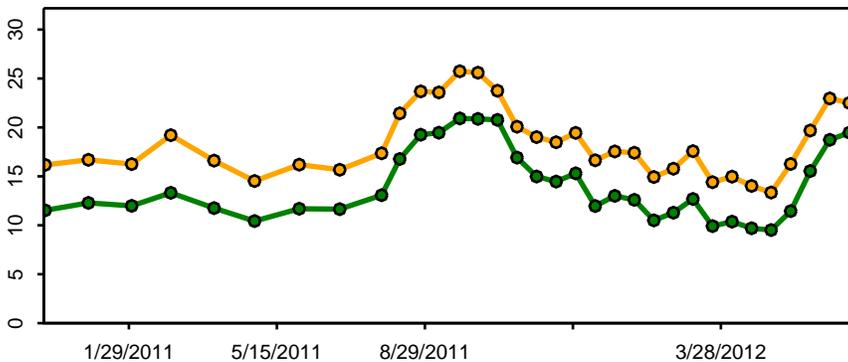
Decrease <=20%   **Increase >= 20%**

Statistics of the Log Return Distributions

	06/14/2012	06/28/2012	Change
10th Pct	-40.67%	-40.88%	-0.20%
50th Pct	1.16%	1.60%	0.44%
90th Pct	27.99%	28.50%	0.51%
Mean	-2.80%	-2.72%	0.07%
Std Dev	27.84%	29.00%	1.16%
Skew	-0.70%	-0.86	-0.16
Kurtosis	0.93	1.47	0.55

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES (Brent)

Log returns are based on the risk neutral density function of the underlying asset derived from options that expire in approximately 6 months.

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Risk Neutral PDF of the Log Return Distribution

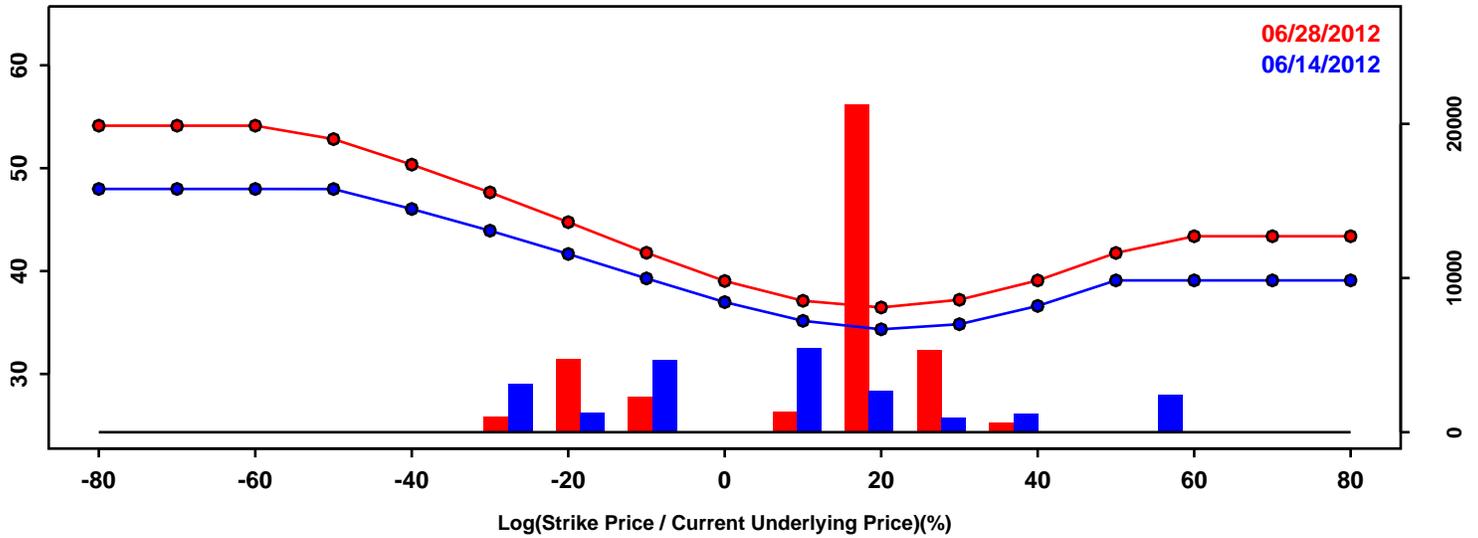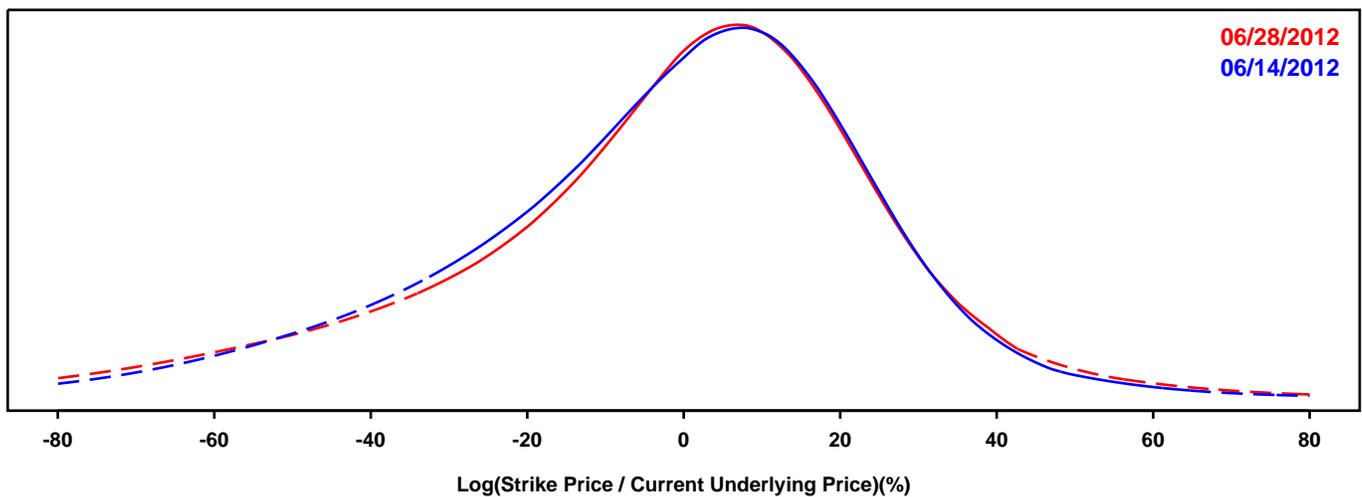

Probability of a Large Change
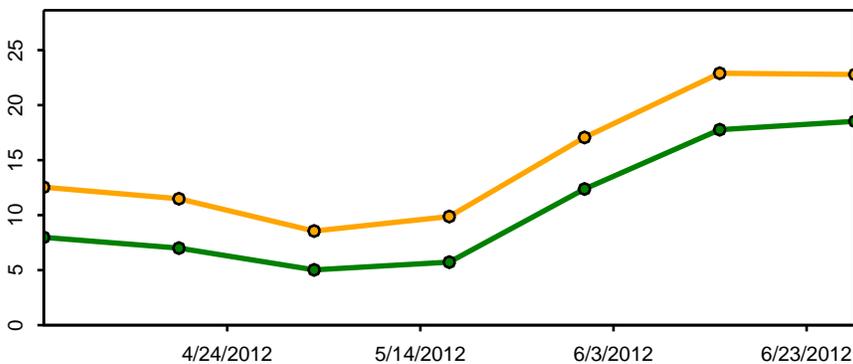
Decrease <=20%   Increase >= 20%

Statistics of the Log Return Distributions

	06/14/2012	06/28/2012	Change
10th Pct	-39.47%	-42.03%	-2.56%
50th Pct	0.89%	1.33%	0.44%
90th Pct	27.04%	28.13%	1.09%
Mean	-2.82%	-2.91%	-0.09%
Std Dev	26.85%	28.76%	1.91%
Skew	-0.63%	-0.74	-0.11
Kurtosis	0.78	1.15	0.36

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- GOLD FUTURES

Log returns are based on the risk neutral density function of the underlying asset
*derived from options that expire in approximately 6 months.*

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Risk Neutral PDF of the Log Return Distribution

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Probability of a Large Change

Decrease <=20%   **Increase >= 20%**
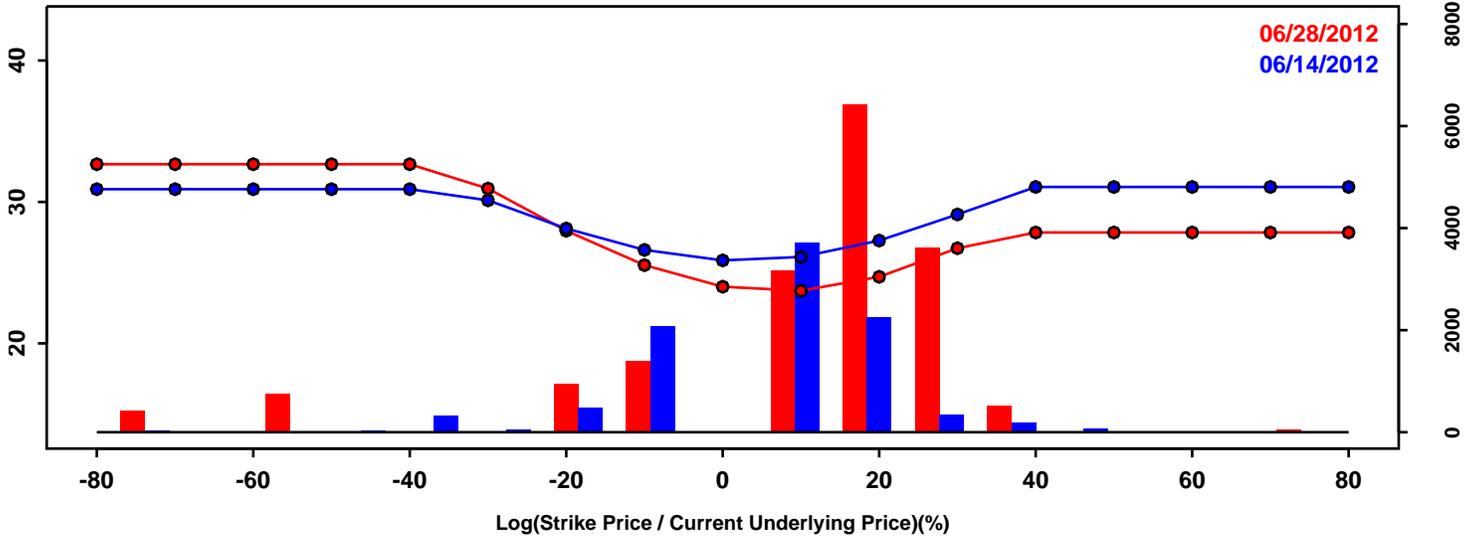
Statistics of the Log Return Distributions

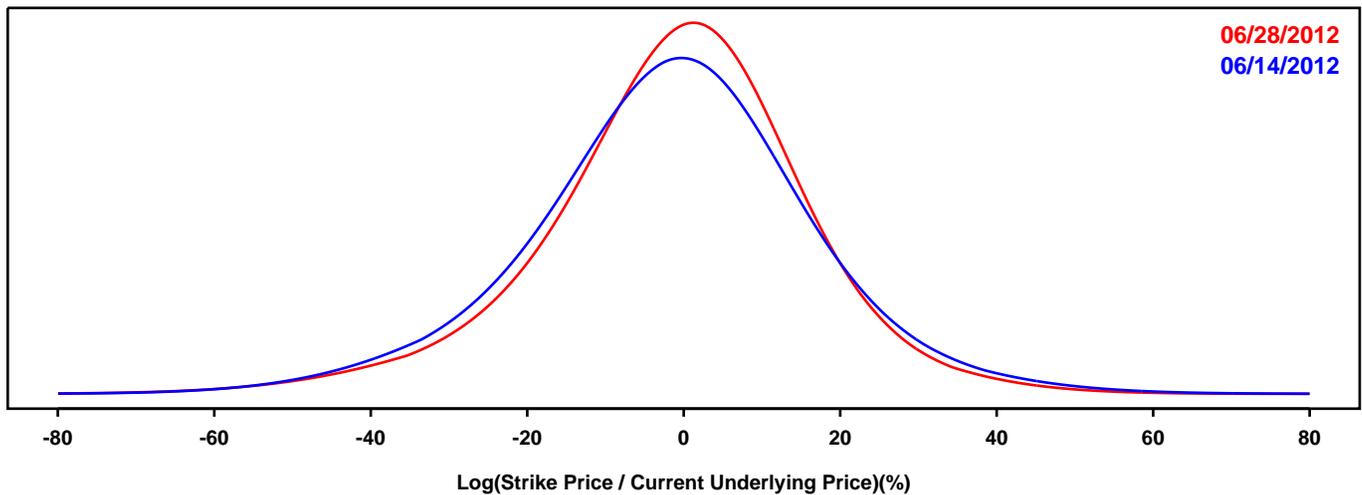|	06/14/2012	06/28/2012	Change
10th Pct	-24.40%	-22.31%	2.09%
50th Pct	-1.08%	-0.13%	0.95%
90th Pct	20.44%	18.79%	-1.65%
Mean	-1.53%	-1.06%	0.47%
Std Dev	18.29%	17.08%	-1.21%
Skew	-0.12	-0.37	-0.25
Kurtosis	0.75	1.12	0.36

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SILVER FUTURES

*Log returns are based on the risk neutral density function of the underlying asset
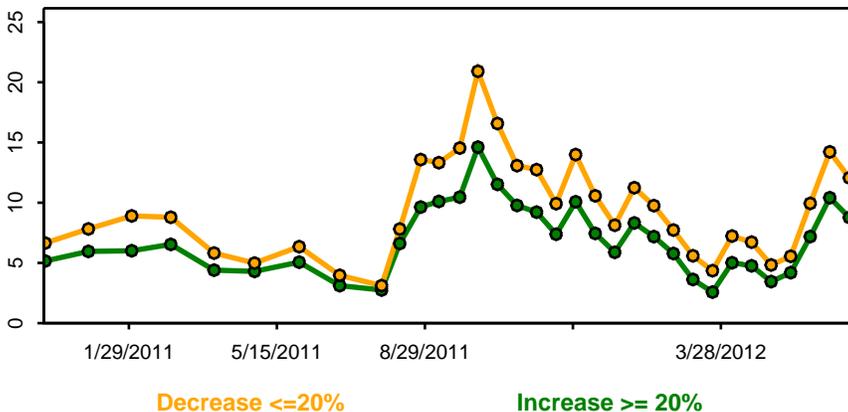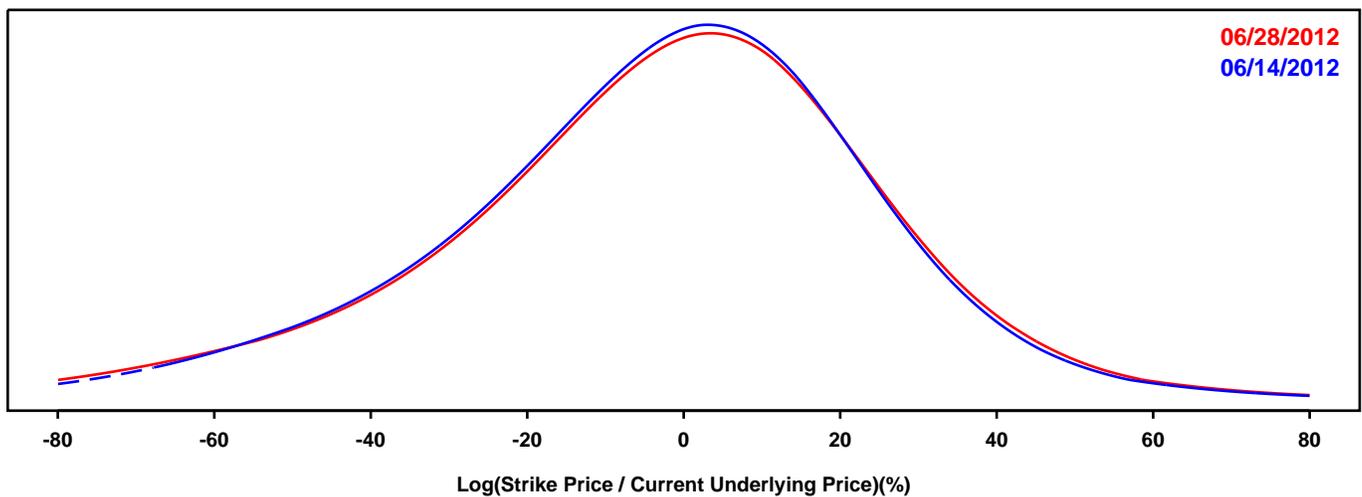derived from options that expire in approximately 6 months.*

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Risk Neutral PDF of the Log Return Distribution

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)
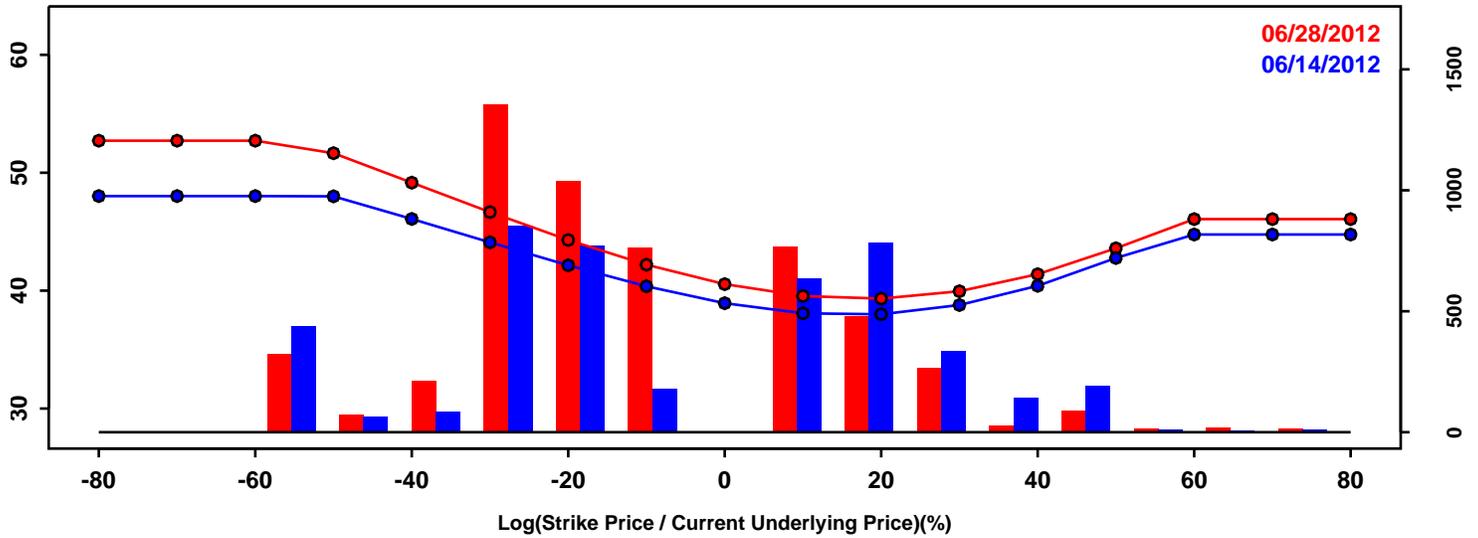
Probability of a Large Change

Decrease <=20%   **Increase >= 20%**

Statistics of the Log Return Distributions

	06/14/2012	06/28/2012	Change
10th Pct	-39.94%	-41.21%	-1.28%
50th Pct	-0.99%	-0.72%	0.27%
90th Pct	28.93%	30.07%	1.13%
Mean	-3.35%	-3.38%	-0.02%
Std Dev	27.74%	29.00%	1.25%
Skew	-0.42	-0.51	-0.09
Kurtosis	0.64	0.83	0.19

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-EURO EXCHANGE RATE FUTURES

Log returns are based on the risk neutral density function of the underlying asset
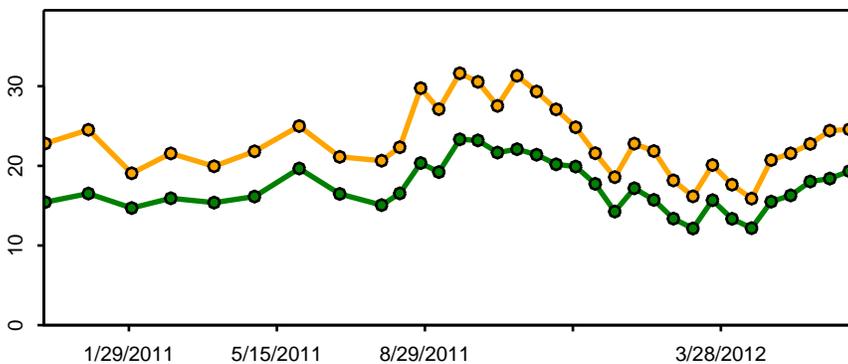*derived from options that expire in approximately 3 months.*

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Risk Neutral PDF of the Log Return Distribution

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Probability of a Large Change

Decrease <=10%   **Increase >= 10%**
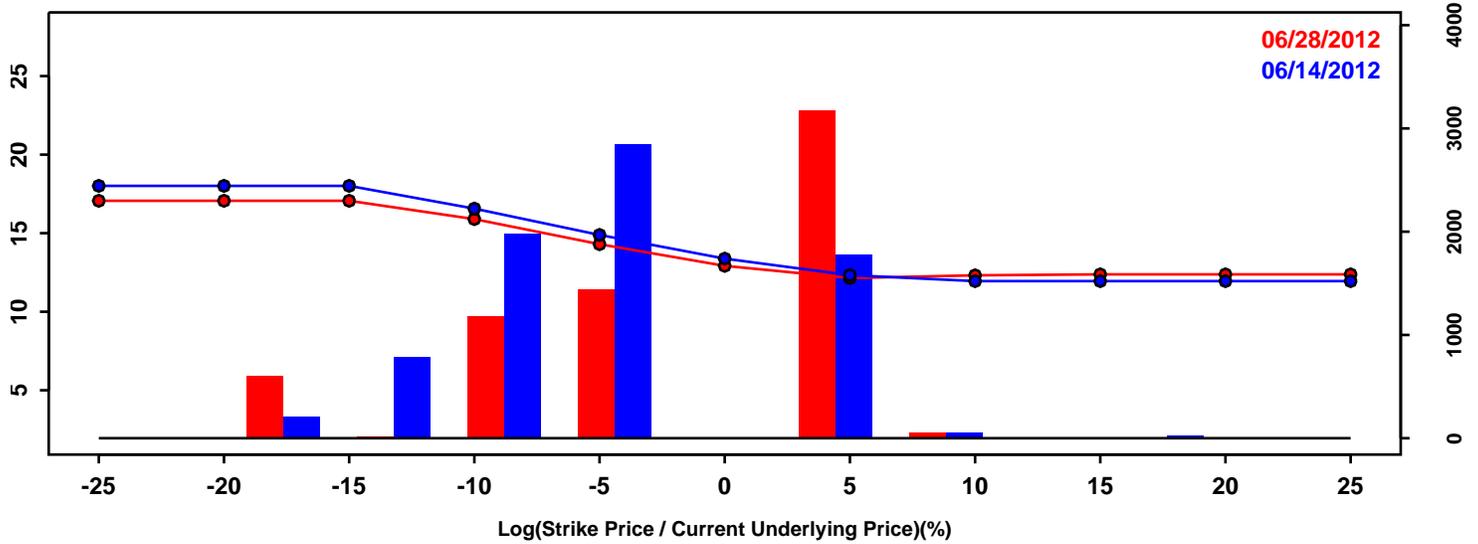
Statistics of the Log Return Distributions

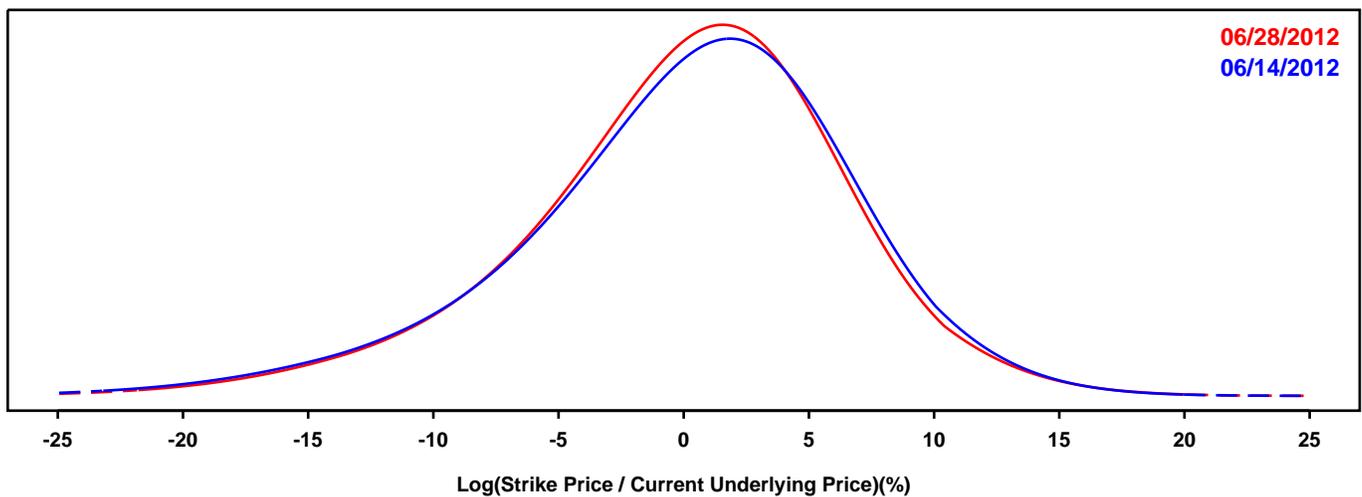|	06/14/2012	06/28/2012	Change
10th Pct	-8.78%	-8.44%	0.34%
50th Pct	0.71%	0.58%	-0.13%
90th Pct	7.87%	7.54%	-0.33%
Mean	0.08%	0.02%	-0.06%
Std Dev	6.75%	6.50%	-0.25%
Skew	-0.59	-0.51	0.08
Kurtosis	0.84	0.81	-0.03

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-POUND EXCHANGE RATE FUTURES

Log returns are based on the risk neutral density function of the underlying asset
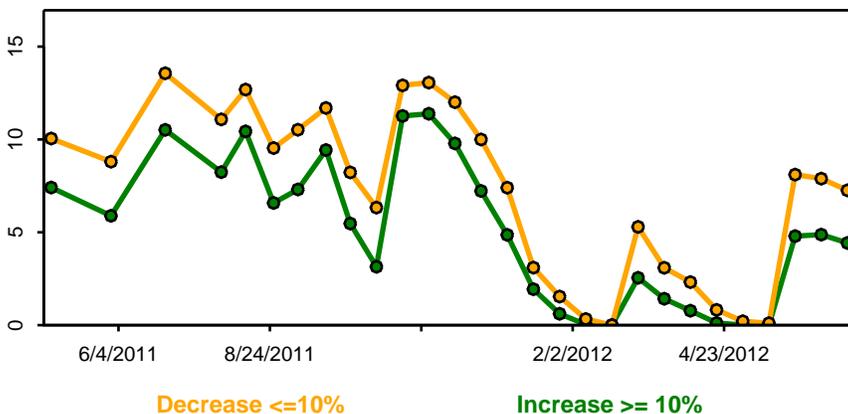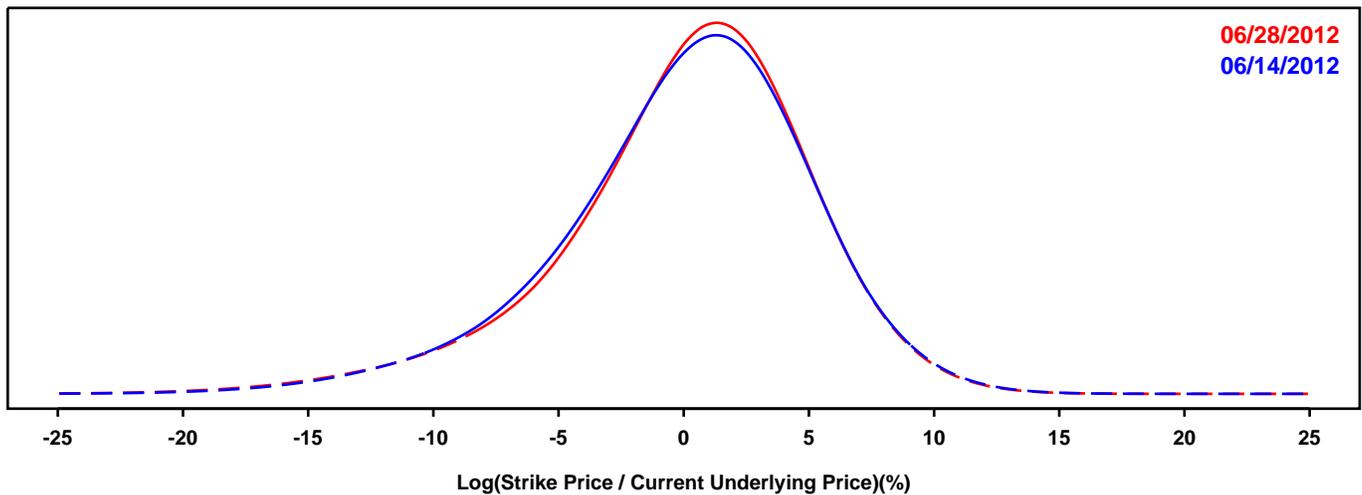*derived from options that expire in approximately 3 months.*

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Risk Neutral PDF of the Log Return Distribution

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Probability of a Large Change

Decrease <=10%   Increase >= 10%
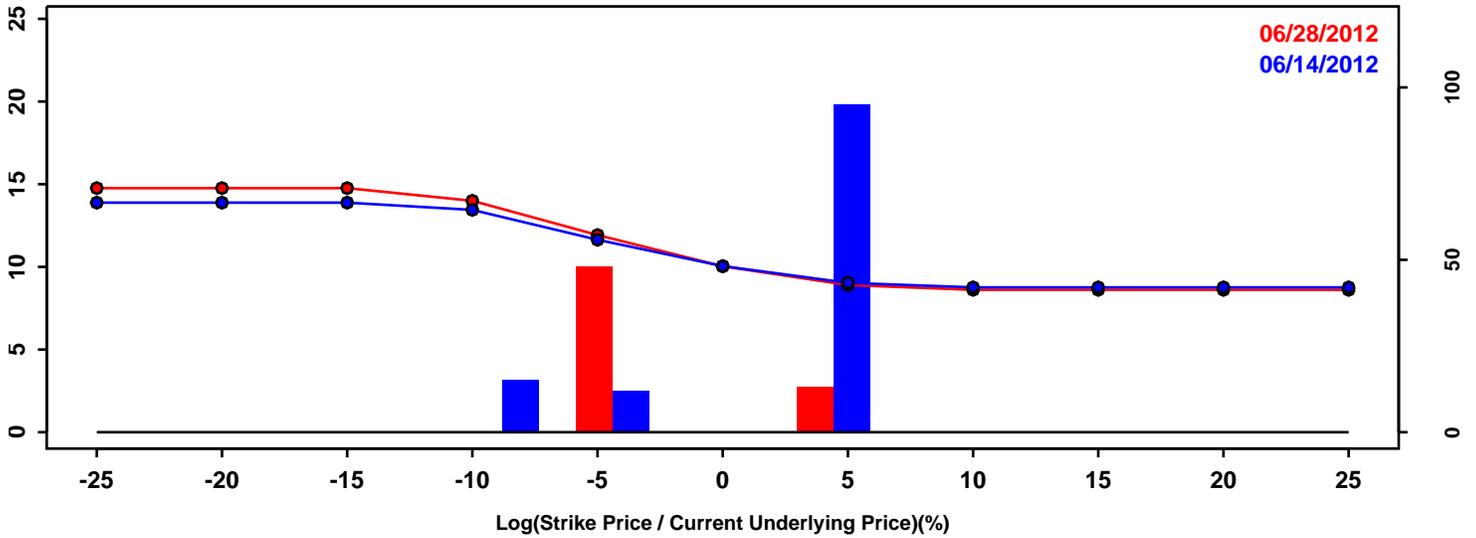
Statistics of the Log Return Distributions

	06/14/2012	06/28/2012	Change
10th Pct	-6.56%	-6.51%	0.05%
50th Pct	0.54%	0.63%	0.09%
90th Pct	5.95%	5.91%	-0.04%
Mean	0.07%	0.10%	0.03%
Std Dev	5.08%	5.10%	0.03%
Skew	-0.62	-0.74	-0.13
Kurtosis	0.91	1.27	0.36

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- YEN-DOLLAR EXCHANGE RATE FUTURES

*Log returns are based on the risk neutral density function of the underlying asset
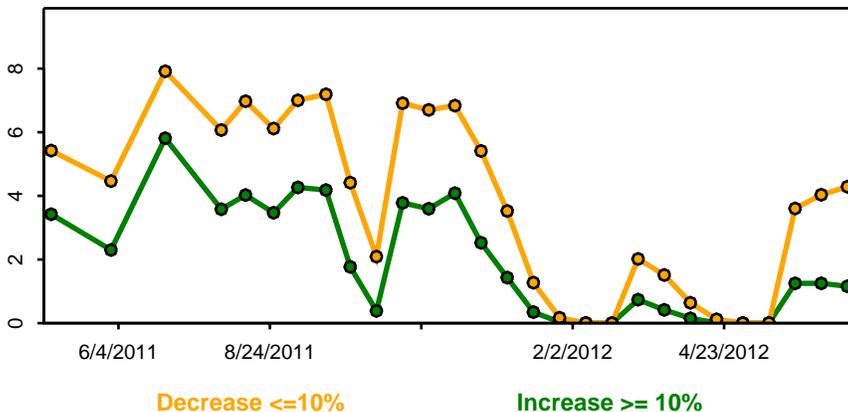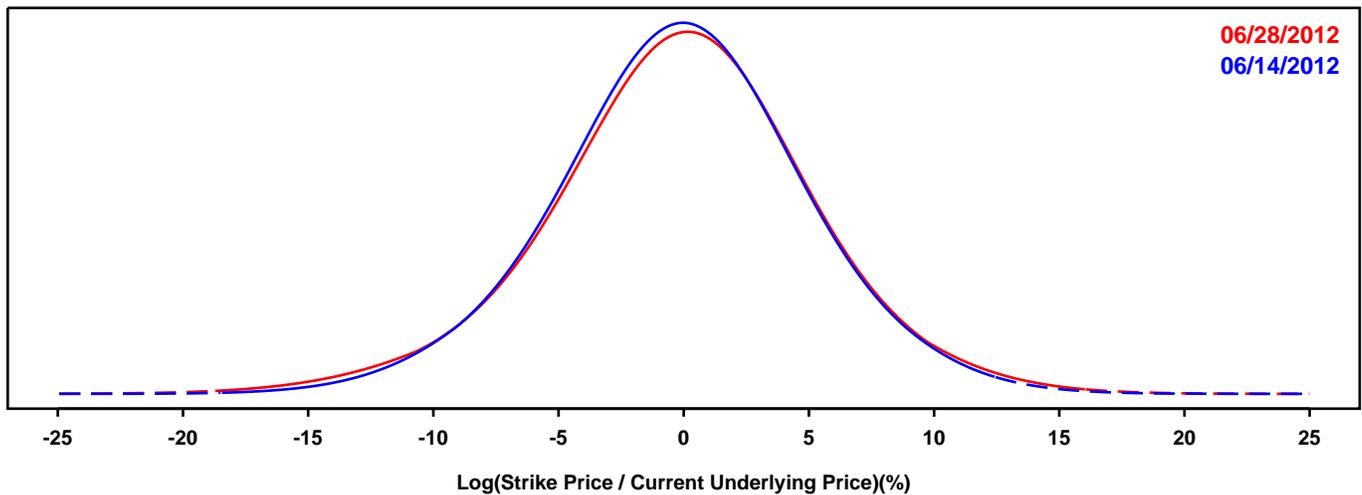derived from options that expire in approximately 3 months.*

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Risk Neutral PDF of the Log Return Distribution

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Probability of a Large Change

Decrease <=10%   **Increase >= 10%**
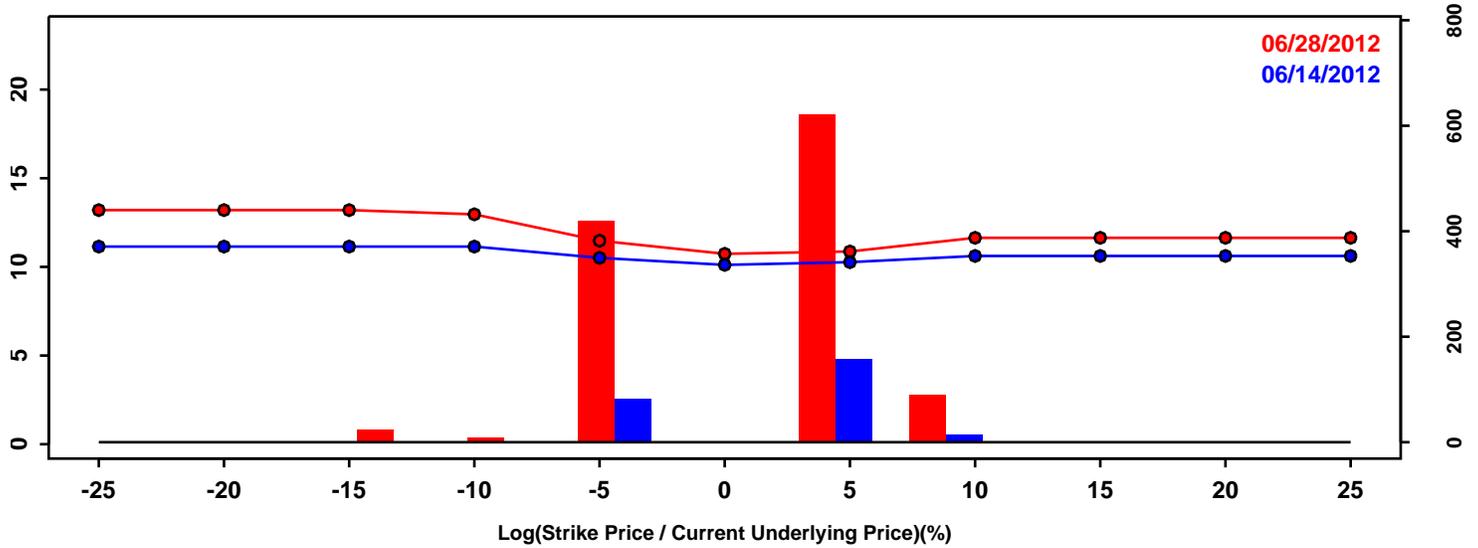
Statistics of the Log Return Distributions

	06/14/2012	06/28/2012	Change
10th Pct	-6.51%	-6.80%	-0.29%
50th Pct	-0.09%	0.00%	0.09%
90th Pct	6.20%	6.45%	0.25%
Mean	-0.10%	-0.08%	0.02%
Std Dev	5.05%	5.36%	0.31%
Skew	-0.06%	-0.16	-0.10
Kurtosis	0.31	0.63	0.32

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CORN FUTURES

Log returns are based on the risk neutral density function of the underlying asset derived from options that expire in approximately 6 months.
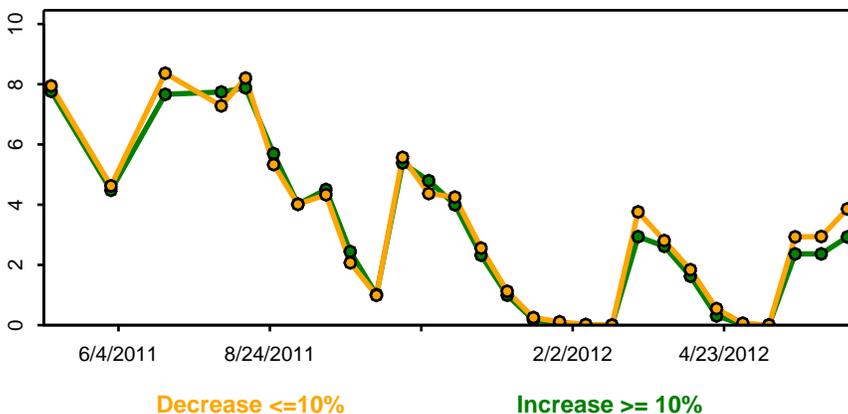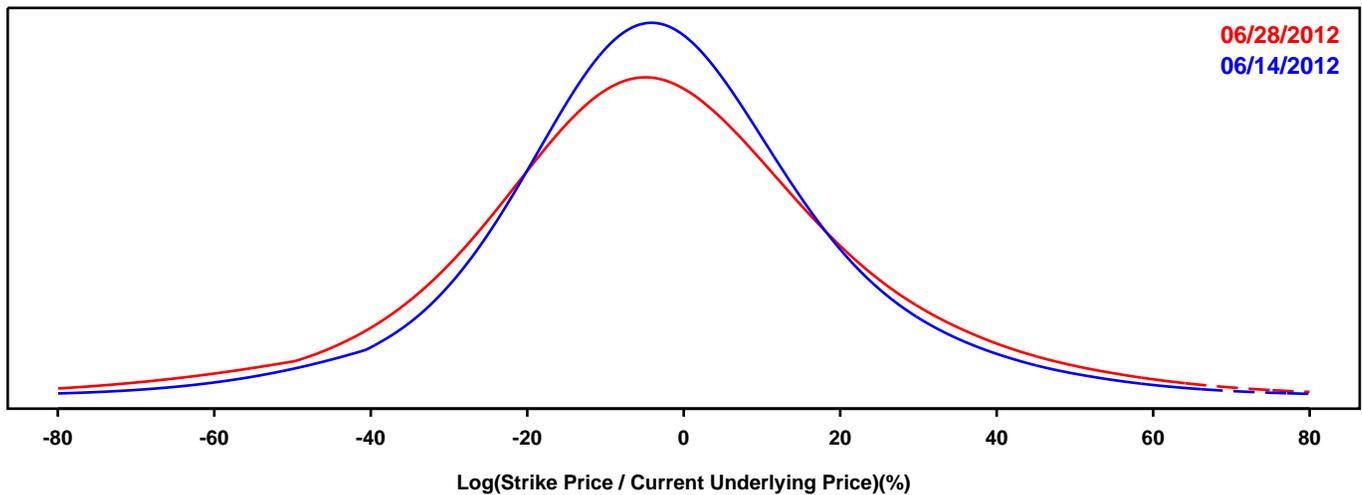
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Risk Neutral PDF of the Log Return Distribution

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Probability of a Large Change

Decrease <=20%   **Increase >= 20%**
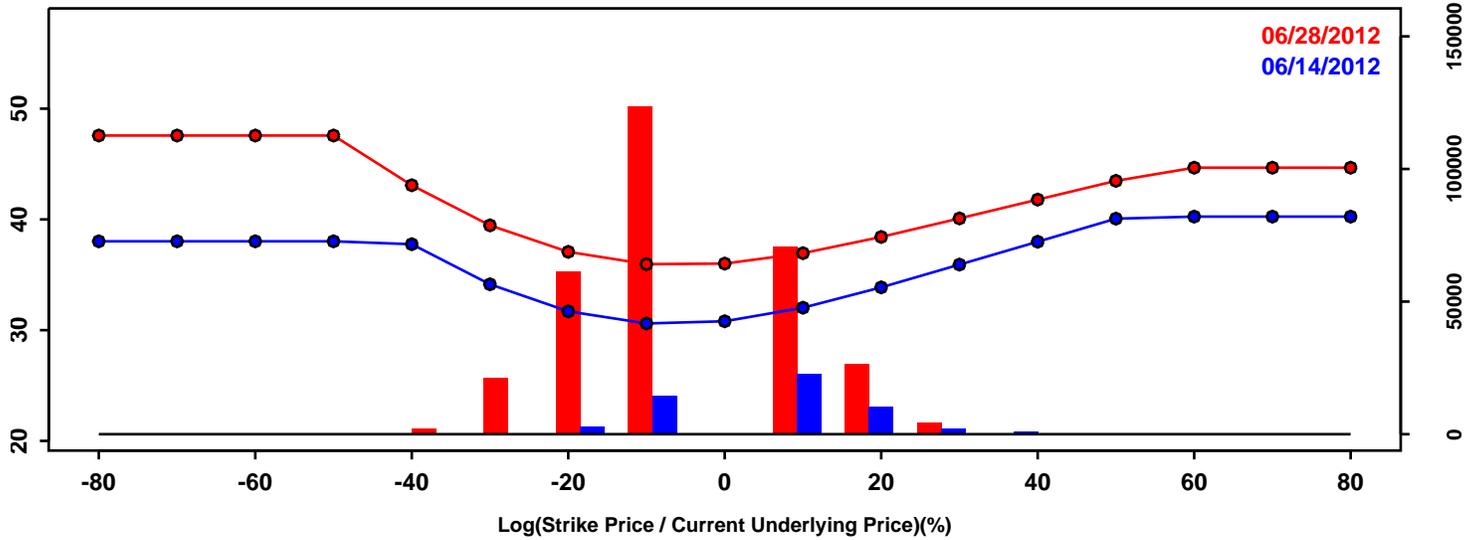
Statistics of the Log Return Distributions

	06/14/2012	06/28/2012	Change
10th Pct	-27.89%	-33.29%	-5.41%
50th Pct	-3.09%	-3.78%	-0.69%
90th Pct	24.13%	27.96%	3.83%
Mean	-2.50%	-3.41%	-0.91%
Std Dev	21.71%	25.50%	3.80%
Skew	0.10	-0.06	-0.17
Kurtosis	1.06	1.04	-0.02

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SOYBEAN FUTURES

*Log returns are based on the risk neutral density function of the underlying asset
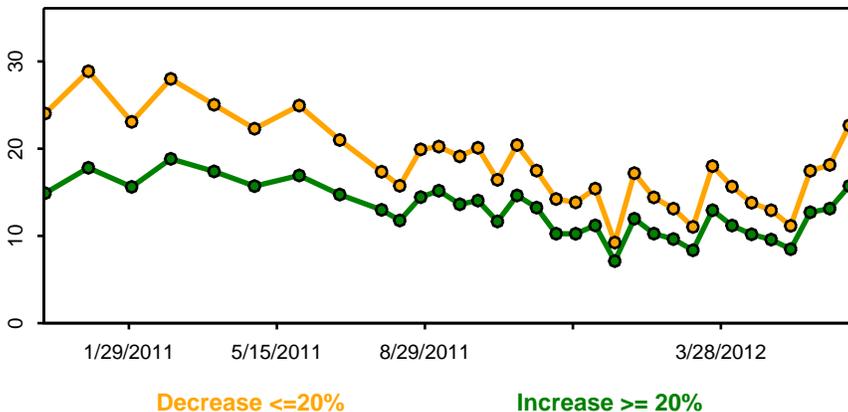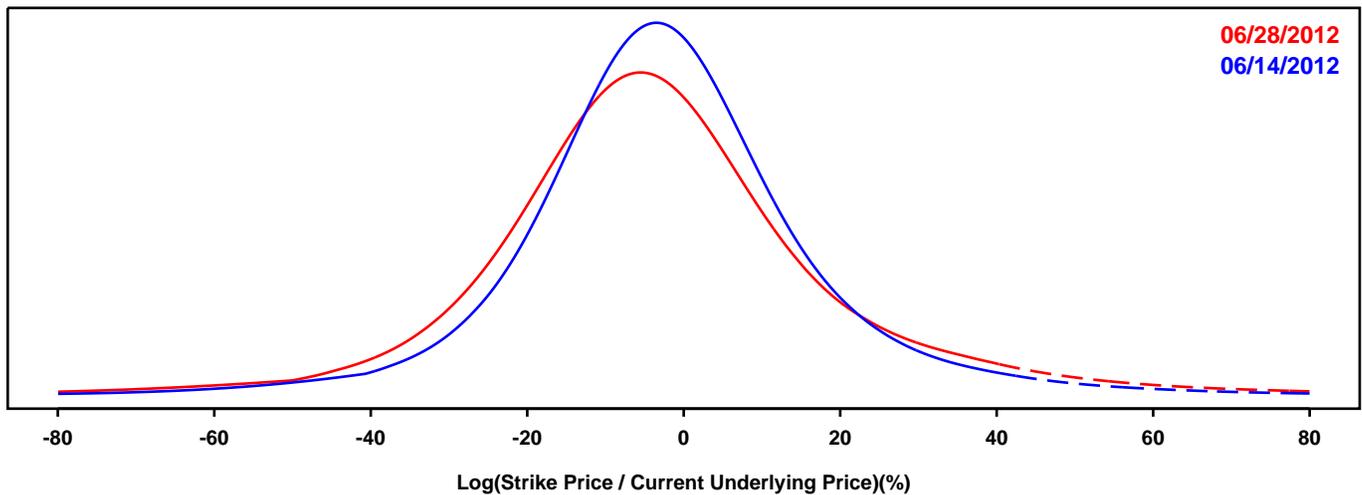derived from options that expire in approximately 6 months.*

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Risk Neutral PDF of the Log Return Distribution

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Probability of a Large Change

Decrease <=20%　　**Increase >= 20%**
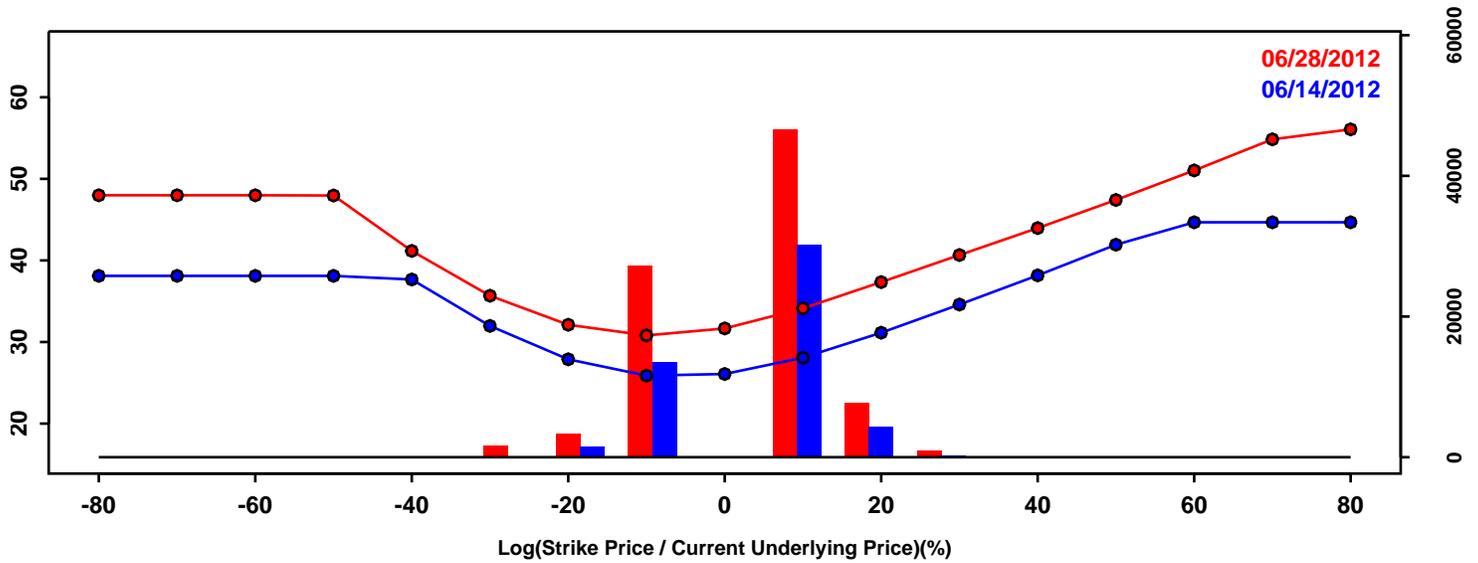
Statistics of the Log Return Distributions

	06/14/2012	06/28/2012	Change
10th Pct	-22.76%	-27.30%	-4.54%
50th Pct	-2.77%	-4.34%	-1.58%
90th Pct	19.49%	23.25%	3.76%
Mean	-2.11%	-3.22%	-1.10%
Std Dev	18.62%	22.16%	3.54%
Skew	0.22	0.22	0.00
Kurtosis	2.14	2.08	-0.07

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- WHEAT FUTURES

Log returns are based on the risk neutral density function of the underlying asset derived from options that expire in approximately 6 months.
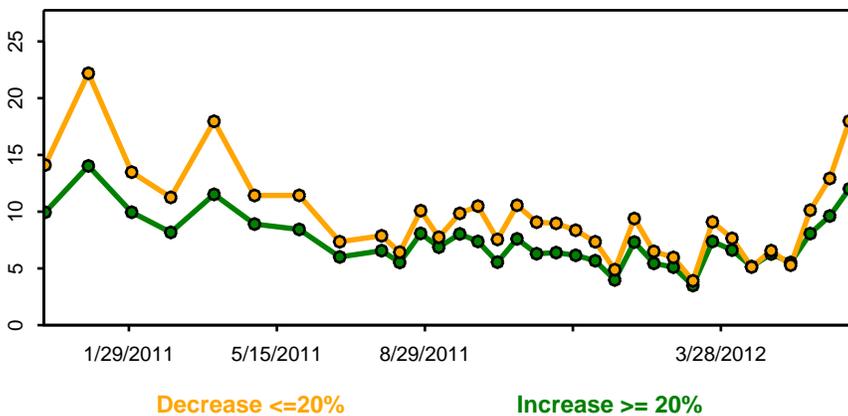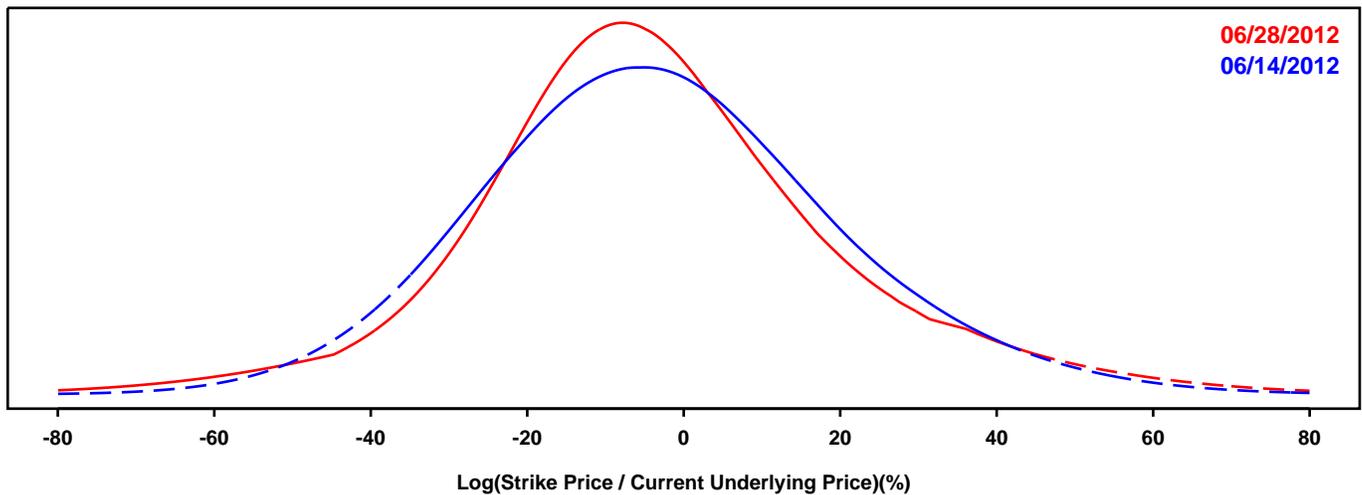
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Risk Neutral PDF of the Log Return Distribution

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Probability of a Large Change

Decrease <=20%   **Increase >= 20%**
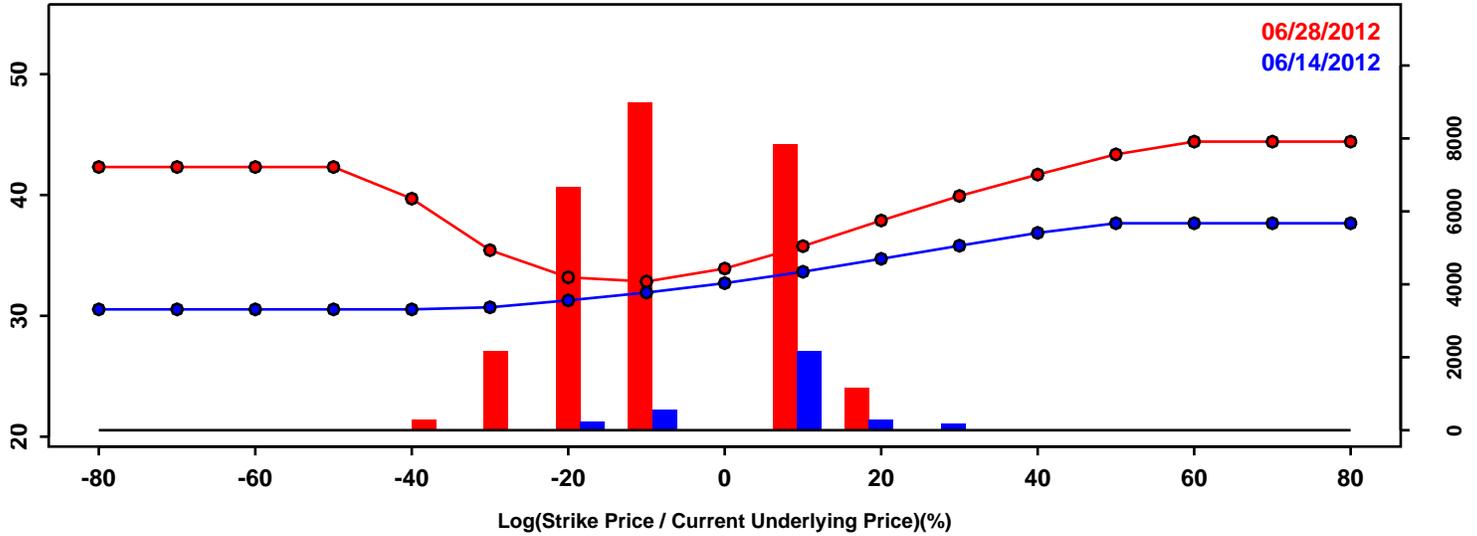
Statistics of the Log Return Distributions

	06/14/2012	06/28/2012	Change
10th Pct	-31.44%	-30.40%	1.04%
50th Pct	-4.06%	-5.09%	-1.03%
90th Pct	26.63%	26.70%	0.07%
Mean	-3.10%	-3.57%	-0.47%
Std Dev	22.87%	23.82%	0.95%
Skew	0.24	0.22	-0.02
Kurtosis	0.21	1.07	0.86

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- iSHARES DOW JONES US REAL ESTATE

Log returns are based on the risk neutral density function of the underlying asset
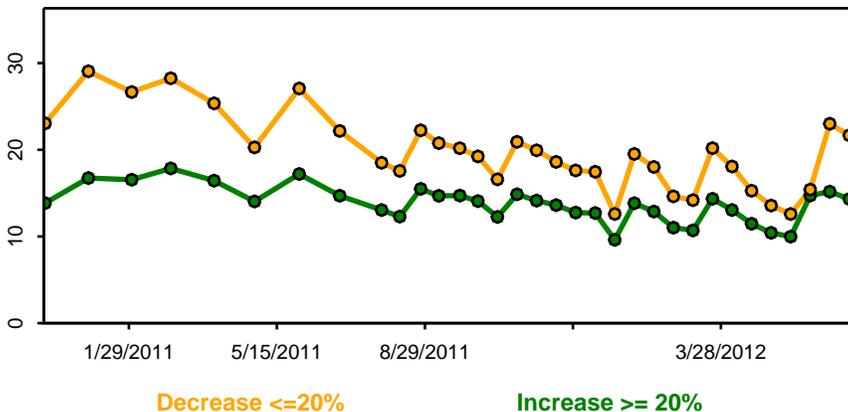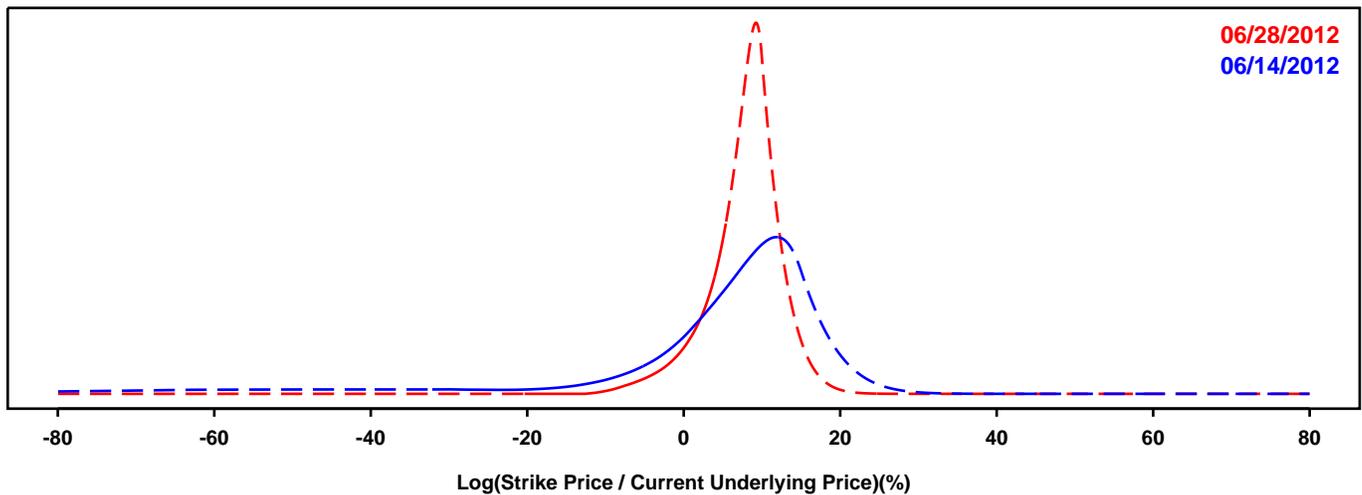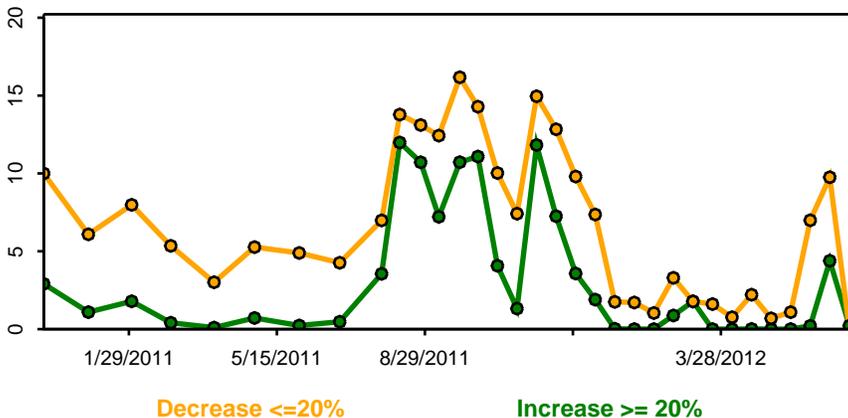*derived from options that expire in approximately 3 months.*

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Risk Neutral PDF of the Log Return Distribution

06/28/2012
06/14/2012

Log(Strike Price / Current Underlying Price)(%)

Probability of a Large Change

Decrease <=20%   **Increase >= 20%**
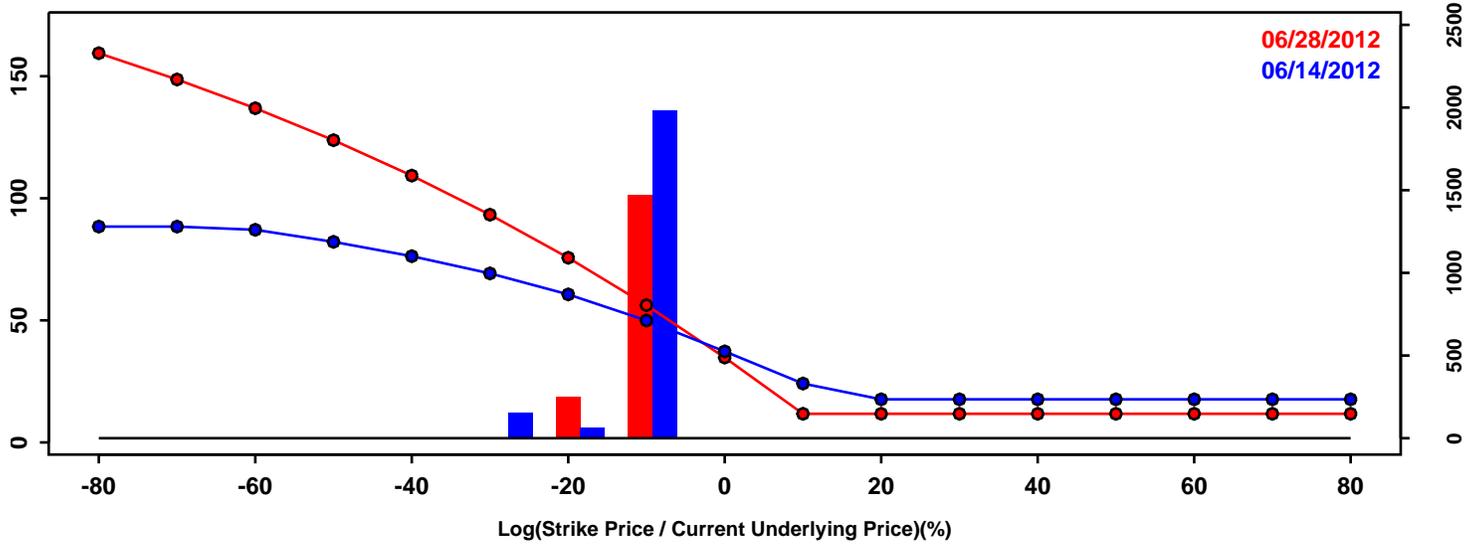
Statistics of the Log Return Distributions

	06/14/2012	06/28/2012	Change
10th Pct	-18.42%	1.91%	20.32%
50th Pct	8.45%	8.45%	0.00%
90th Pct	17.11%	12.83%	-4.28%
Mean	2.03%	7.87%	5.83%
Std Dev	22.25%	4.55%	-17.70%
Skew	-2.79%	-0.76	2.04
Kurtosis	8.64	1.43	-7.22