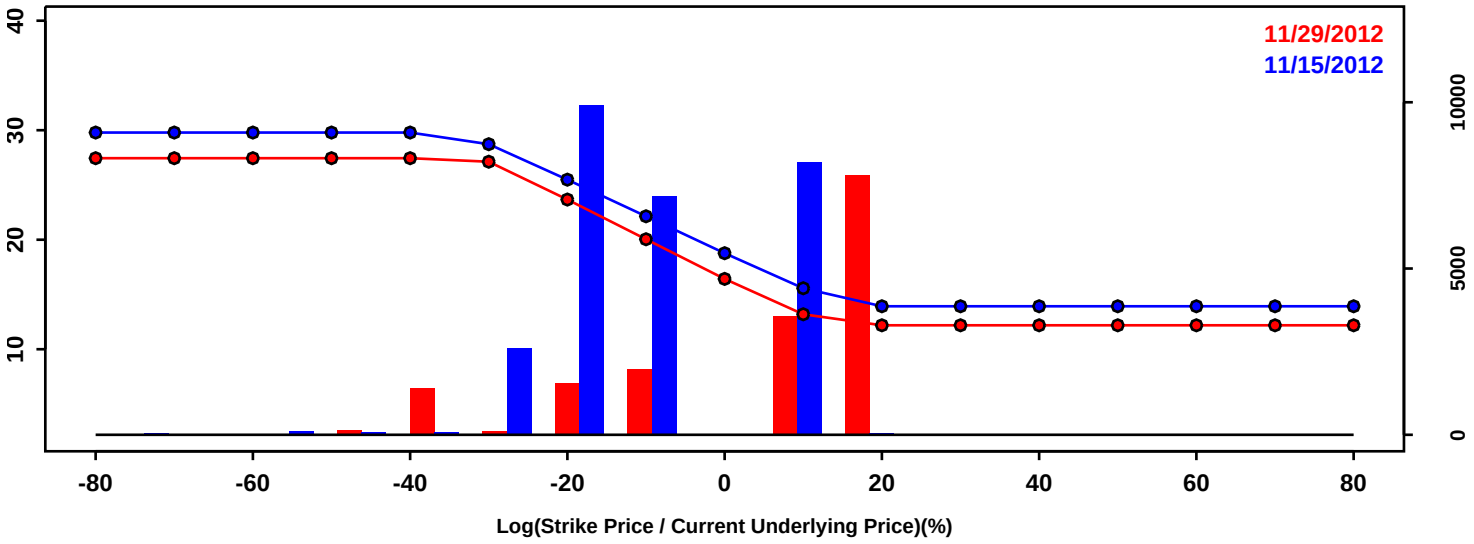
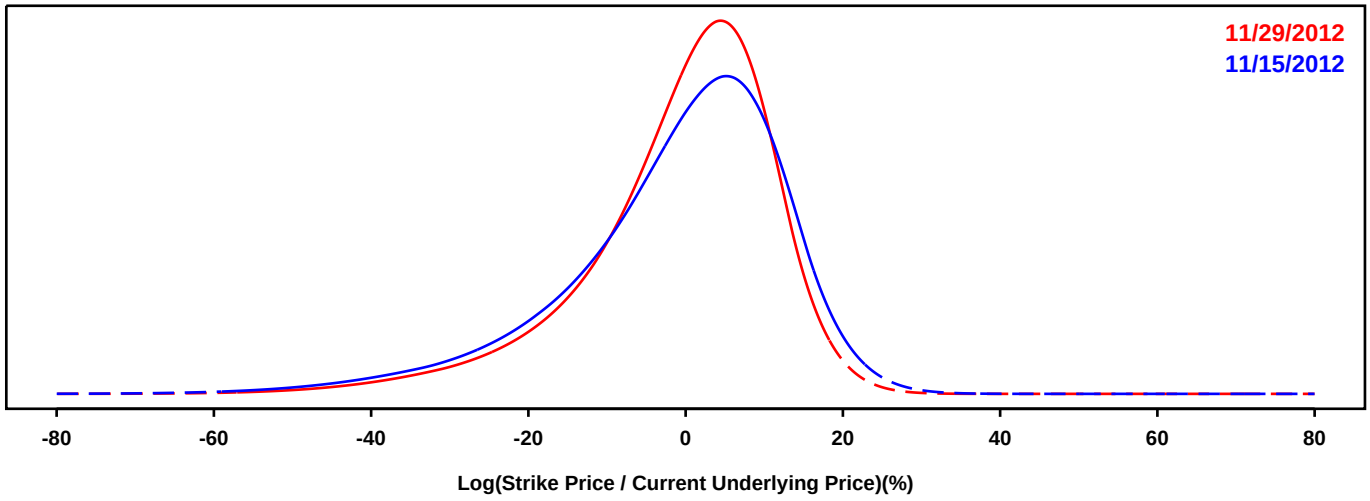
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

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

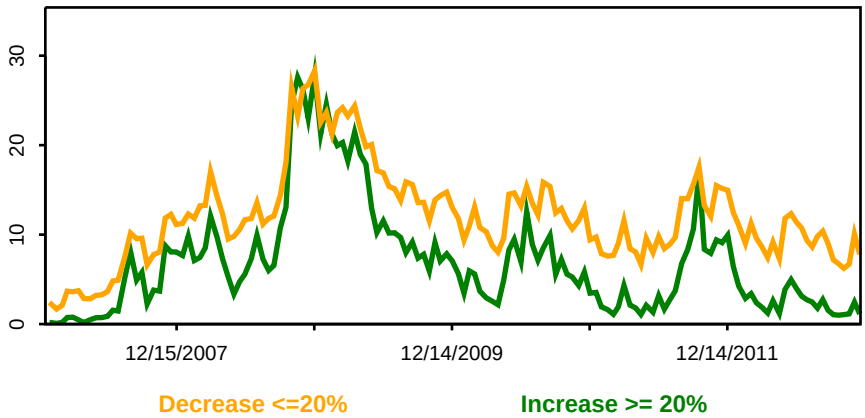
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



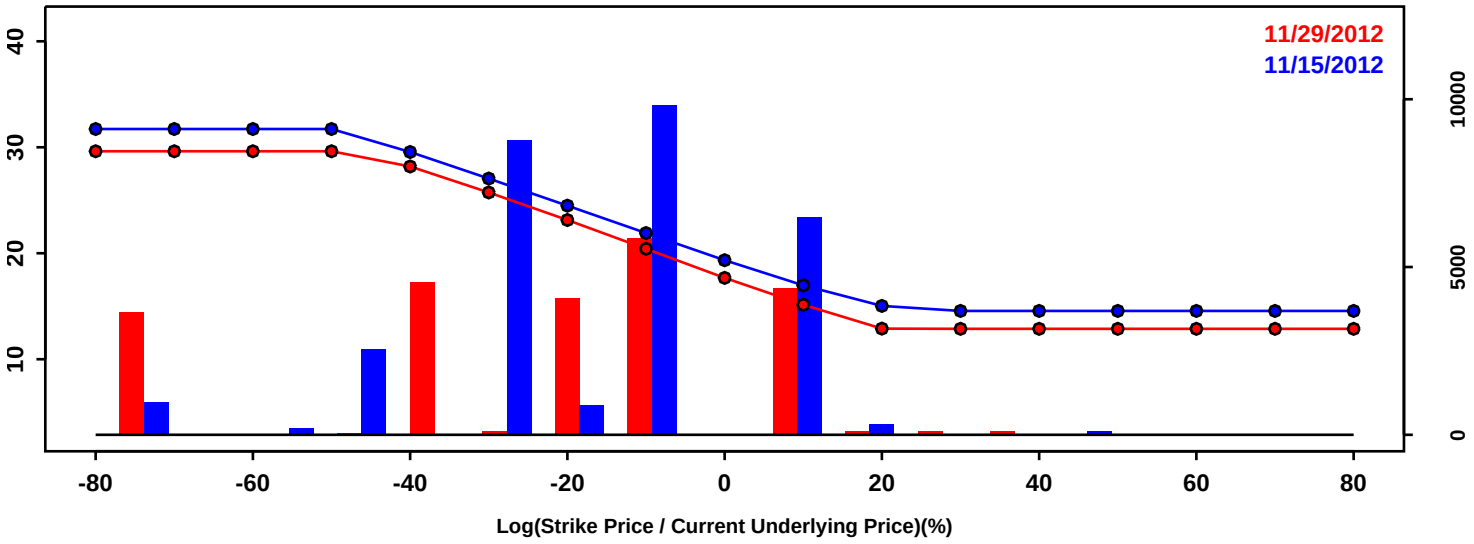
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-20.07%	-17.19%	2.87%
50th Pct	1.22%	1.30%	0.08%
90th Pct	13.95%	12.19%	-1.76%
Mean	-1.23%	-0.89%	0.33%
Std Dev	14.12%	12.37%	-1.75%
Skew	-1.04	-1.13	-0.10
Kurtosis	1.63	2.04	0.40

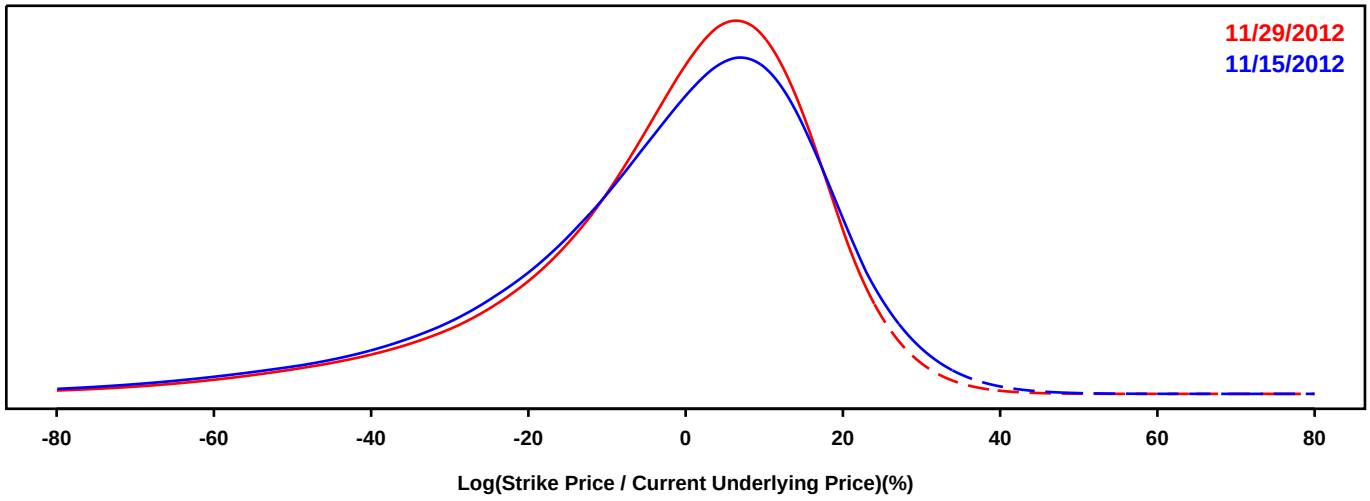
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

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)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change

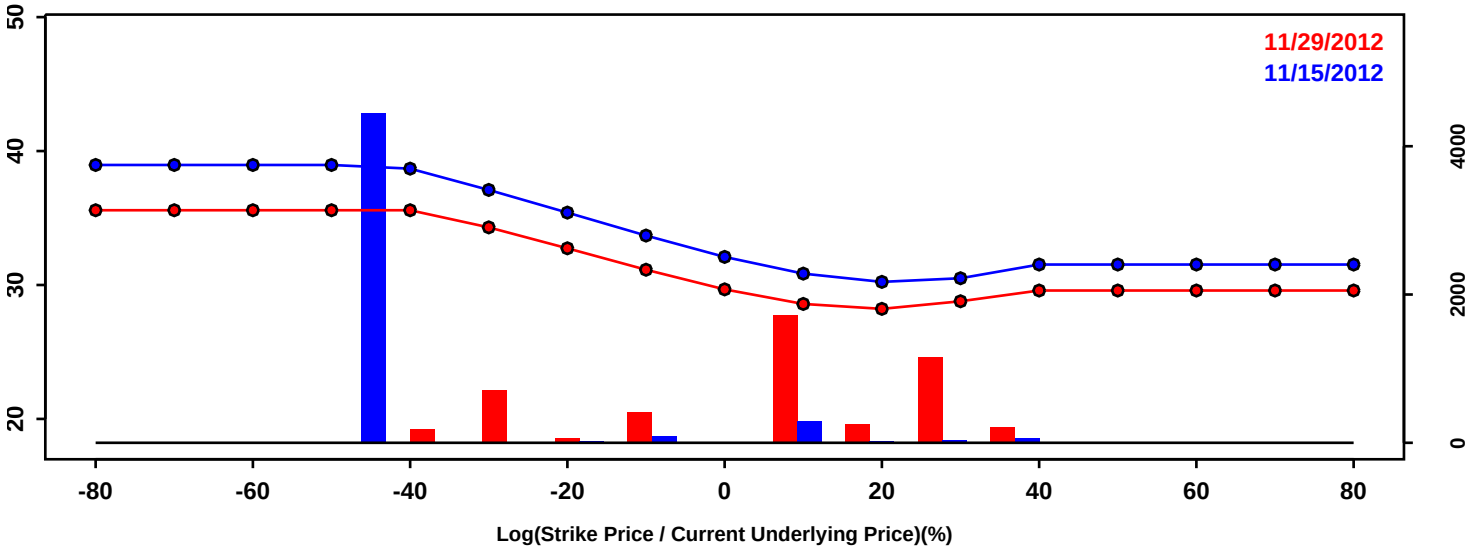
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-30.56%	-27.76%	2.80%
50th Pct	1.15%	1.59%	0.45%
90th Pct	19.39%	17.95%	-1.44%
Mean	-2.72%	-2.13%	0.59%
Std Dev	20.96%	19.26%	-1.70%
Skew	-1.12	-1.19	-0.08
Kurtosis	1.88	2.09	0.20

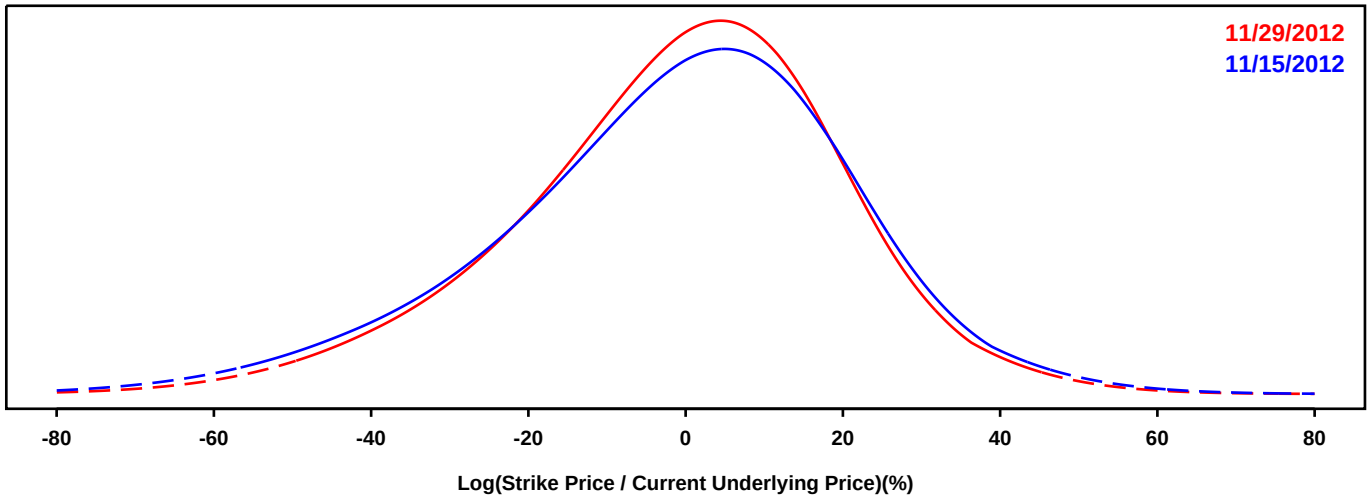
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES (WTI)

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

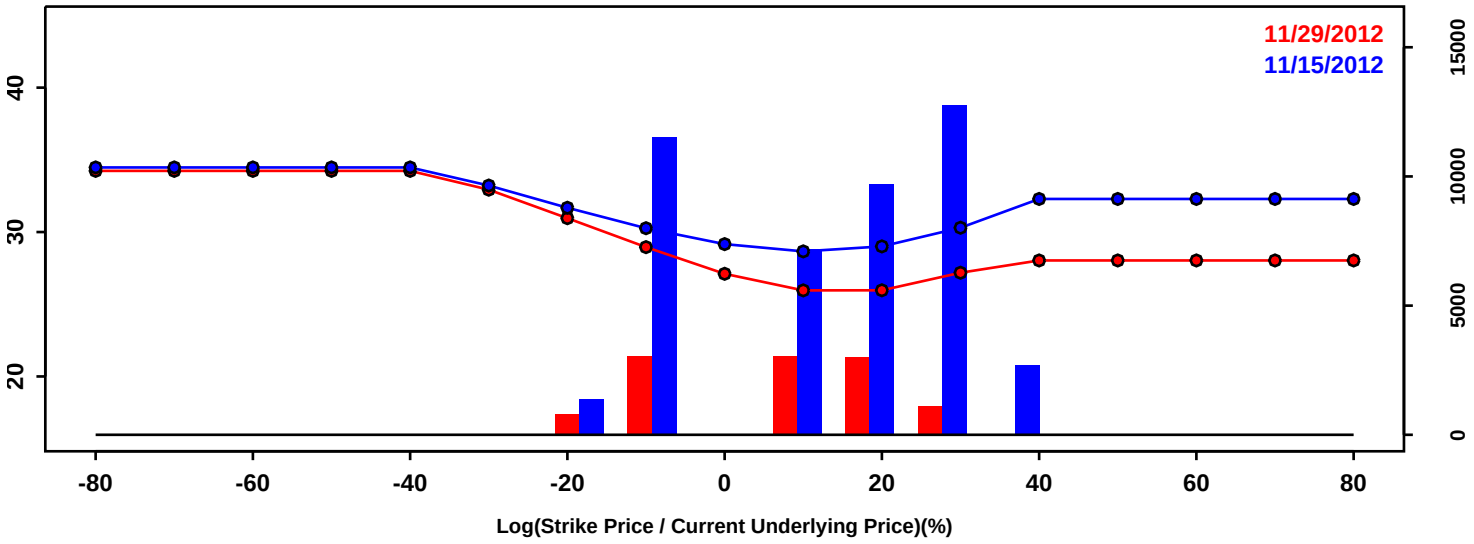
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-32.03%	-28.98%	3.05%
50th Pct	0.68%	0.77%	0.08%
90th Pct	25.42%	23.81%	-1.61%
Mean	-1.41%	-0.98%	0.43%
Std Dev	22.95%	21.09%	-1.85%
Skew	-0.43	-0.39	0.04
Kurtosis	0.49	0.47	-0.02

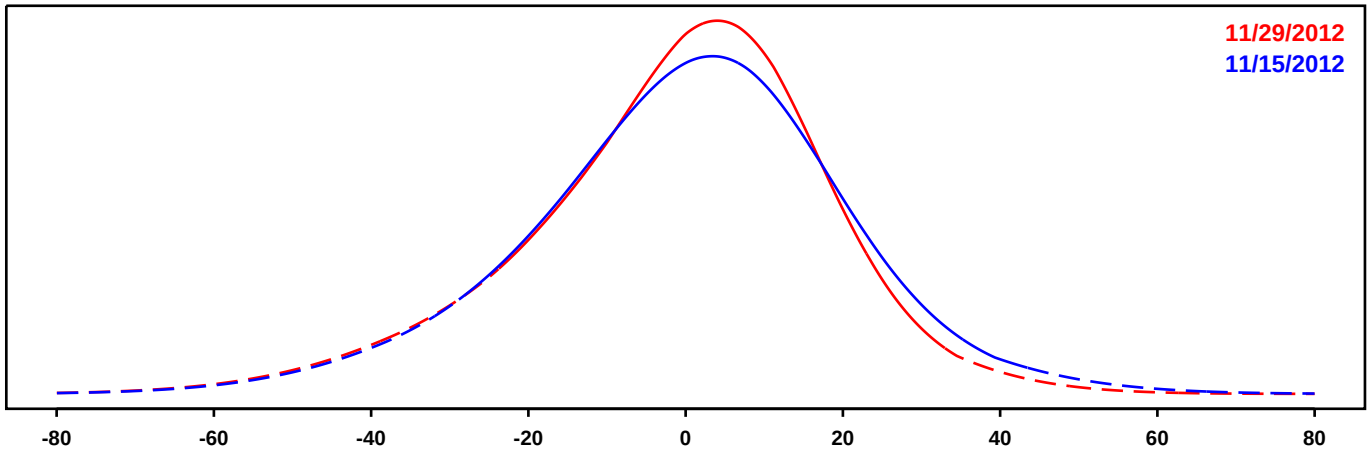
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES (Brent)

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

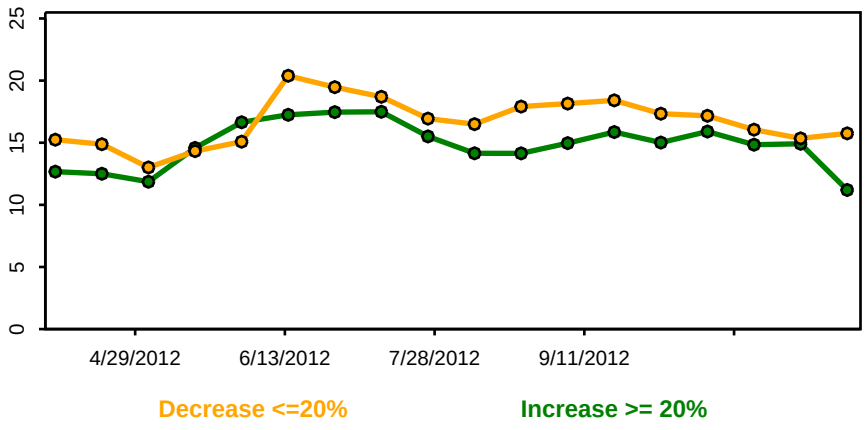
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



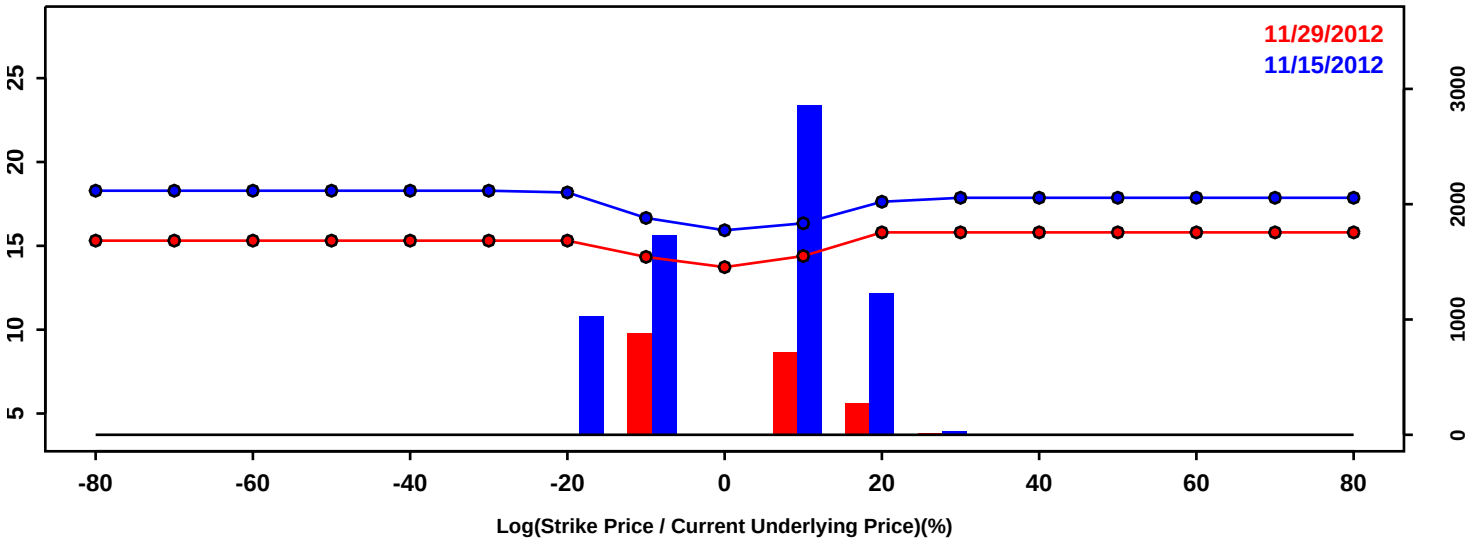
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-26.25%	-27.01%	-0.76%
50th Pct	1.18%	0.70%	-0.48%
90th Pct	24.58%	21.04%	-3.54%
Mean	0.16%	-1.22%	-1.37%
Std Dev	20.52%	19.39%	-1.12%
Skew	-0.23	-0.48	-0.25
Kurtosis	0.59	0.71	0.13

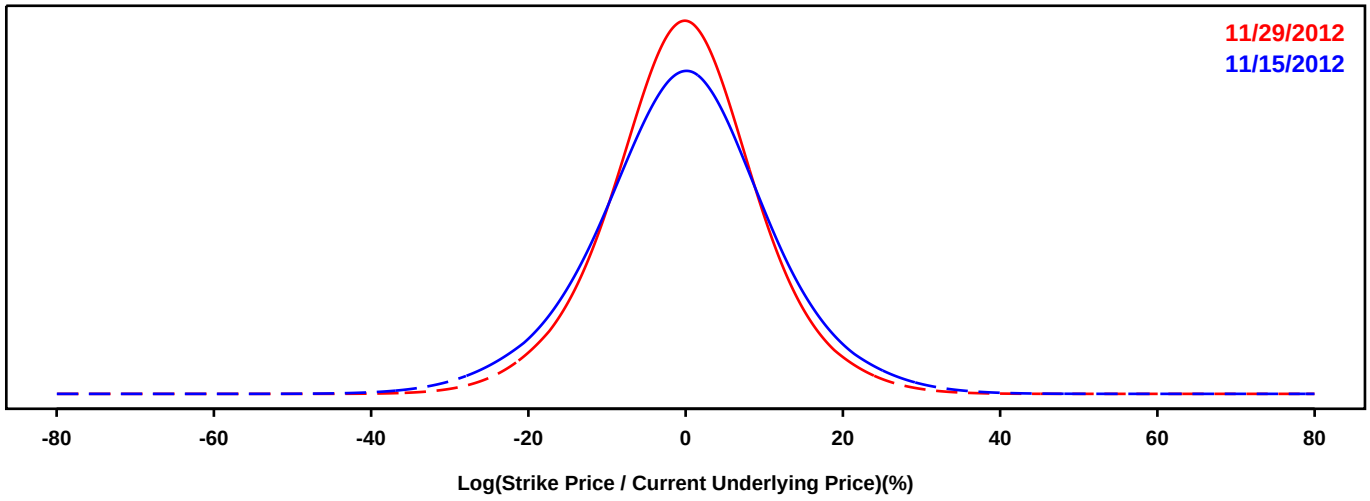
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- GOLD FUTURES

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

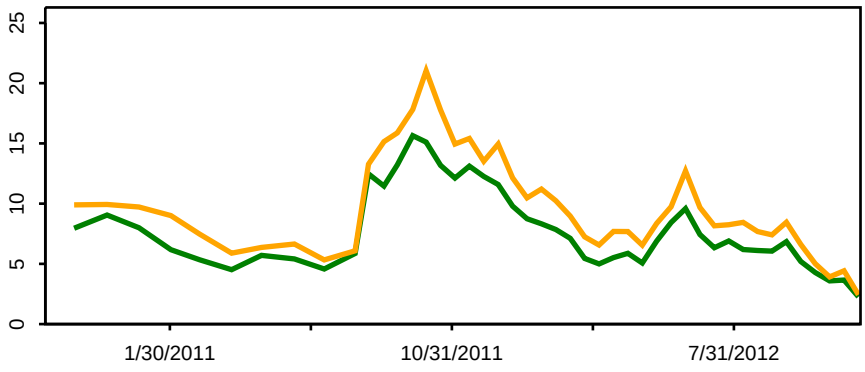
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <=20% Increase >= 20%

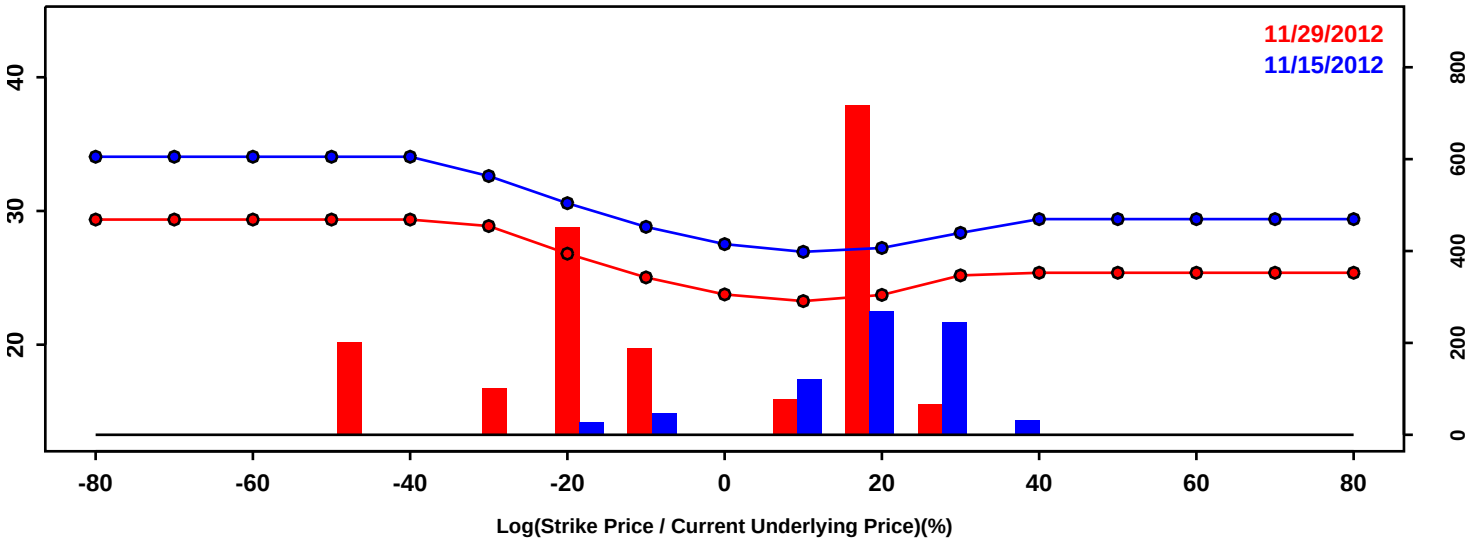
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-14.37%	-12.29%	2.08%
50th Pct	-0.16%	-0.17%	-0.01%
90th Pct	13.56%	11.80%	-1.76%
Mean	-0.27%	-0.16%	0.10%
Std Dev	11.25%	9.69%	-1.56%
Skew	-0.06	0.00	0.07
Kurtosis	0.54	0.52	-0.01

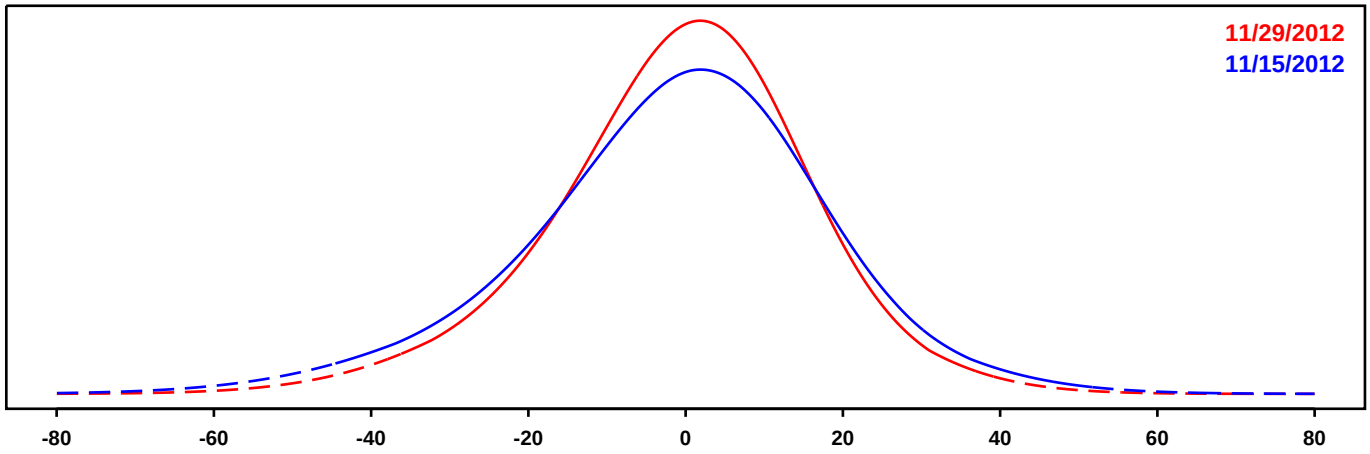
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SILVER FUTURES

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)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change

Decrease <=20% Increase >= 20%

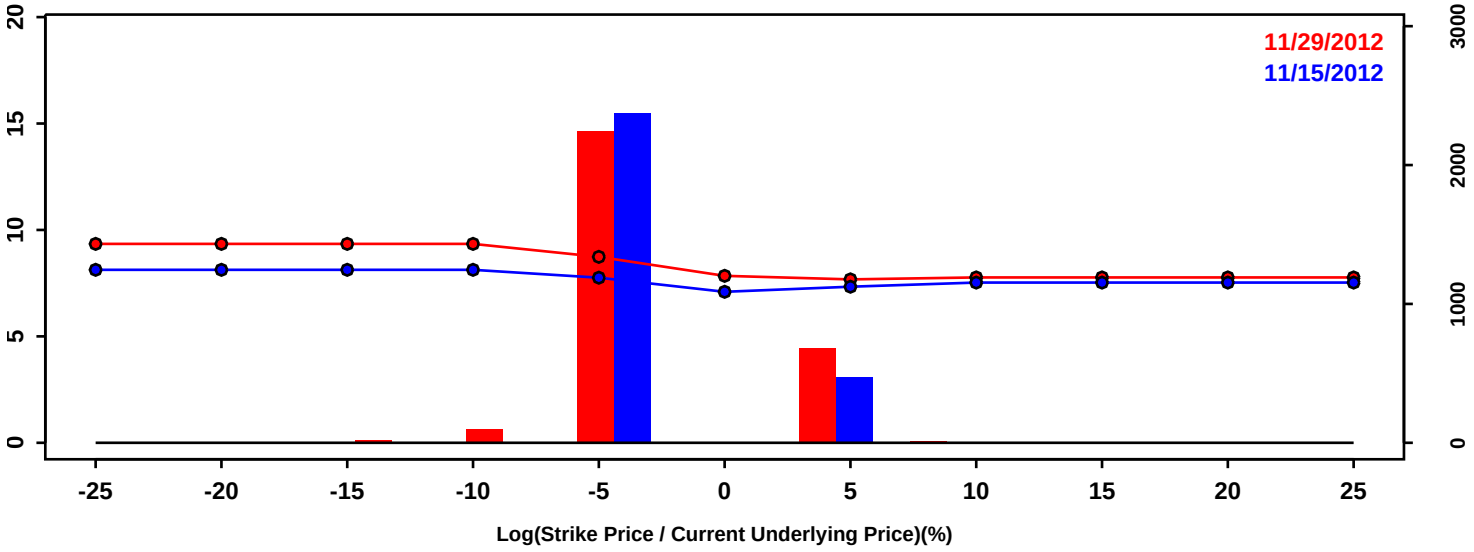
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-26.31%	-22.19%	4.11%
50th Pct	-0.05%	0.25%	0.30%
90th Pct	21.95%	19.41%	-2.54%
Mean	-1.18%	-0.64%	0.55%
Std Dev	19.56%	16.84%	-2.72%
Skew	-0.32	-0.30	0.02
Kurtosis	0.67	0.65	-0.02

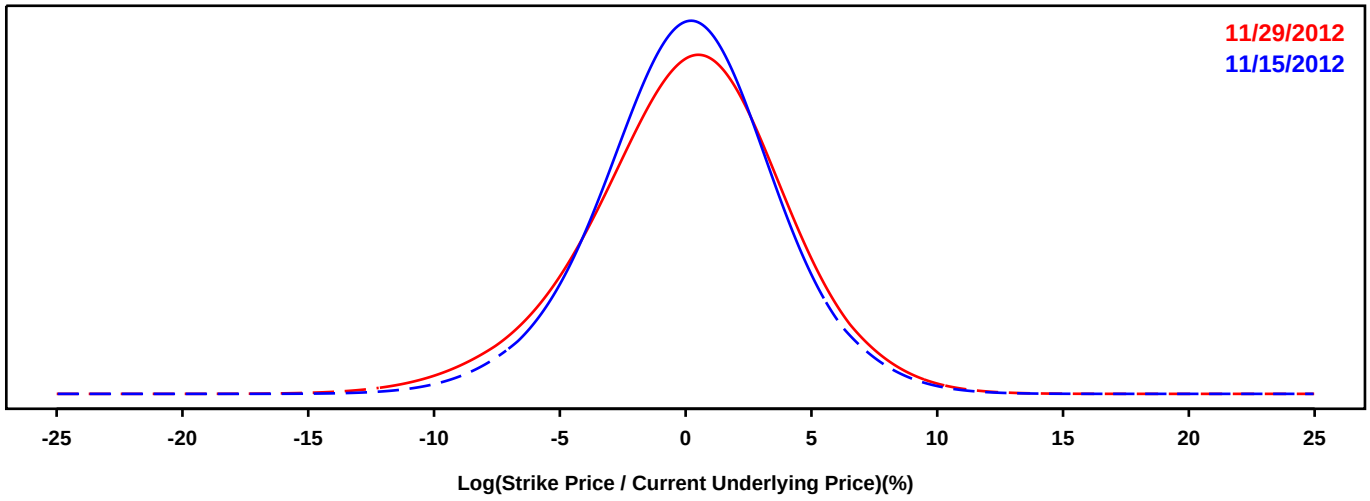
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-EURO EXCHANGE RATE FUTURES

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

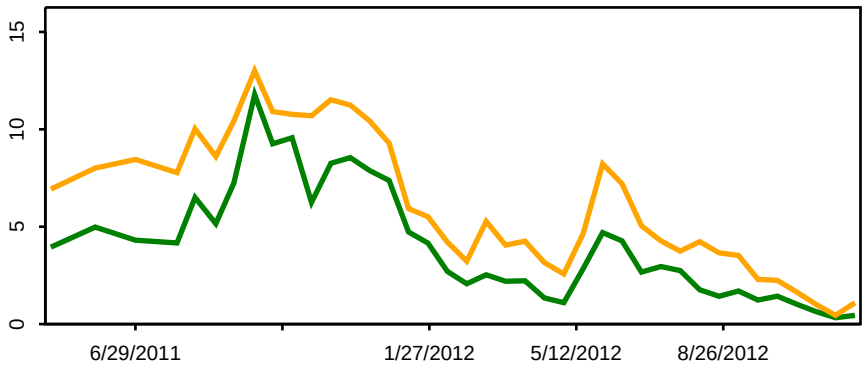
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <=10% Increase >= 10%

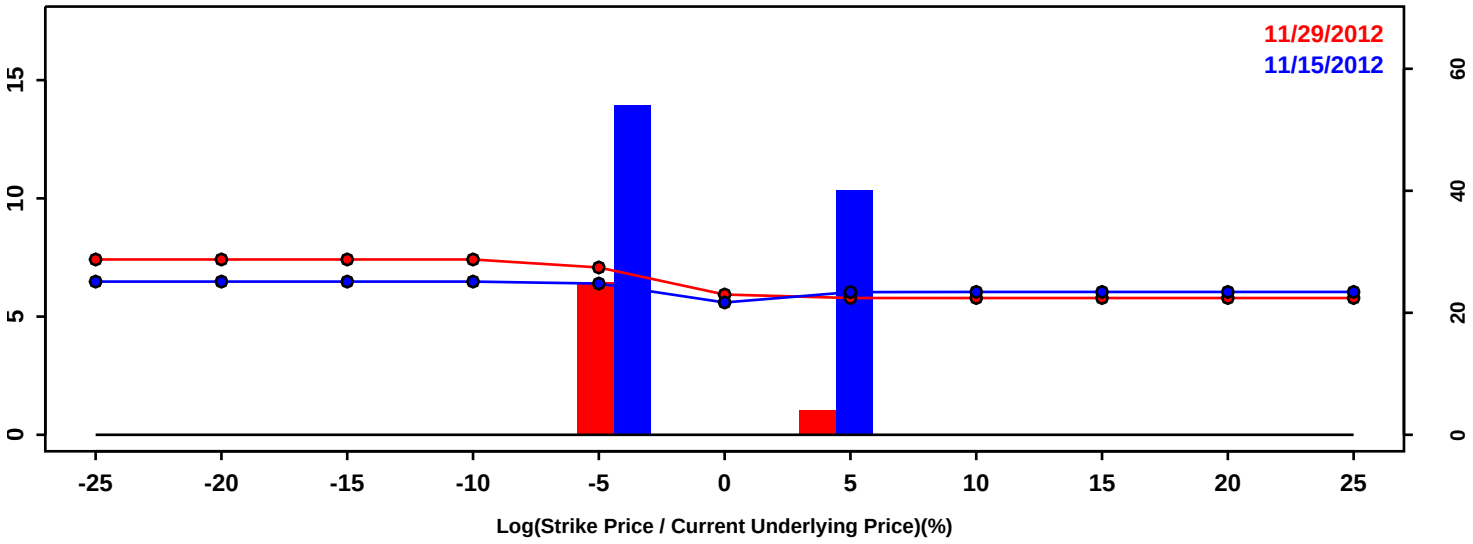
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-4.39%	-5.03%	-0.65%
50th Pct	0.09%	0.21%	0.12%
90th Pct	4.48%	4.78%	0.31%
Mean	0.11%	0.04%	-0.07%
Std Dev	3.54%	3.92%	0.39%
Skew	-0.10	-0.26	-0.16
Kurtosis	0.40	0.43	0.02

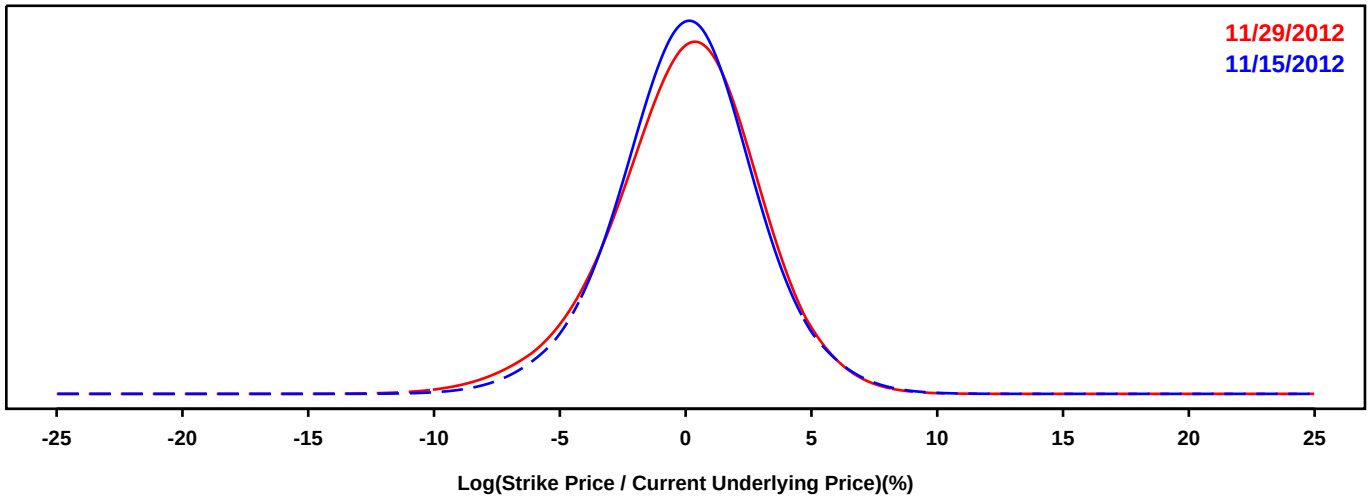
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-POUND EXCHANGE RATE FUTURES

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

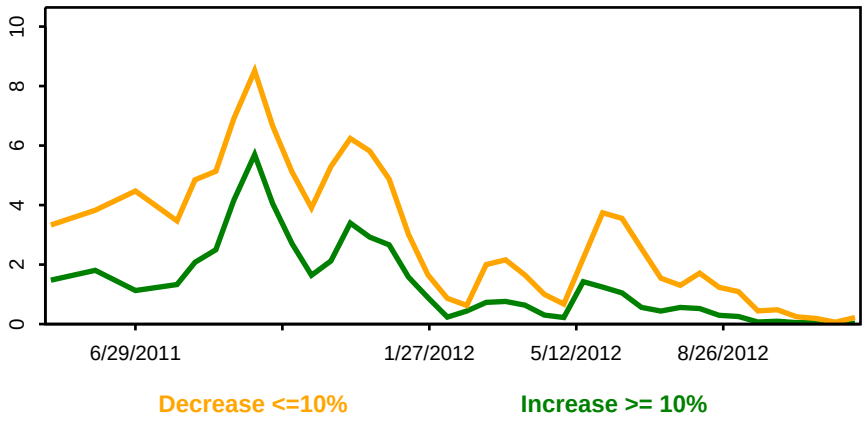
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



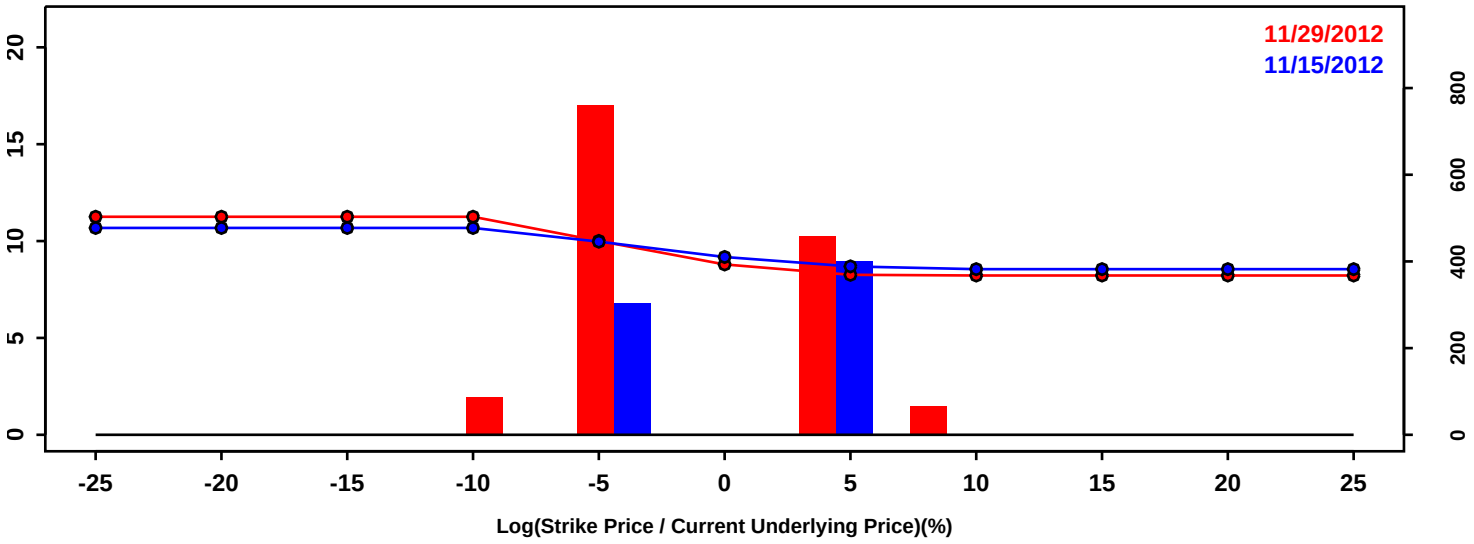
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-3.47%	-3.83%	-0.36%
50th Pct	0.09%	0.13%	0.04%
90th Pct	3.50%	3.56%	0.06%
Mean	0.09%	-0.01%	-0.10%
Std Dev	2.79%	2.97%	0.18%
Skew	-0.09	-0.32	-0.24
Kurtosis	0.46	0.54	0.08

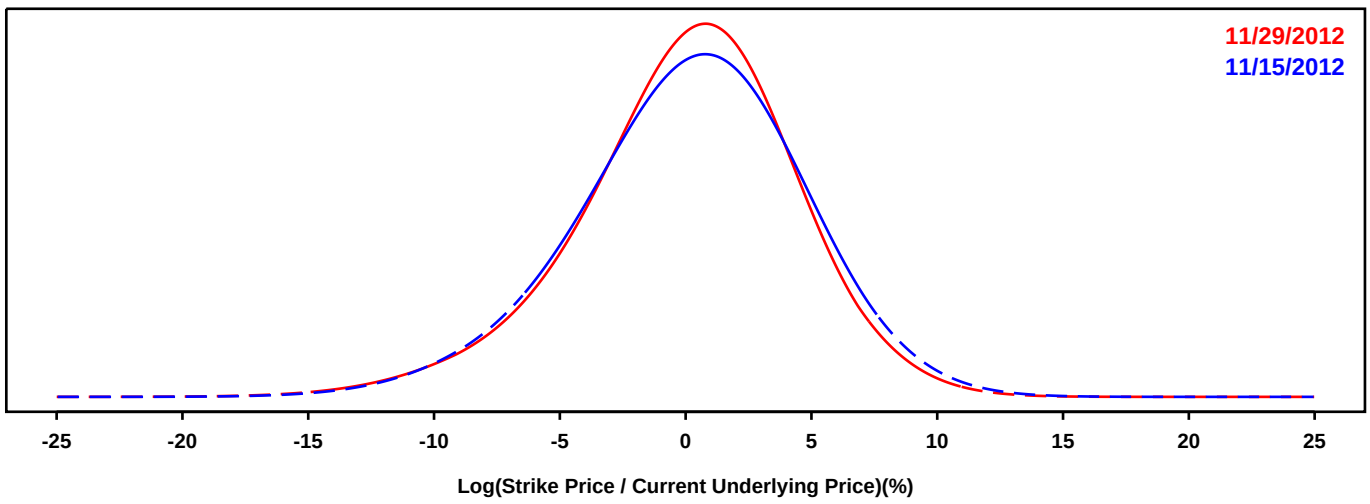
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- YEN-DOLLAR EXCHANGE RATE FUTURES

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

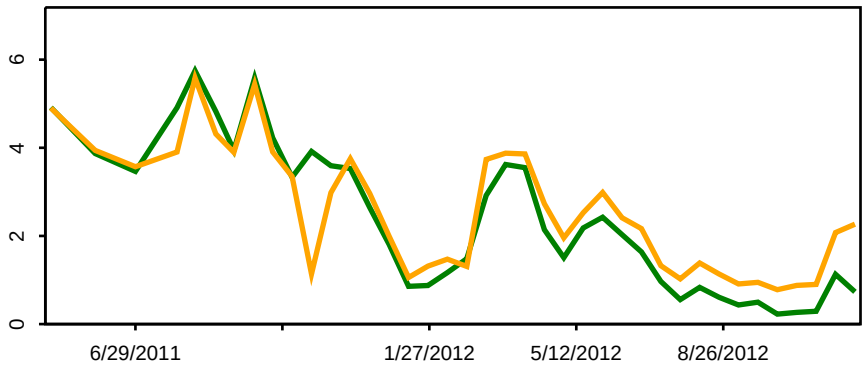
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <=10% Increase >= 10%

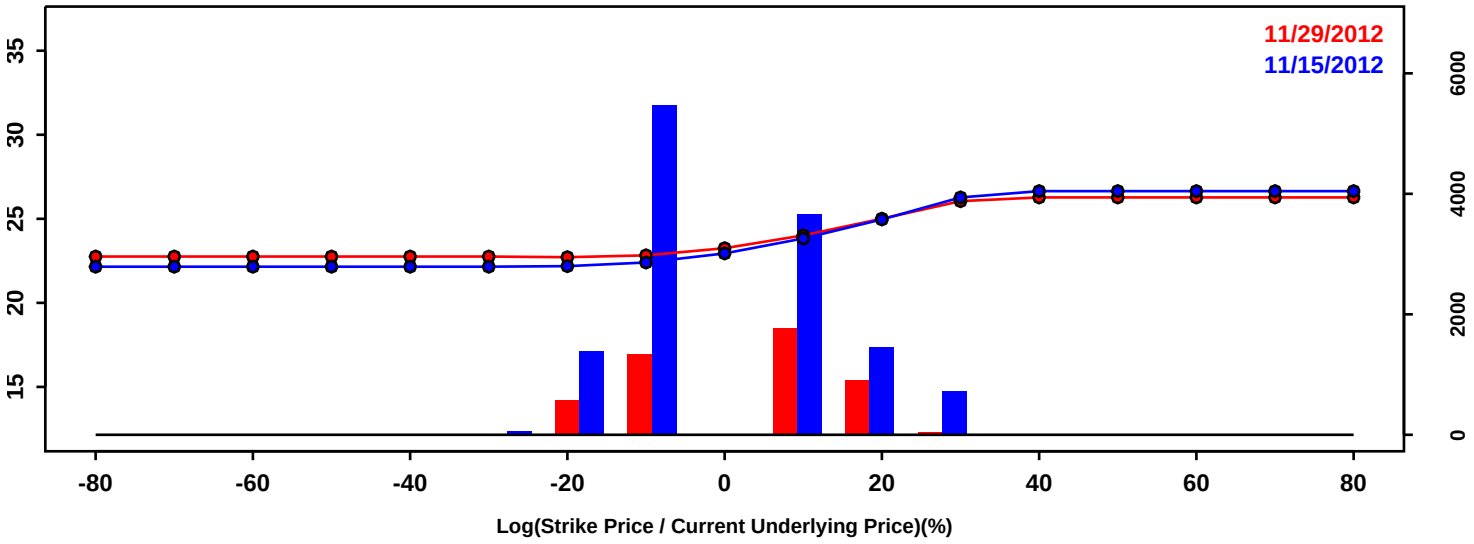
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-5.78%	-5.67%	0.11%
50th Pct	0.36%	0.30%	-0.06%
90th Pct	5.80%	5.31%	-0.49%
Mean	0.21%	0.03%	-0.17%
Std Dev	4.58%	4.41%	-0.17%
Skew	-0.27	-0.42	-0.14
Kurtosis	0.27	0.61	0.34

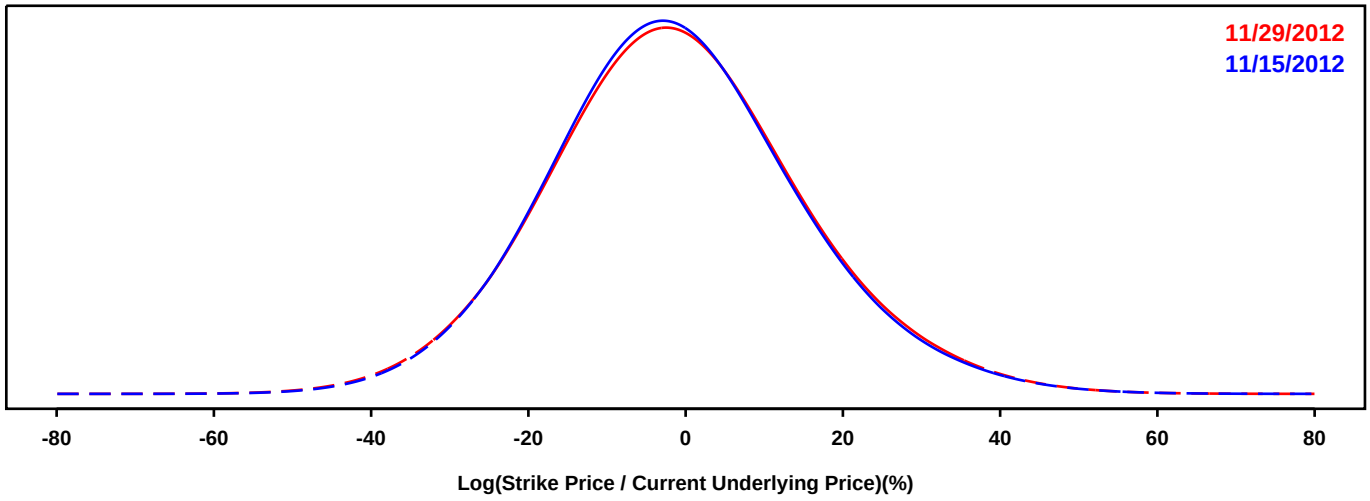
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CORN FUTURES

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

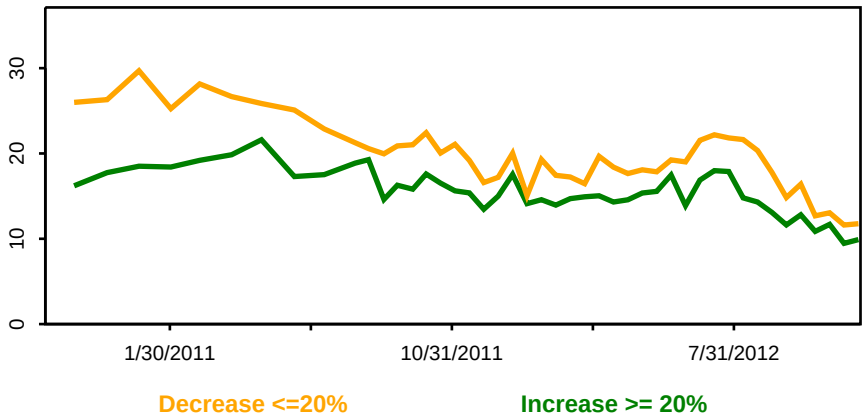
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



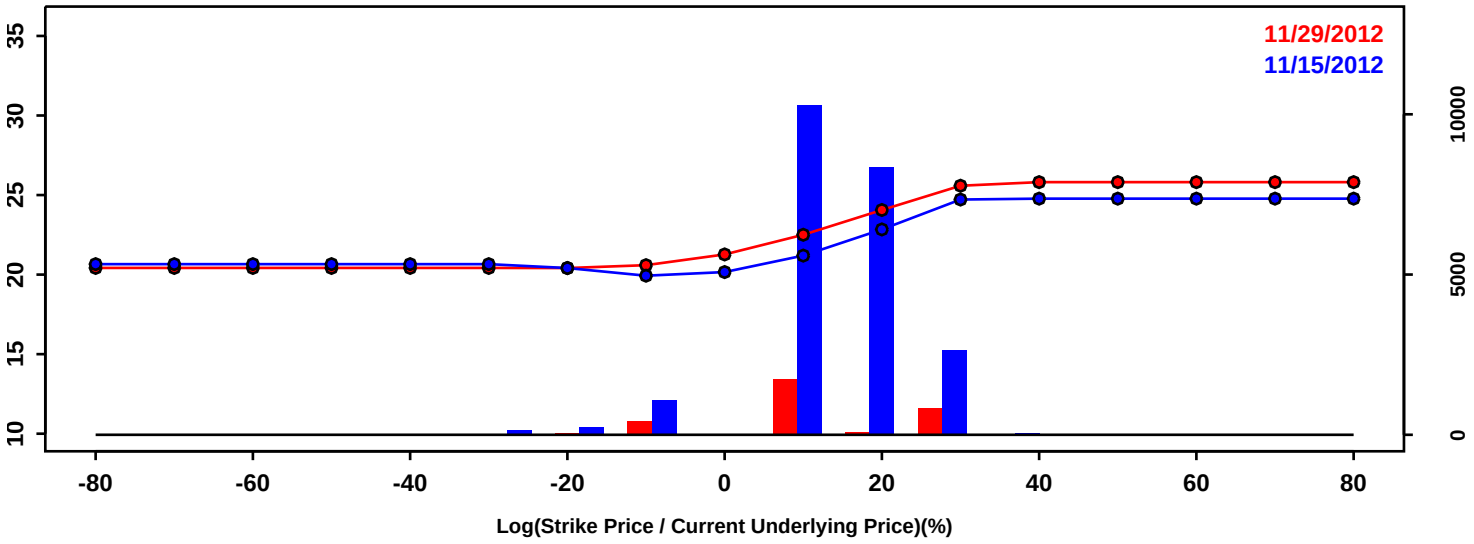
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-21.31%	-21.52%	-0.21%
50th Pct	-1.91%	-1.64%	0.26%
90th Pct	19.40%	19.93%	0.53%
Mean	-1.32%	-1.14%	0.18%
Std Dev	16.14%	16.38%	0.24%
Skew	0.21	0.18	-0.04
Kurtosis	0.30	0.26	-0.04

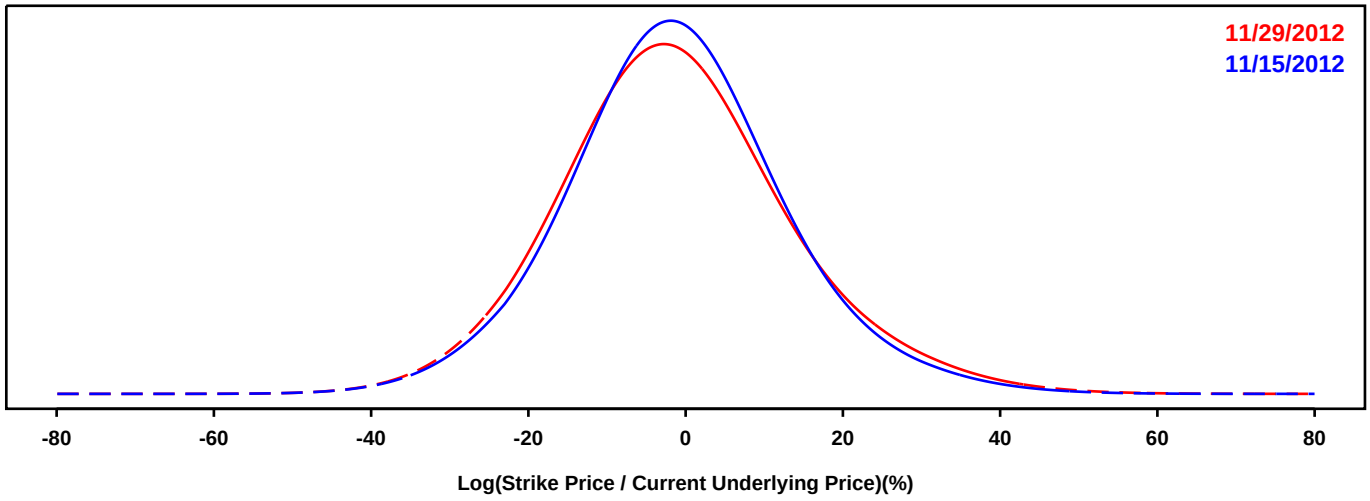
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SOYBEAN FUTURES

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)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change

Decrease <=20% Increase >= 20%

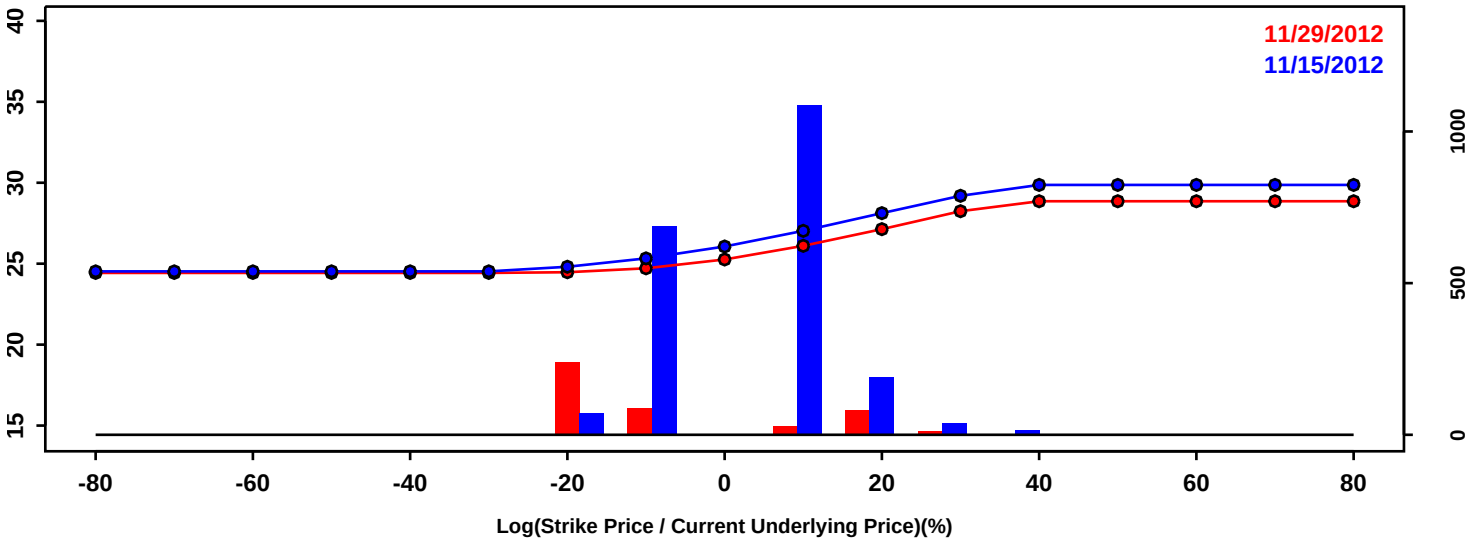
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-18.45%	-19.37%	-0.92%
50th Pct	-1.43%	-1.80%	-0.37%
90th Pct	16.68%	18.13%	1.45%
Mean	-1.04%	-1.08%	-0.03%
Std Dev	14.14%	14.98%	0.84%
Skew	0.19	0.30	0.11
Kurtosis	0.55	0.46	-0.09

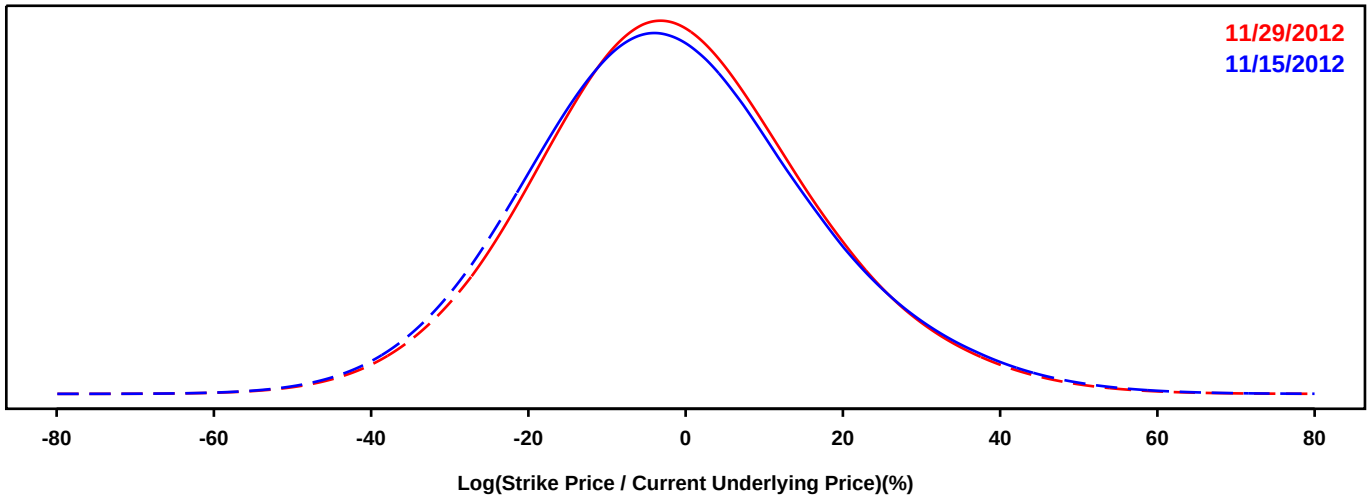
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- WHEAT FUTURES

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

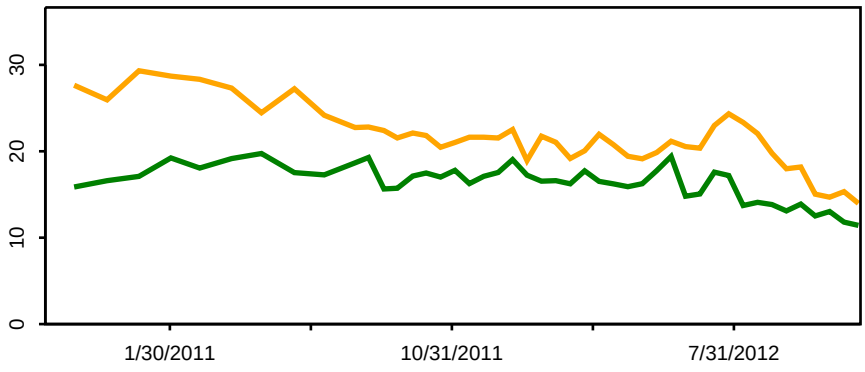
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <=20% Increase >= 20%

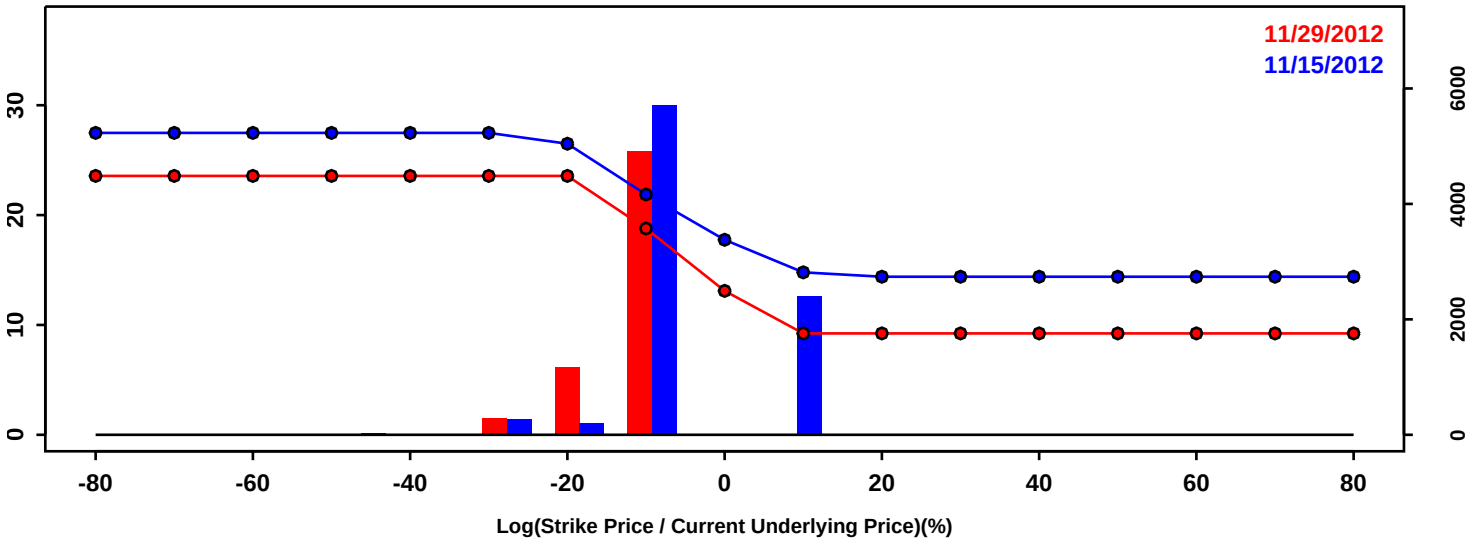
Statistics of the Log Return Distributions

	11/15/2012	11/29/2012	Change
10th Pct	-24.36%	-23.40%	0.97%
50th Pct	-2.54%	-2.00%	0.54%
90th Pct	22.04%	21.57%	-0.47%
Mean	-1.73%	-1.35%	0.38%
Std Dev	18.32%	17.78%	-0.54%
Skew	0.25	0.20	-0.05
Kurtosis	0.26	0.27	0.01

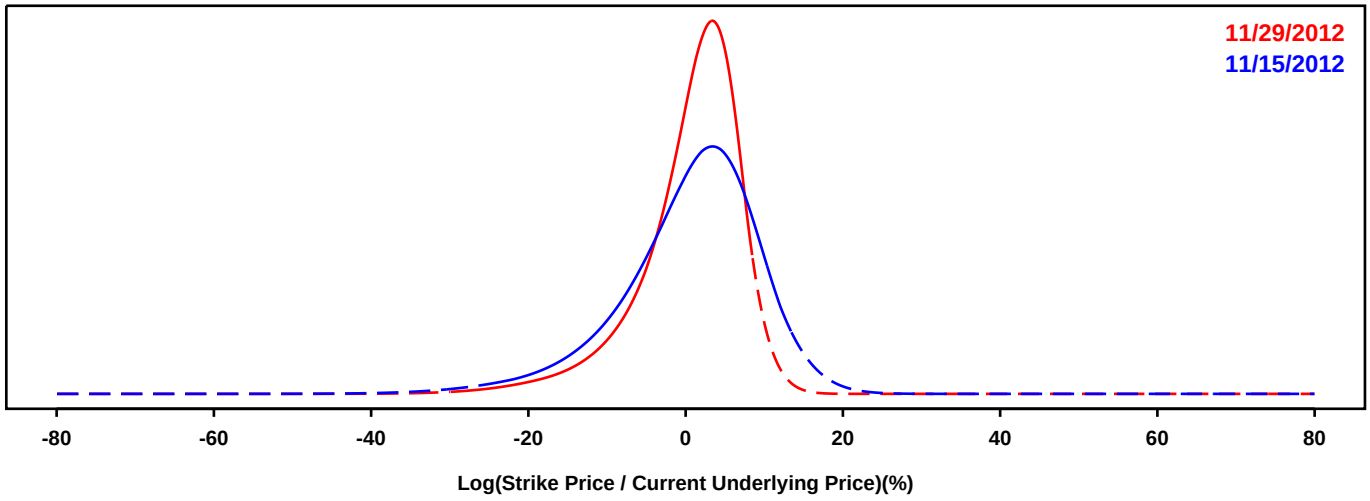
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- iSHARES DOW JONES US REAL ESTATE

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

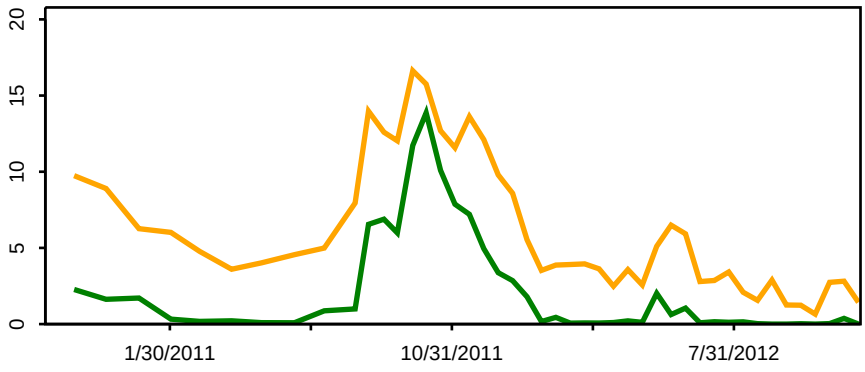
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



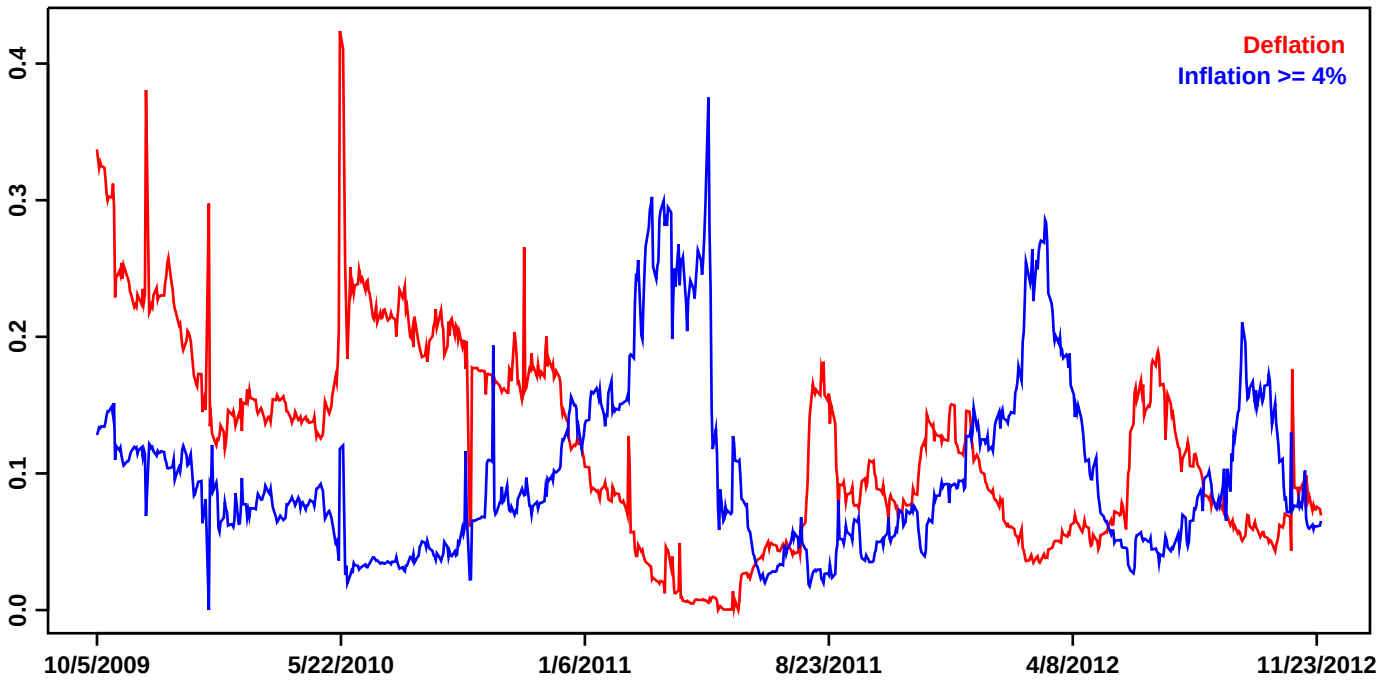
Decrease <=20% Increase >= 20%

Statistics of the Log Return Distributions

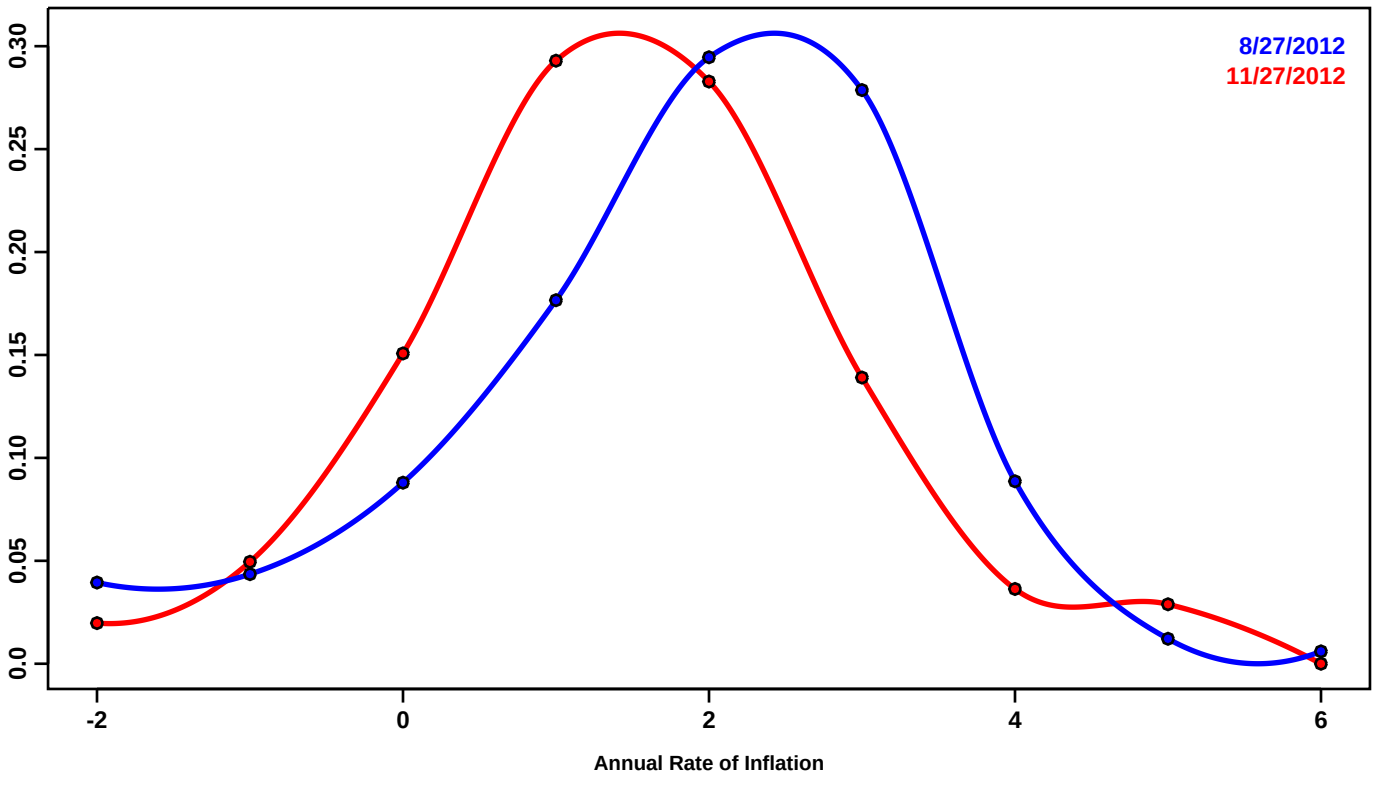
	11/15/2012	11/29/2012	Change
10th Pct	-10.98%	-7.97%	3.01%
50th Pct	1.67%	1.79%	0.12%
90th Pct	10.52%	7.42%	-3.11%
Mean	0.56%	0.57%	0.00%
Std Dev	8.90%	6.67%	-2.23%
Skew	-0.85	-1.31	-0.46
Kurtosis	1.49	2.87	1.38

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- Inflation Caps & Floors

Probabilty of Deflation and High Inflation over the Next Year



Risk Neutral Density Function for Inflation over the Next Year



RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- Inflation Caps & Floors

Probabilty of Deflation and High Inflation over the Next 5 Years