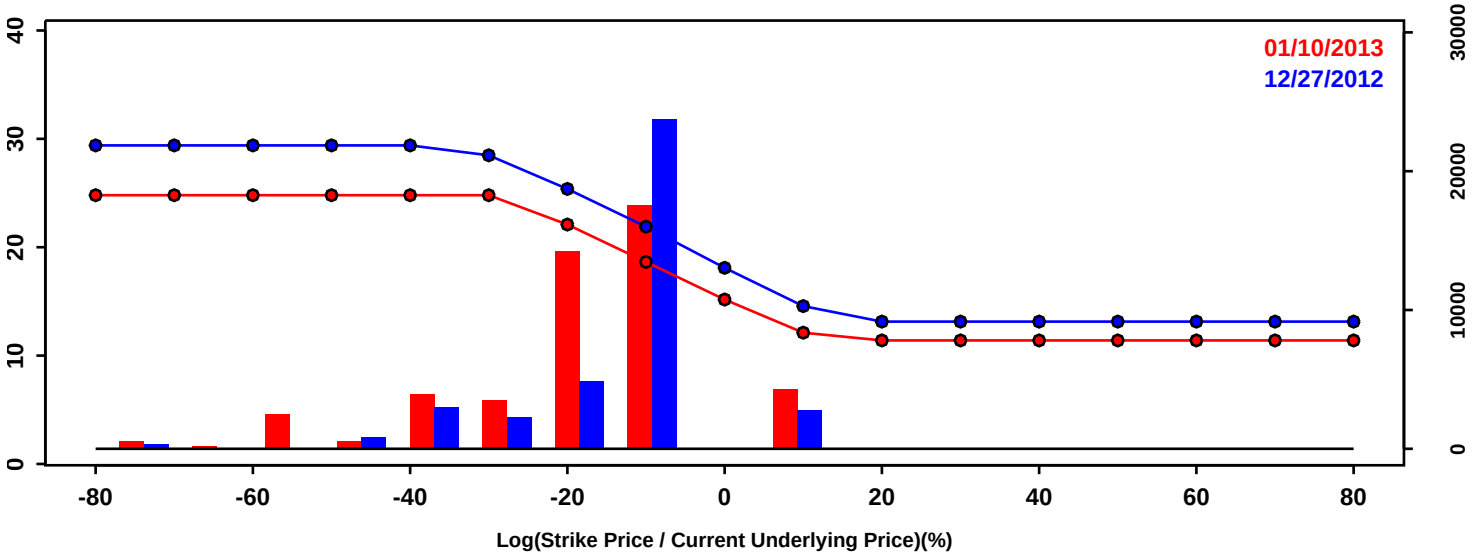
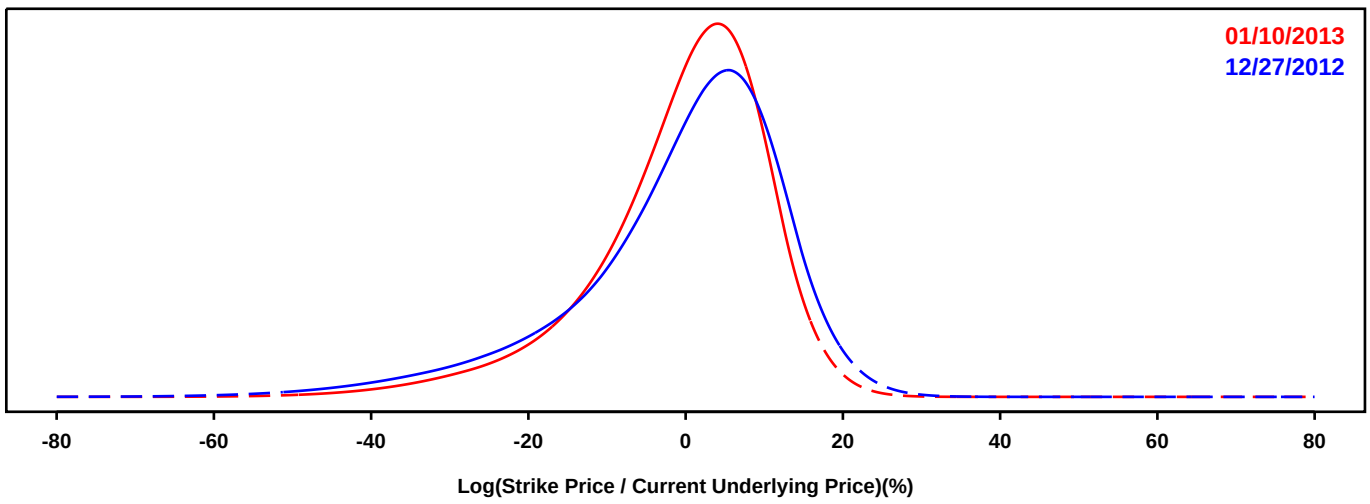
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

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

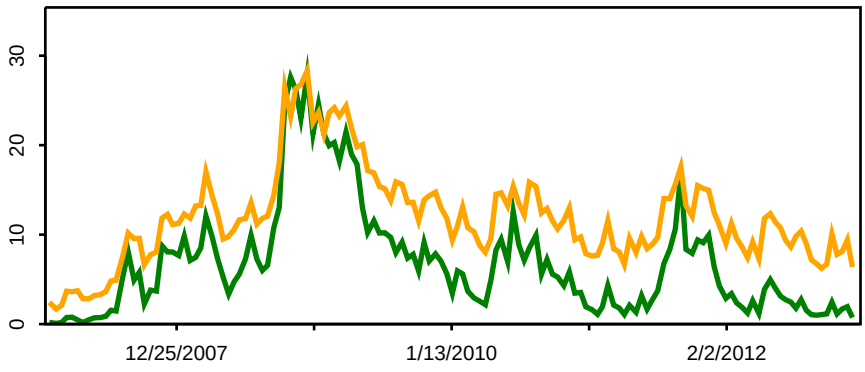
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <=20% Increase >= 20%

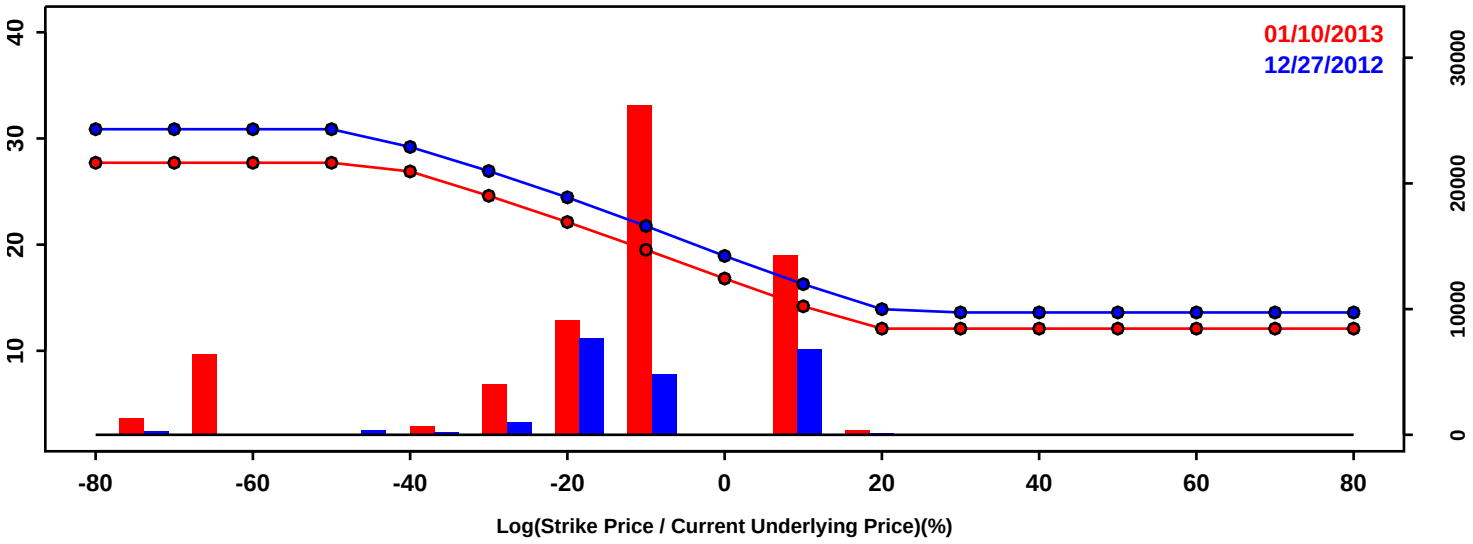
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-19.17%	-15.41%	3.76%
50th Pct	1.89%	1.31%	-0.58%
90th Pct	13.49%	11.47%	-2.02%
Mean	-0.76%	-0.60%	0.17%
Std Dev	13.65%	11.28%	-2.37%
Skew	-1.16	-1.08	0.08
Kurtosis	1.94	1.90	-0.04

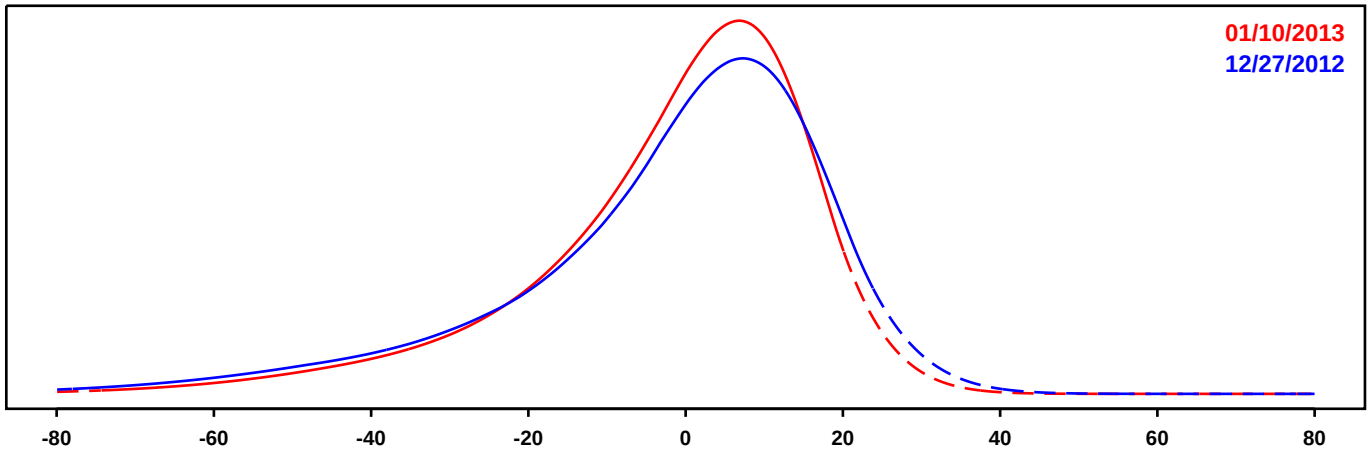
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

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

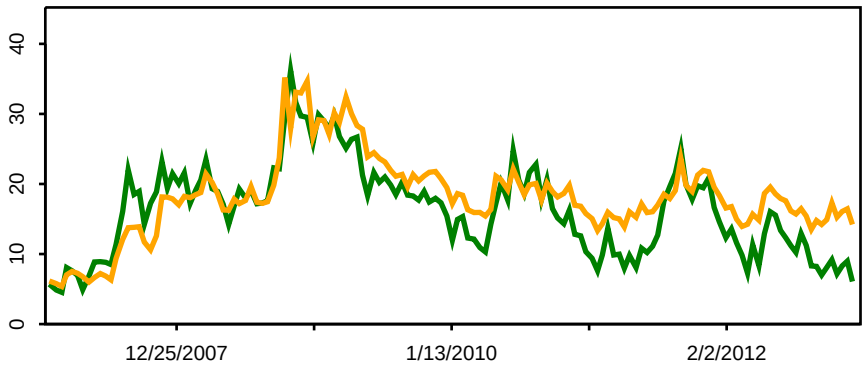
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <=20% Increase >= 20%

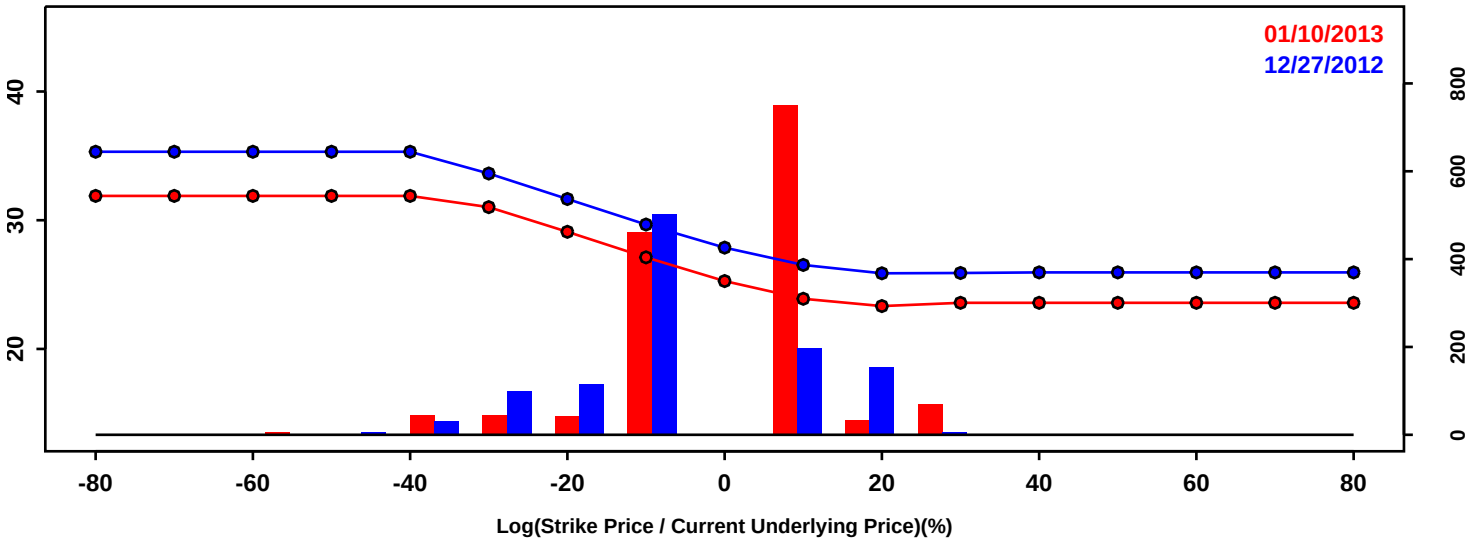
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-30.11%	-26.01%	4.10%
50th Pct	2.10%	1.82%	-0.28%
90th Pct	19.28%	17.19%	-2.09%
Mean	-2.10%	-1.74%	0.36%
Std Dev	20.63%	18.14%	-2.49%
Skew	-1.19	-1.17	0.01
Kurtosis	1.94	1.98	0.04

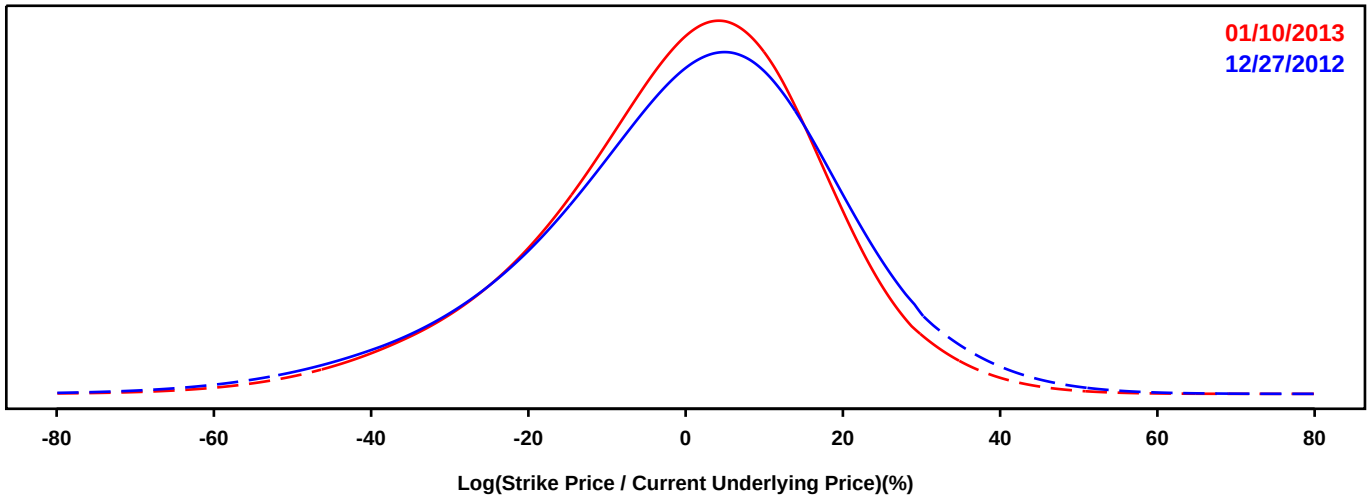
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES (WTI)

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

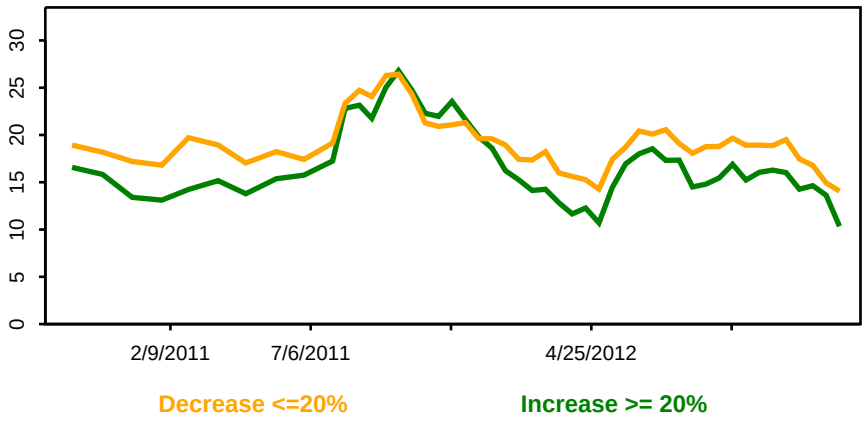
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



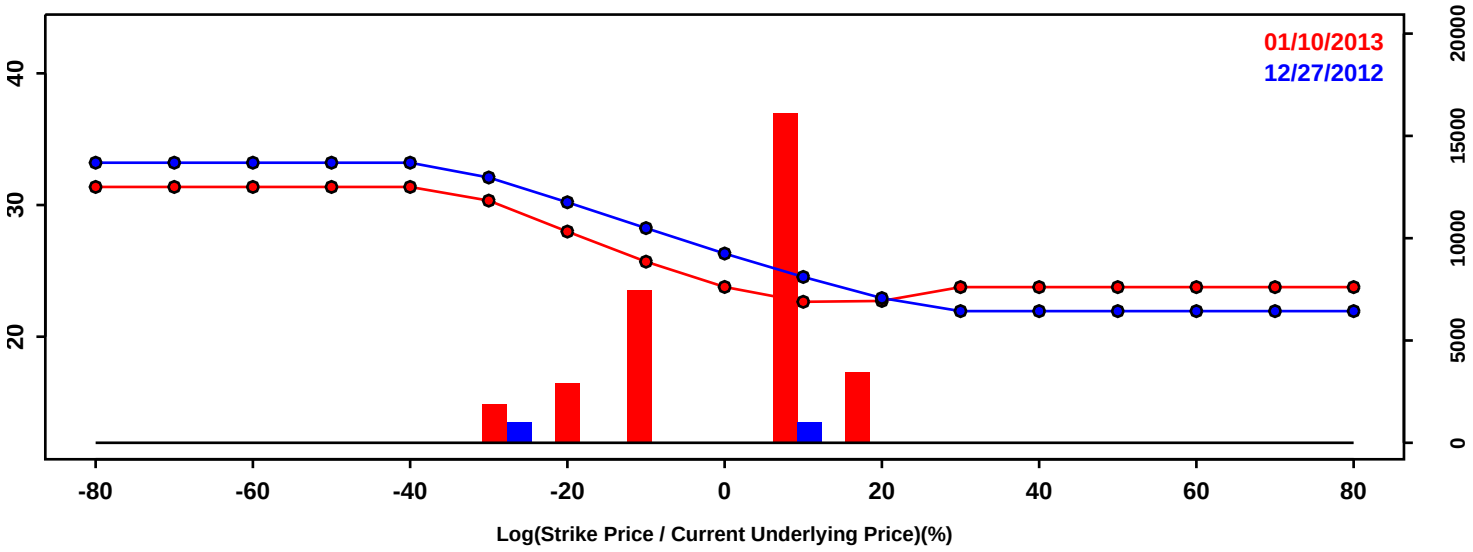
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-26.13%	-24.85%	1.28%
50th Pct	1.71%	1.00%	-0.70%
90th Pct	23.04%	20.28%	-2.76%
Mean	-0.09%	-0.75%	-0.66%
Std Dev	19.78%	18.09%	-1.68%
Skew	-0.48	-0.50	-0.02
Kurtosis	0.64	0.60	-0.03

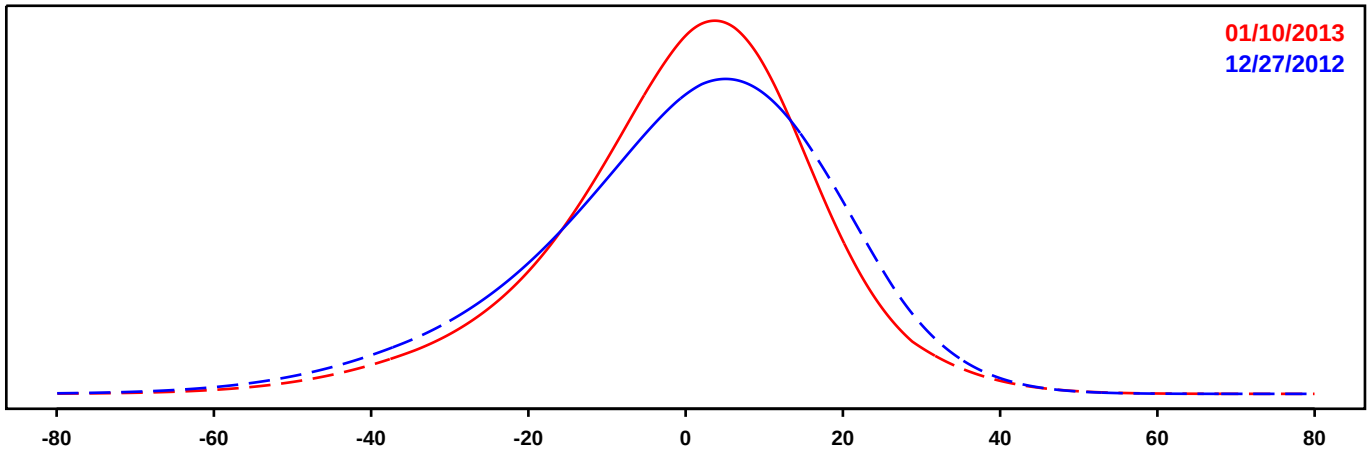
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES (Brent)

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

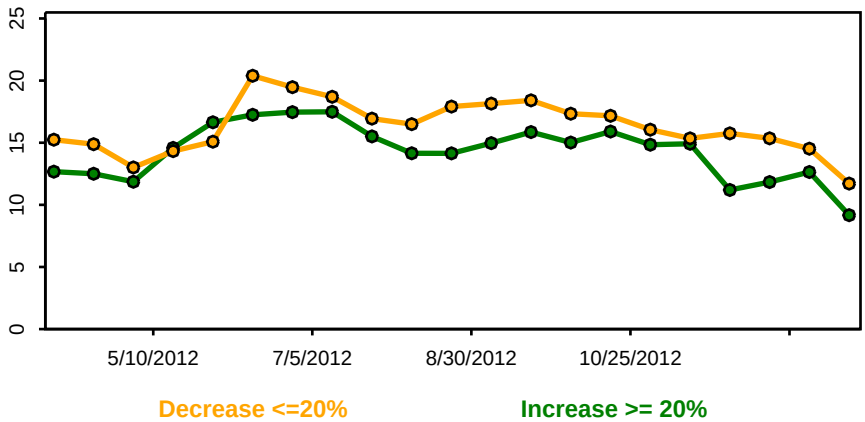
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



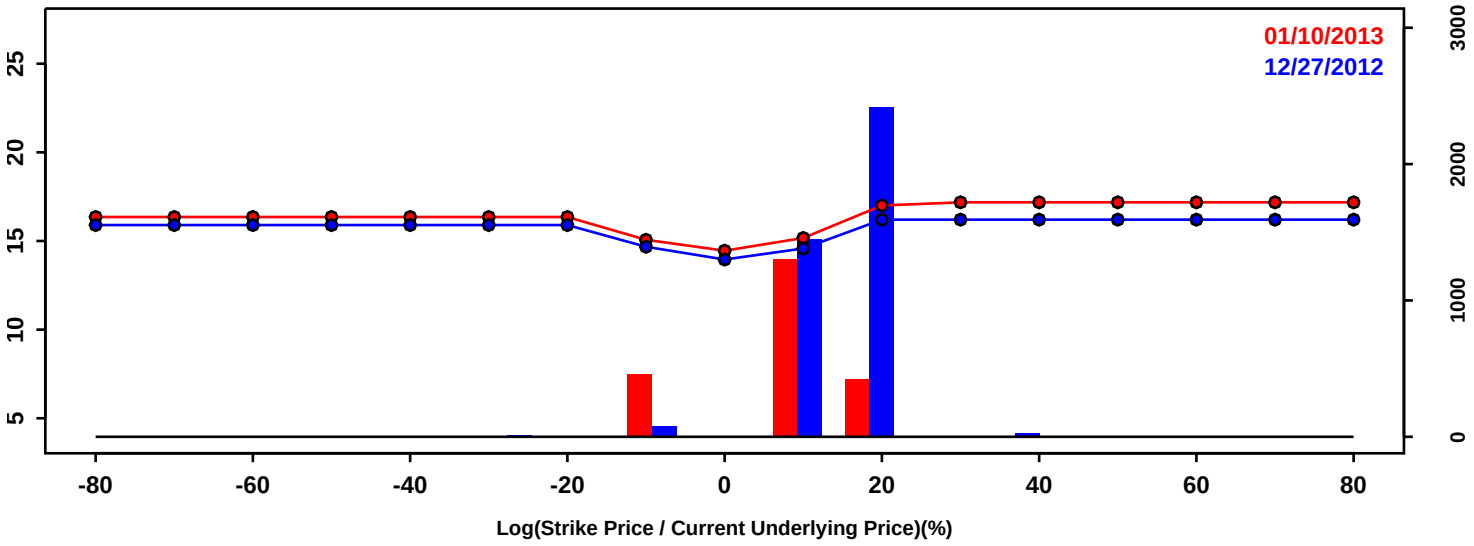
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-25.47%	-22.08%	3.39%
50th Pct	1.74%	1.29%	-0.44%
90th Pct	22.00%	19.27%	-2.73%
Mean	-0.20%	-0.17%	0.03%
Std Dev	18.87%	16.87%	-2.00%
Skew	-0.56	-0.50	0.06
Kurtosis	0.50	0.87	0.37

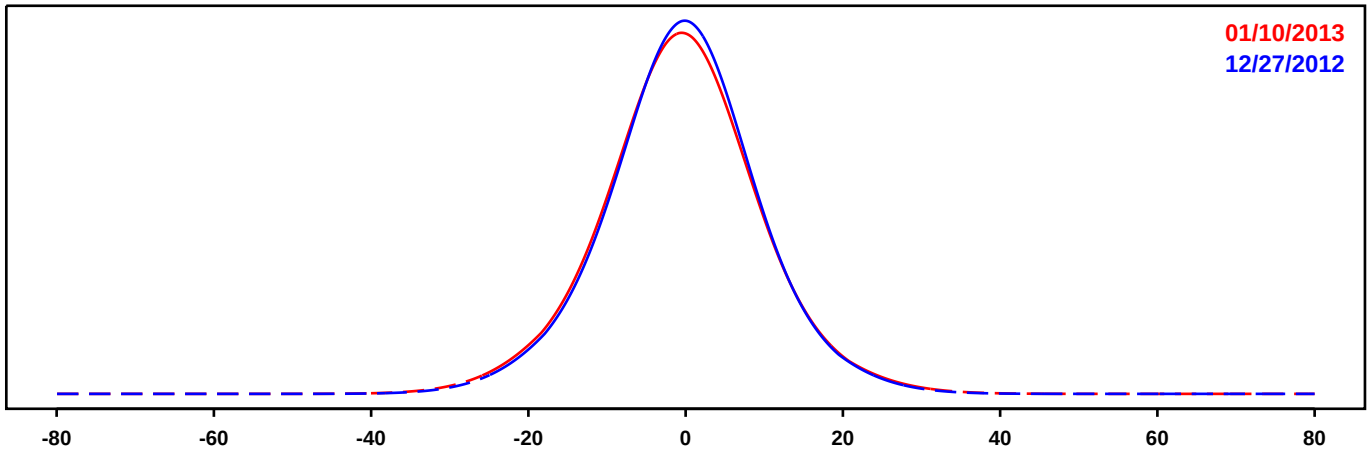
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- GOLD FUTURES

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

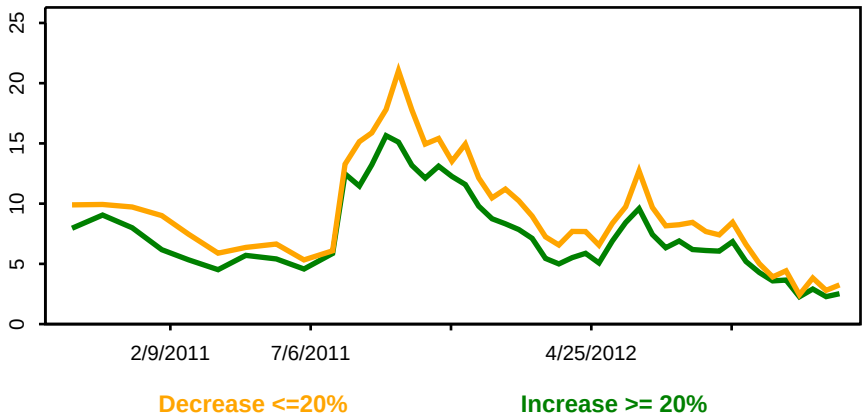
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



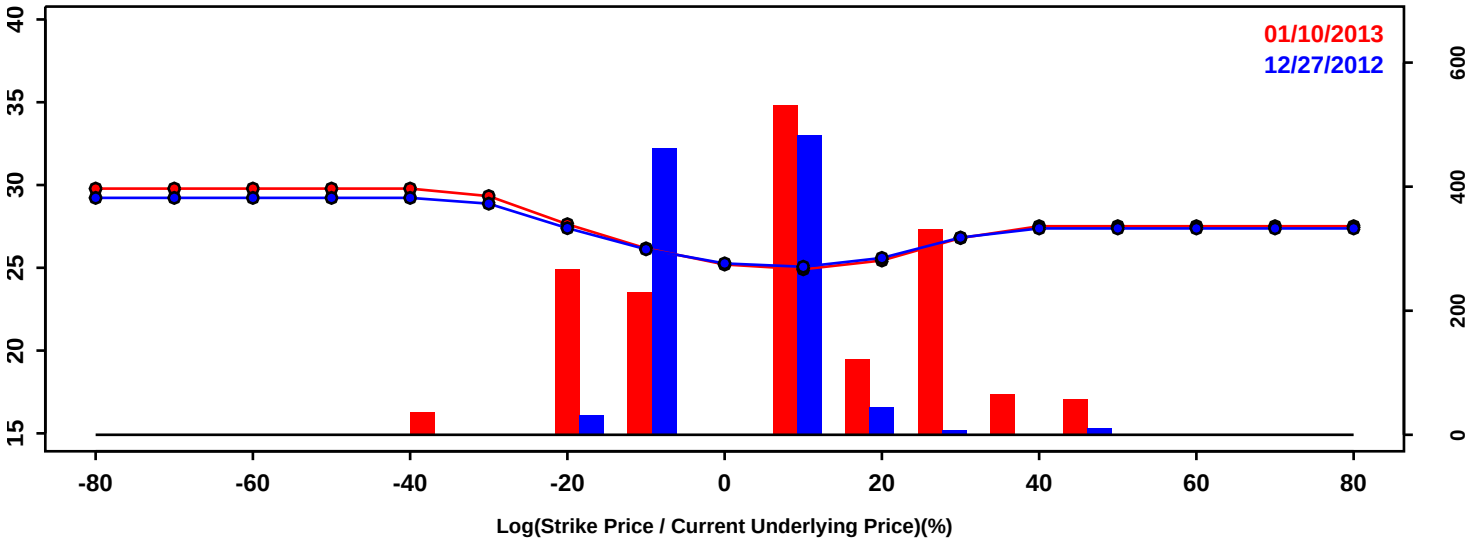
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-12.62%	-13.20%	-0.58%
50th Pct	-0.24%	-0.52%	-0.27%
90th Pct	11.75%	11.95%	0.20%
Mean	-0.32%	-0.55%	-0.23%
Std Dev	9.84%	10.18%	0.34%
Skew	-0.03	-0.00	0.03
Kurtosis	0.58	0.60	0.03

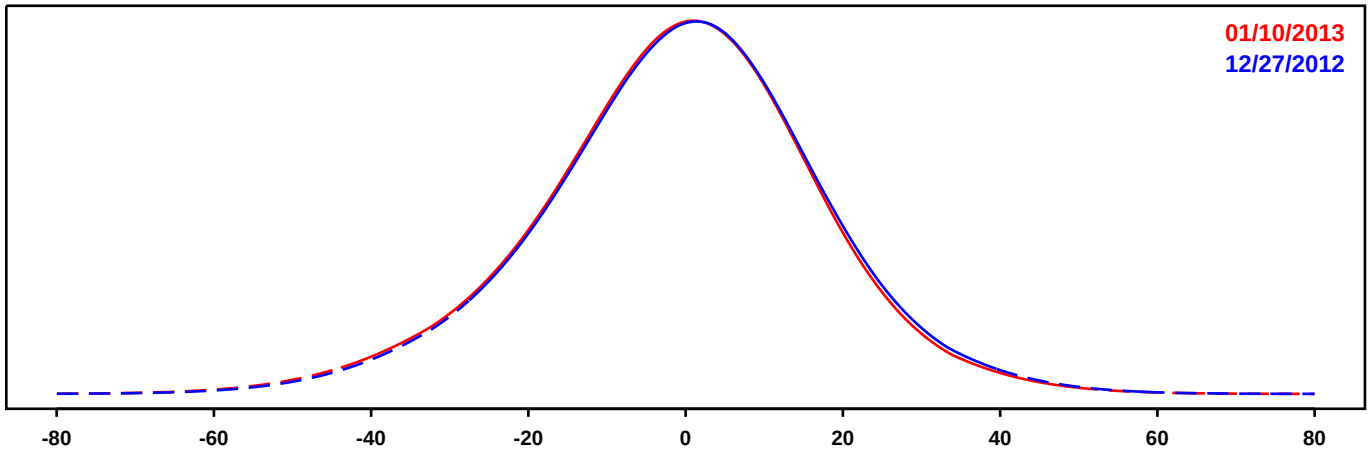
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SILVER FUTURES

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

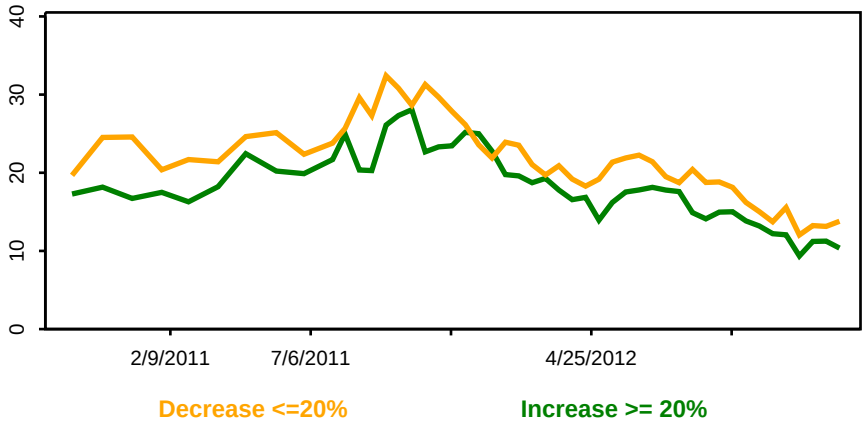
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



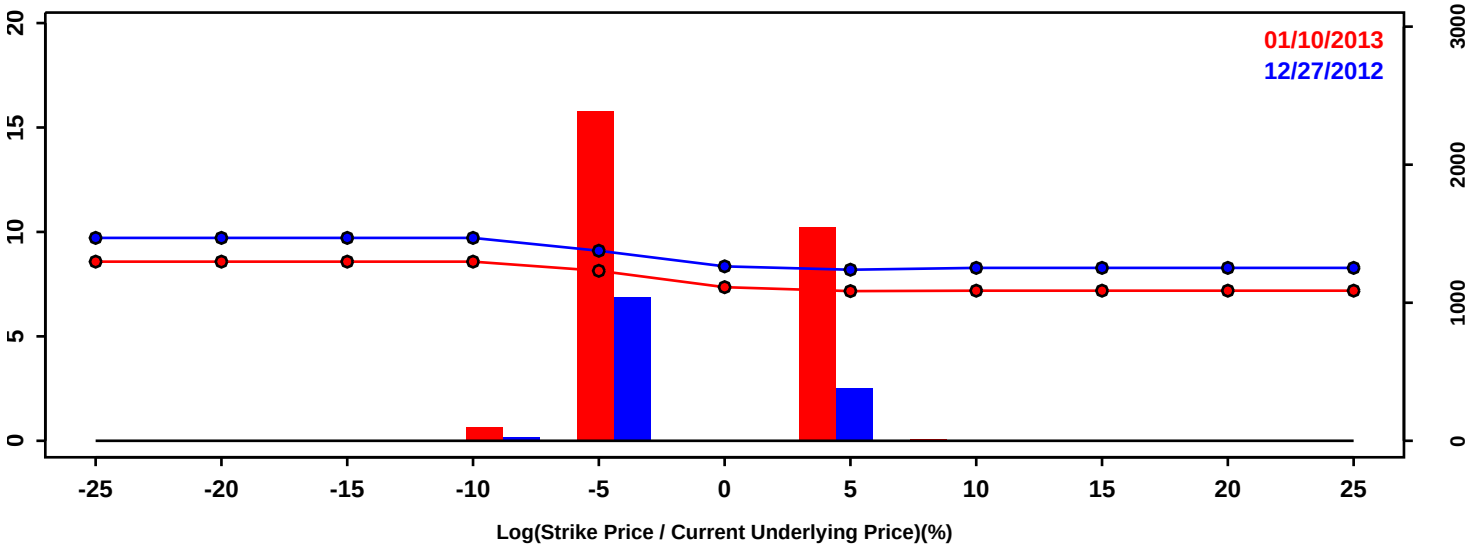
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-23.28%	-24.06%	-0.79%
50th Pct	0.11%	-0.37%	-0.49%
90th Pct	21.17%	20.36%	-0.82%
Mean	-0.48%	-1.13%	-0.66%
Std Dev	17.85%	17.87%	0.02%
Skew	-0.17	-0.22	-0.05
Kurtosis	0.48	0.54	0.05

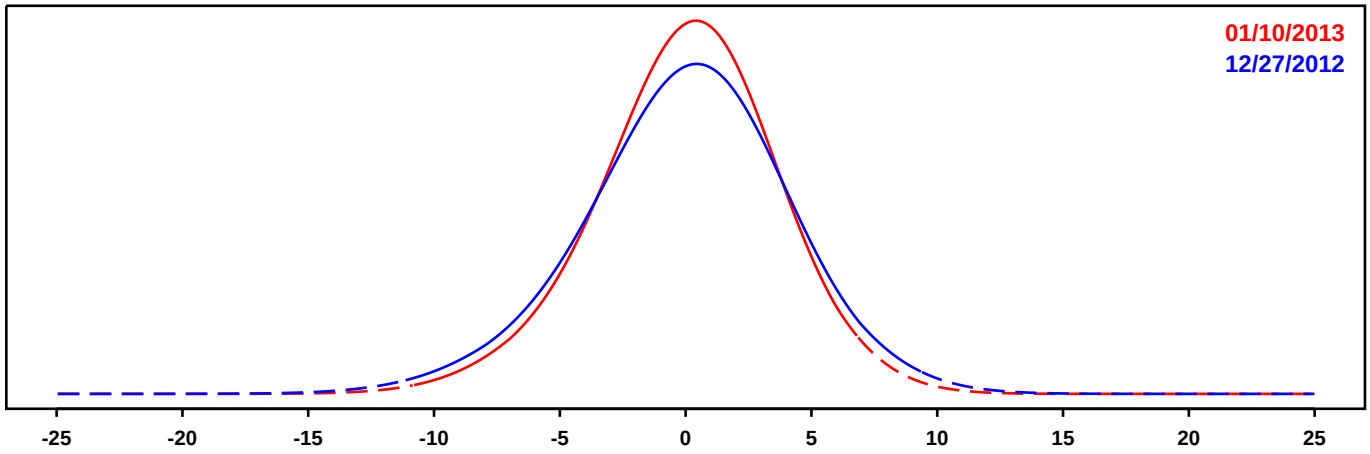
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-EURO EXCHANGE RATE FUTURES

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

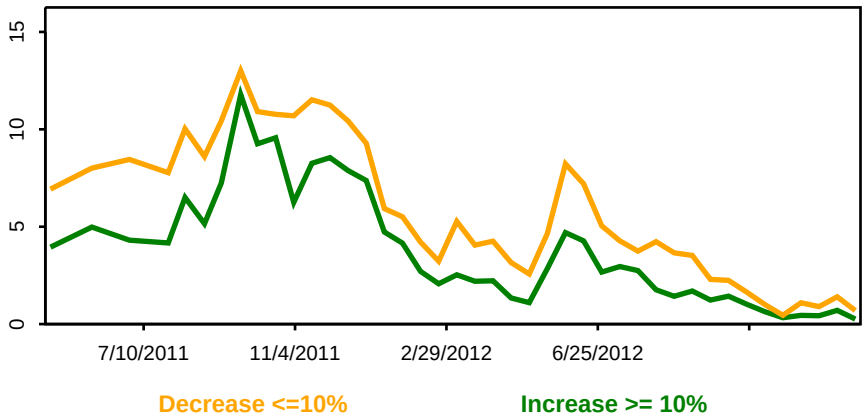
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



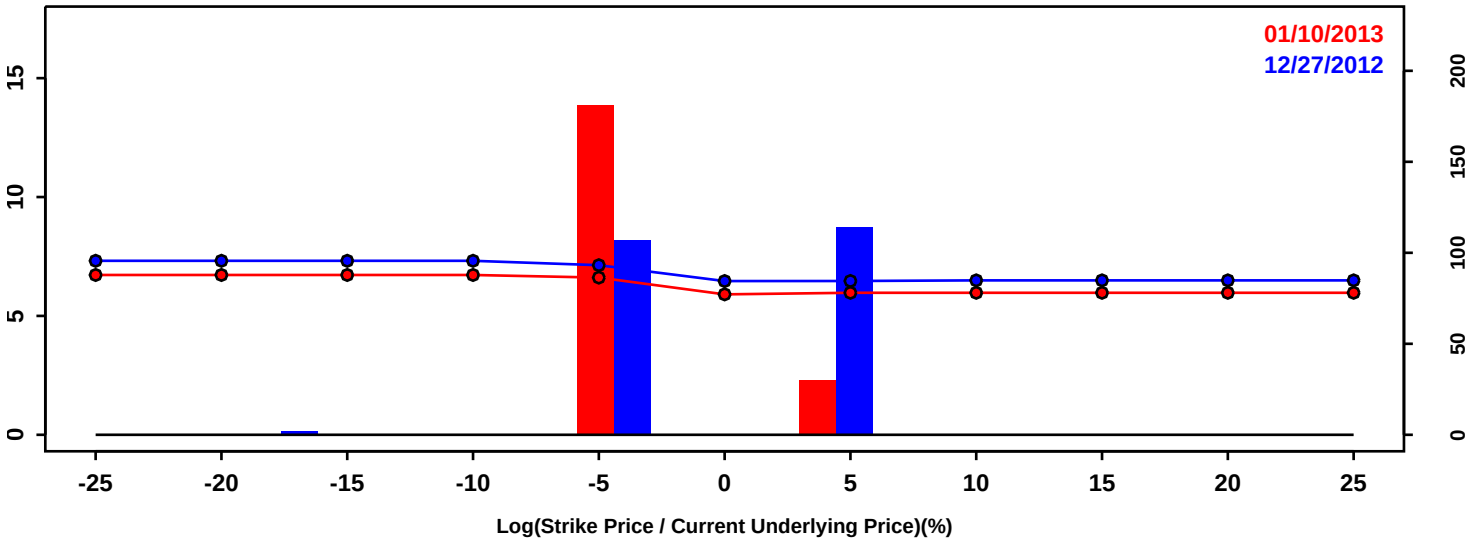
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-5.31%	-4.65%	0.66%
50th Pct	0.15%	0.17%	0.02%
90th Pct	5.17%	4.54%	-0.63%
Mean	0.05%	0.07%	0.02%
Std Dev	4.17%	3.67%	-0.50%
Skew	-0.21	-0.22	-0.01
Kurtosis	0.35	0.33	-0.02

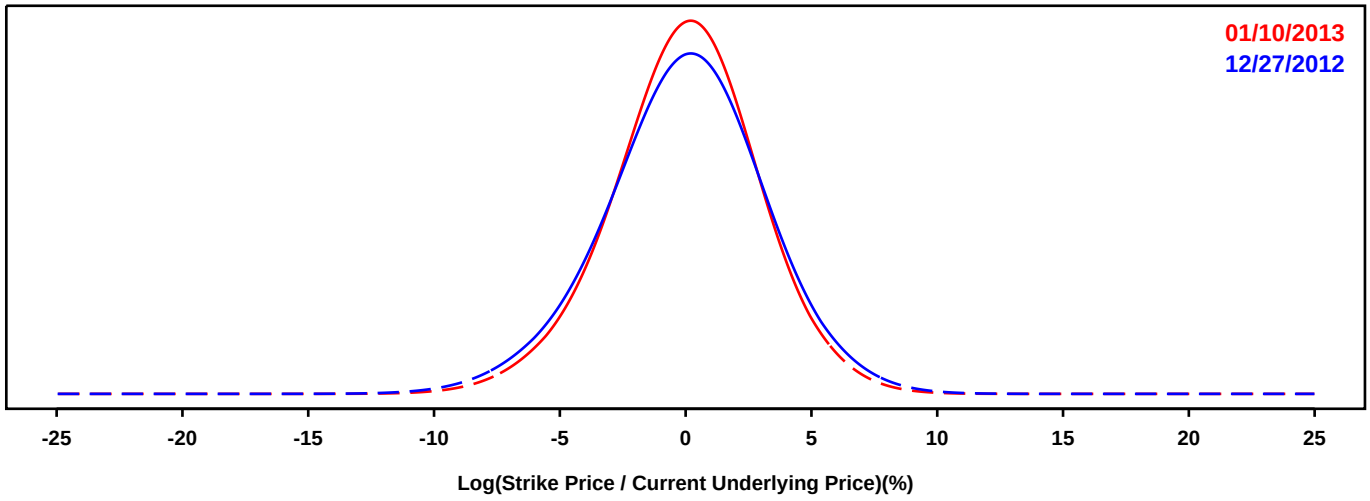
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-POUND EXCHANGE RATE FUTURES

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

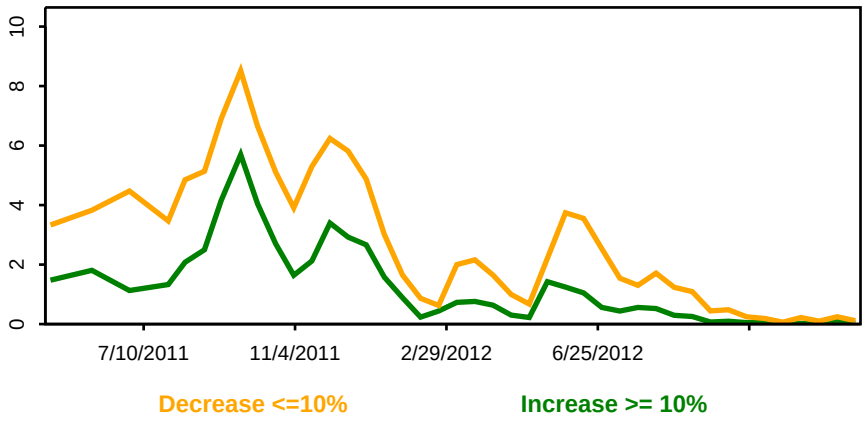
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



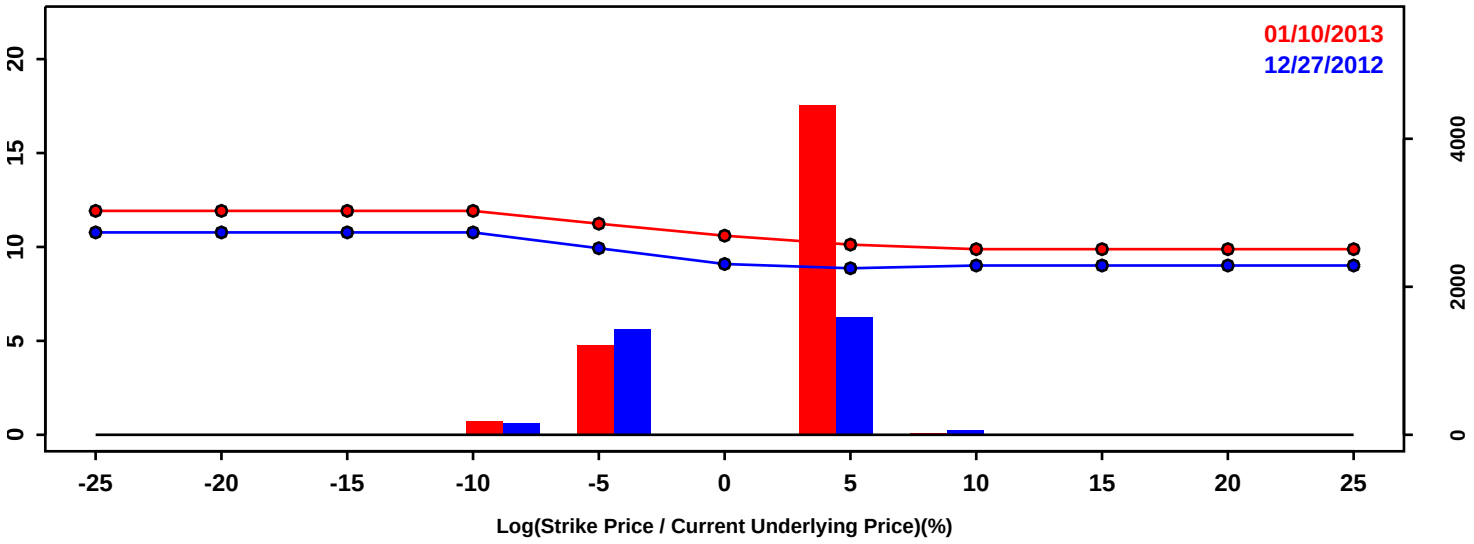
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-4.15%	-3.79%	0.36%
50th Pct	0.05%	0.06%	0.01%
90th Pct	3.96%	3.63%	-0.33%
Mean	-0.01%	0.01%	0.02%
Std Dev	3.23%	2.95%	-0.28%
Skew	-0.16	-0.15	0.01
Kurtosis	0.29	0.31	0.02

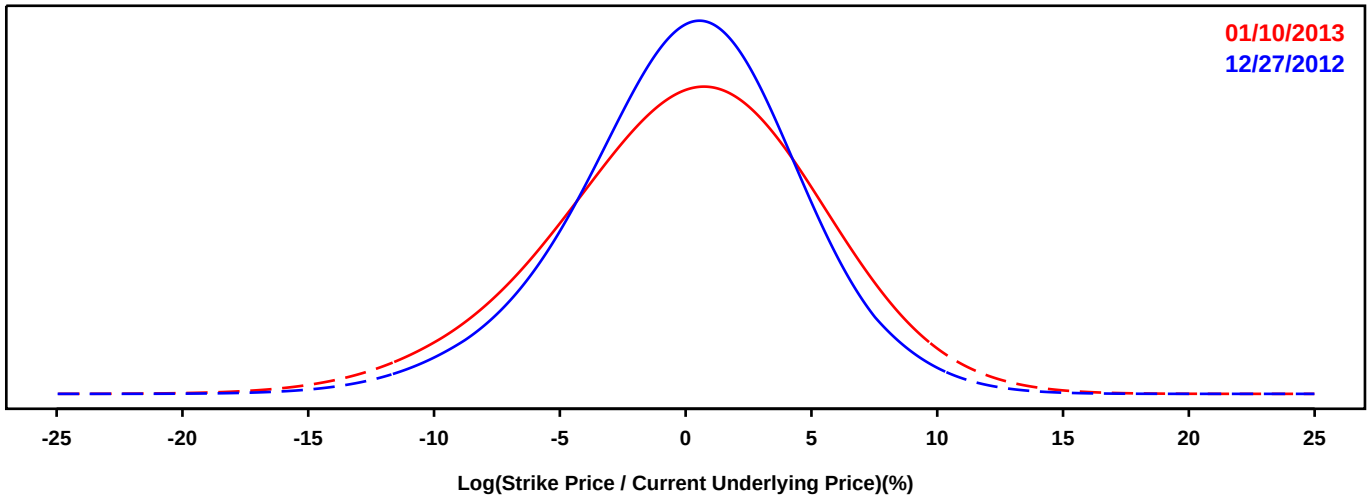
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- YEN-DOLLAR EXCHANGE RATE FUTURES

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

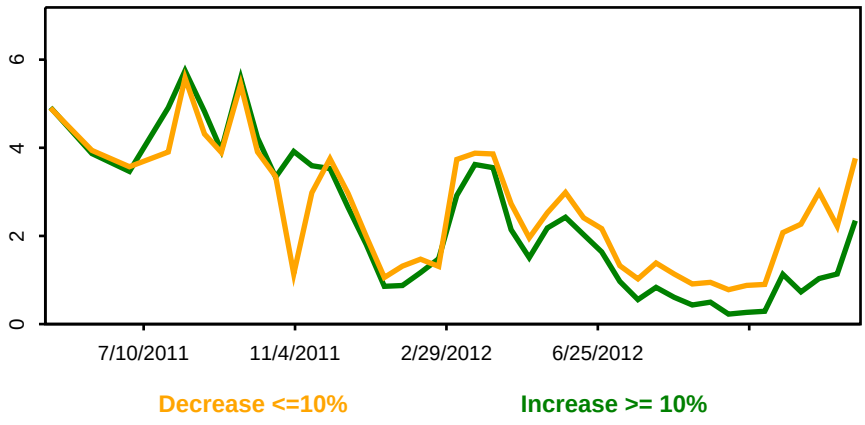
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



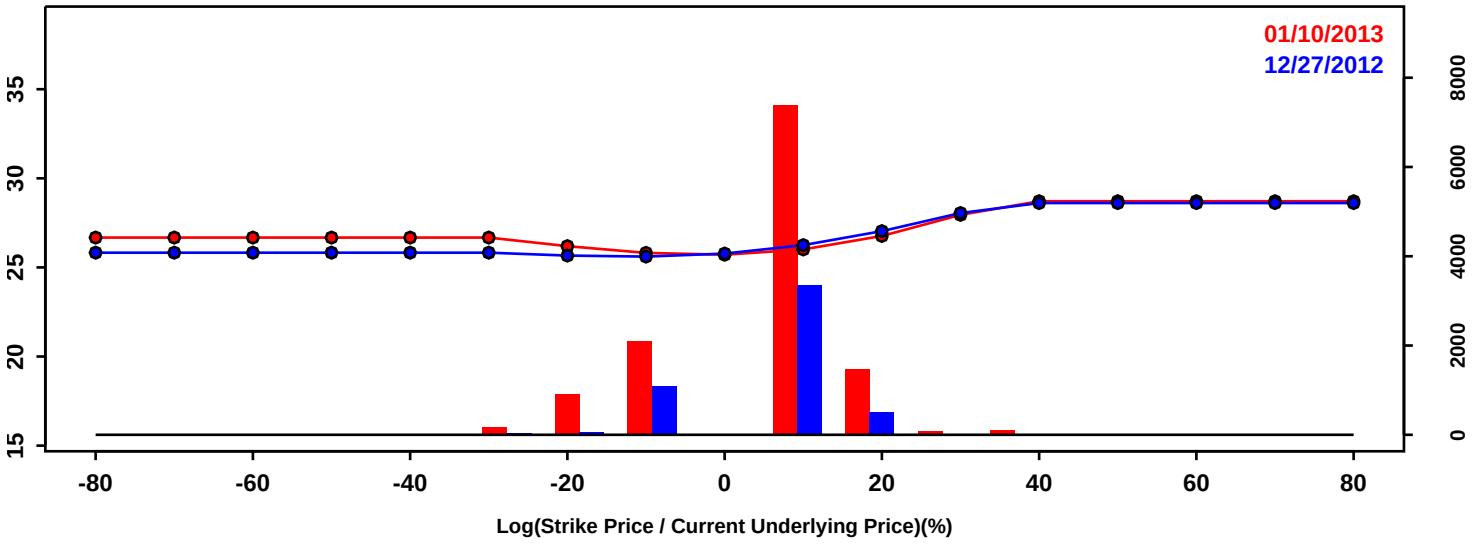
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-5.84%	-6.87%	-1.03%
50th Pct	0.20%	0.28%	0.08%
90th Pct	5.55%	6.62%	1.07%
Mean	0.02%	0.06%	0.05%
Std Dev	4.54%	5.30%	0.76%
Skew	-0.25	-0.24	0.02
Kurtosis	0.41	0.17	-0.24

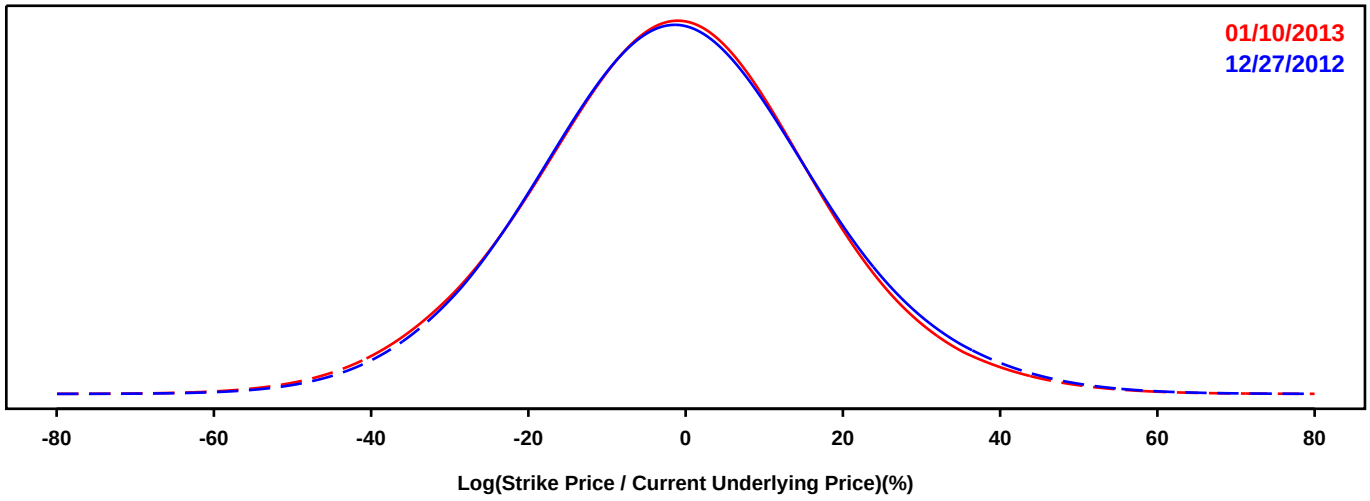
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CORN FUTURES

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

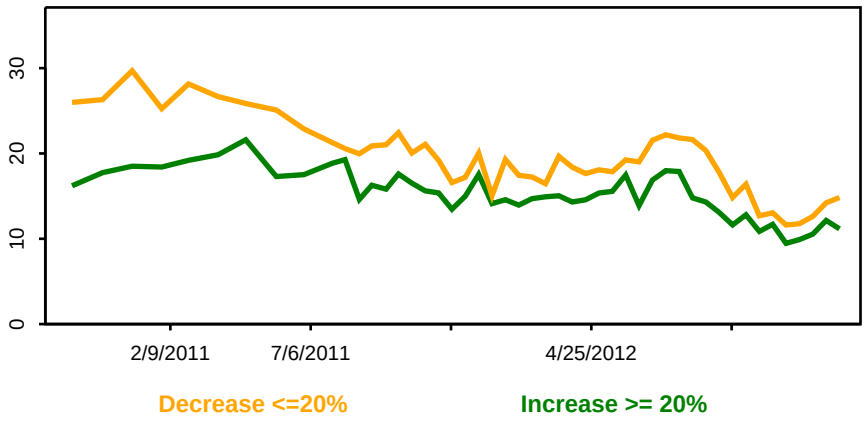
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



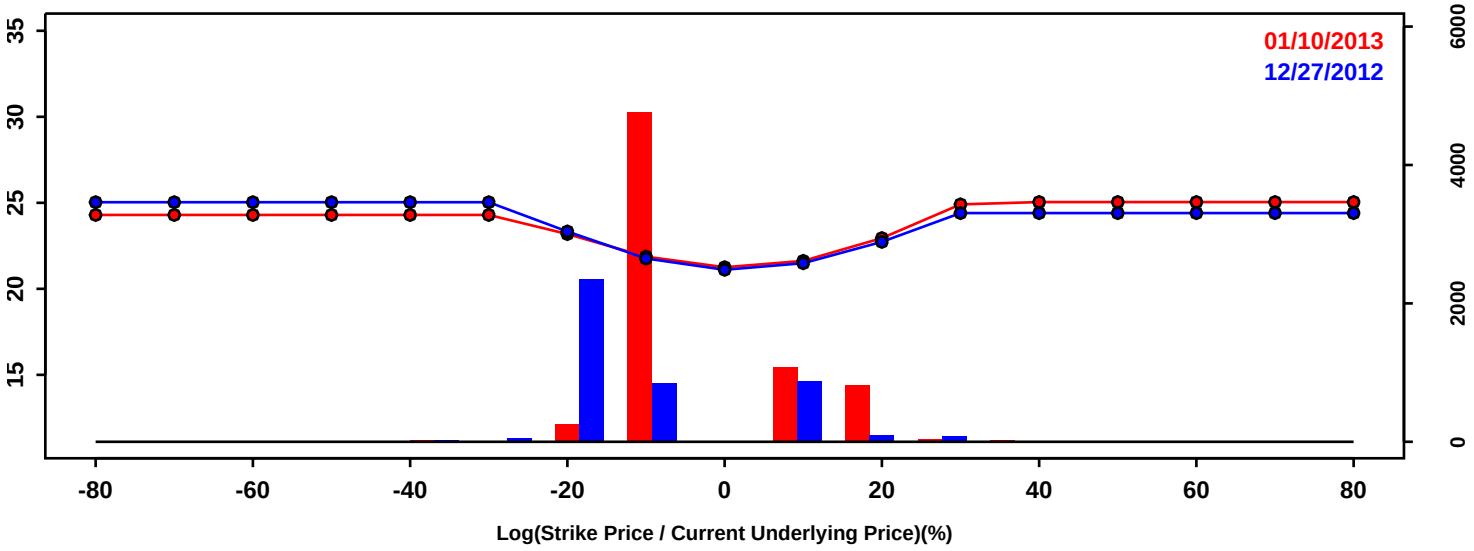
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-23.78%	-24.48%	-0.70%
50th Pct	-1.16%	-1.43%	-0.27%
90th Pct	22.24%	21.19%	-1.05%
Mean	-0.86%	-1.45%	-0.59%
Std Dev	18.18%	18.11%	-0.07%
Skew	0.10	0.02	-0.08
Kurtosis	0.23	0.28	0.05

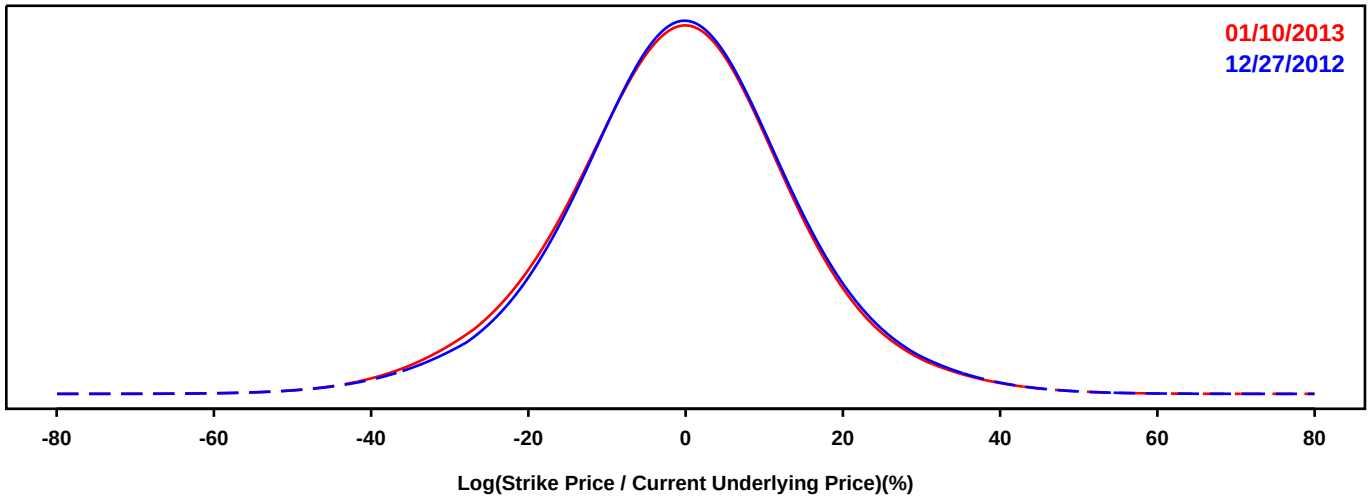
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SOYBEAN FUTURES

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

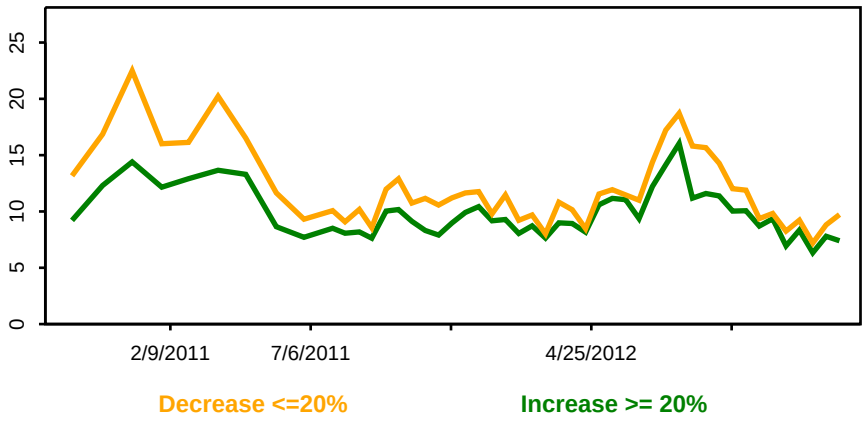
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



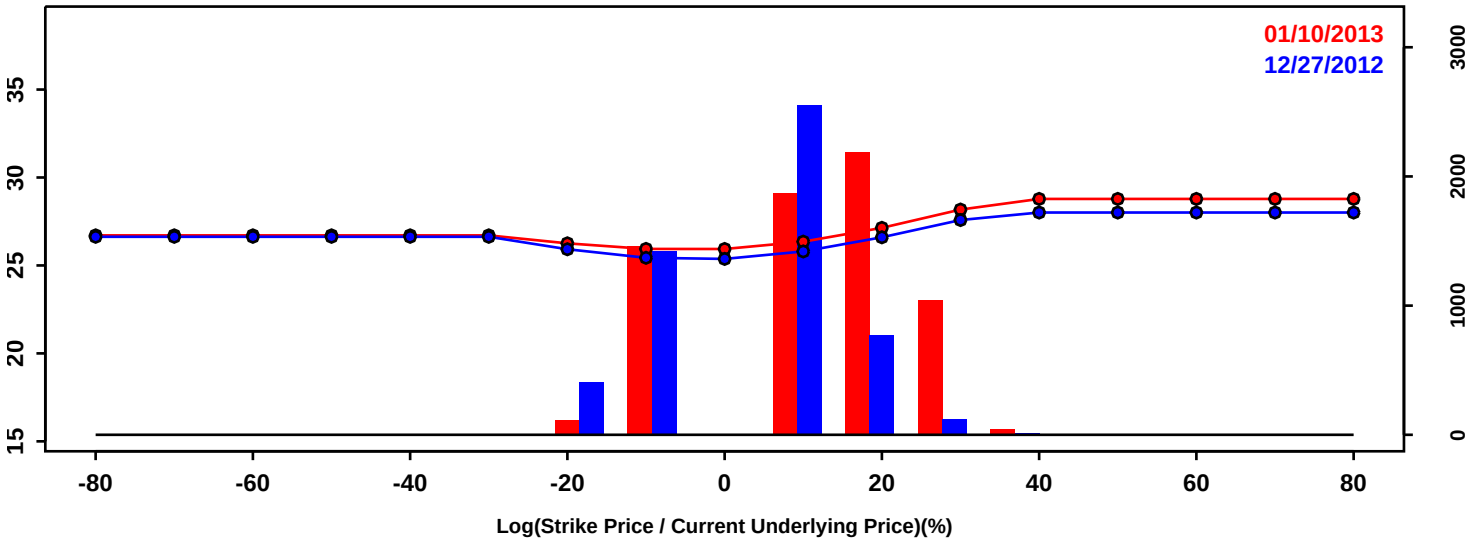
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-18.81%	-19.70%	-0.89%
50th Pct	-0.27%	-0.66%	-0.39%
90th Pct	17.80%	17.33%	-0.47%
Mean	-0.39%	-0.88%	-0.50%
Std Dev	14.87%	15.00%	0.13%
Skew	-0.06	-0.06	0.00
Kurtosis	0.68	0.62	-0.06

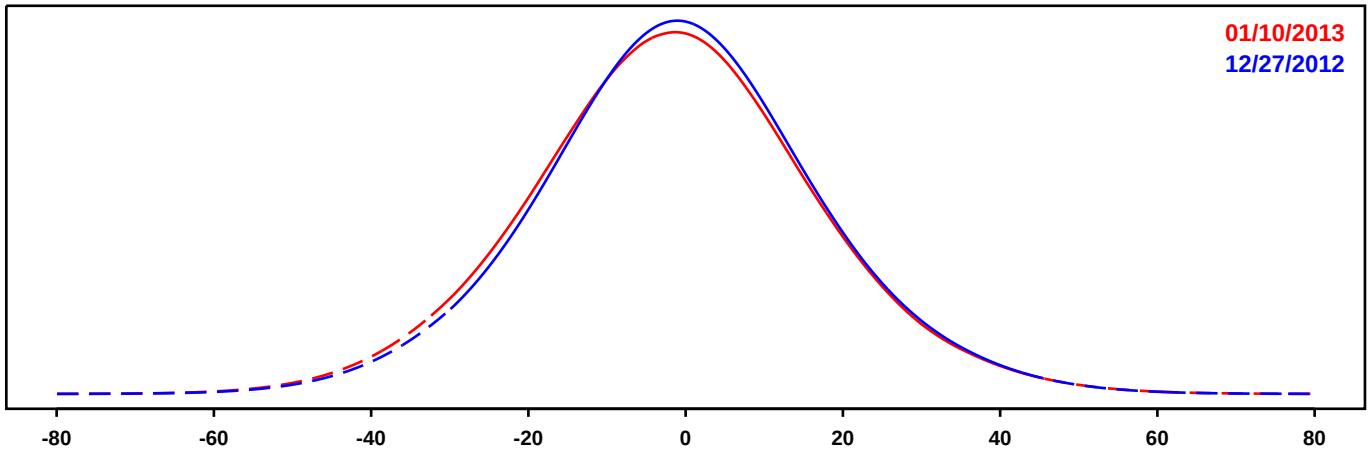
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- WHEAT FUTURES

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

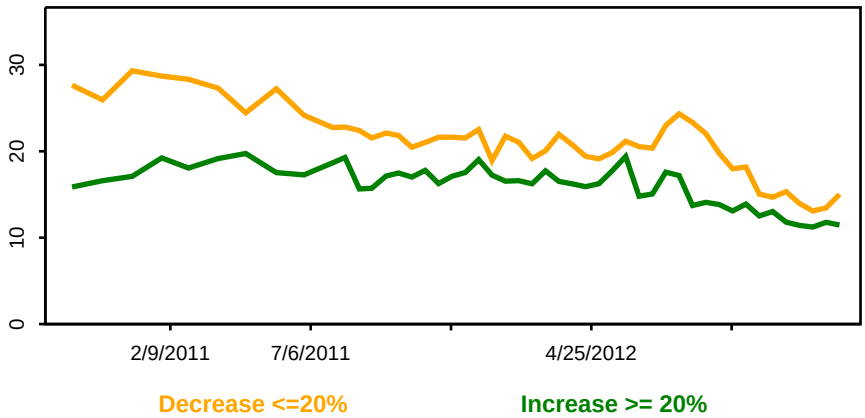
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



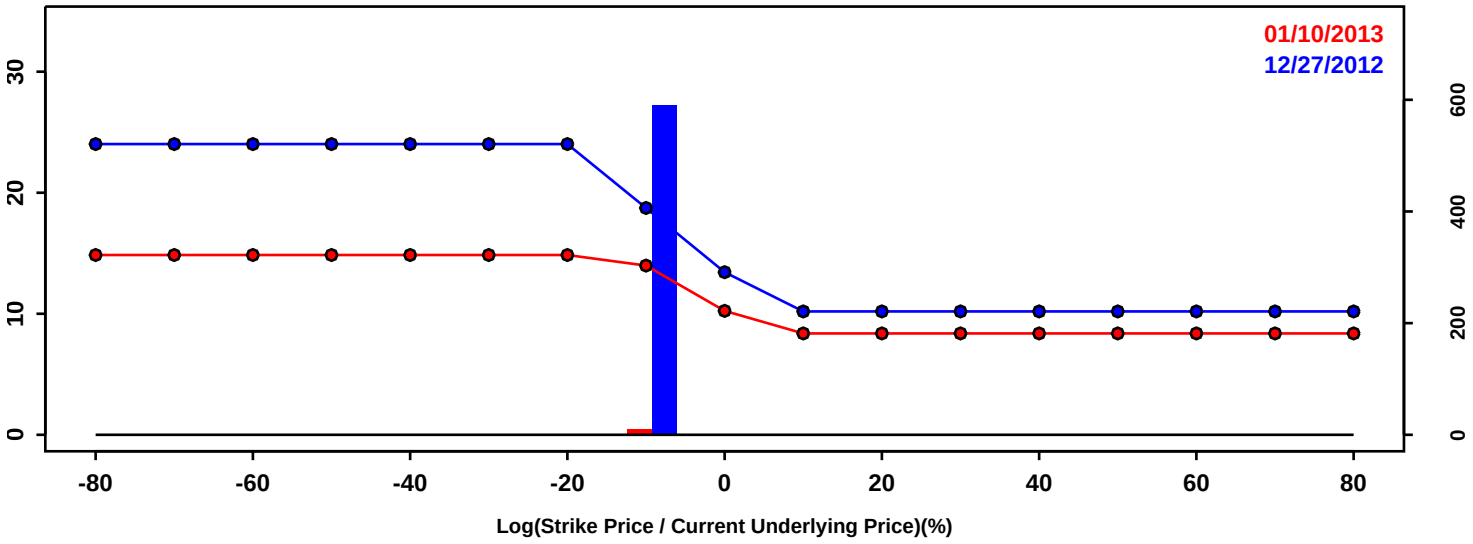
Statistics of the Log Return Distributions

	12/27/2012	01/10/2013	Change
10th Pct	-23.25%	-24.60%	-1.35%
50th Pct	-0.88%	-1.57%	-0.69%
90th Pct	21.87%	21.54%	-0.33%
Mean	-0.74%	-1.49%	-0.76%
Std Dev	17.90%	18.28%	0.37%
Skew	0.05	0.05	0.00
Kurtosis	0.32	0.28	-0.04

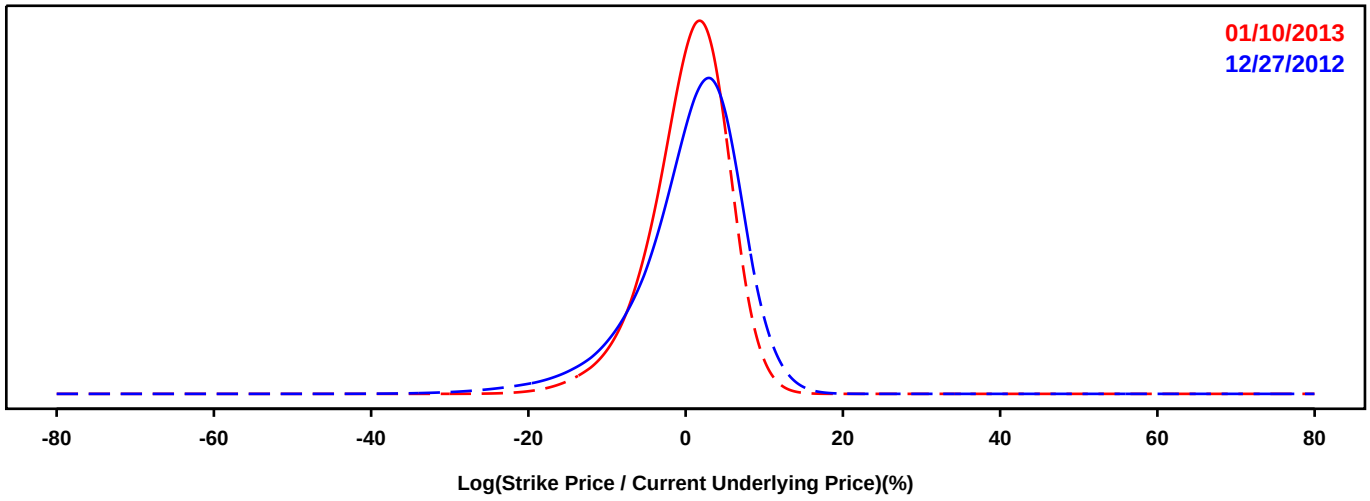
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- iSHARES DOW JONES US REAL ESTATE

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

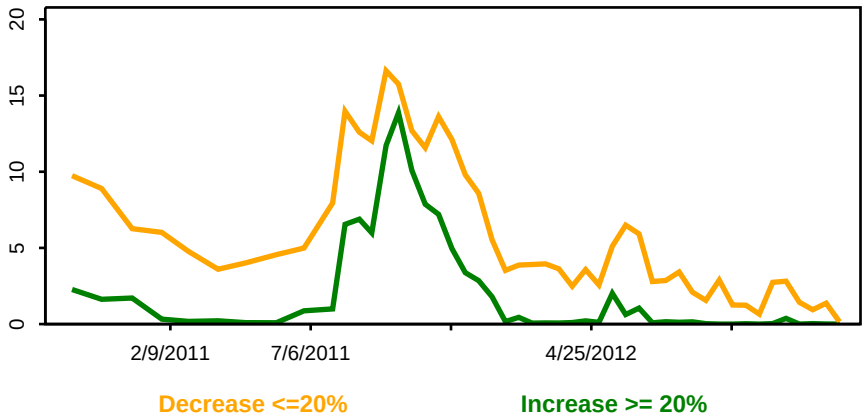
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change

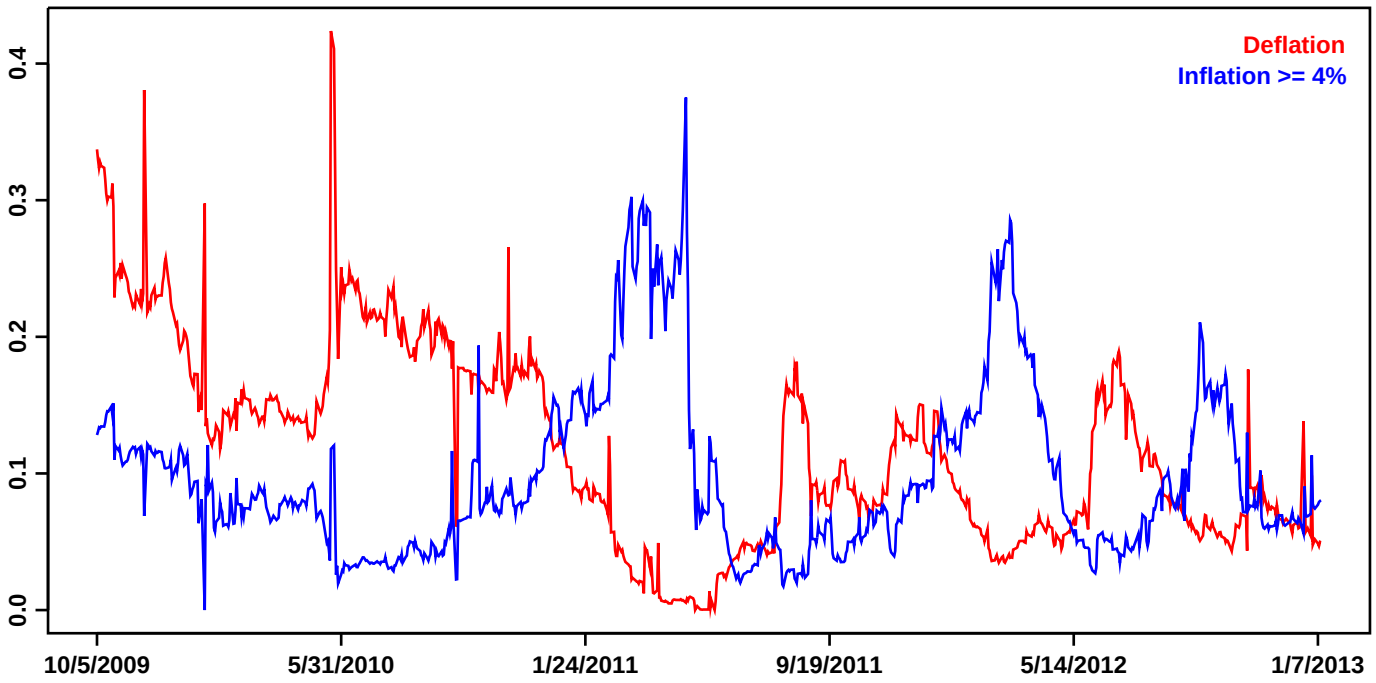


Statistics of the Log Return Distributions

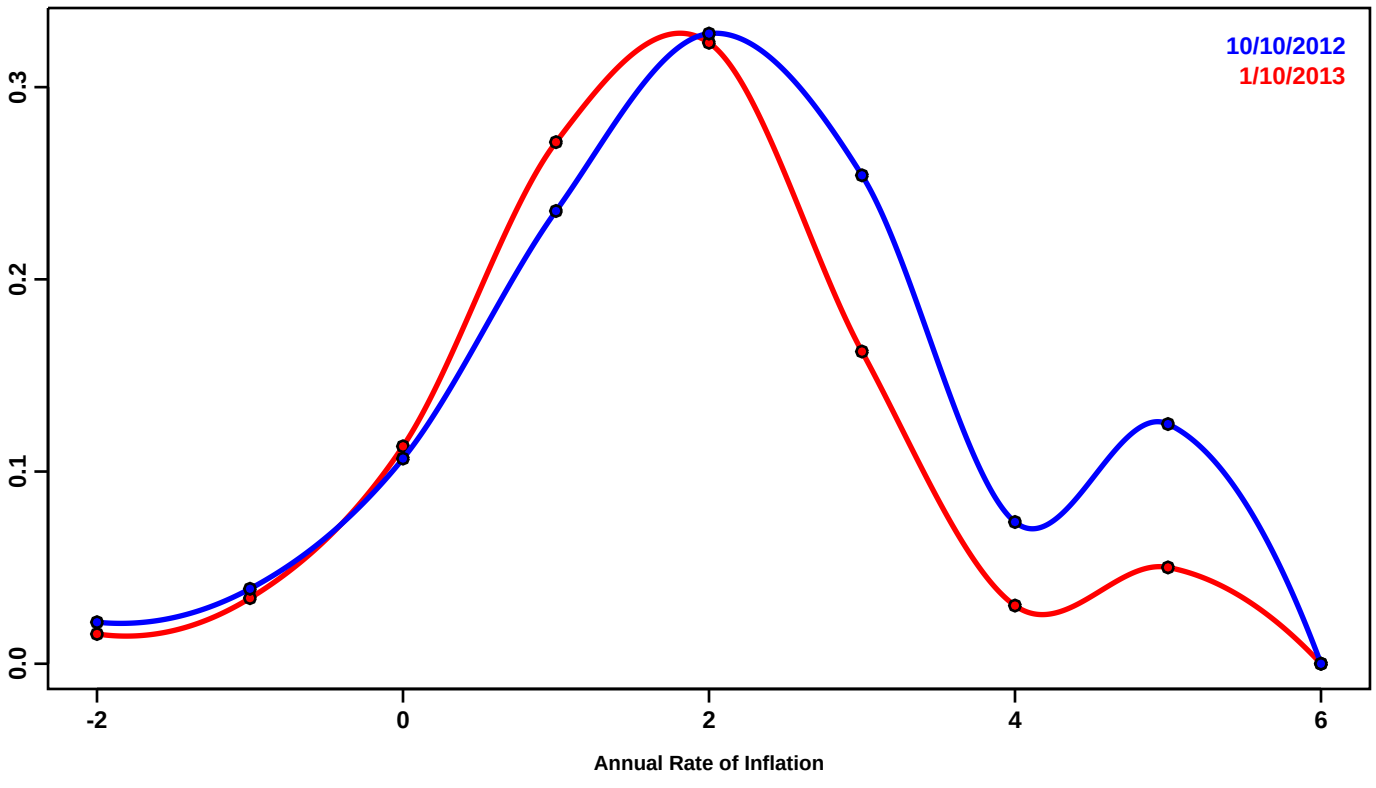
	12/27/2012	01/10/2013	Change
10th Pct	-8.12%	-6.35%	1.77%
50th Pct	1.51%	0.85%	-0.66%
90th Pct	7.78%	6.18%	-1.60%
Mean	0.50%	0.33%	-0.17%
Std Dev	6.79%	5.12%	-1.66%
Skew	-1.14	-0.72	0.43
Kurtosis	2.52	1.08	-1.44

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