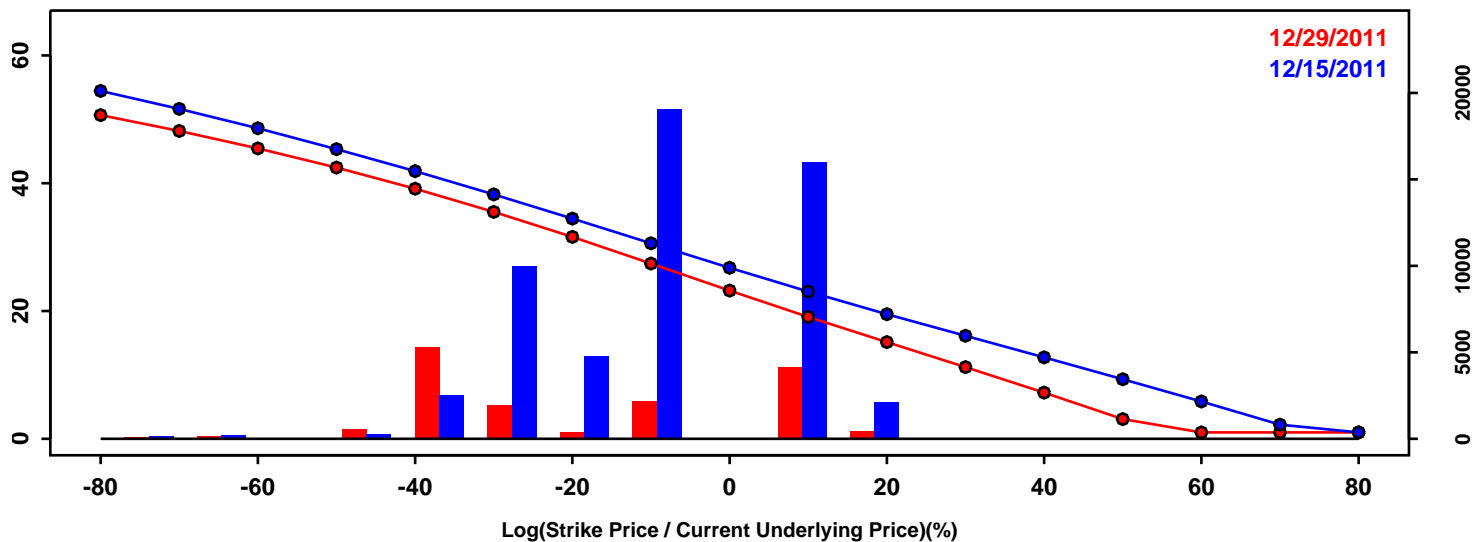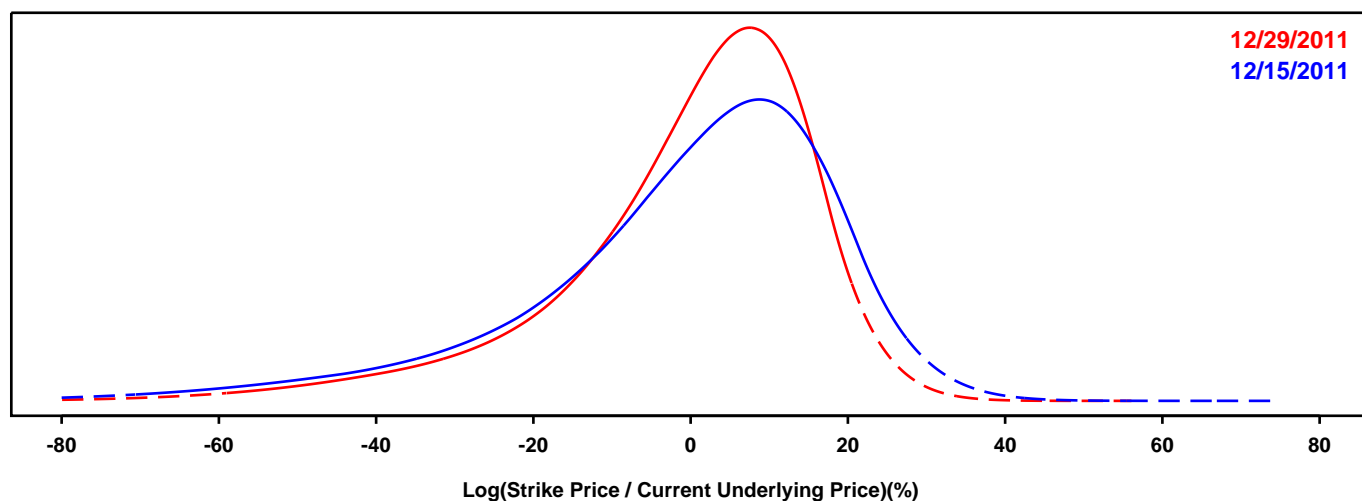# RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

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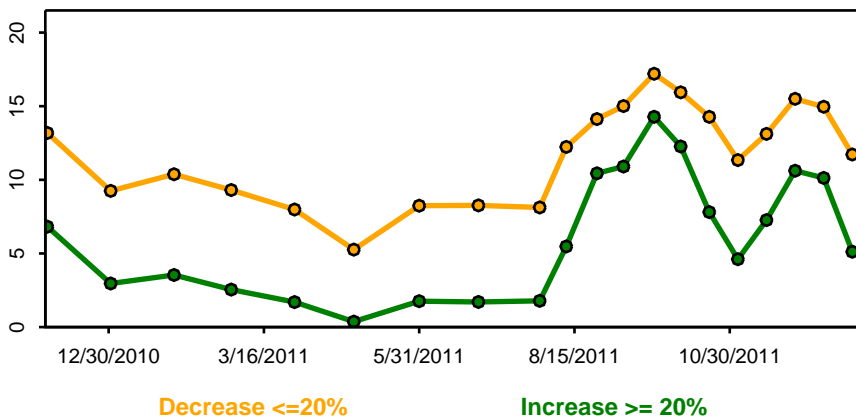derived from options that expire in approximately 6 months.*

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

12/29/2011
12/15/2011

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

Risk Neutral PDF of the Log Return Distribution

12/29/2011
12/15/2011

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

Probability of a Large Change

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

Statistics of the Log Return Distributions

	12/15/2011	12/29/2011	Change
10th Pct	-27.56%	-22.55%	5.00%
50th Pct	2.85%	2.83%	-0.02%
90th Pct	20.09%	16.70%	-3.38%
Mean	-0.95%	-0.51%	0.44%
Std Dev	20.07%	16.71%	-3.36%
Skew	-1.17	-1.26	-0.09
Kurtosis	2.01	2.30	0.29

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
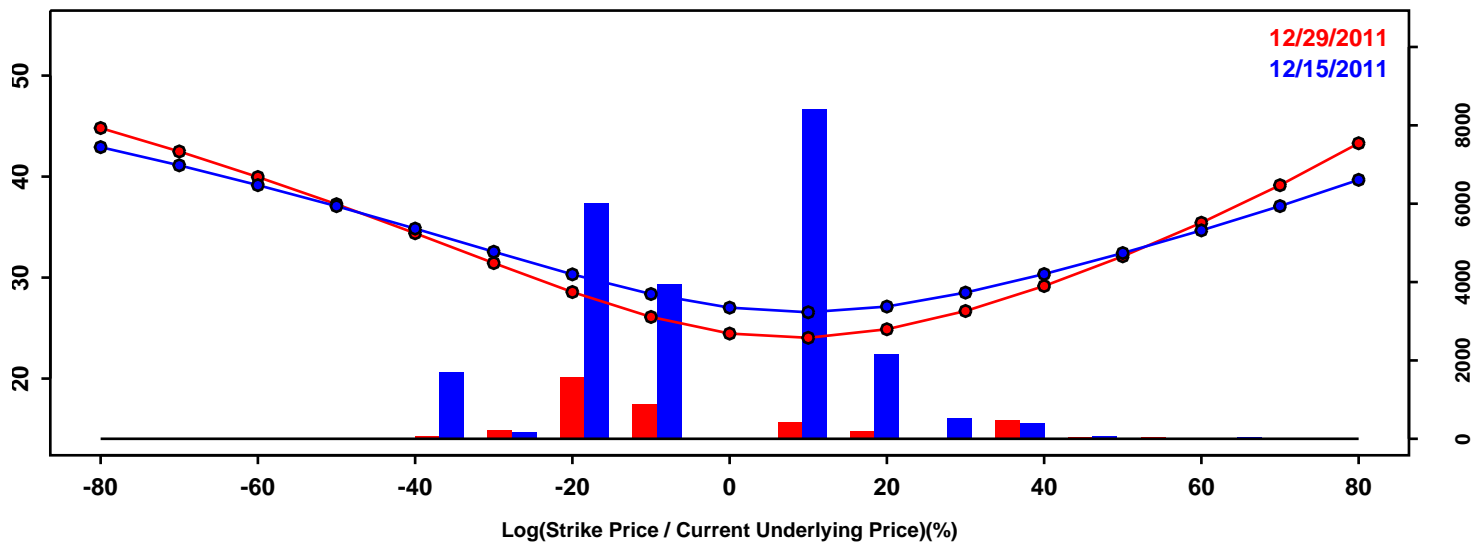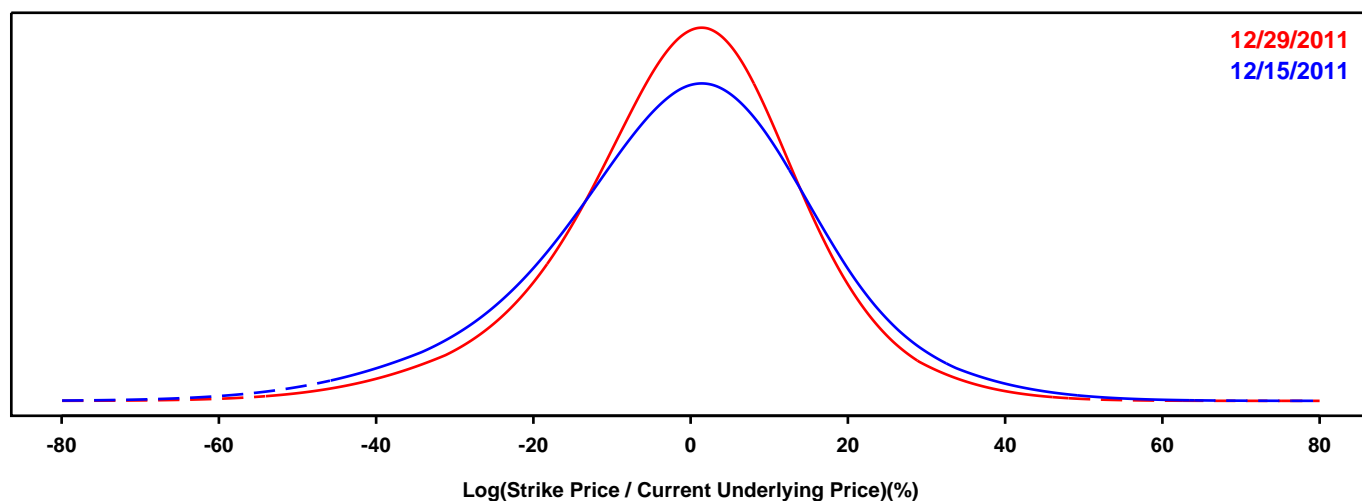

Probability of a Large Change

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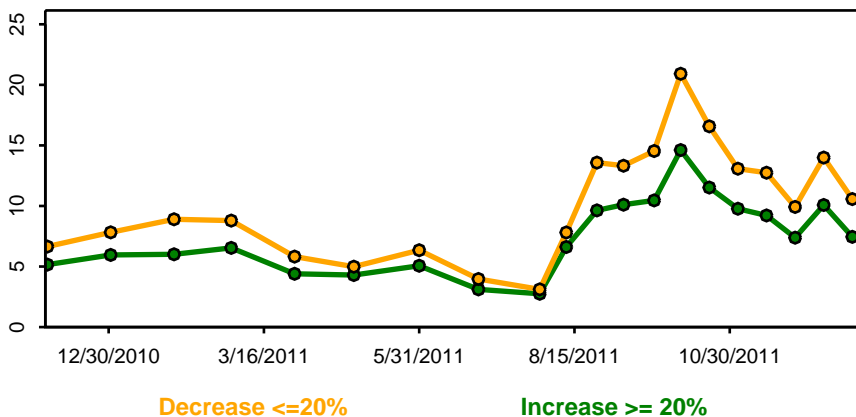
Statistics of the Log Return Distributions

	12/15/2011	12/29/2011	Change
10th Pct	-24.41%	-20.59%	3.82%
50th Pct	-0.26%	0.04%	0.30%
90th Pct	20.09%	17.56%	-2.53%
Mean	-1.28%	-0.84%	0.44%
Std Dev	18.06%	15.62%	-2.44%
Skew	-0.31%	-0.35%	-0.04
Kurtosis	0.70	0.86	0.16

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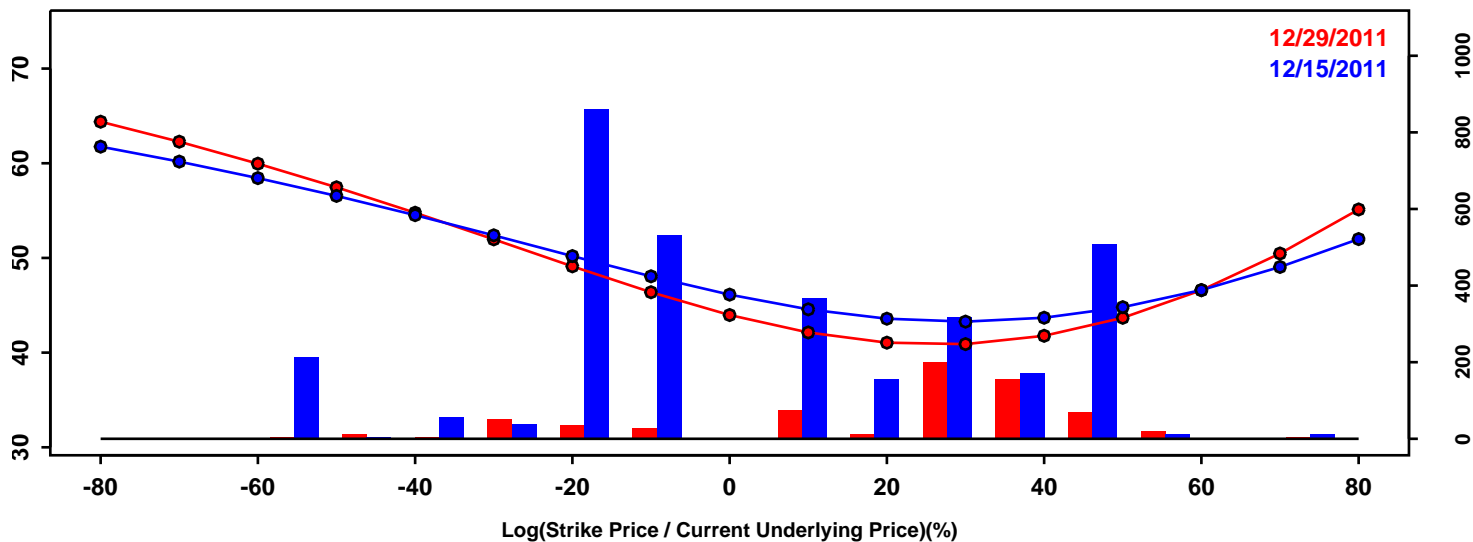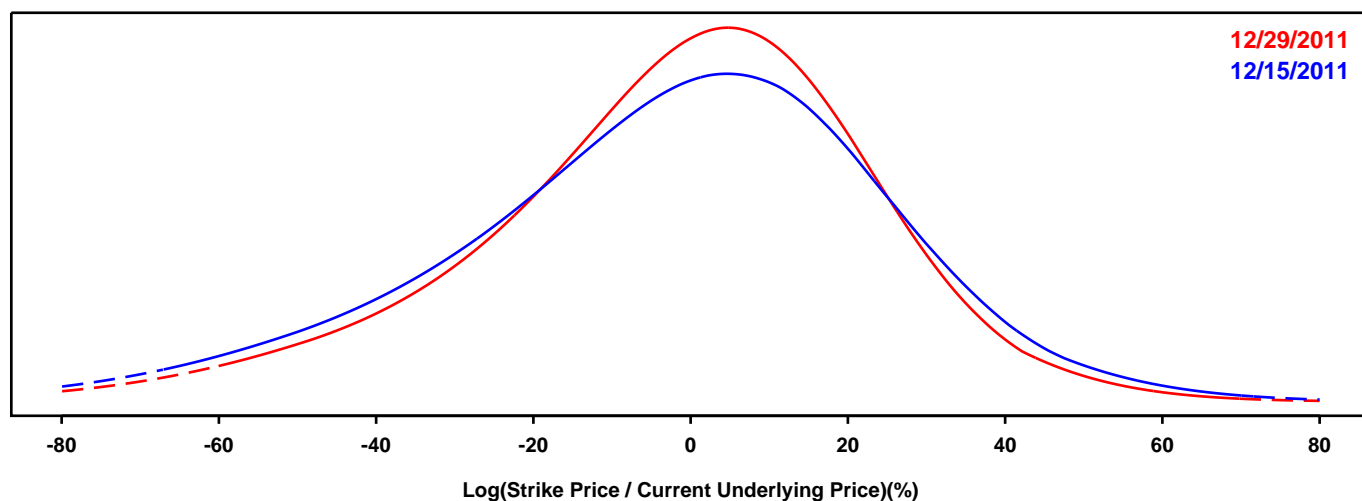
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

12/29/2011
12/15/2011

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

Risk Neutral PDF of the Log Return Distribution

12/29/2011
12/15/2011

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

Probability of a Large Change

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

Statistics of the Log Return Distributions

	12/15/2011	12/29/2011	Change
10th Pct	-40.96%	-36.18%	4.78%
50th Pct	-0.41%	0.39%	0.80%
90th Pct	30.16%	27.31%	-2.85%
Mean	-3.07%	-2.21%	0.86%
Std Dev	28.33%	25.56%	-2.77%
Skew	-0.46	-0.55	-0.09
Kurtosis	0.48	0.72	0.24

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

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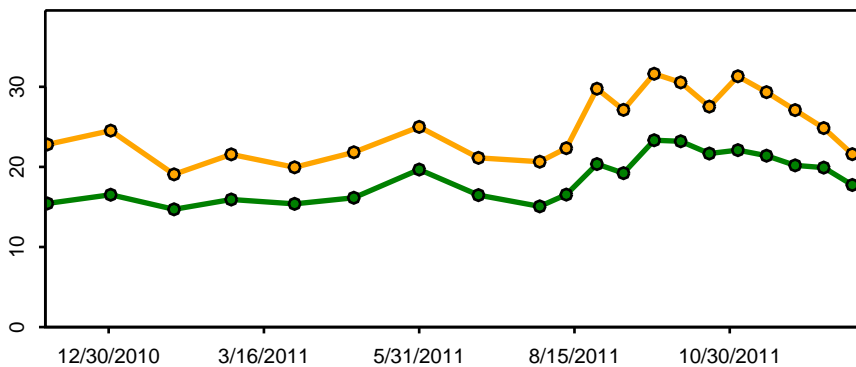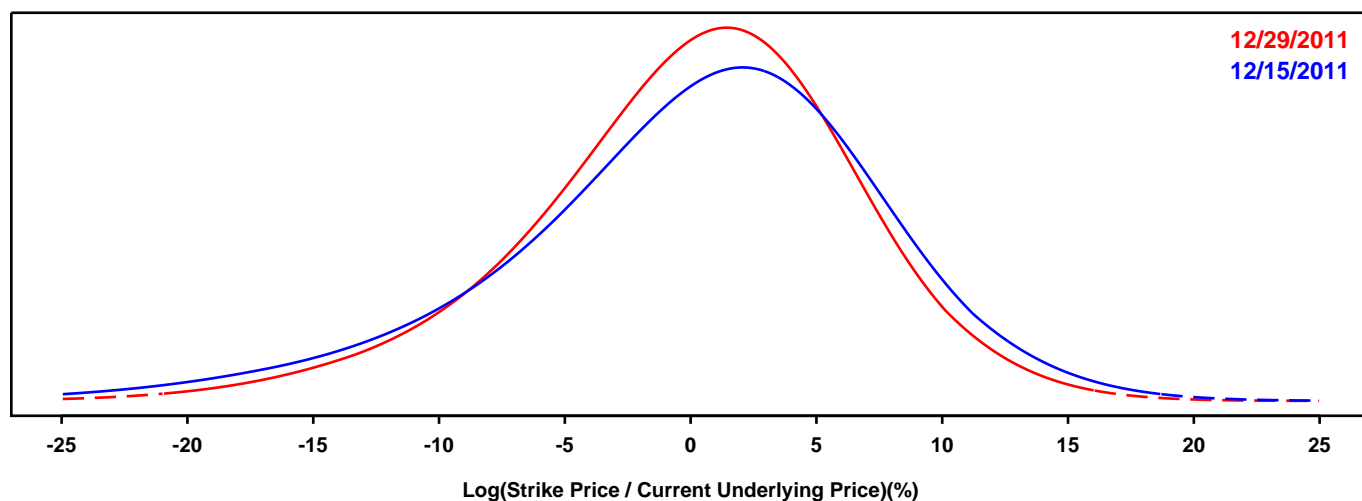derived from options that expire in approximately 3 months.*

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

12/29/2011
12/15/2011

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

Risk Neutral PDF of the Log Return Distribution

12/29/2011
12/15/2011

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

Probability of a Large Change

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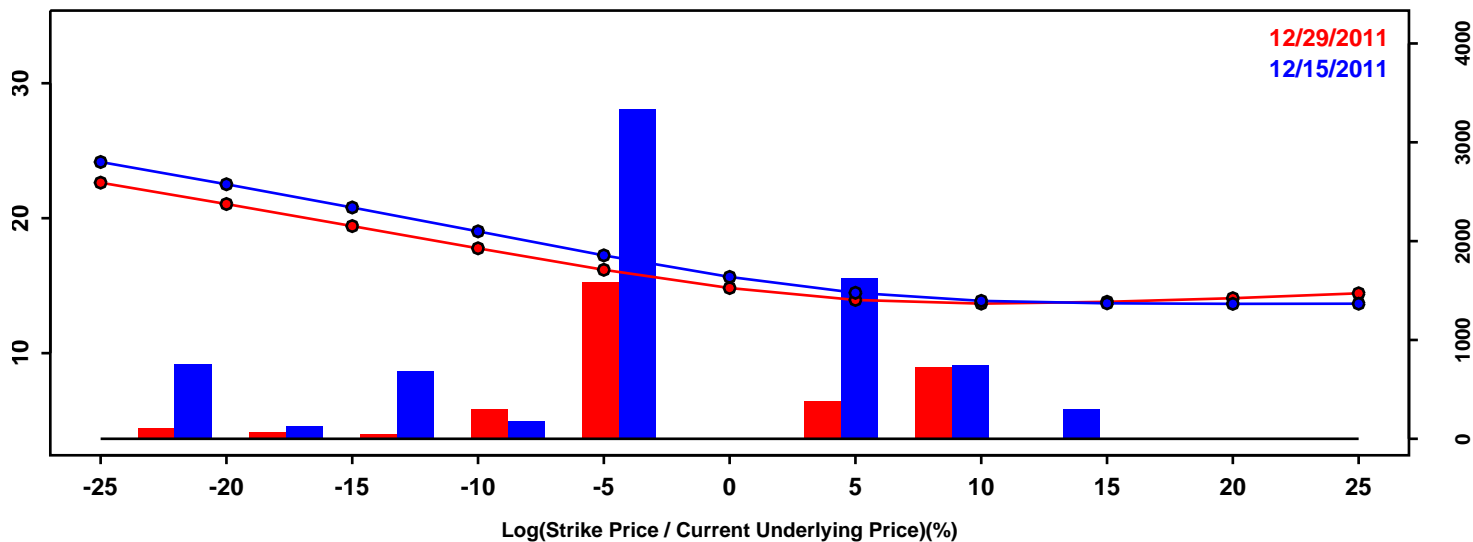
Statistics of the Log Return Distributions

	12/15/2011	12/29/2011	Change
10th Pct	-9.99%	-8.56%	1.43%
50th Pct	0.84%	0.54%	-0.30%
90th Pct	8.89%	7.79%	-1.10%
Mean	0.06%	0.03%	-0.03%
Std Dev	7.65%	6.57%	-1.07%
Skew	-0.62	-0.45	0.17
Kurtosis	0.88	0.60	-0.28

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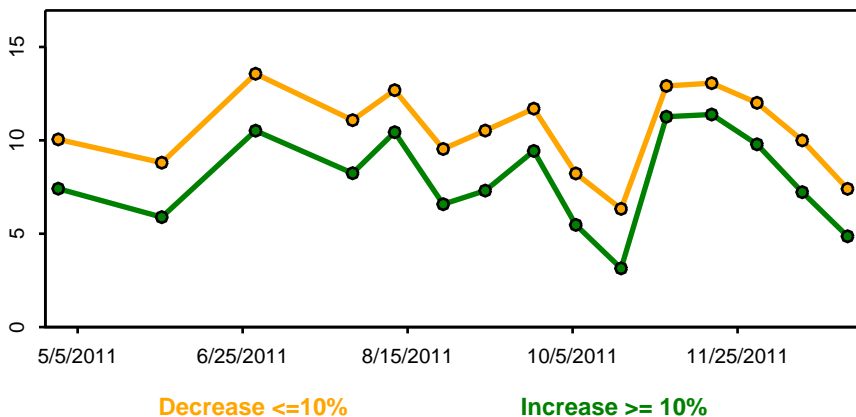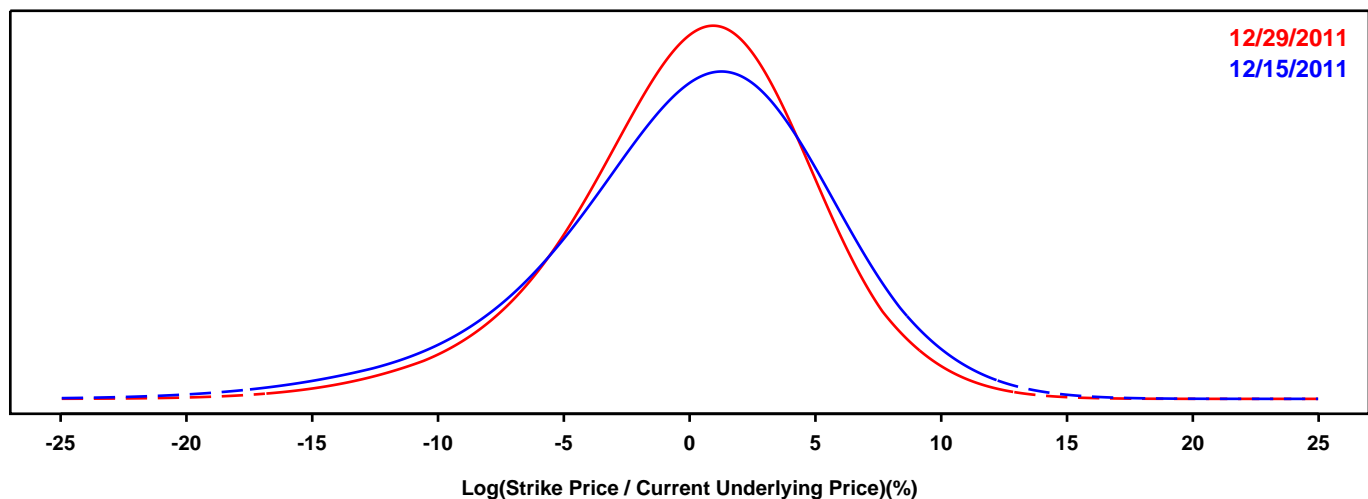
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

12/29/2011
12/15/2011

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

Risk Neutral PDF of the Log Return Distribution

12/29/2011
12/15/2011

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

Probability of a Large Change

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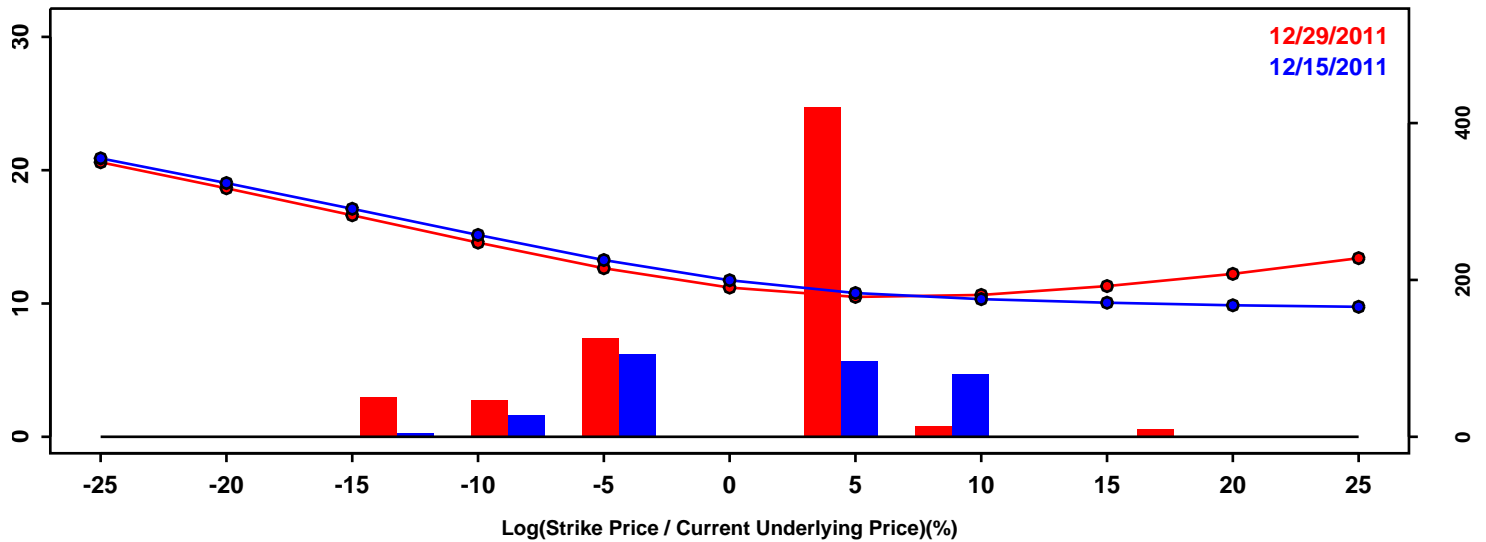
Statistics of the Log Return Distributions

	12/15/2011	12/29/2011	Change
10th Pct	-7.37%	-6.41%	0.96%
50th Pct	0.49%	0.34%	-0.15%
90th Pct	6.72%	5.87%	-0.85%
Mean	0.02%	0.01%	-0.01%
Std Dev	5.72%	4.96%	-0.76%
Skew	-0.57	-0.46	0.11
Kurtosis	0.87	0.72	-0.15

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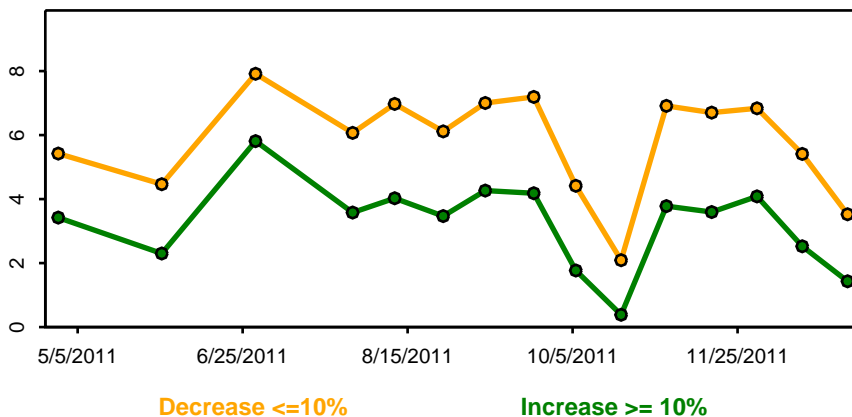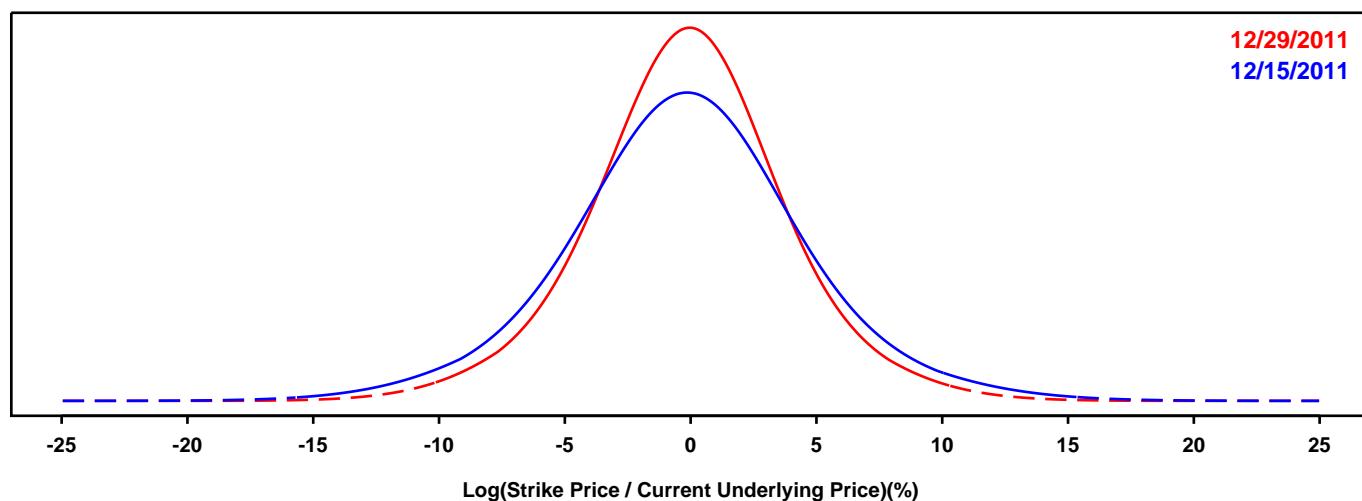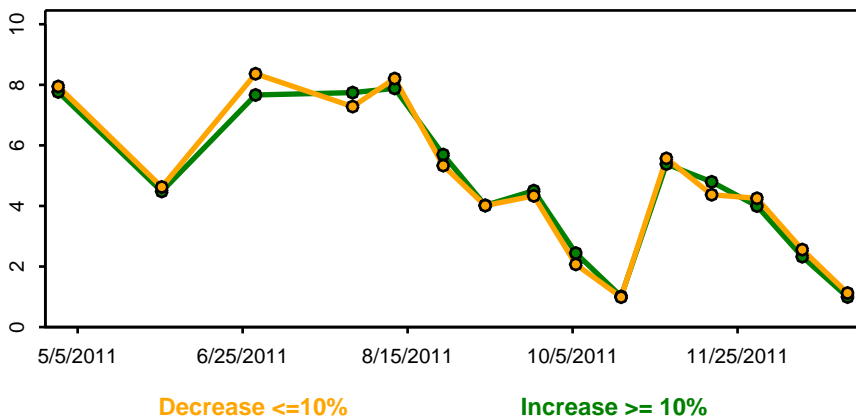
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

12/29/2011
12/15/2011

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

Risk Neutral PDF of the Log Return Distribution

12/29/2011
12/15/2011

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

Probability of a Large Change

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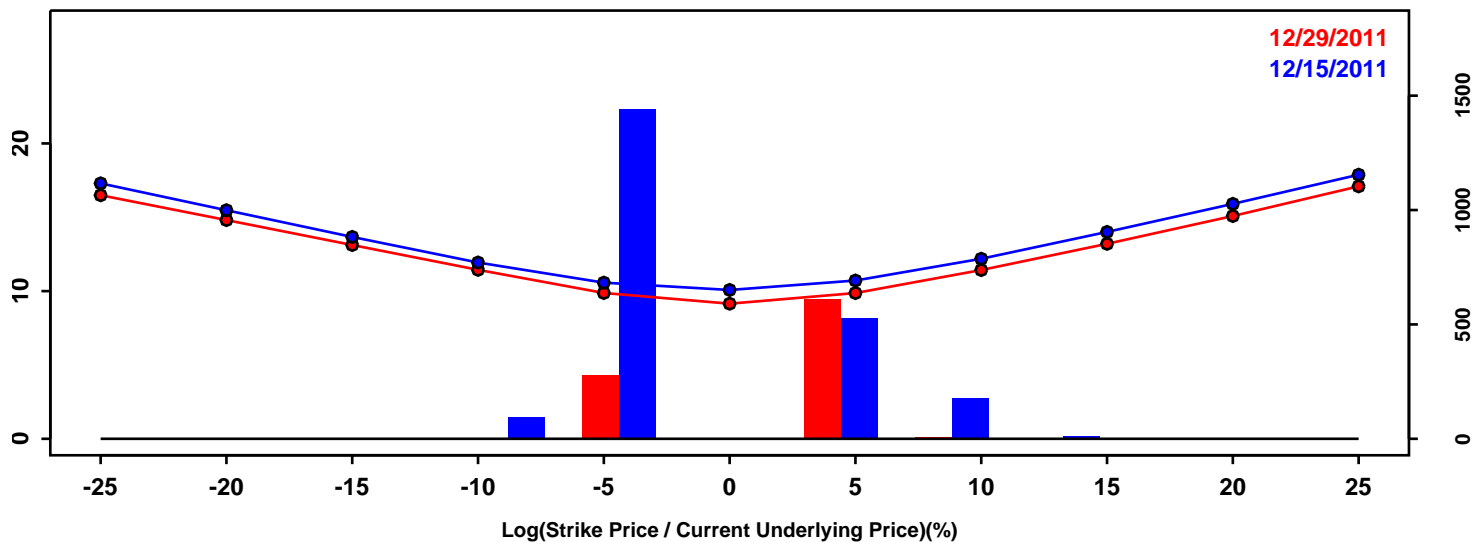
Statistics of the Log Return Distributions

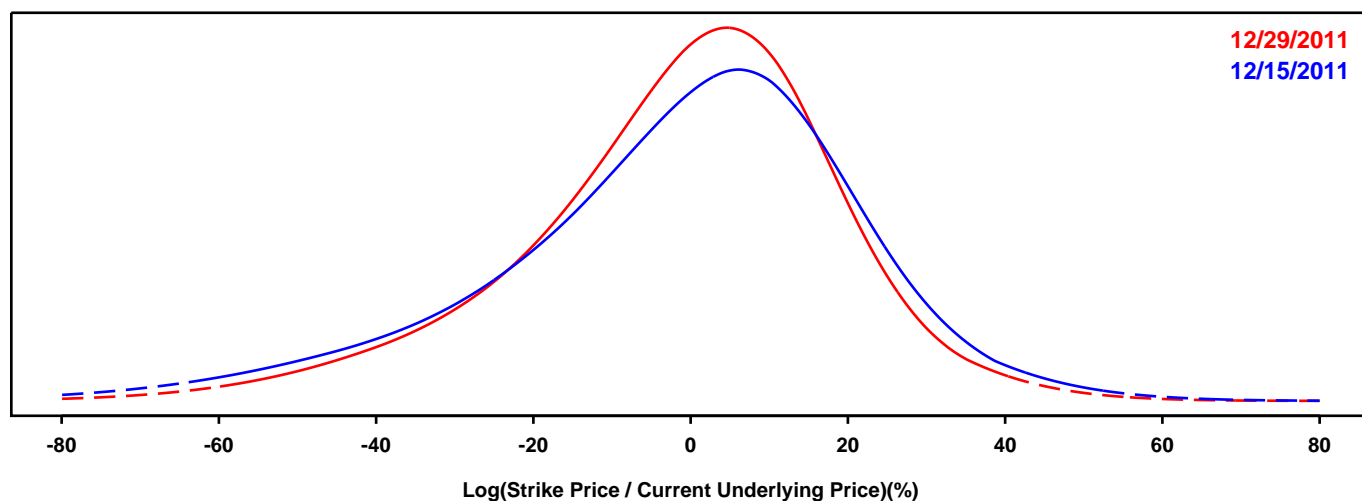|	12/15/2011	12/29/2011	Change
10th Pct	-6.09%	-5.03%	1.06%
50th Pct	-0.16%	-0.06%	0.10%
90th Pct	5.78%	4.83%	-0.95%
Mean	-0.13%	-0.07%	0.06%
Std Dev	4.85%	4.02%	-0.83%
Skew	0.02	-0.01	-0.03
Kurtosis	0.70	0.67	-0.02

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES

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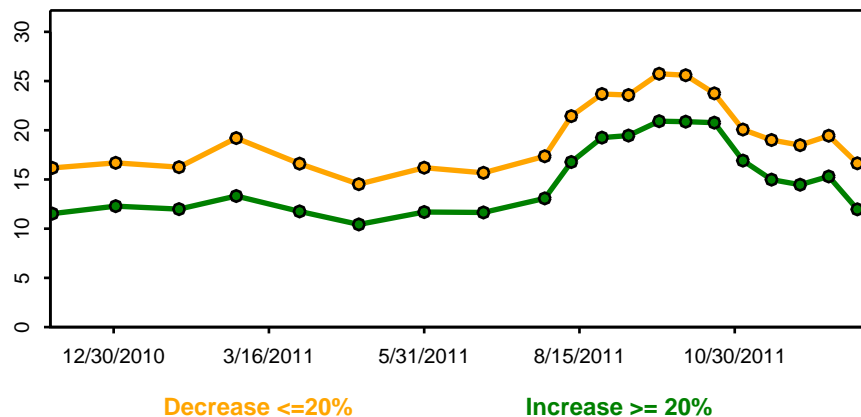derived from options that expire in approximately 6 months.*

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

12/29/2011
12/15/2011

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

Risk Neutral PDF of the Log Return Distribution

12/29/2011
12/15/2011

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

Probability of a Large Change

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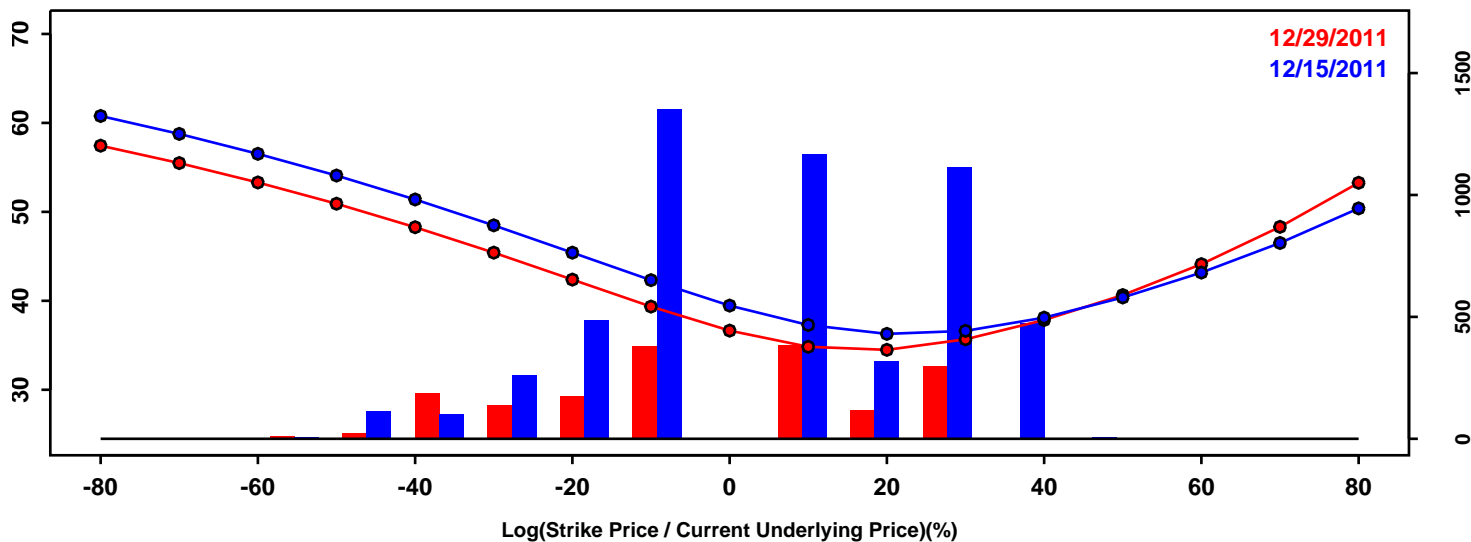
Statistics of the Log Return Distributions

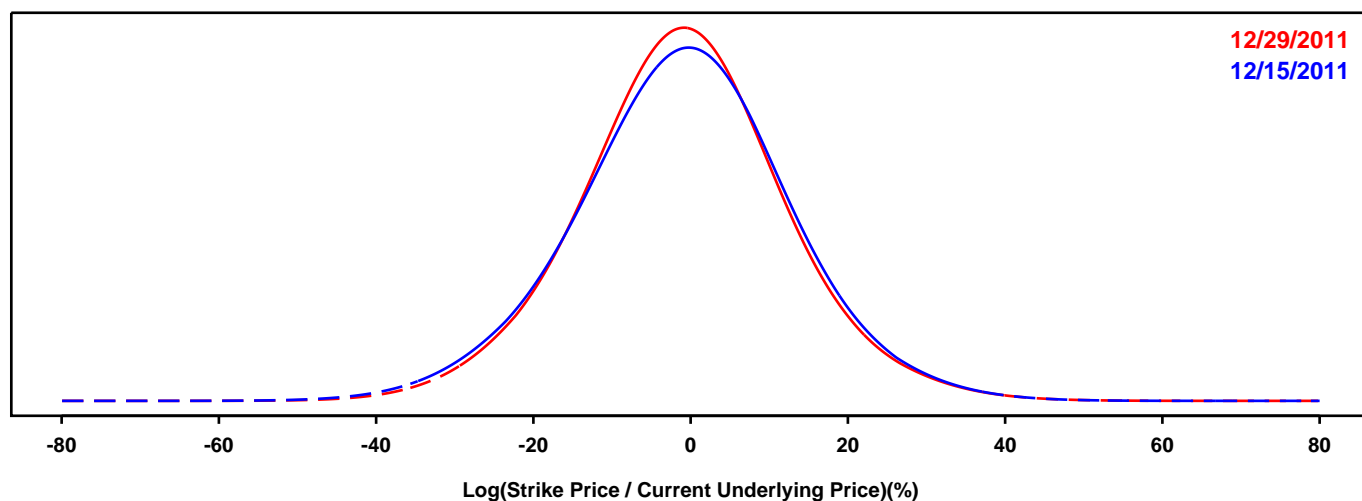|	12/15/2011	12/29/2011	Change
10th Pct	-33.42%	-28.58%	4.84%
50th Pct	1.19%	0.79%	-0.40%
90th Pct	24.69%	21.75%	-2.93%
Mean	-1.81%	-1.44%	0.37%
Std Dev	23.62%	20.46%	-3.16%
Skew	-0.66	-0.57	0.09
Kurtosis	0.93	0.87	-0.06

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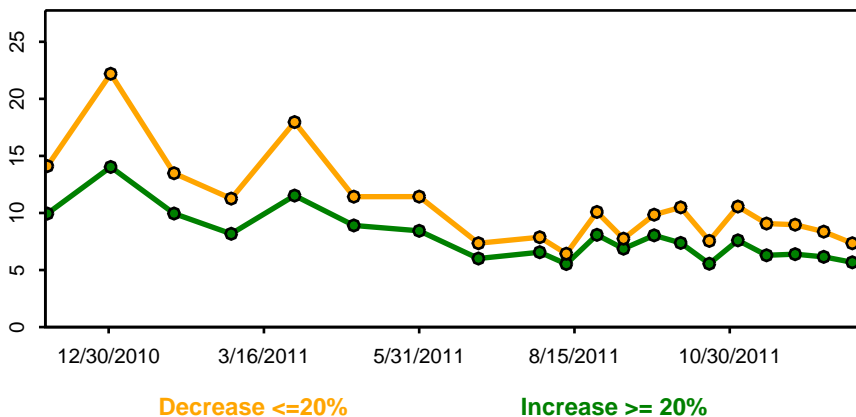
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

12/29/2011
12/15/2011

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

Risk Neutral PDF of the Log Return Distribution

12/29/2011
12/15/2011

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

Probability of a Large Change

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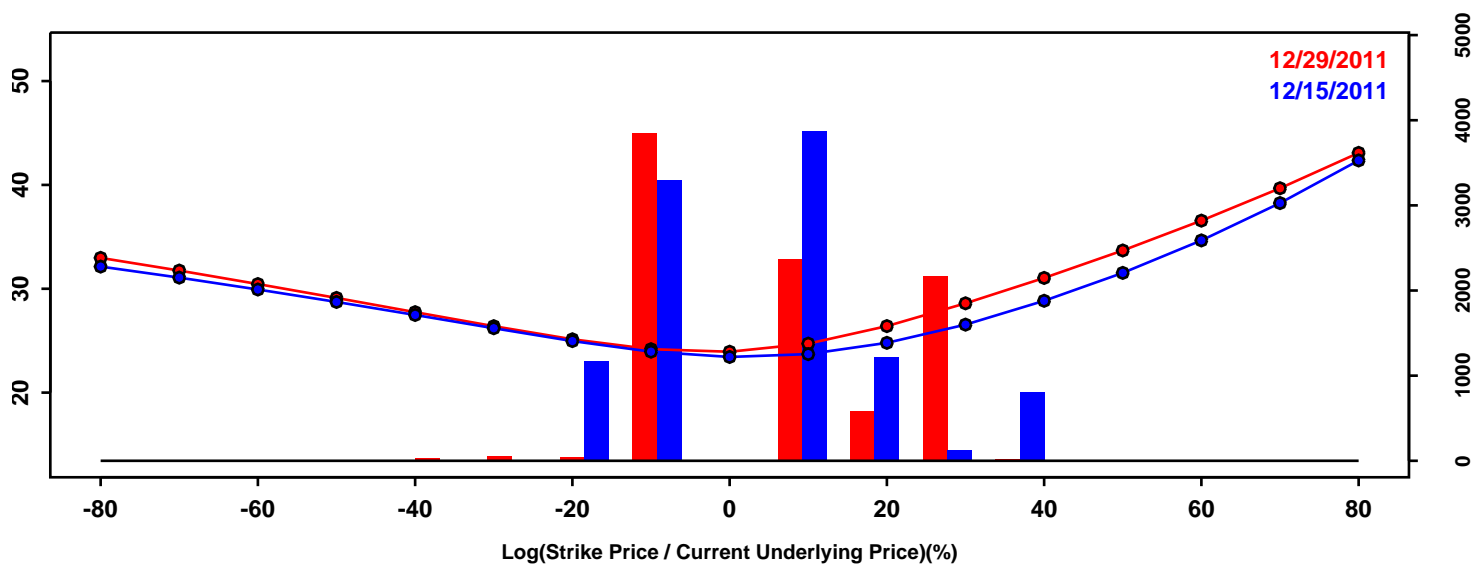
Statistics of the Log Return Distributions

	12/15/2011	12/29/2011	Change
10th Pct	-18.46%	-17.56%	0.90%
50th Pct	-0.76%	-0.96%	-0.20%
90th Pct	16.21%	15.53%	-0.68%
Mean	-0.90%	-0.93%	-0.03%
Std Dev	13.80%	13.24%	-0.56%
Skew	-0.04%	0.05	0.10
Kurtosis	0.35	0.44	0.09

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)
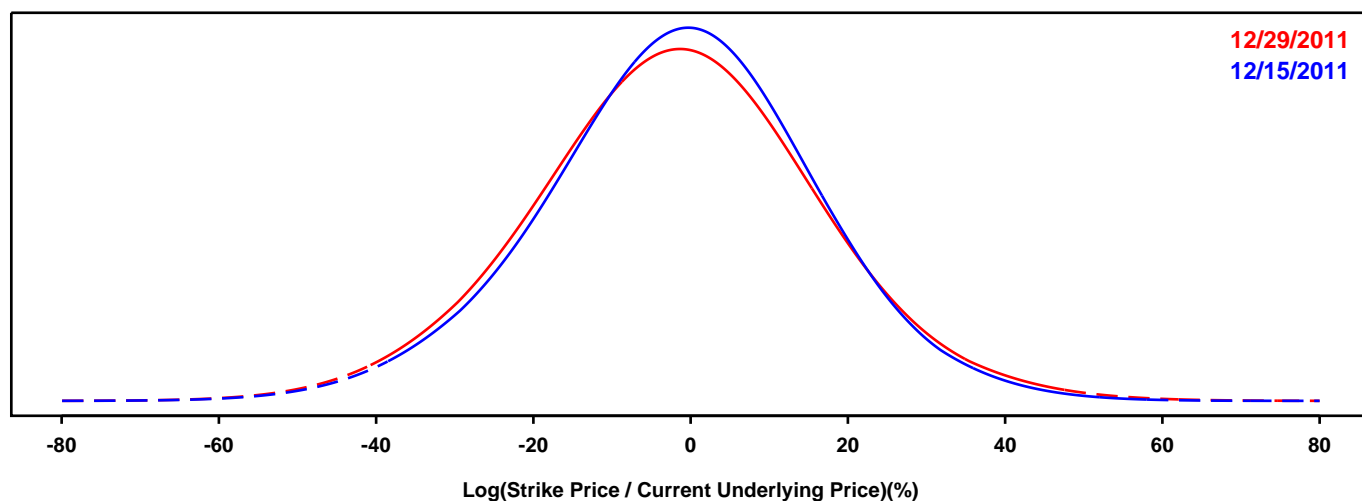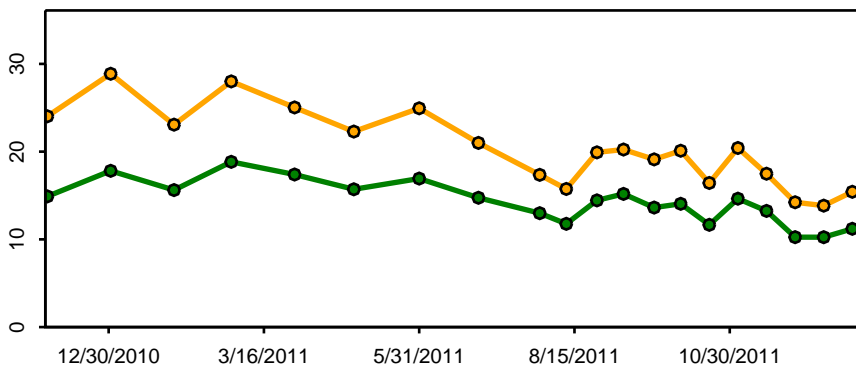

Log(Strike Price / Current Underlying Price)(%)

Risk Neutral PDF of the Log Return Distribution

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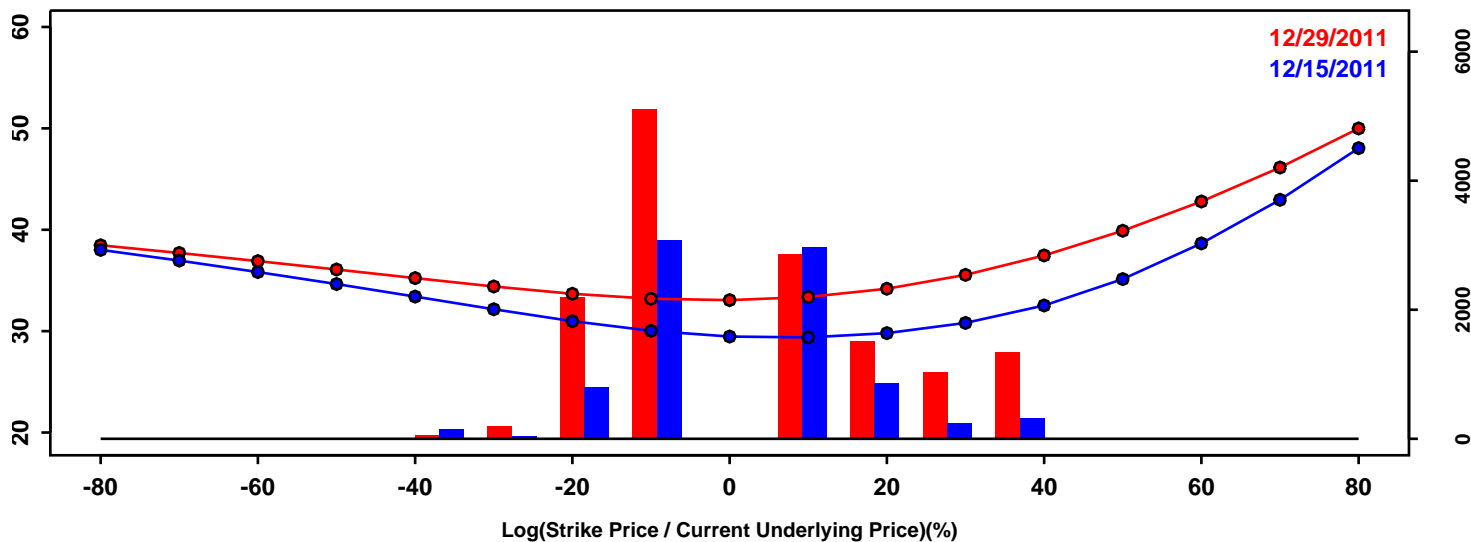
Probability of a Large Change

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

Statistics of the Log Return Distributions

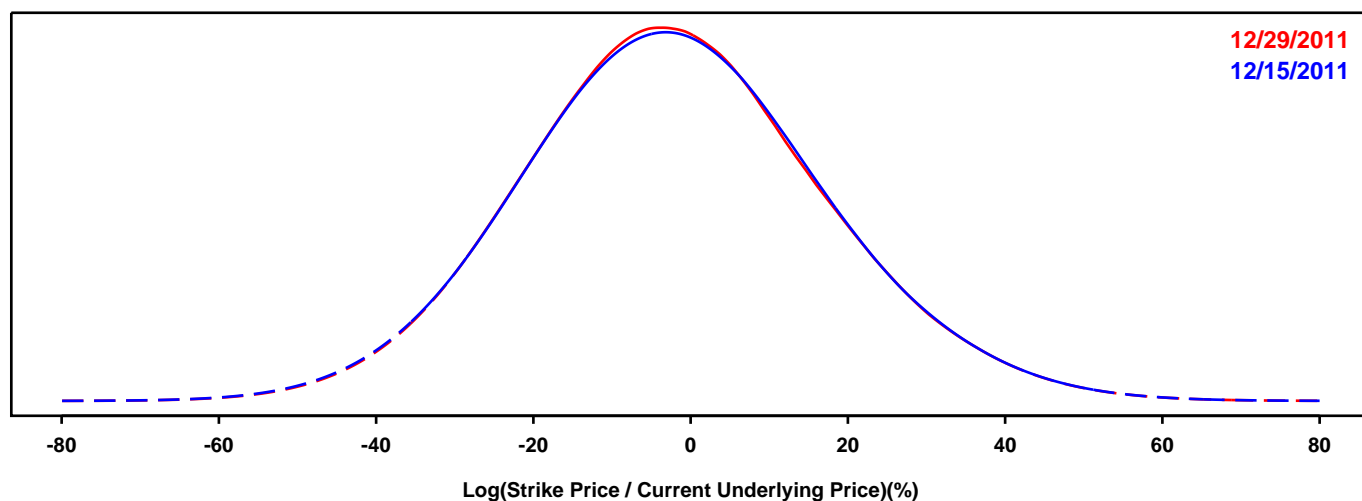|	12/15/2011	12/29/2011	Change
10th Pct	-23.65%	-24.99%	-1.34%
50th Pct	-1.01%	-1.67%	-0.66%
90th Pct	20.25%	21.23%	0.98%
Mean	-1.35%	-1.70%	-0.34%
Std Dev	17.39%	18.30%	0.91%
Skew	-0.10	0.01	0.11
Kurtosis	0.26	0.25	-0.01

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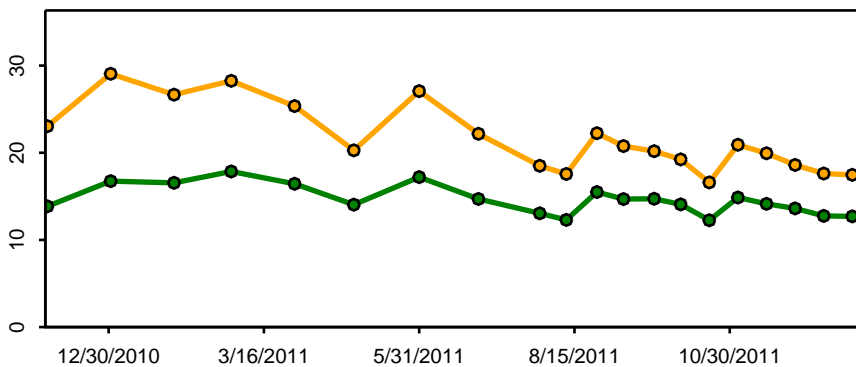
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

12/29/2011
12/15/2011

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

Risk Neutral PDF of the Log Return Distribution

12/29/2011
12/15/2011

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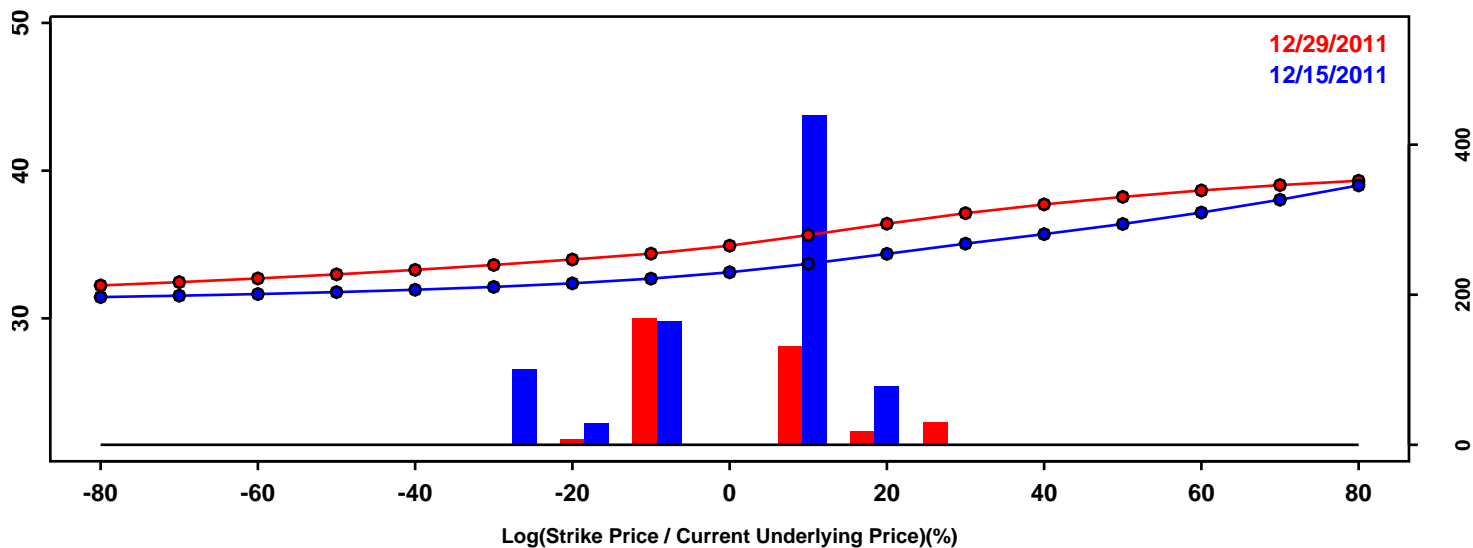
Probability of a Large Change

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

Statistics of the Log Return Distributions

	12/15/2011	12/29/2011	Change
10th Pct	-26.54%	-26.34%	0.20%
50th Pct	-2.49%	-2.59%	-0.10%
90th Pct	23.03%	22.95%	-0.08%
Mean	-2.05%	-2.06%	-0.01%
Std Dev	19.44%	19.32%	-0.12%
Skew	0.12	0.14	0.02
Kurtosis	0.11	0.11	0.00

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

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

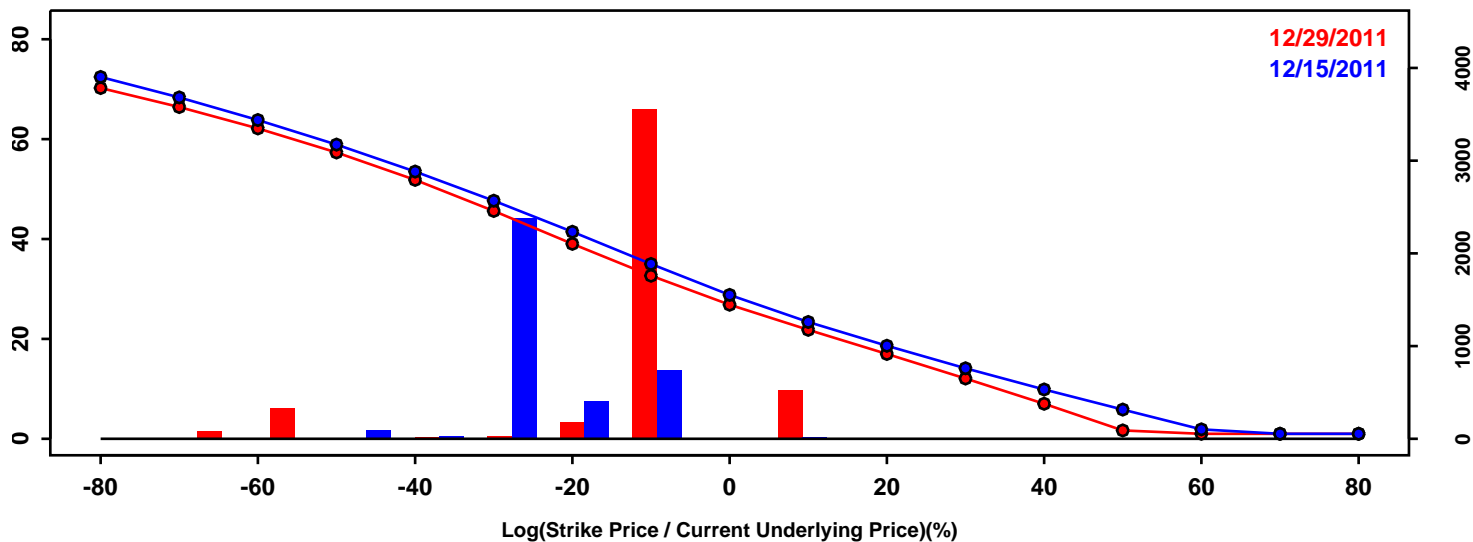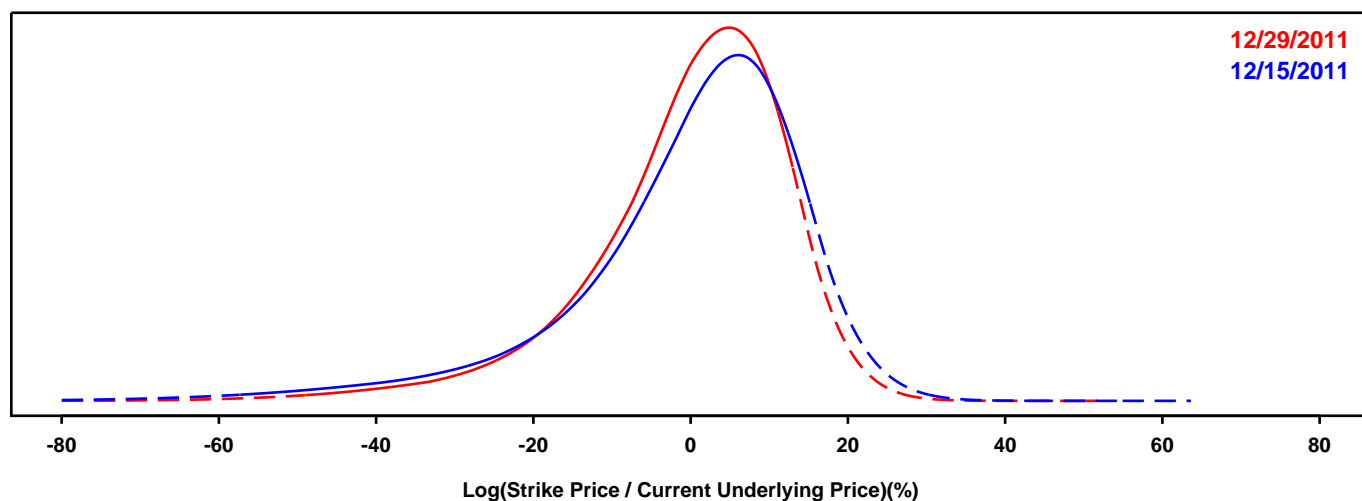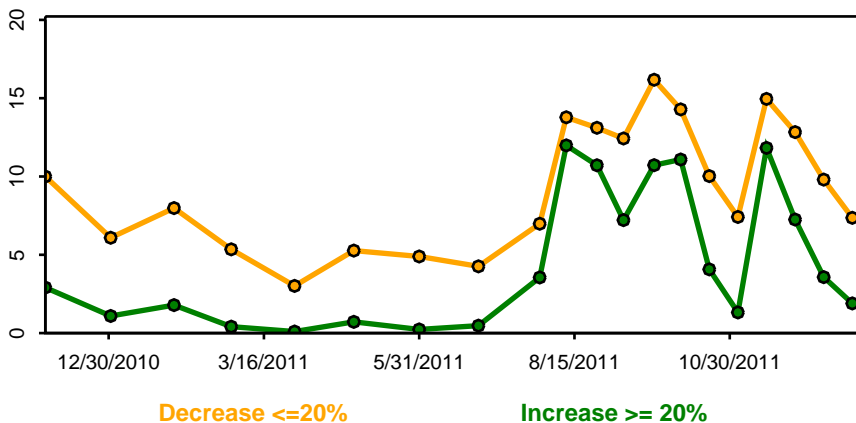### Probability of a Large Change

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

Statistics of the Log Return Distributions

	12/15/2011	12/29/2011	Change
10th Pct	-19.66%	-16.56%	3.11%
50th Pct	2.56%	1.83%	-0.73%
90th Pct	15.31%	13.56%	-1.75%
Mean	-0.35%	-0.23%	0.12%
Std Dev	15.39%	12.90%	-2.49%
Skew	-1.41	-1.19	0.22
Kurtosis	3.23	2.57	-0.66