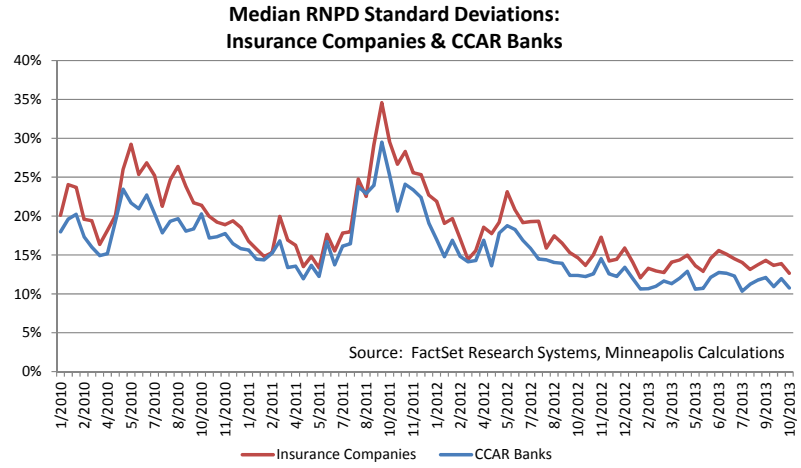
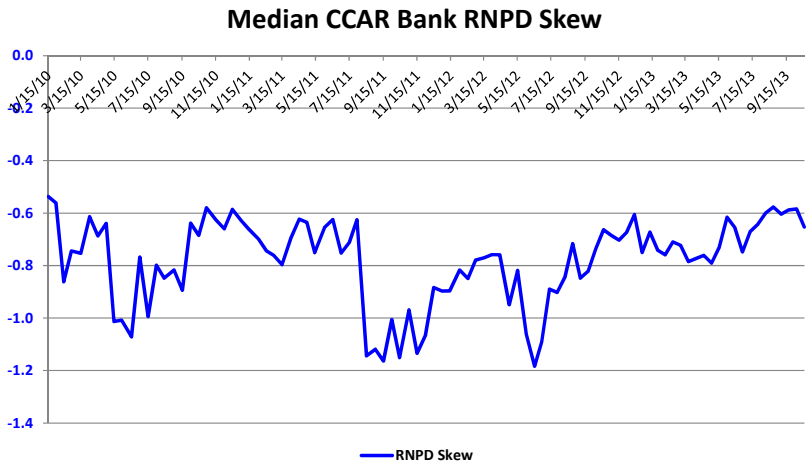
Minneapolis Options Report – October 17th

Banks & Insurance Companies

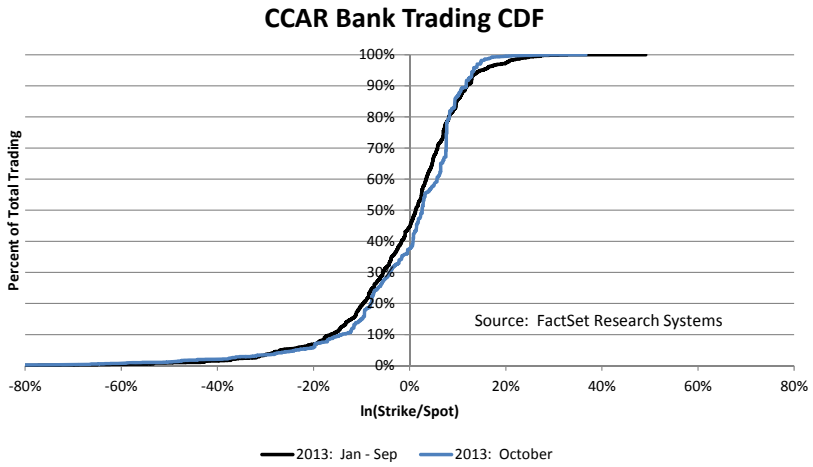
The S&P 500 rose 3.25% over the past two weeks. This period fully encompasses the market's response to the short term resolution of the debt crisis and government shutdown. The average CCAR bank stock rallied over 5% while the average share price of the five insurance companies we follow increased 6.9%. Of the LISCC firms, only BAC and C had volumes fall relative to two weeks ago. Trading volumes in bank stock options we follow were generally above average and strong for C, GS, JPM, and WFC. Volumes were very light for insurance company options.

RNPD standard deviations were uniformly lower relative to two weeks ago and remain at three year lows. In a similarly uniform fashion, RNPD skews became more negative relative to two weeks ago. In absolute terms, the RNPD skew for CCAR banks is not unusually negative.





Surprisingly for the group, trading did not necessarily favor more out of the money activity than what we have witnessed year to date.



Additional notes:

- We also recorded strong activity in options on GS shares. For this bank, we did see evidence of hedging with a pickup in volume at low strike prices. A similar trading histogram is illustrated for WFC. (*See GS and WFC detail reports*)

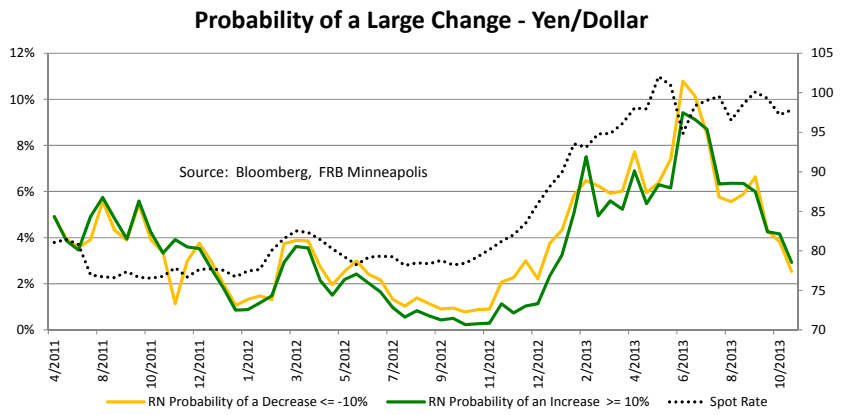
- Strong trading in options on shares of JPM caused the RNPD standard deviation to drop 160 basis points. (*See JPM detail report*)

Other Commodity Markets

Trading in shorter expiry options on the S&P 500 index jumped while RNPD standard deviations for both expiries fell approximately -130 basis points. RNPD standard deviations across the other markets we follow were mostly lower while spot commodity prices were generally higher.

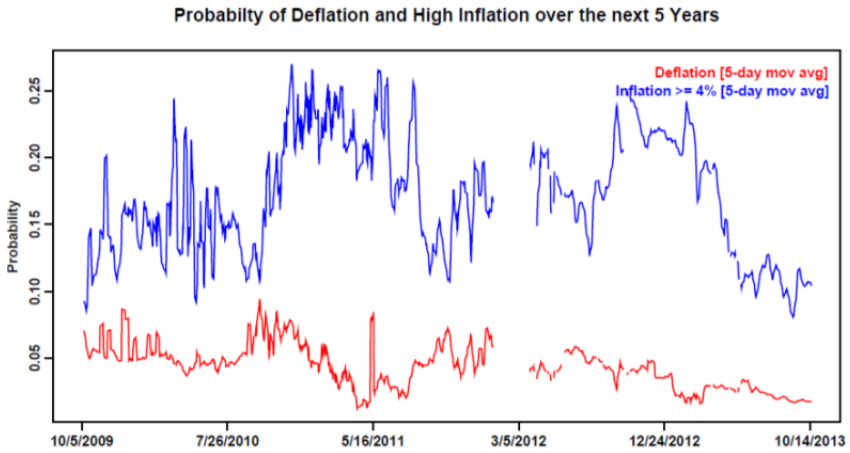
Additional notes:

- Trading in options Dollar-Euro and Dollar-Pound futures was strong. RNPD standard deviations fell. Large change probabilities for derived from options on Dollar-Yen futures continue to tumble. (*See Exchange Rate Reports*)

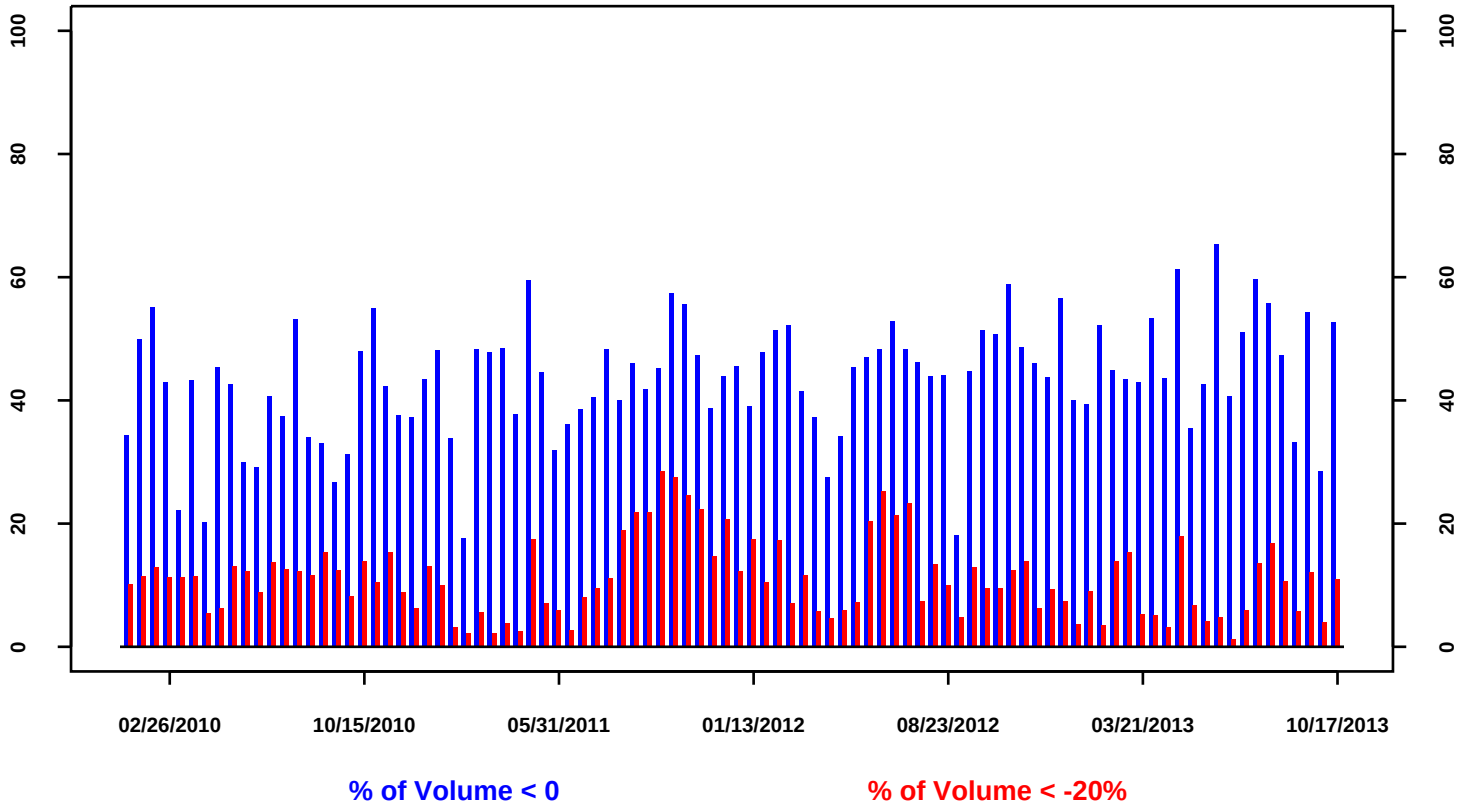


- The DJ Real Estate Index ETF traded actively again last week and more than reversed last period's -4.3% price decline. The ETF rose 5.3% while the RNPD standard deviation fell 200 basis points. (*See Real Estate Report*)

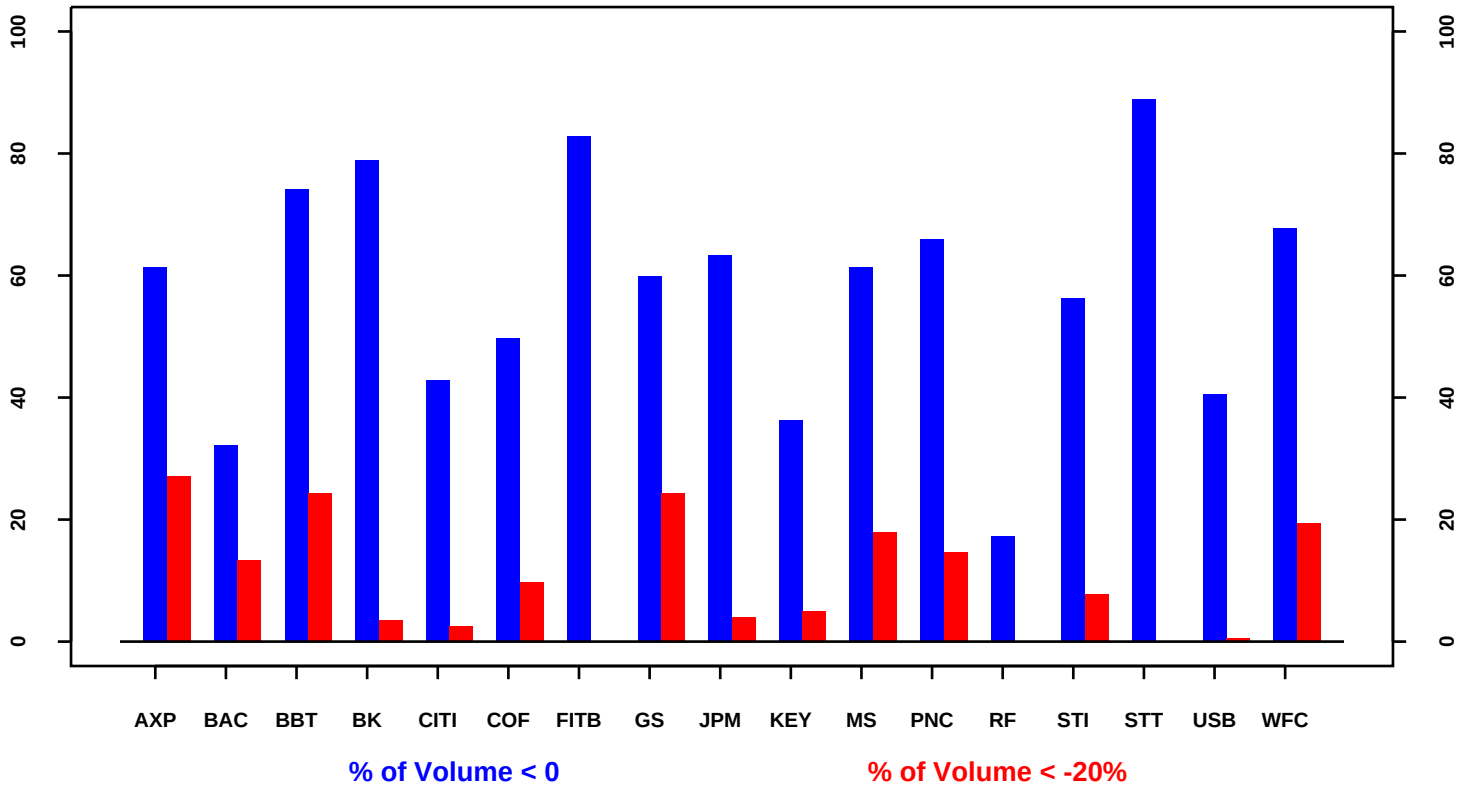
- Though off their recent lows, risk-neutral probabilities for high inflation over the next five years remain small.



Aggregate Volumes for Options on CCAR Banks

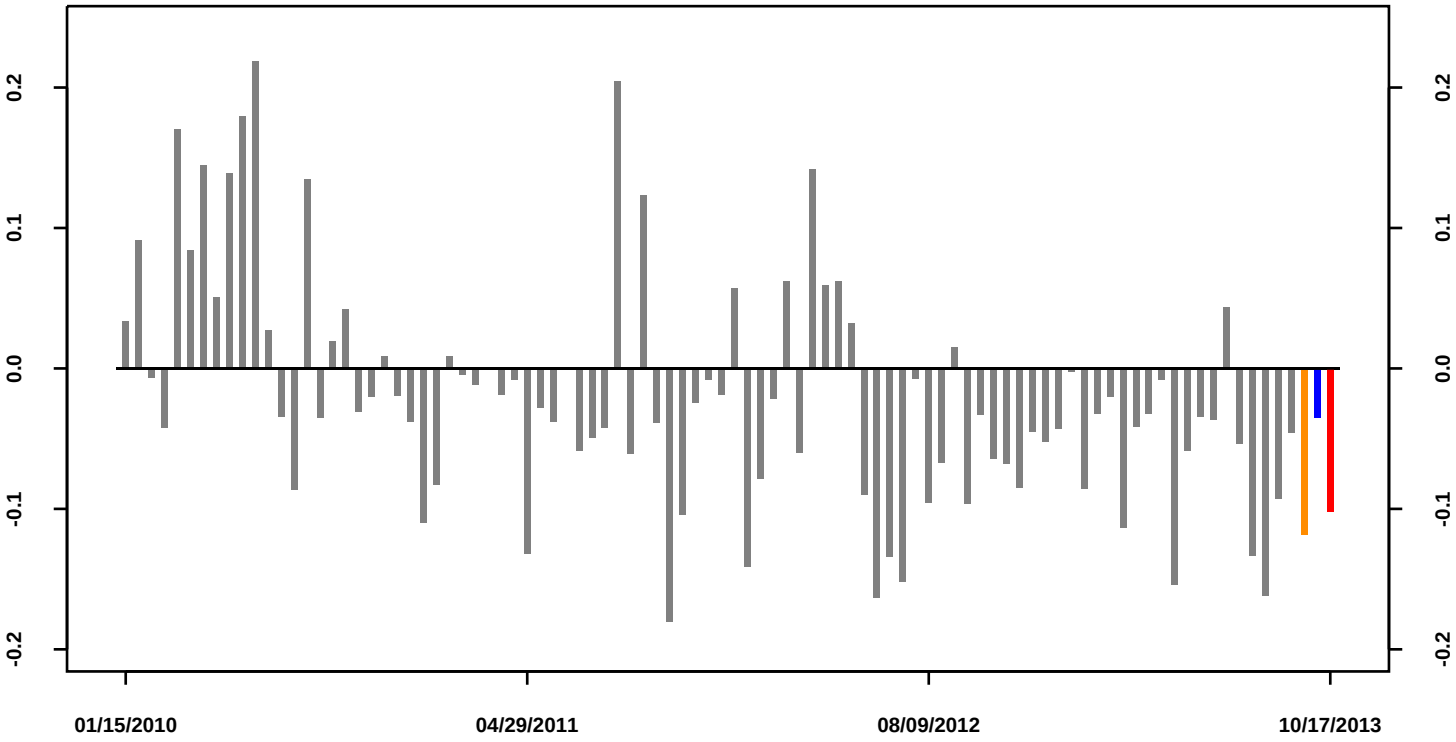


Volumes for Options on CCAR Banks

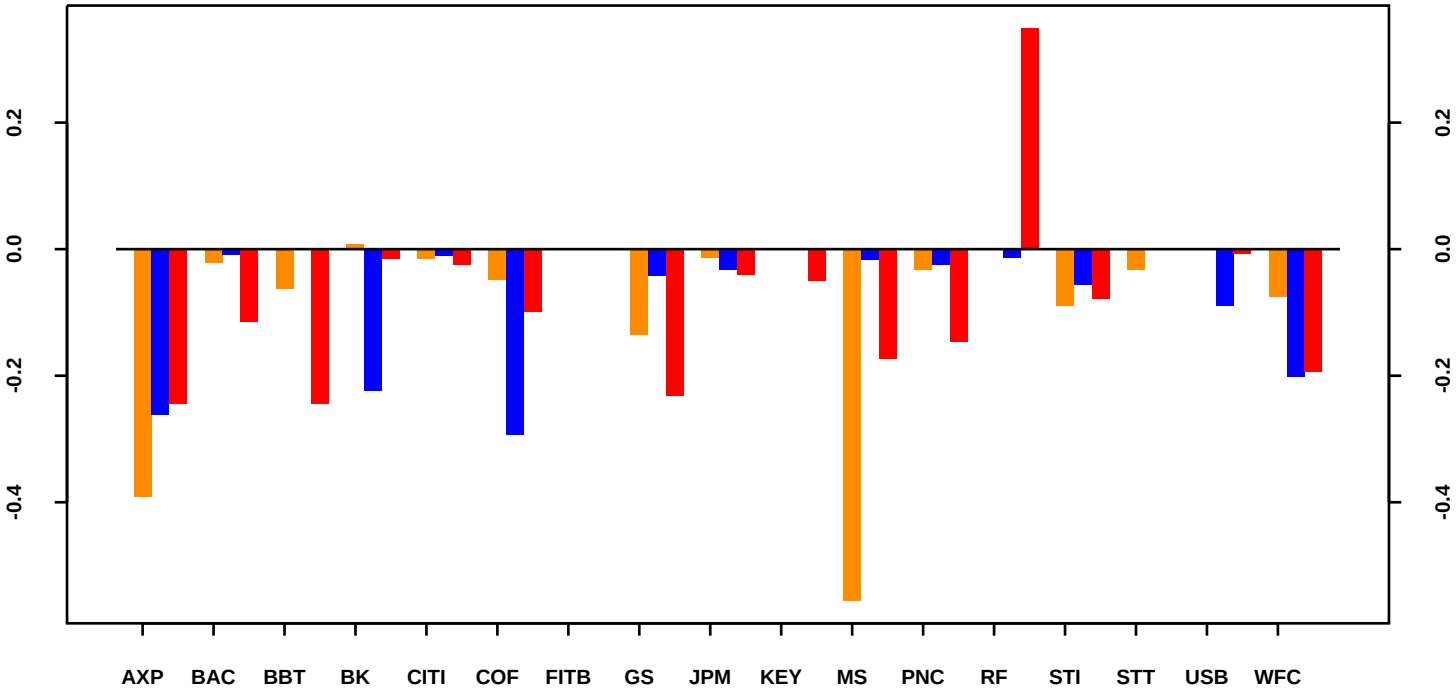


Aggregate Volume Skew--CCAR Banks

(% of volume traded in deep out-of-the-money calls LESS % of volume traded in deep out-of-the-money puts)



CCAR Bank Volume Skew -- Last Three Periods

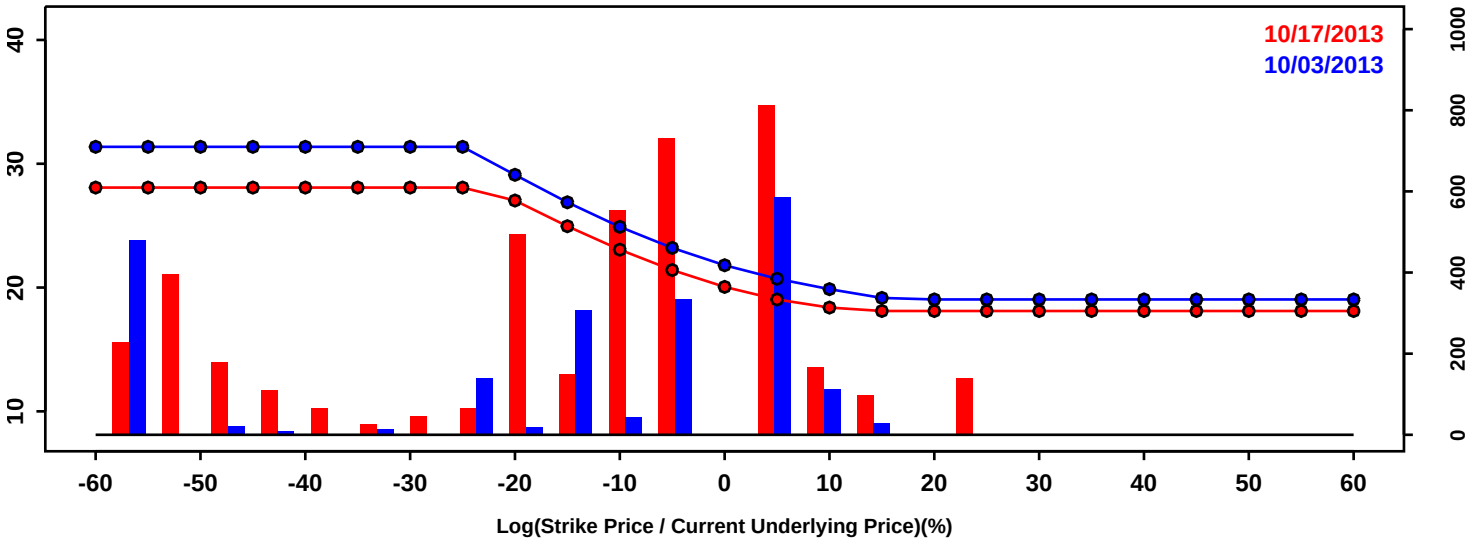


09/19/2013 10/03/2013 10/17/2013

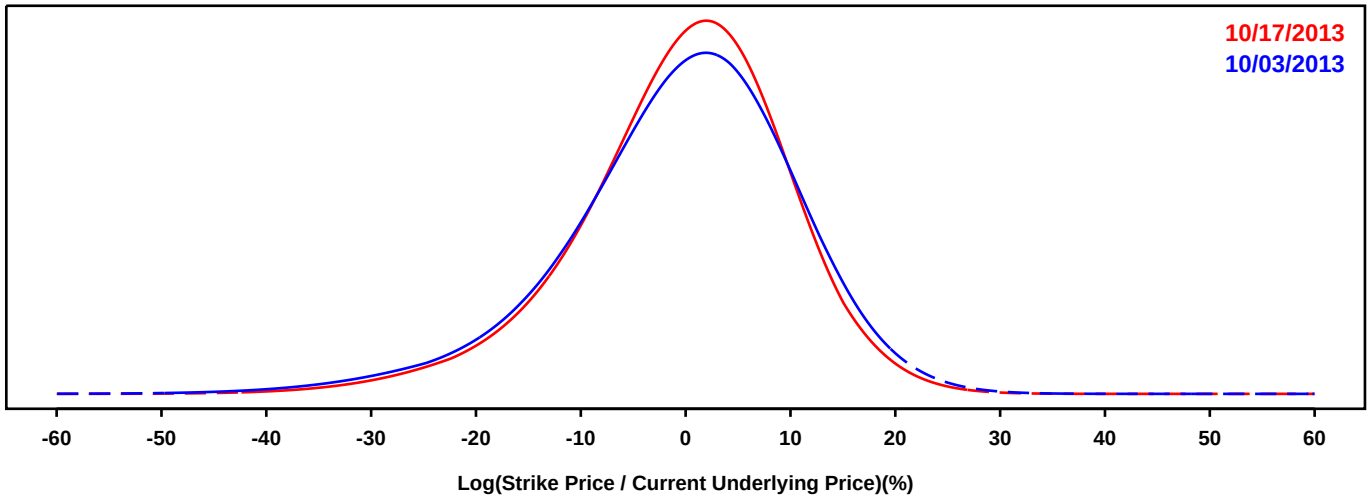
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- AMERICAN EXPRESS

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

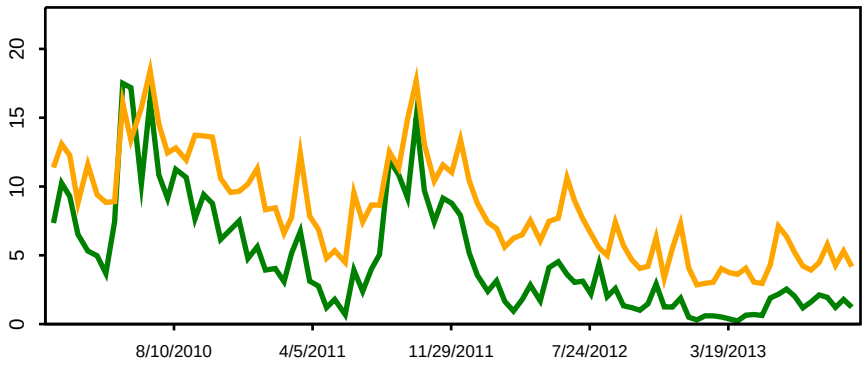
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

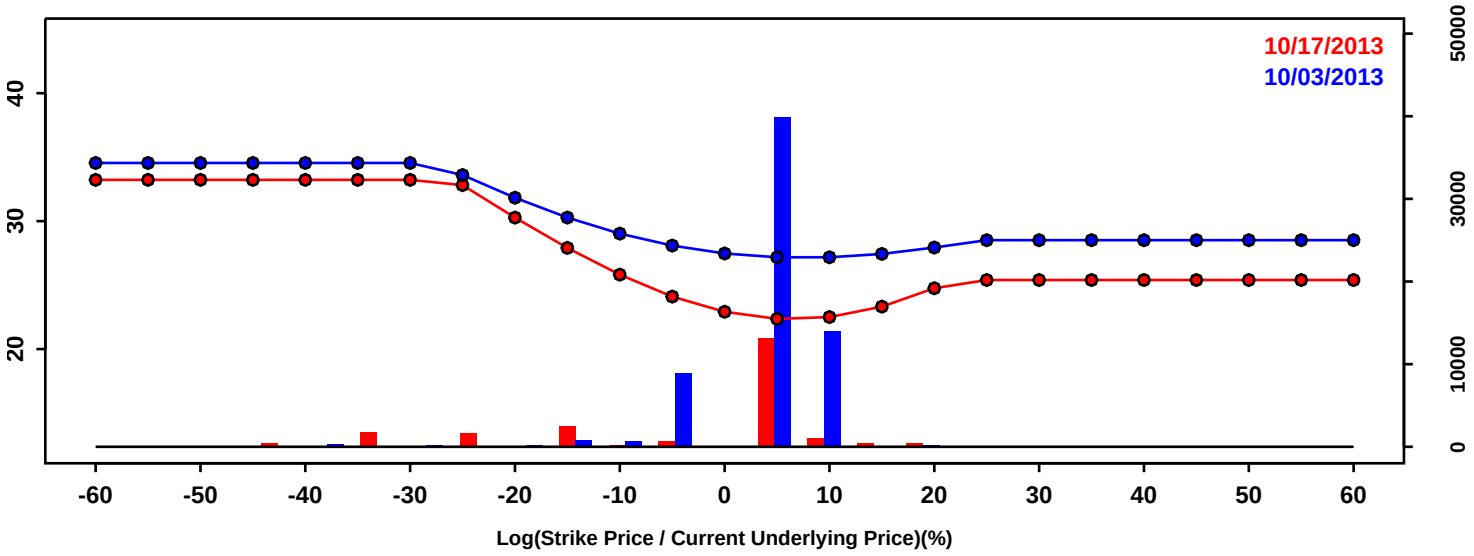
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-14.74%	-13.46%	1.28%
50th Pct	0.46%	0.53%	0.08%
90th Pct	12.53%	11.50%	-1.03%
Mean	-0.50%	-0.36%	0.14%
Std Dev	11.12%	10.18%	-0.95%
Skew	-0.62	-0.58	0.04
Kurtosis	1.00	0.92	-0.08

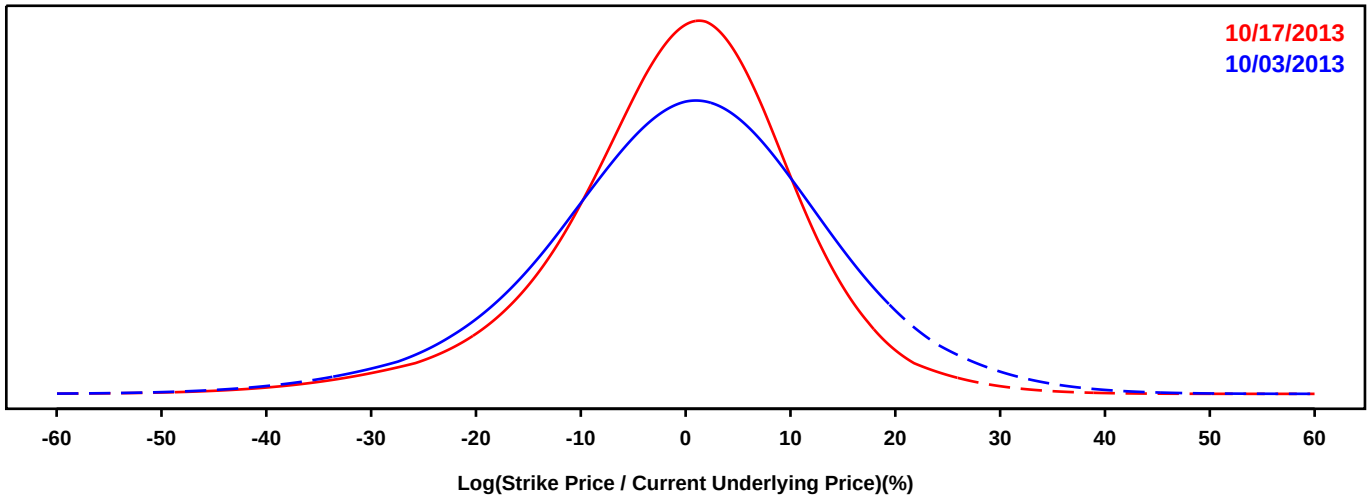
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- BANK OF AMERICA

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

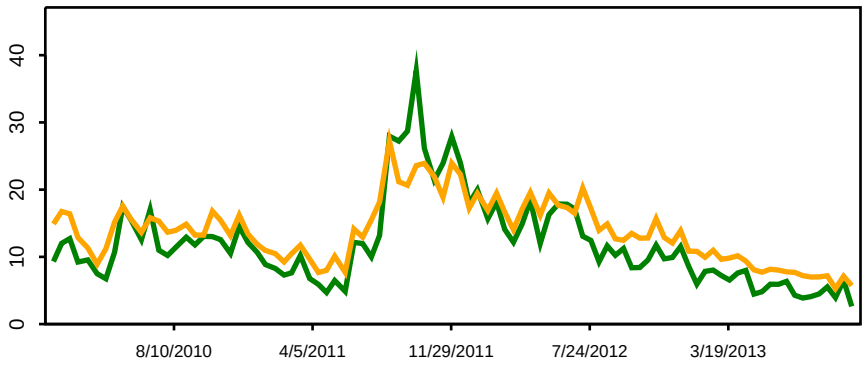
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

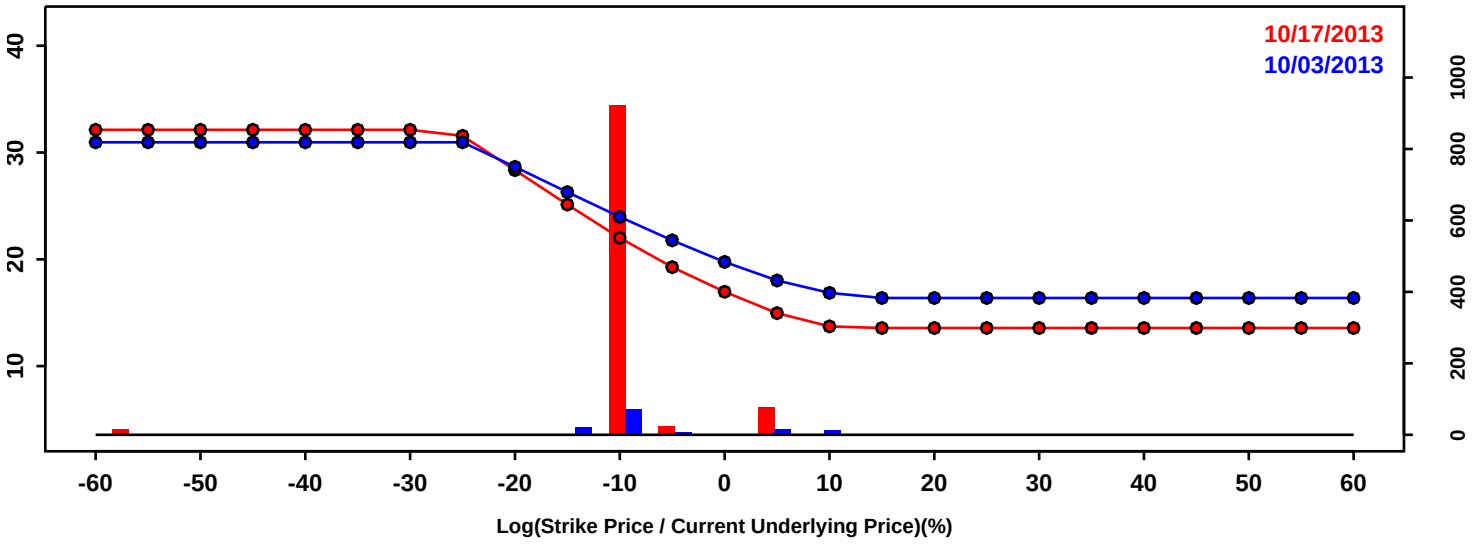
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-17.01%	-15.17%	1.84%
50th Pct	0.52%	0.08%	-0.44%
90th Pct	16.79%	12.57%	-4.21%
Mean	0.14%	-0.75%	-0.90%
Std Dev	13.68%	11.57%	-2.11%
Skew	-0.22	-0.51	-0.29
Kurtosis	0.62	1.31	0.68

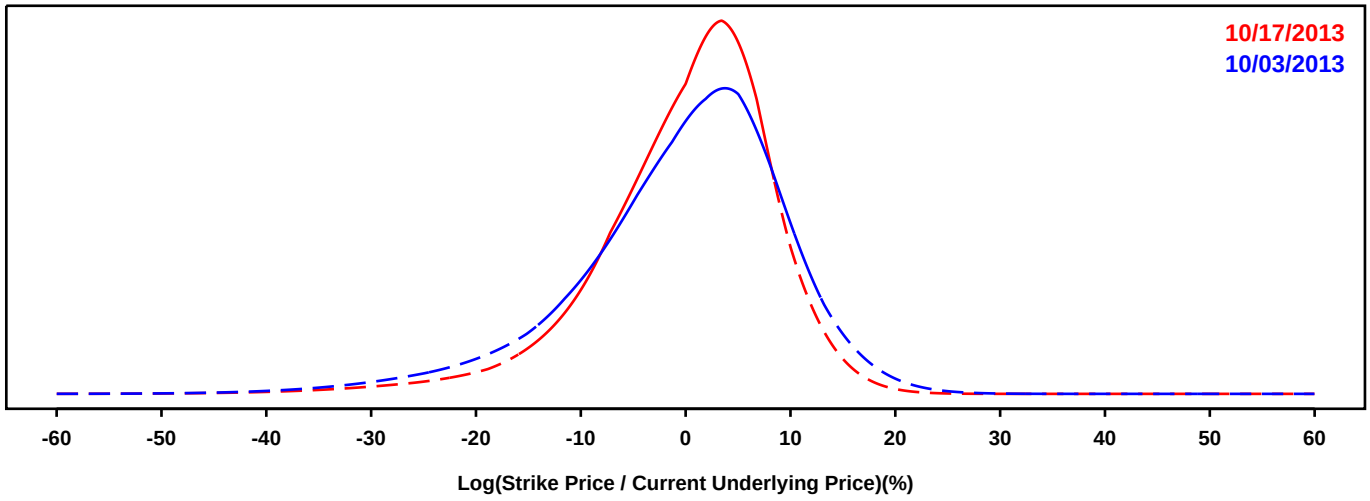
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- BB&T

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

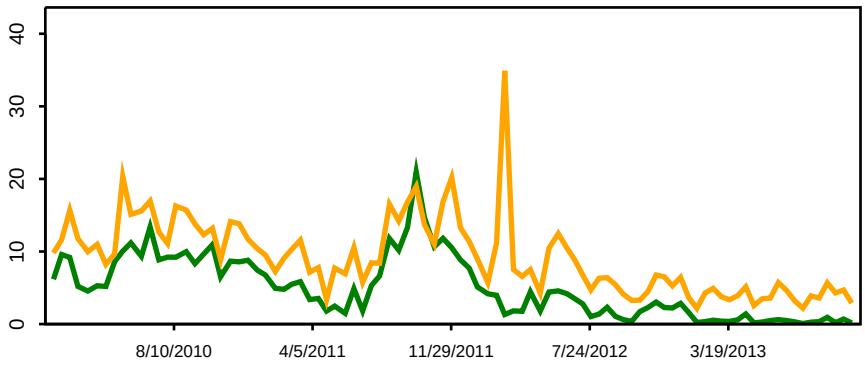
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

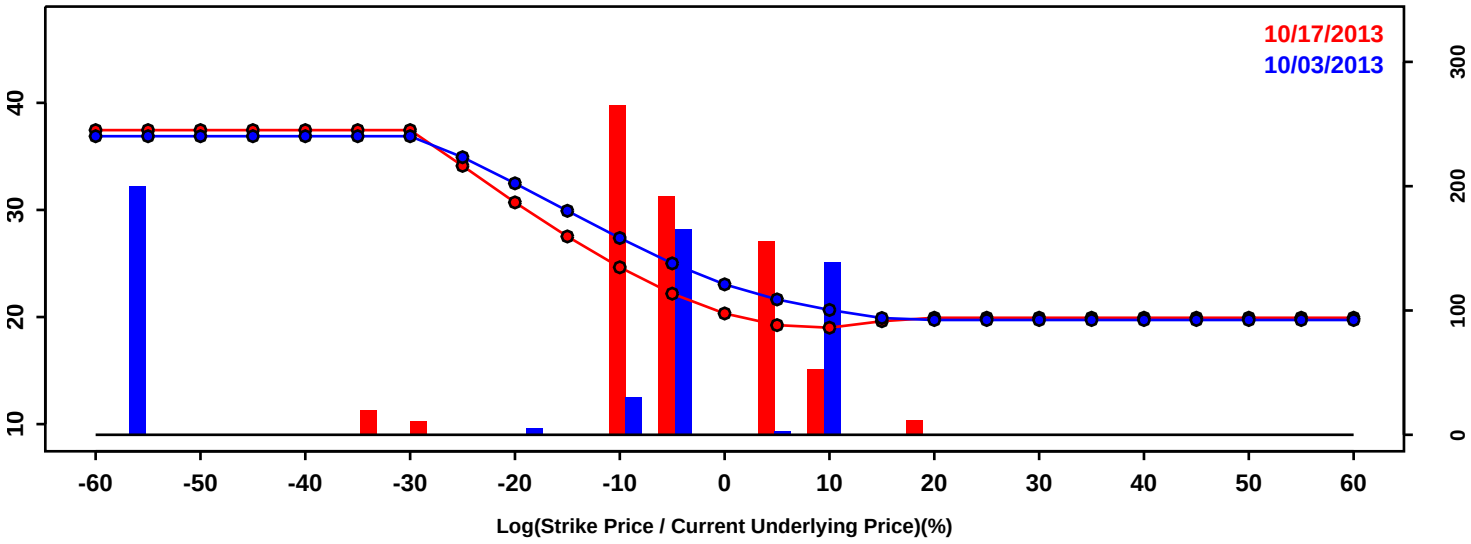
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-13.50%	-10.65%	2.85%
50th Pct	1.01%	1.22%	0.21%
90th Pct	10.78%	9.19%	-1.60%
Mean	-0.41%	-0.07%	0.34%
Std Dev	10.15%	8.62%	-1.53%
Skew	-0.90	-1.14	-0.24
Kurtosis	1.60	2.83	1.23

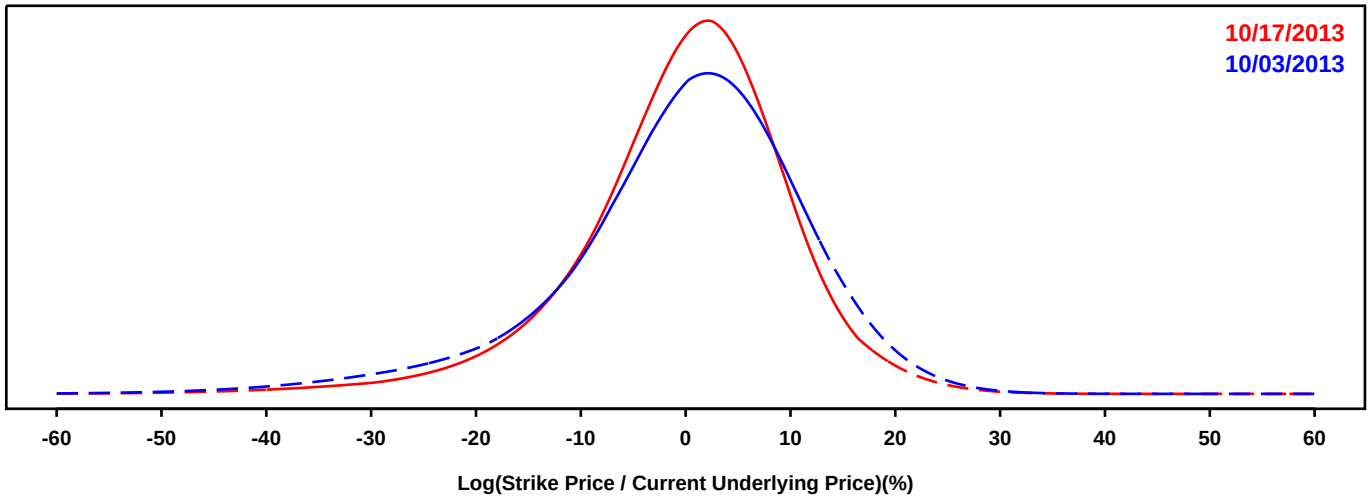
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- BANK OF NEW YORK MELLON

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

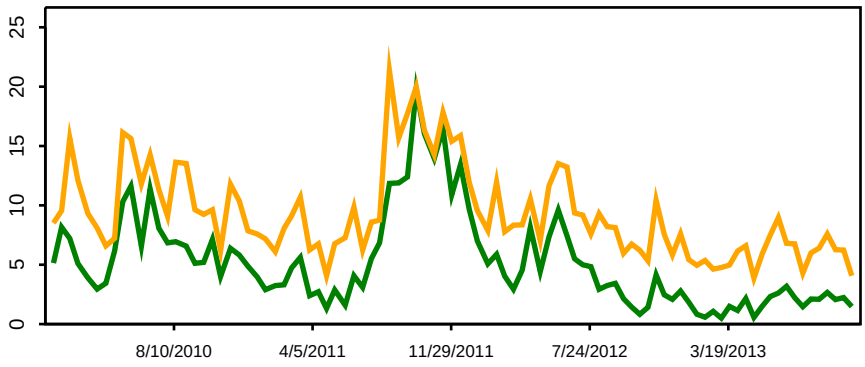
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



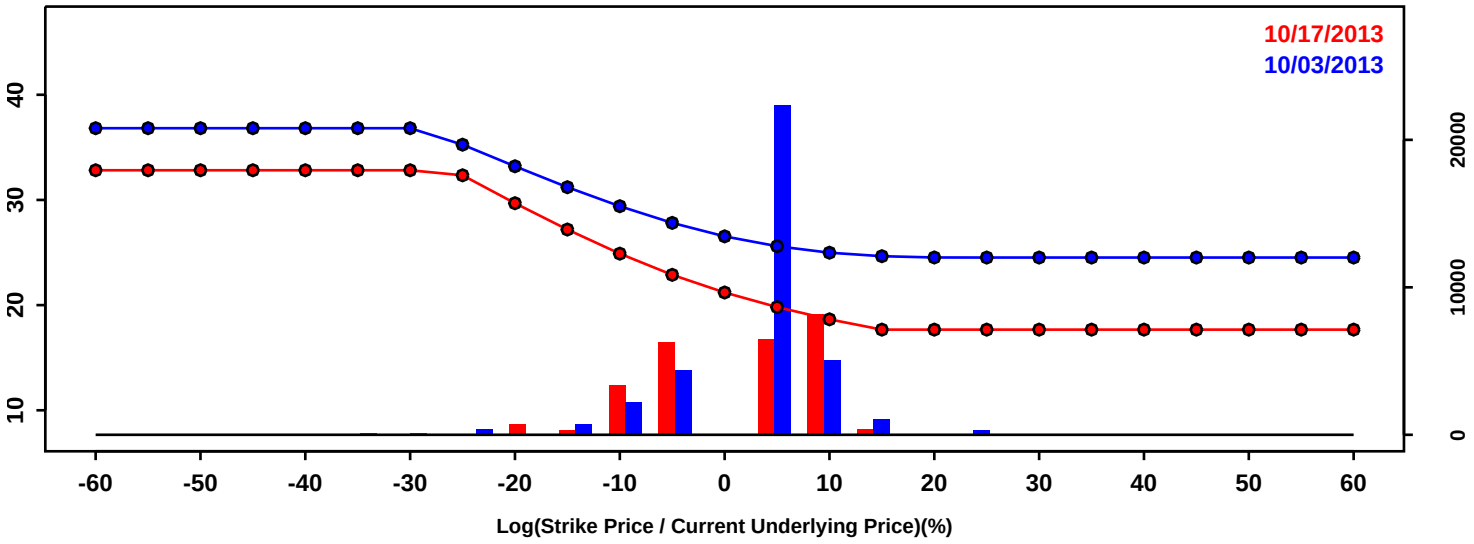
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-15.04%	-12.70%	2.34%
50th Pct	1.10%	0.85%	-0.25%
90th Pct	13.15%	11.28%	-1.87%
Mean	-0.20%	-0.14%	0.06%
Std Dev	11.86%	10.29%	-1.57%
Skew	-0.88	-0.85	0.04
Kurtosis	1.81	2.38	0.57

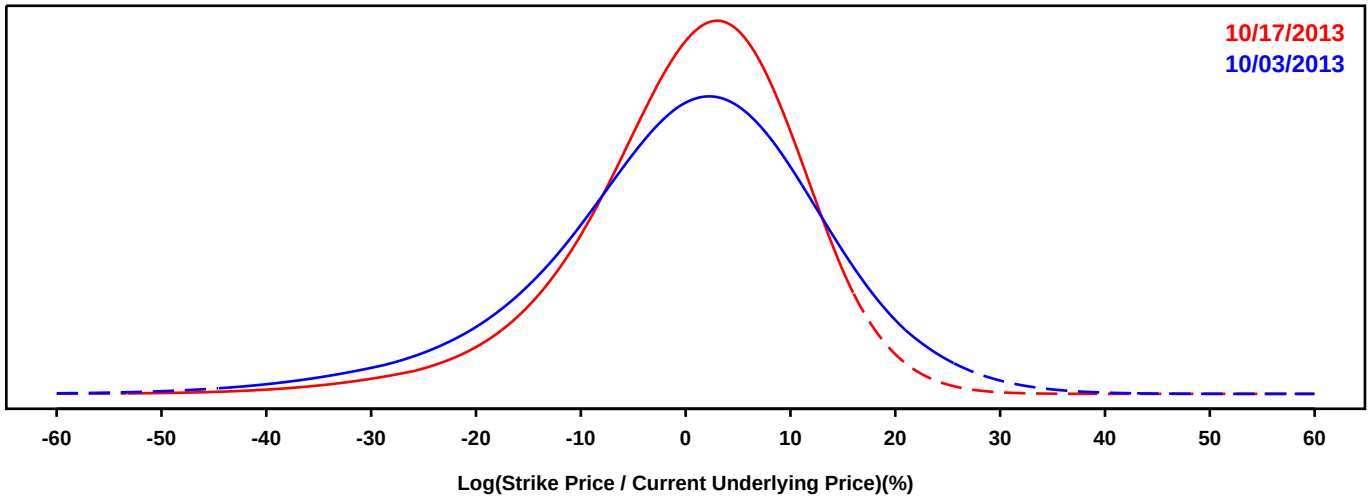
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CITIGROUP

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

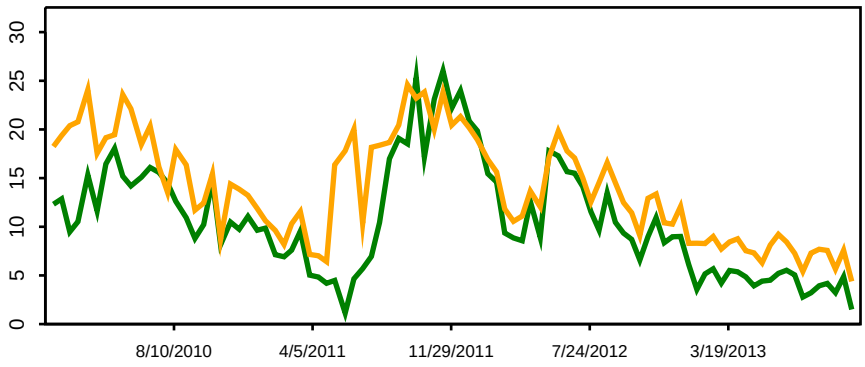
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

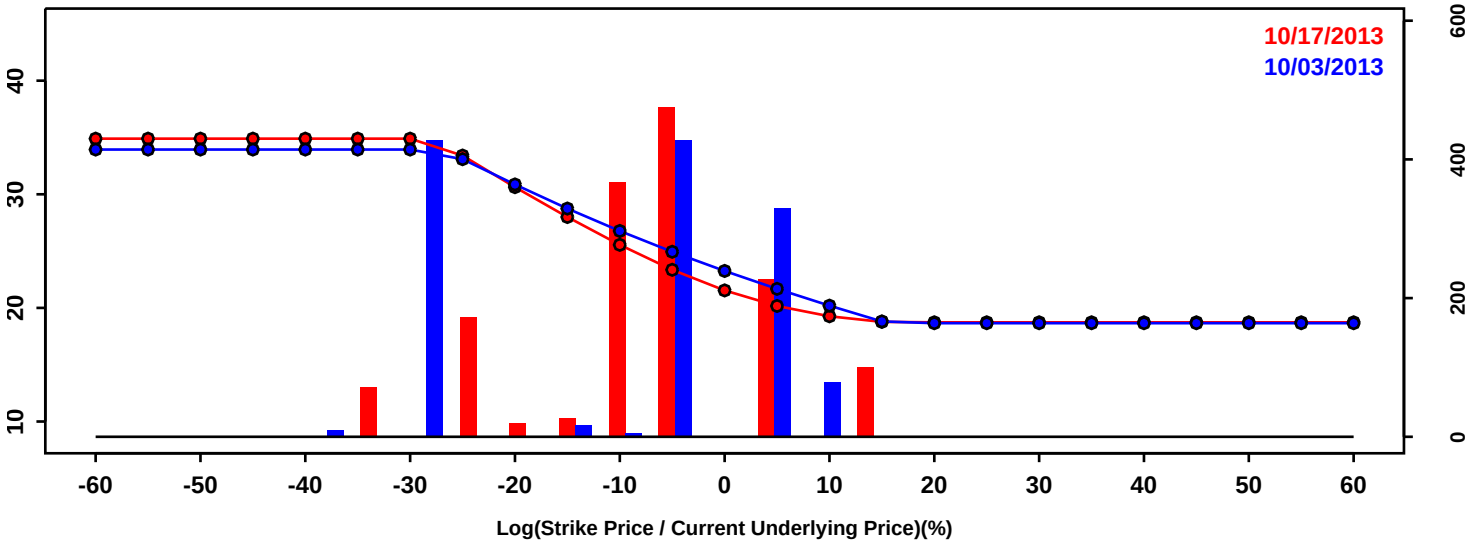
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-17.21%	-13.29%	3.92%
50th Pct	0.86%	1.37%	0.51%
90th Pct	15.54%	12.62%	-2.92%
Mean	-0.16%	0.32%	0.48%
Std Dev	13.39%	10.68%	-2.71%
Skew	-0.55	-0.75	-0.20
Kurtosis	0.95	1.36	0.41

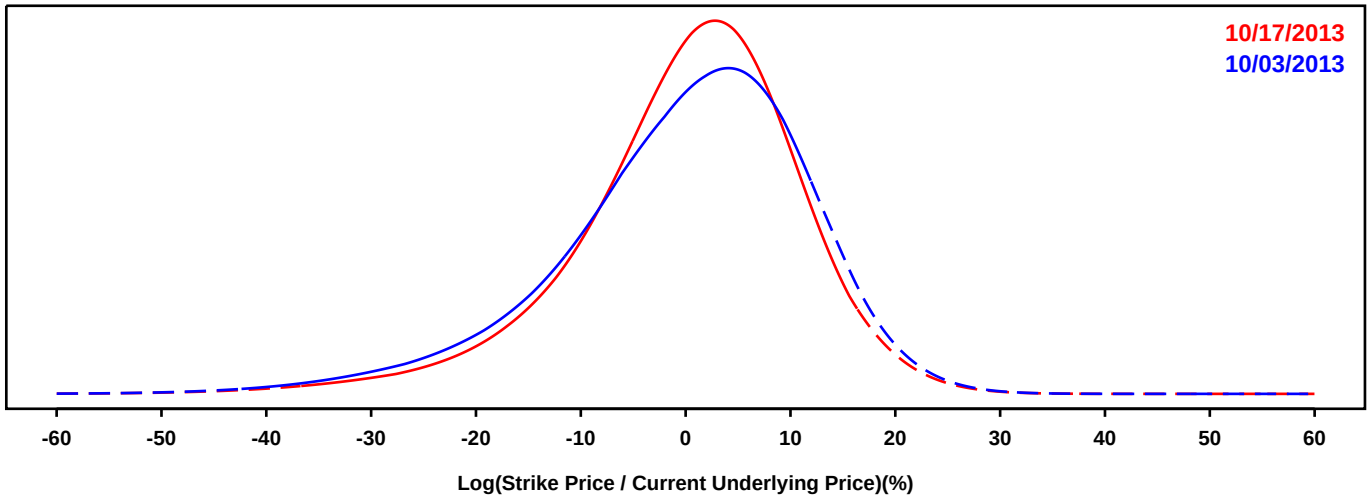
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CAPITAL ONE

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

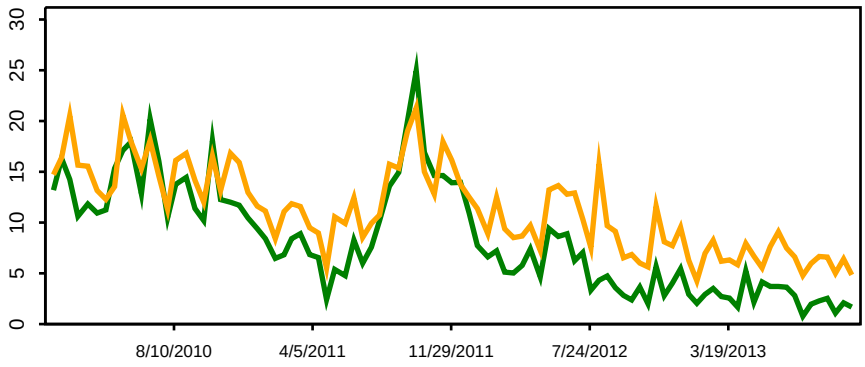
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

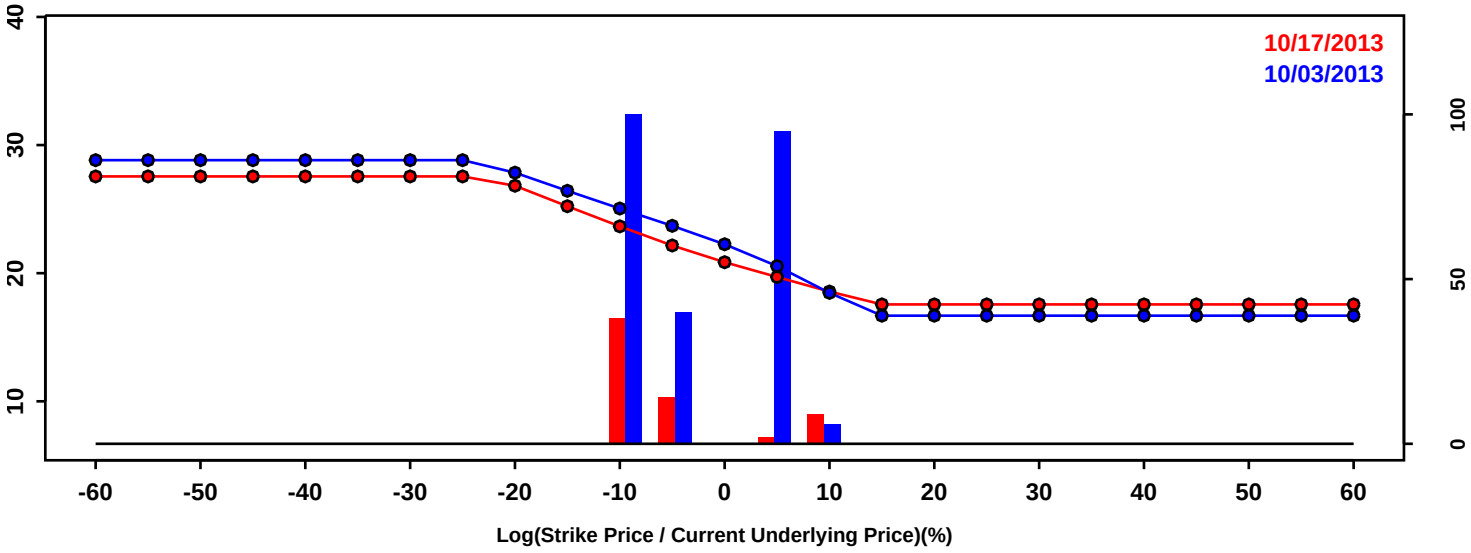
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-15.81%	-13.71%	2.11%
50th Pct	1.29%	1.22%	-0.08%
90th Pct	13.49%	12.43%	-1.06%
Mean	-0.15%	0.07%	0.22%
Std Dev	11.94%	10.92%	-1.02%
Skew	-0.76	-0.81	-0.05
Kurtosis	1.08	1.67	0.59

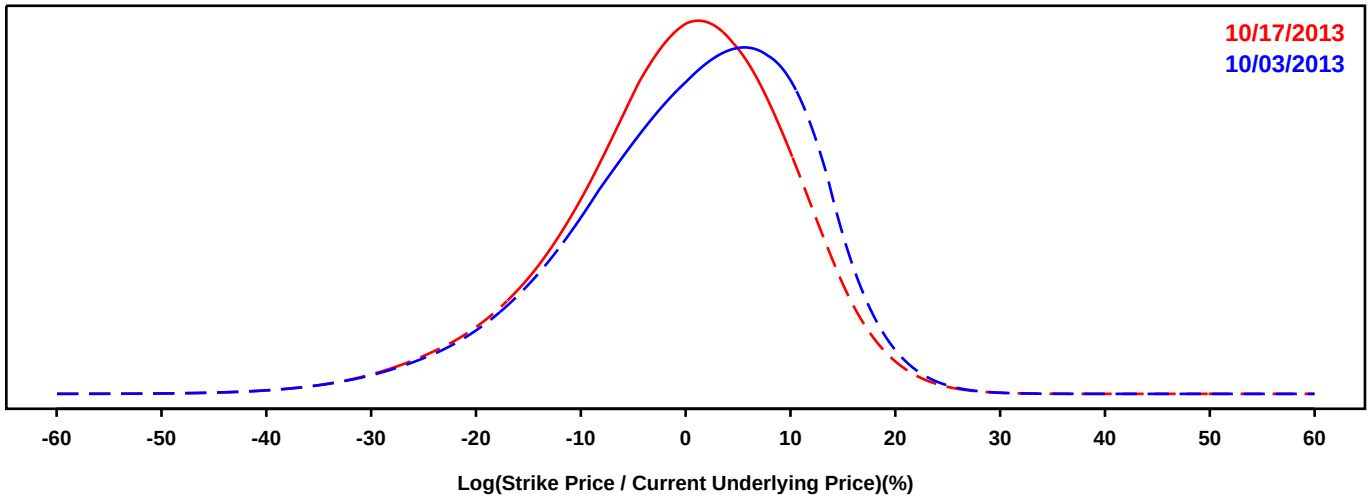
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- FIFTH THIRD

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

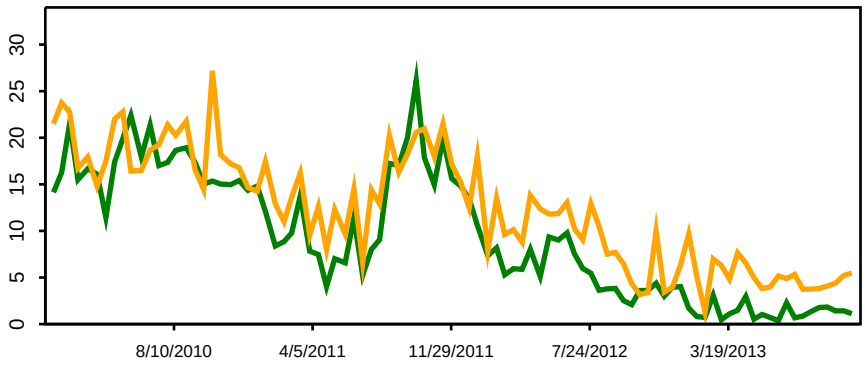
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

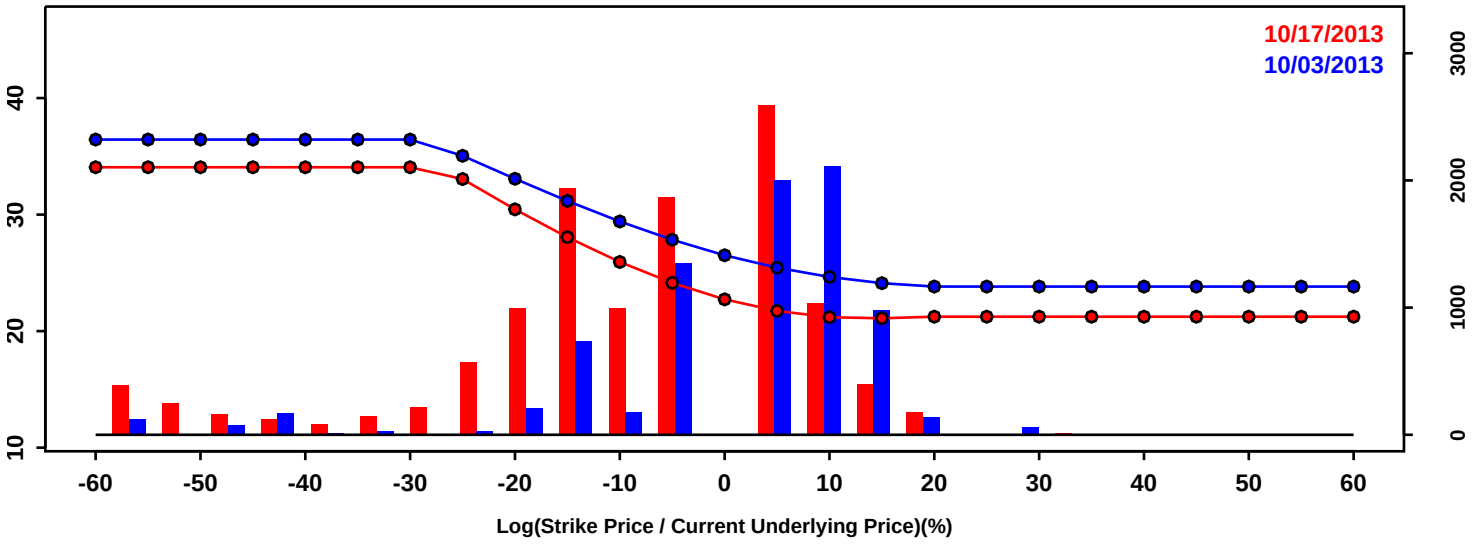
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-14.84%	-15.22%	-0.37%
50th Pct	1.67%	-0.04%	-1.71%
90th Pct	13.23%	11.72%	-1.51%
Mean	0.30%	-1.01%	-1.32%
Std Dev	11.21%	10.76%	-0.45%
Skew	-0.65	-0.57	0.08
Kurtosis	0.50	0.61	0.11

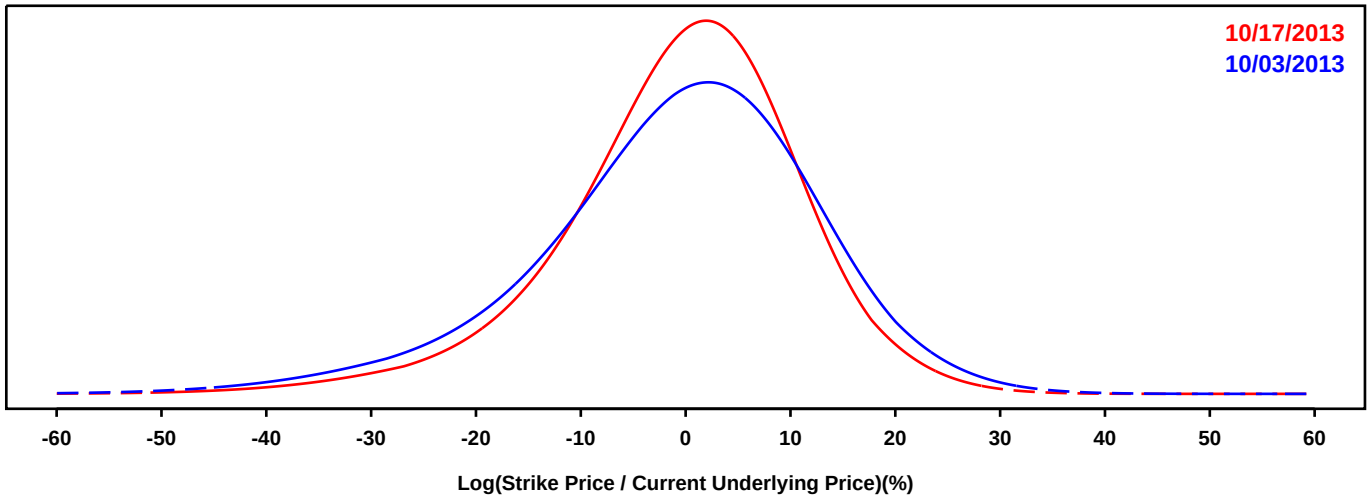
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- GOLDMAN SACHS

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

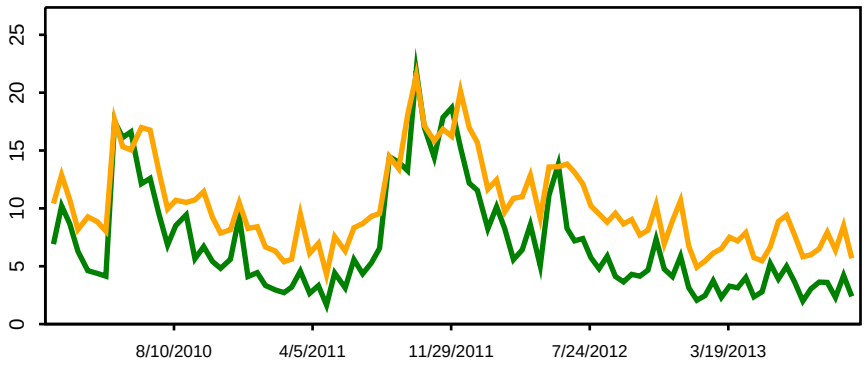
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

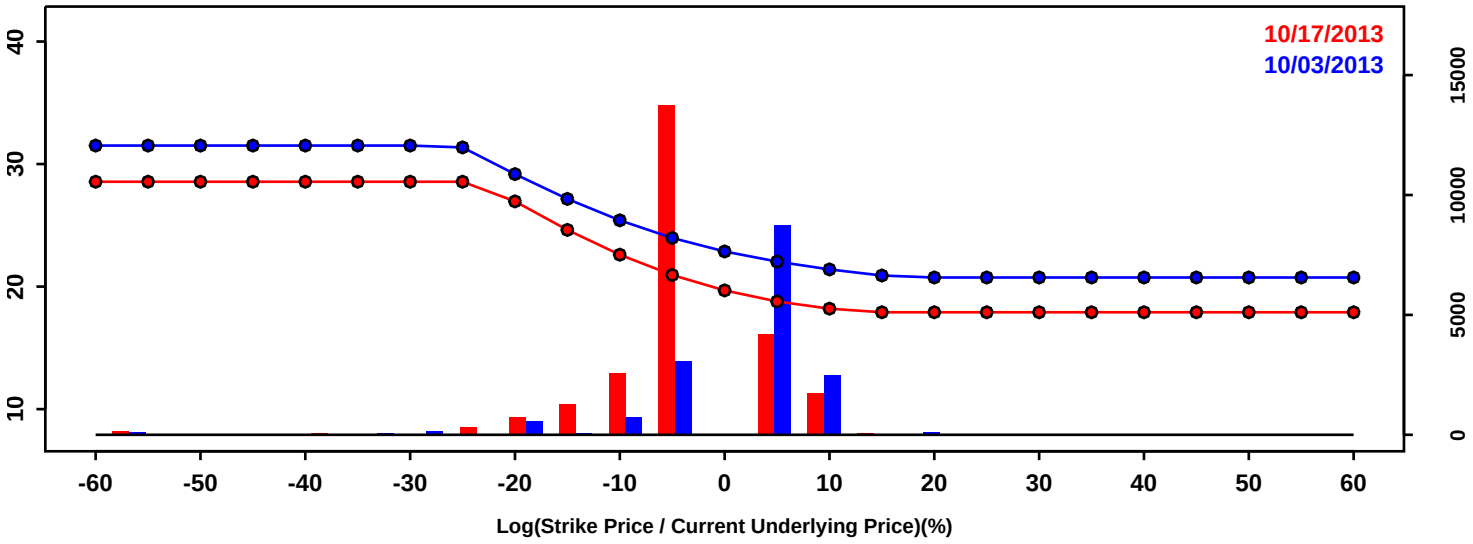
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-18.30%	-15.10%	3.20%
50th Pct	0.37%	0.49%	0.12%
90th Pct	14.96%	12.84%	-2.12%
Mean	-0.82%	-0.50%	0.33%
Std Dev	13.52%	11.55%	-1.97%
Skew	-0.58	-0.63	-0.05
Kurtosis	0.88	1.25	0.37

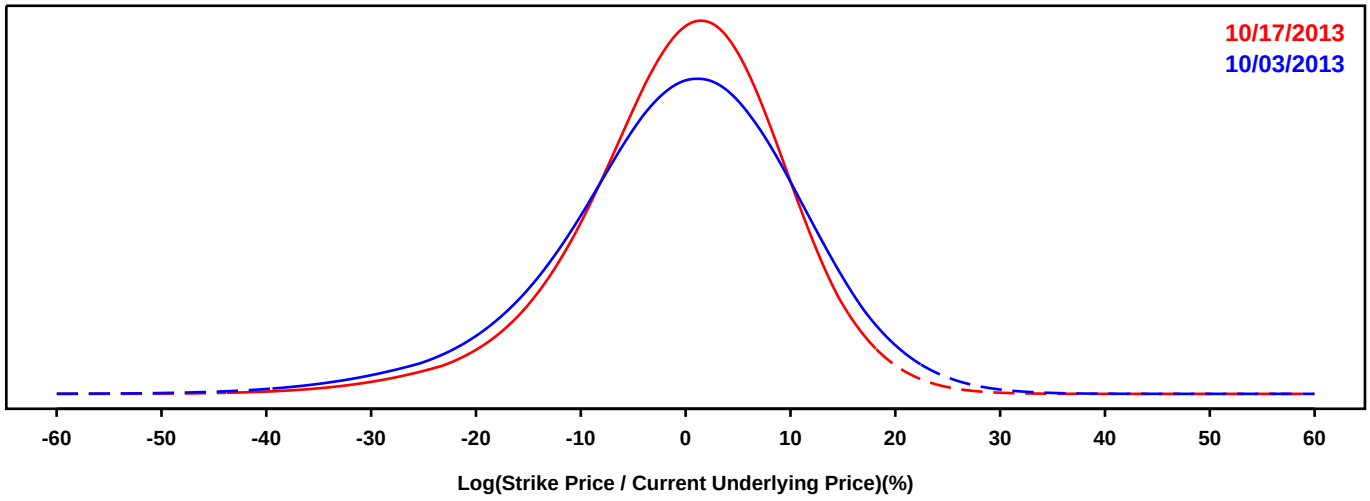
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- JP MORGAN

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

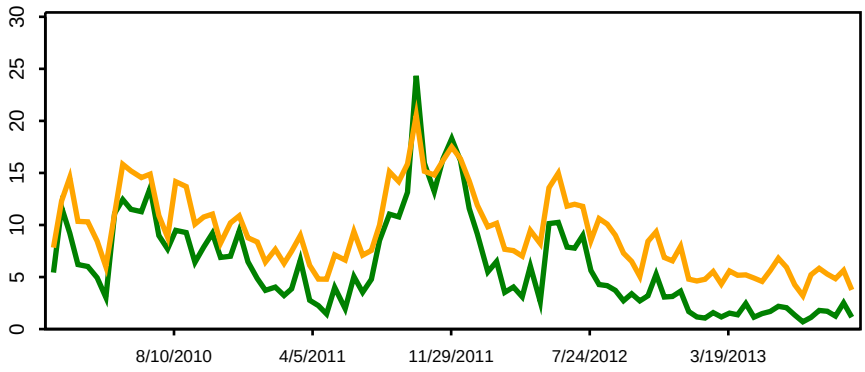
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

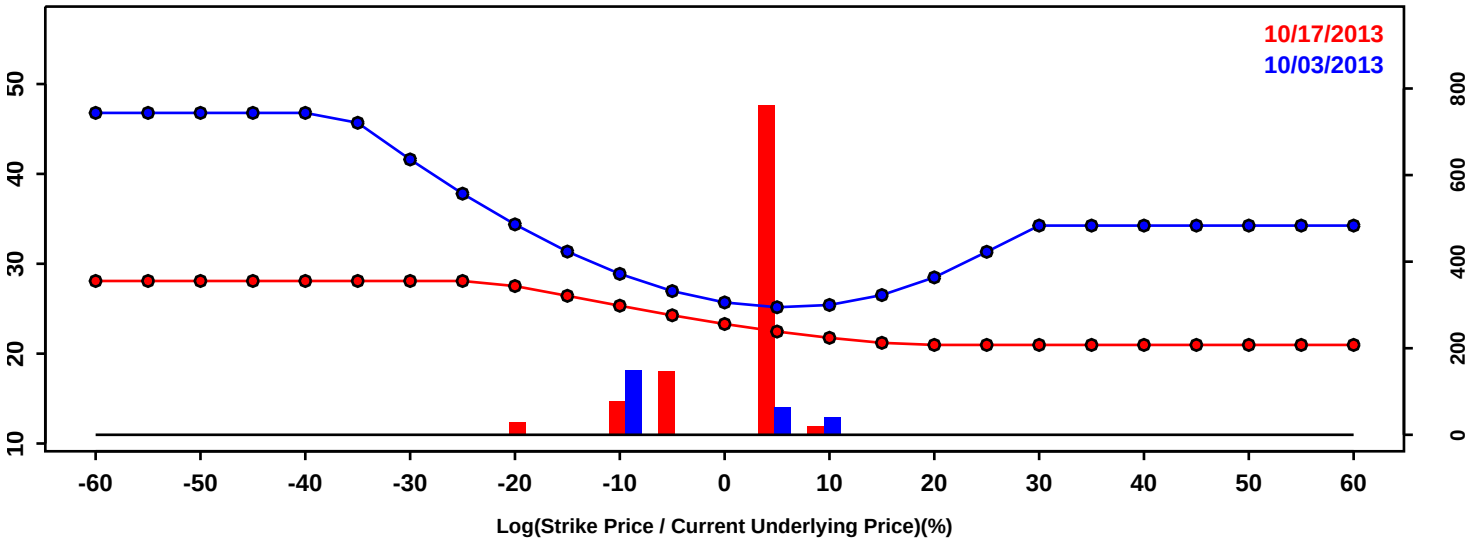
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-15.31%	-12.99%	2.32%
50th Pct	0.15%	0.37%	0.23%
90th Pct	13.23%	11.33%	-1.91%
Mean	-0.59%	-0.38%	0.21%
Std Dev	11.57%	9.96%	-1.61%
Skew	-0.49	-0.56	-0.06
Kurtosis	0.80	0.99	0.19

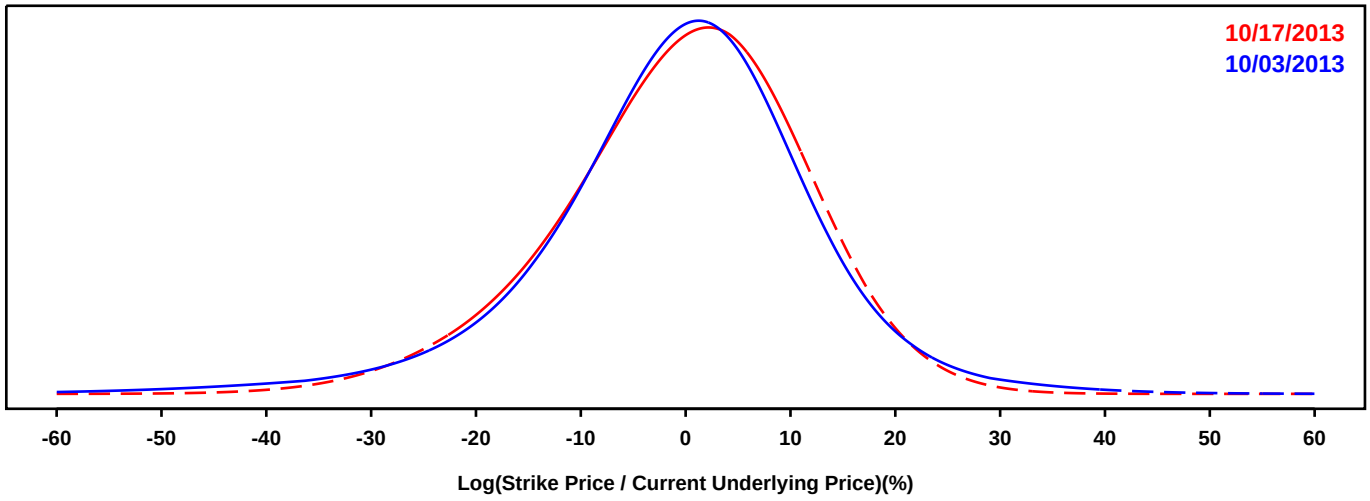
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- KEYCORP

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

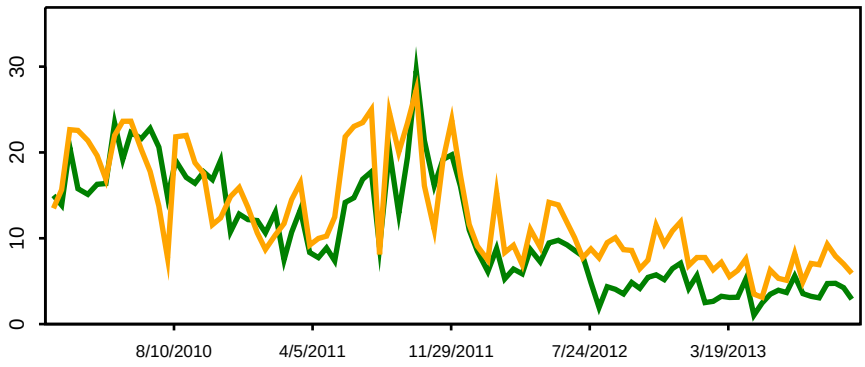
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



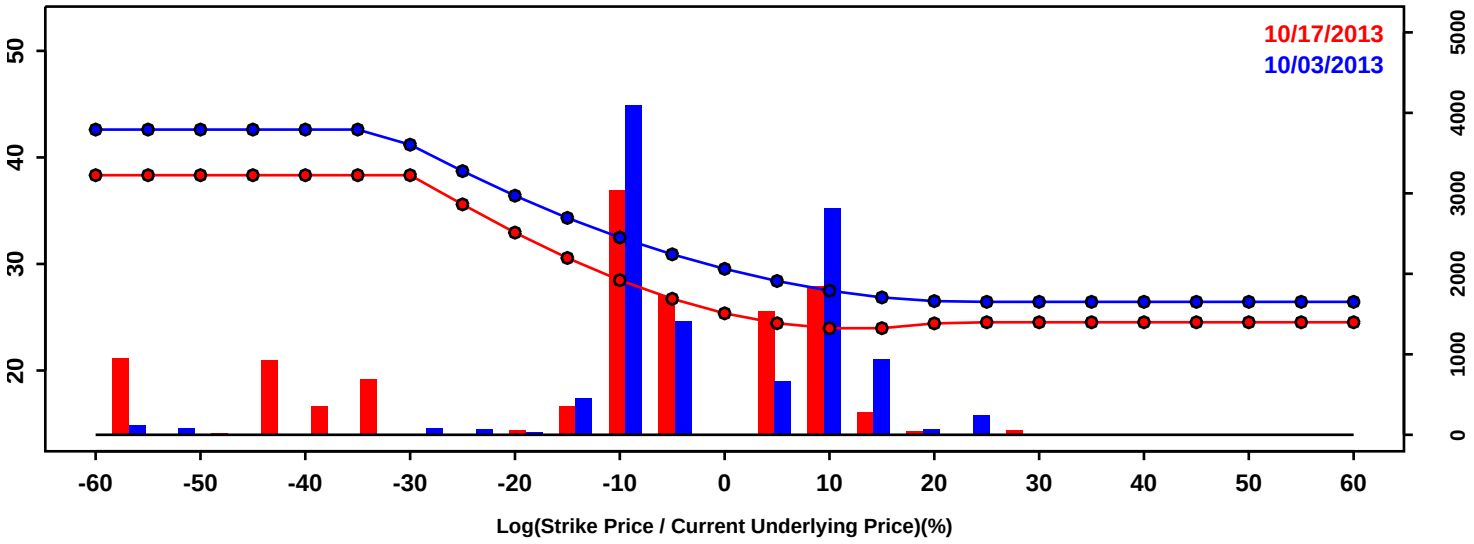
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-16.54%	-15.81%	0.73%
50th Pct	0.15%	0.48%	0.33%
90th Pct	14.16%	13.81%	-0.35%
Mean	-0.71%	-0.33%	0.38%
Std Dev	13.36%	11.74%	-1.61%
Skew	-0.61	-0.39	0.21
Kurtosis	2.37	0.36	-2.01

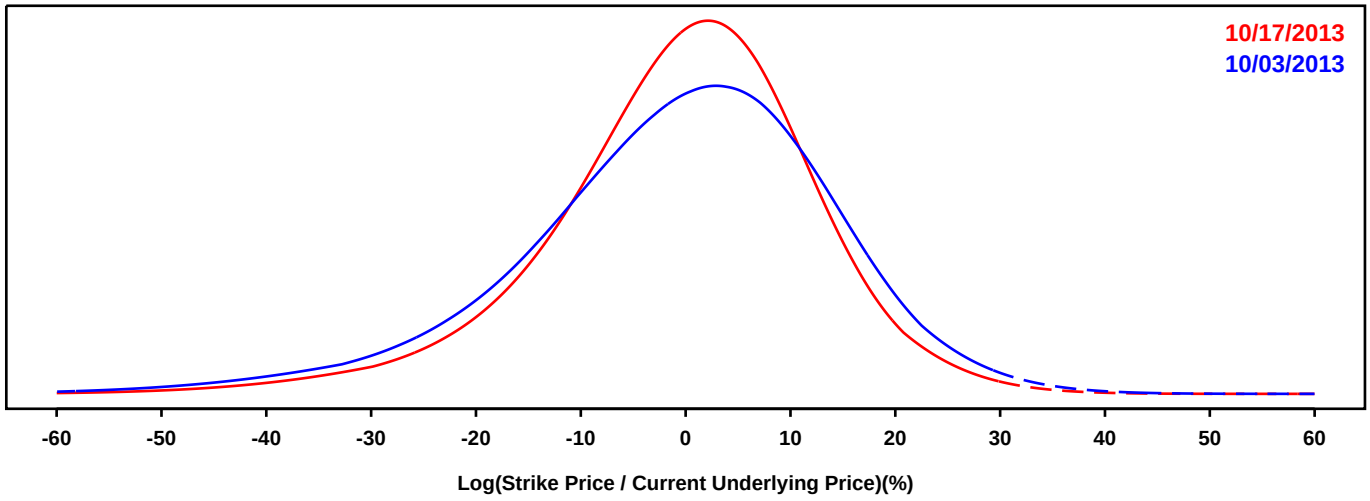
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- MORGAN STANLEY

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

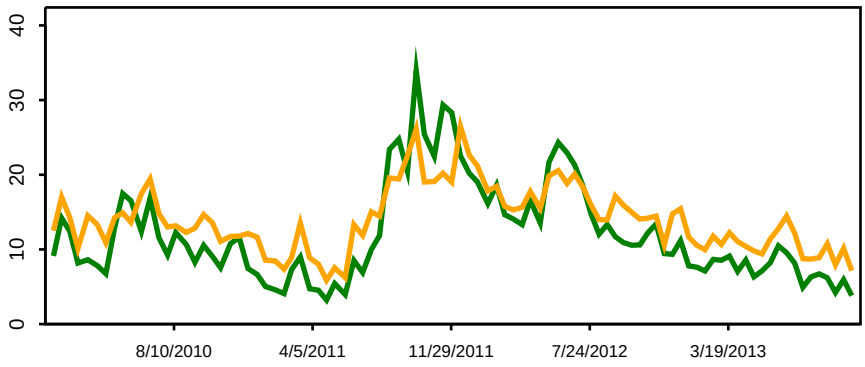
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

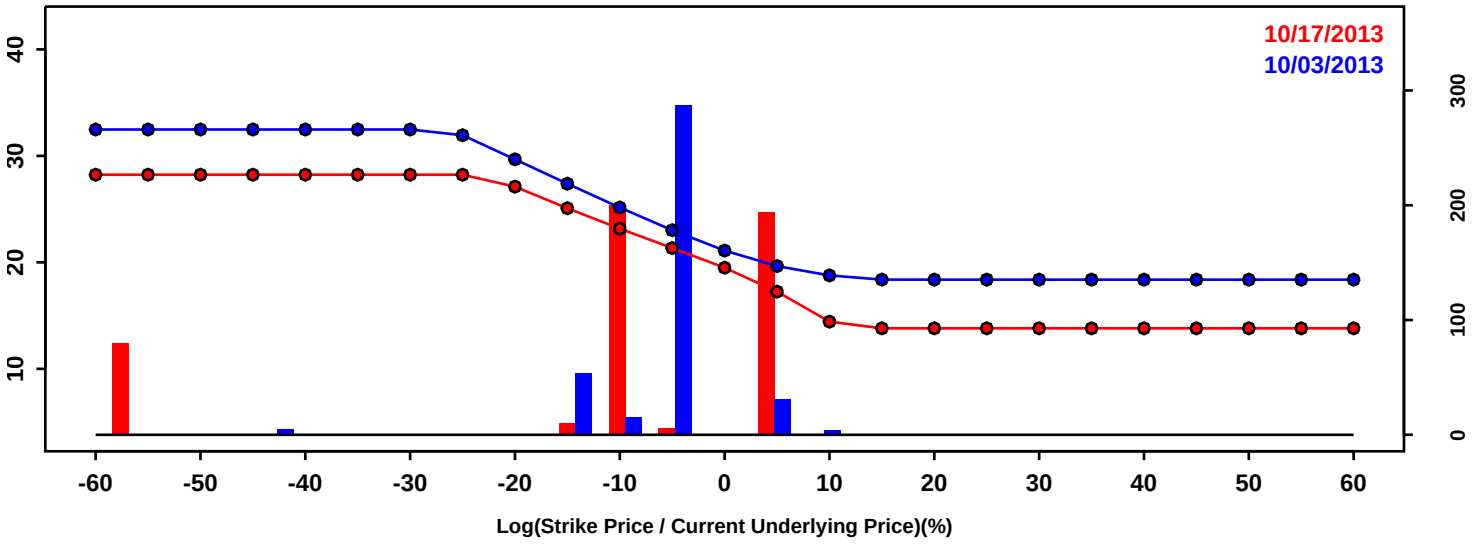
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-20.14%	-16.78%	3.36%
50th Pct	0.50%	0.53%	0.04%
90th Pct	16.60%	14.31%	-2.29%
Mean	-0.88%	-0.54%	0.34%
Std Dev	15.07%	12.91%	-2.16%
Skew	-0.63	-0.62	0.01
Kurtosis	1.05	1.31	0.26

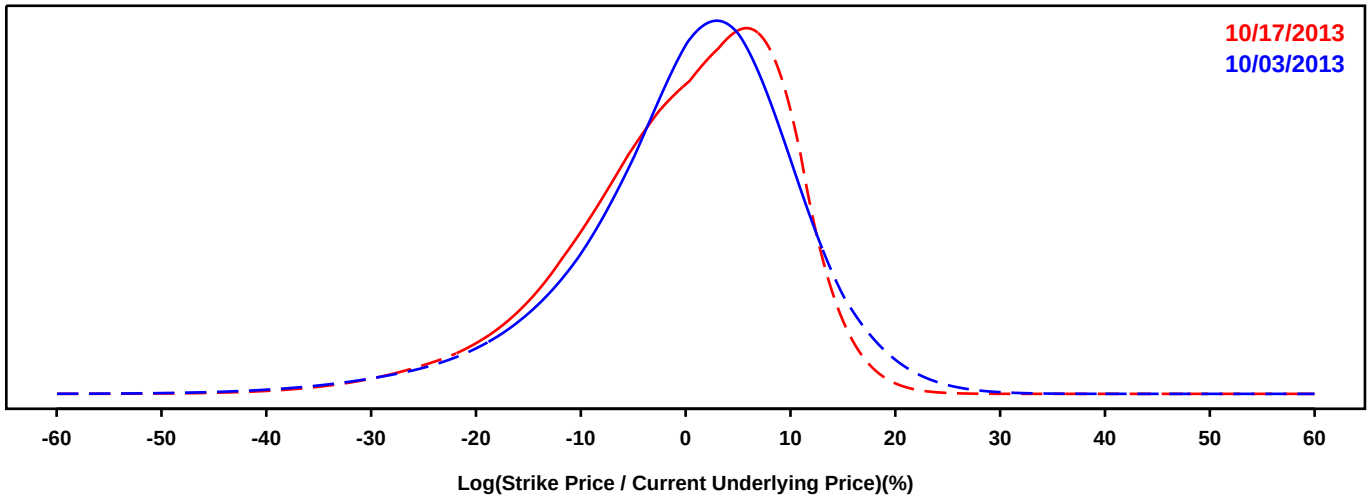
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- PNC FINANCIAL

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

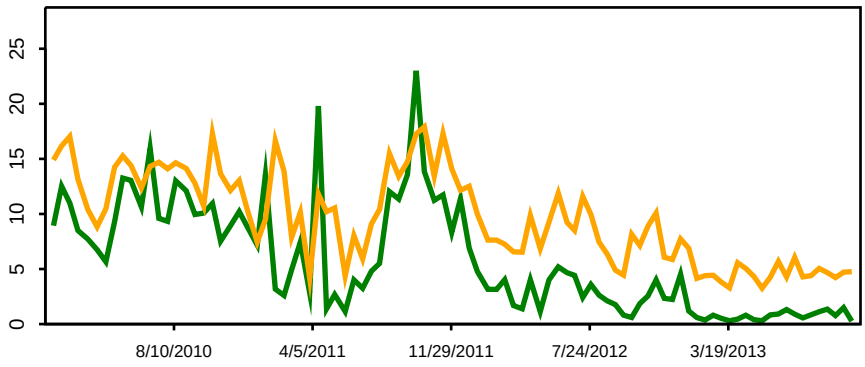
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

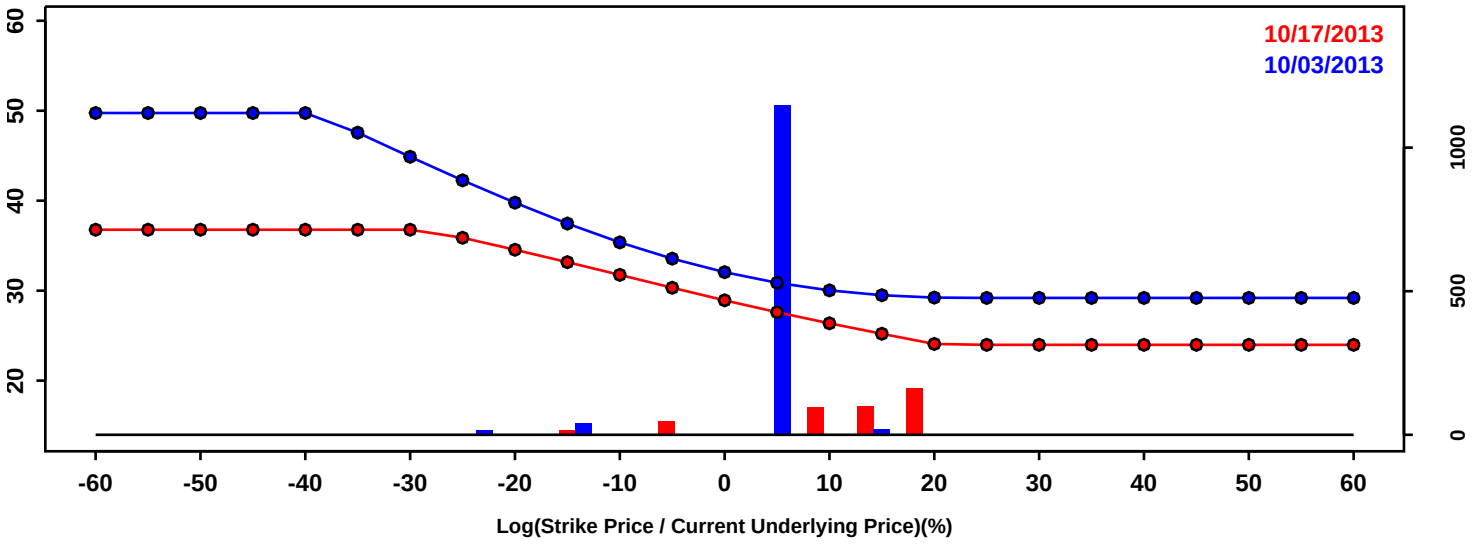
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-13.56%	-14.13%	-0.58%
50th Pct	1.35%	1.02%	-0.33%
90th Pct	12.10%	10.75%	-1.35%
Mean	0.14%	-0.54%	-0.68%
Std Dev	10.64%	10.15%	-0.49%
Skew	-0.80	-0.85	-0.05
Kurtosis	1.50	0.96	-0.55

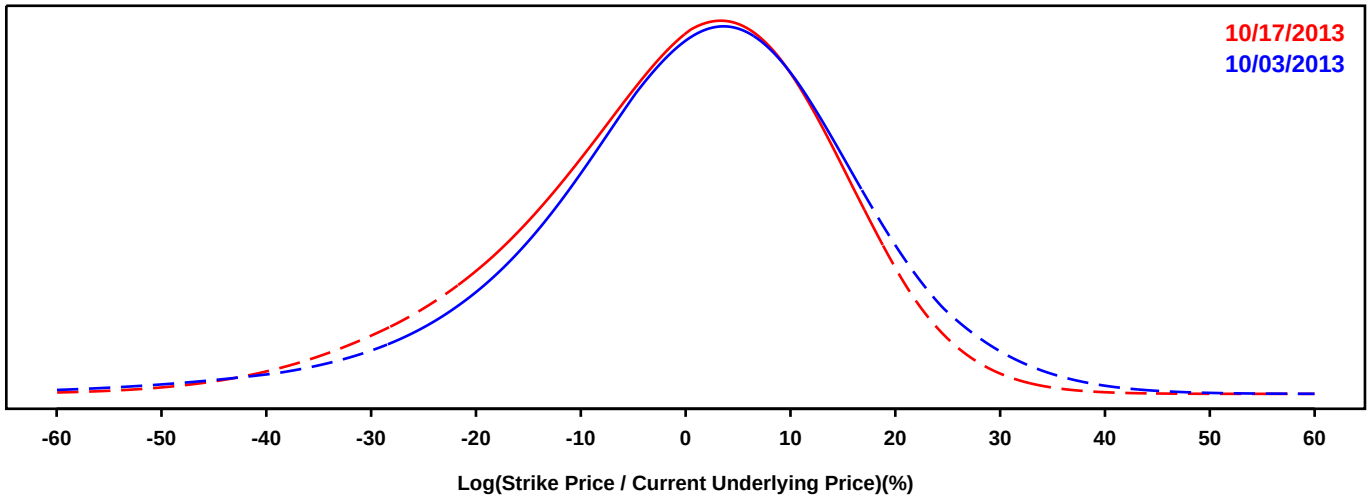
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- REGIONS FINANCIAL

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

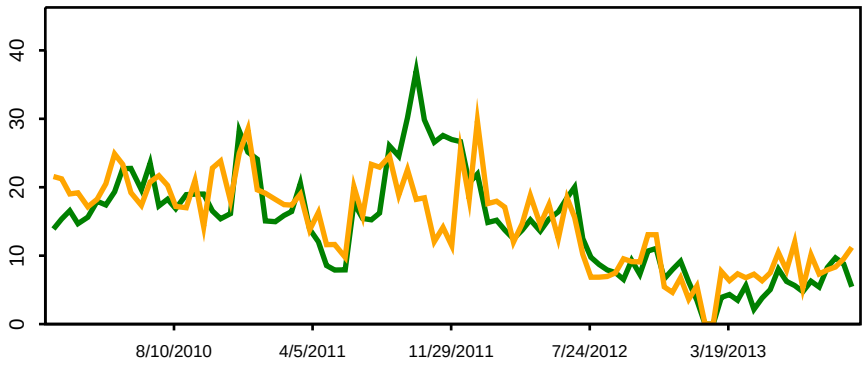
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

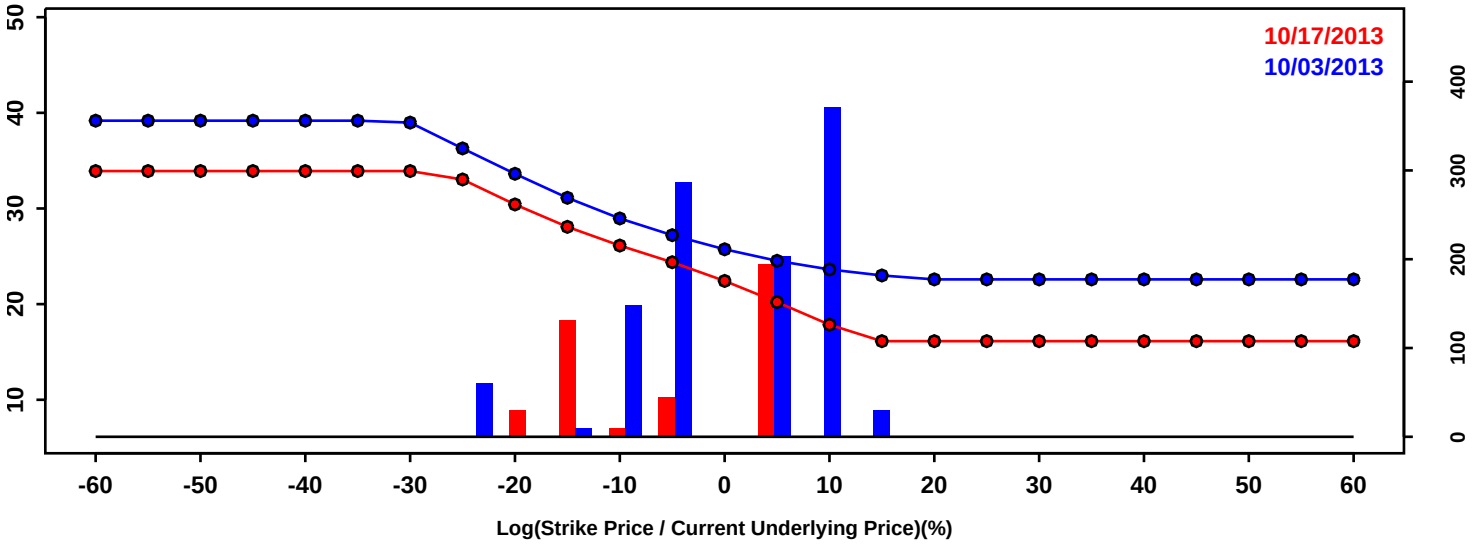
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-19.43%	-21.29%	-1.85%
50th Pct	1.87%	0.49%	-1.37%
90th Pct	19.02%	16.41%	-2.60%
Mean	0.55%	-1.13%	-1.68%
Std Dev	15.99%	14.94%	-1.04%
Skew	-0.66	-0.57	0.09
Kurtosis	1.42	0.48	-0.94

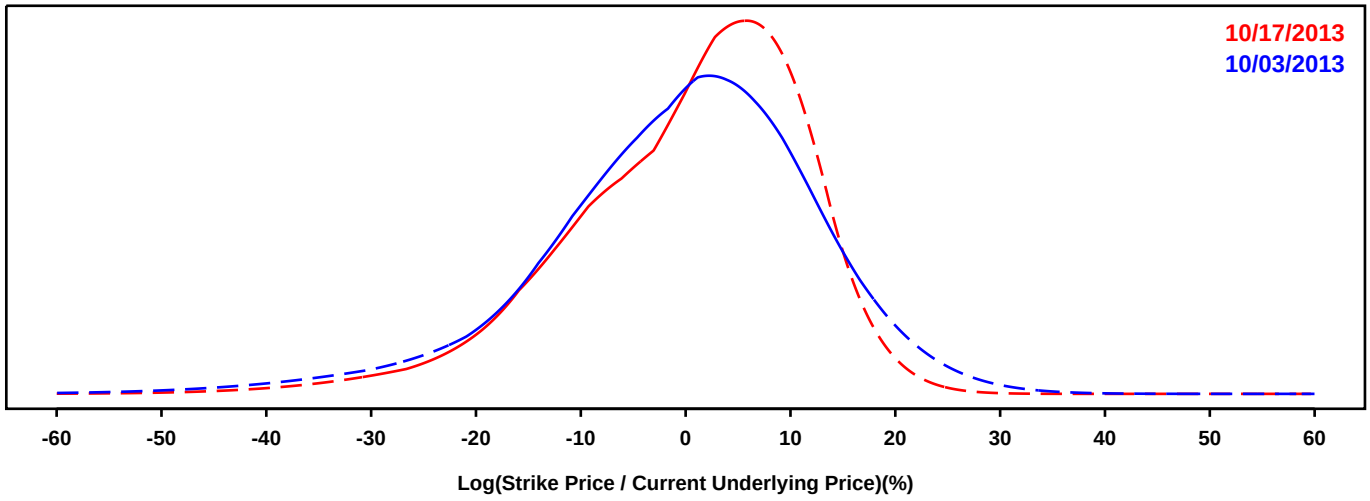
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SUNTRUST

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

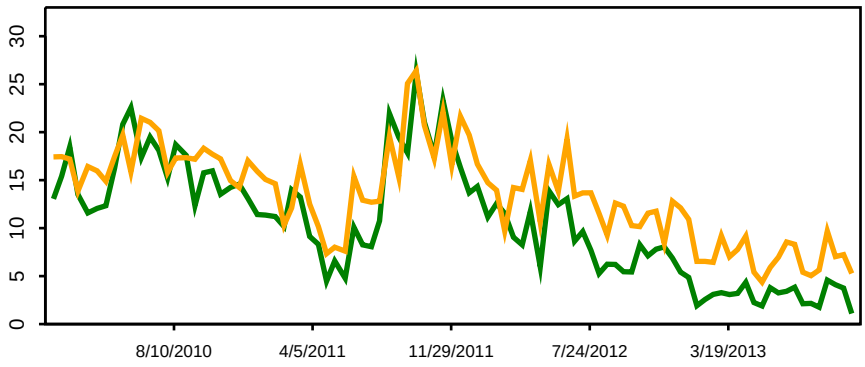
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

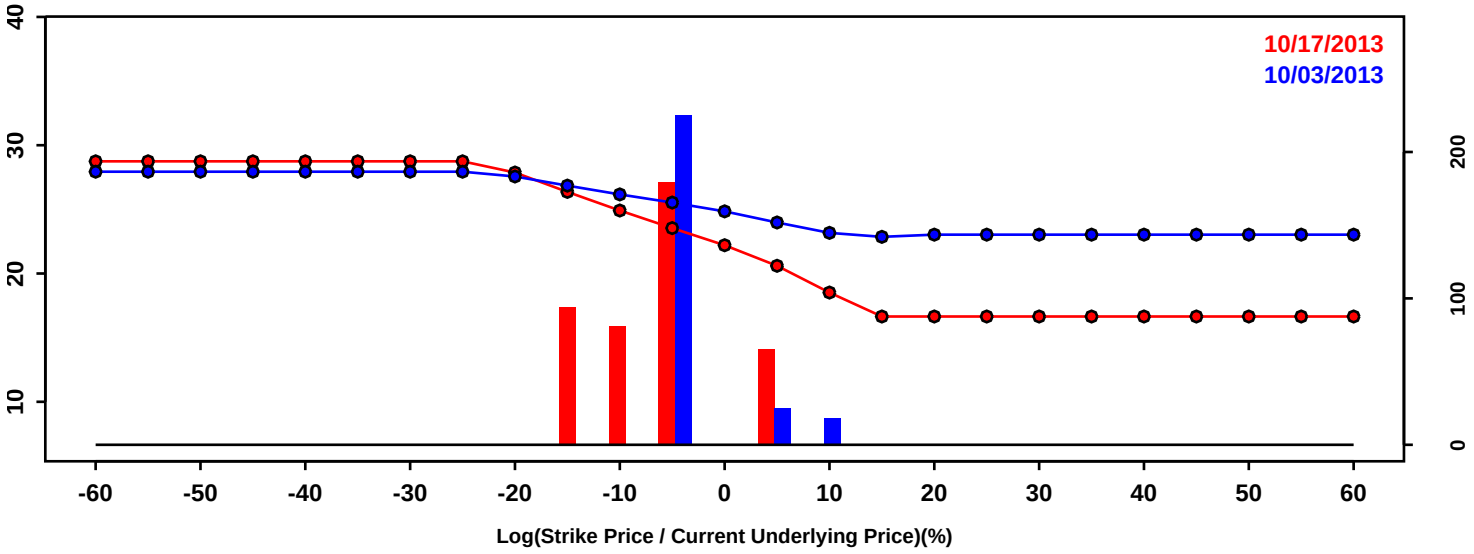
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-16.75%	-14.90%	1.85%
50th Pct	0.66%	1.98%	1.32%
90th Pct	14.57%	12.76%	-1.81%
Mean	-0.54%	0.13%	0.67%
Std Dev	13.08%	11.32%	-1.76%
Skew	-0.69	-0.85	-0.15
Kurtosis	1.34	1.11	-0.22

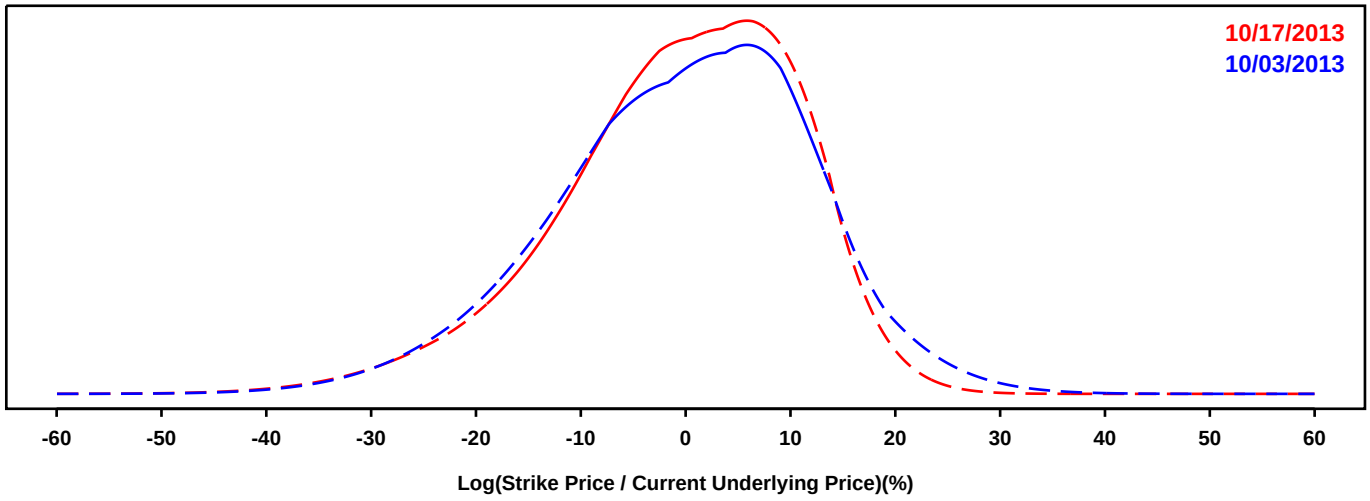
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- STATE STREET

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

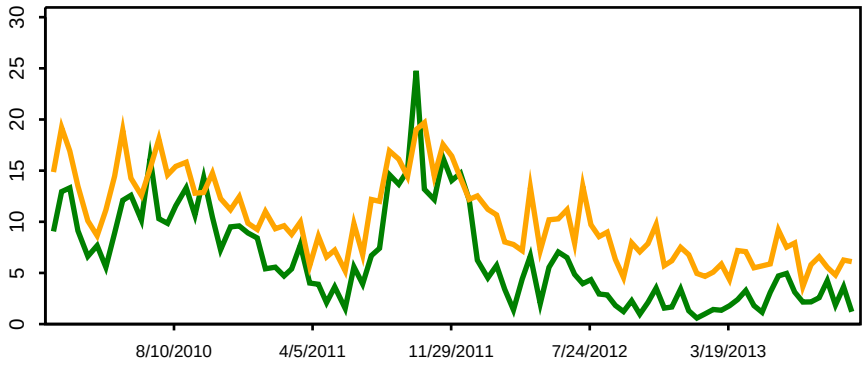
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

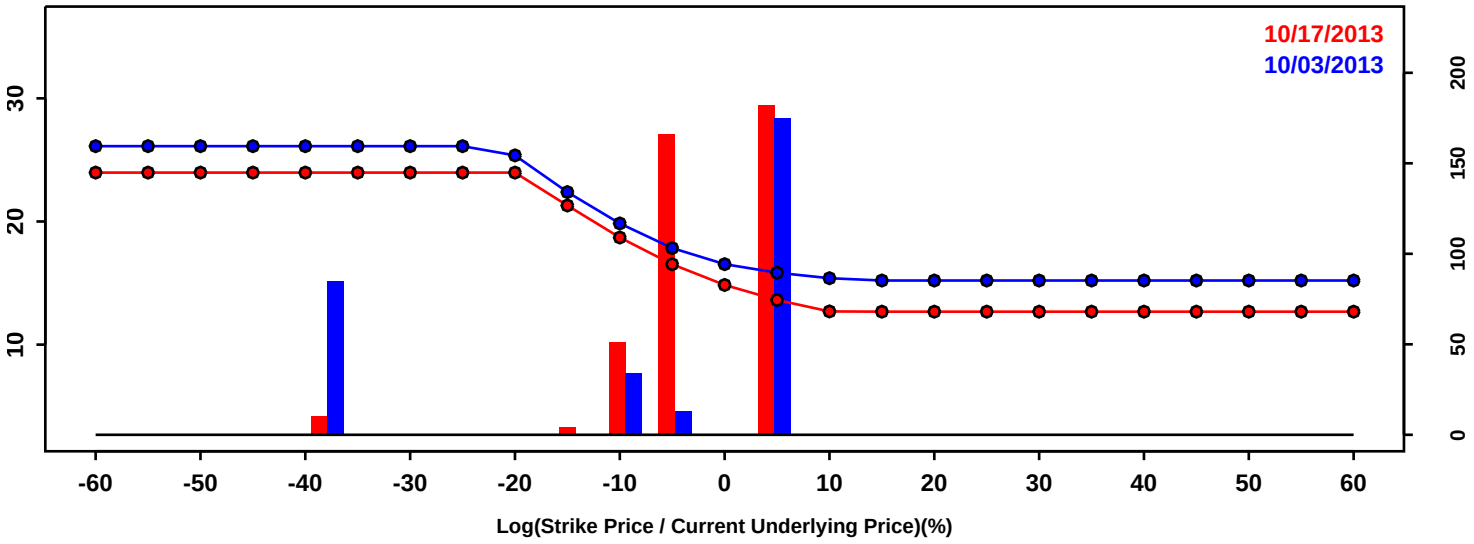
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-16.43%	-15.90%	0.53%
50th Pct	0.78%	0.61%	-0.17%
90th Pct	14.46%	12.80%	-1.66%
Mean	-0.14%	-0.60%	-0.46%
Std Dev	12.26%	11.42%	-0.84%
Skew	-0.32	-0.62	-0.30
Kurtosis	0.17	0.44	0.27

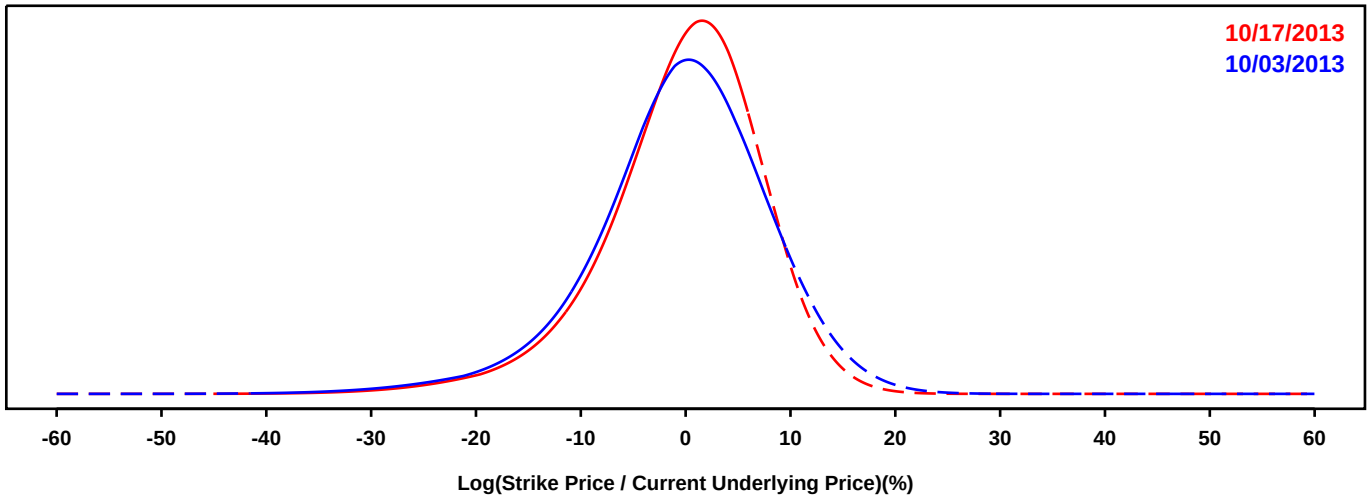
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- US BANCORP

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

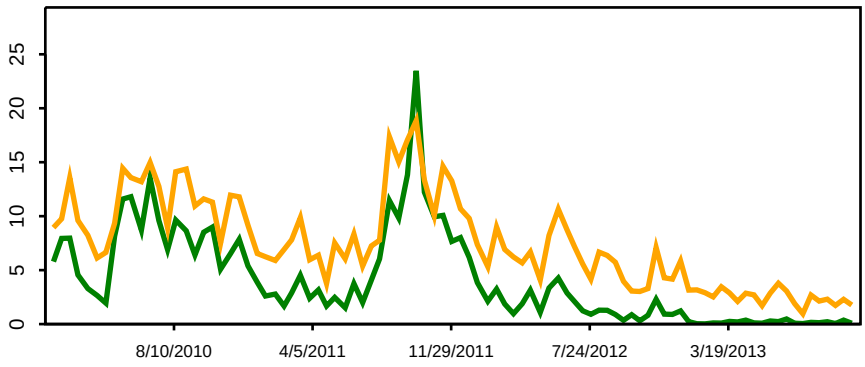
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

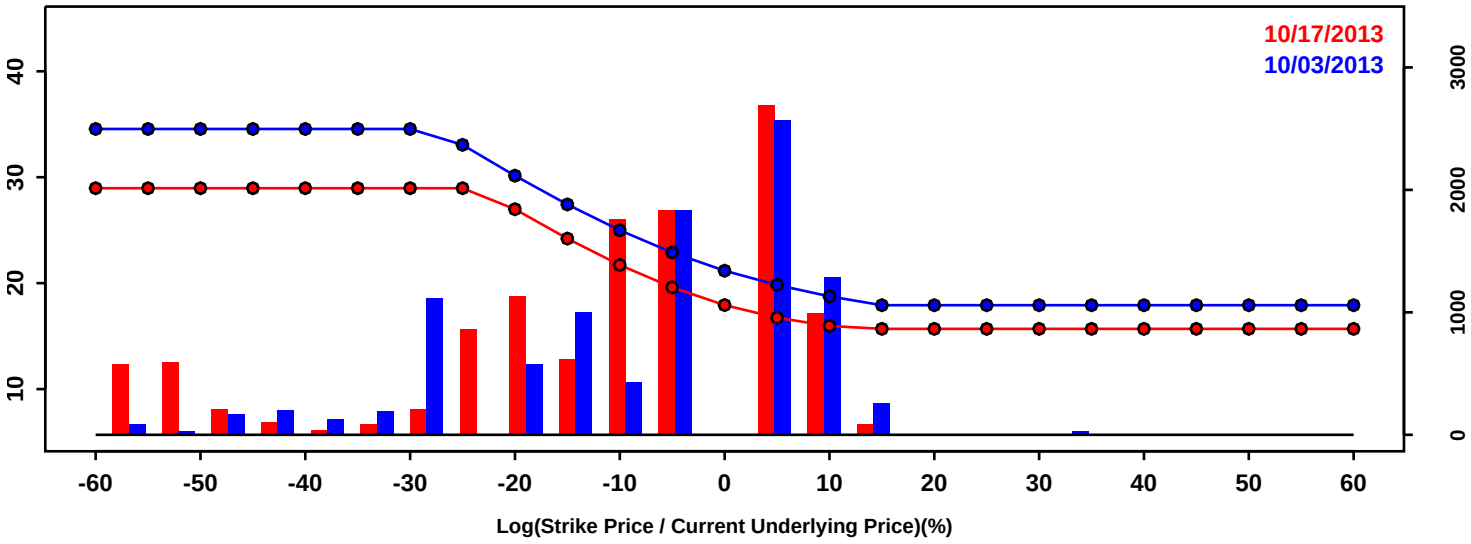
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-10.81%	-9.84%	0.97%
50th Pct	0.05%	0.53%	0.48%
90th Pct	9.56%	8.50%	-1.06%
Mean	-0.43%	-0.22%	0.21%
Std Dev	8.41%	7.59%	-0.82%
Skew	-0.58	-0.75	-0.17
Kurtosis	1.31	1.45	0.14

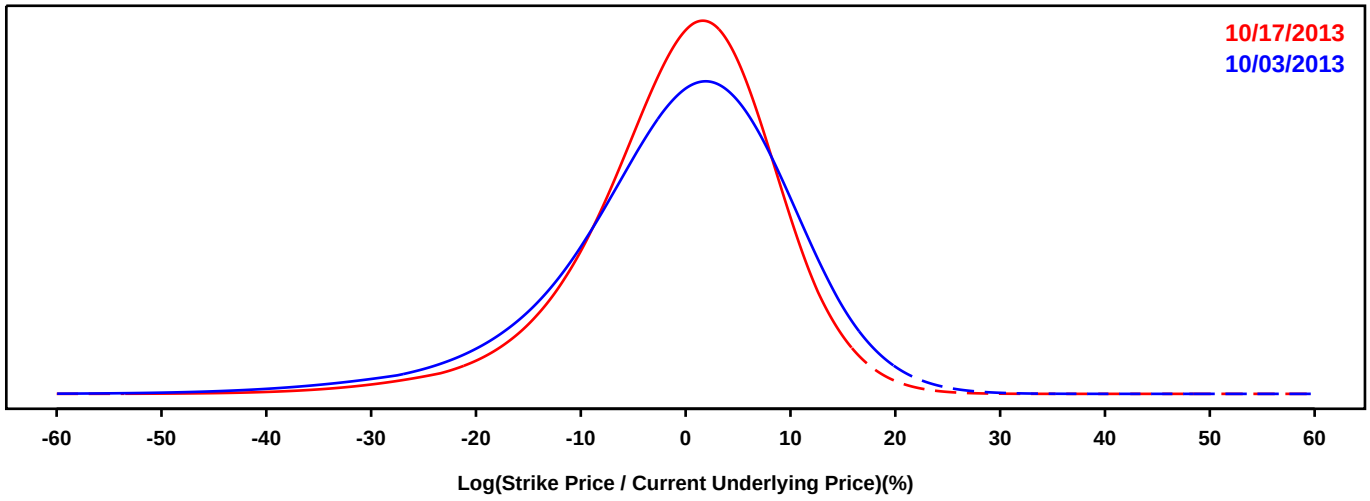
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- WELLS FARGO

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

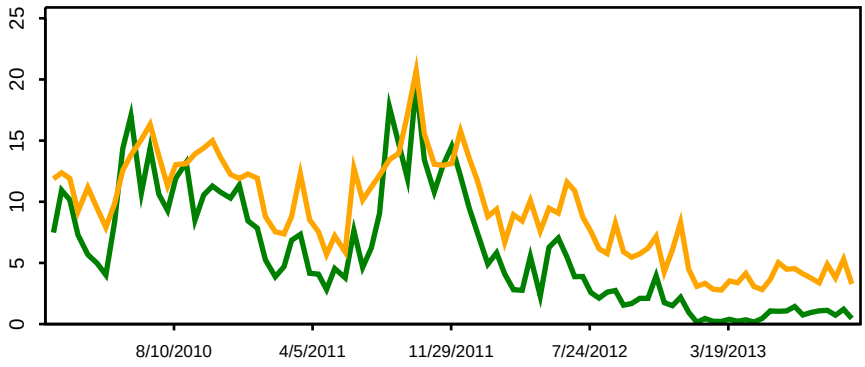
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

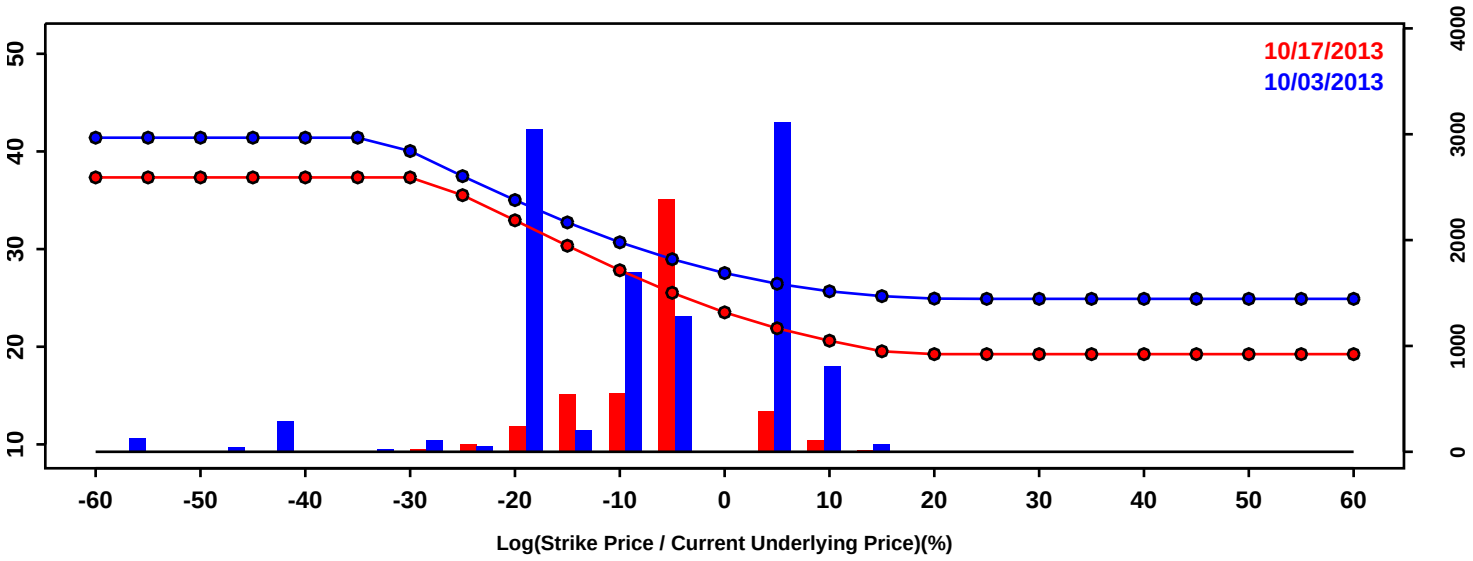
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-14.55%	-12.10%	2.45%
50th Pct	0.37%	0.36%	-0.02%
90th Pct	11.73%	9.94%	-1.79%
Mean	-0.74%	-0.53%	0.21%
Std Dev	10.94%	9.17%	-1.77%
Skew	-0.81	-0.76	0.06
Kurtosis	1.61	1.53	-0.07

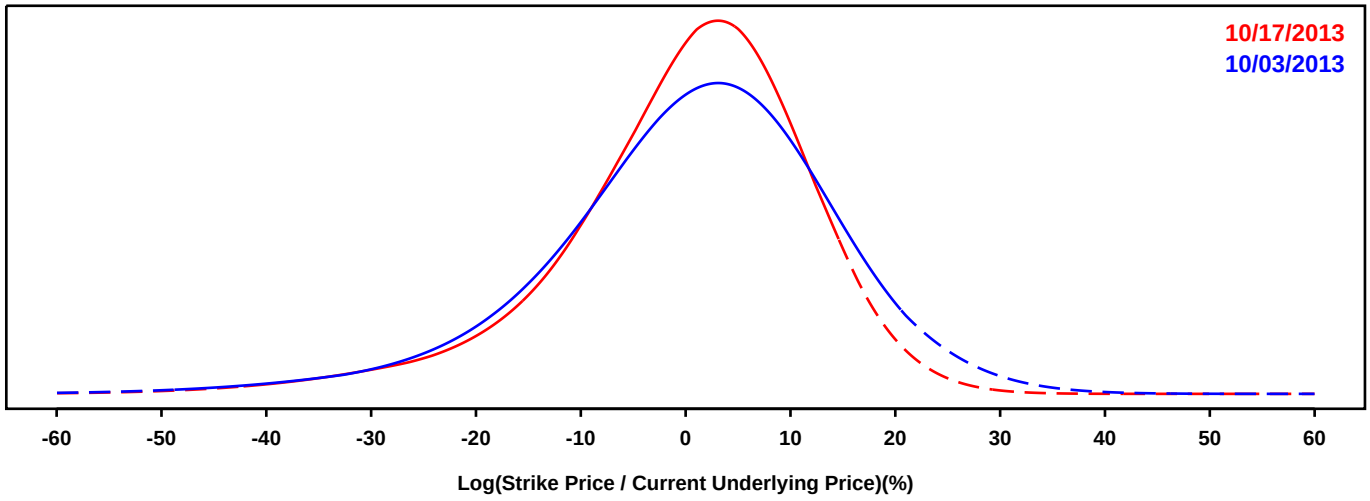
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- AIG

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

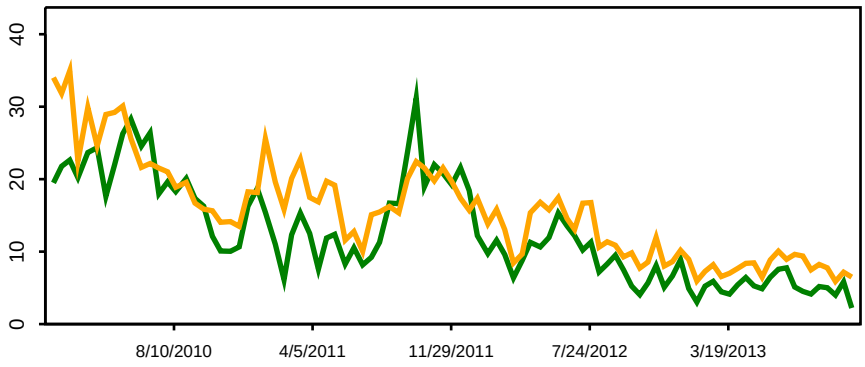
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



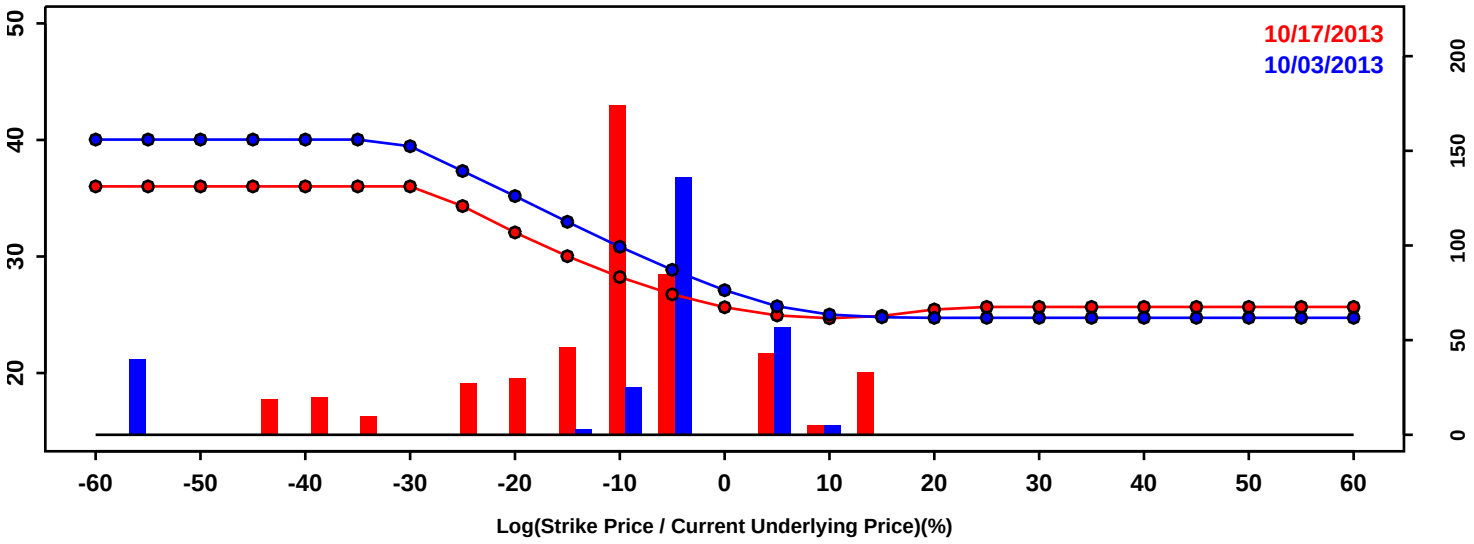
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-16.65%	-15.49%	1.16%
50th Pct	1.61%	1.28%	-0.33%
90th Pct	16.56%	13.42%	-3.14%
Mean	0.57%	-0.19%	-0.76%
Std Dev	13.72%	12.13%	-1.58%
Skew	-0.61	-0.91	-0.30
Kurtosis	1.23	1.74	0.51

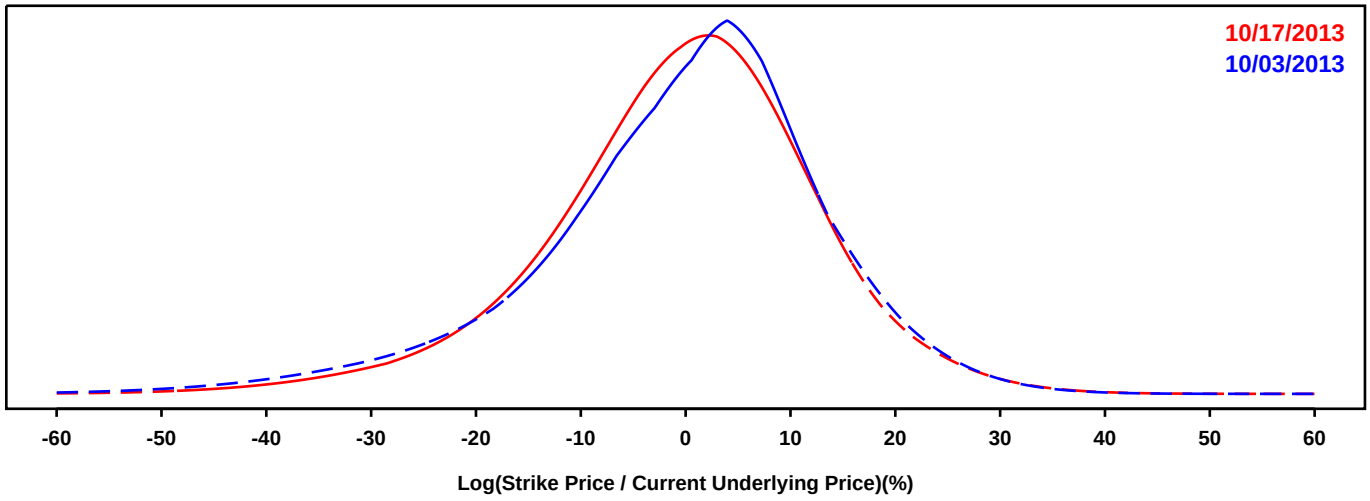
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- HARTFORD FINANCIAL

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

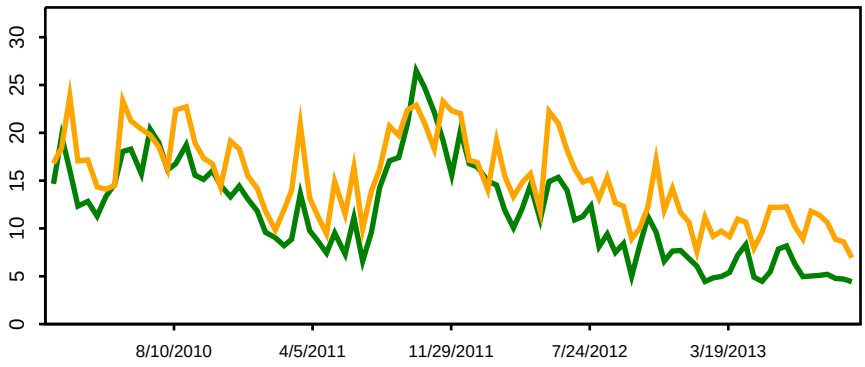
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

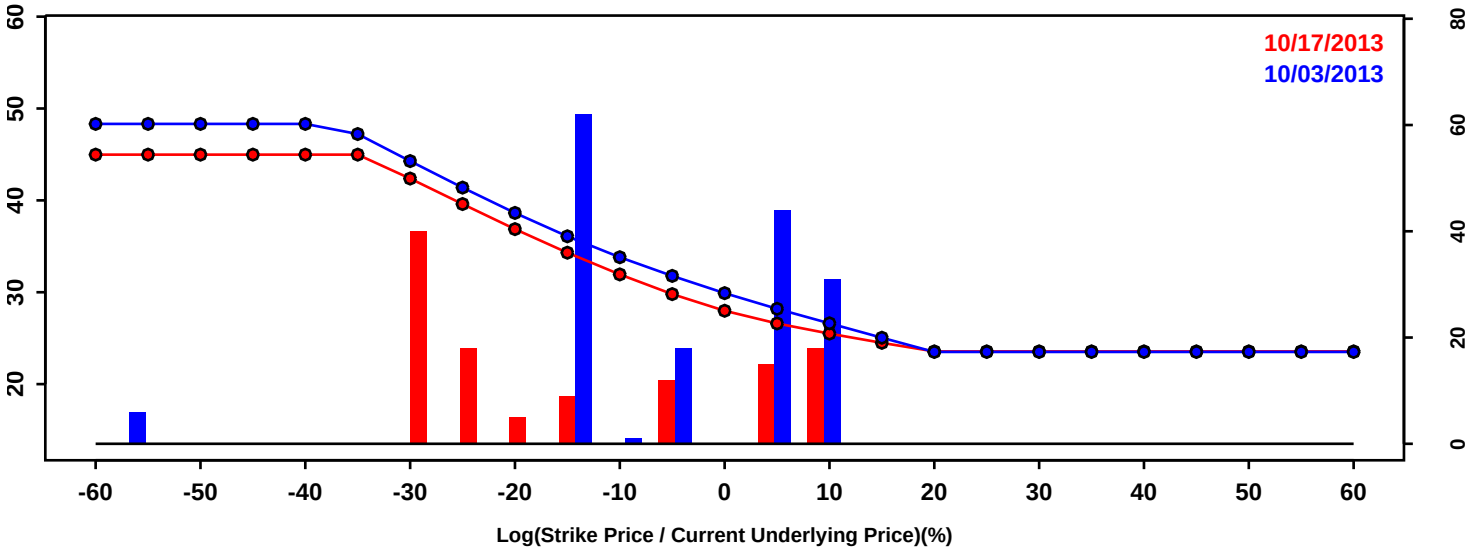
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-18.23%	-16.60%	1.63%
50th Pct	1.24%	0.53%	-0.71%
90th Pct	15.25%	14.80%	-0.46%
Mean	-0.41%	-0.33%	0.09%
Std Dev	13.87%	12.91%	-0.96%
Skew	-0.73	-0.46	0.27
Kurtosis	1.36	1.01	-0.35

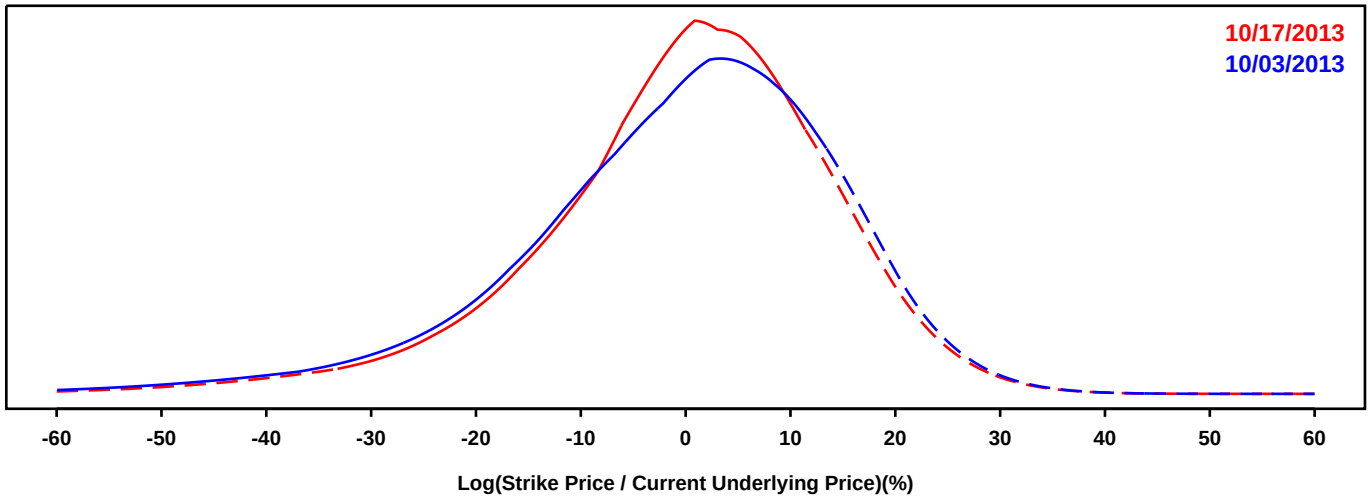
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- LINCOLN NATIONAL

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

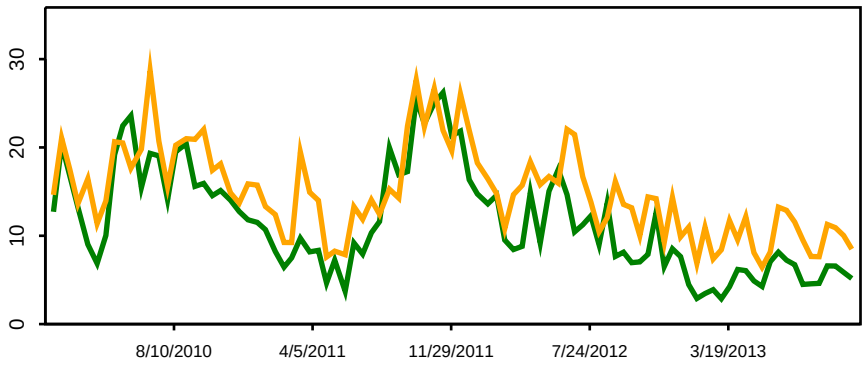
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

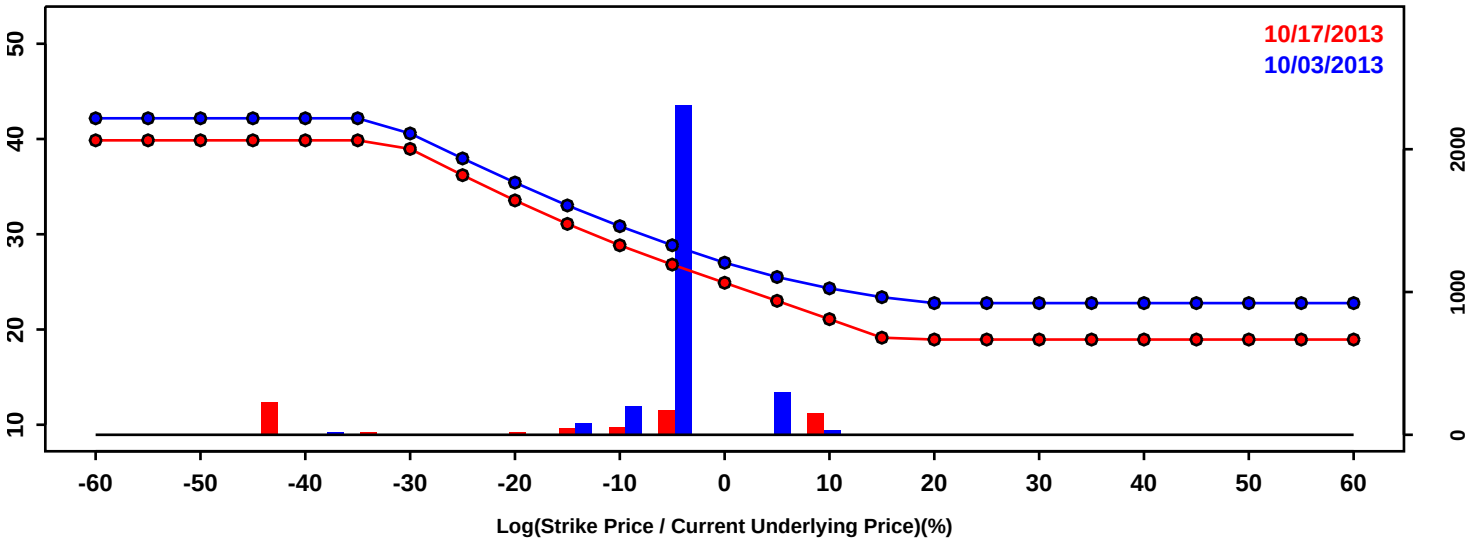
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-20.04%	-18.15%	1.88%
50th Pct	1.36%	1.15%	-0.21%
90th Pct	16.95%	16.15%	-0.80%
Mean	-0.52%	-0.23%	0.29%
Std Dev	15.41%	14.28%	-1.13%
Skew	-0.88	-0.82	0.06
Kurtosis	1.63	1.66	0.03

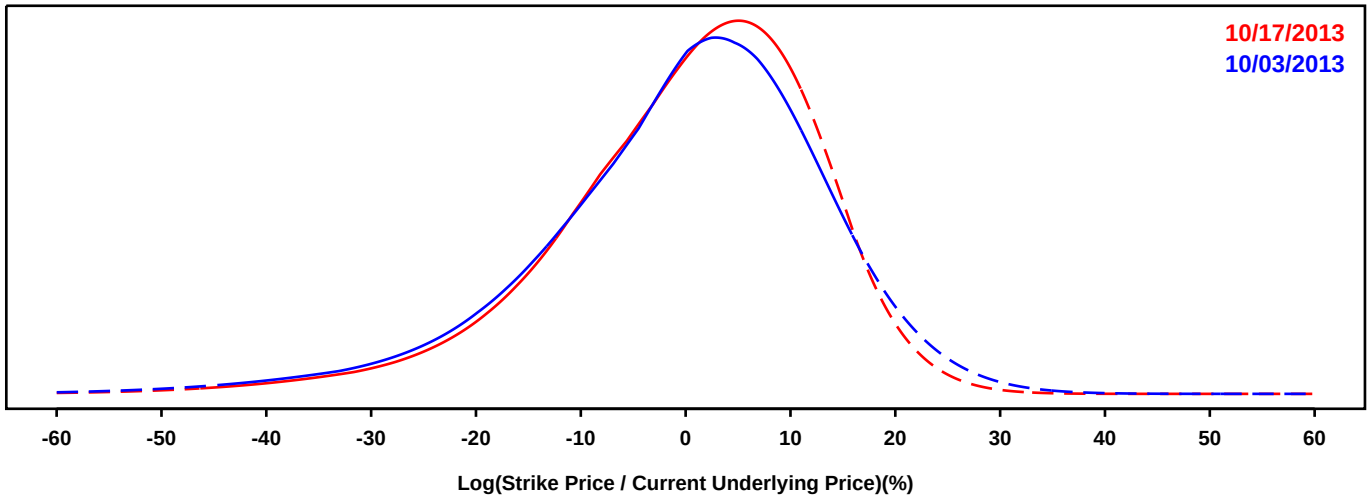
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- METLIFE

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

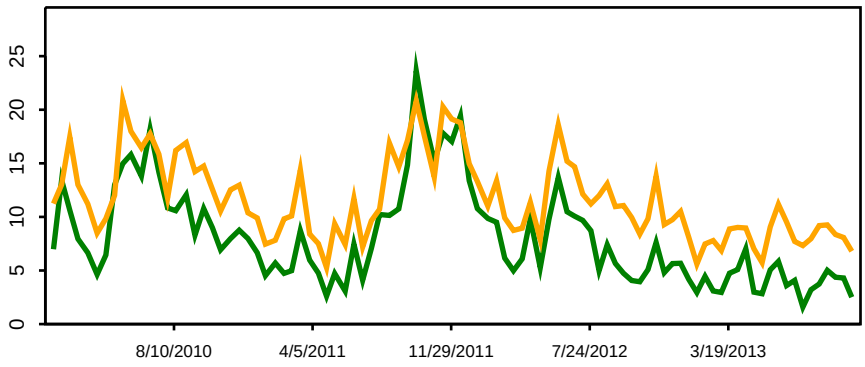
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

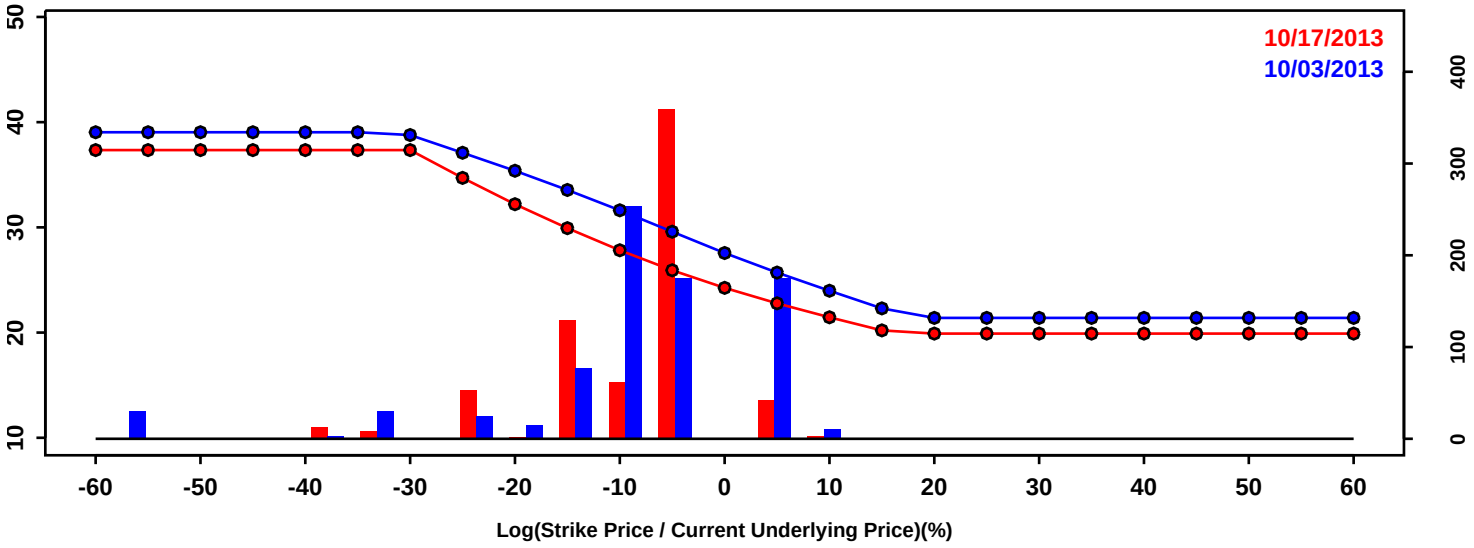
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-17.78%	-16.23%	1.55%
50th Pct	1.24%	1.74%	0.50%
90th Pct	15.29%	14.23%	-1.06%
Mean	-0.28%	0.05%	0.34%
Std Dev	13.71%	12.65%	-1.06%
Skew	-0.79	-0.89	-0.10
Kurtosis	1.46	1.51	0.05

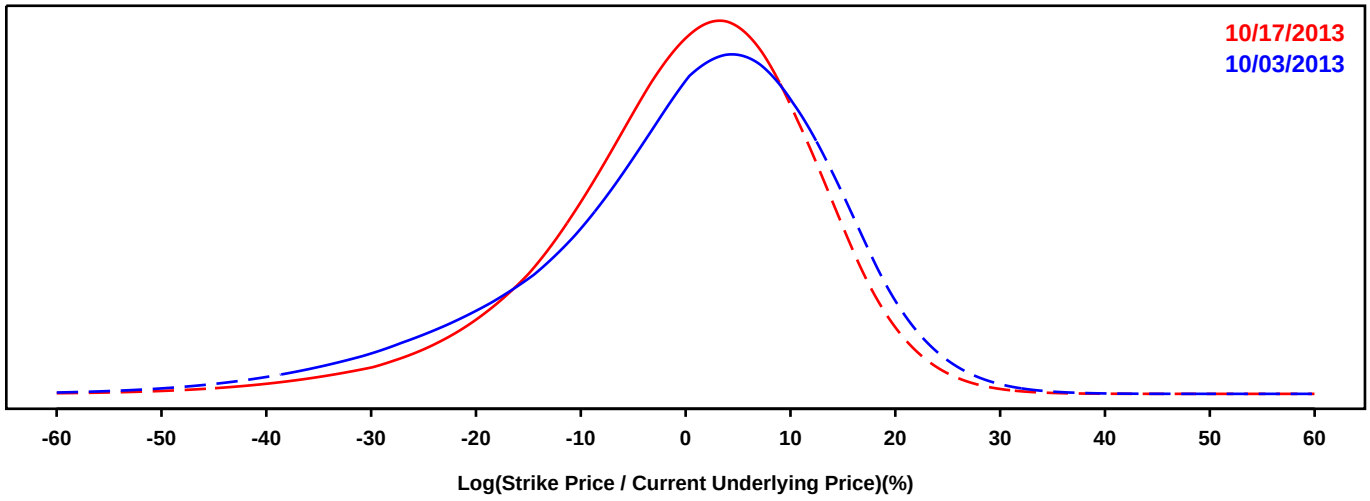
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- PRUDENTIAL

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

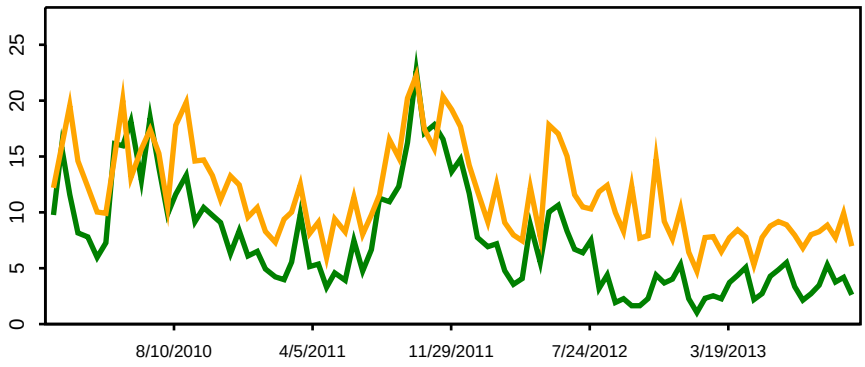
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

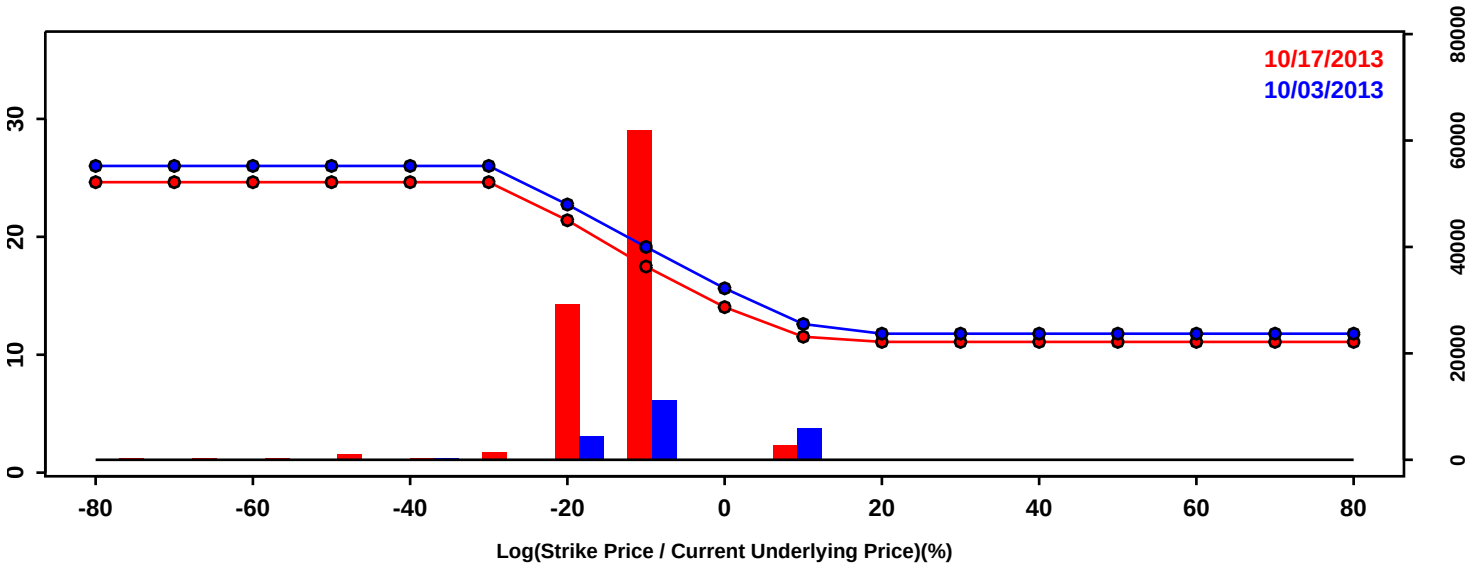
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-19.90%	-16.48%	3.42%
50th Pct	1.72%	1.01%	-0.71%
90th Pct	15.63%	13.90%	-1.72%
Mean	-0.38%	-0.36%	0.02%
Std Dev	14.32%	12.48%	-1.84%
Skew	-0.83	-0.77	0.06
Kurtosis	1.03	1.27	0.24

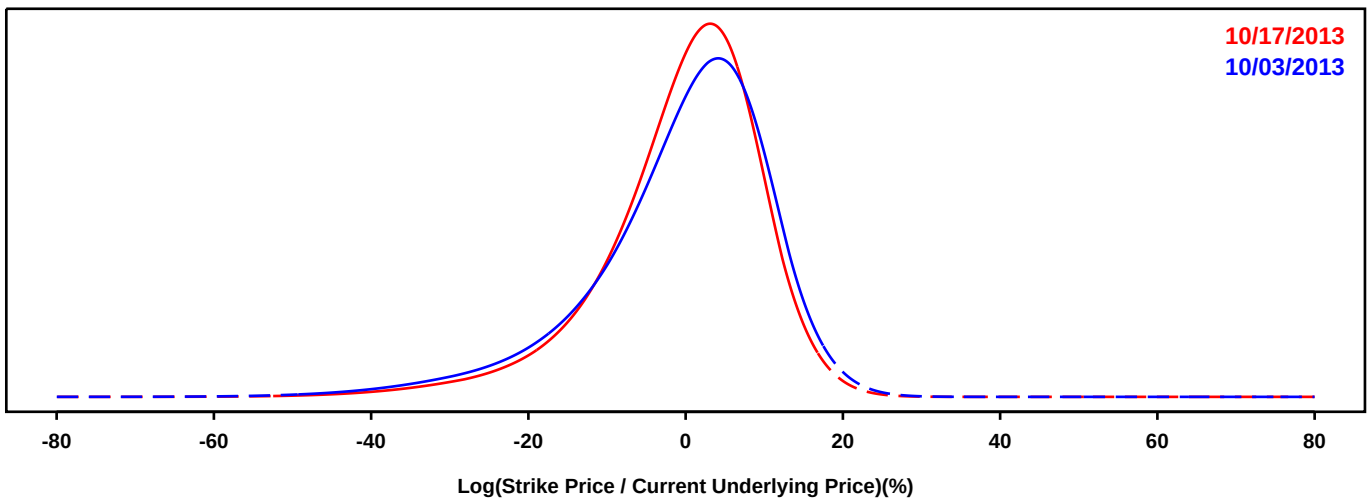
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

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

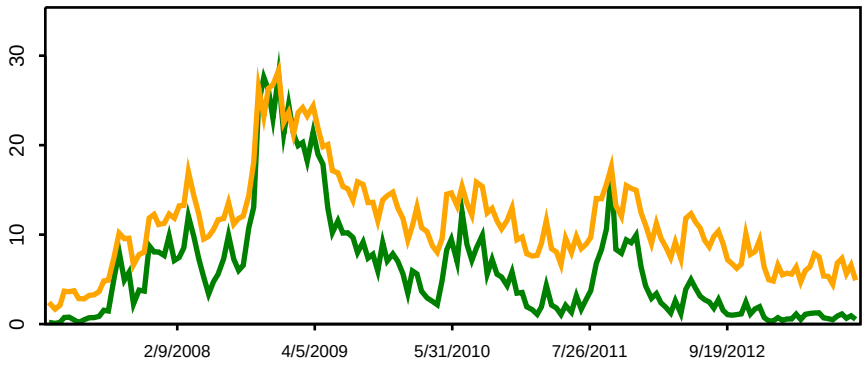
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

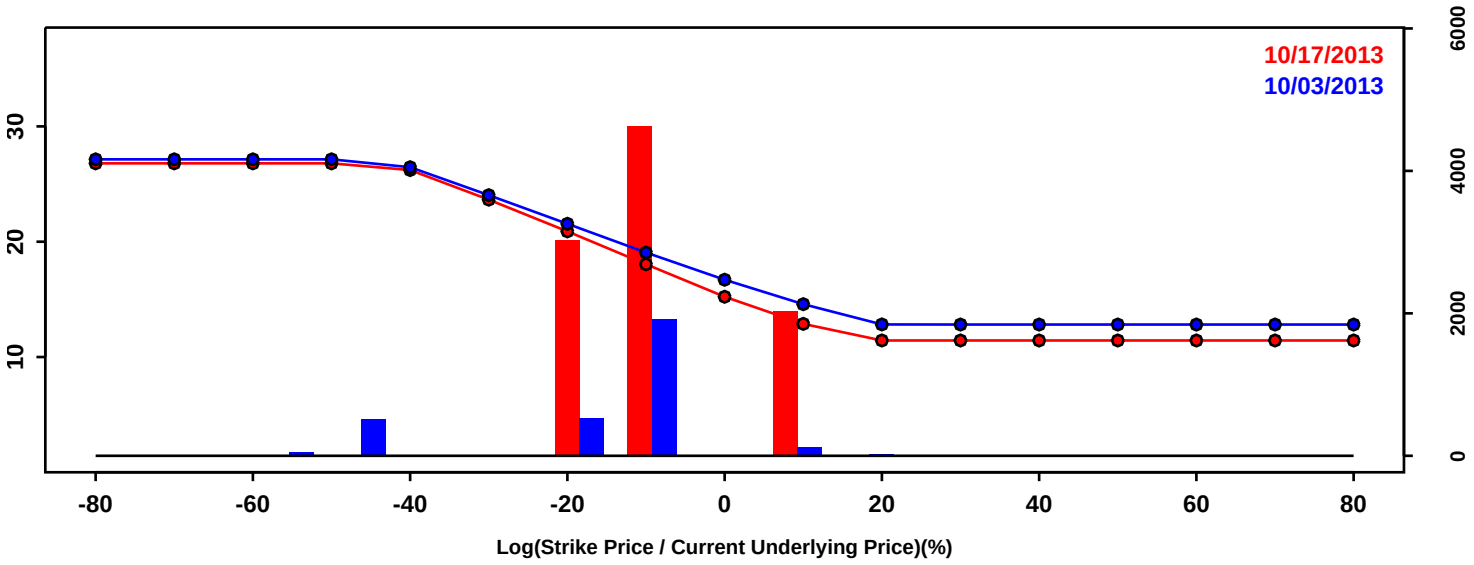
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-15.68%	-13.60%	2.08%
50th Pct	1.38%	1.01%	-0.37%
90th Pct	11.85%	10.69%	-1.17%
Mean	-0.56%	-0.50%	0.06%
Std Dev	11.59%	10.33%	-1.26%
Skew	-1.10	-1.08	0.02
Kurtosis	2.02	2.27	0.25

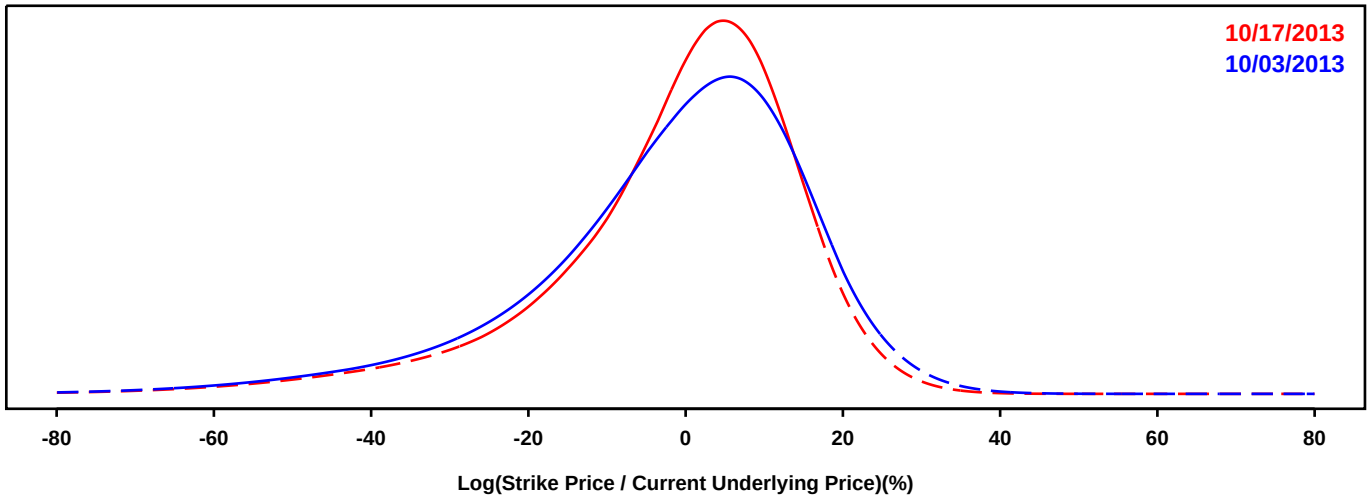
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

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%

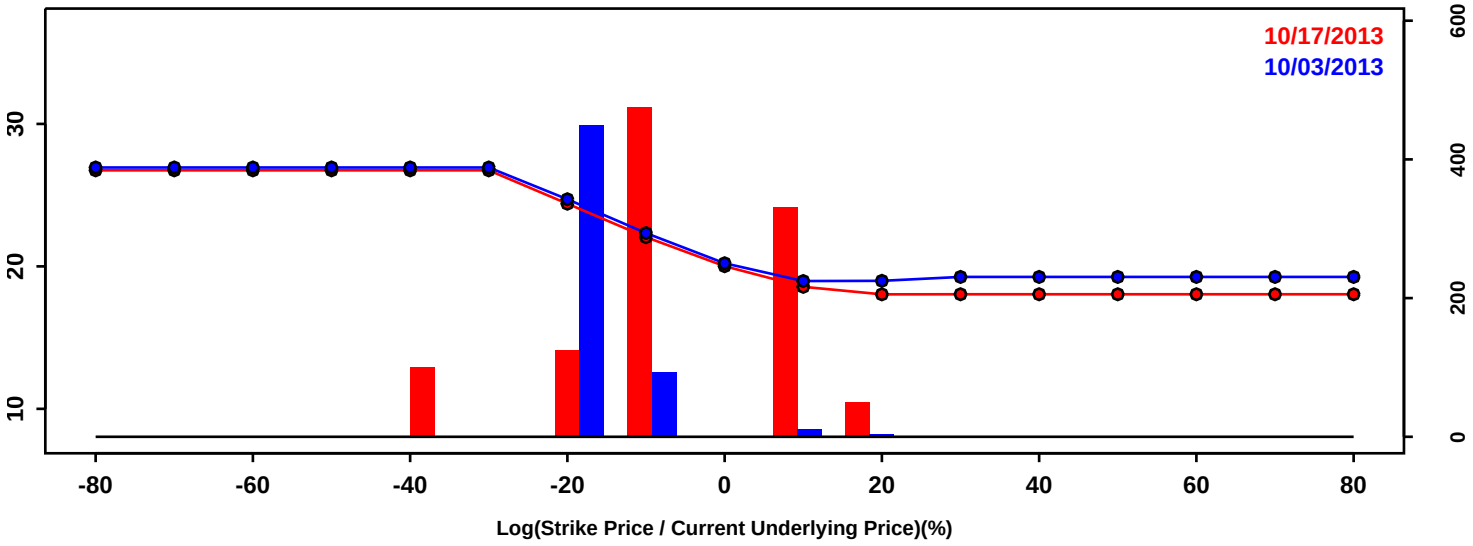
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-25.09%	-22.56%	2.53%
50th Pct	1.04%	1.57%	0.53%
90th Pct	17.27%	15.61%	-1.66%
Mean	-1.85%	-1.44%	0.41%
Std Dev	17.74%	16.39%	-1.35%
Skew	-1.05	-1.25	-0.20
Kurtosis	1.81	2.53	0.72

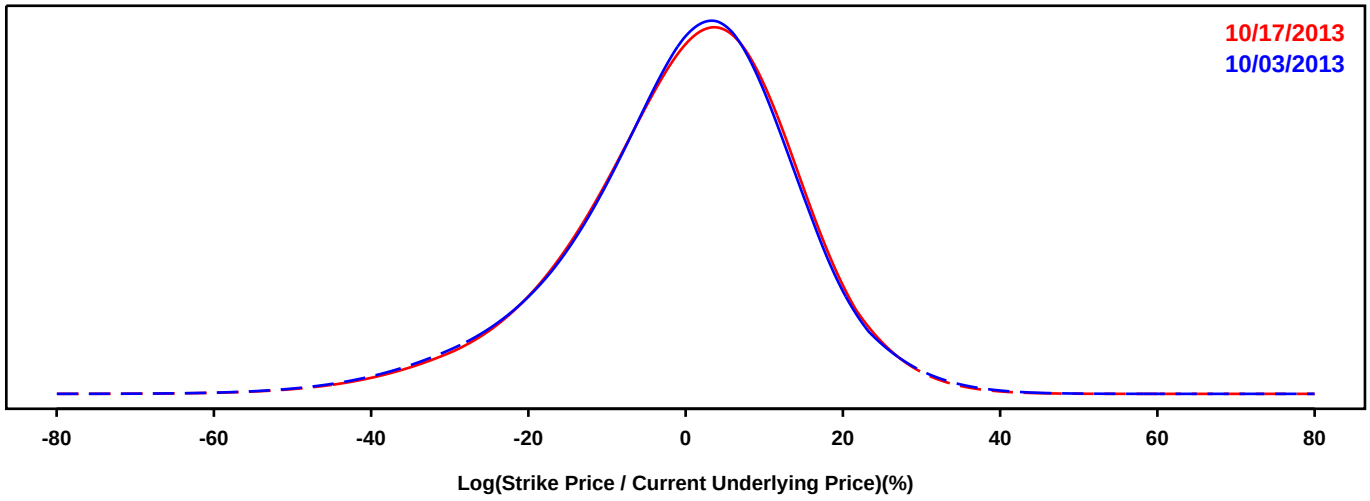
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES (WTI)

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

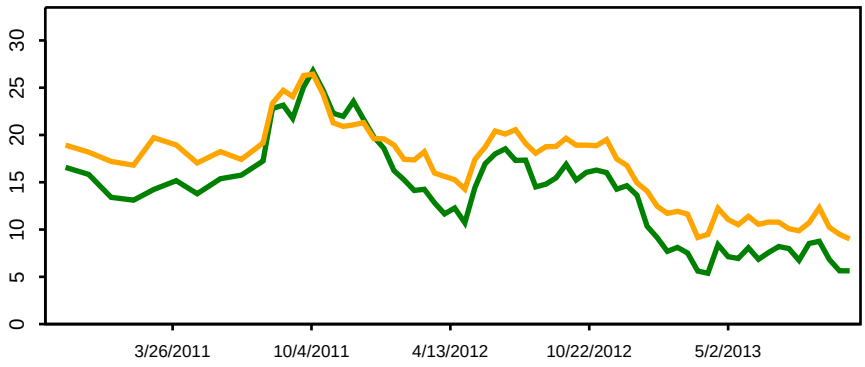
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

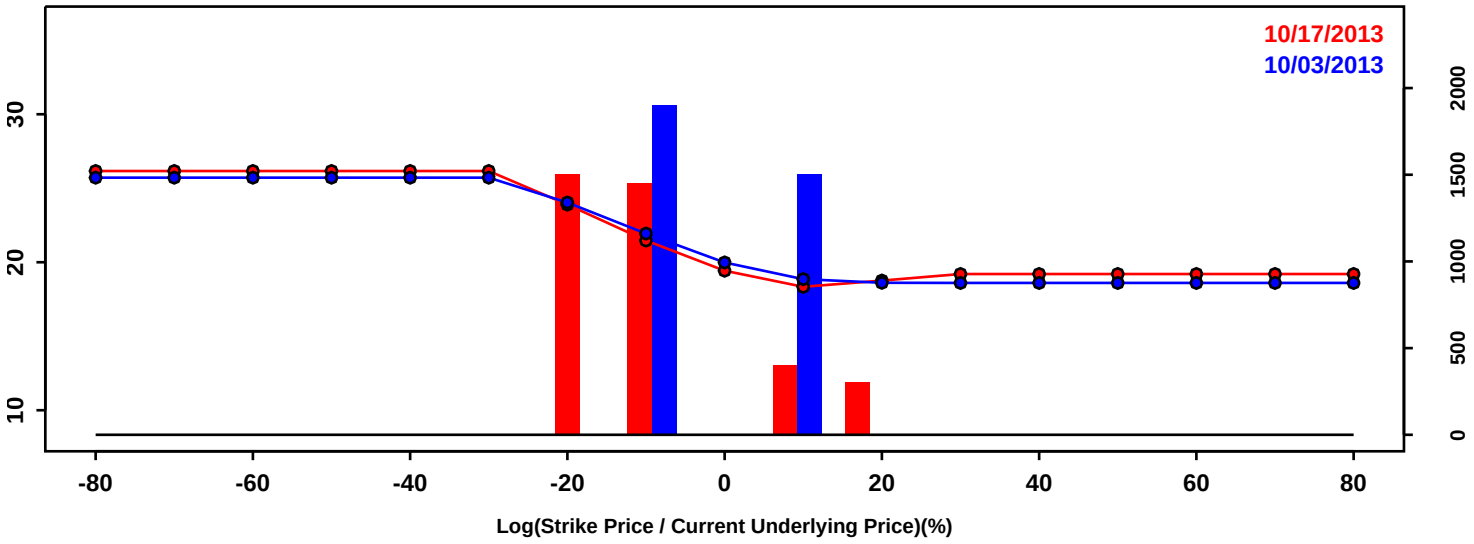
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-19.41%	-18.89%	0.52%
50th Pct	1.03%	1.17%	0.14%
90th Pct	16.25%	16.40%	0.15%
Mean	-0.40%	-0.18%	0.22%
Std Dev	14.48%	14.29%	-0.19%
Skew	-0.57	-0.57	-0.00
Kurtosis	0.87	0.79	-0.08

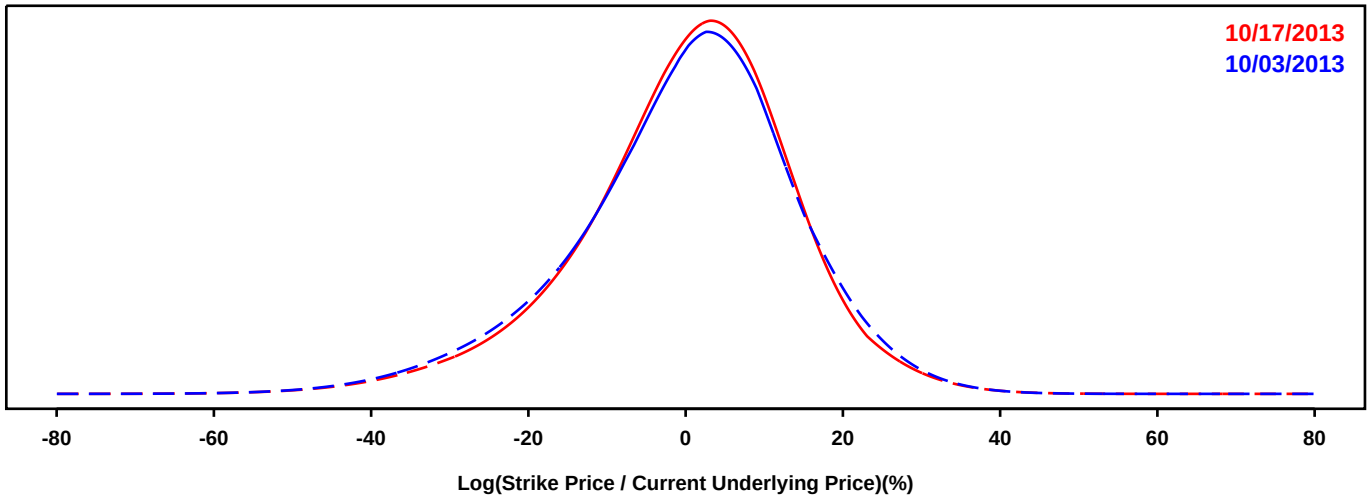
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES (Brent)

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

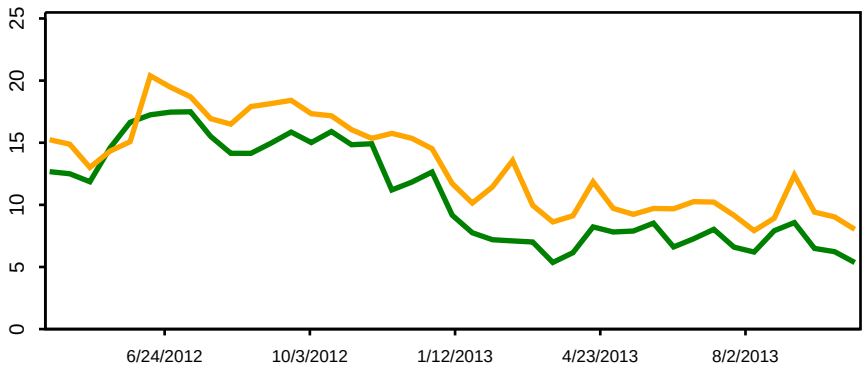
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

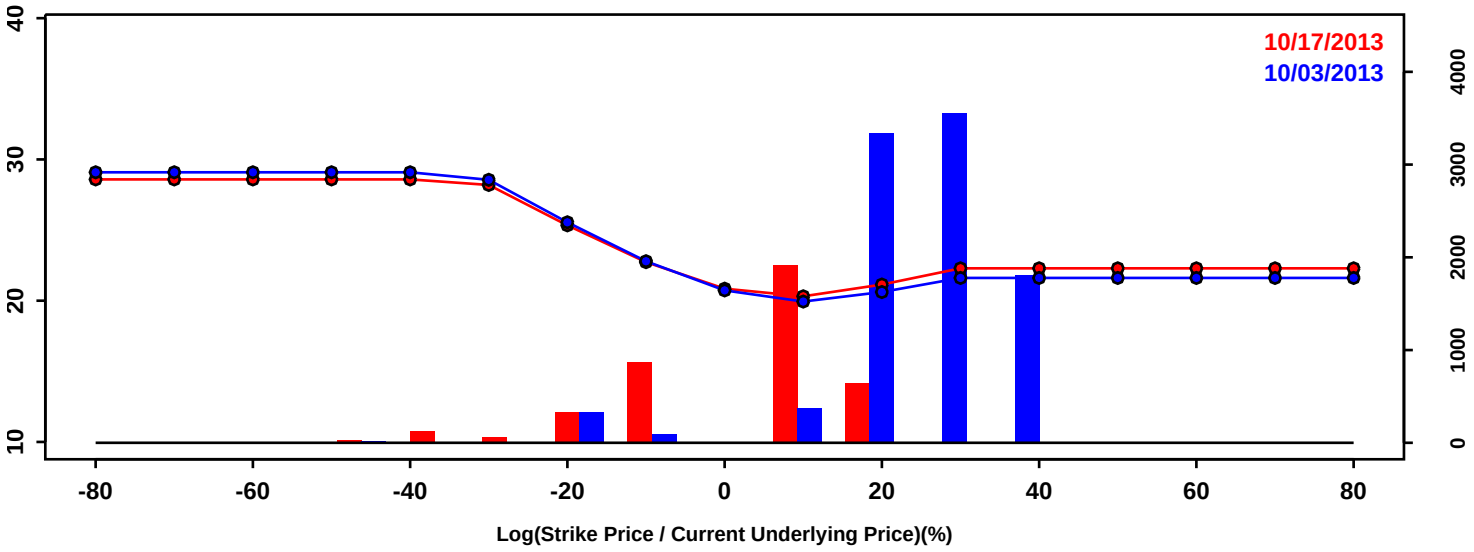
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-18.89%	-17.73%	1.16%
50th Pct	1.22%	1.29%	0.07%
90th Pct	16.77%	15.95%	-0.82%
Mean	-0.06%	0.10%	0.16%
Std Dev	14.30%	13.78%	-0.52%
Skew	-0.49	-0.52	-0.03
Kurtosis	0.70	0.93	0.23

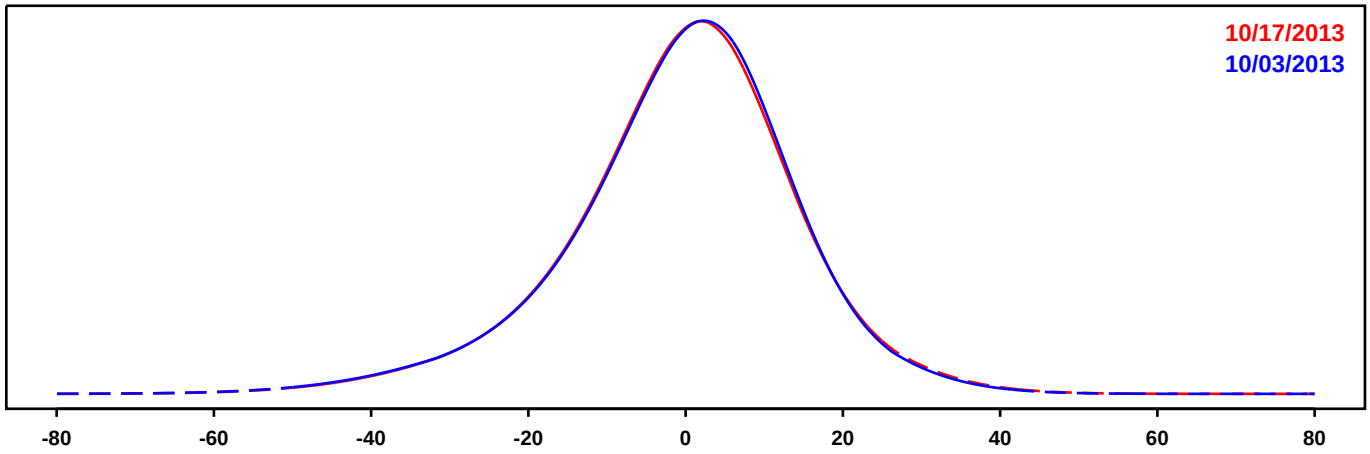
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- GOLD FUTURES

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

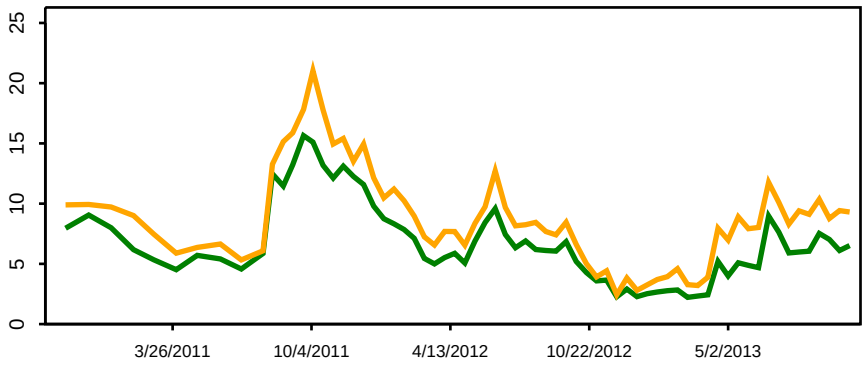
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

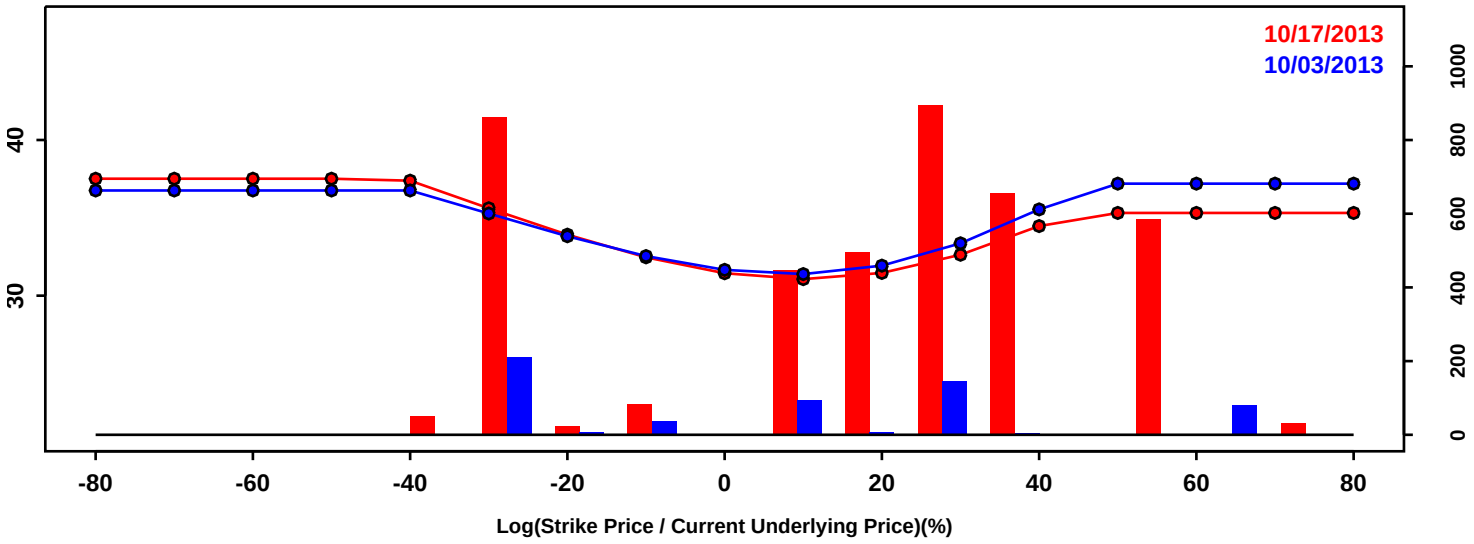
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-19.34%	-19.20%	0.14%
50th Pct	0.64%	0.52%	-0.11%
90th Pct	16.41%	16.71%	0.30%
Mean	-0.56%	-0.48%	0.08%
Std Dev	14.80%	14.83%	0.03%
Skew	-0.53	-0.45	0.08
Kurtosis	1.17	1.09	-0.08

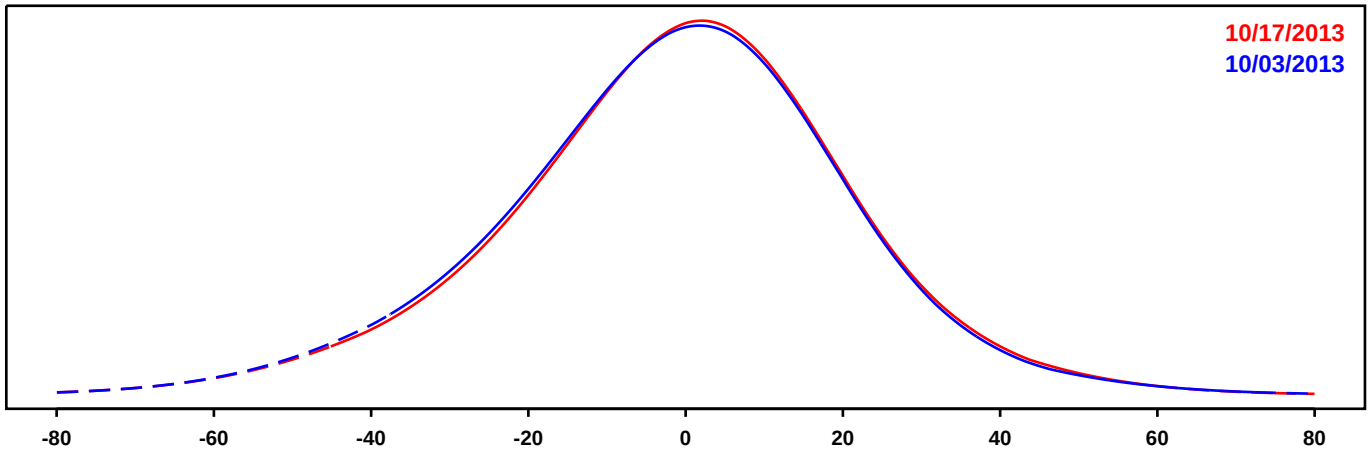
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SILVER FUTURES

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

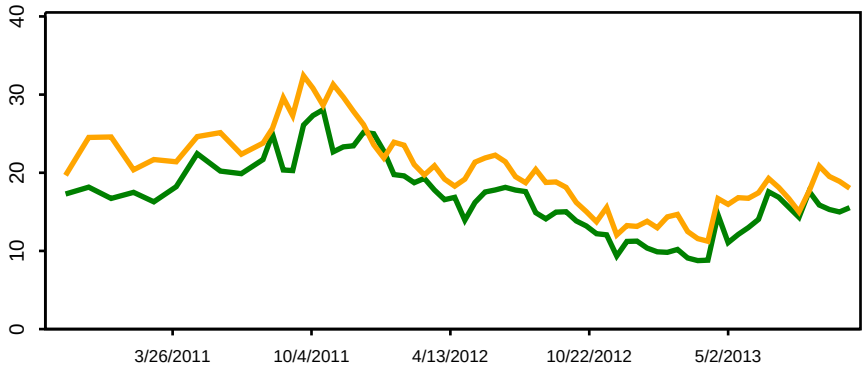
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

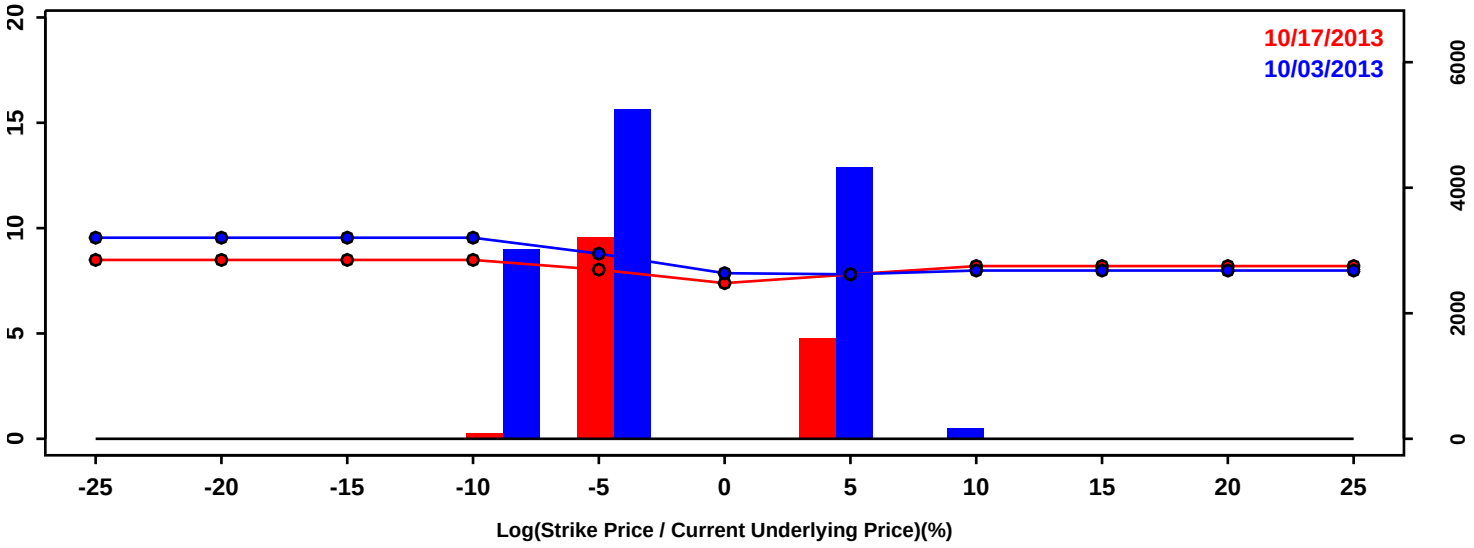
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-30.27%	-29.48%	0.79%
50th Pct	-0.50%	0.05%	0.56%
90th Pct	25.01%	25.62%	0.61%
Mean	-1.53%	-0.95%	0.58%
Std Dev	22.33%	22.29%	-0.05%
Skew	-0.19	-0.22	-0.03
Kurtosis	0.59	0.62	0.03

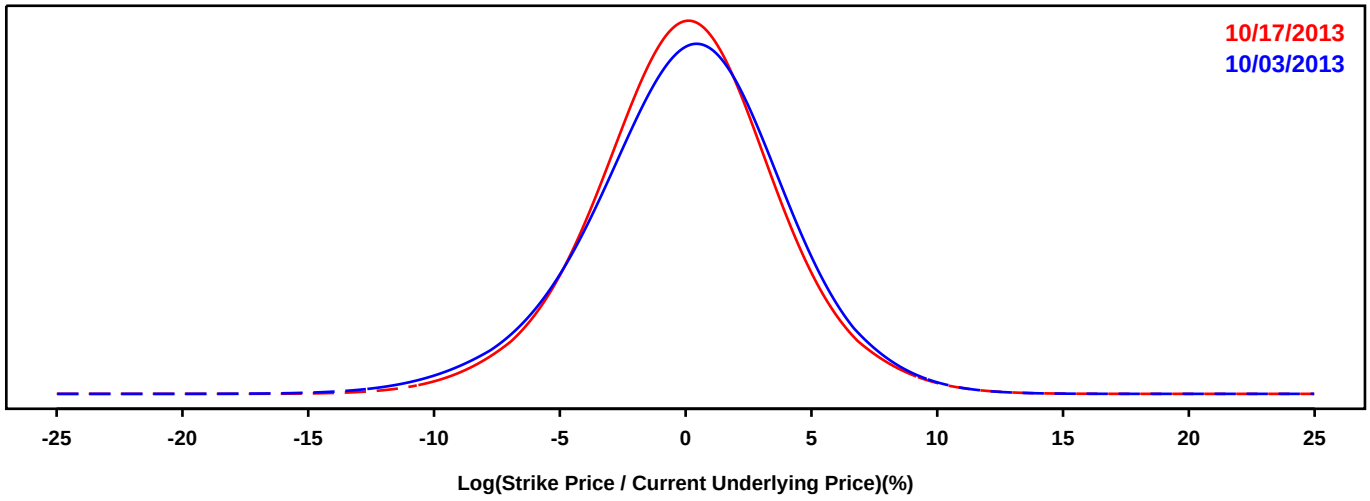
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-EURO EXCHANGE RATE FUTURES

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

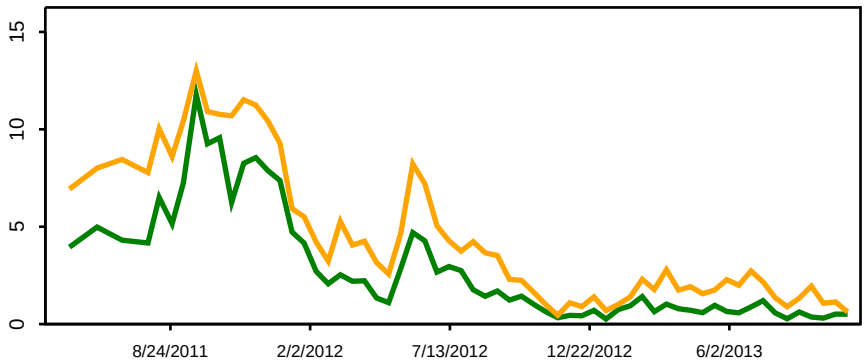
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -10% [stronger $] Increase >= 10% [weaker $]

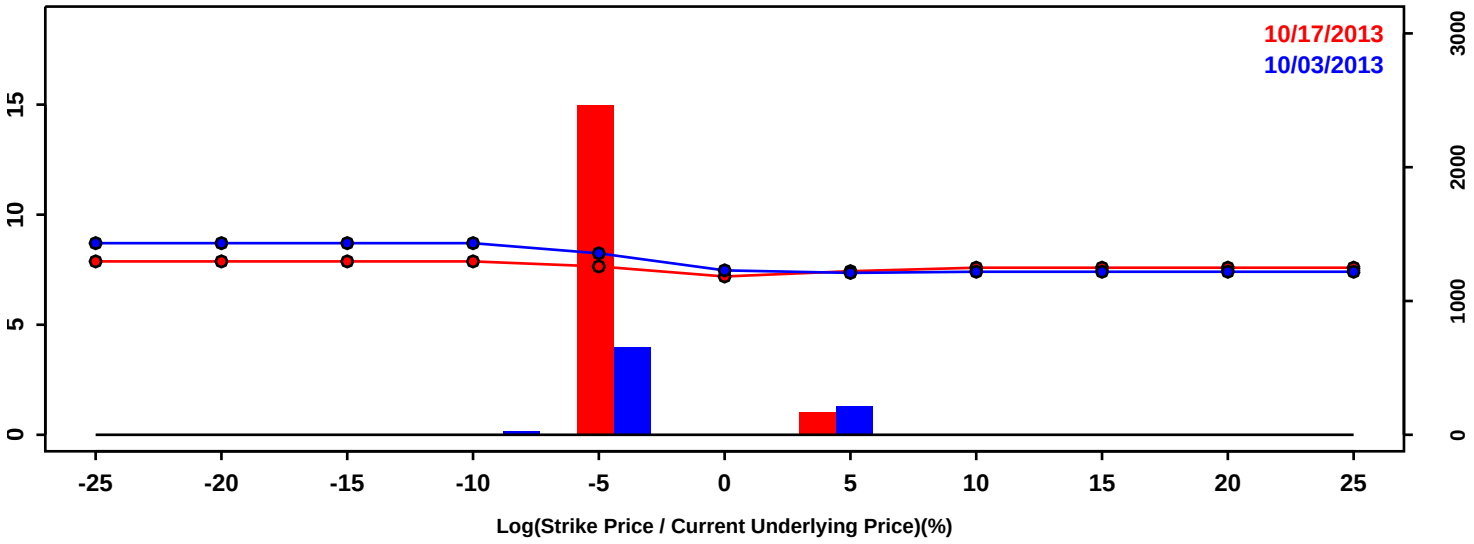
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-4.97%	-4.62%	0.34%
50th Pct	0.16%	0.06%	-0.10%
90th Pct	4.82%	4.53%	-0.29%
Mean	0.06%	0.03%	-0.03%
Std Dev	3.92%	3.68%	-0.24%
Skew	-0.24	-0.06	0.18
Kurtosis	0.50	0.50	-0.01

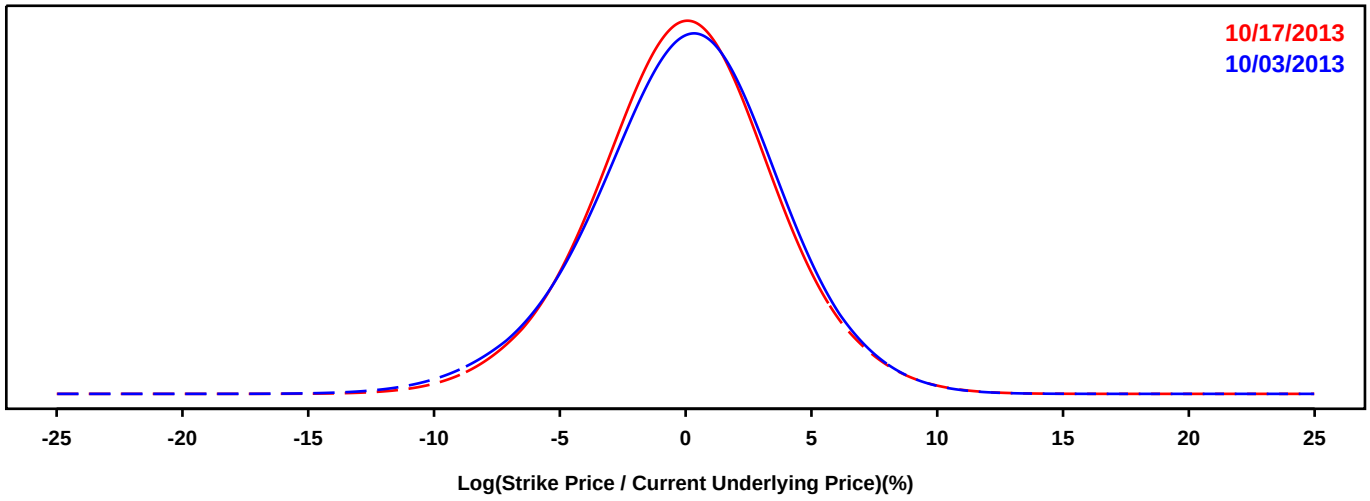
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-POUND EXCHANGE RATE FUTURES

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

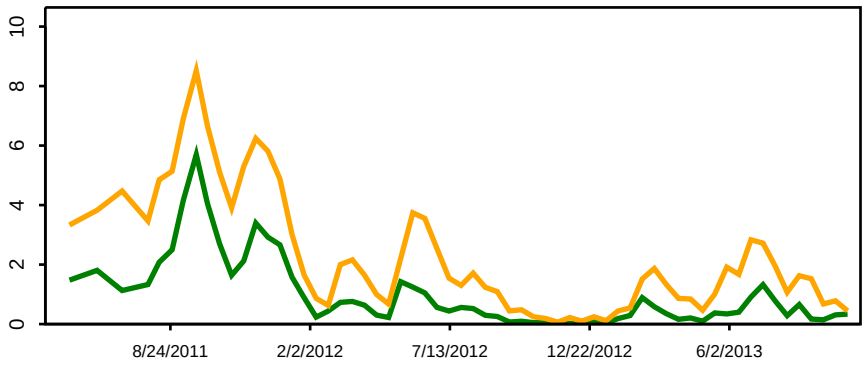
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -10% [stronger $] Increase >= 10% [weaker $]

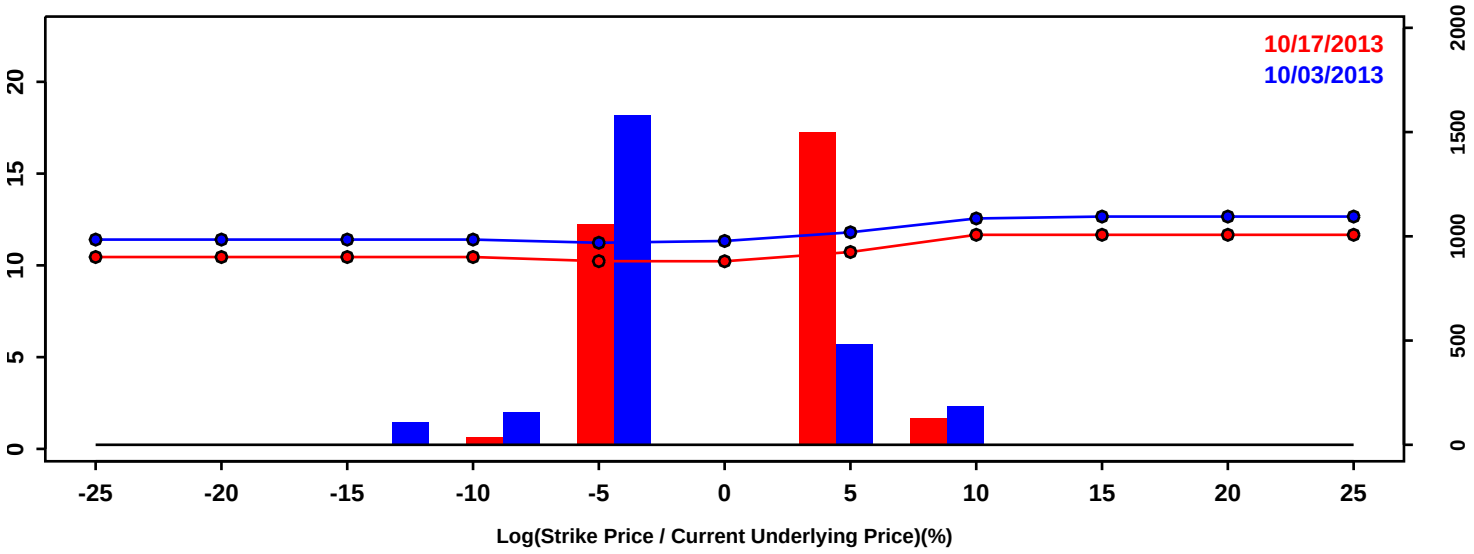
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-4.80%	-4.56%	0.24%
50th Pct	0.11%	0.00%	-0.11%
90th Pct	4.57%	4.47%	-0.09%
Mean	0.02%	0.00%	-0.02%
Std Dev	3.73%	3.59%	-0.14%
Skew	-0.21	-0.05	0.15
Kurtosis	0.35	0.30	-0.05

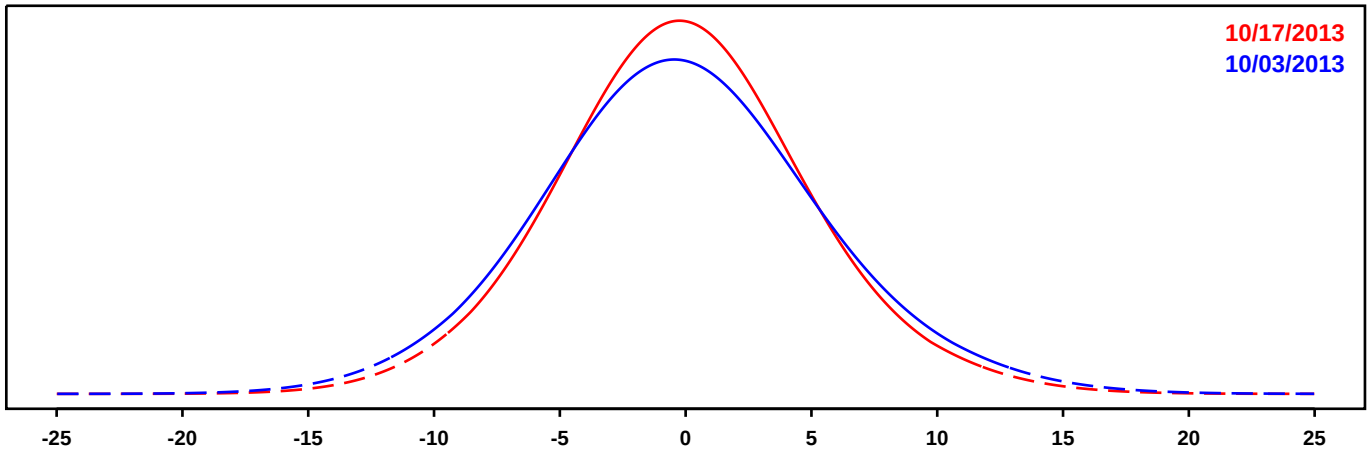
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-YEN EXCHANGE RATE FUTURES

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

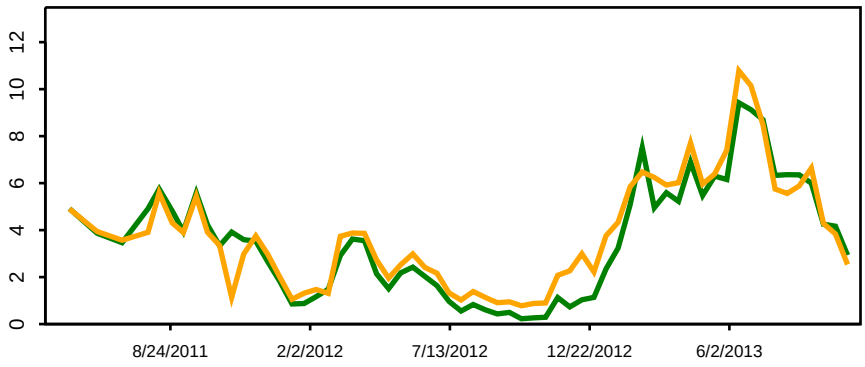
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -10% [stronger $] Increase >= 10% [weaker $]

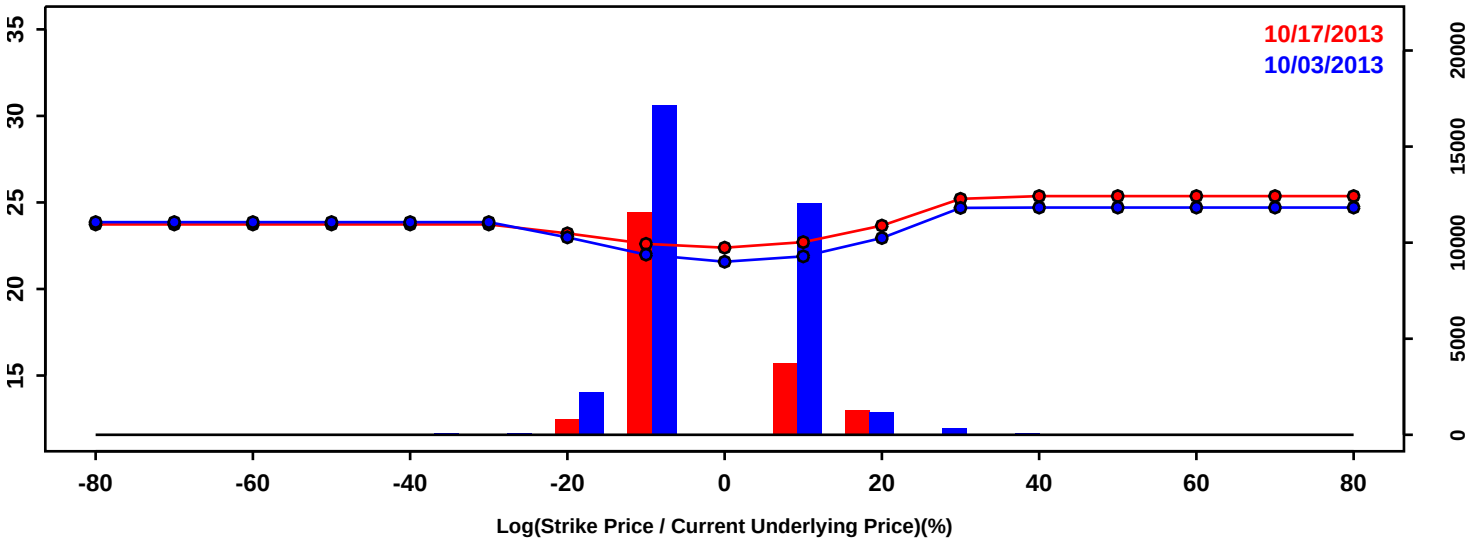
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-7.16%	-6.46%	0.70%
50th Pct	-0.27%	-0.18%	0.09%
90th Pct	7.11%	6.40%	-0.71%
Mean	-0.10%	-0.05%	0.05%
Std Dev	5.65%	5.10%	-0.55%
Skew	0.13	0.11	-0.01
Kurtosis	0.26	0.33	0.06

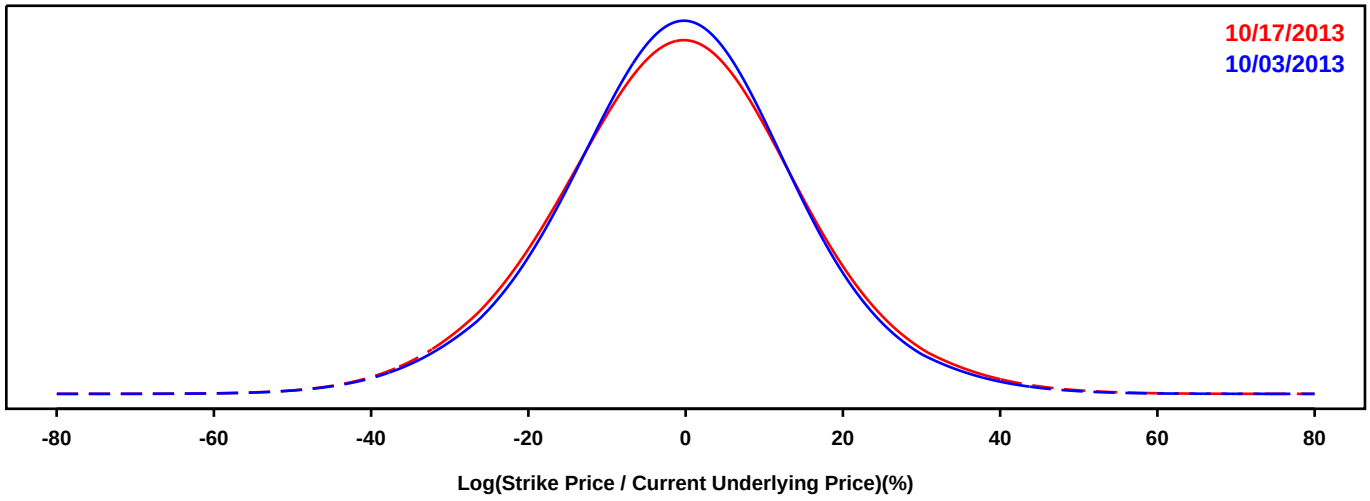
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CORN FUTURES

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

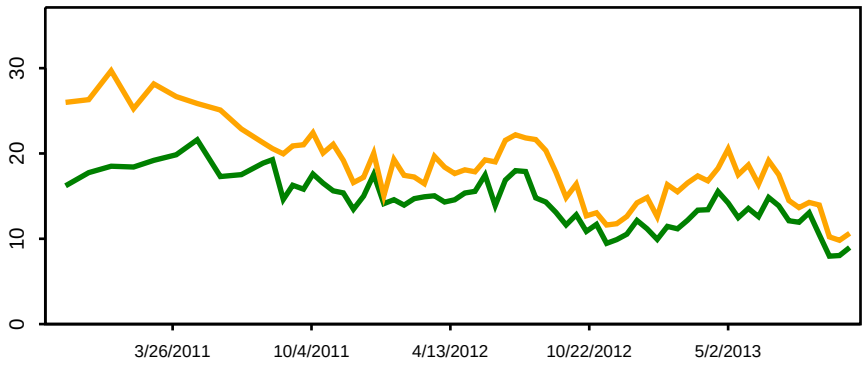
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

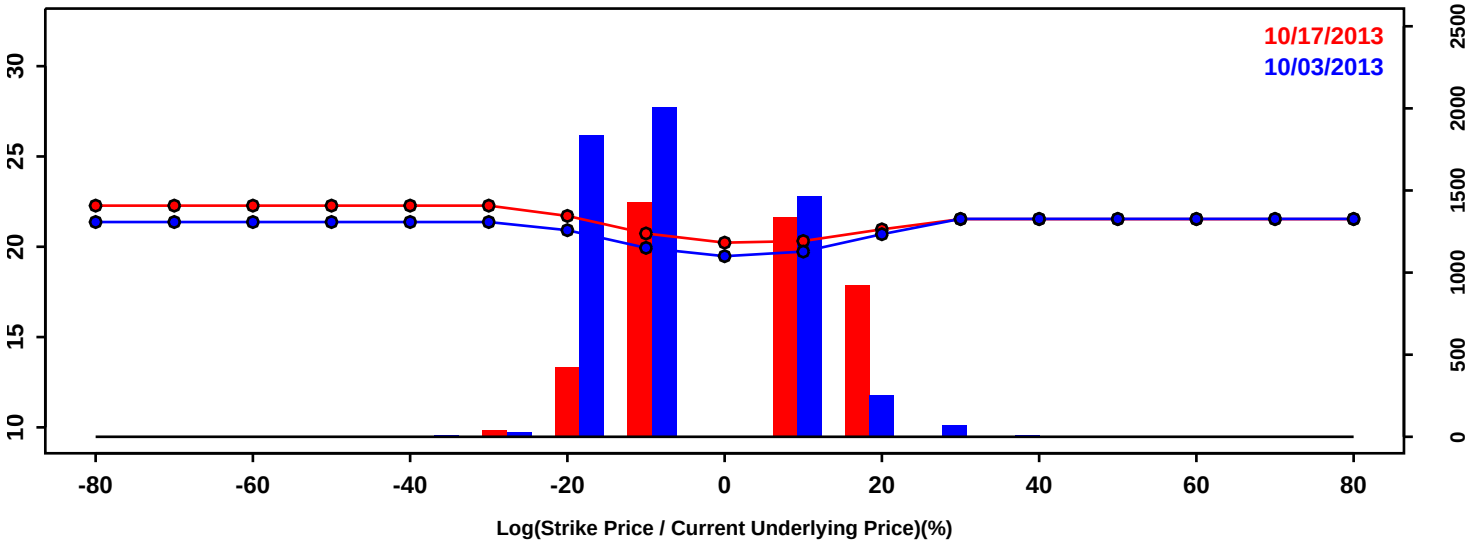
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-19.81%	-20.58%	-0.77%
50th Pct	-0.56%	-0.59%	-0.03%
90th Pct	18.06%	19.01%	0.95%
Mean	-0.69%	-0.63%	0.06%
Std Dev	15.21%	15.79%	0.58%
Skew	-0.02	0.02	0.04
Kurtosis	0.46	0.35	-0.11

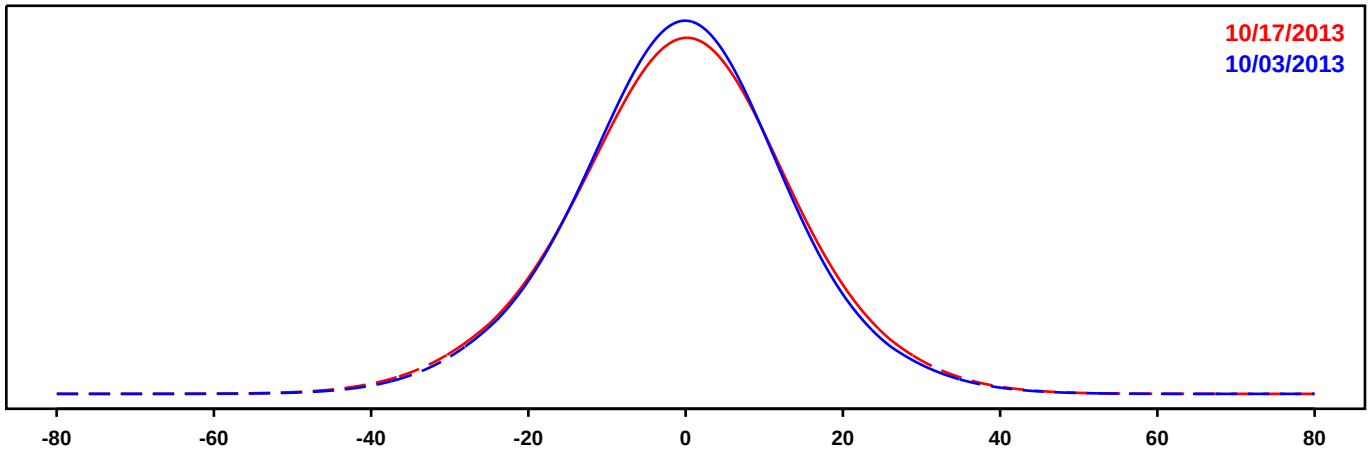
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SOYBEAN FUTURES

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

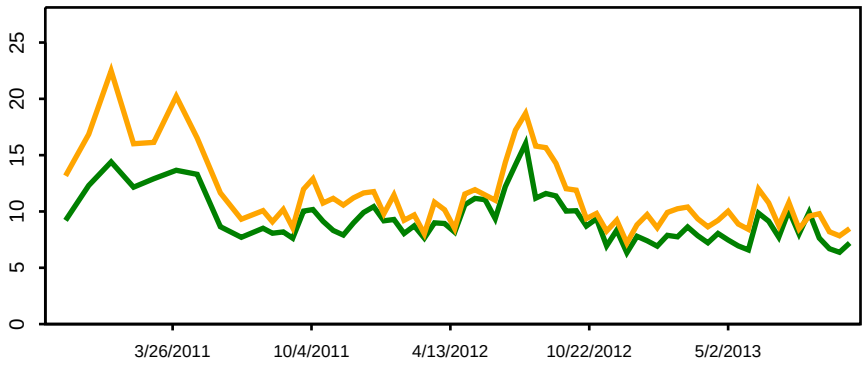
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

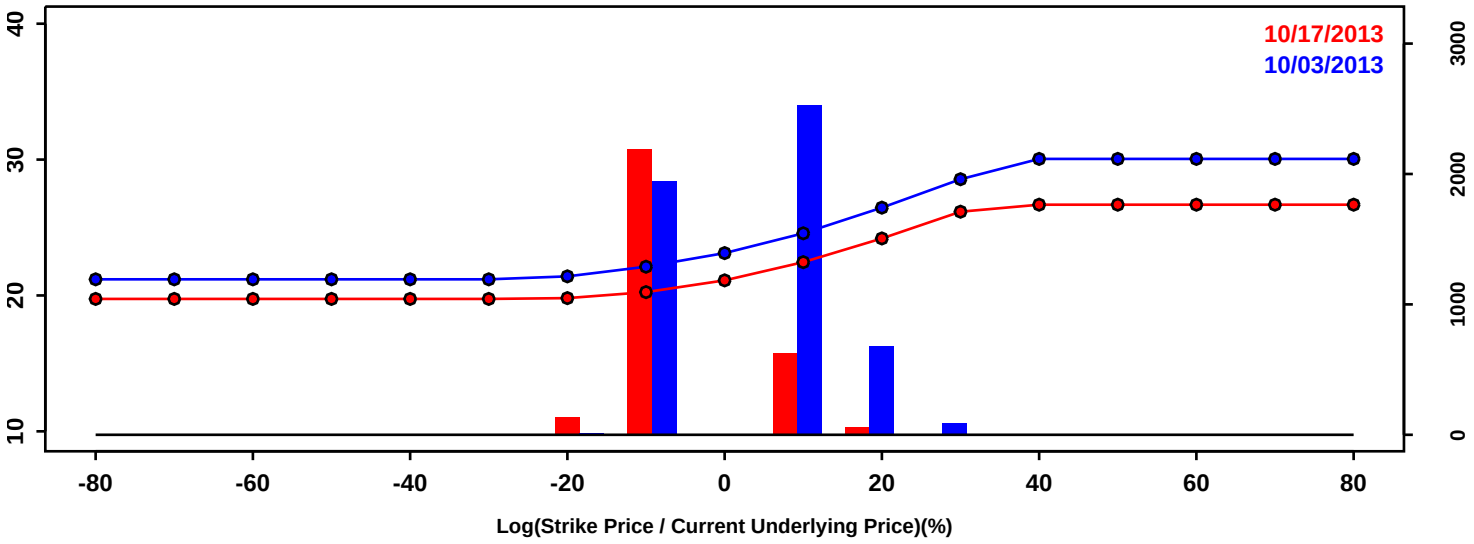
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-17.94%	-18.55%	-0.61%
50th Pct	-0.41%	-0.21%	0.19%
90th Pct	16.48%	17.34%	0.86%
Mean	-0.54%	-0.40%	0.14%
Std Dev	13.74%	14.28%	0.54%
Skew	-0.04	-0.07	-0.03
Kurtosis	0.39	0.33	-0.06

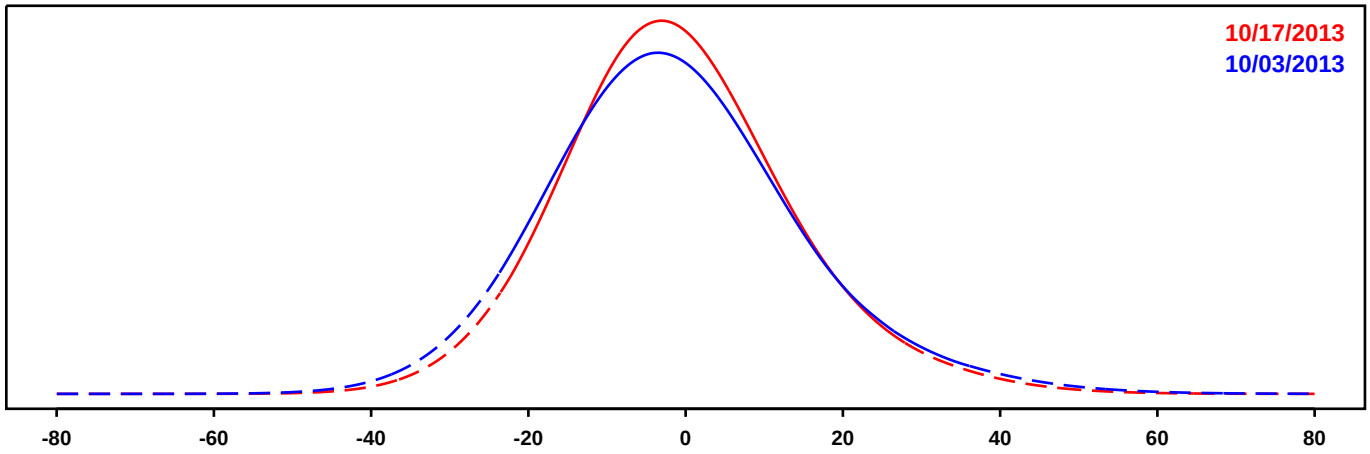
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- WHEAT FUTURES

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

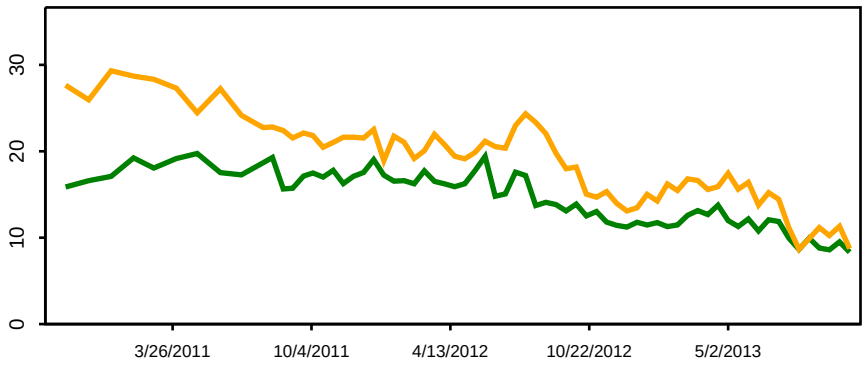
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

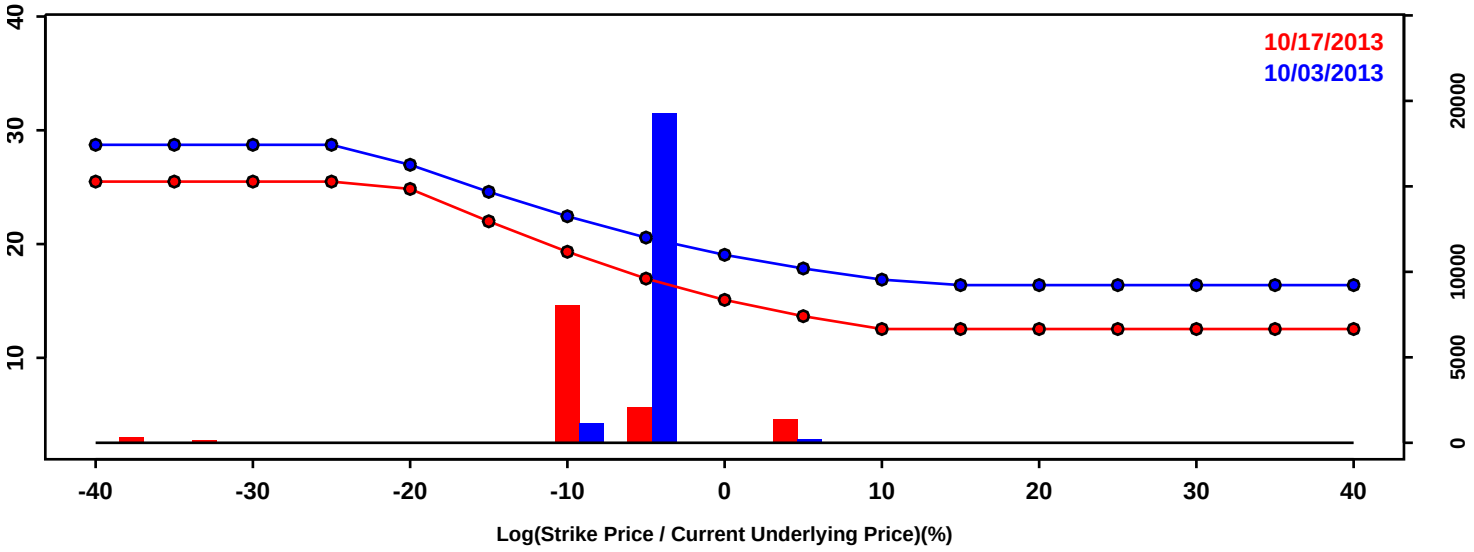
Statistics of the Log Return Distributions

	10/03/2013	10/17/2013	Change
10th Pct	-21.03%	-18.99%	2.04%
50th Pct	-2.27%	-1.74%	0.53%
90th Pct	19.45%	18.18%	-1.27%
Mean	-1.30%	-0.89%	0.41%
Std Dev	16.27%	14.87%	-1.40%
Skew	0.40	0.35	-0.05
Kurtosis	0.60	0.52	-0.08

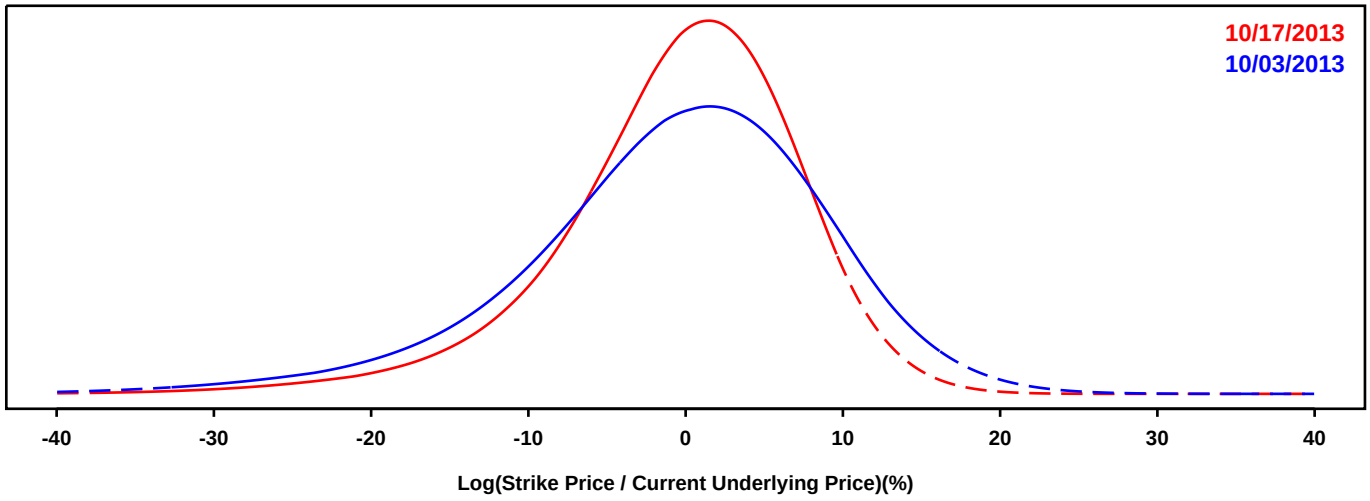
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- iSHARES DOW JONES US REAL ESTATE

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

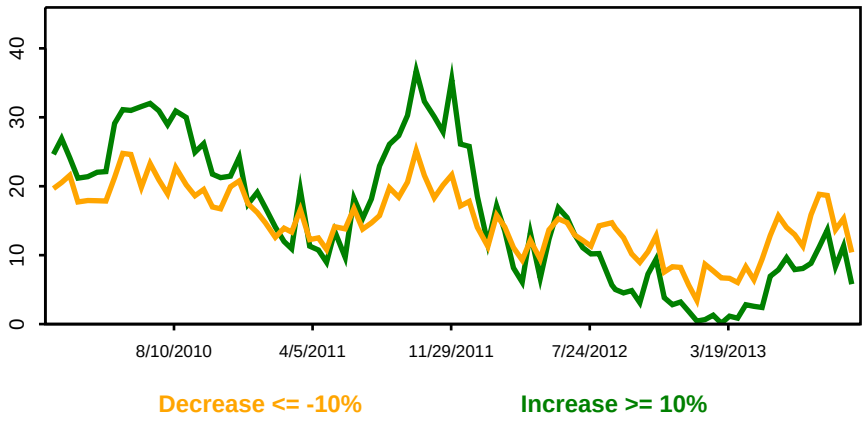
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change

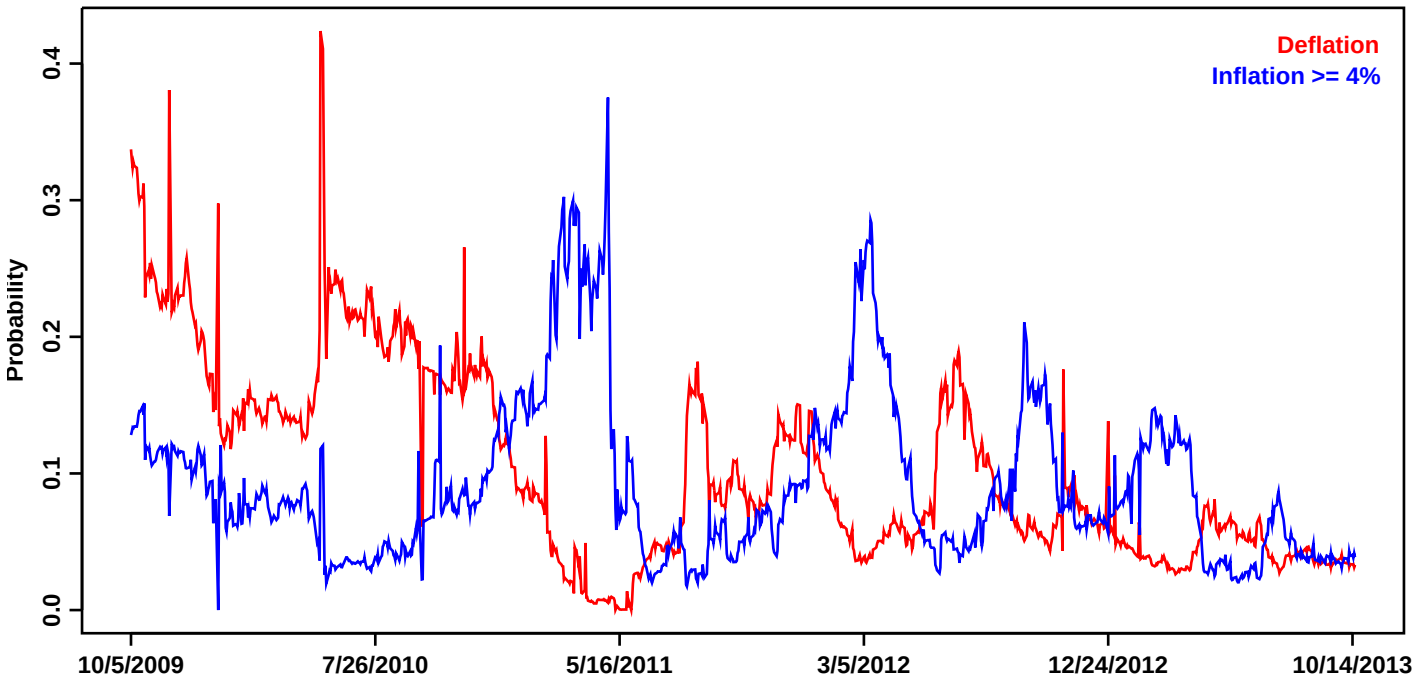


Statistics of the Log Return Distributions

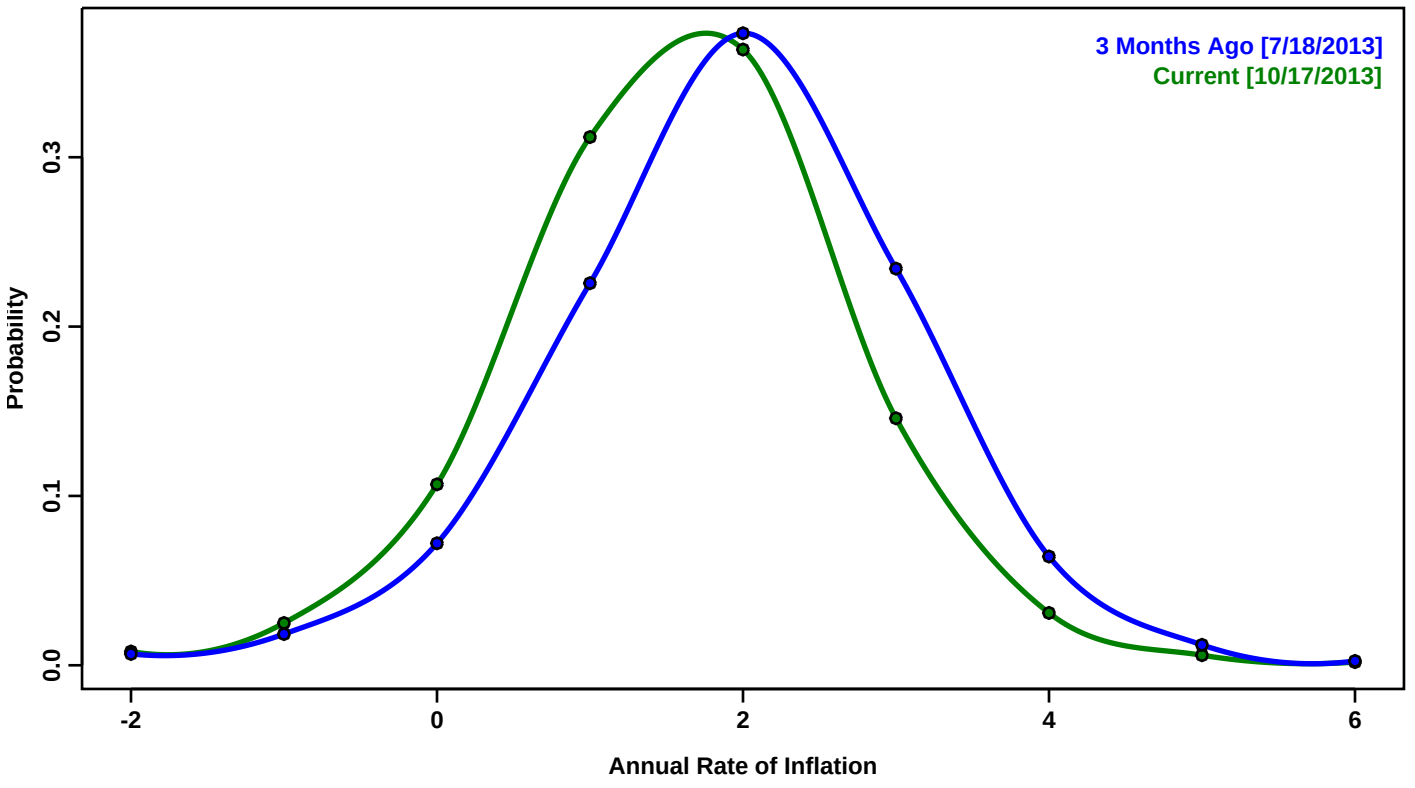
	10/03/2013	10/17/2013	Change
10th Pct	-13.17%	-10.24%	2.93%
50th Pct	0.15%	0.37%	0.23%
90th Pct	10.57%	8.35%	-2.22%
Mean	-0.74%	-0.46%	0.28%
Std Dev	9.75%	7.76%	-1.99%
Skew	-0.69	-0.86	-0.17
Kurtosis	1.18	1.75	0.58

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- Inflation Caps & Floors

Probabilty of Deflation and High Inflation over the next 12 Months



Risk Neutral Density Function for Inflation over the next 12 Months



RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- Inflation Caps & Floors