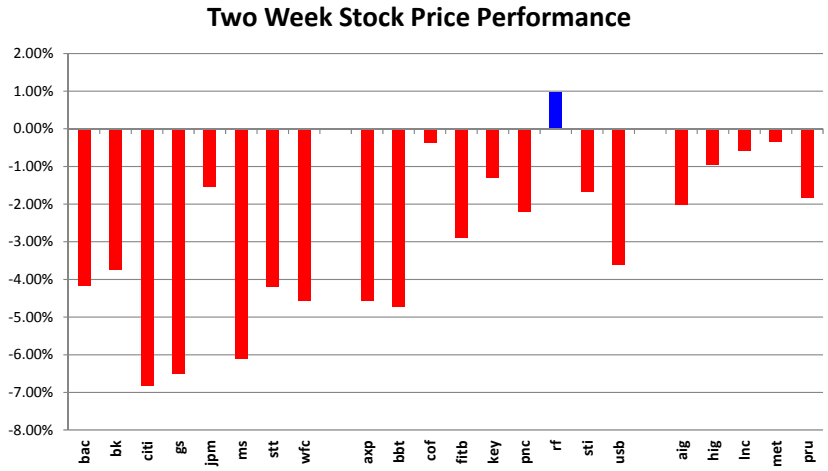
Minneapolis Options Report – October 3rd

Banks & Insurance Companies
The S&P 500 dropped more than -2.5% during the past two weeks. Banks performed worse than that, on average, while insurance companies did better.



Options on stock prices traded at average volume levels and RNPD standard deviations were generally higher. Across the universe of banks we follow, volatility smiles (top panel of detail reports) tended to shift upwards. In addition, the upward shift was larger at strike prices below the current spot causing RNPDs to have more downside skew. The median RNPD standard deviation for the CCAR banks rose 100 basis points.

Additional notes:

- We recorded strong activity in options on C shares. The RNPD standard deviation jumped nearly 160 basis points and the skew became more negative. (*See C detail report*)

- The behavior of the RNPD derived from options on JPM shares was similar to that of Citigroup. A parallel shift in the volatility smile led to an increase in the RNPD standard deviation of over 100 basis points. (*See JPM detail report*)

- The reaction of the RNPD derived from options on AIG shares to market changes was more similar to the banks than to the other insurance companies. We note the parallel increase in its volatility smile, the 130 basis point jump in the RNPD standard deviation, and robust trading. (*See AIG detail report*)

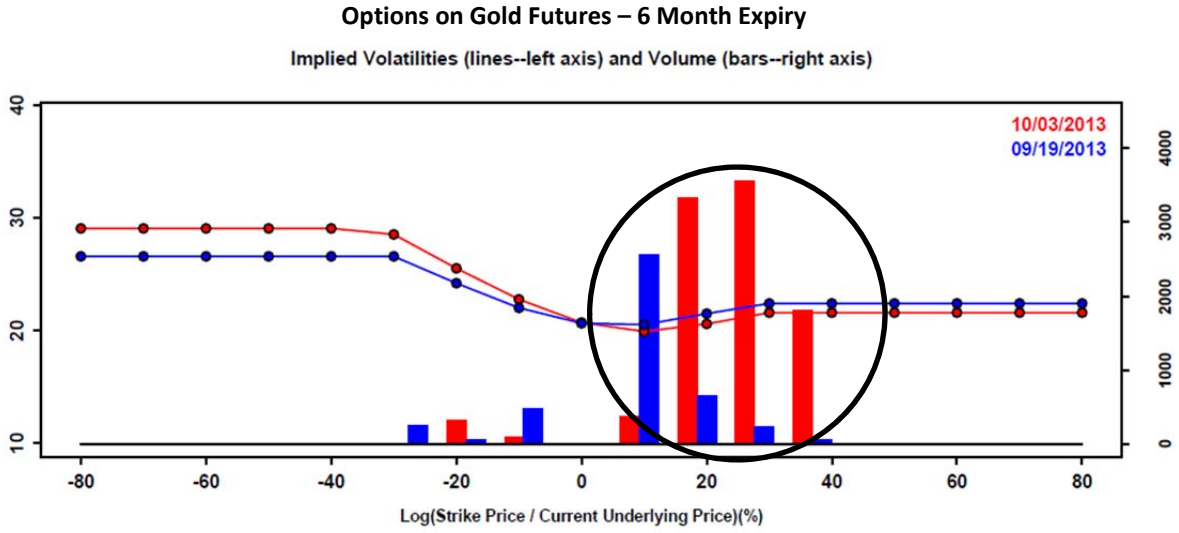
Other Commodity Markets

Trading in options on the S&P 500 index was surprisingly light given the ongoing budget and debt ceiling negotiations: volumes ranked 19th lowest of the past 20 weeks. RNPD standard deviations across the various markets we follow showed little change relative to two weeks ago. Spot commodity prices have generally fallen over the past two weeks and the dollar has weakened.

Additional notes:

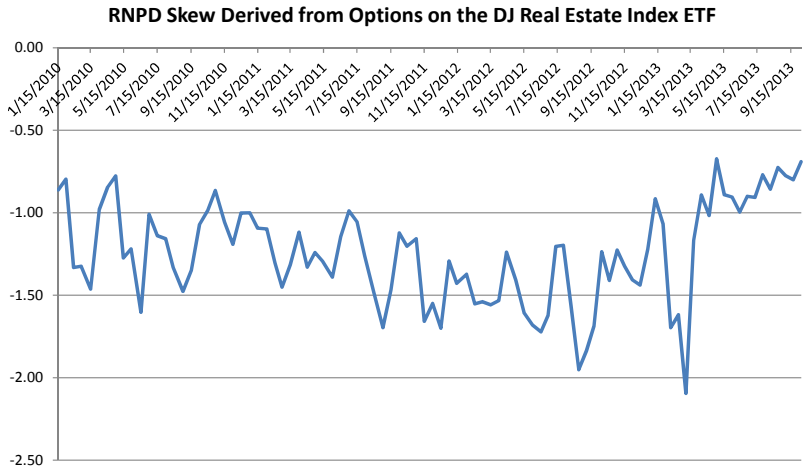
- Trading in options on WTI and Brent crude futures dropped sharply. Spot prices for WTI fell another -1.3% and Brent was relatively stable. RNPD standard deviations fell for the second straight report. (*See Oil Reports*).

- The spot price for gold *fell* -3.7% over the past two weeks. Trading in options on gold futures caused the RNPD to skew more toward the downside. Conversely we noted out of the money trading that favored strike prices above the spot price. (*See Gold and Silver Reports*).



- Grain prices were mixed again over the past two weeks but in the same direction as in our last report. Corn futures fell -4.2%, soybeans fell -4.0%, and wheat rose 4.4%. RNPD standard deviations changed slightly for corn and soybeans but rose 90 basis points for wheat. Risk neutral expectations as measured by skew stepped higher for wheat. (*See grain market reports*)

- Options on the DJ Real Estate Index ETF traded actively last week. The ETF price fell back -4.3% and the RNPD standard deviation rose 80 basis points. RNPD skew remains near its highs. (*See Real Estate Report*)

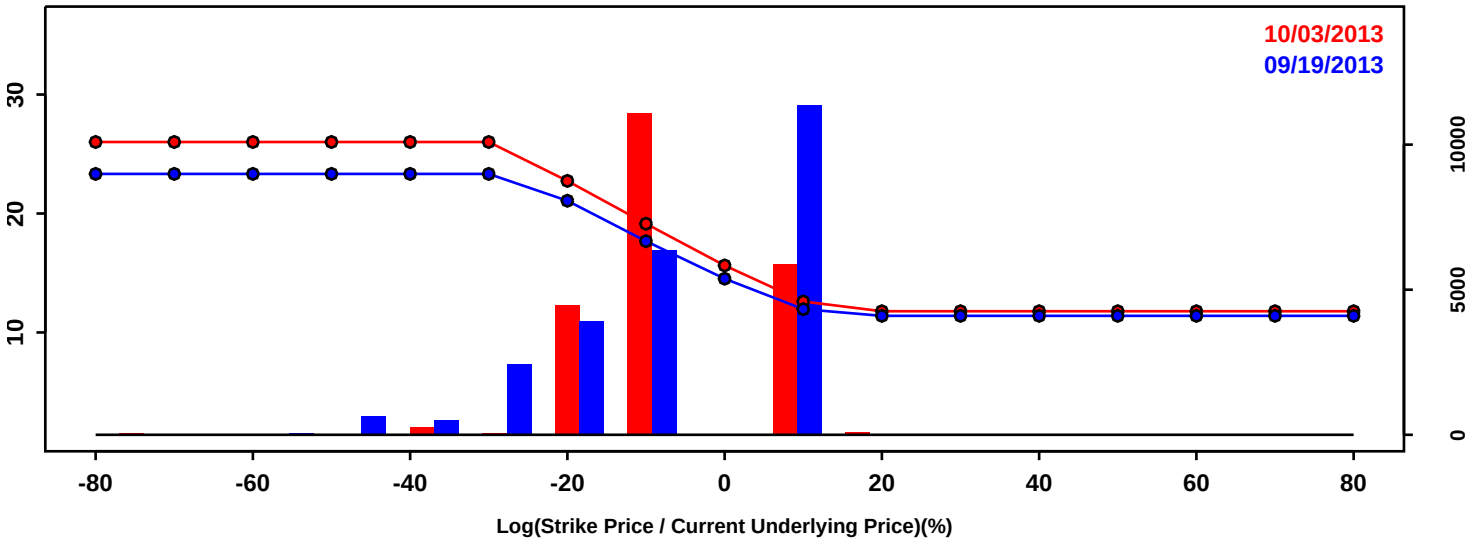


- Trading in options Dollar-Euro futures was strong and about average for the other exchange rates we follow. Though market participants took the dollar lower over the past two weeks, our RNPDs changed only slightly. (*See Exchange Rate Reports*)

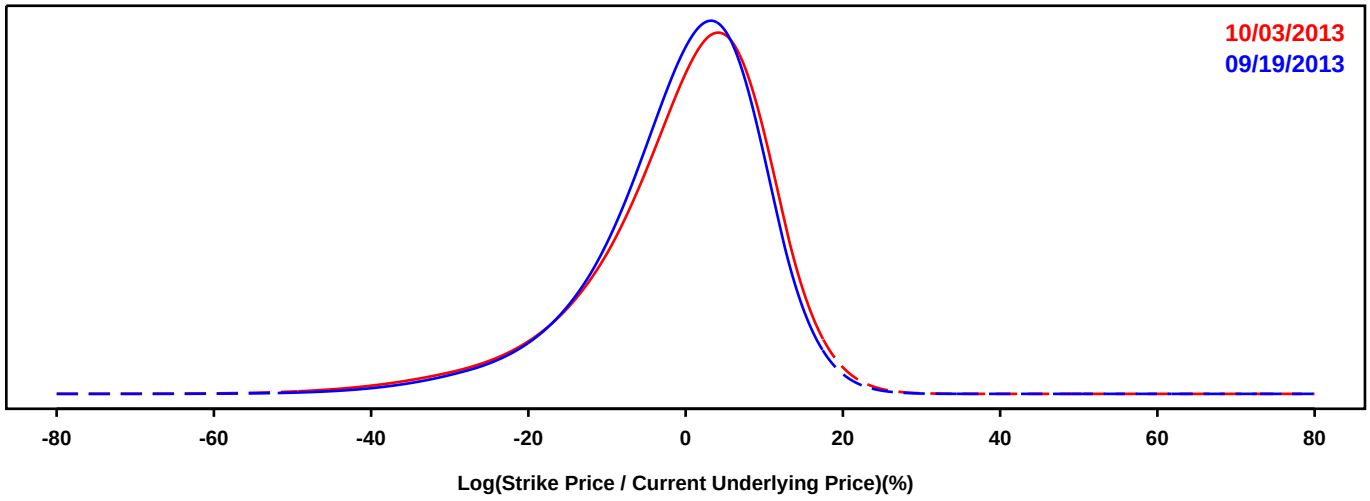
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

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

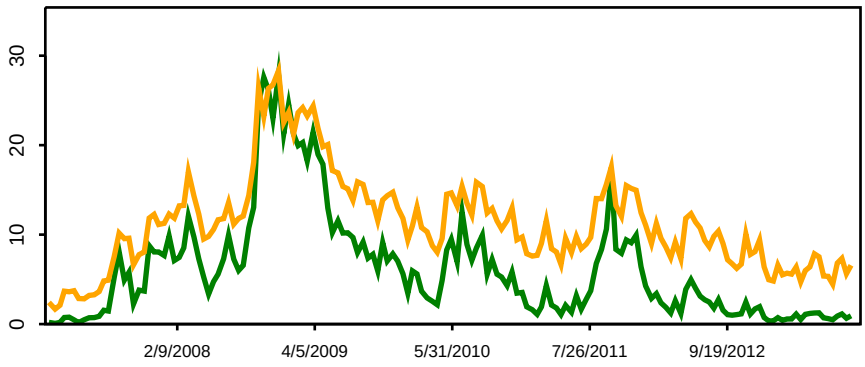
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

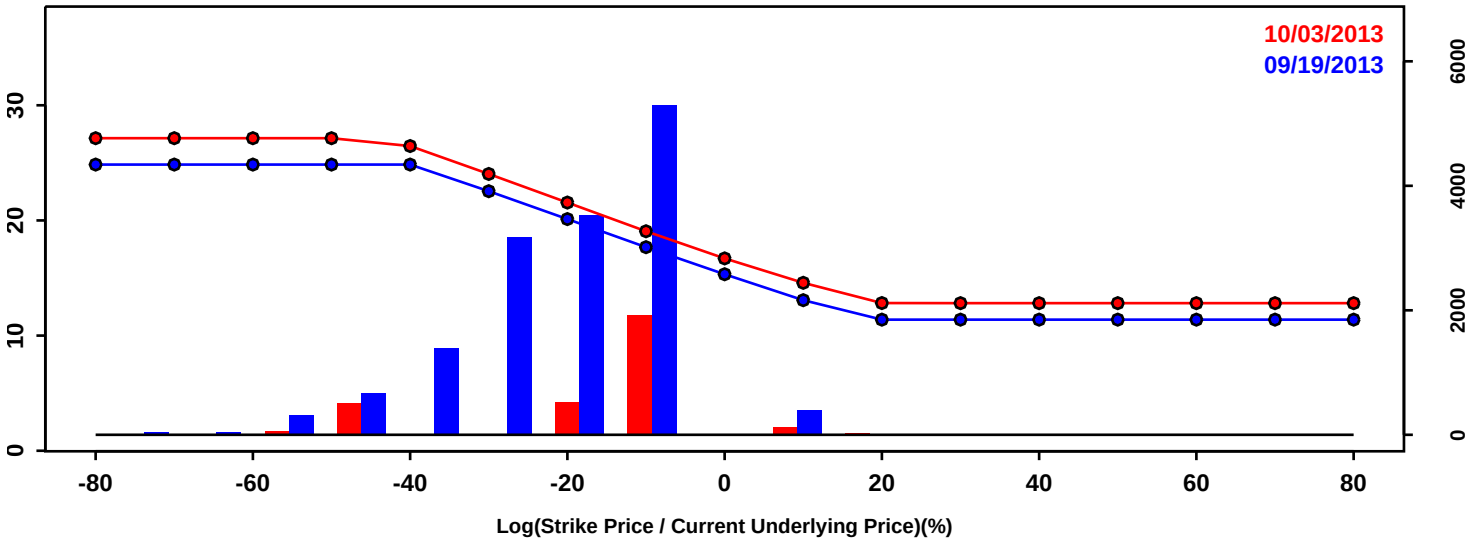
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-14.70%	-15.68%	-0.97%
50th Pct	0.80%	1.38%	0.58%
90th Pct	10.99%	11.85%	0.86%
Mean	-0.76%	-0.56%	0.20%
Std Dev	10.73%	11.59%	0.86%
Skew	-0.97	-1.10	-0.13
Kurtosis	1.69	2.02	0.33

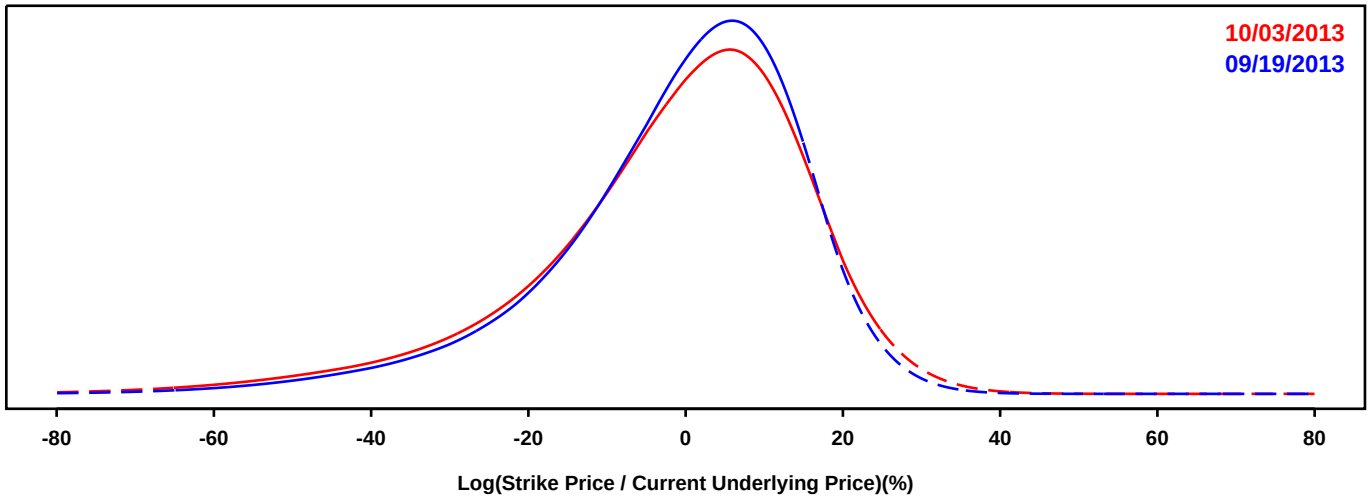
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

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%

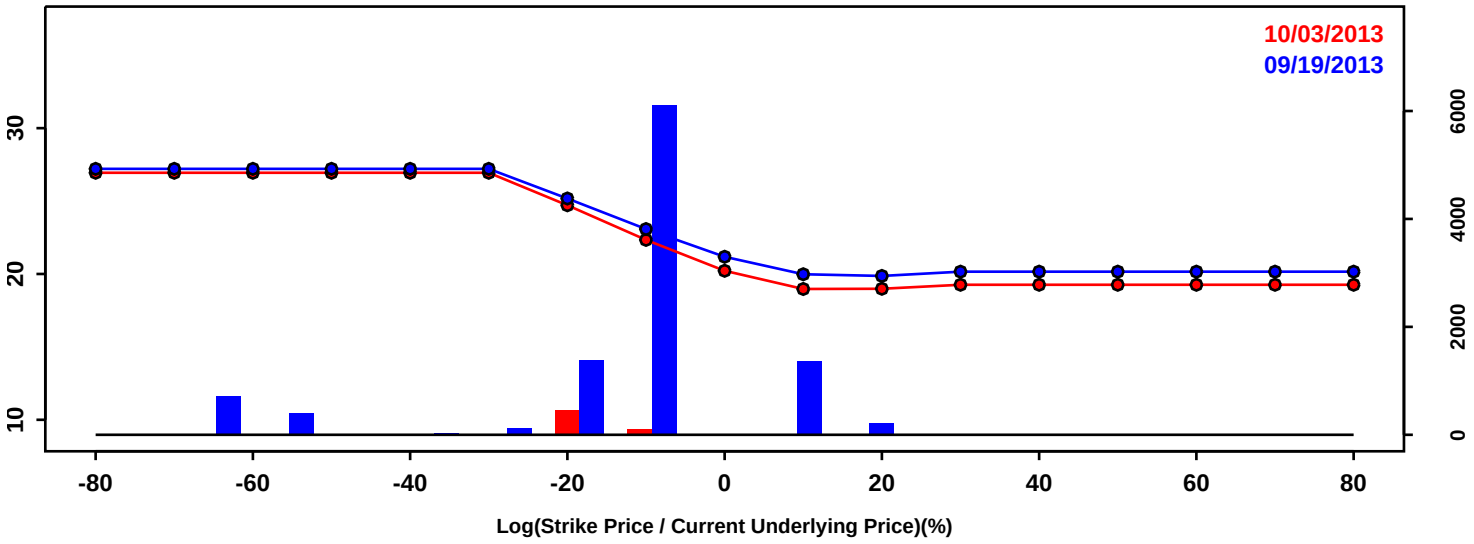
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-22.12%	-25.09%	-2.97%
50th Pct	1.59%	1.04%	-0.54%
90th Pct	16.34%	17.27%	0.93%
Mean	-1.04%	-1.85%	-0.81%
Std Dev	16.07%	17.74%	1.67%
Skew	-1.05	-1.05	0.00
Kurtosis	1.79	1.81	0.02

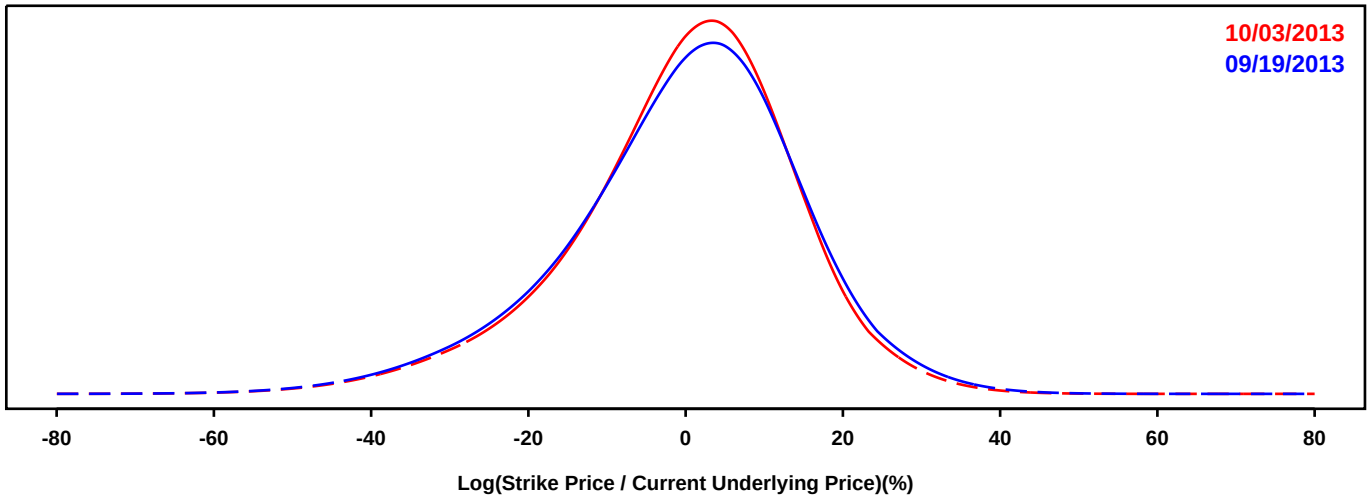
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES (WTI)

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

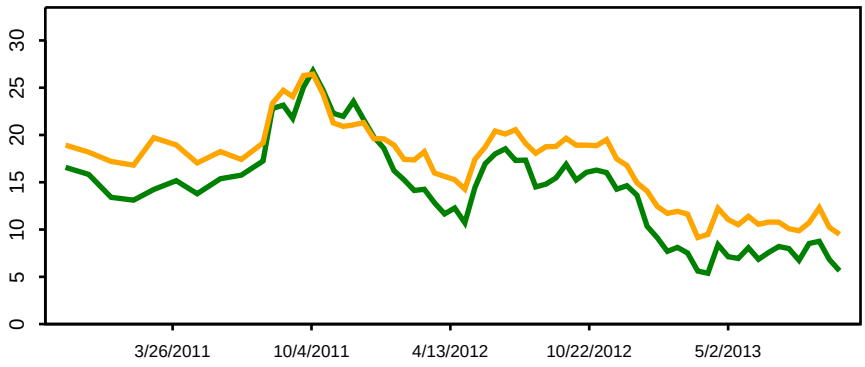
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

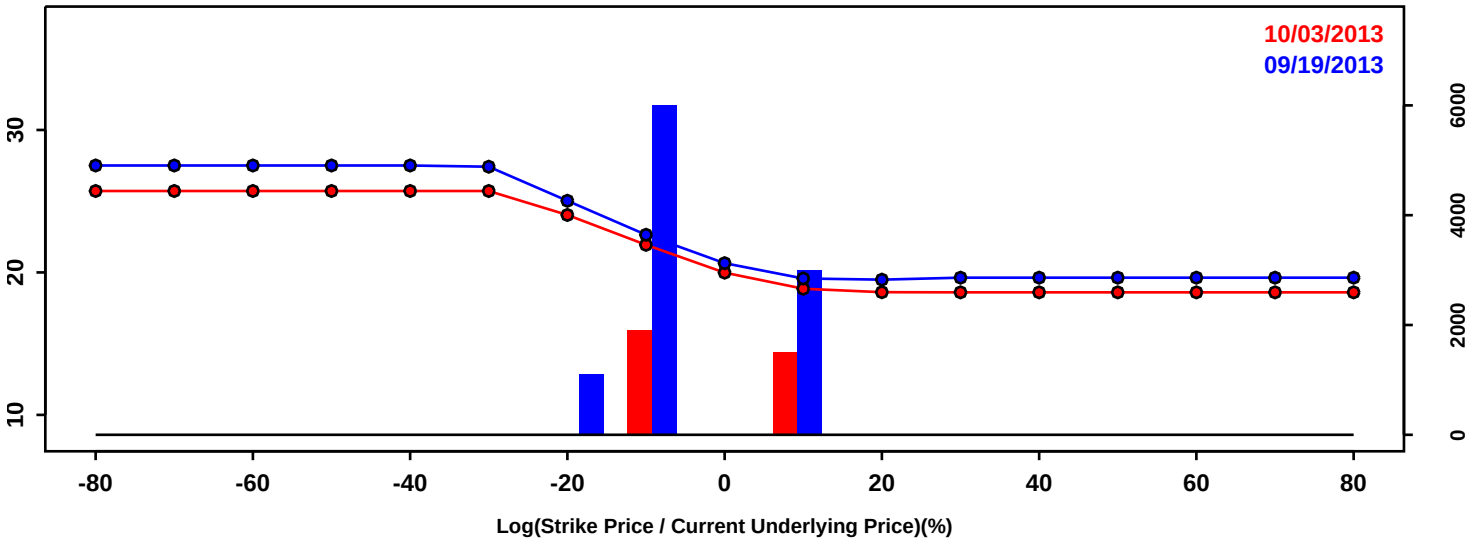
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-20.22%	-19.41%	0.81%
50th Pct	1.09%	1.03%	-0.07%
90th Pct	17.28%	16.25%	-1.03%
Mean	-0.31%	-0.40%	-0.09%
Std Dev	15.13%	14.48%	-0.65%
Skew	-0.50	-0.57	-0.07
Kurtosis	0.70	0.87	0.17

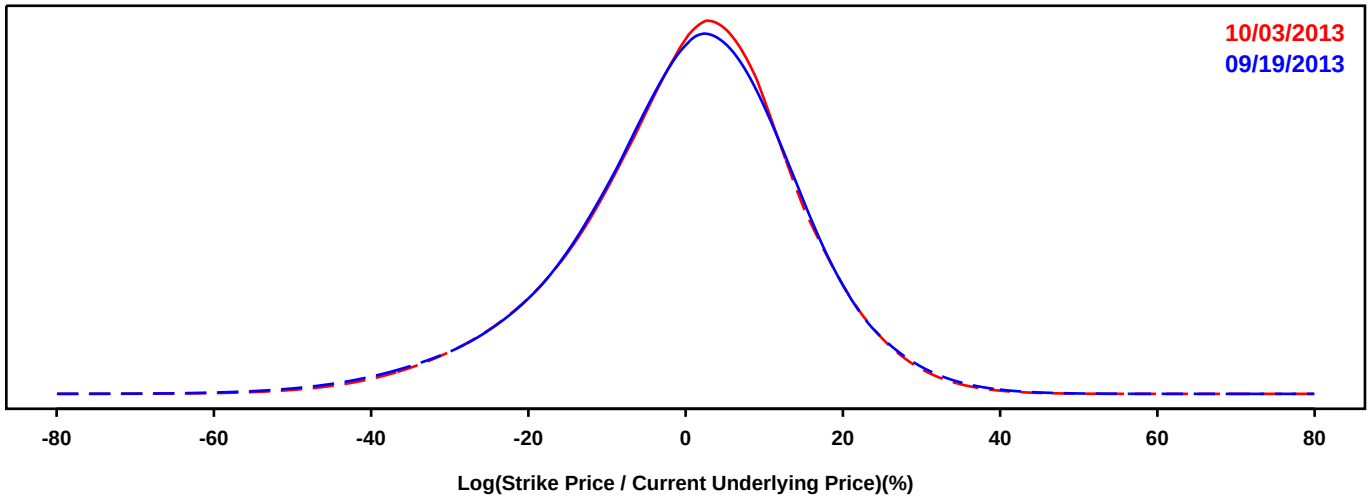
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES (Brent)

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

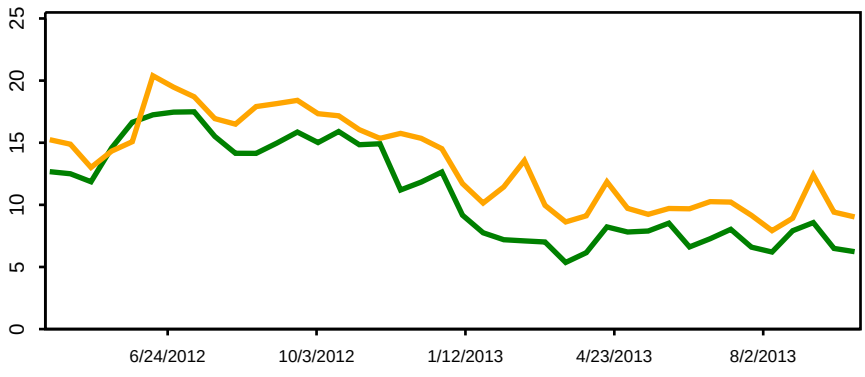
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

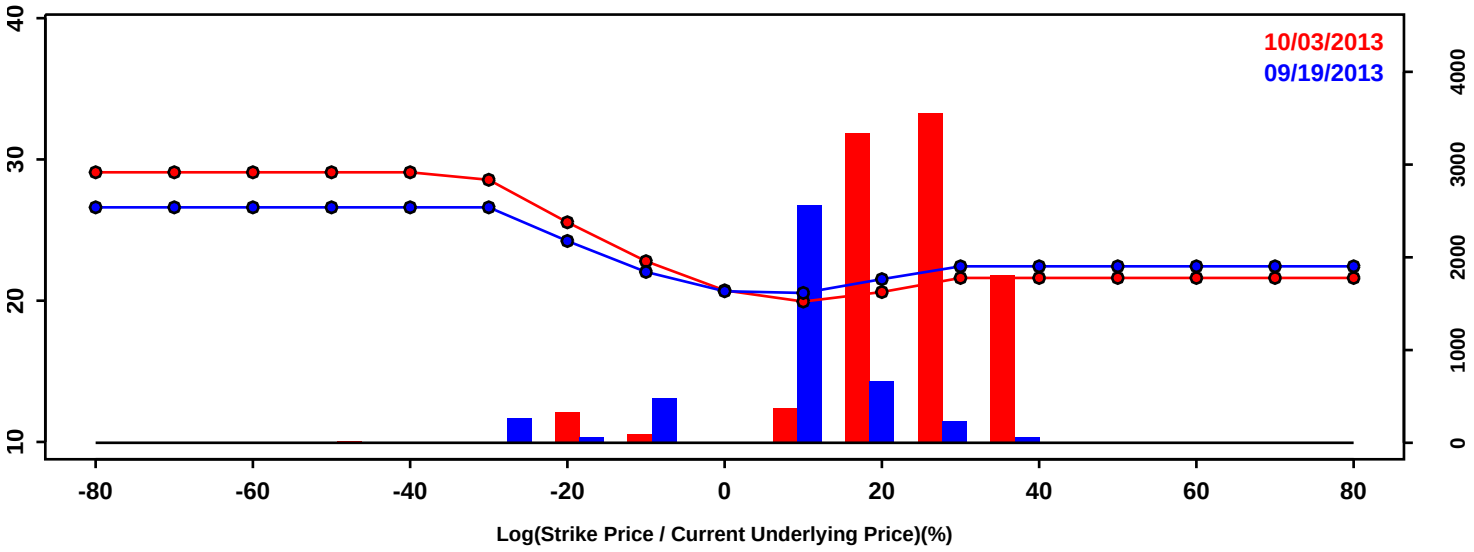
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-19.36%	-18.89%	0.47%
50th Pct	1.01%	1.22%	0.21%
90th Pct	16.96%	16.77%	-0.19%
Mean	-0.21%	-0.06%	0.14%
Std Dev	14.73%	14.30%	-0.43%
Skew	-0.52	-0.49	0.03
Kurtosis	0.85	0.70	-0.16

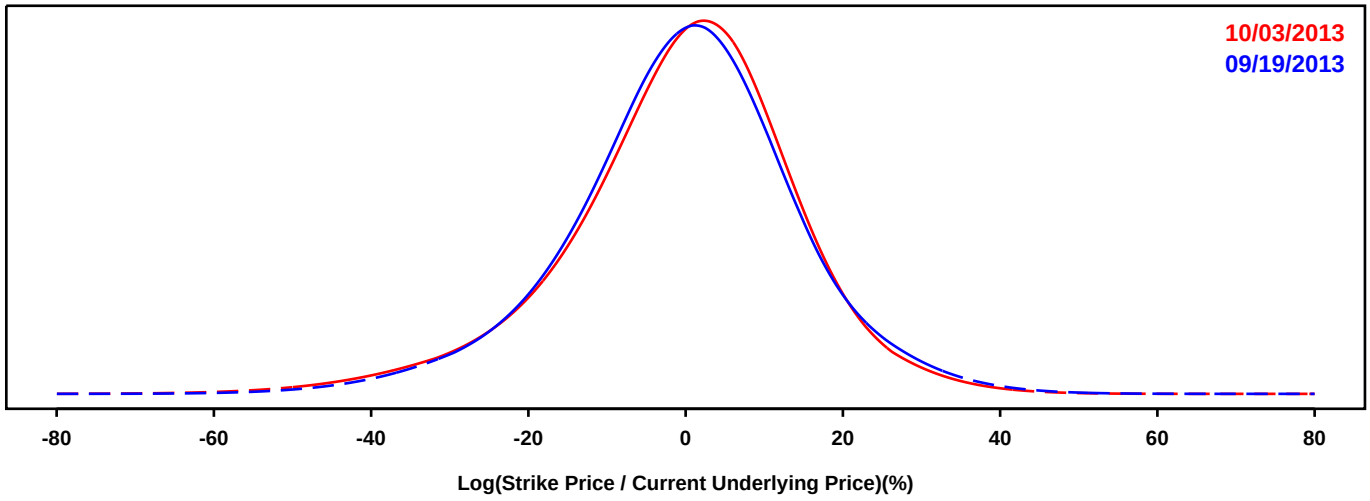
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- GOLD FUTURES

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

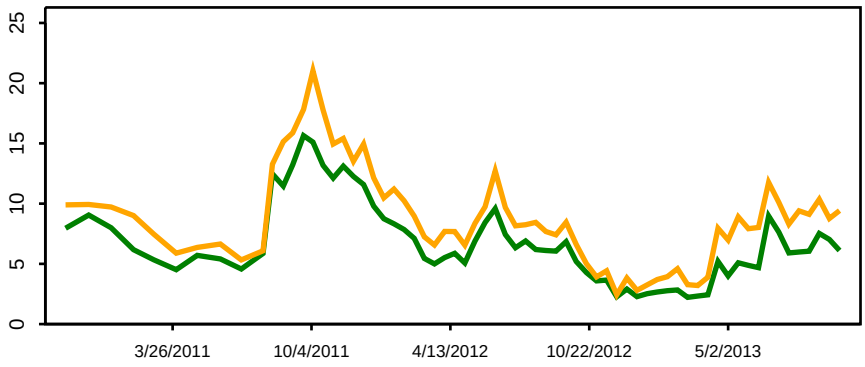
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

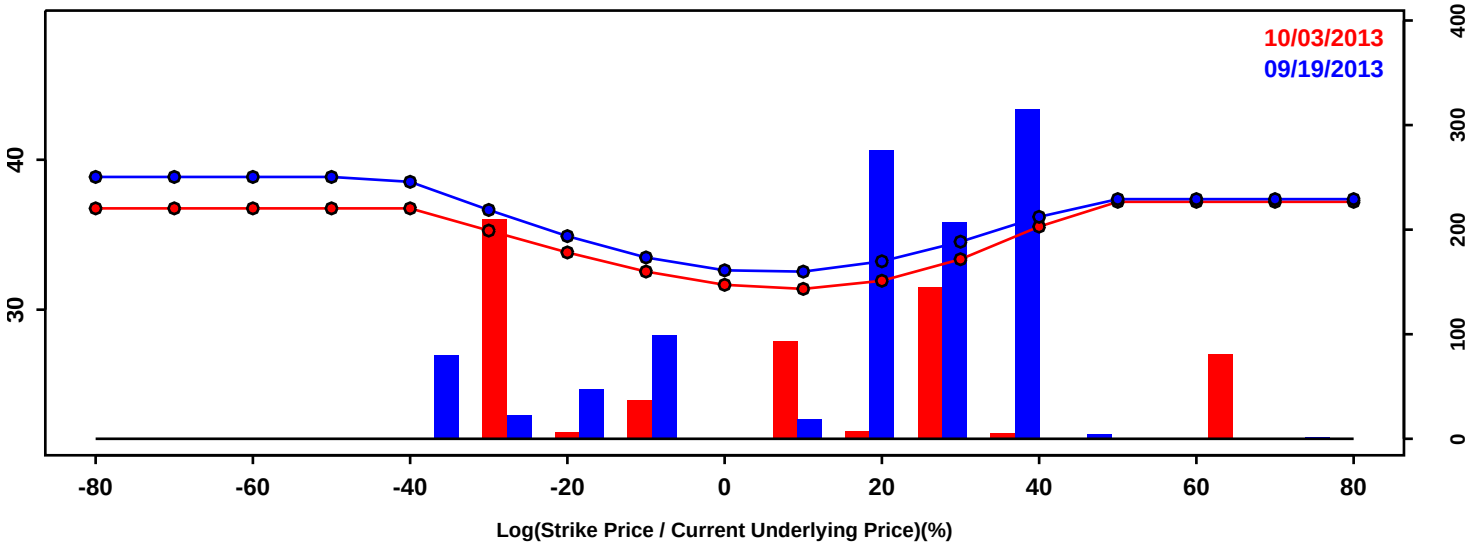
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-18.62%	-19.34%	-0.72%
50th Pct	0.27%	0.64%	0.37%
90th Pct	17.05%	16.41%	-0.64%
Mean	-0.32%	-0.56%	-0.24%
Std Dev	14.62%	14.80%	0.18%
Skew	-0.27	-0.53	-0.26
Kurtosis	0.86	1.17	0.31

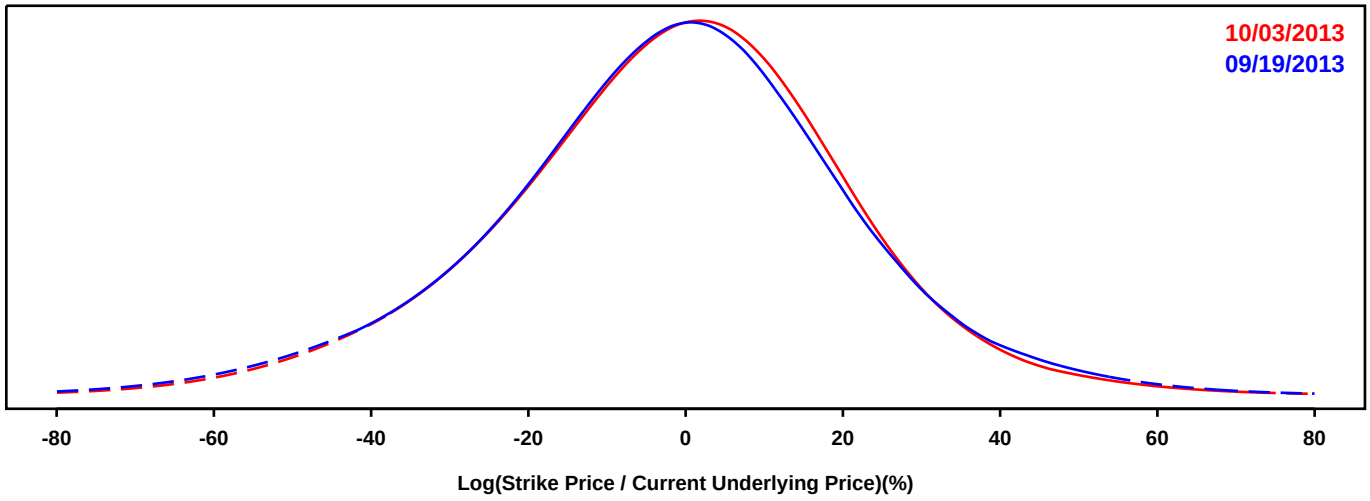
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SILVER FUTURES

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

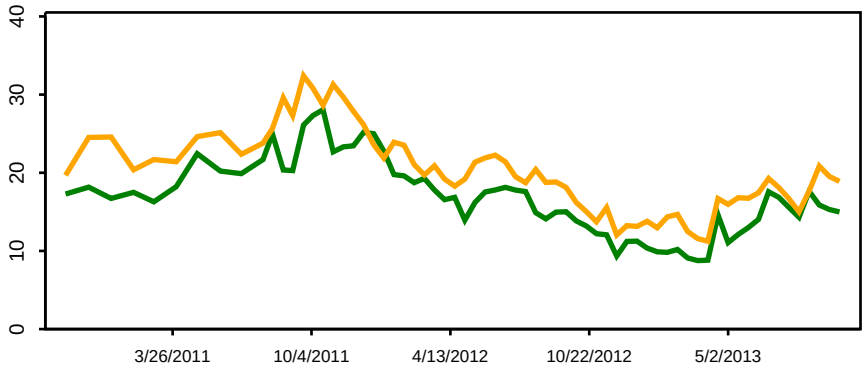
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

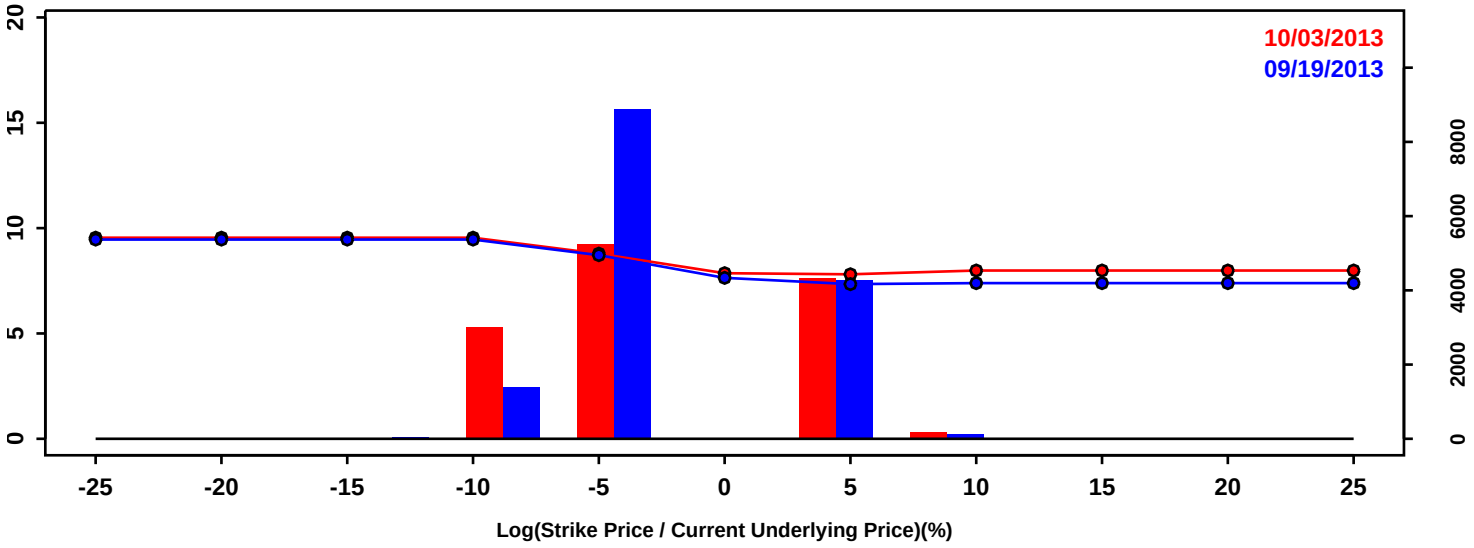
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-31.23%	-30.27%	0.96%
50th Pct	-0.96%	-0.50%	0.46%
90th Pct	25.81%	25.01%	-0.80%
Mean	-1.85%	-1.53%	0.31%
Std Dev	23.13%	22.33%	-0.80%
Skew	-0.18	-0.19	-0.01
Kurtosis	0.68	0.59	-0.09

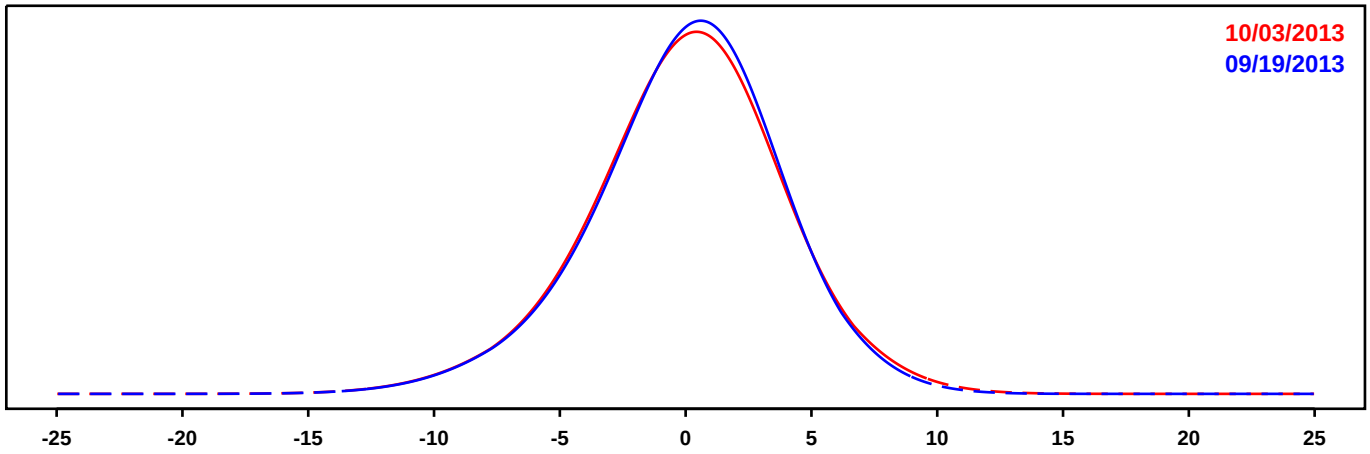
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-EURO EXCHANGE RATE FUTURES

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

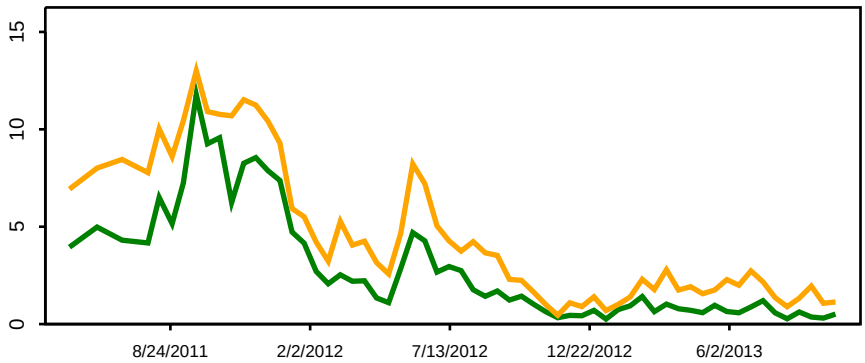
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



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

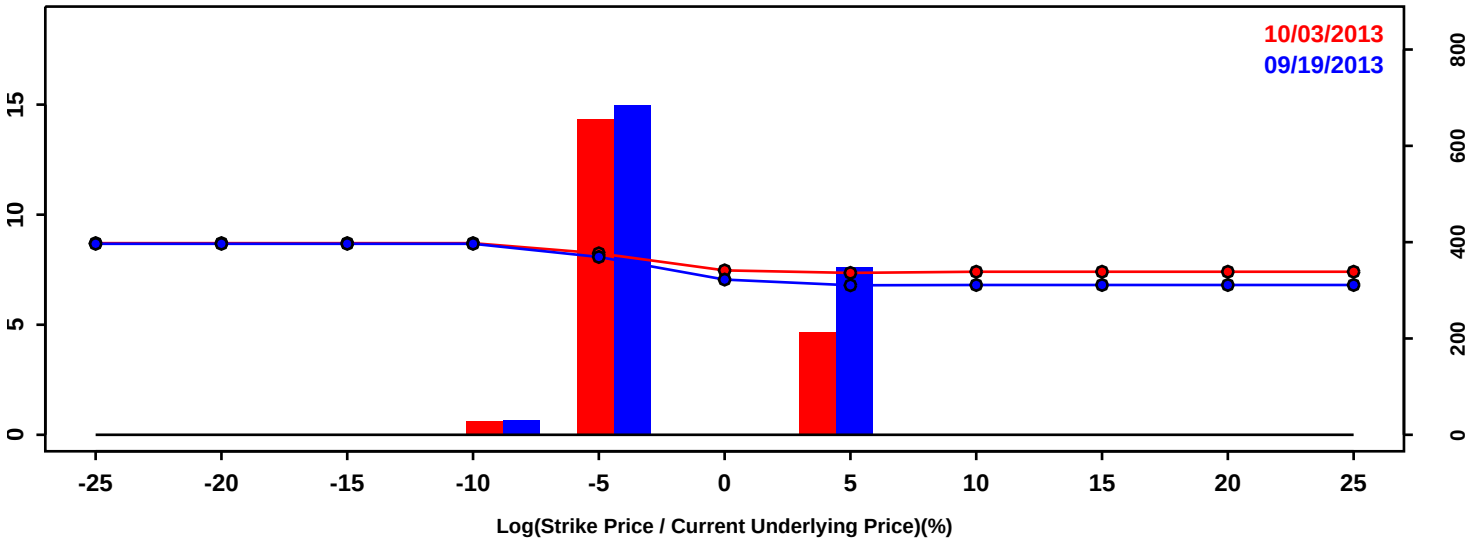
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-4.90%	-4.97%	-0.07%
50th Pct	0.24%	0.16%	-0.08%
90th Pct	4.64%	4.82%	0.18%
Mean	0.06%	0.06%	0.01%
Std Dev	3.82%	3.92%	0.10%
Skew	-0.33	-0.24	0.10
Kurtosis	0.52	0.50	-0.02

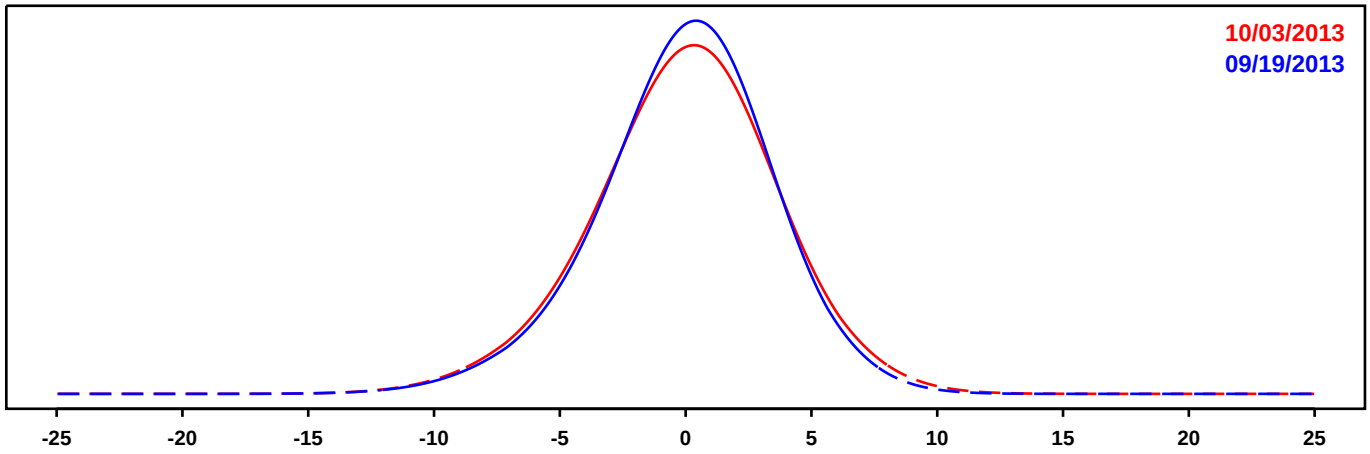
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-POUND EXCHANGE RATE FUTURES

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

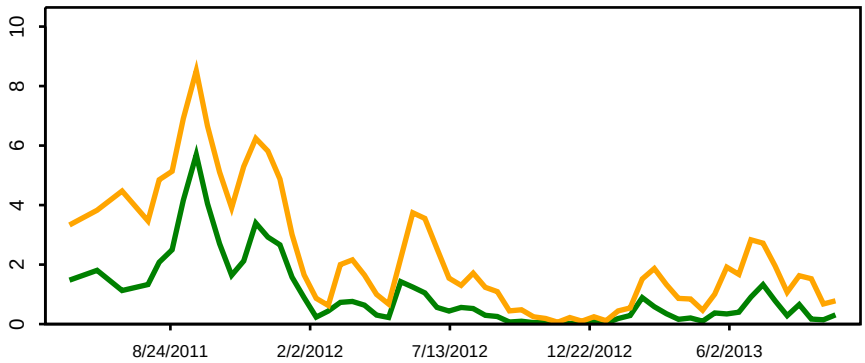
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



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

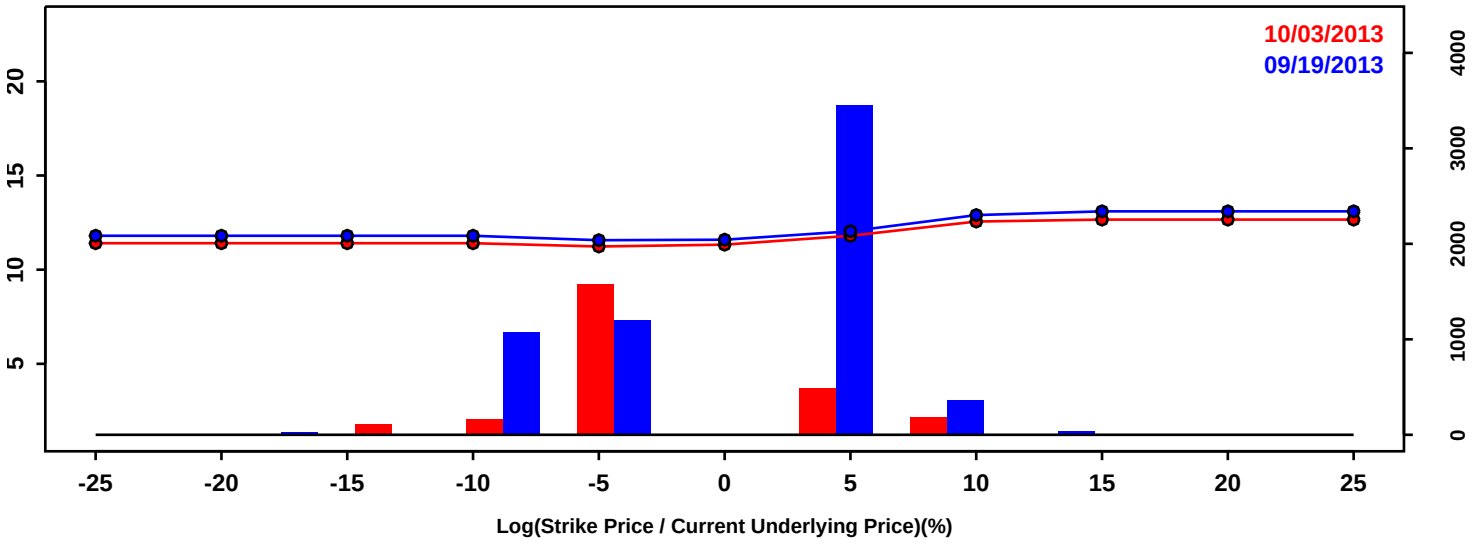
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-4.54%	-4.80%	-0.26%
50th Pct	0.15%	0.11%	-0.04%
90th Pct	4.27%	4.57%	0.30%
Mean	-0.01%	0.02%	0.02%
Std Dev	3.53%	3.73%	0.20%
Skew	-0.30	-0.21	0.10
Kurtosis	0.48	0.35	-0.12

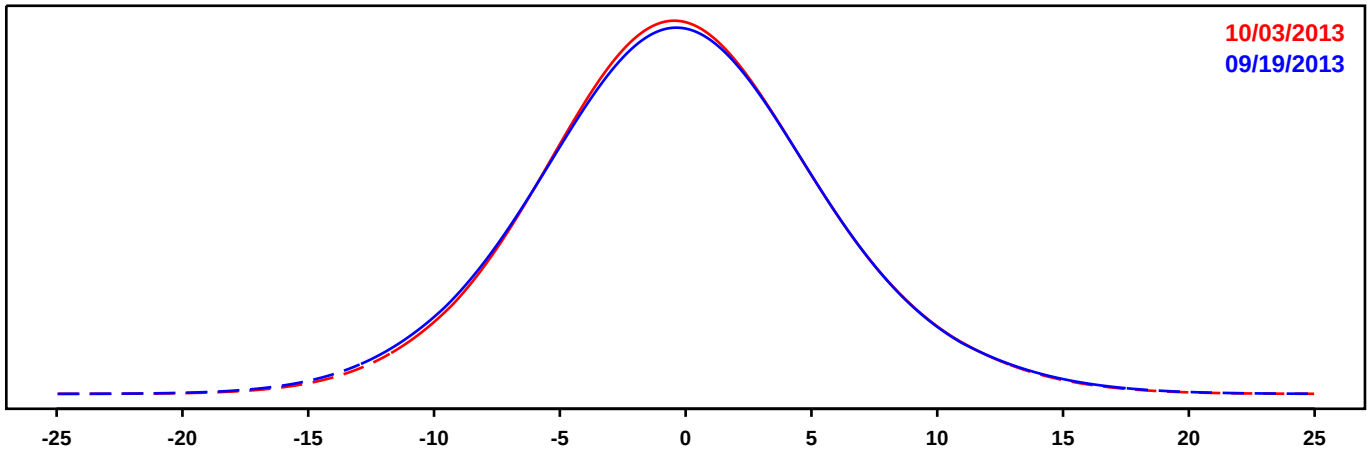
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- DOLLAR-YEN EXCHANGE RATE FUTURES

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

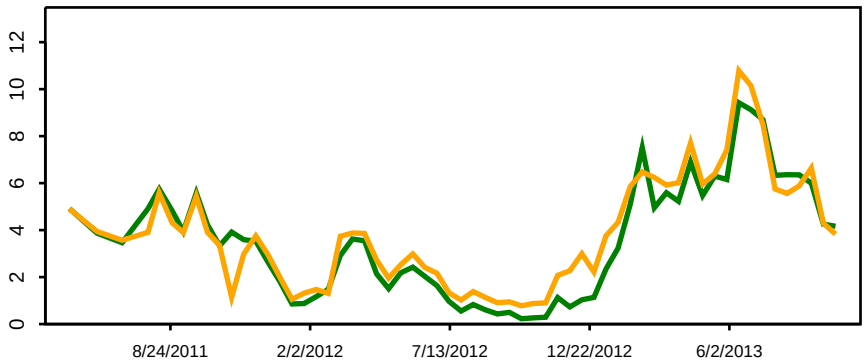
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



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

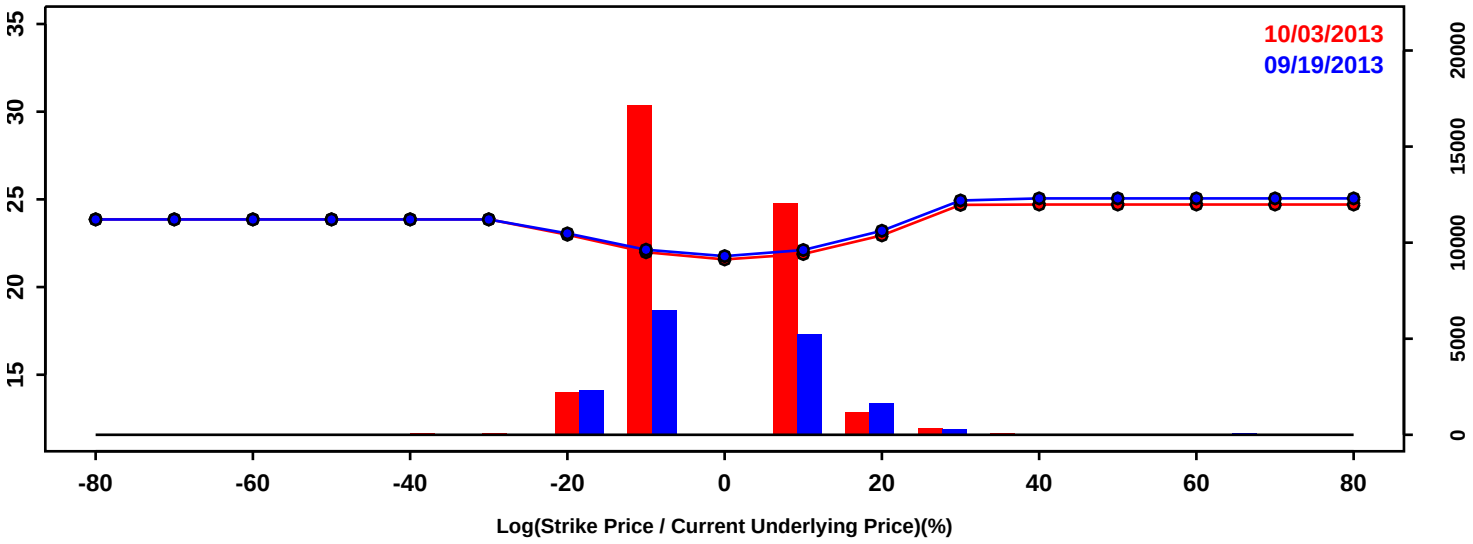
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-7.46%	-7.16%	0.30%
50th Pct	-0.29%	-0.27%	0.02%
90th Pct	7.11%	7.11%	-0.00%
Mean	-0.17%	-0.10%	0.07%
Std Dev	5.78%	5.65%	-0.13%
Skew	0.10	0.13	0.02
Kurtosis	0.30	0.26	-0.03

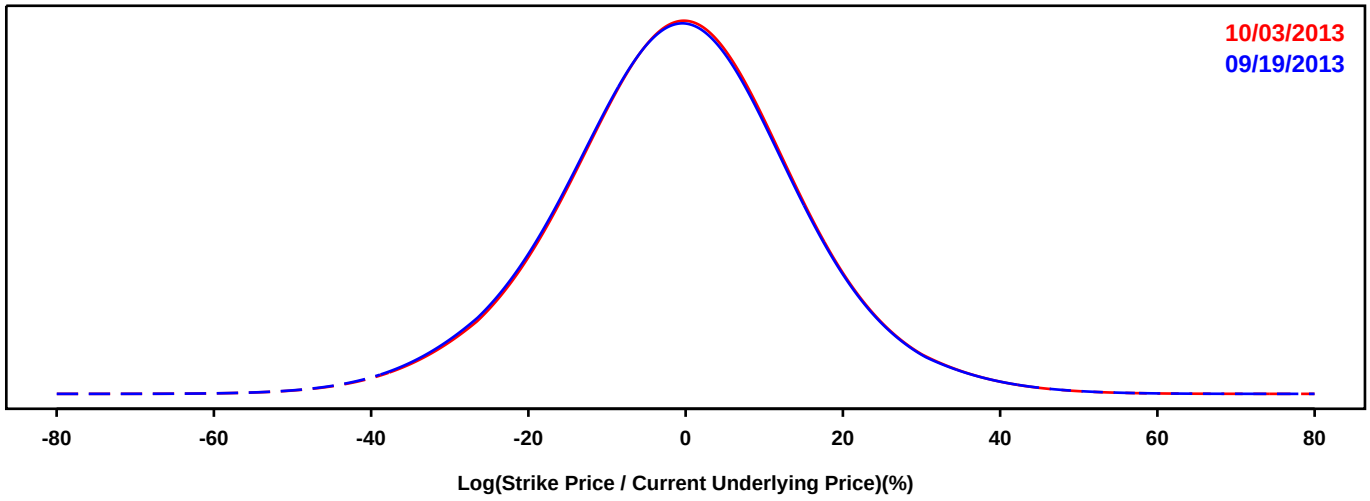
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CORN FUTURES

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

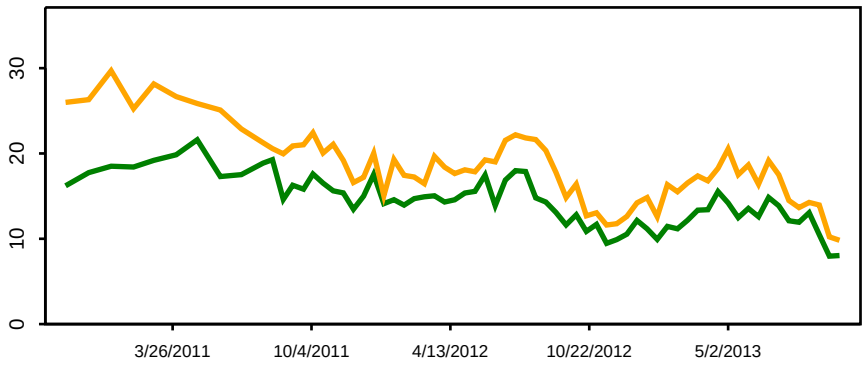
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

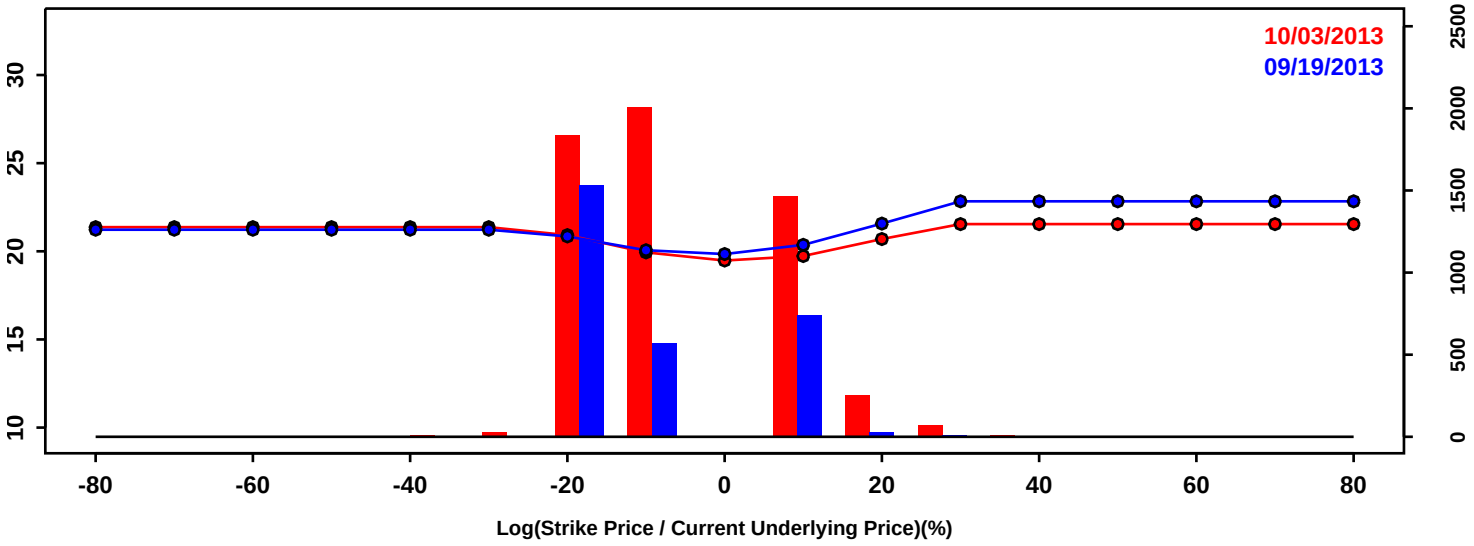
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-20.22%	-19.81%	0.41%
50th Pct	-0.78%	-0.56%	0.22%
90th Pct	17.96%	18.06%	0.11%
Mean	-0.90%	-0.69%	0.21%
Std Dev	15.31%	15.21%	-0.10%
Skew	-0.02	-0.02	-0.00
Kurtosis	0.46	0.46	0.00

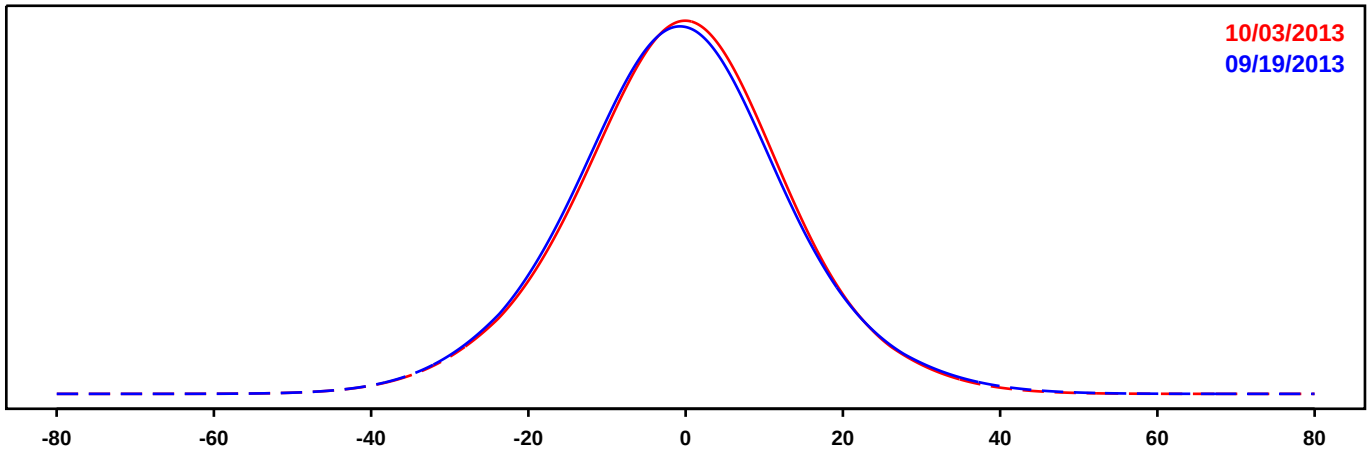
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SOYBEAN FUTURES

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

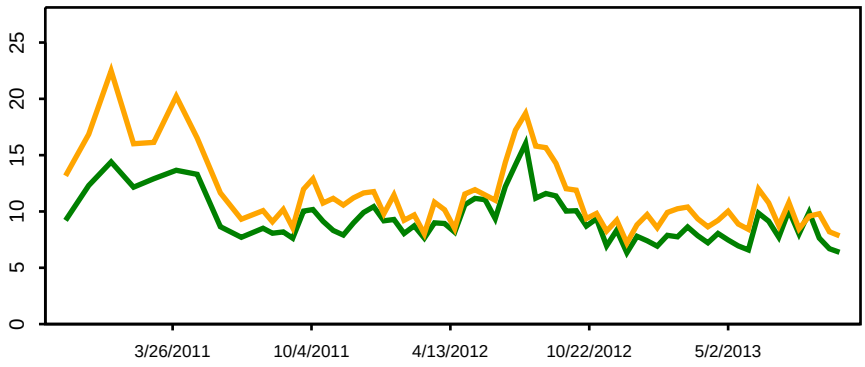
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

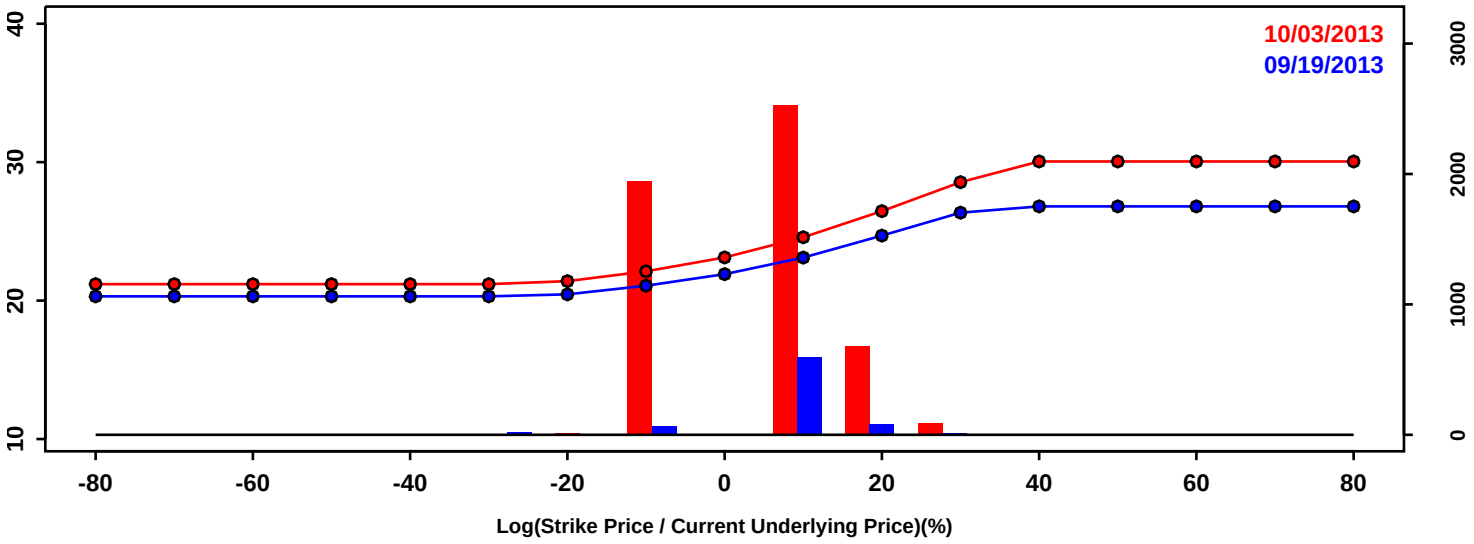
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-18.30%	-17.94%	0.36%
50th Pct	-0.83%	-0.41%	0.42%
90th Pct	16.63%	16.48%	-0.15%
Mean	-0.77%	-0.54%	0.22%
Std Dev	13.99%	13.74%	-0.25%
Skew	0.04	-0.04	-0.08
Kurtosis	0.43	0.39	-0.03

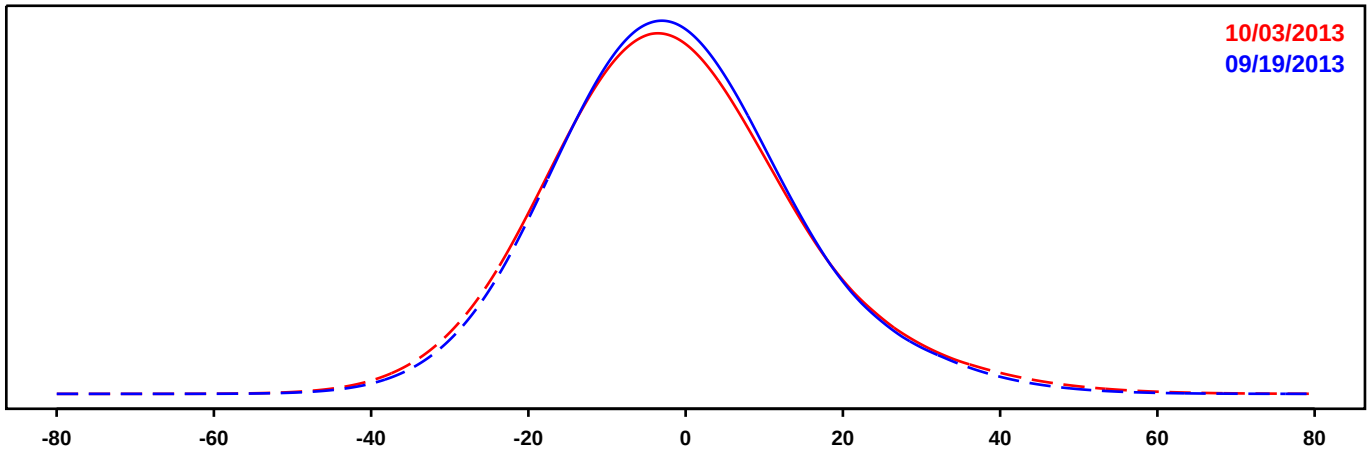
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- WHEAT FUTURES

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

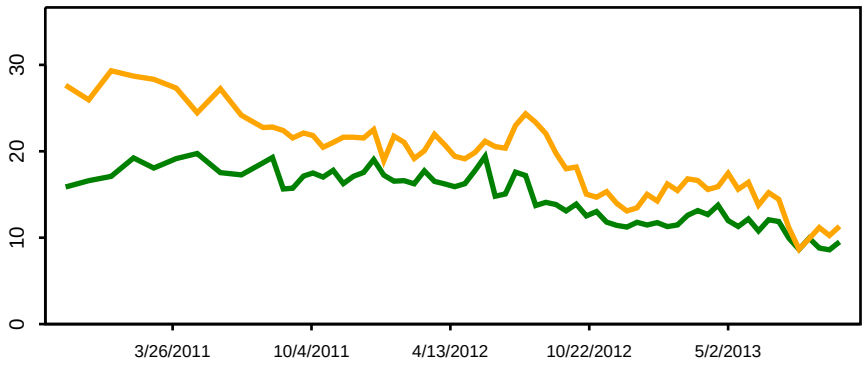
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

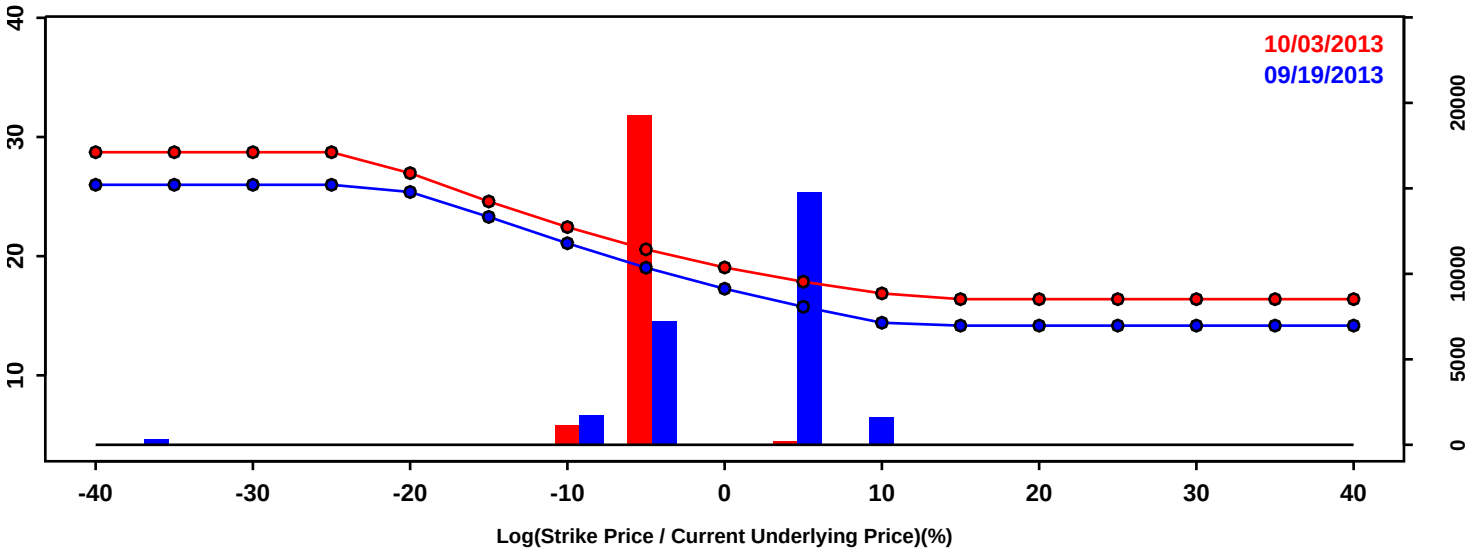
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-20.16%	-21.03%	-0.87%
50th Pct	-2.06%	-2.27%	-0.21%
90th Pct	18.41%	19.45%	1.04%
Mean	-1.29%	-1.30%	-0.02%
Std Dev	15.41%	16.27%	0.86%
Skew	0.32	0.40	0.08
Kurtosis	0.43	0.60	0.17

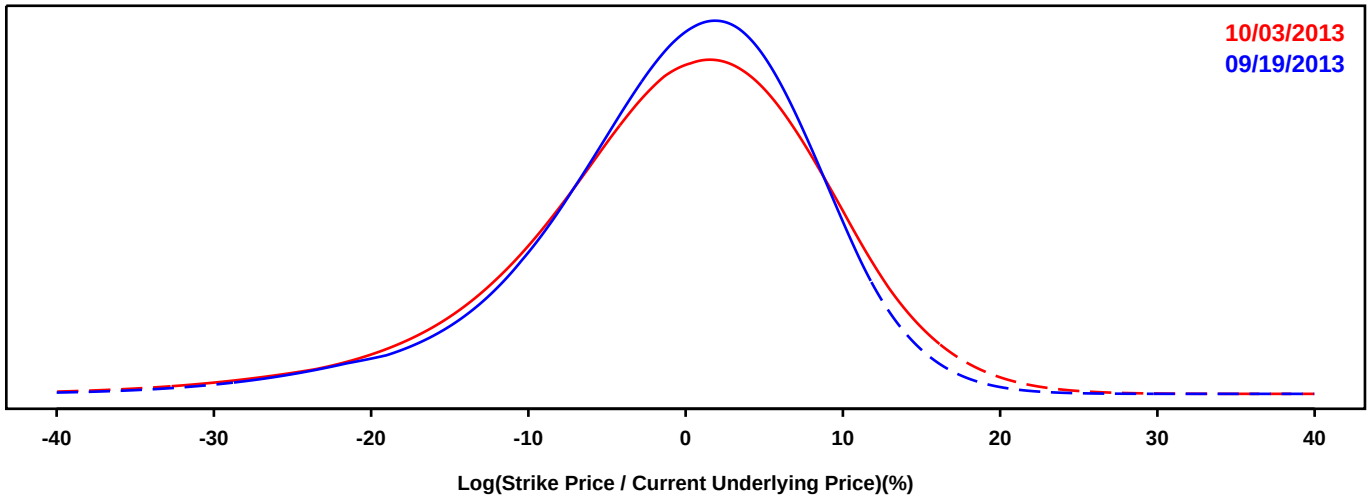
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- iSHARES DOW JONES US REAL ESTATE

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

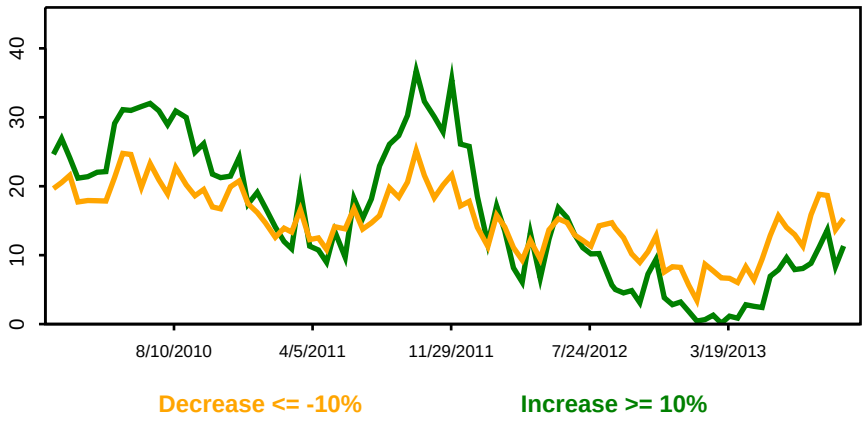
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change

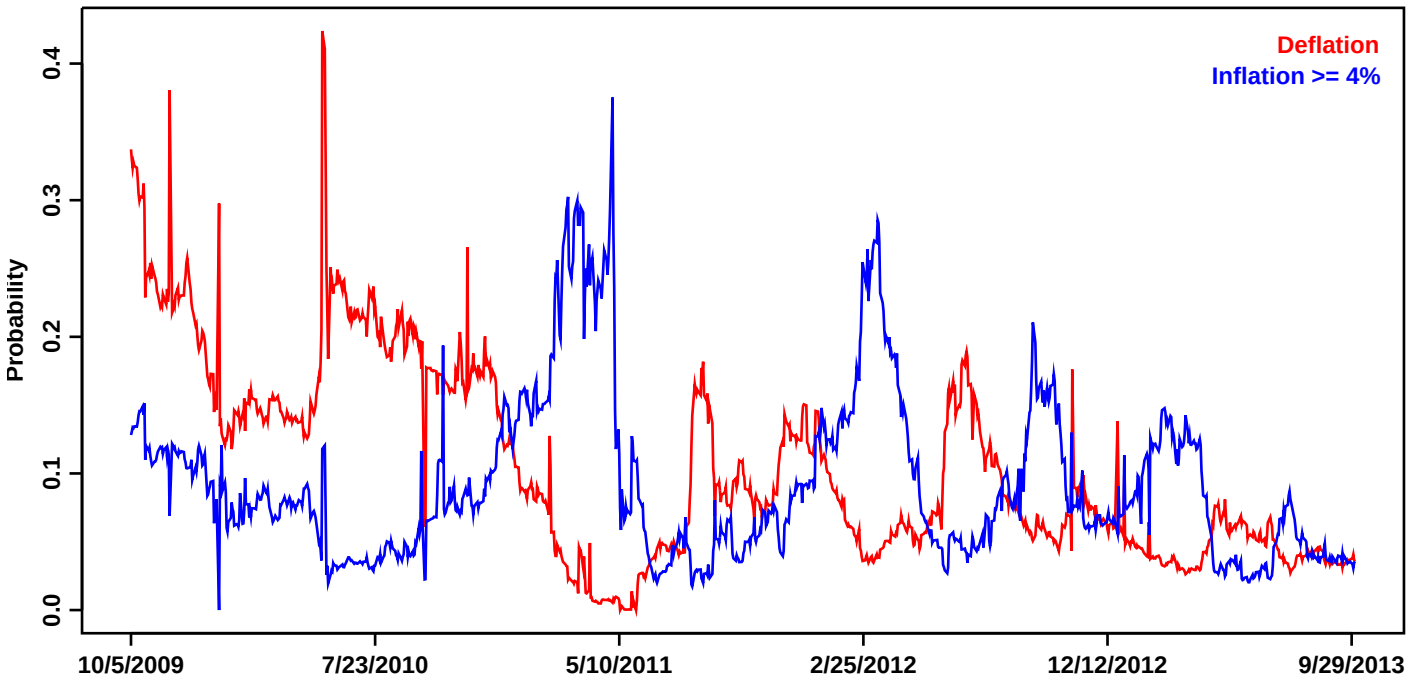


Statistics of the Log Return Distributions

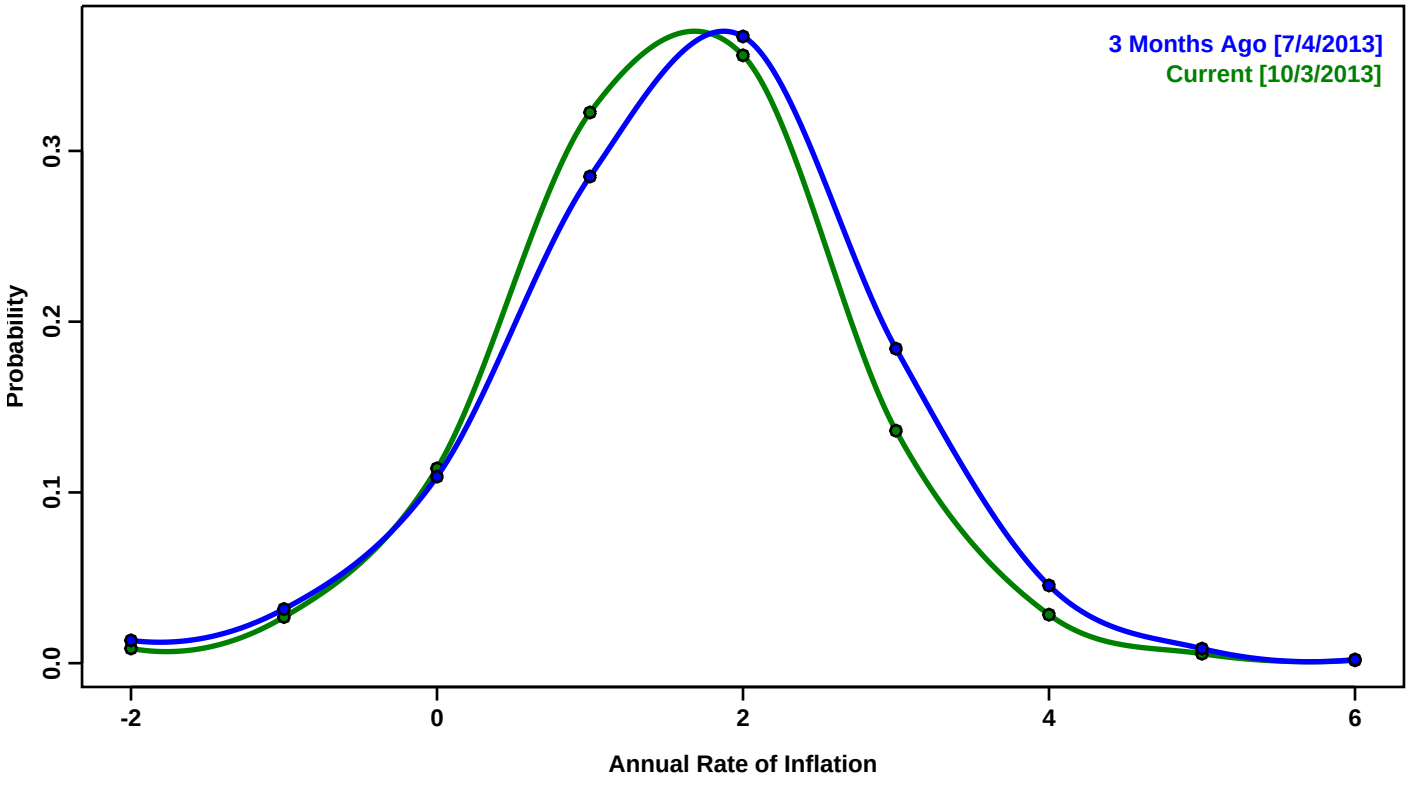
	09/19/2013	10/03/2013	Change
10th Pct	-12.23%	-13.17%	-0.94%
50th Pct	0.22%	0.15%	-0.08%
90th Pct	9.37%	10.57%	1.20%
Mean	-0.79%	-0.74%	0.05%
Std Dev	8.91%	9.75%	0.84%
Skew	-0.80	-0.69	0.11
Kurtosis	1.30	1.18	-0.12

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- Inflation Caps & Floors

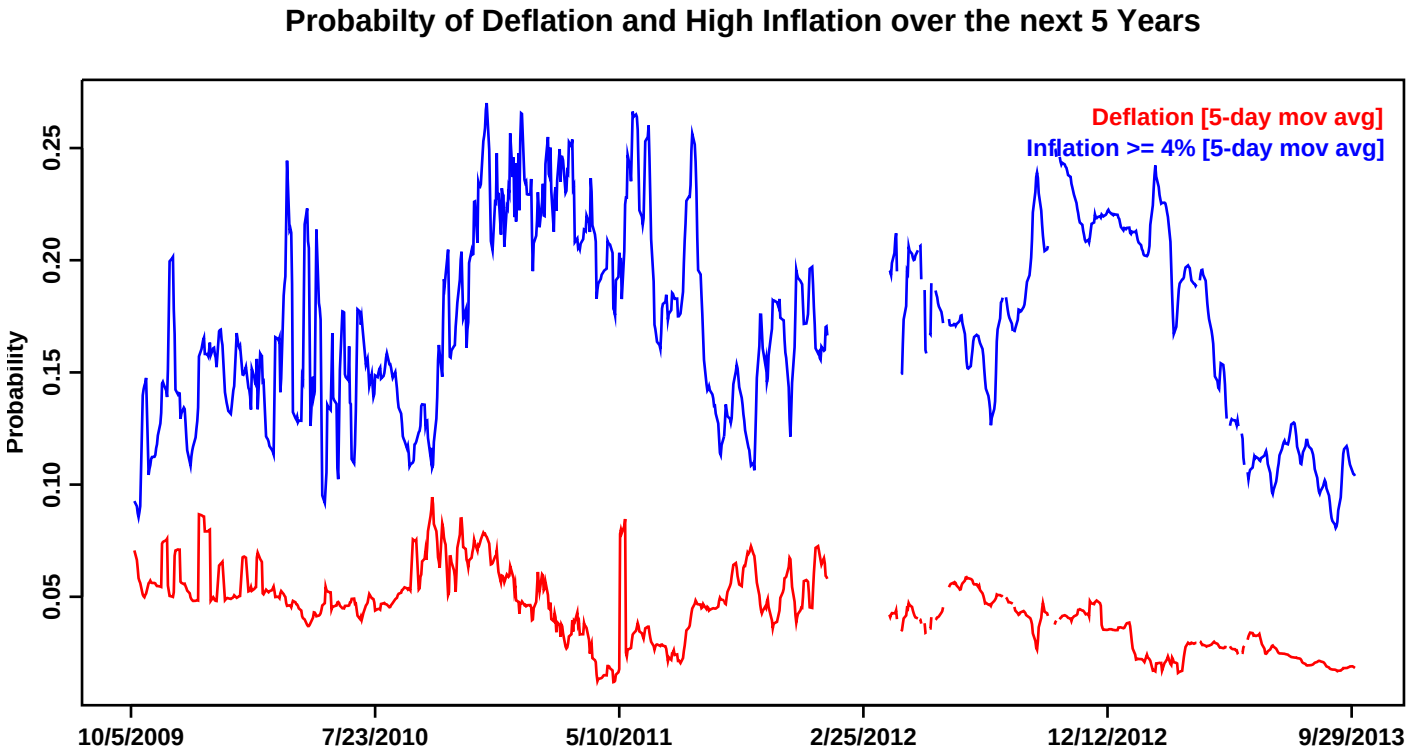
Probabilty of Deflation and High Inflation over the next 12 Months



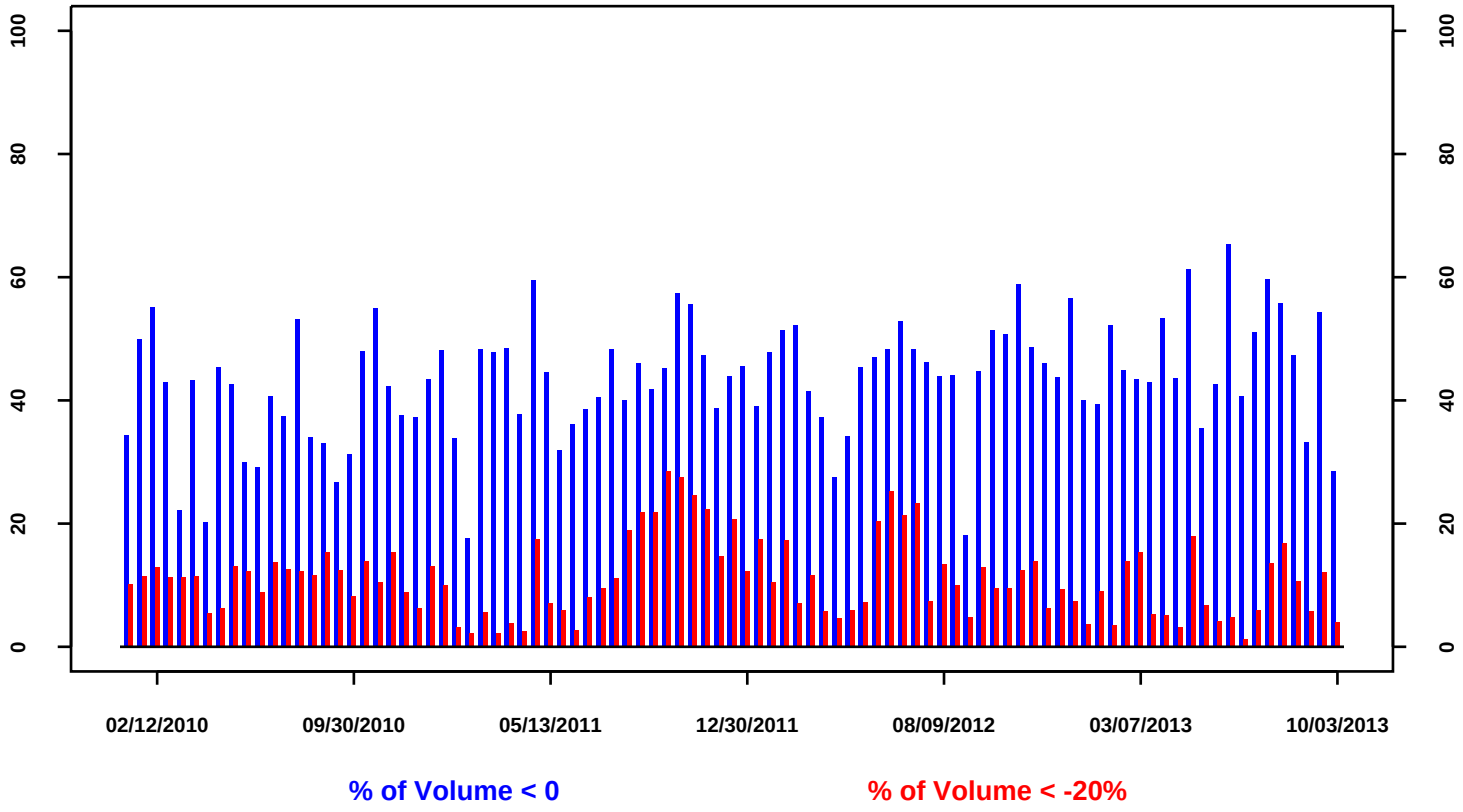
Risk Neutral Density Function for Inflation over the next 12 Months



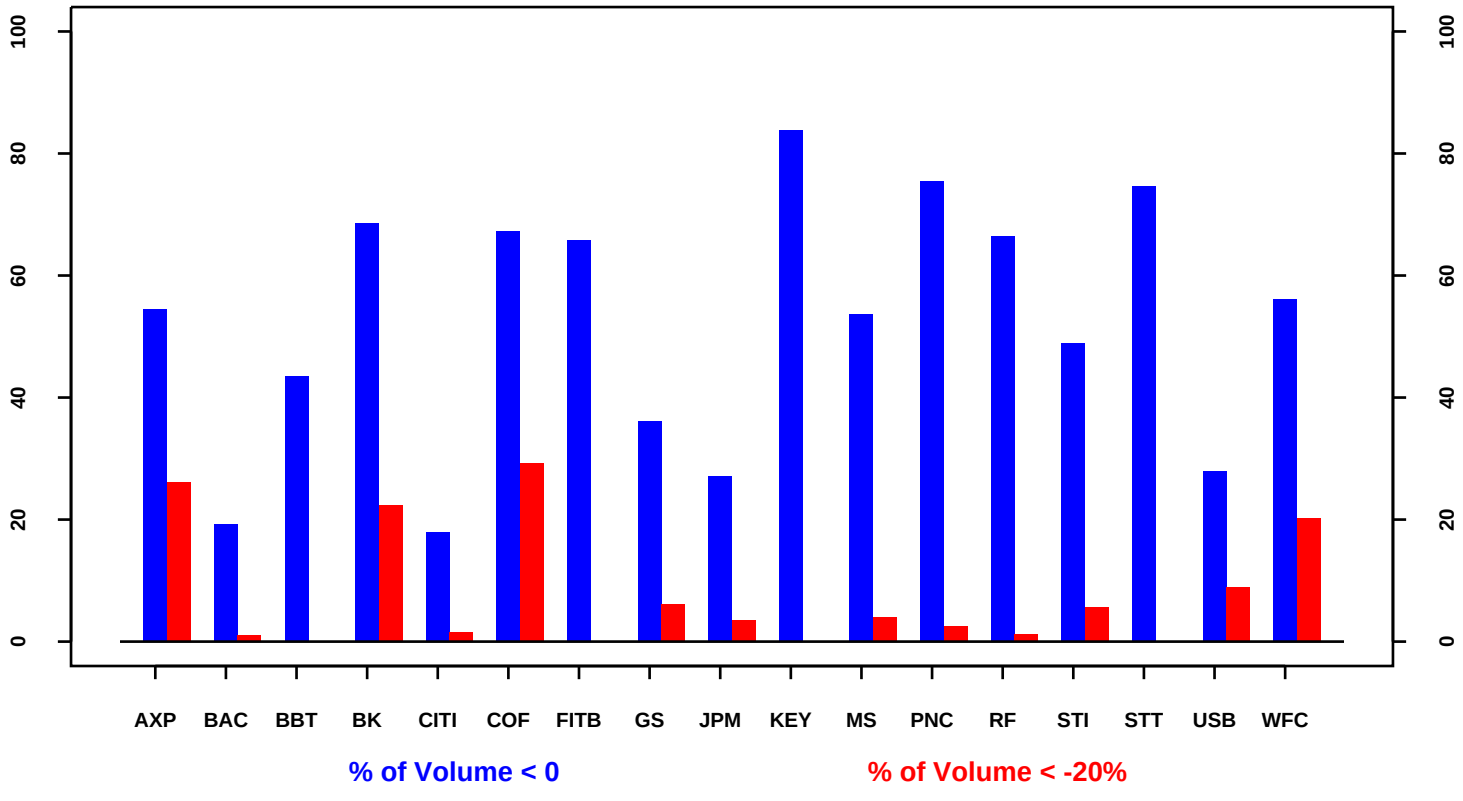
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- Inflation Caps & Floors



Aggregate Volumes for Options on CCAR Banks

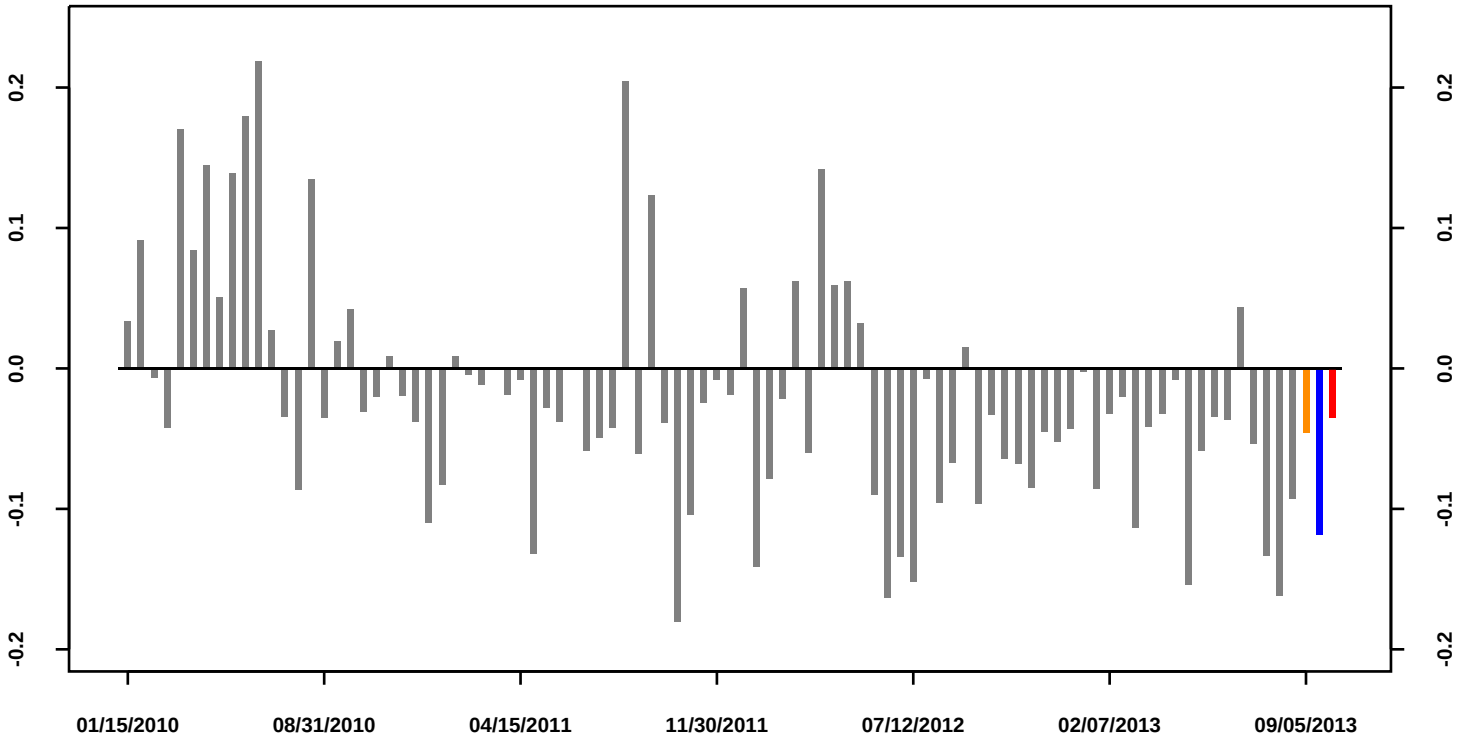


Volumes for Options on CCAR Banks

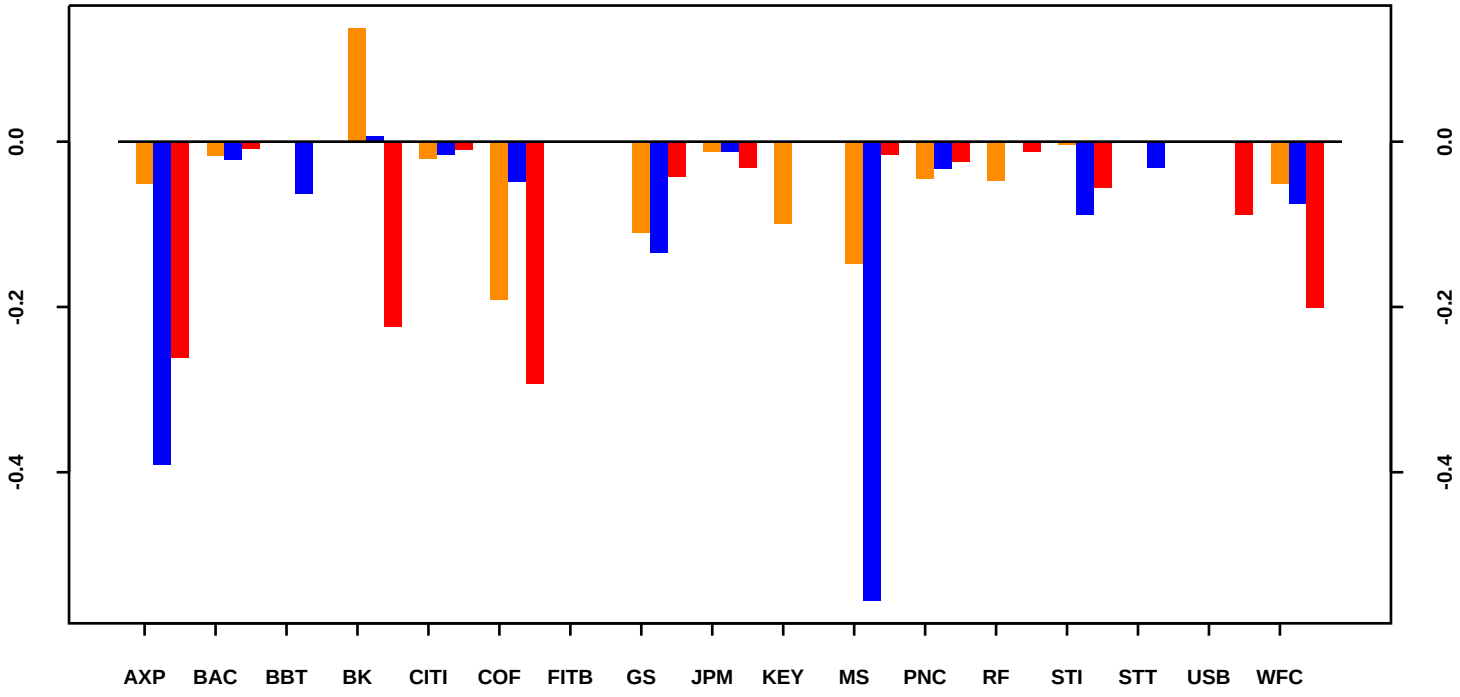


Aggregate Volume Skew--CCAR Banks

(% 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

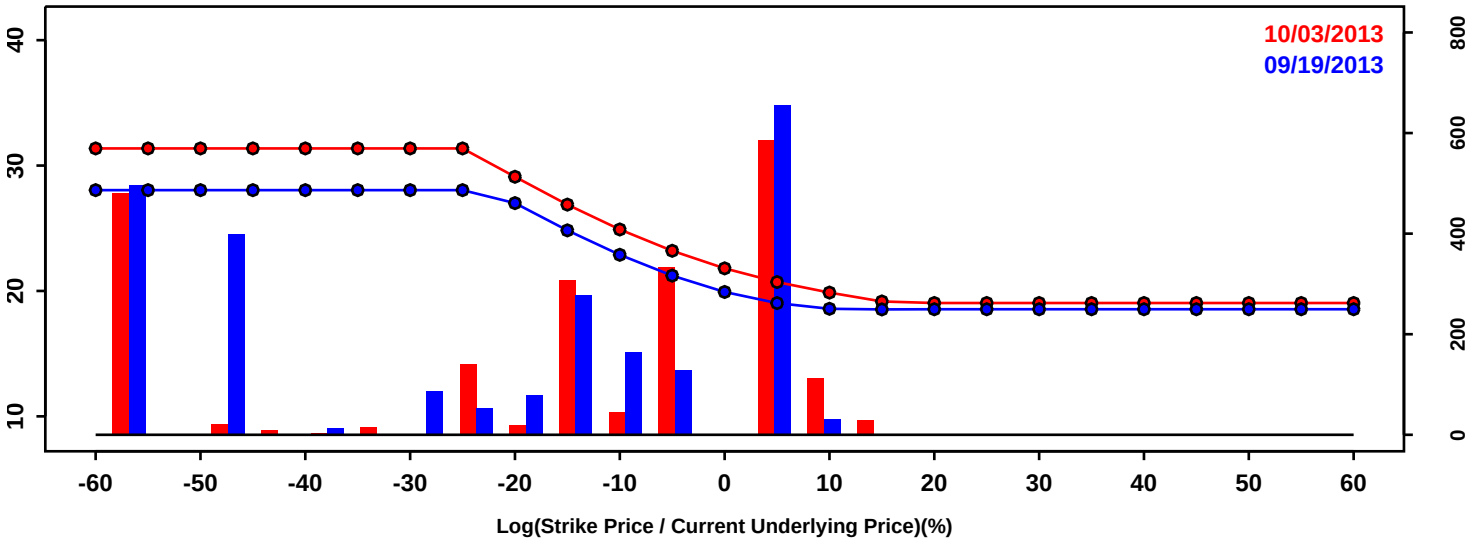


09/05/2013 09/19/2013 10/03/2013

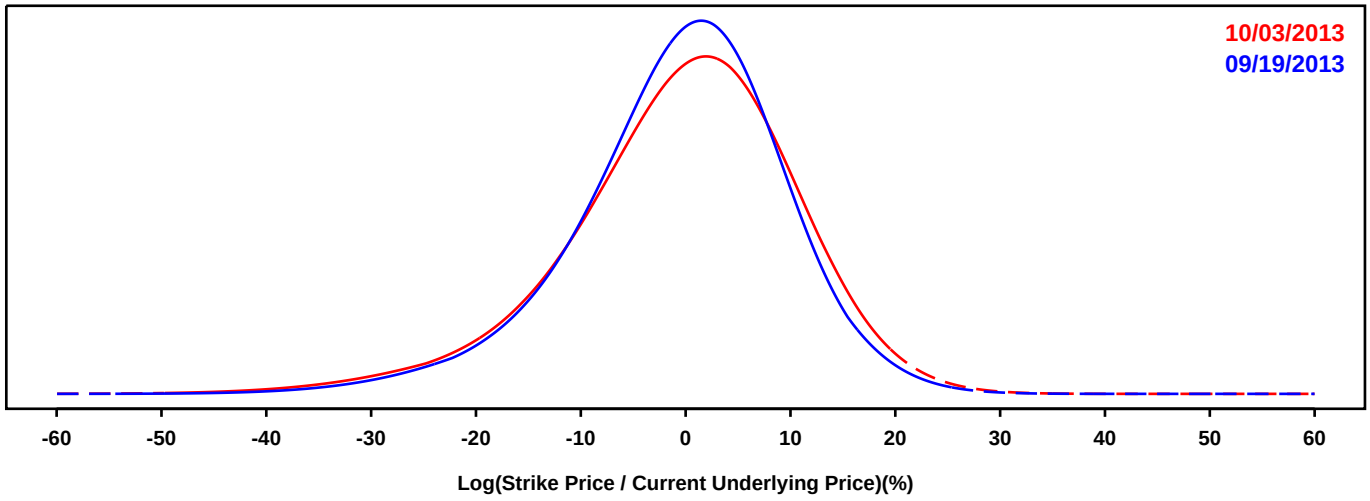
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- AMERICAN EXPRESS

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

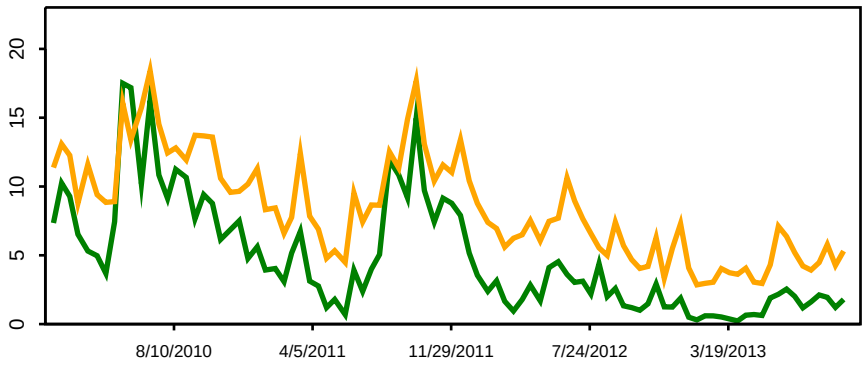
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

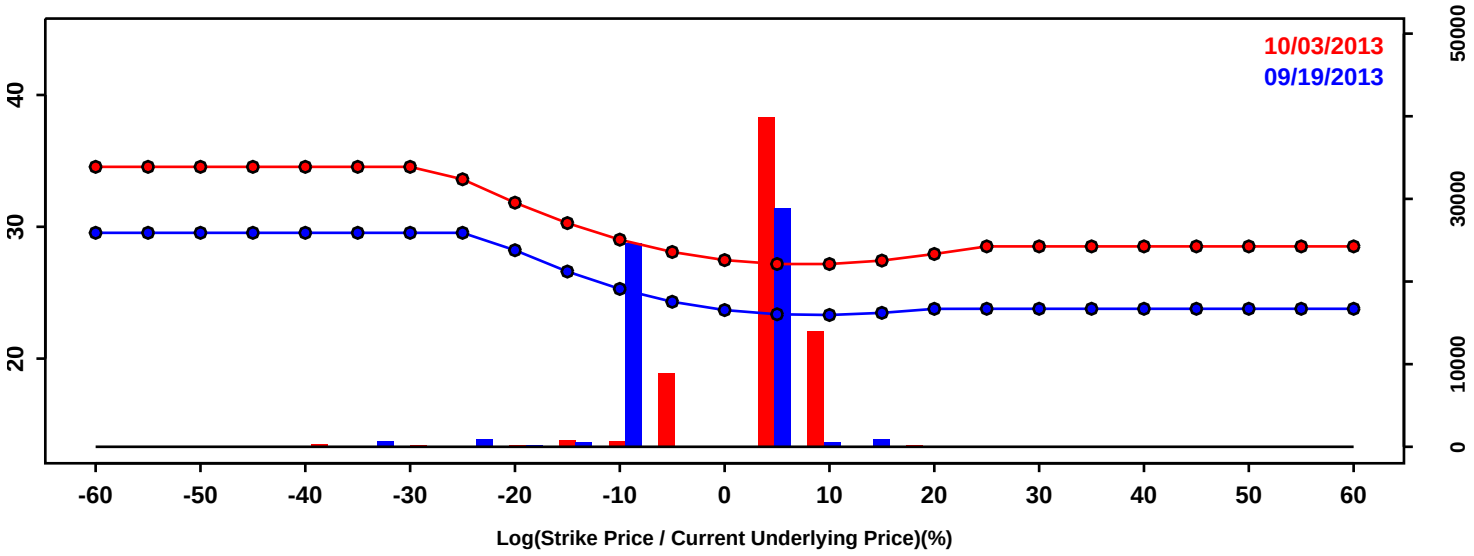
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-13.62%	-14.74%	-1.12%
50th Pct	0.20%	0.46%	0.26%
90th Pct	11.19%	12.53%	1.34%
Mean	-0.65%	-0.50%	0.15%
Std Dev	10.15%	11.12%	0.98%
Skew	-0.56	-0.62	-0.06
Kurtosis	0.96	1.00	0.04

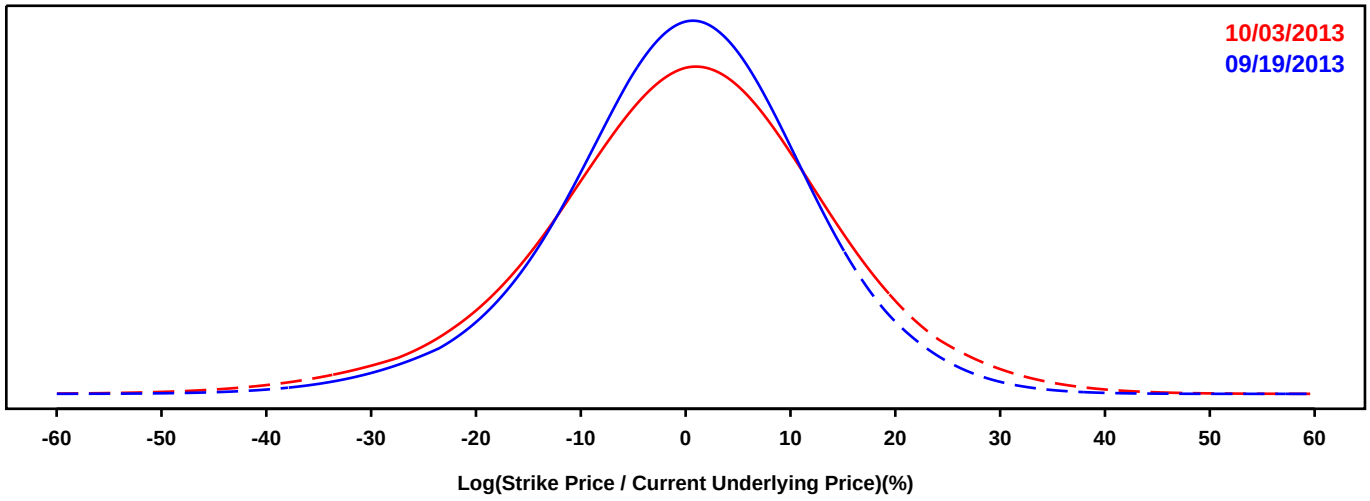
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- BANK OF AMERICA

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

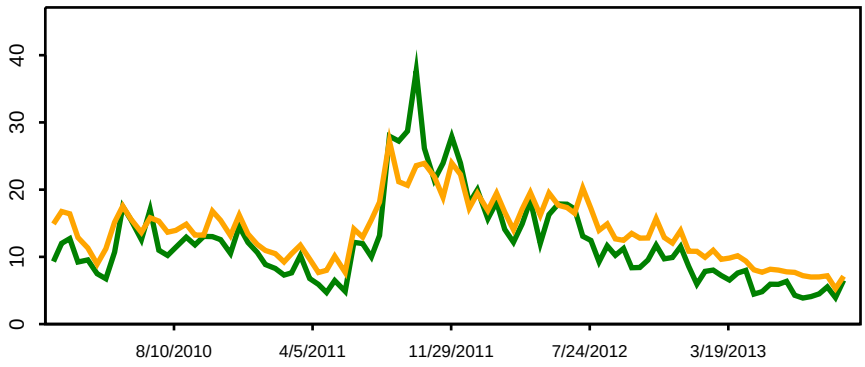
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

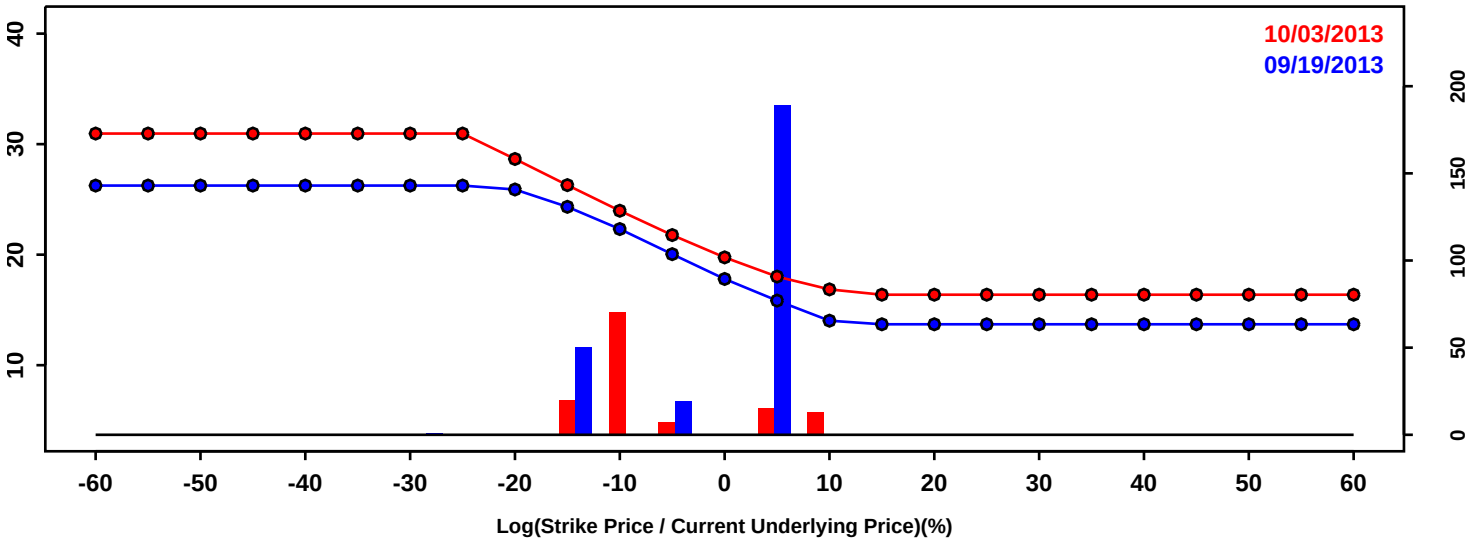
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-15.09%	-17.01%	-1.92%
50th Pct	0.23%	0.52%	0.29%
90th Pct	14.38%	16.79%	2.41%
Mean	-0.12%	0.14%	0.27%
Std Dev	11.86%	13.68%	1.82%
Skew	-0.25	-0.22	0.02
Kurtosis	0.54	0.62	0.08

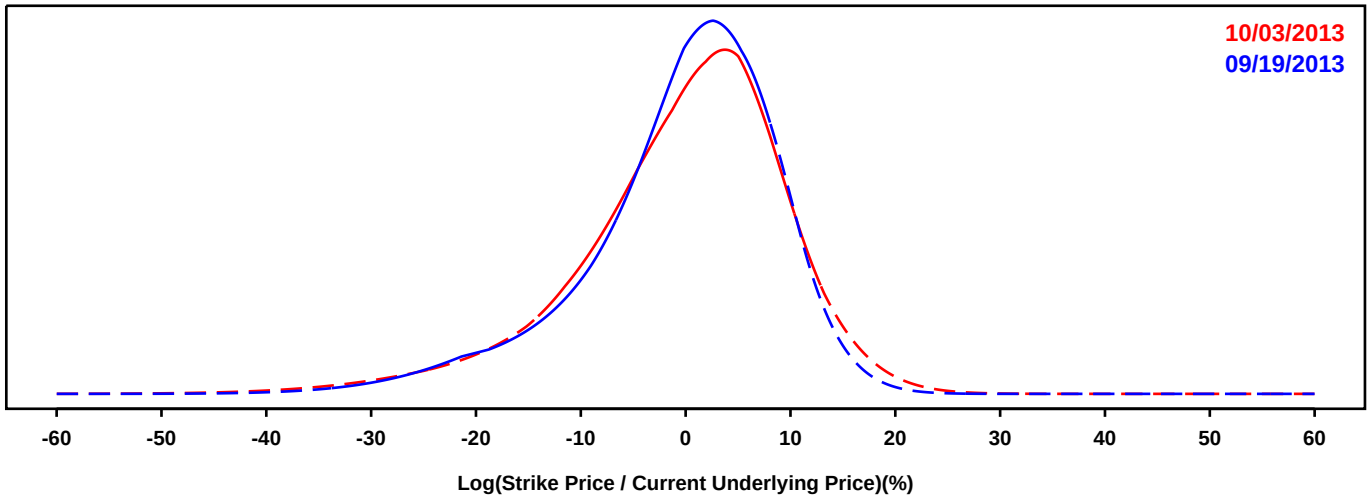
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- BB&T

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

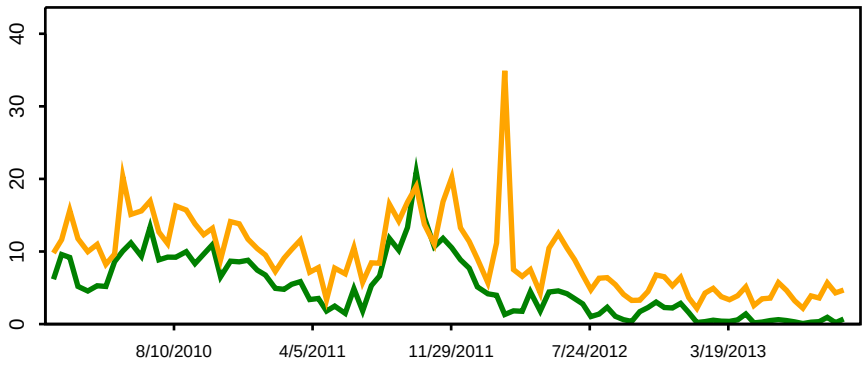
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

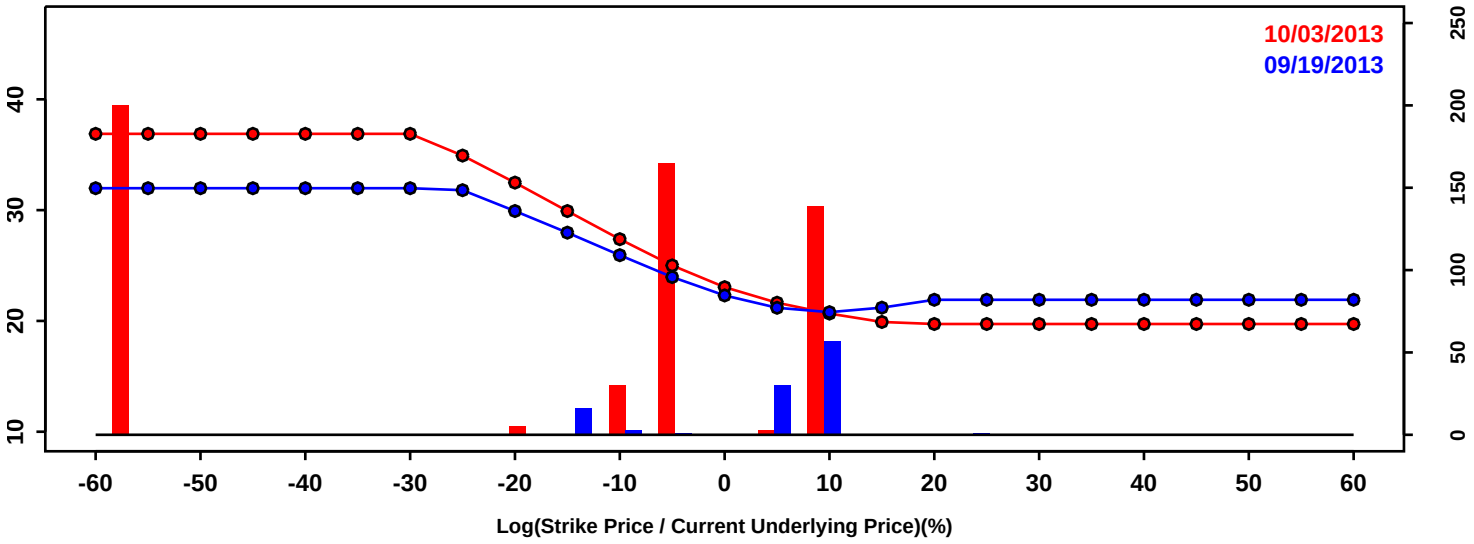
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-12.88%	-13.50%	-0.62%
50th Pct	1.01%	1.01%	-0.01%
90th Pct	9.85%	10.78%	0.93%
Mean	-0.38%	-0.41%	-0.03%
Std Dev	9.33%	10.15%	0.81%
Skew	-0.95	-0.90	0.05
Kurtosis	1.39	1.60	0.21

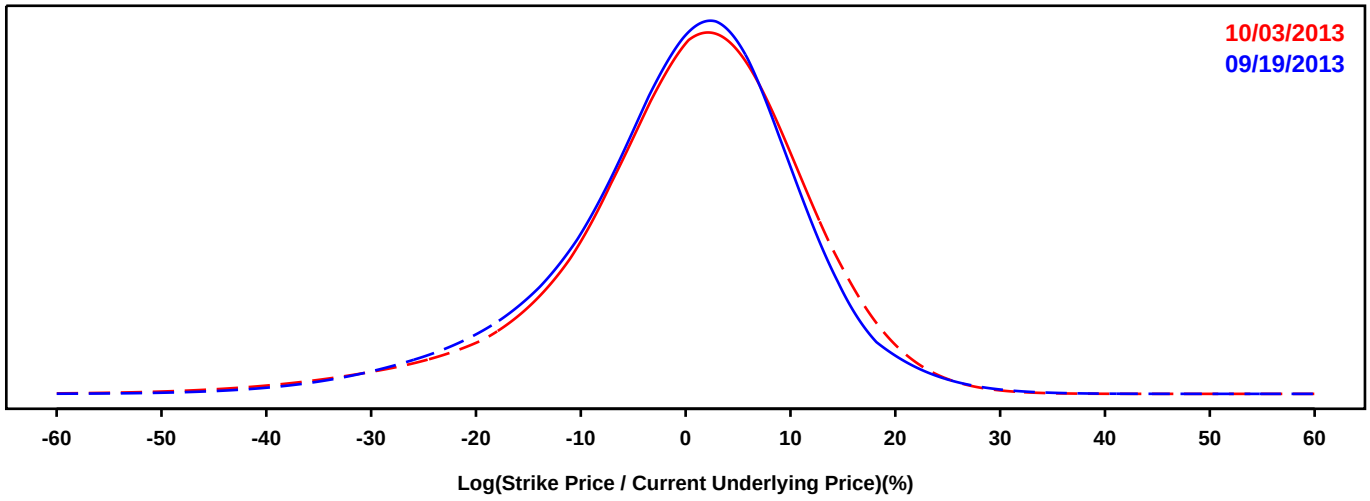
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- BANK OF NEW YORK MELLON

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

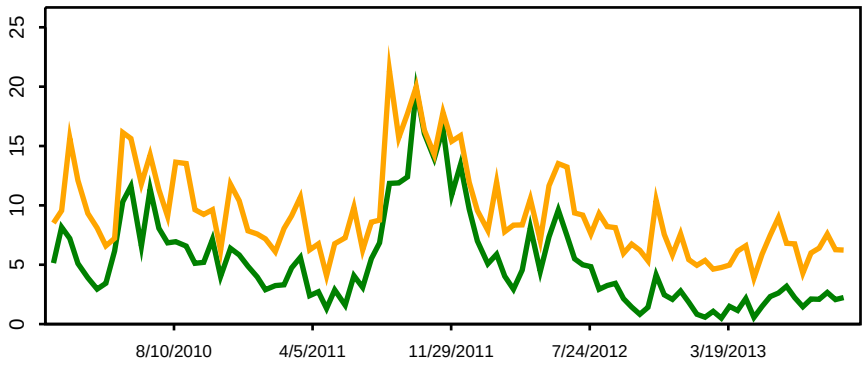
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



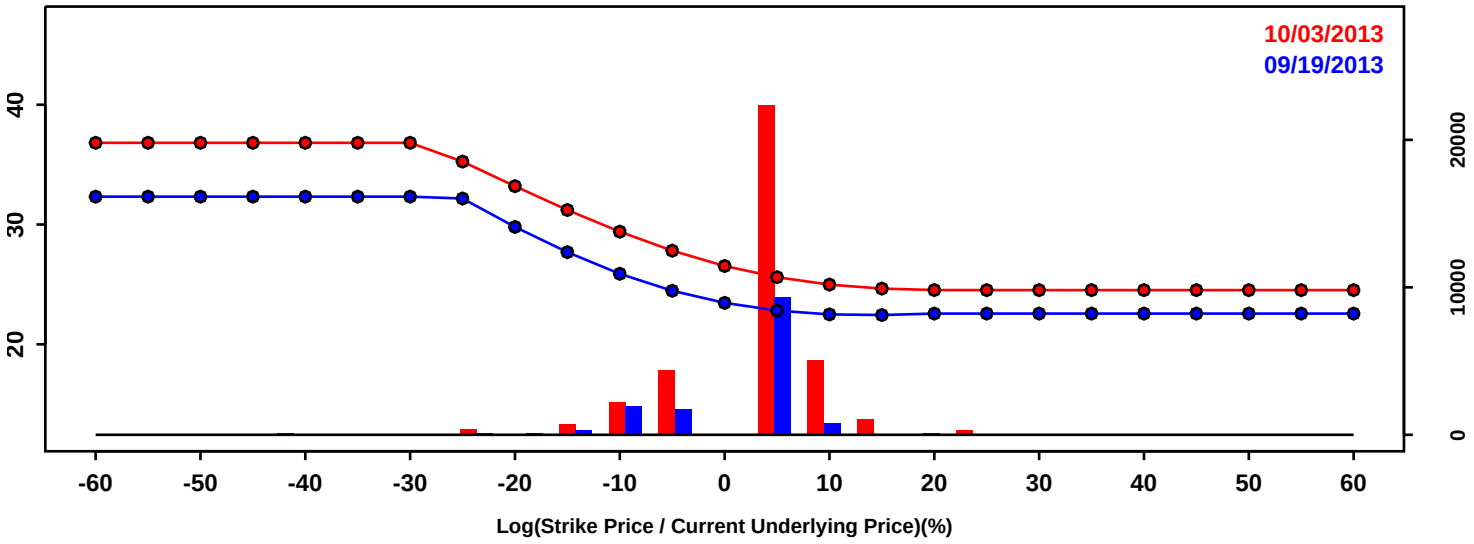
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-15.54%	-15.04%	0.50%
50th Pct	0.57%	1.10%	0.53%
90th Pct	12.14%	13.15%	1.00%
Mean	-0.66%	-0.20%	0.46%
Std Dev	11.44%	11.86%	0.43%
Skew	-0.69	-0.88	-0.19
Kurtosis	1.24	1.81	0.57

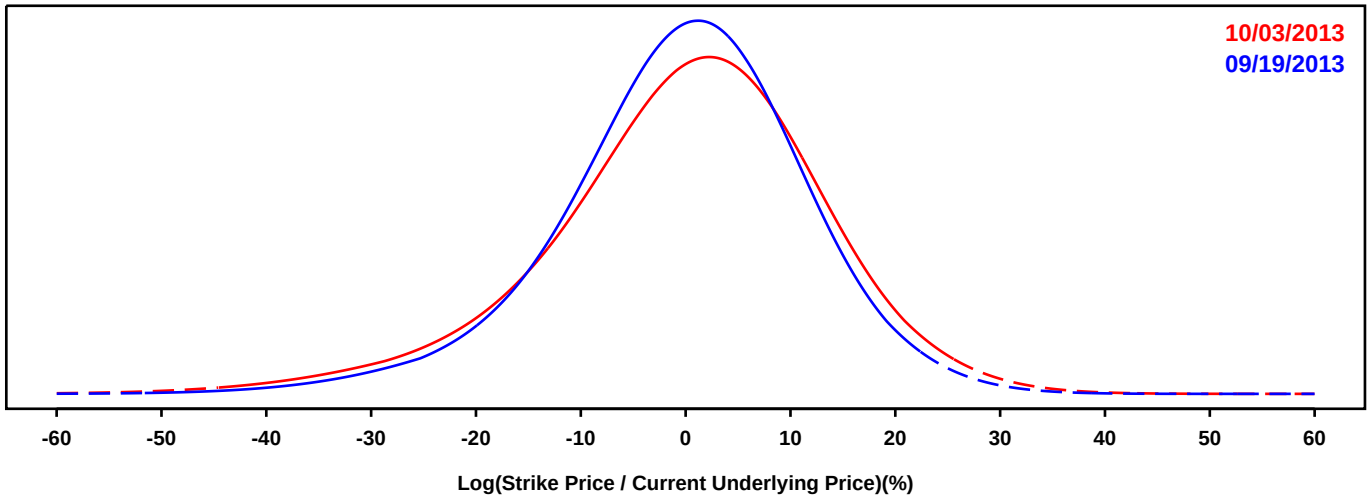
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CITIGROUP

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

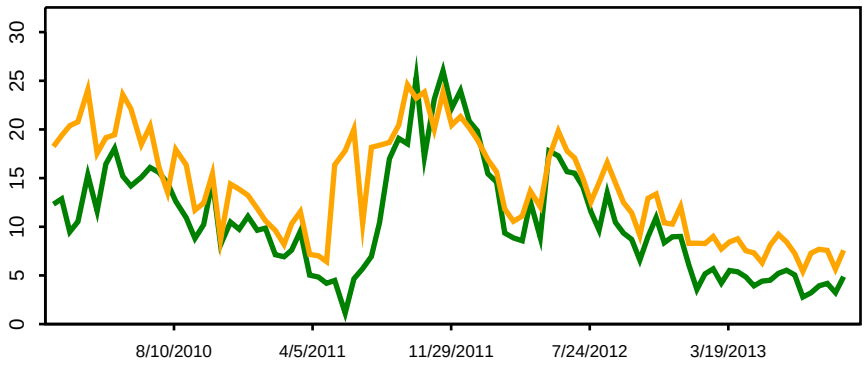
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

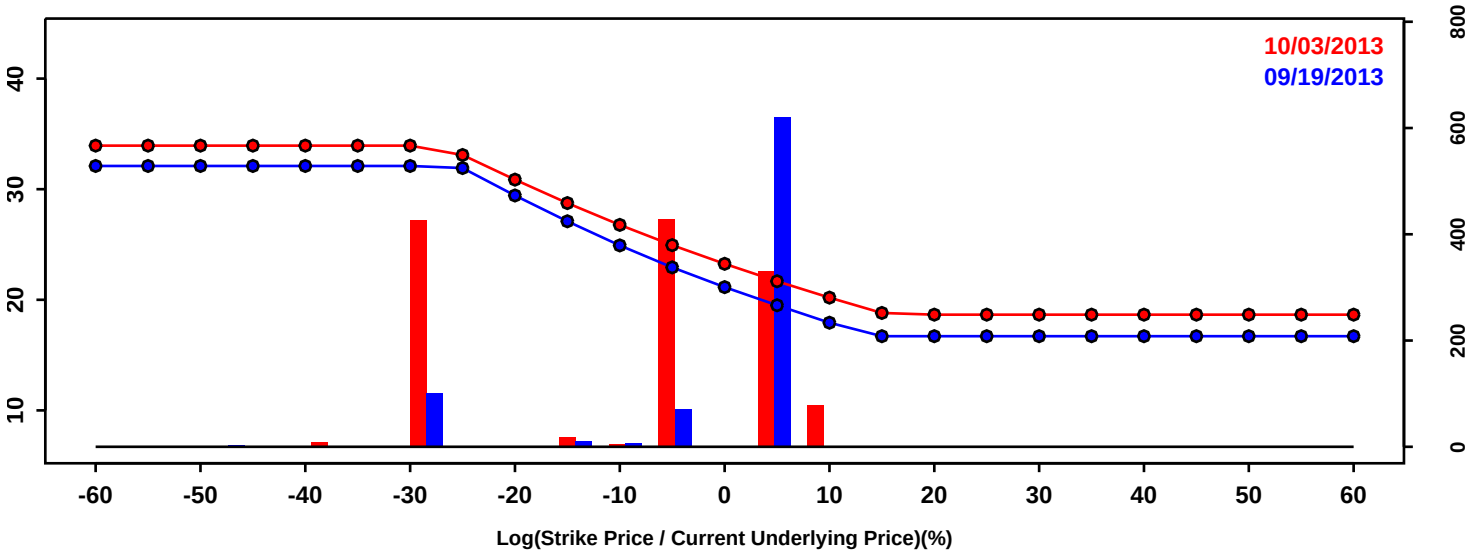
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-15.23%	-17.21%	-1.99%
50th Pct	0.31%	0.86%	0.55%
90th Pct	13.74%	15.54%	1.81%
Mean	-0.36%	-0.16%	0.20%
Std Dev	11.83%	13.39%	1.56%
Skew	-0.44	-0.55	-0.10
Kurtosis	0.86	0.95	0.09

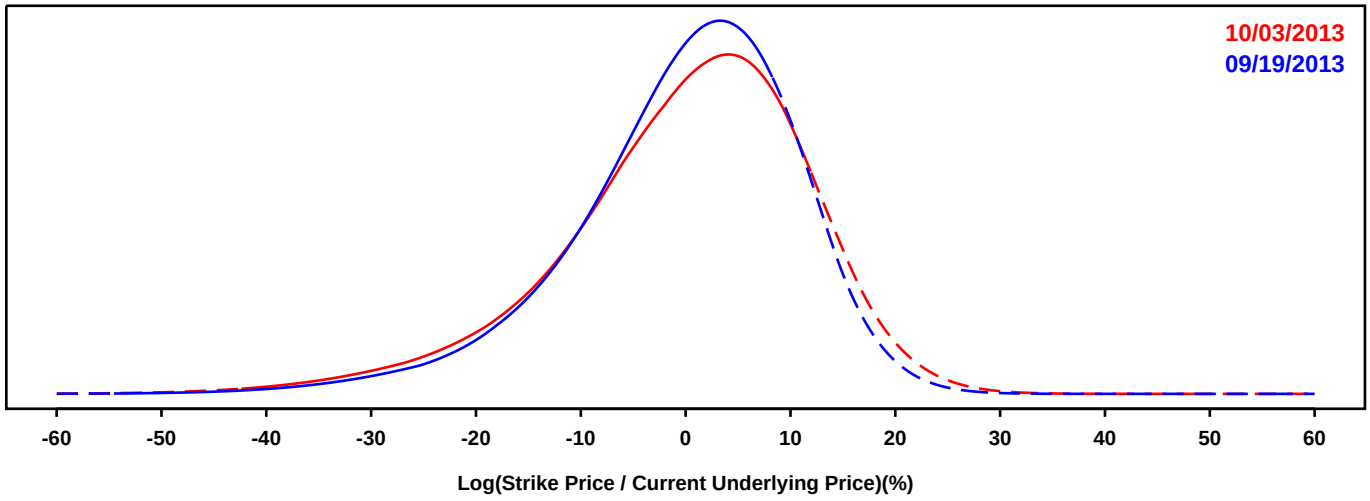
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CAPITAL ONE

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

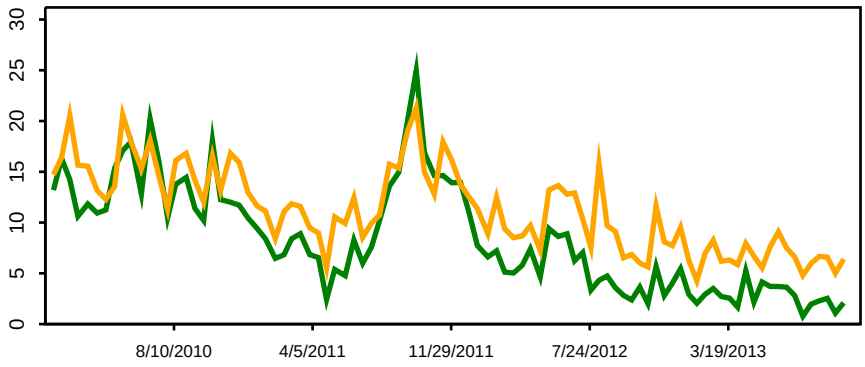
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



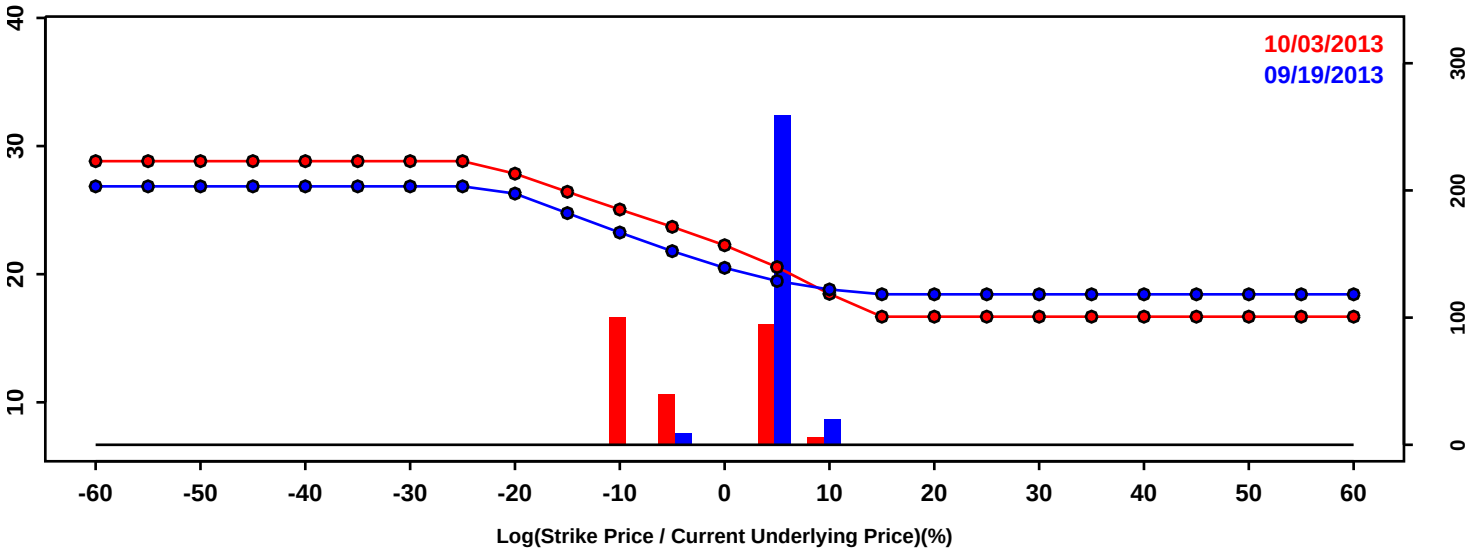
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-14.20%	-15.81%	-1.61%
50th Pct	1.15%	1.29%	0.15%
90th Pct	12.18%	13.49%	1.30%
Mean	-0.13%	-0.15%	-0.02%
Std Dev	10.82%	11.94%	1.12%
Skew	-0.80	-0.76	0.04
Kurtosis	1.25	1.08	-0.17

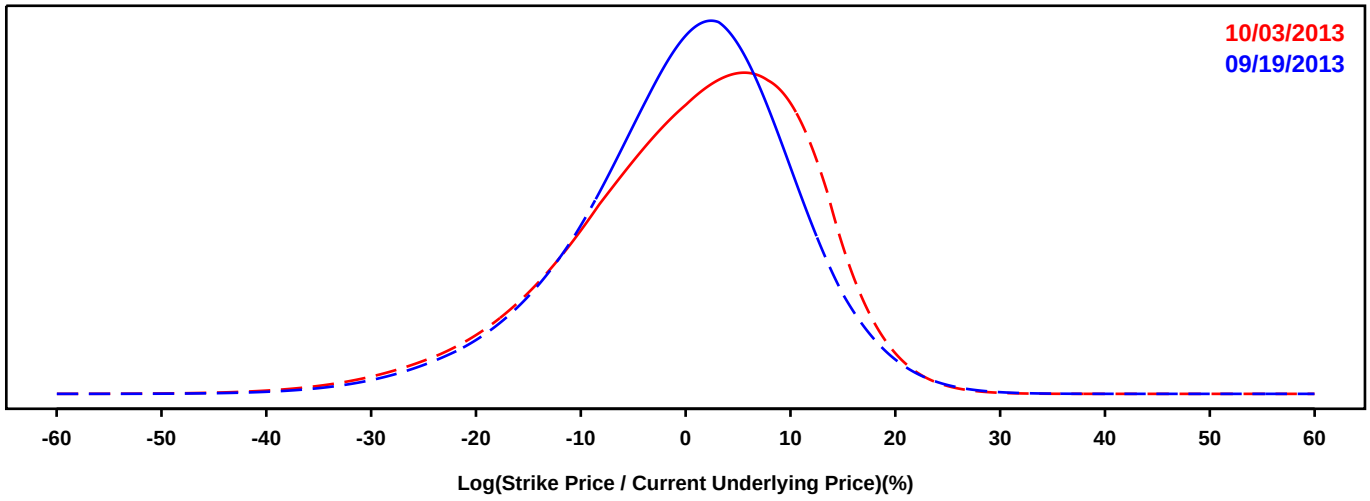
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- FIFTH THIRD

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

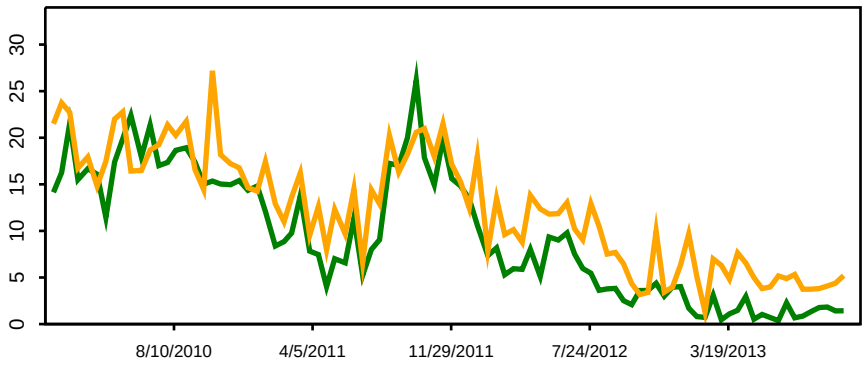
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



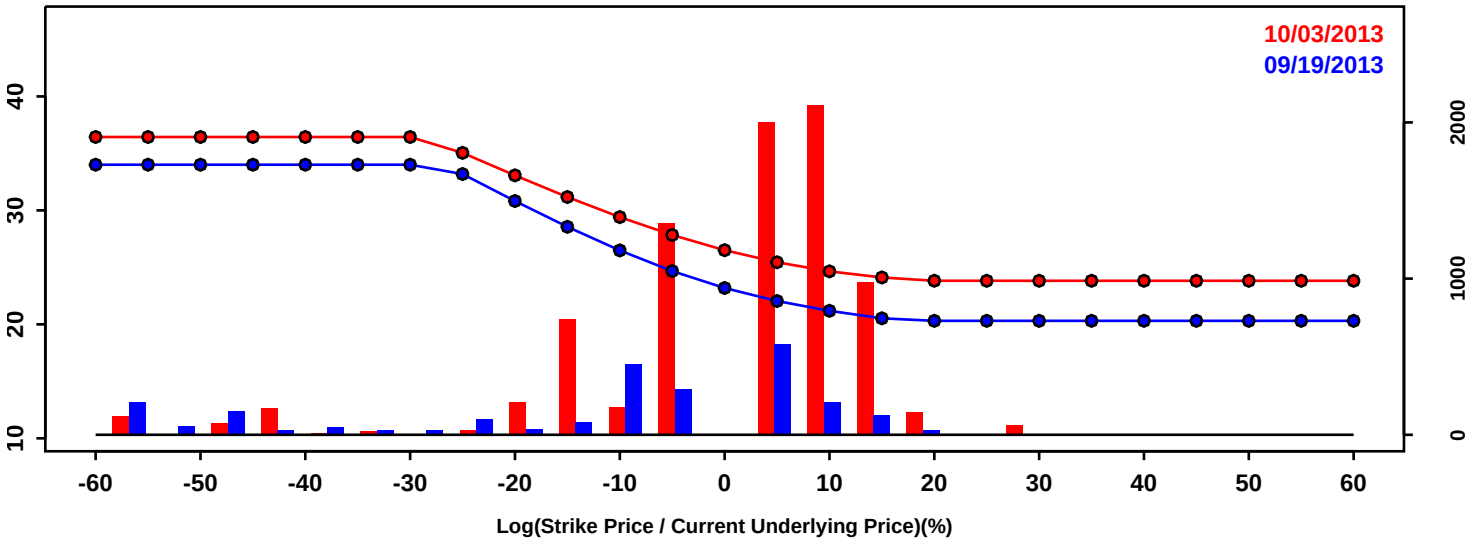
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-13.89%	-14.84%	-0.95%
50th Pct	0.62%	1.67%	1.06%
90th Pct	11.85%	13.23%	1.38%
Mean	-0.28%	0.30%	0.59%
Std Dev	10.36%	11.21%	0.85%
Skew	-0.52	-0.65	-0.13
Kurtosis	0.68	0.50	-0.18

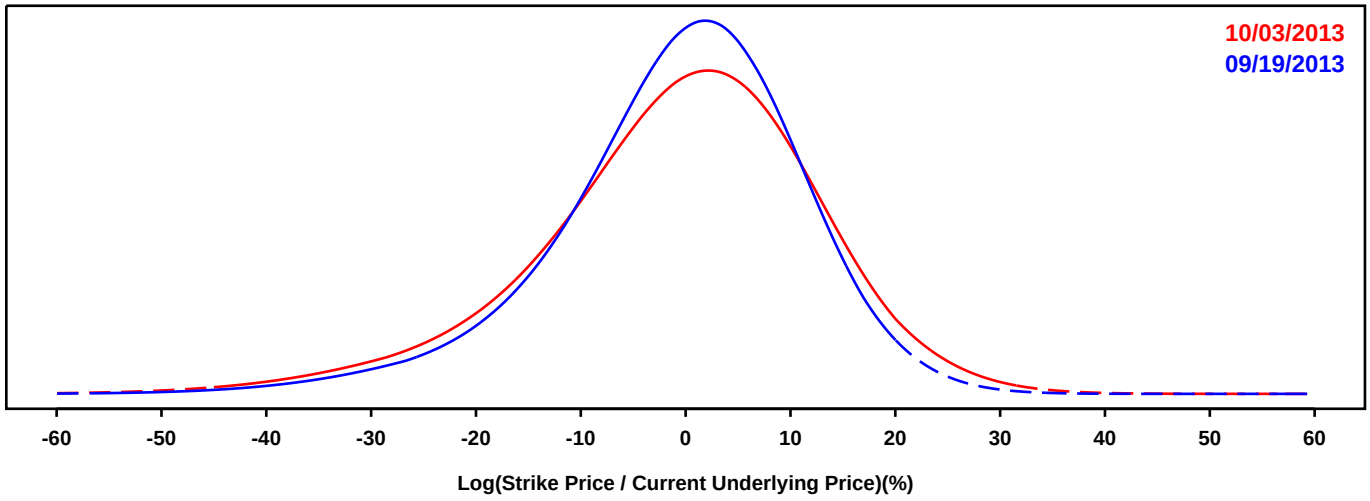
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- GOLDMAN SACHS

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

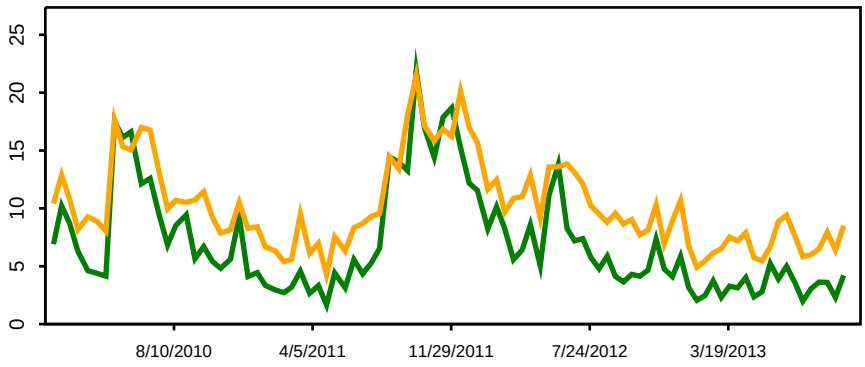
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

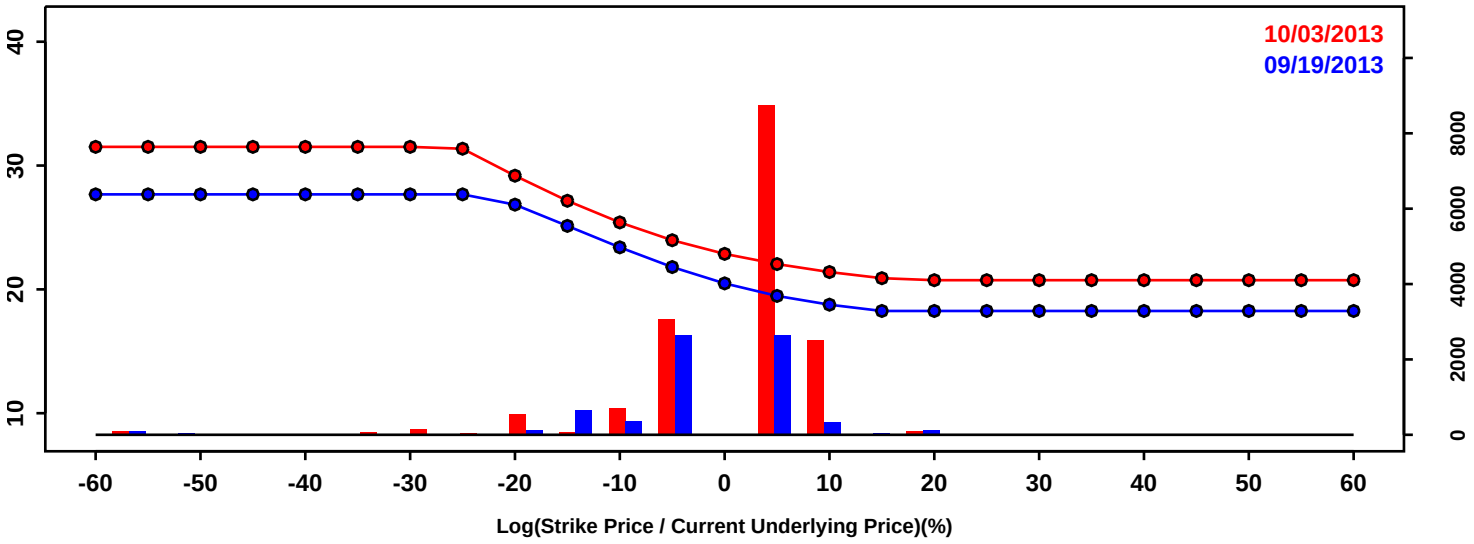
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-15.92%	-18.30%	-2.38%
50th Pct	0.39%	0.37%	-0.02%
90th Pct	13.05%	14.96%	1.91%
Mean	-0.72%	-0.82%	-0.10%
Std Dev	11.88%	13.52%	1.64%
Skew	-0.67	-0.58	0.09
Kurtosis	1.14	0.88	-0.26

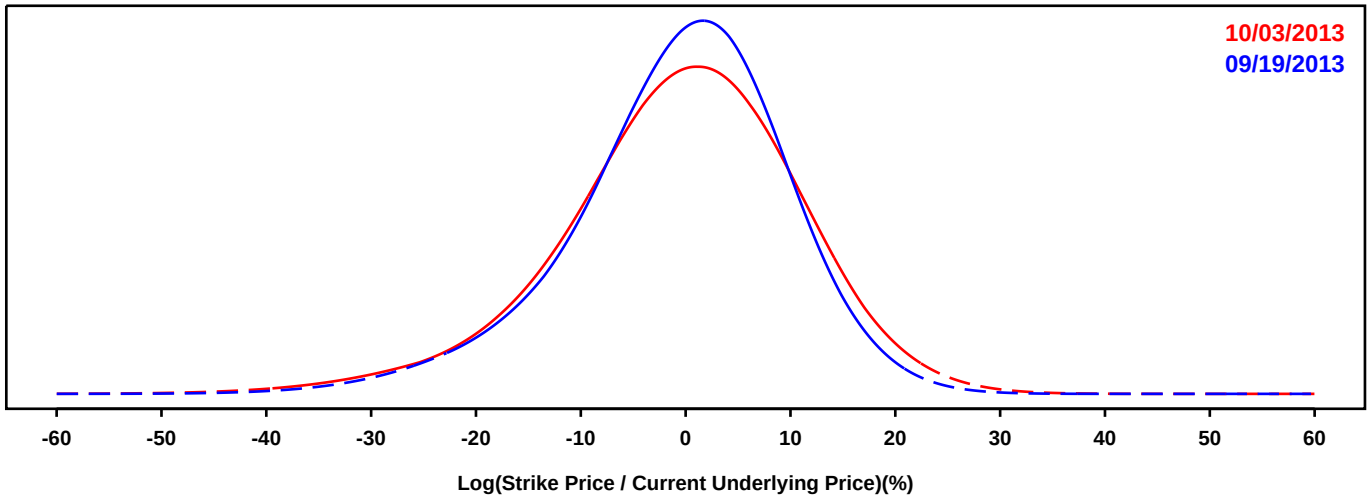
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- JP MORGAN

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

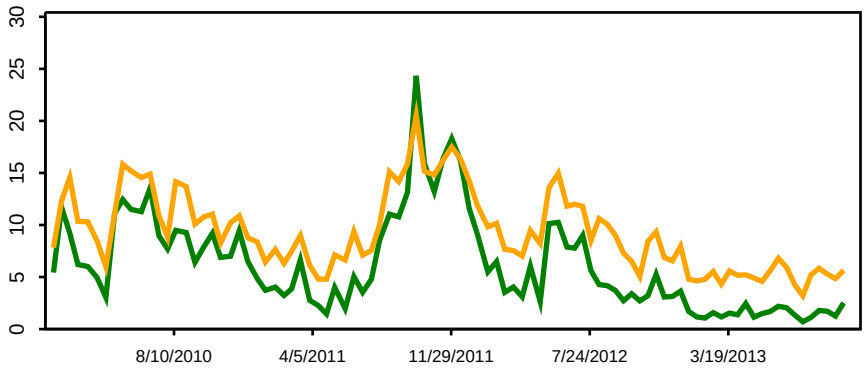
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

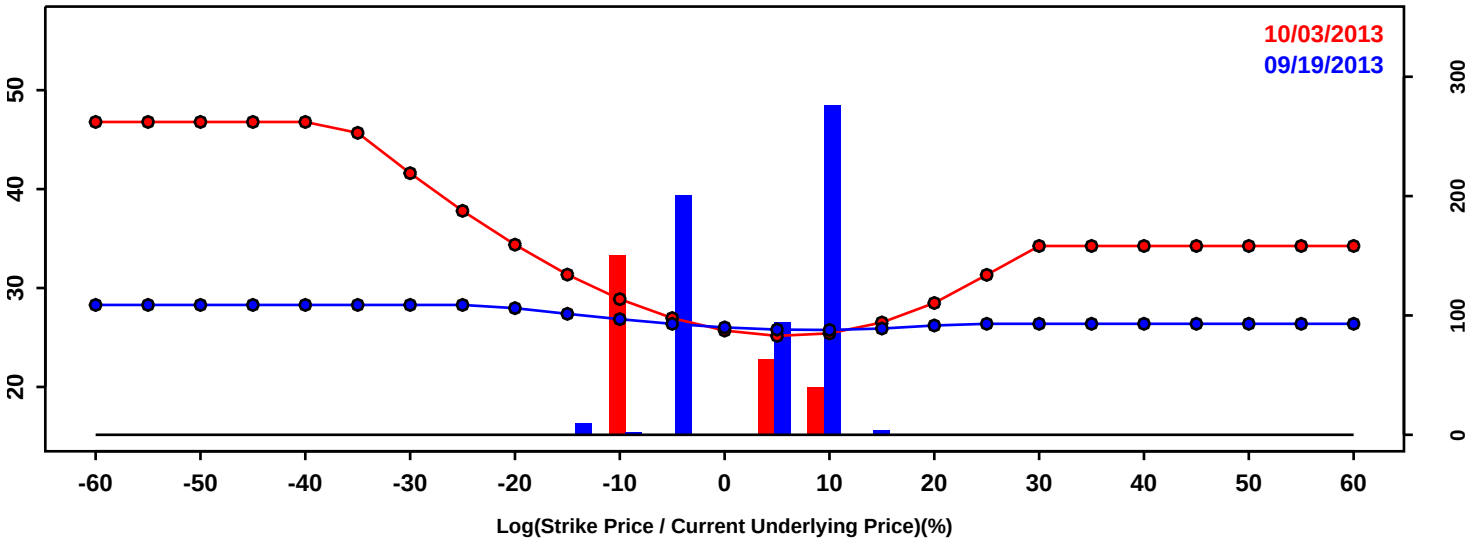
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-14.30%	-15.31%	-1.01%
50th Pct	0.18%	0.15%	-0.03%
90th Pct	11.52%	13.23%	1.72%
Mean	-0.72%	-0.59%	0.13%
Std Dev	10.44%	11.57%	1.12%
Skew	-0.56	-0.49	0.07
Kurtosis	0.80	0.80	0.00

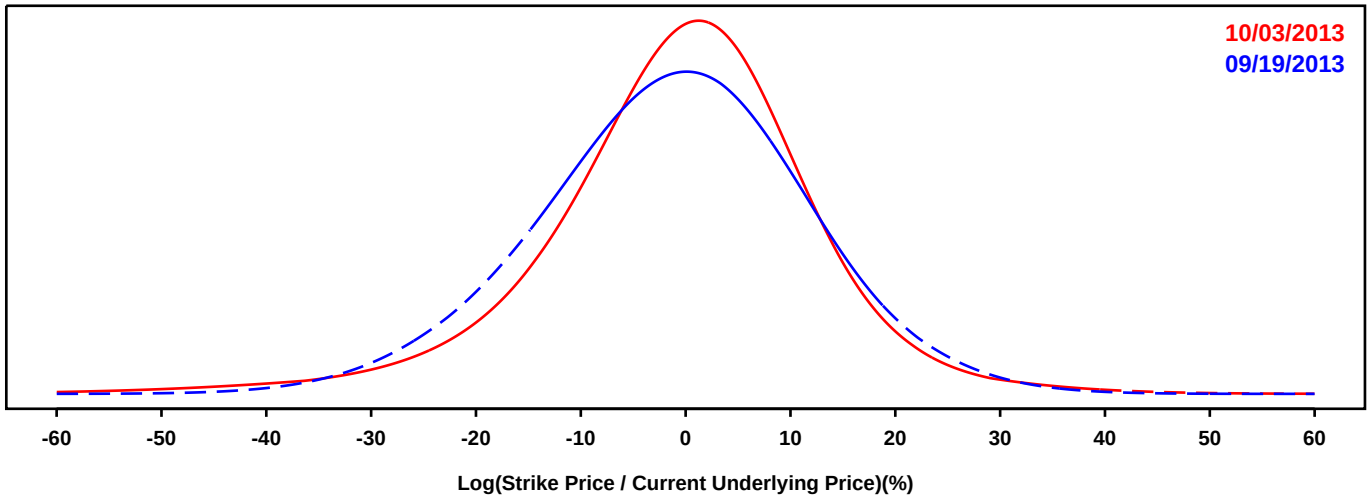
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- KEYCORP

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

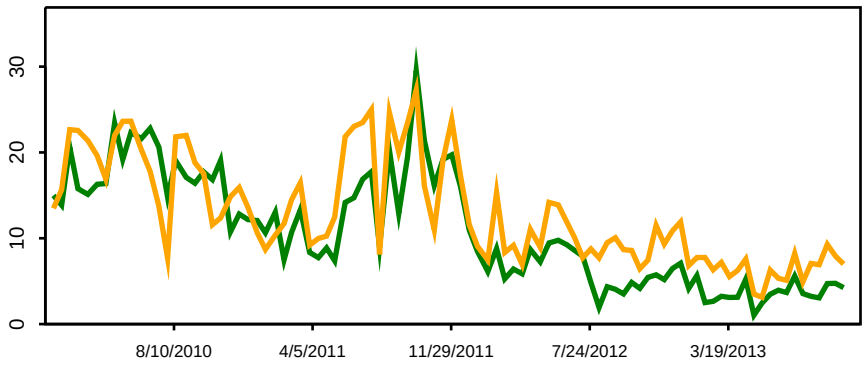
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

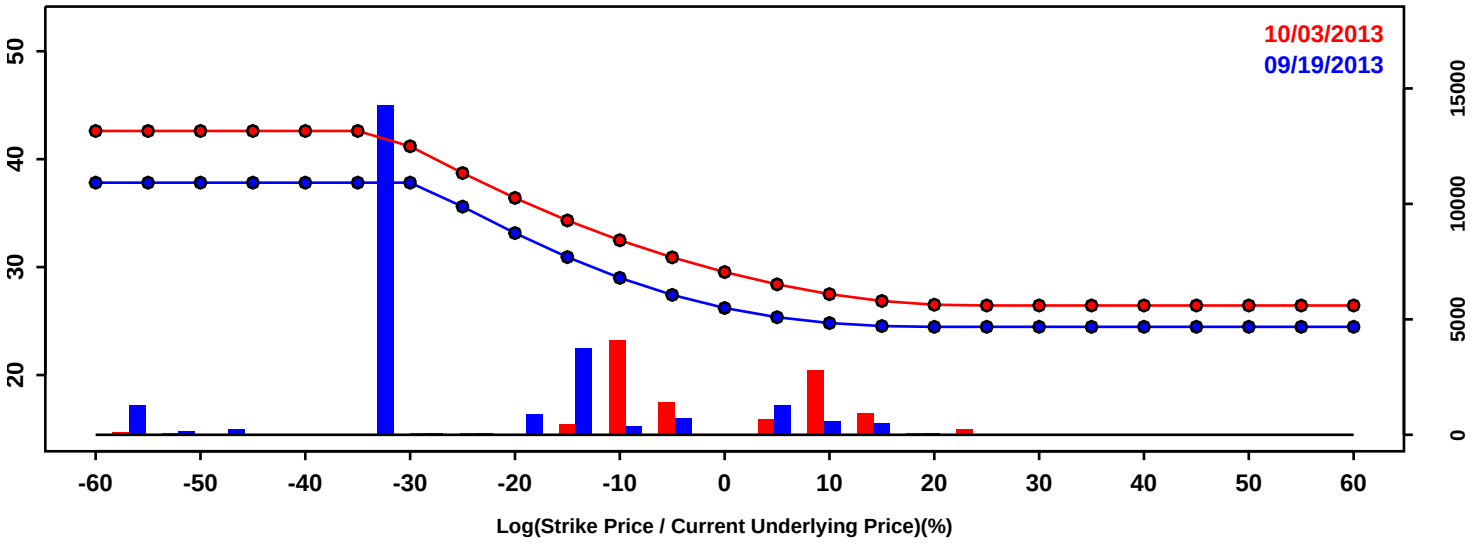
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-18.11%	-16.54%	1.57%
50th Pct	-0.84%	0.15%	0.99%
90th Pct	14.96%	14.16%	-0.80%
Mean	-1.21%	-0.71%	0.50%
Std Dev	13.05%	13.36%	0.30%
Skew	-0.13	-0.61	-0.48
Kurtosis	0.20	2.37	2.17

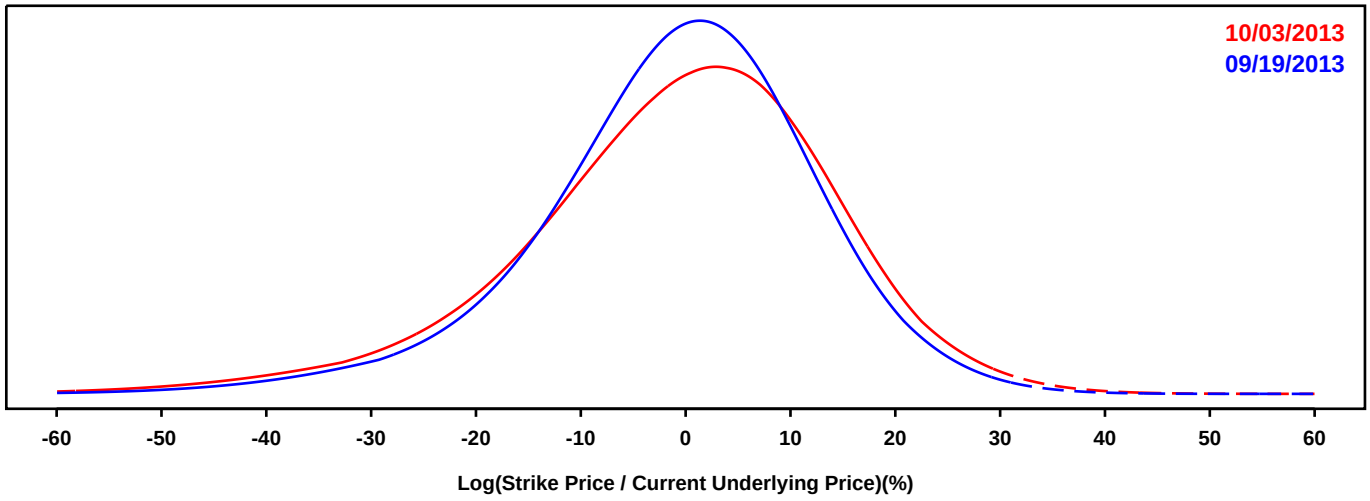
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- MORGAN STANLEY

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

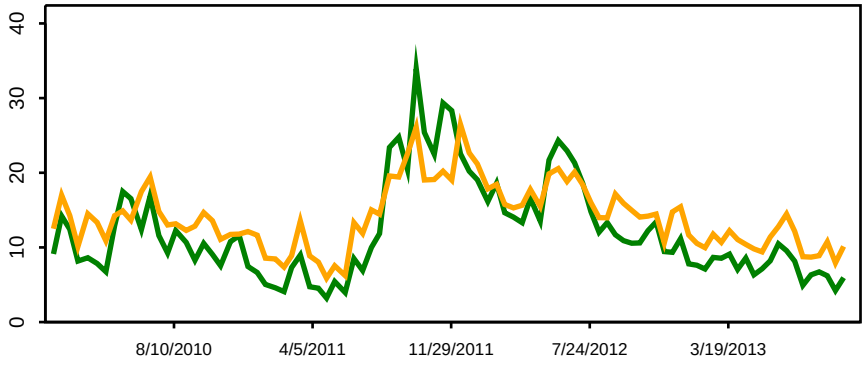
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

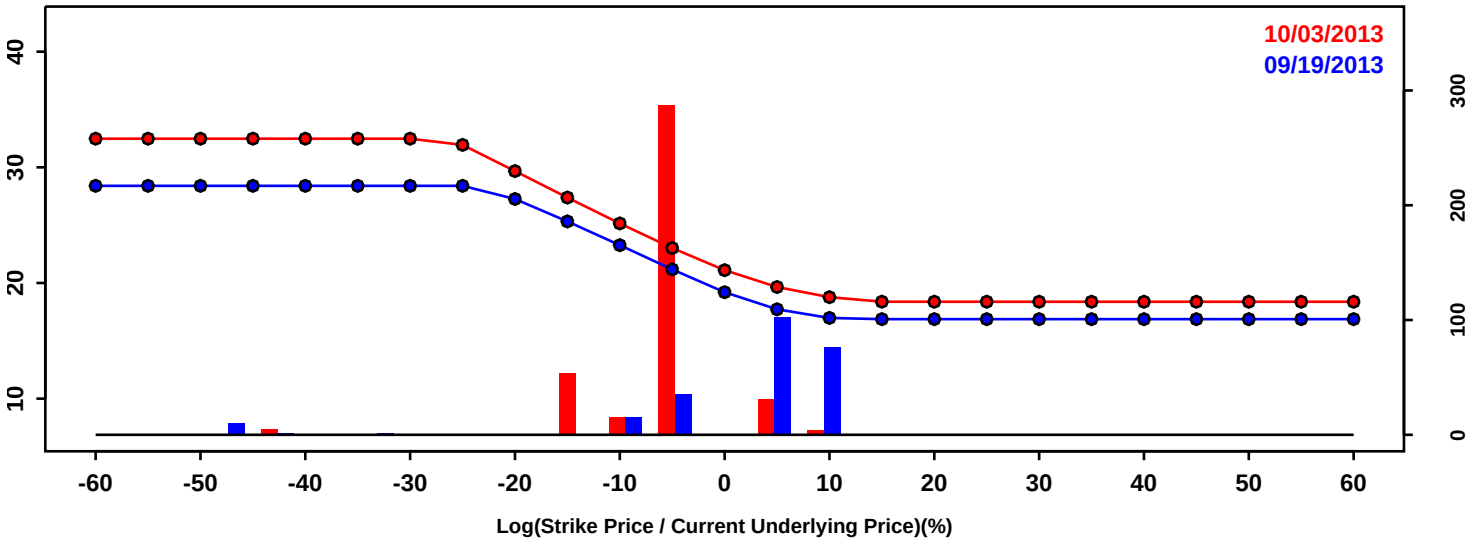
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-17.72%	-20.14%	-2.42%
50th Pct	0.08%	0.50%	0.42%
90th Pct	14.78%	16.60%	1.82%
Mean	-0.90%	-0.88%	0.02%
Std Dev	13.35%	15.07%	1.71%
Skew	-0.56	-0.63	-0.07
Kurtosis	1.07	1.05	-0.02

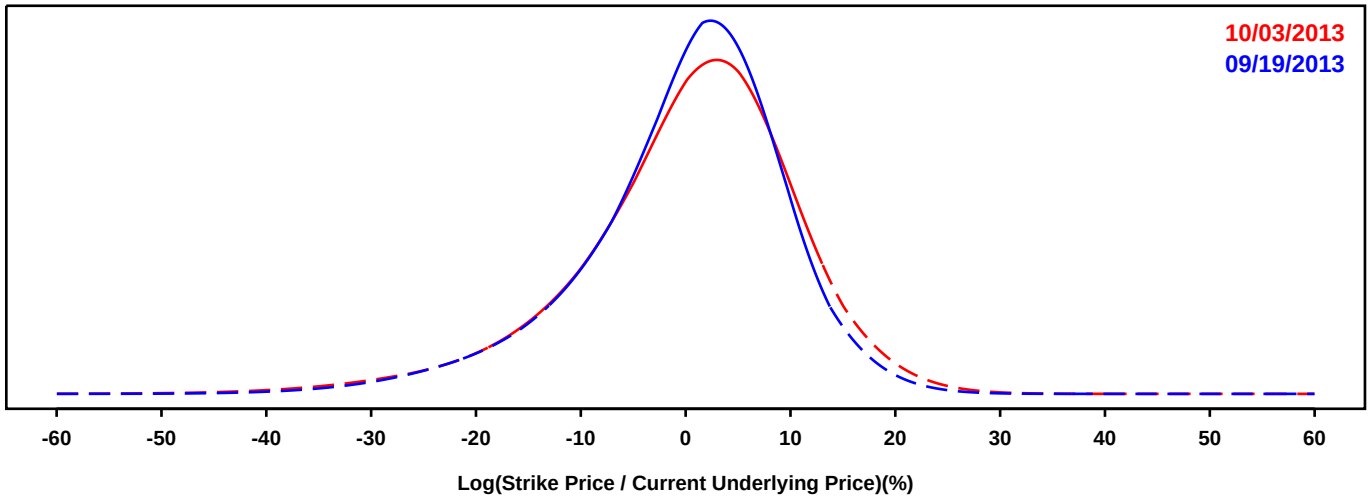
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- PNC FINANCIAL

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

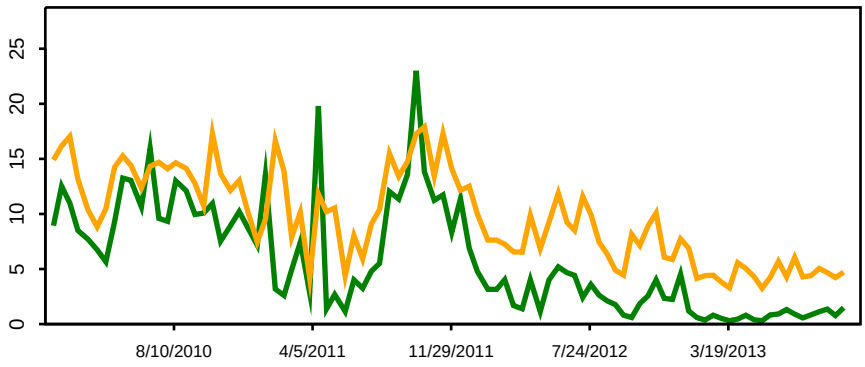
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

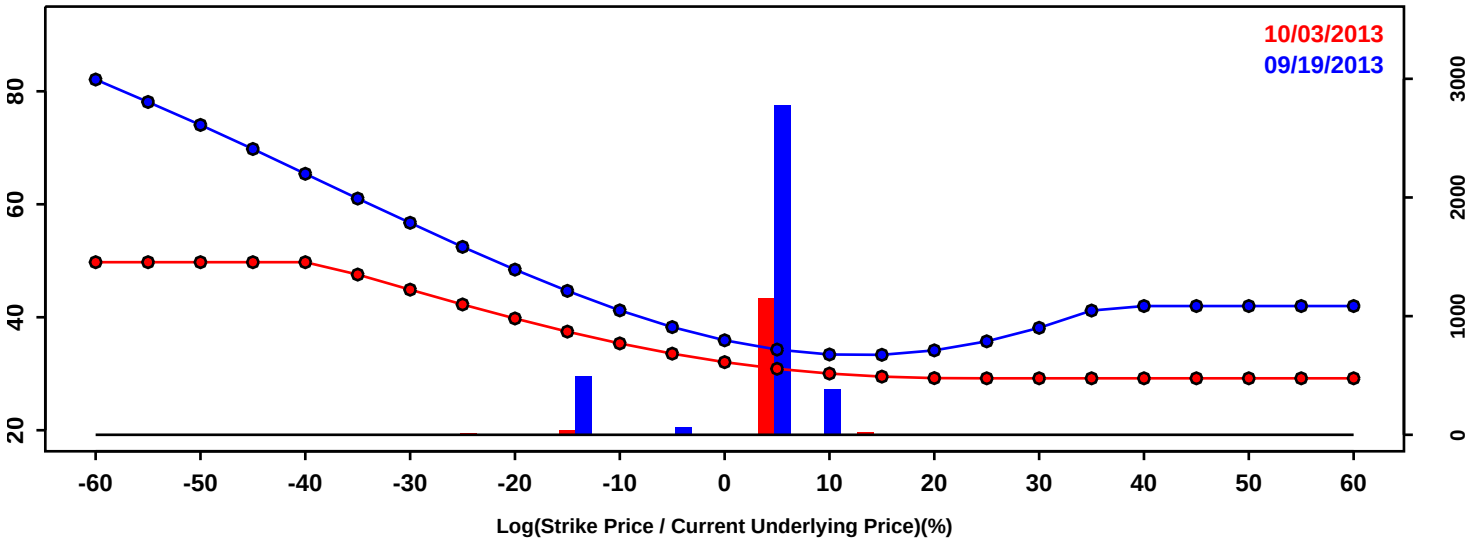
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-13.02%	-13.56%	-0.54%
50th Pct	1.12%	1.35%	0.23%
90th Pct	10.67%	12.10%	1.44%
Mean	-0.17%	0.14%	0.31%
Std Dev	9.80%	10.64%	0.85%
Skew	-0.81	-0.80	0.01
Kurtosis	1.36	1.50	0.14

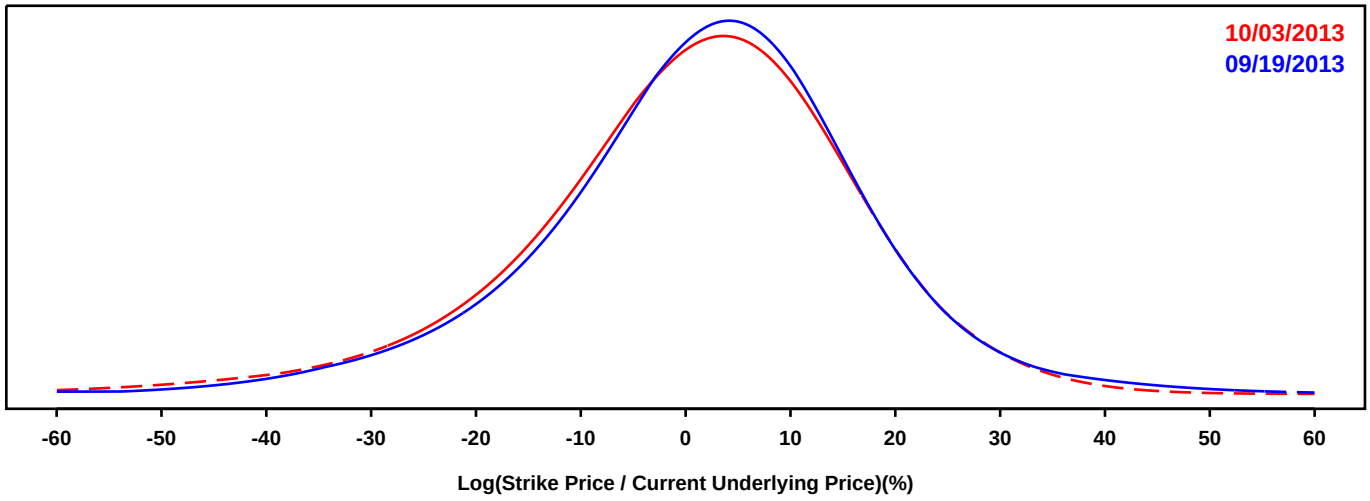
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- REGIONS FINANCIAL

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

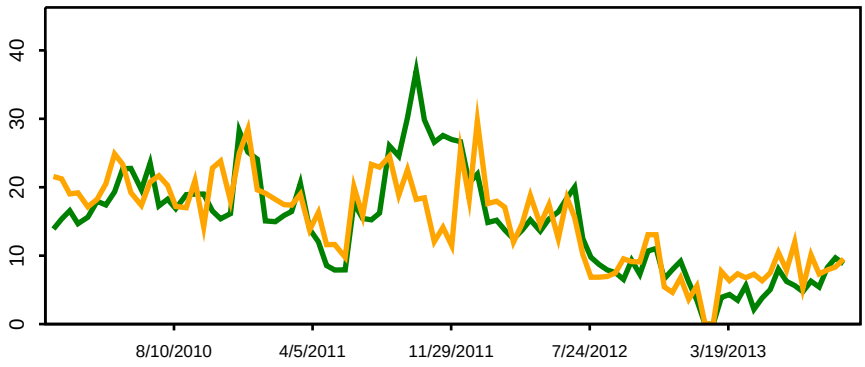
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

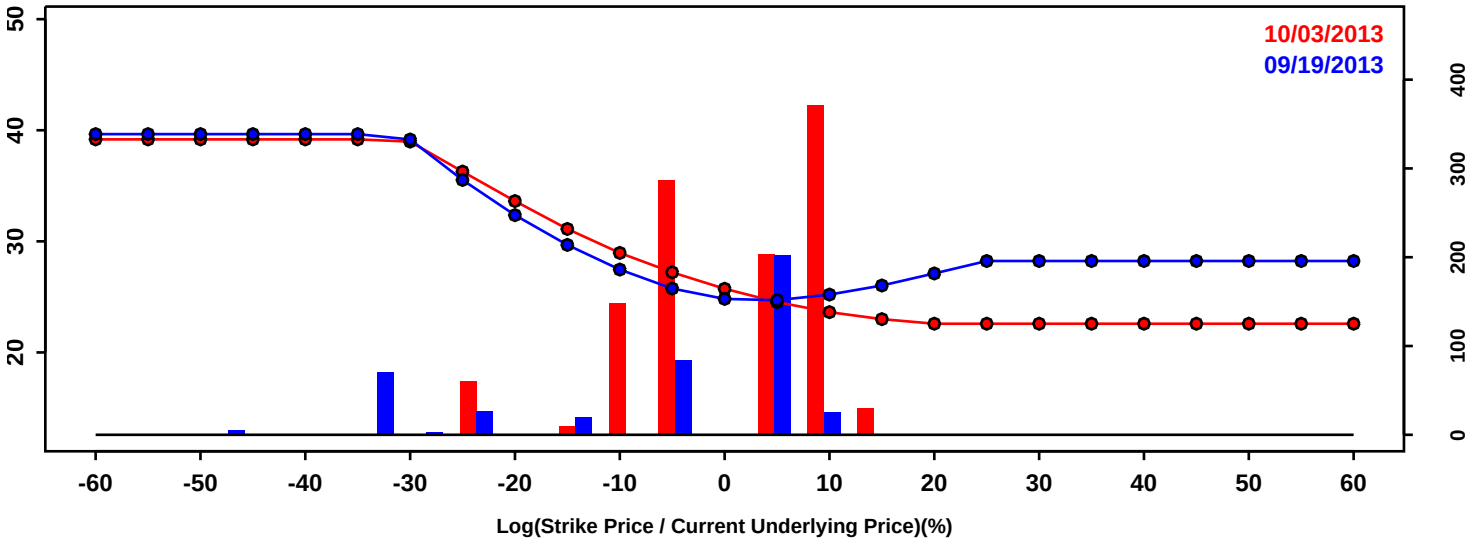
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-17.91%	-19.43%	-1.52%
50th Pct	2.67%	1.87%	-0.80%
90th Pct	19.73%	19.02%	-0.71%
Mean	1.63%	0.55%	-1.08%
Std Dev	16.35%	15.99%	-0.36%
Skew	-0.73	-0.66	0.07
Kurtosis	3.69	1.42	-2.26

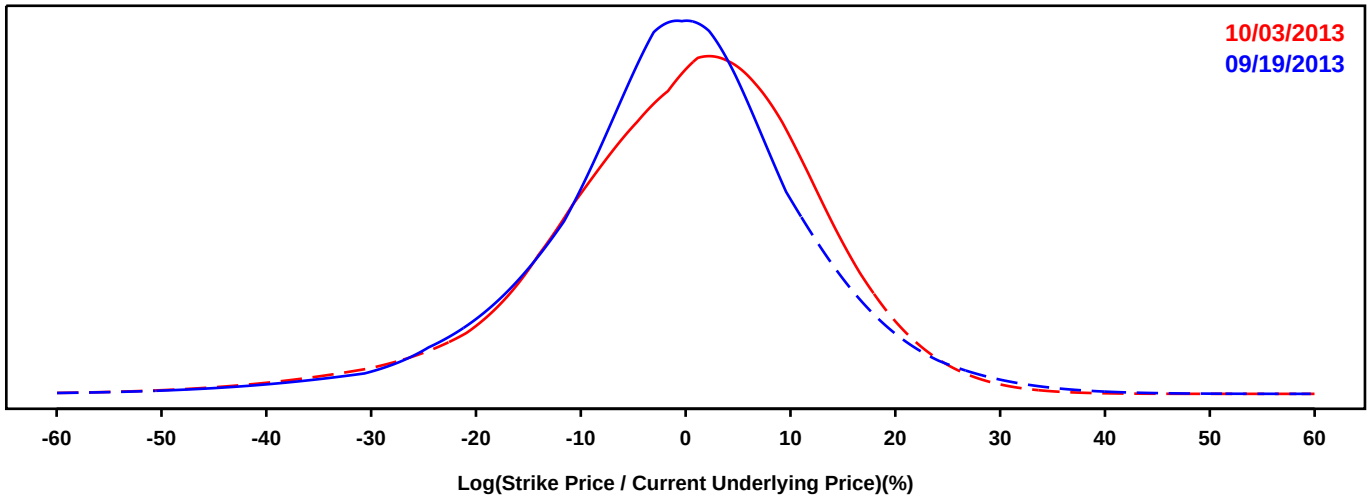
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SUNTRUST

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

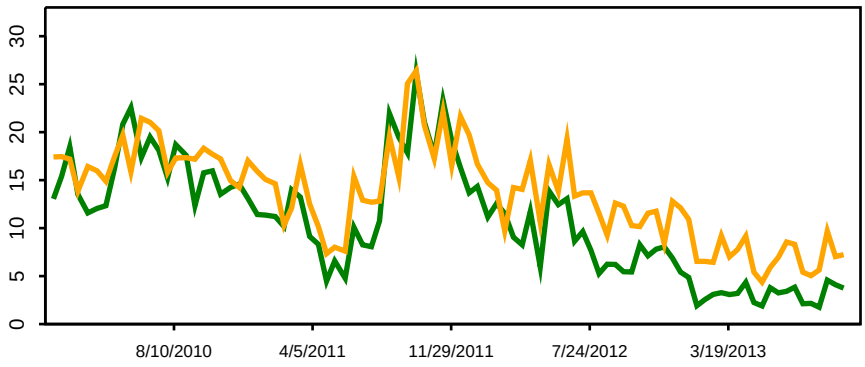
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

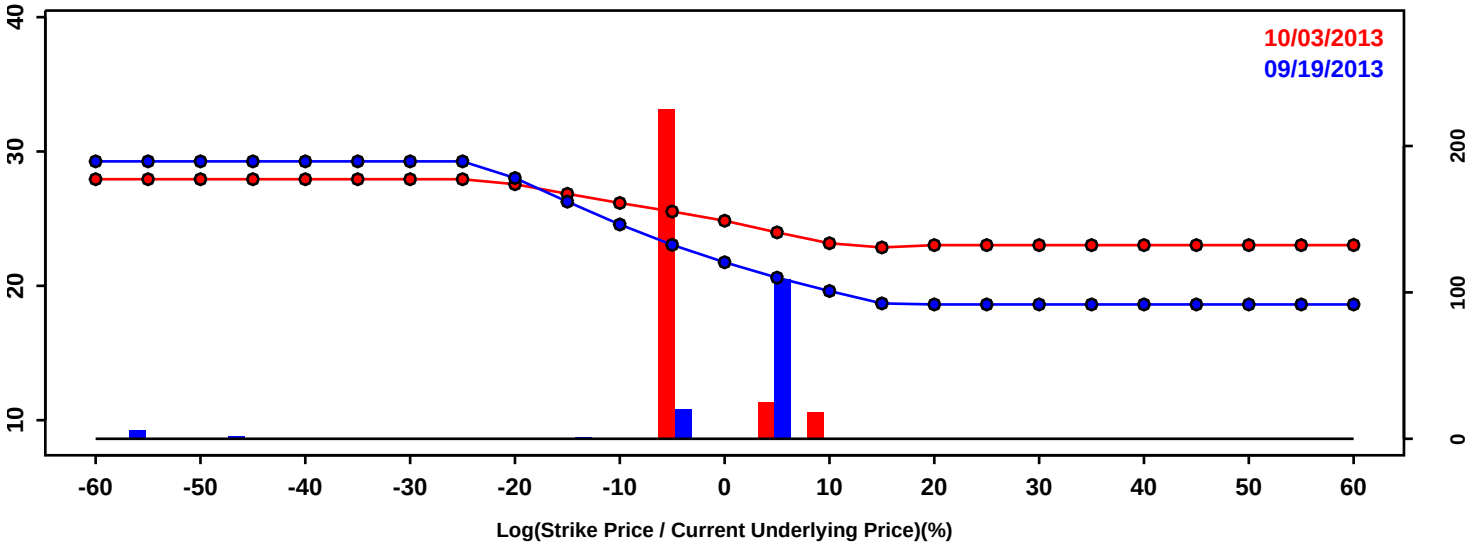
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-16.77%	-16.75%	0.02%
50th Pct	-0.62%	0.66%	1.29%
90th Pct	13.82%	14.57%	0.75%
Mean	-1.18%	-0.54%	0.64%
Std Dev	12.79%	13.08%	0.29%
Skew	-0.45	-0.69	-0.25
Kurtosis	1.59	1.34	-0.25

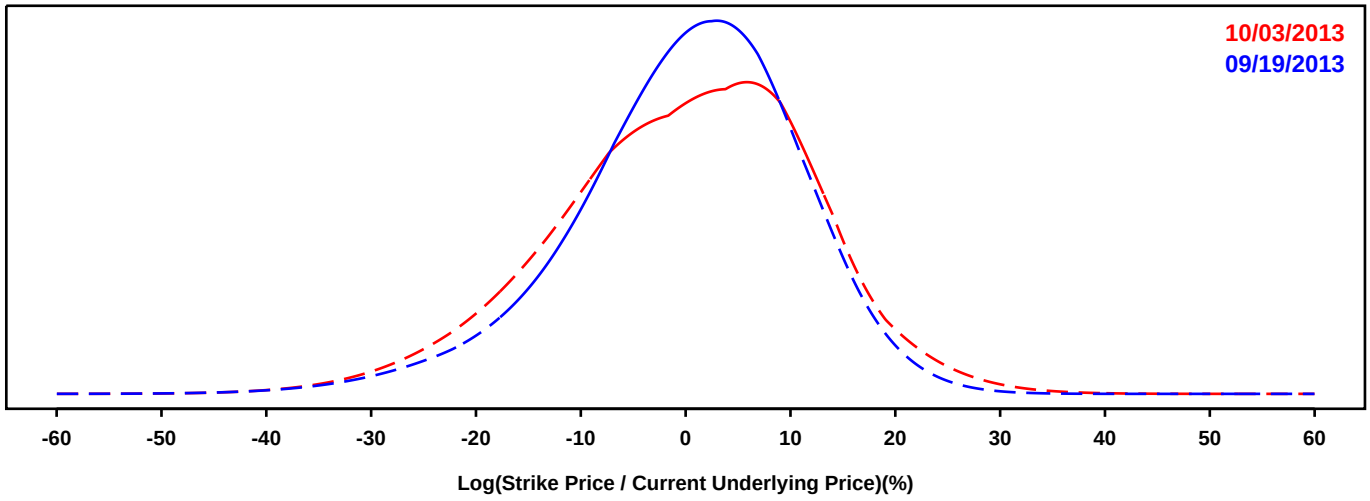
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- STATE STREET

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

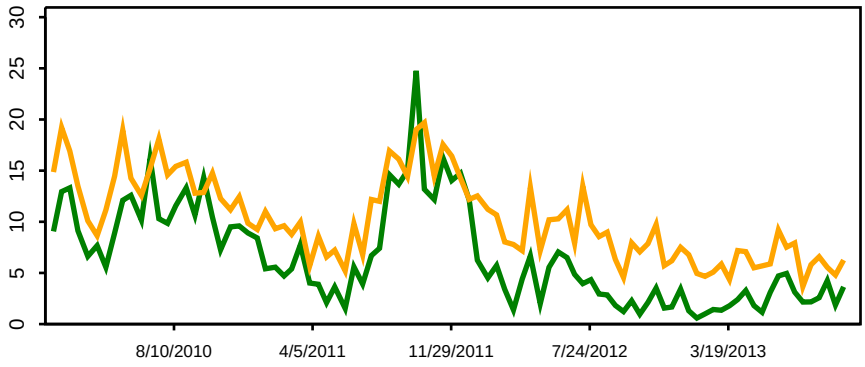
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

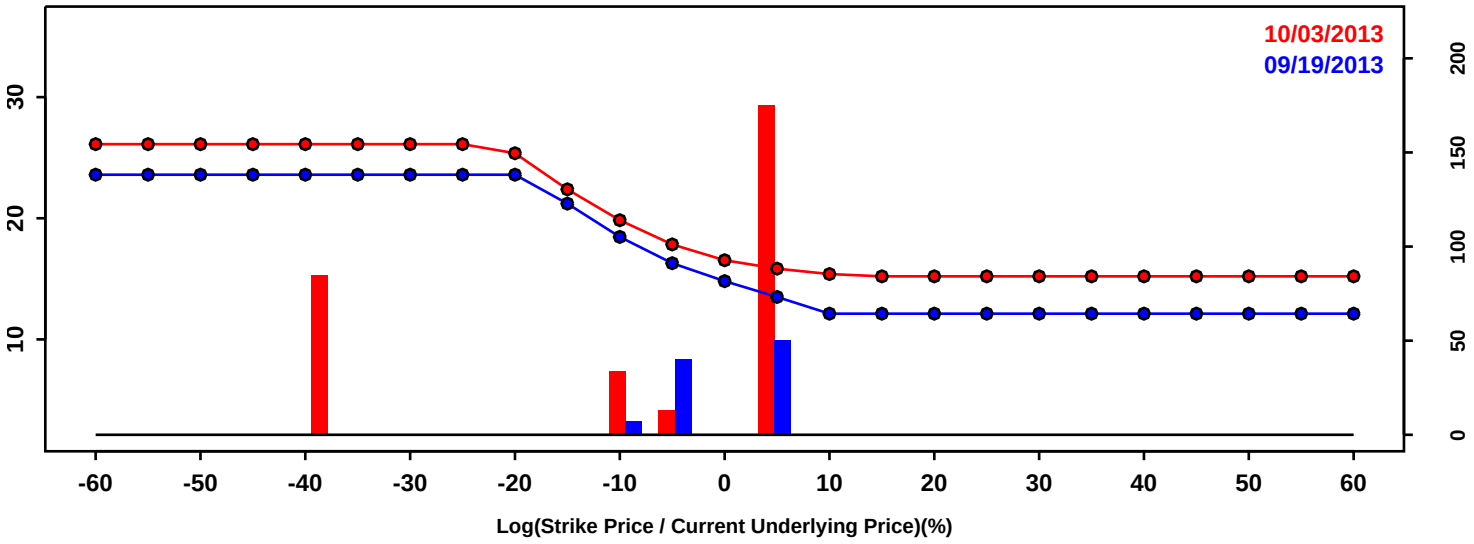
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-14.15%	-16.43%	-2.29%
50th Pct	0.95%	0.78%	-0.18%
90th Pct	12.97%	14.46%	1.49%
Mean	0.03%	-0.14%	-0.17%
Std Dev	10.94%	12.26%	1.33%
Skew	-0.56	-0.32	0.24
Kurtosis	0.74	0.17	-0.57

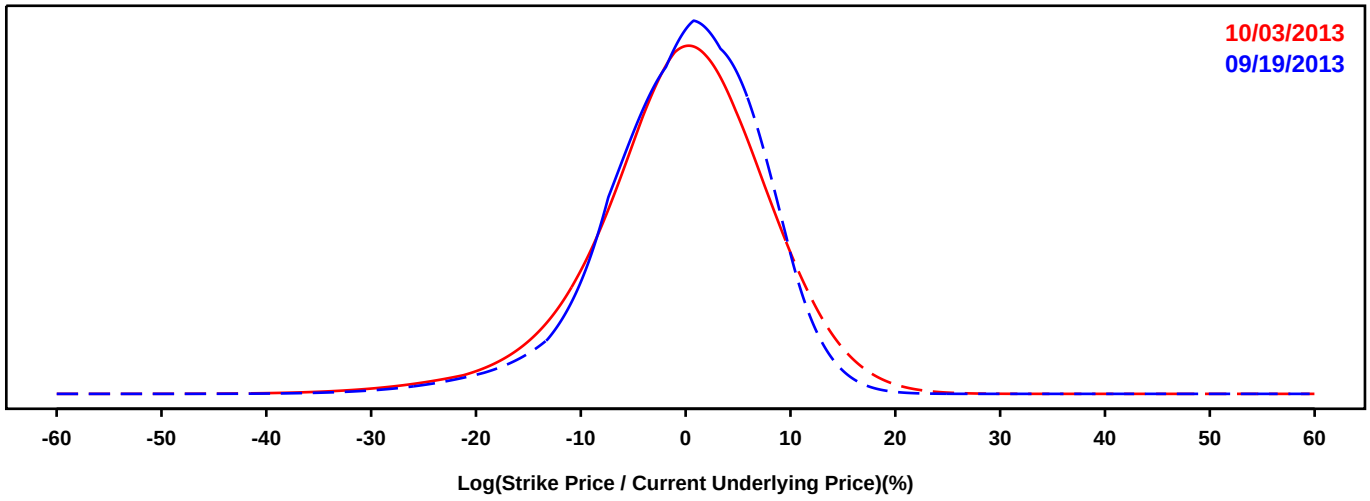
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- US BANCORP

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

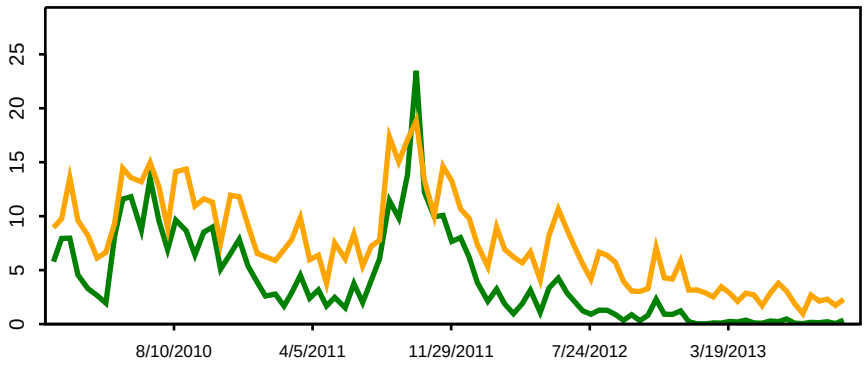
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

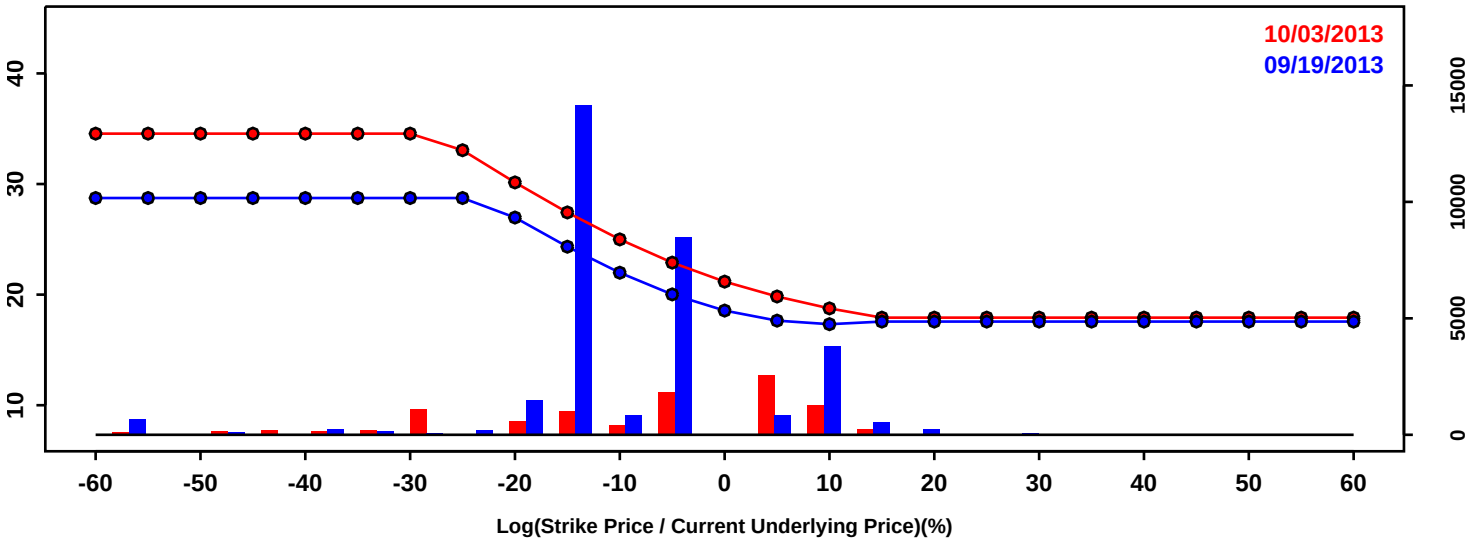
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-9.51%	-10.81%	-1.30%
50th Pct	0.31%	0.05%	-0.26%
90th Pct	8.52%	9.56%	1.04%
Mean	-0.30%	-0.43%	-0.13%
Std Dev	7.52%	8.41%	0.89%
Skew	-0.72	-0.58	0.14
Kurtosis	1.37	1.31	-0.06

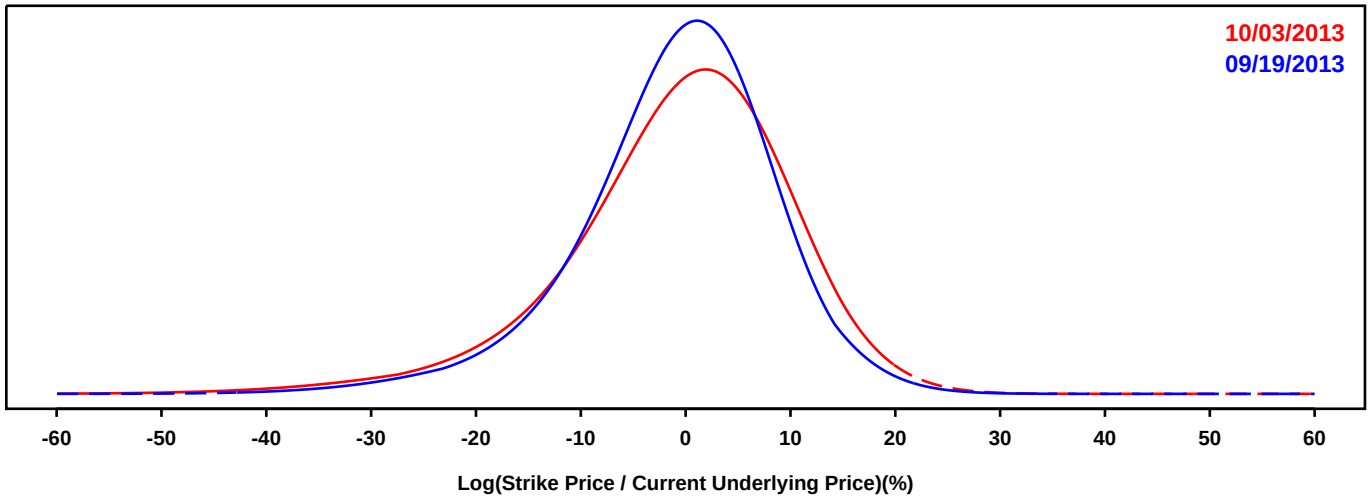
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- WELLS FARGO

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

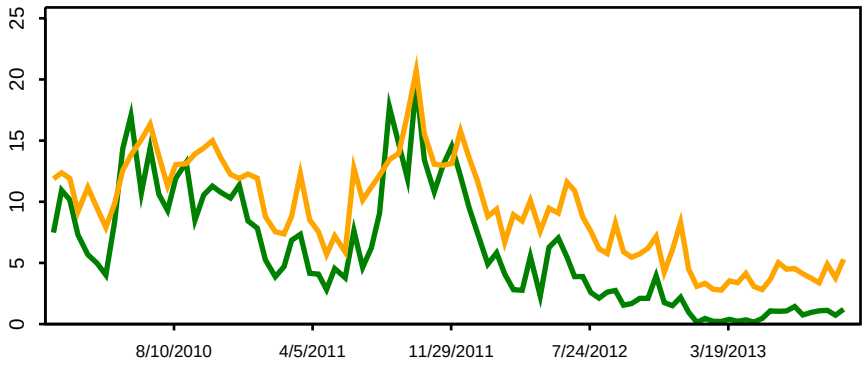
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

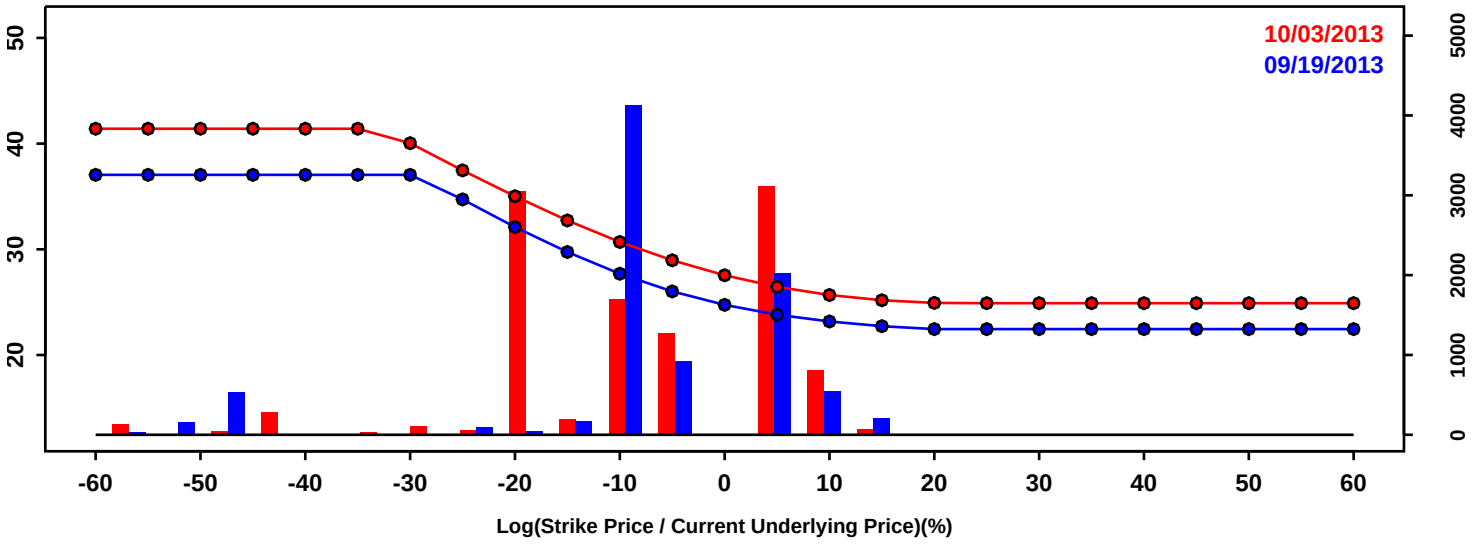
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-12.89%	-14.55%	-1.65%
50th Pct	-0.08%	0.37%	0.45%
90th Pct	9.99%	11.73%	1.75%
Mean	-0.93%	-0.74%	0.18%
Std Dev	9.52%	10.94%	1.42%
Skew	-0.67	-0.81	-0.15
Kurtosis	1.38	1.61	0.22

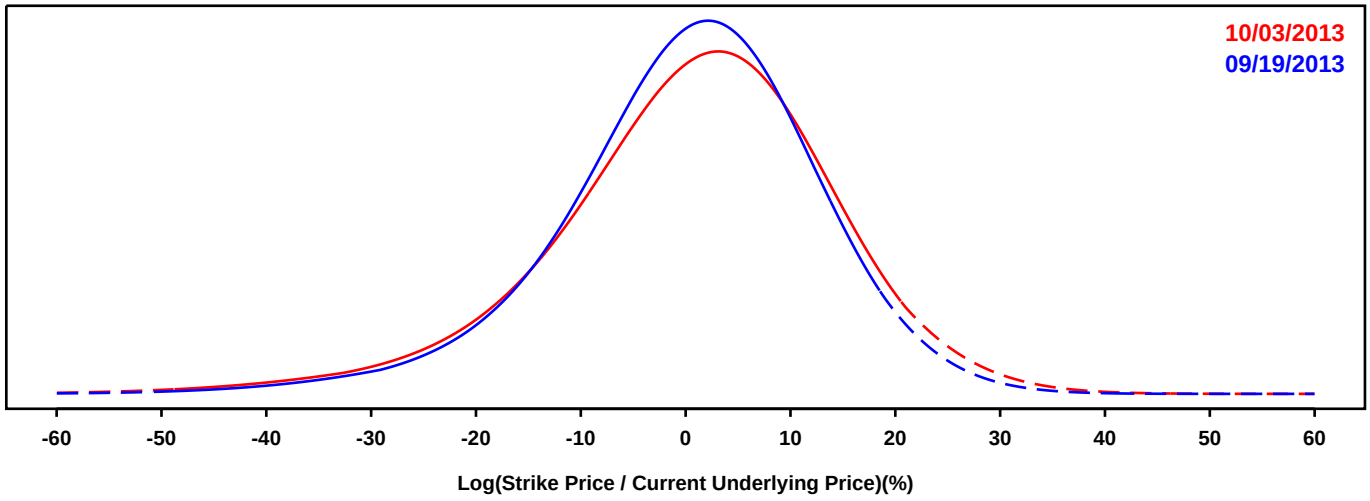
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- AIG

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

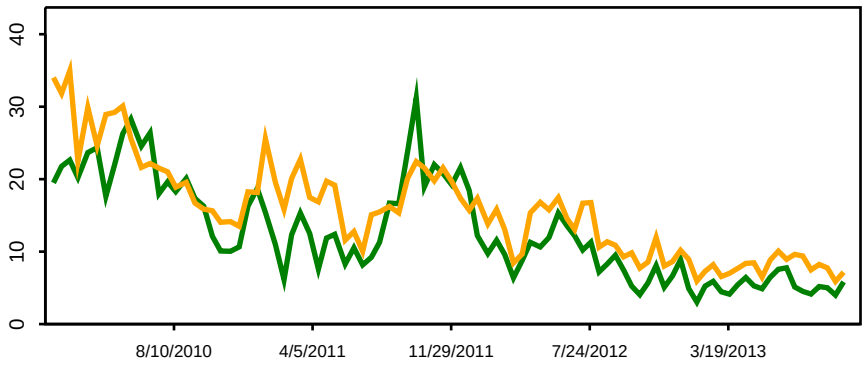
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

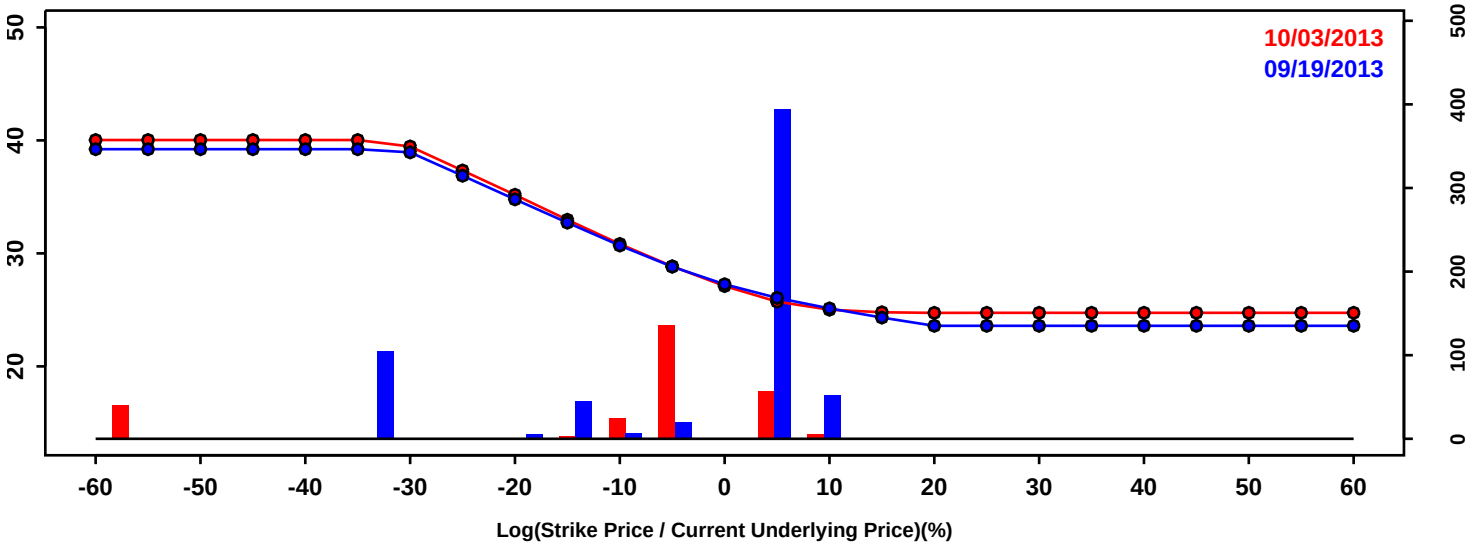
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-15.28%	-16.65%	-1.37%
50th Pct	1.07%	1.61%	0.55%
90th Pct	14.93%	16.56%	1.63%
Mean	0.25%	0.57%	0.32%
Std Dev	12.41%	13.72%	1.30%
Skew	-0.56	-0.61	-0.05
Kurtosis	1.13	1.23	0.09

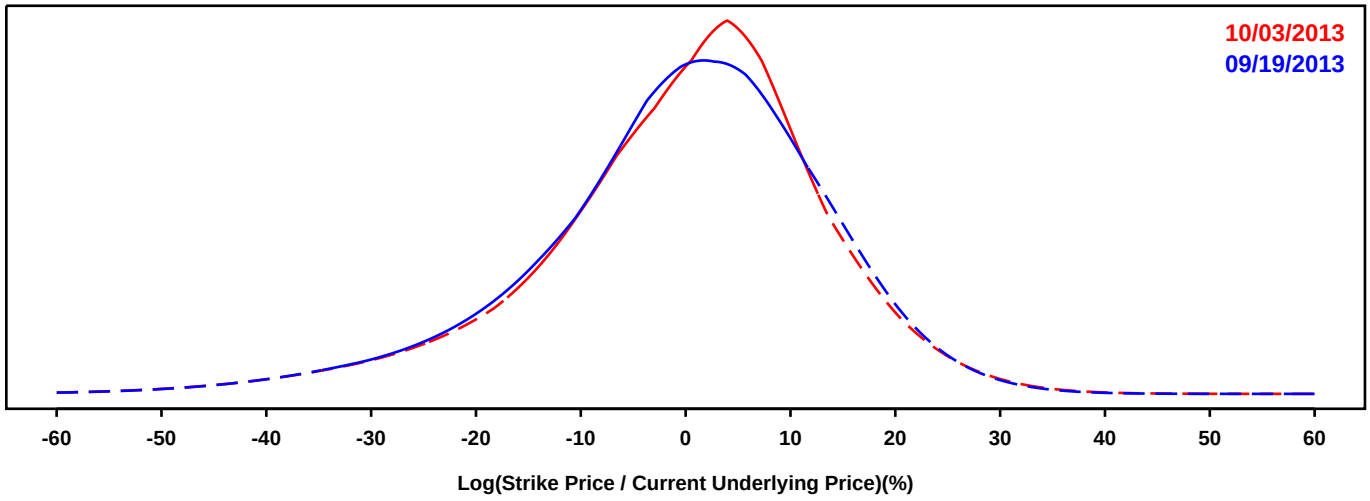
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- HARTFORD FINANCIAL

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

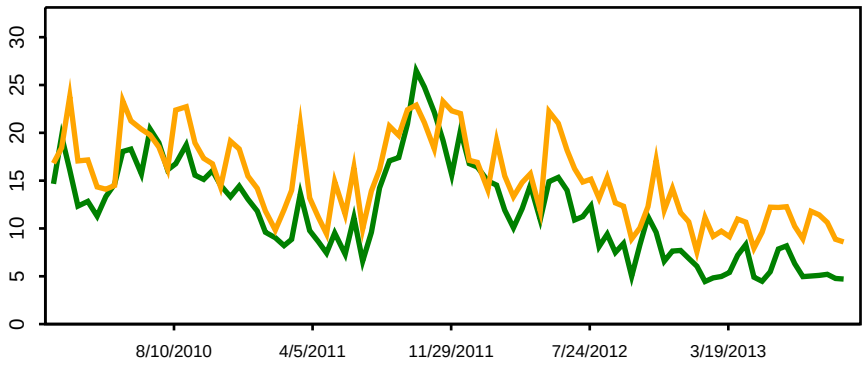
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

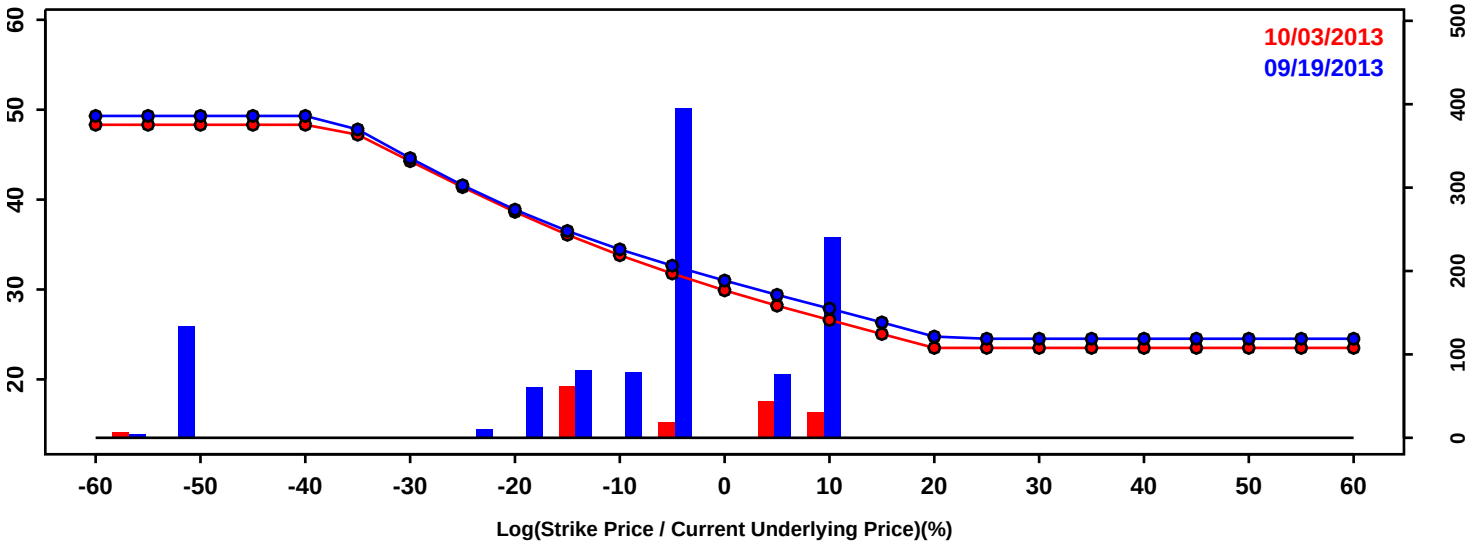
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-18.64%	-18.23%	0.41%
50th Pct	0.75%	1.24%	0.49%
90th Pct	15.68%	15.25%	-0.43%
Mean	-0.57%	-0.41%	0.15%
Std Dev	13.99%	13.87%	-0.12%
Skew	-0.68	-0.73	-0.05
Kurtosis	1.11	1.36	0.25

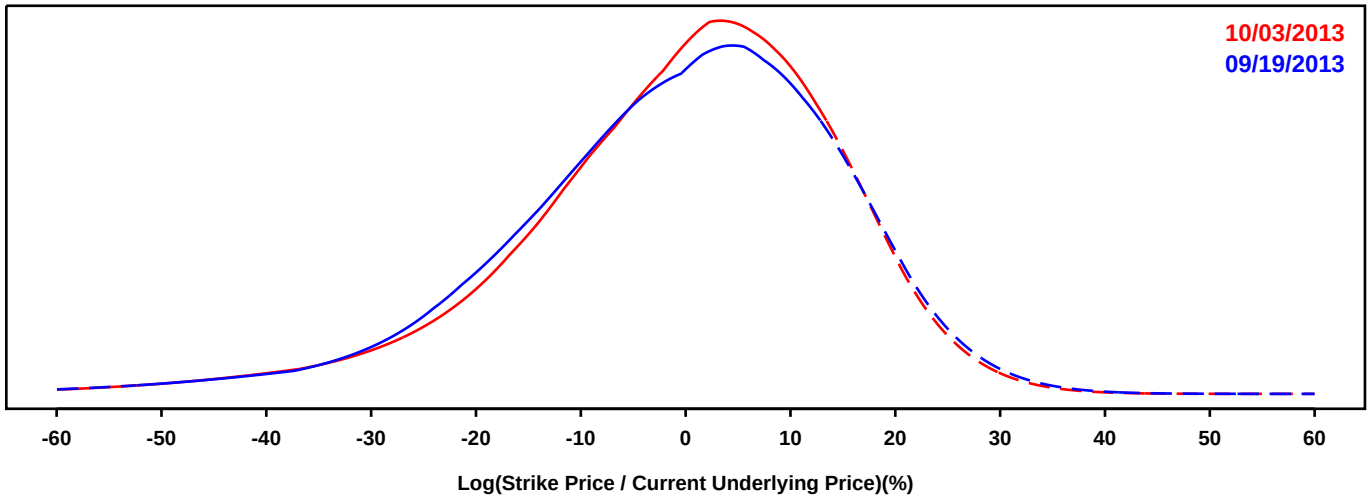
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- LINCOLN NATIONAL

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

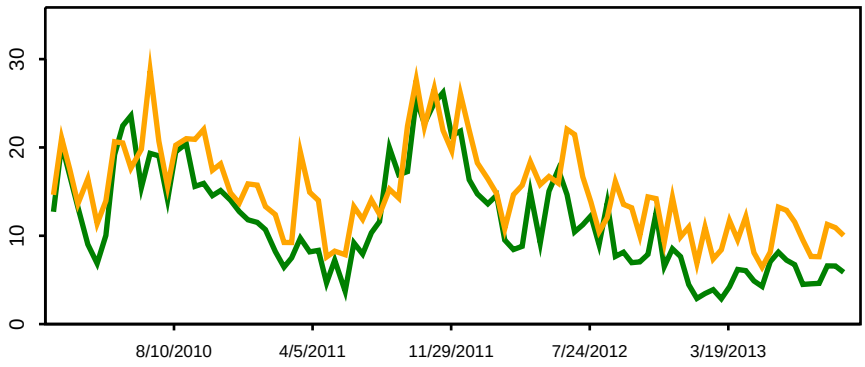
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



Decrease <= -20% Increase >= 20%

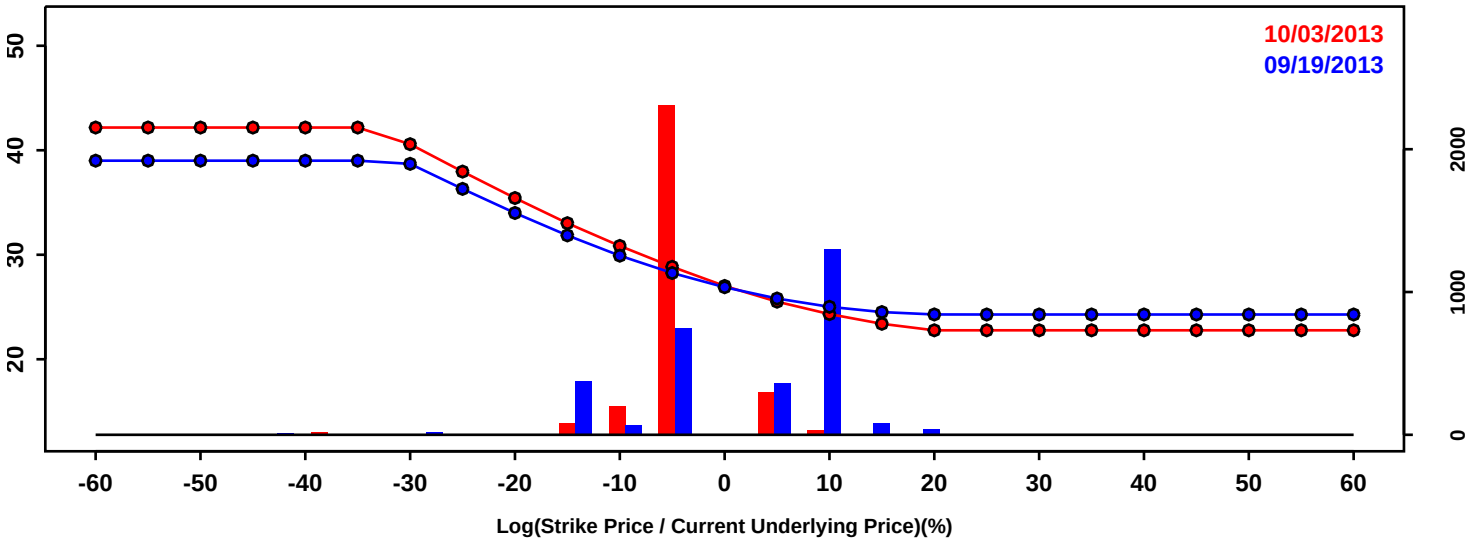
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-20.97%	-20.04%	0.94%
50th Pct	0.89%	1.36%	0.47%
90th Pct	17.46%	16.95%	-0.51%
Mean	-0.84%	-0.52%	0.32%
Std Dev	15.84%	15.41%	-0.43%
Skew	-0.78	-0.88	-0.10
Kurtosis	1.38	1.63	0.25

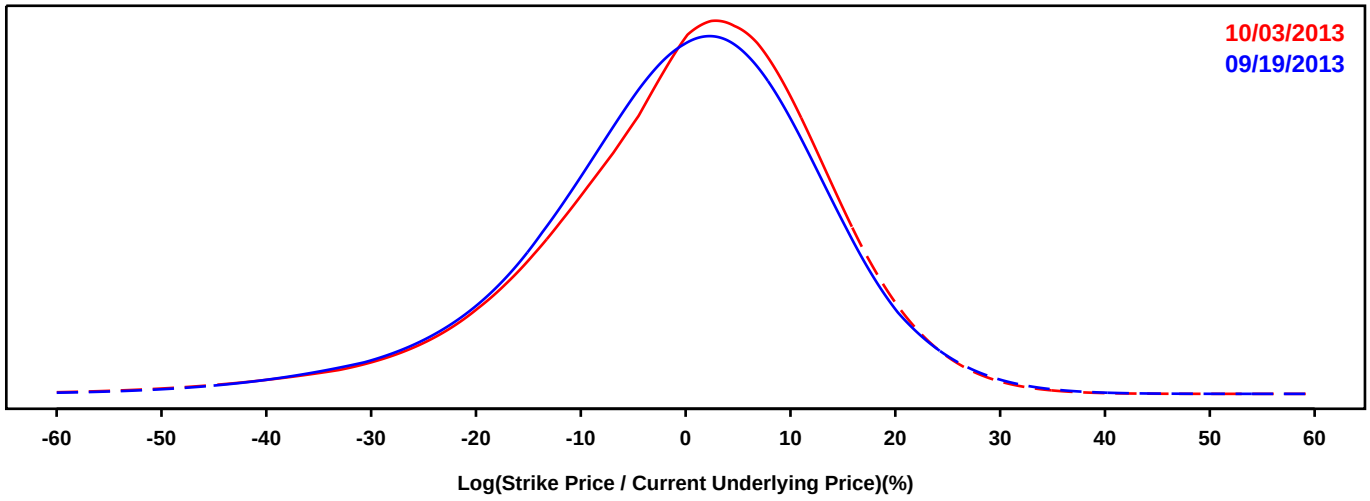
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- METLIFE

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

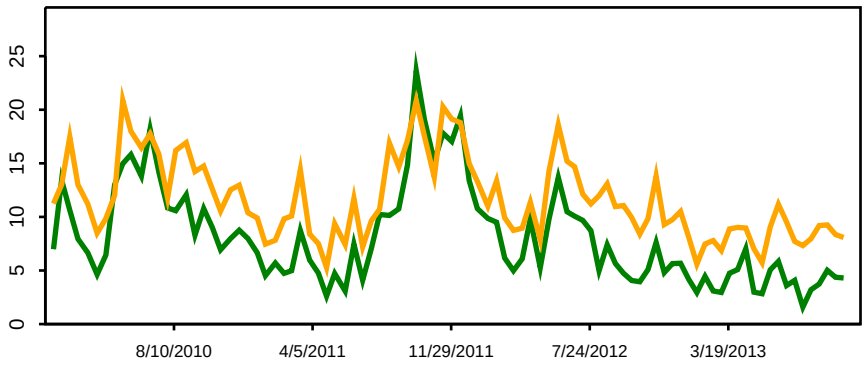
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



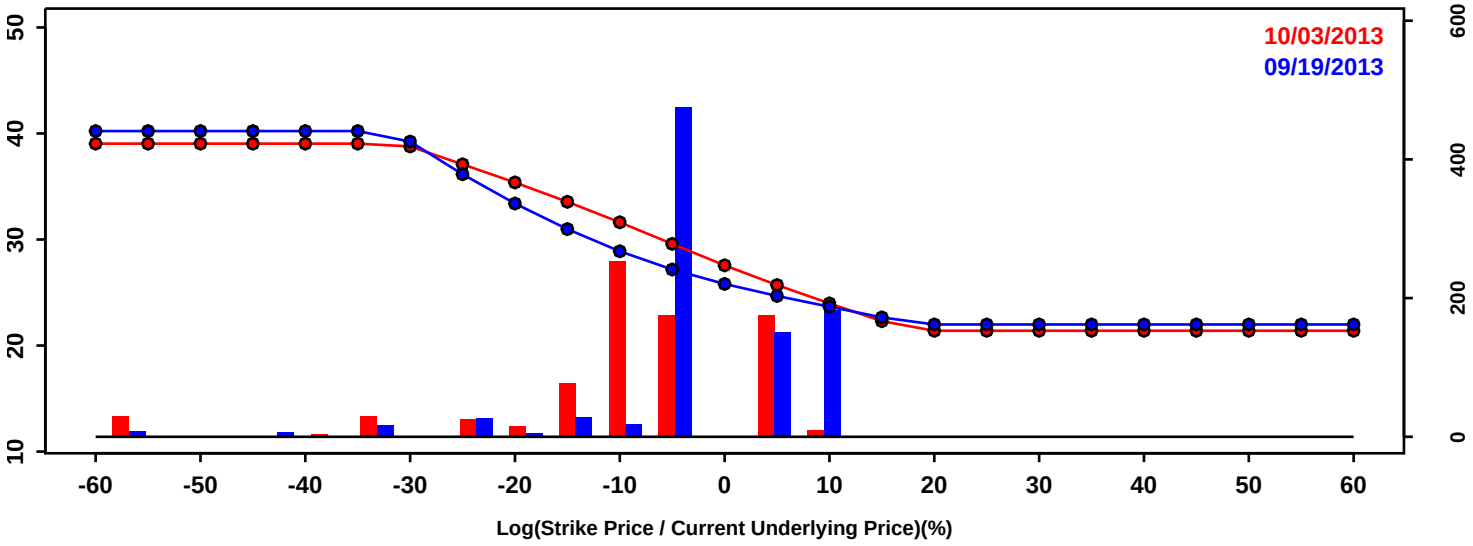
Statistics of the Log Return Distributions

	09/19/2013	10/03/2013	Change
10th Pct	-18.16%	-17.78%	0.38%
50th Pct	0.40%	1.24%	0.84%
90th Pct	15.08%	15.29%	0.22%
Mean	-0.78%	-0.28%	0.50%
Std Dev	13.66%	13.71%	0.05%
Skew	-0.62	-0.79	-0.17
Kurtosis	1.10	1.46	0.37

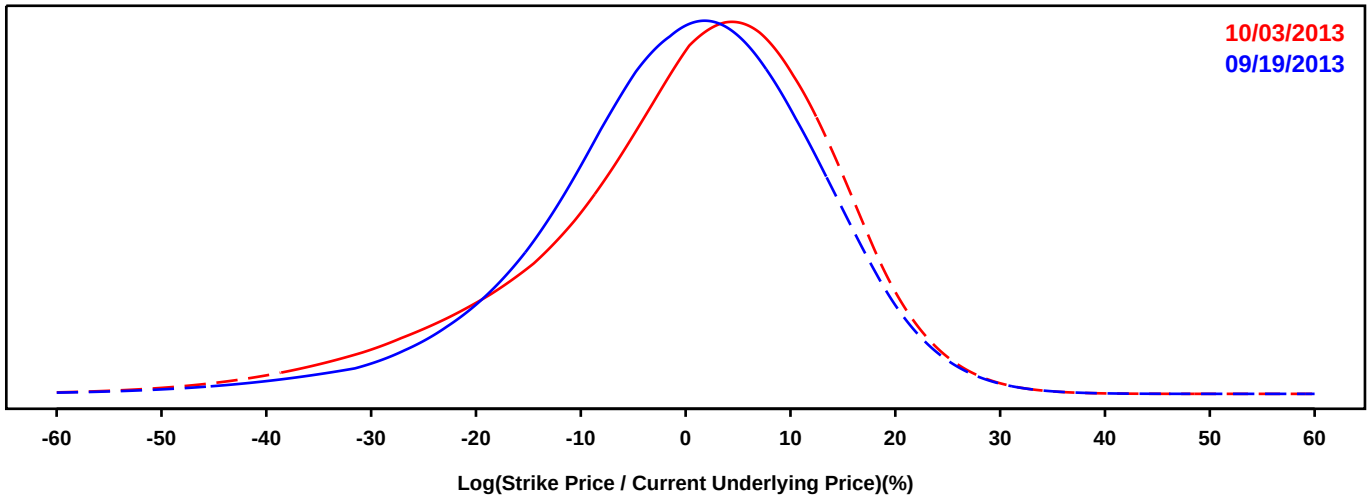
RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- PRUDENTIAL

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

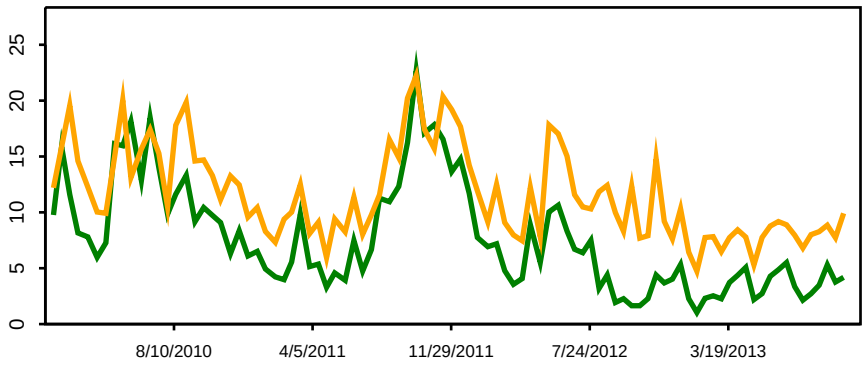
Implied Volatilities (lines--left axis) and Volume (bars--right axis)



Risk Neutral PDF of the Log Return Distribution



Probability of a Large Change



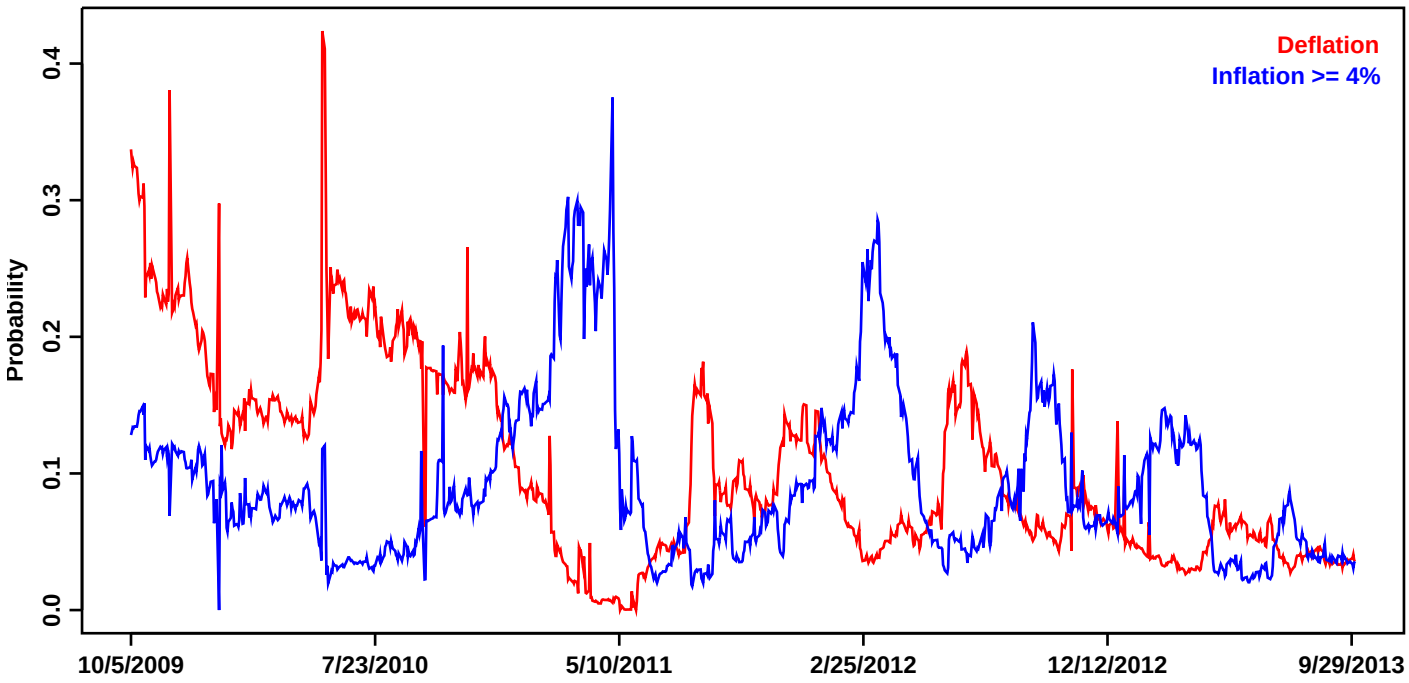
Decrease <= -20% Increase >= 20%

Statistics of the Log Return Distributions

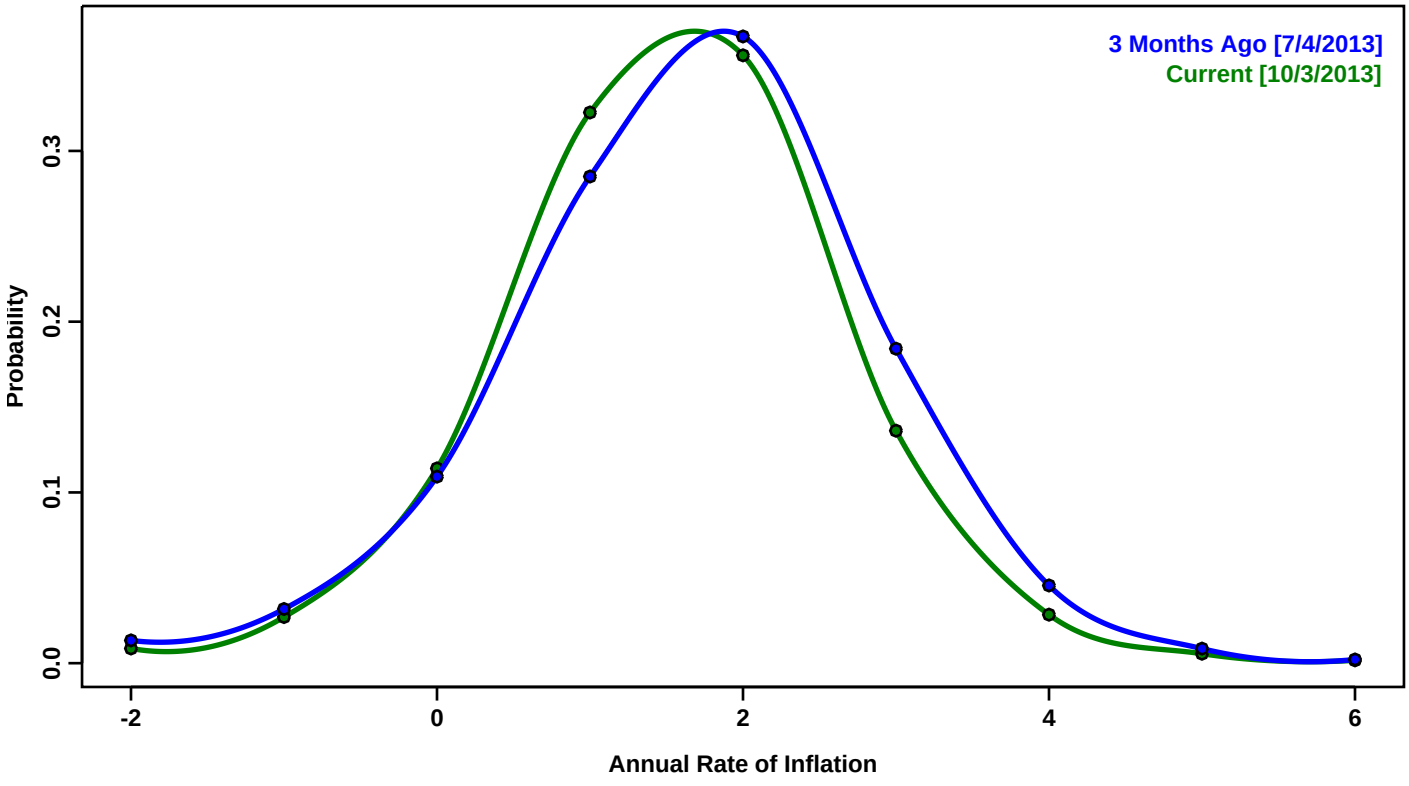
	09/19/2013	10/03/2013	Change
10th Pct	-17.47%	-19.90%	-2.42%
50th Pct	0.35%	1.72%	1.36%
90th Pct	14.85%	15.63%	0.78%
Mean	-0.73%	-0.38%	0.35%
Std Dev	13.26%	14.32%	1.06%
Skew	-0.68	-0.83	-0.15
Kurtosis	1.23	1.03	-0.21

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