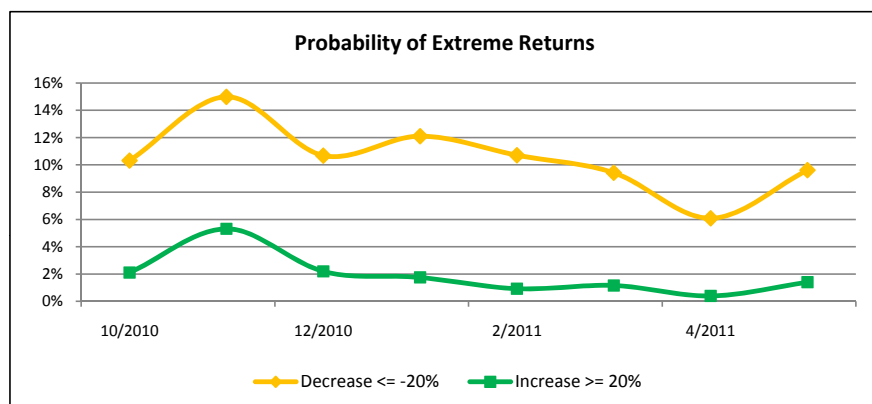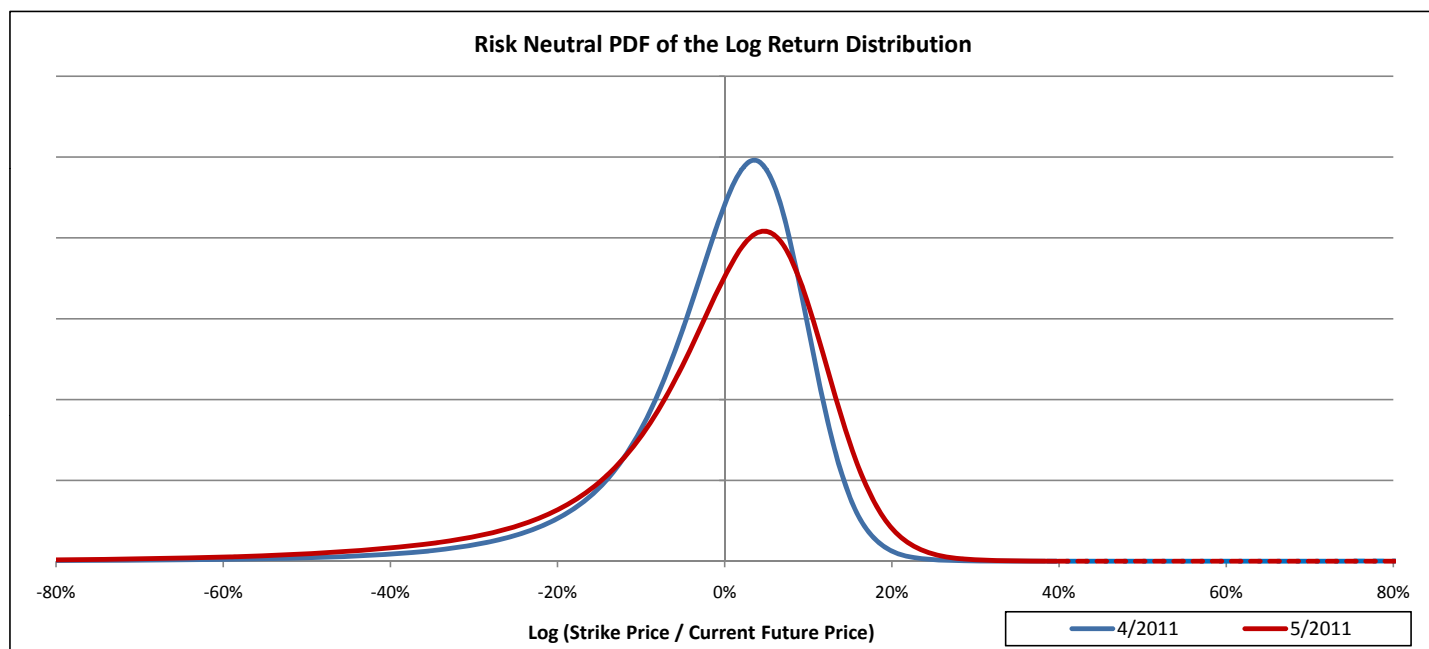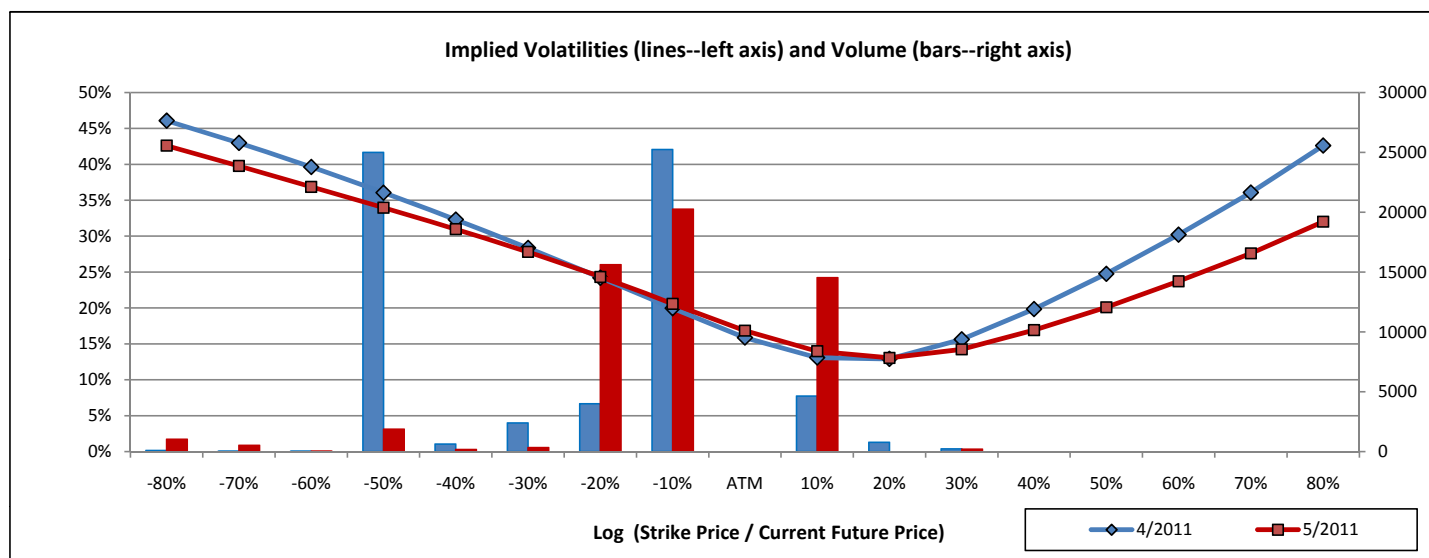# RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- S&P 500

*Log returns are based on the risk neutral density function
derived from options that expire in approximately six months.*
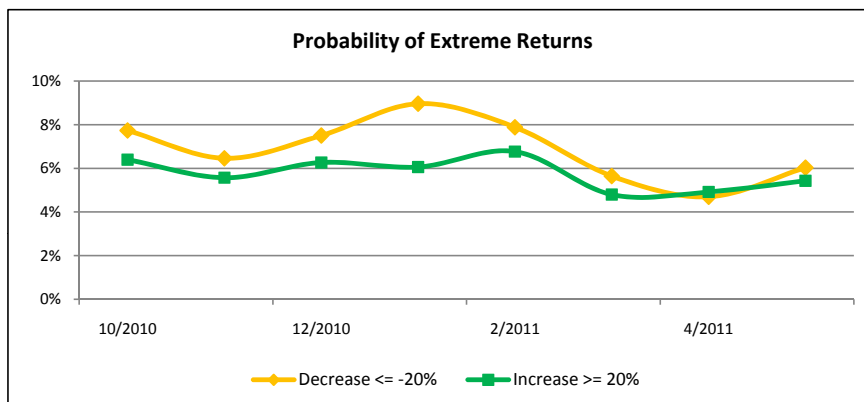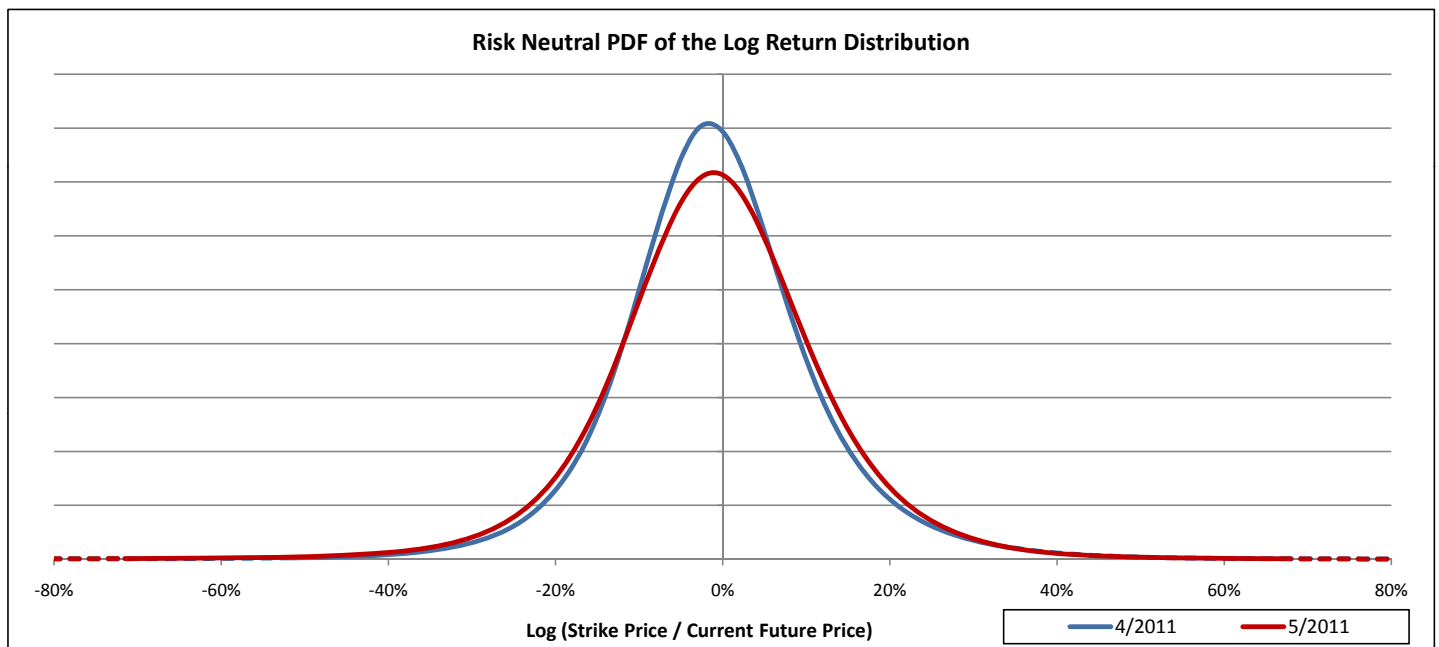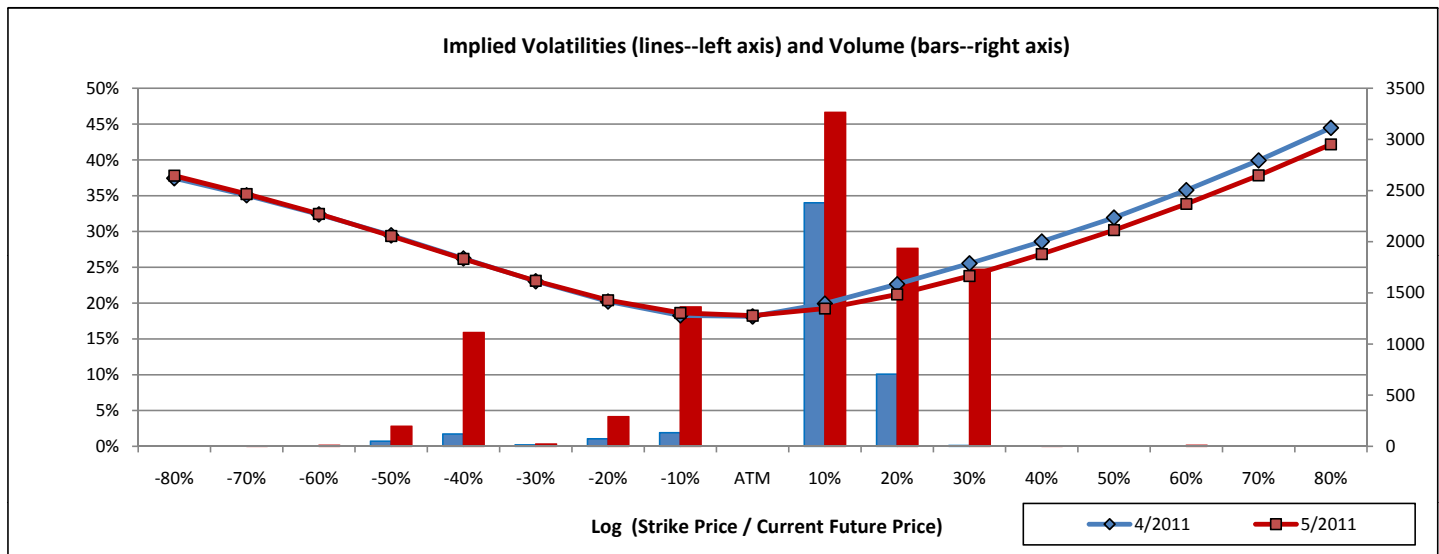
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Log (Strike Price / Current Future Price)

4/2011   5/2011

Risk Neutral PDF of the Log Return Distribution

Log (Strike Price / Current Future Price)

4/2011   5/2011

Probability of Extreme Returns

Decrease <= -20%   Increase >= 20%

Statistics of the Log Return Distributions

	4/2011	5/2011	Change
10th Pct	-14.58%	-19.40%	-4.8%
50th Pct	1.03%	1.52%	0.5%
90th Pct	10.38%	12.83%	2.4%
Mean	-1.10%	-1.70%	-0.6%
Std Dev	12.25%	15.57%	3.3%
Skew	-2.33	-2.25	0.08
Kurtosis	13.30	9.66	-3.64

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- GOLD FUTURES

Log returns are based on the risk neutral density function of the front month futures contract derived from options that expire in approximately six months.

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

Log (Strike Price / Current Future Price)

4/2011 ◆ 5/2011 ■

Risk Neutral PDF of the Log Return Distribution

Log (Strike Price / Current Future Price)

4/2011 5/2011

Probability of Extreme Returns

Decrease <= -20%   Increase >= 20%

Statistics of the Log Return Distributions

	4/2011	5/2011	Change
10th Pct	-14.60%	-16.00%	-1.40%
50th Pct	-1.11%	-0.70%	0.40%
90th Pct	13.95%	15.11%	1.16%
Mean	-0.63%	-0.62%	0.02%
Std Dev	12.53%	13.41%	0.88%
Skew	0.19	-0.05	-0.24
Kurtosis	3.17	2.75	-0.42

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SILVER FUTURES

Log returns are based on the risk neutral density function of the front month futures contract derived from options that expire in approximately six months.
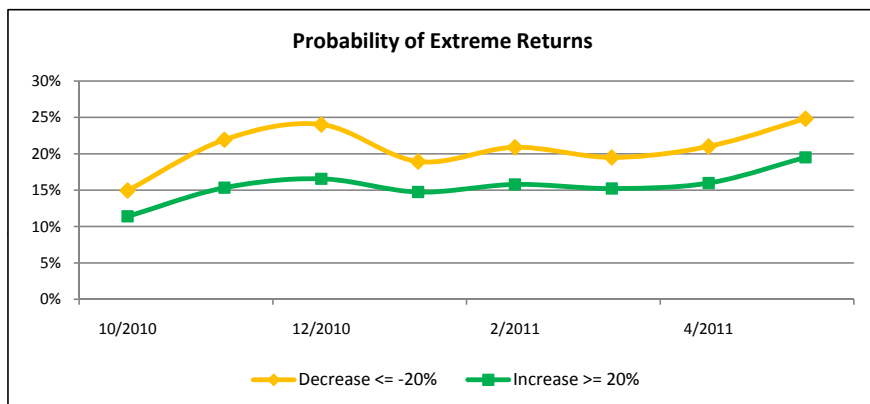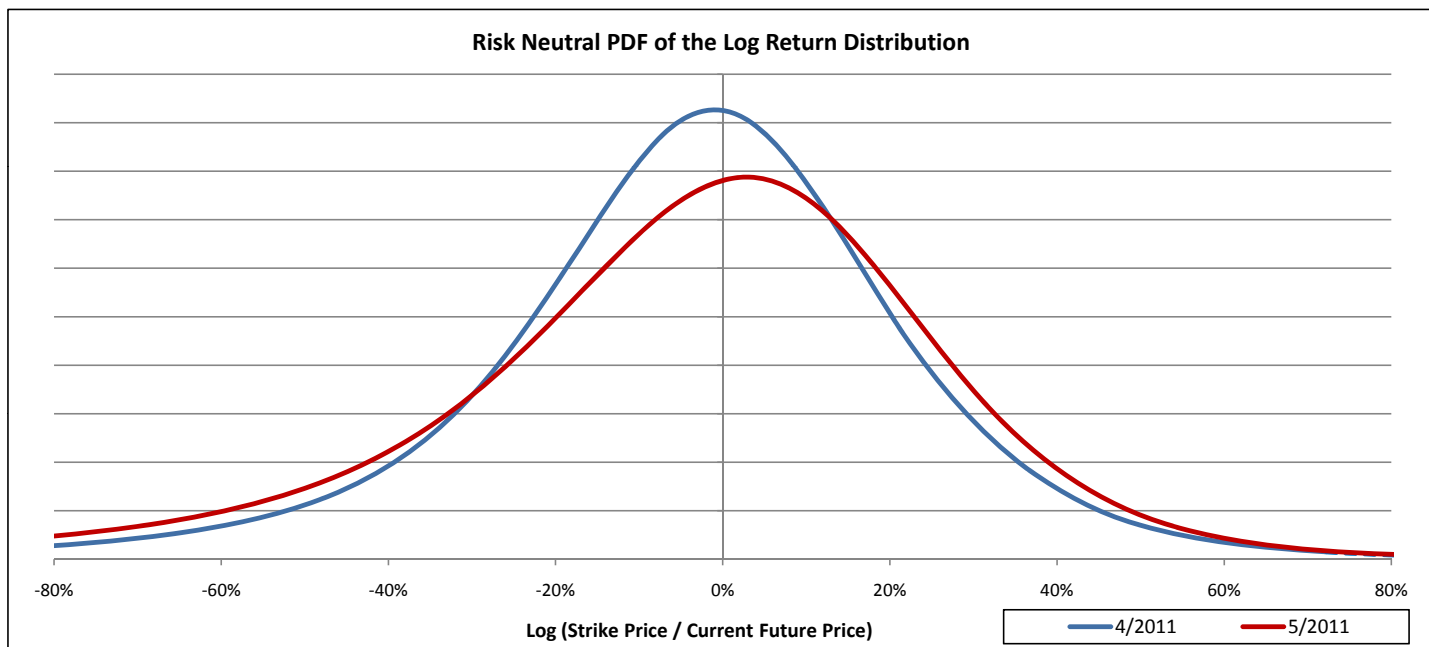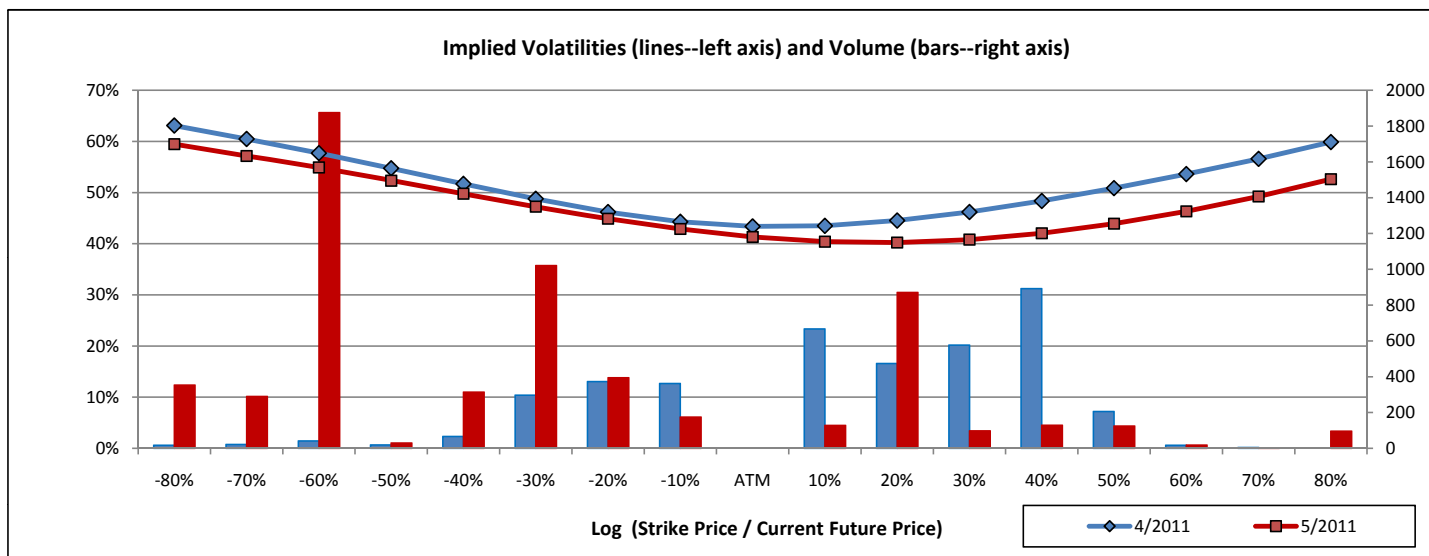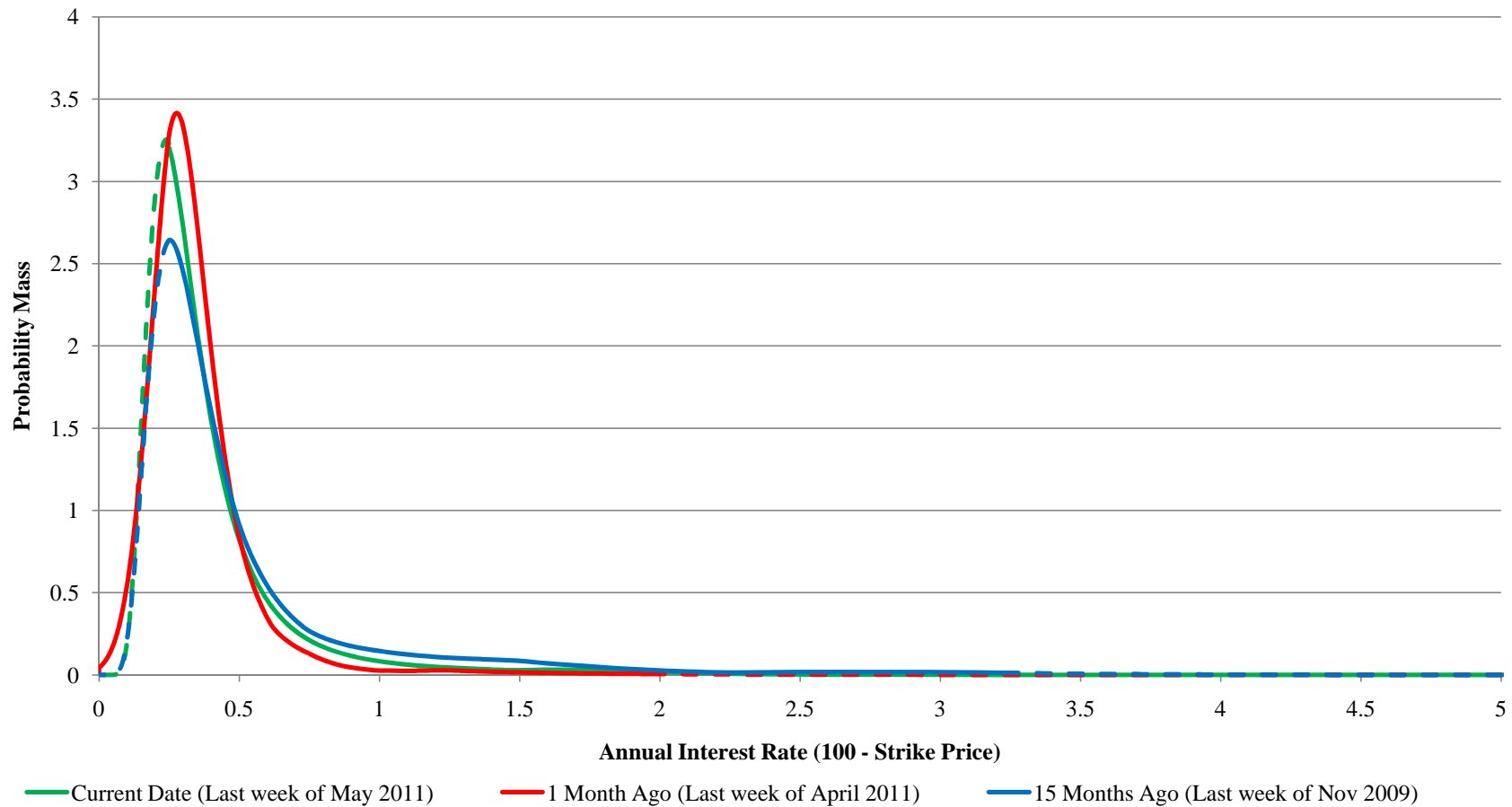
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Log (Strike Price / Current Future Price)

◆ 4/2011　　■ 5/2011

Risk Neutral PDF of the Log Return Distribution

Log (Strike Price / Current Future Price)

—— 4/2011　　—— 5/2011

Probability of Extreme Returns

—◆— Decrease <= -20%　　—■— Increase >= 20%

Statistics of the Log Return Distributions

	4/2011	5/2011	Change
10th Pct	-33.80%	-43.16%	-9.4%
50th Pct	-1.71%	-0.87%	0.8%
90th Pct	28.29%	31.11%	2.8%
Mean	-2.64%	-4.12%	-1.5%
Std Dev	25.24%	30.63%	5.4%
Skew	-0.24	-0.75	-0.50
Kurtosis	0.99	1.41	0.43

Risk-Neutral Density Function--Eurodollar Interest Rate Futures Contract in '6 Months'

Annual Interest Rate (100 - Strike Price)

— Current Date (Last week of May 2011)　　— 1 Month Ago (Last week of April 2011)　　— 15 Months Ago (Last week of Nov 2009)
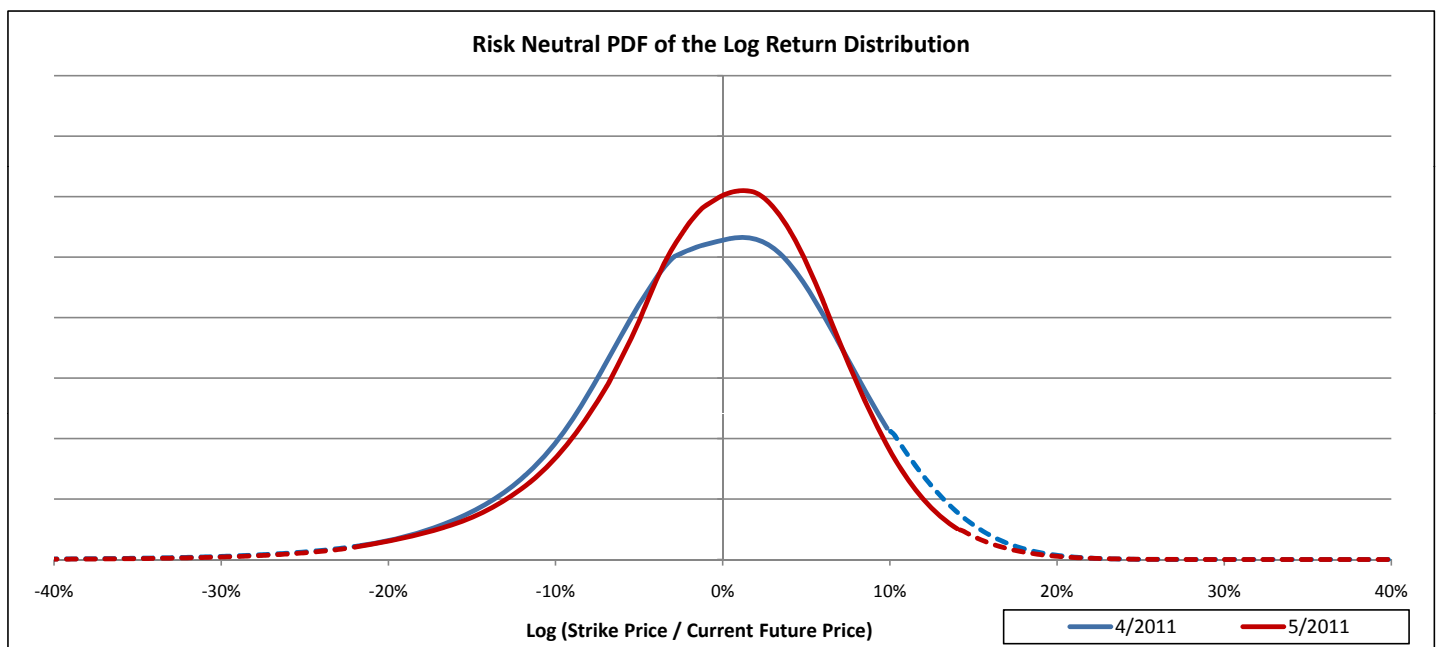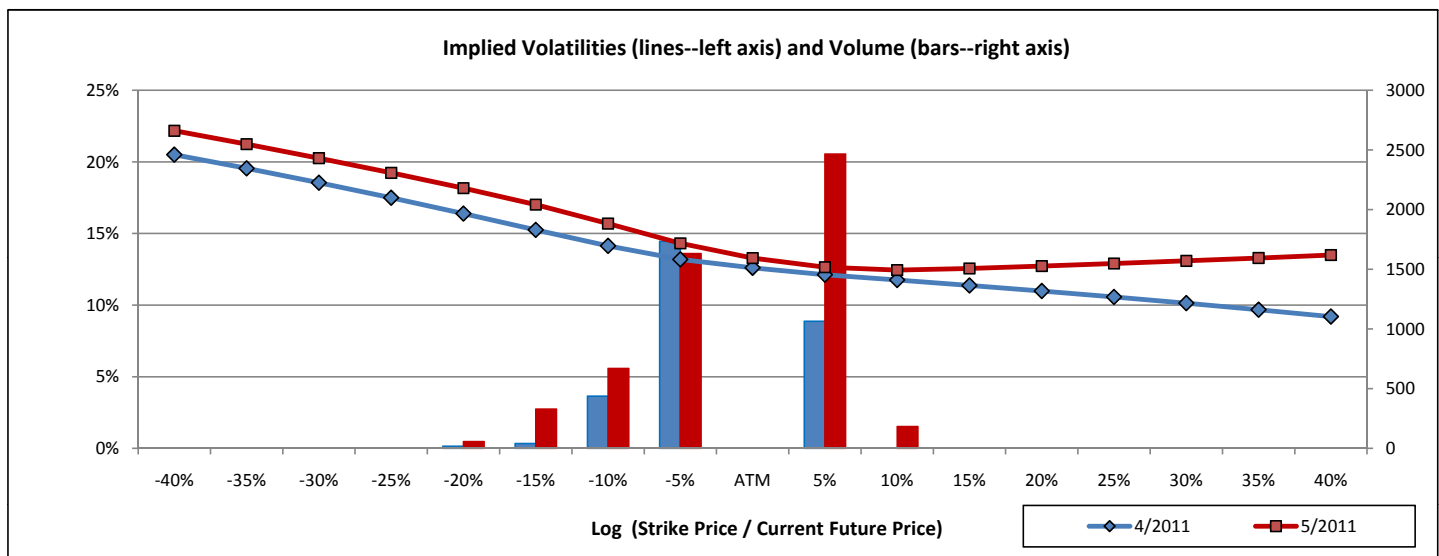
Percentiles of the Distributions

	Current Date (Last week of May 2011)	1 Month Ago (Last week of April 2011)	15 Months Ago (Last week of Nov 2009)
5th	0.94	0.67	1.59
10th	0.67	0.53	1.09
90th	0.18	0.17	0.19
95th	0.16	0.14	0.16

Underlying Asset Statistics (trailing year)

Average	0.86
Minimum	0.43
Maximum	2.15

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

Log returns are based on the risk neutral density function of the front month futures contract derived from options that expire in approximately six months.

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

Log (Strike Price / Current Future Price)

◆ 4/2011   ■ 5/2011

Risk Neutral PDF of the Log Return Distribution

Log (Strike Price / Current Future Price)

— 4/2011   — 5/2011

Statistics of the Log Return Distributions			
	4/2011	5/2011	Change
10th Pct	-10.33%	-9.68%	0.7%
50th Pct	-0.09%	0.15%	0.2%
90th Pct	8.93%	8.15%	-0.8%
Mean	-0.49%	-0.41%	0.1%
Std Dev	7.91%	7.37%	-0.5%
Skew	-0.54	-0.65	-0.12
Kurtosis	1.04	1.39	0.36

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

Log returns are based on the risk neutral density function of the front month futures contract derived from options that expire in approximately six months.
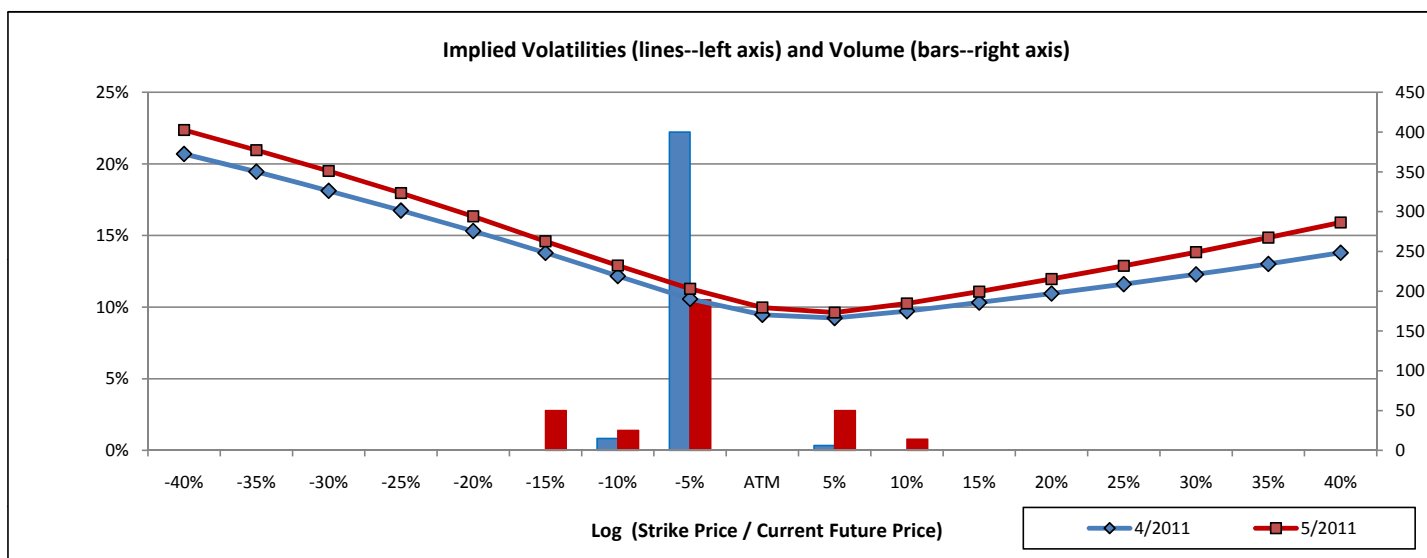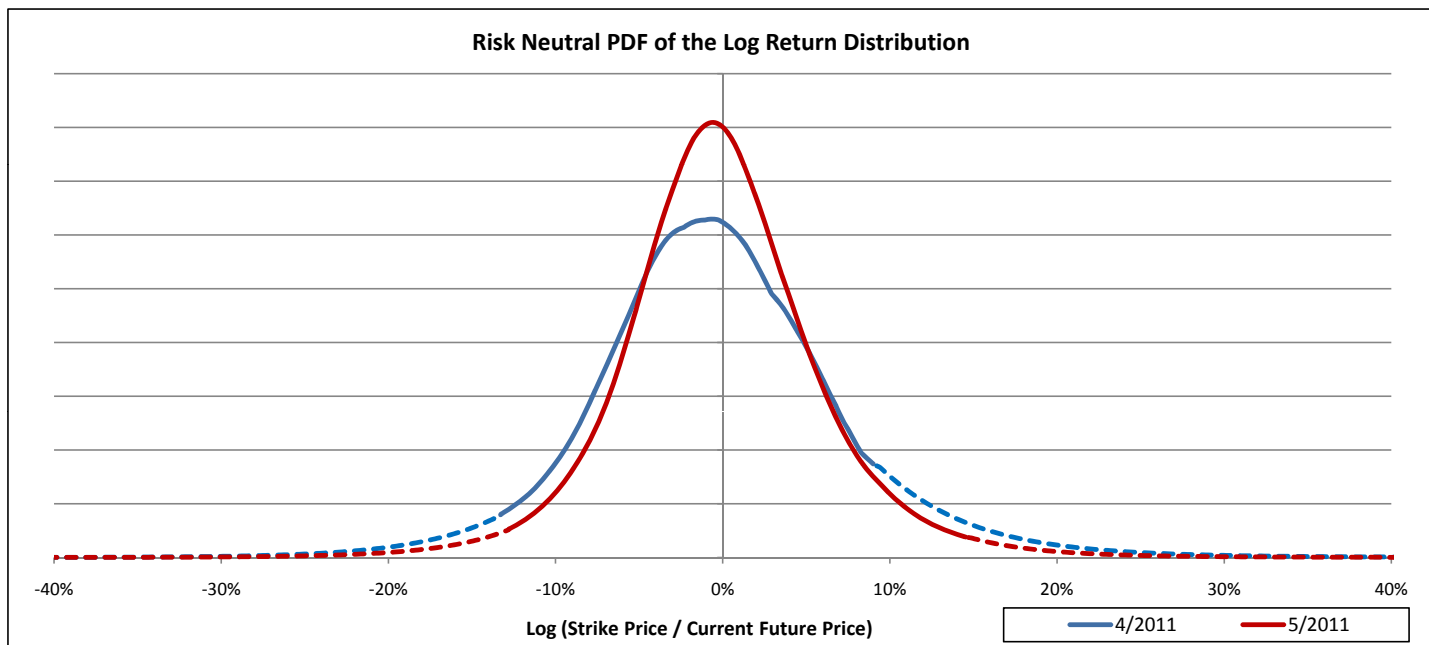

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Risk Neutral PDF of the Log Return Distribution
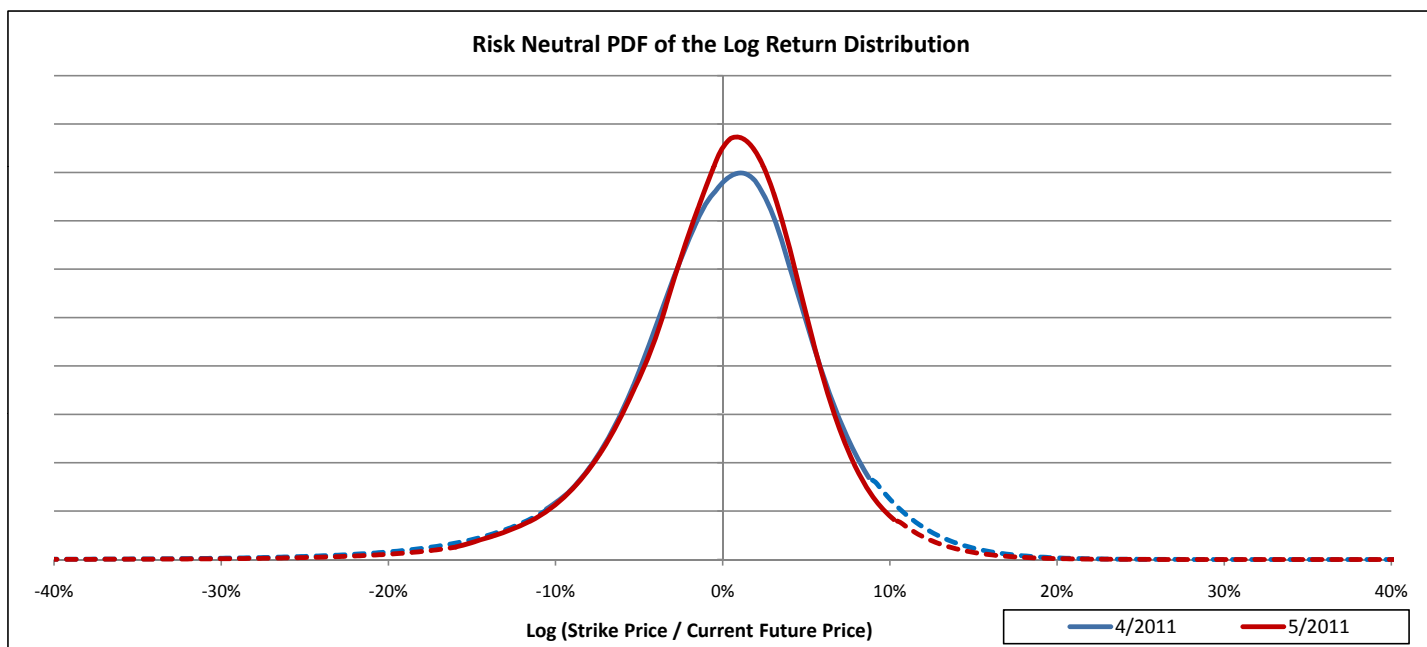
Statistics of the Log Return Distributions			
	4/2011	5/2011	Change
10th Pct	-7.38%	-6.98%	0.4%
50th Pct	0.31%	0.36%	0.1%
90th Pct	6.79%	6.19%	-0.6%
Mean	-0.10%	-0.09%	0.0%
Std Dev	6.22%	5.68%	-0.5%
Skew	-0.76	-0.75	0.01
Kurtosis	2.91	2.79	-0.12

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

Log returns are based on the risk neutral density function of the front month futures contract derived from options that expire in approximately six months.
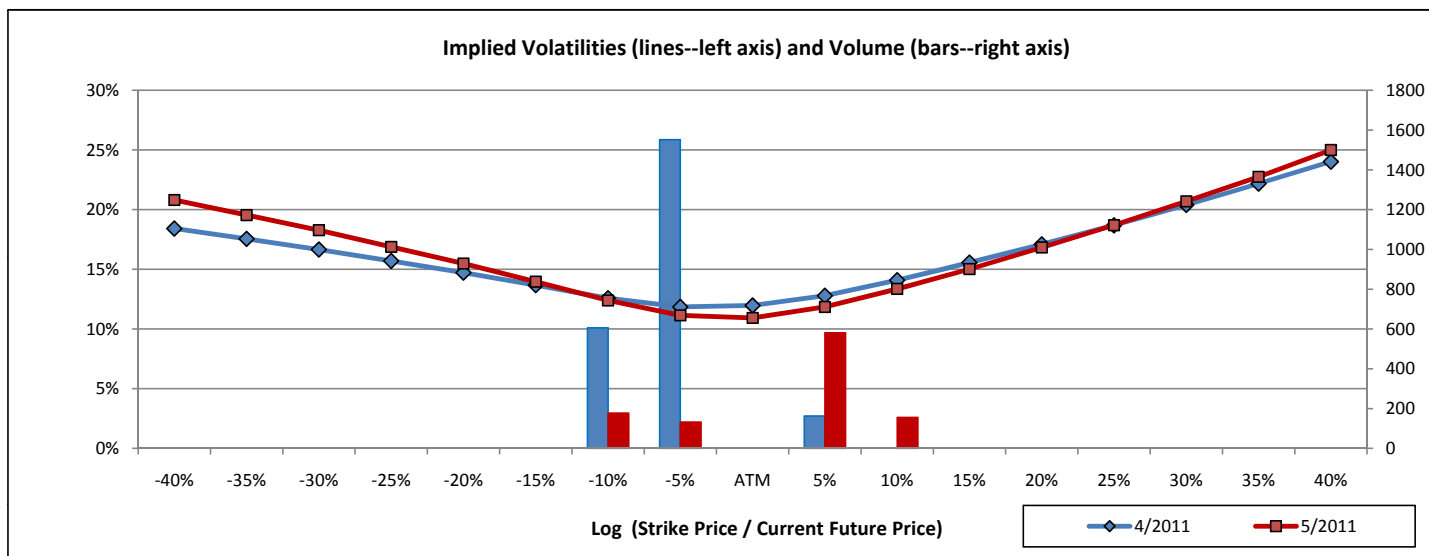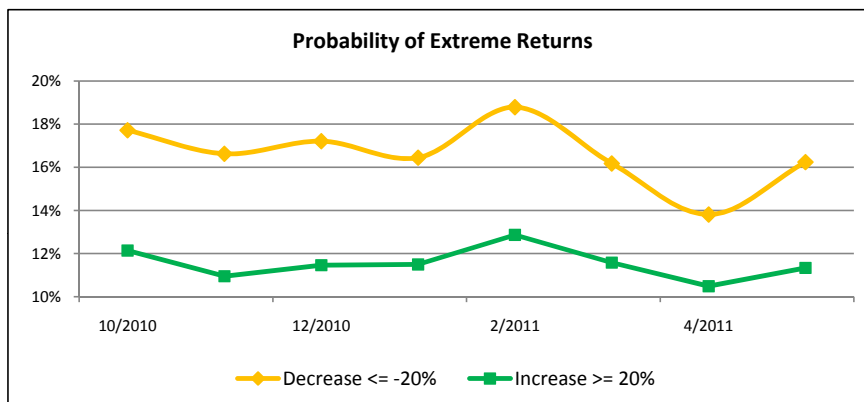
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Log (Strike Price / Current Future Price)

4/2011   5/2011

Risk Neutral PDF of the Log Return Distribution

Log (Strike Price / Current Future Price)

4/2011   5/2011

Statistics of the Log Return Distributions			
	4/2011	5/2011	Change
10th Pct	-8.86%	-7.07%	1.8%
50th Pct	-0.59%	-0.35%	0.2%
90th Pct	8.79%	7.09%	-1.7%
Mean	-0.23%	-0.14%	0.1%
Std Dev	7.67%	6.18%	-1.5%
Skew	0.32	0.20	-0.12
Kurtosis	2.08	2.80	0.72

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CRUDE OIL FUTURES

Log returns are based on the risk neutral density function of the front month futures contract derived from options that expire in approximately six months.
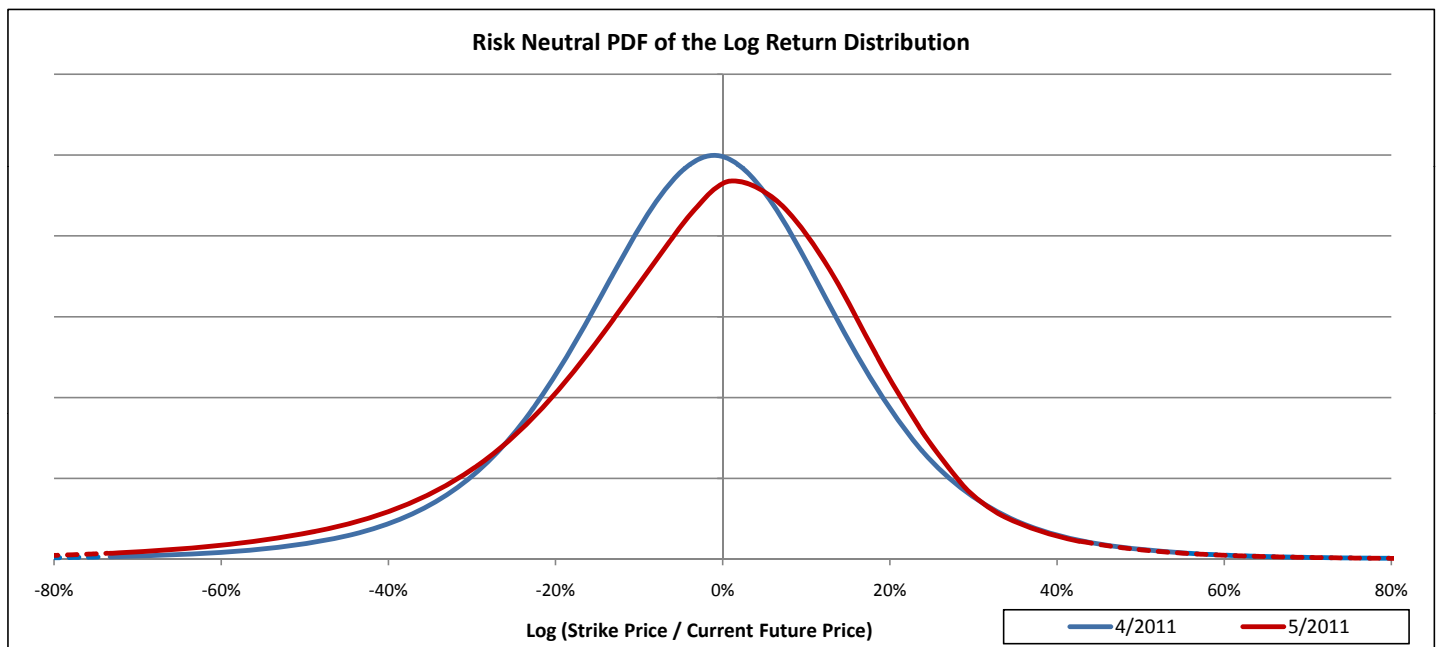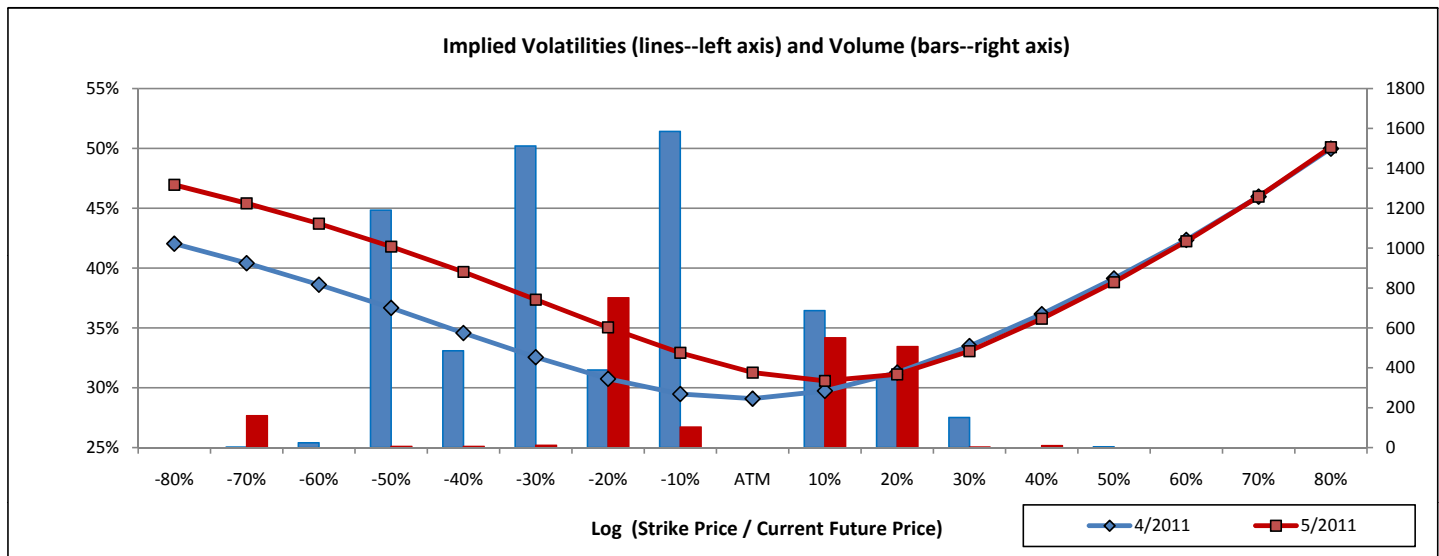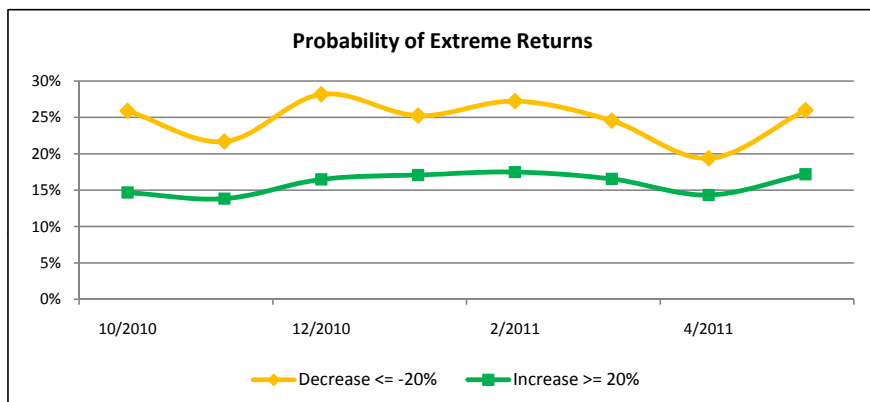
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Log (Strike Price / Current Future Price)

4/2011   5/2011

Risk Neutral PDF of the Log Return Distribution

Log (Strike Price / Current Future Price)

4/2011   5/2011

Probability of Extreme Returns

Decrease <= -20%   Increase >= 20%

Statistics of the Log Return Distributions

	4/2011	5/2011	Change
10th Pct	-24.03%	-27.69%	-3.67%
50th Pct	-1.45%	-0.18%	1.27%
90th Pct	20.62%	21.48%	0.86%
Mean	-1.56%	-1.79%	-0.23%
Std Dev	18.62%	20.40%	1.79%
Skew	-0.08	-0.44	-0.36
Kurtosis	1.27	1.19	-0.08

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- WHEAT FUTURES

Log returns are based on the risk neutral density function of the front month futures contract derived from options that expire in approximately six months.
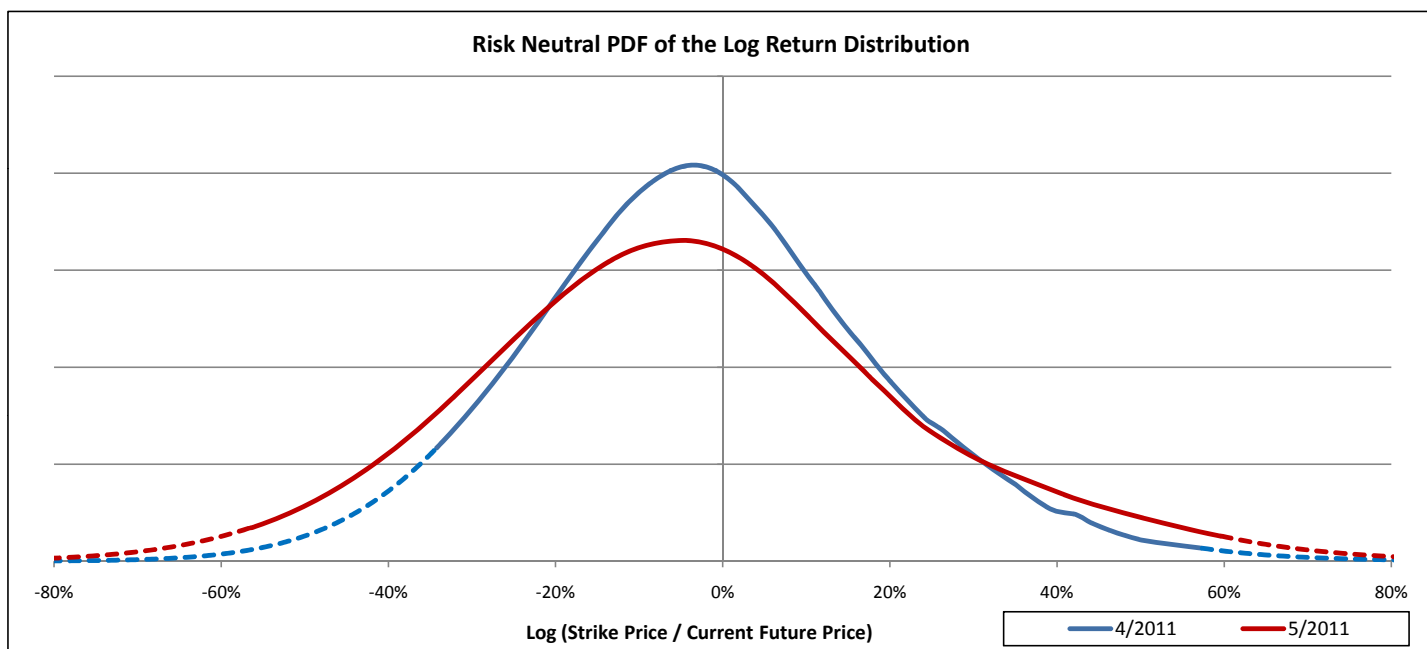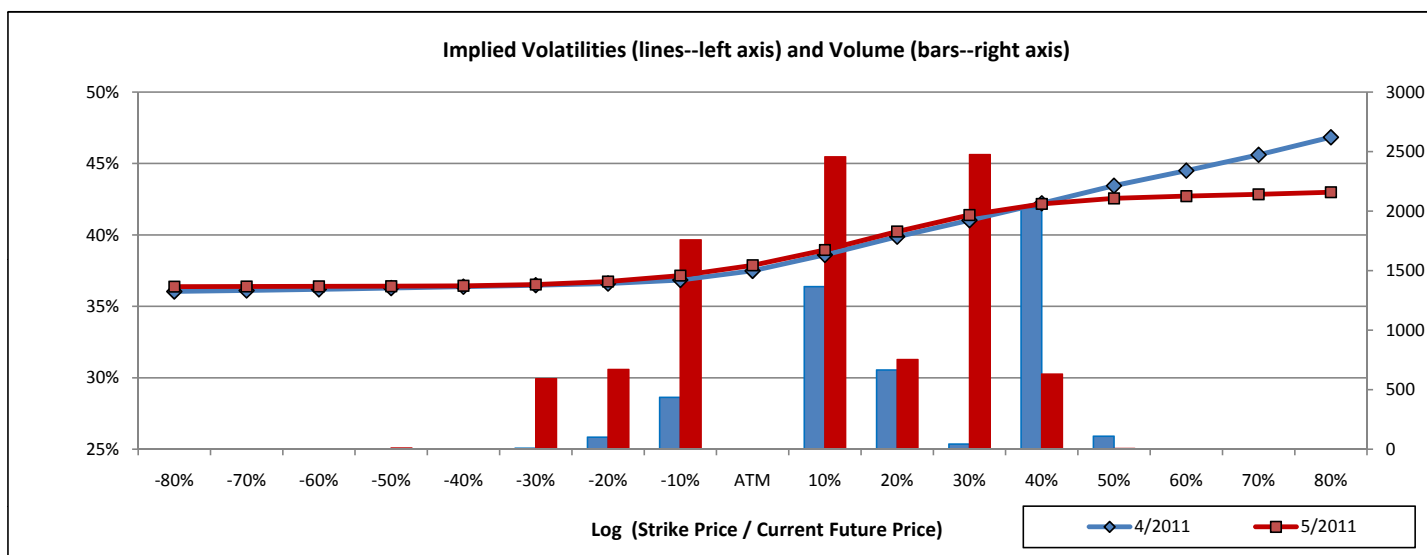

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Risk Neutral PDF of the Log Return Distribution

Probability of Extreme Returns

Statistics of the Log Return Distributions

	4/2011	5/2011	Change
10th Pct	-28.67%	-35.62%	-6.9%
50th Pct	-3.02%	-4.63%	-1.6%
90th Pct	25.54%	31.25%	5.7%
Mean	-2.15%	-3.42%	-1.3%
Std Dev	21.27%	26.04%	4.8%
Skew	0.23	0.25	0.01
Kurtosis	0.33	0.18	-0.15

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- CORN FUTURES

Log returns are based on the risk neutral density function of the front month futures contract derived from options that expire in approximately six months.
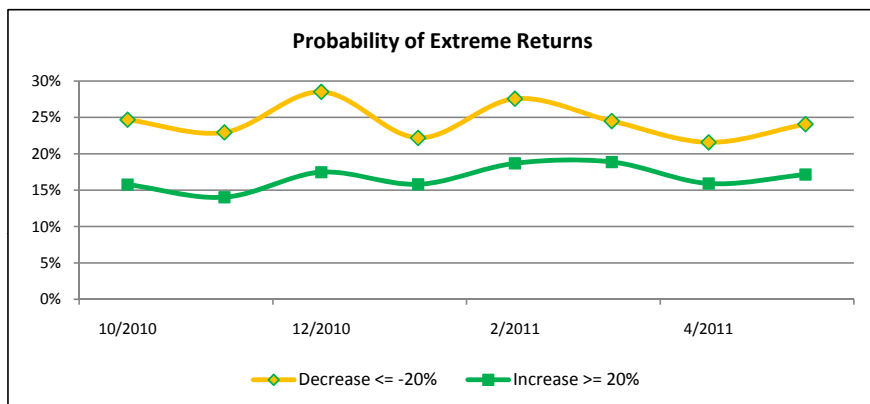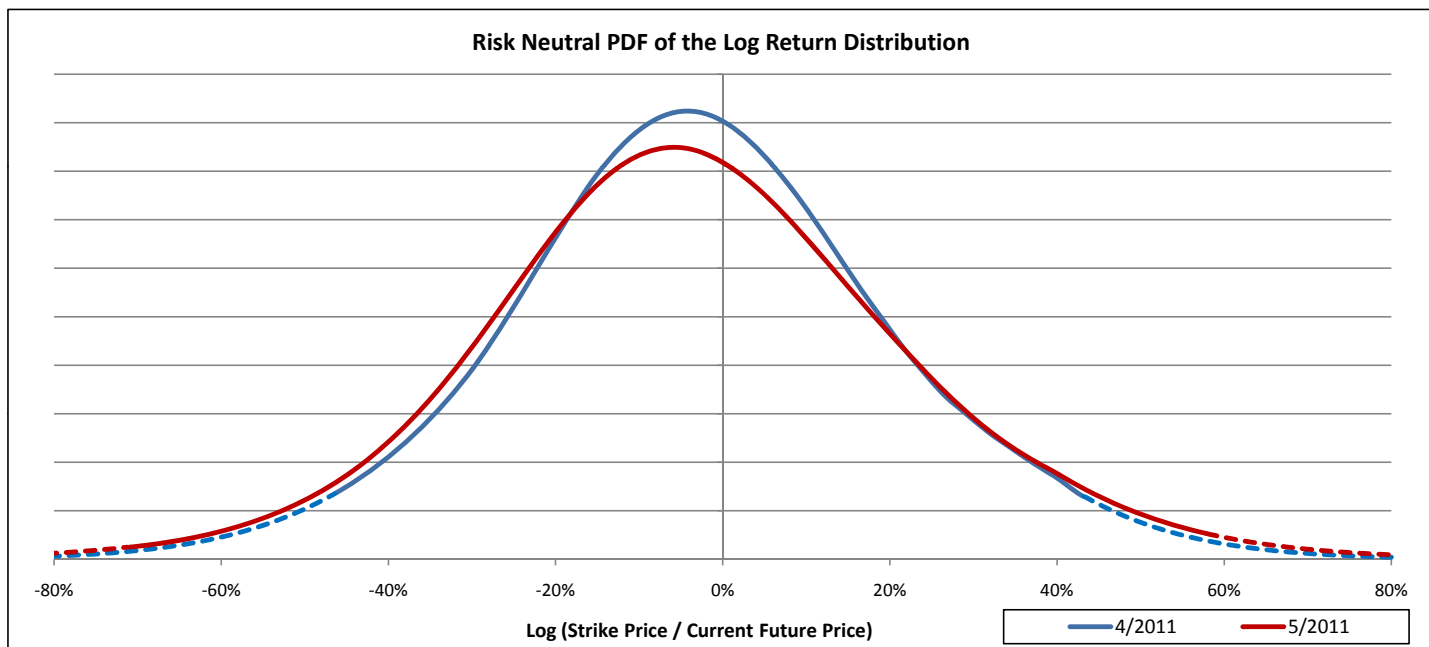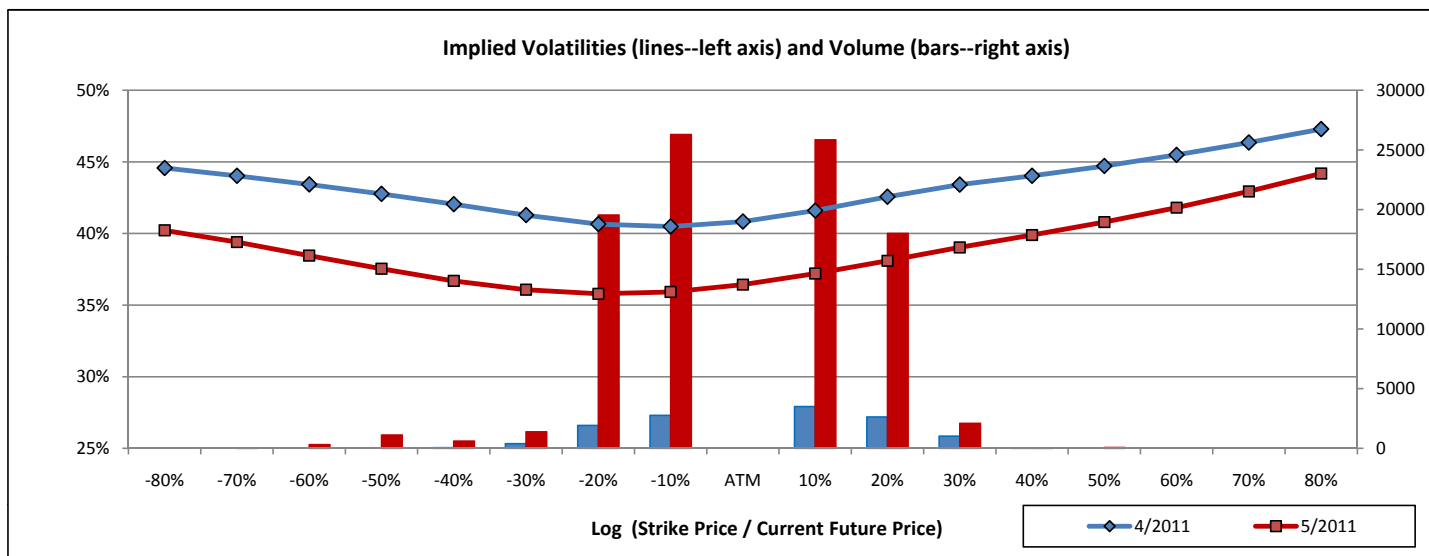
Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Log (Strike Price / Current Future Price)

■ 4/2011   ■ 5/2011

Risk Neutral PDF of the Log Return Distribution

Log (Strike Price / Current Future Price)

— 4/2011   — 5/2011

Probability of Extreme Returns

◆ Decrease <= -20%   ■ Increase >= 20%

Statistics of the Log Return Distributions

	4/2011	5/2011	Change
10th Pct	-31.60%	-34.08%	-2.5%
50th Pct	-3.05%	-3.88%	-0.8%
90th Pct	27.58%	29.79%	2.2%
Mean	-2.57%	-3.08%	-0.5%
Std Dev	23.36%	25.10%	1.7%
Skew	0.08	0.13	0.05
Kurtosis	0.29	0.26	-0.03

RISK NEUTRAL PROBABILITY DENSITY FUNCTIONS -- SOYBEAN FUTURES

Log returns are based on the risk neutral density function of the front month futures contract derived from options that expire in approximately six months.
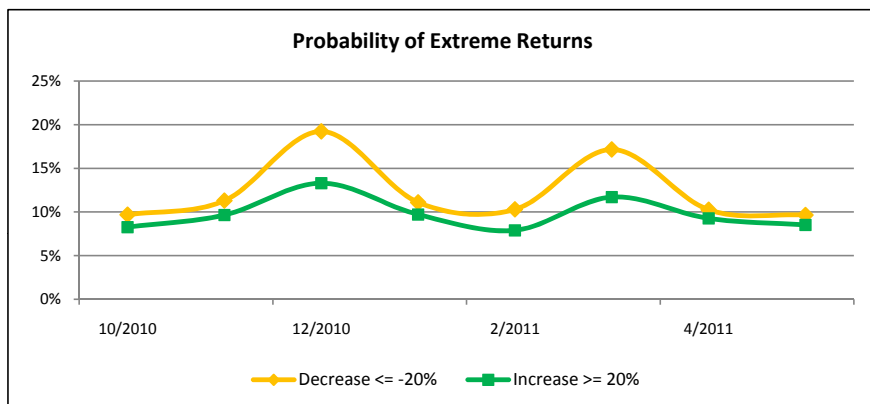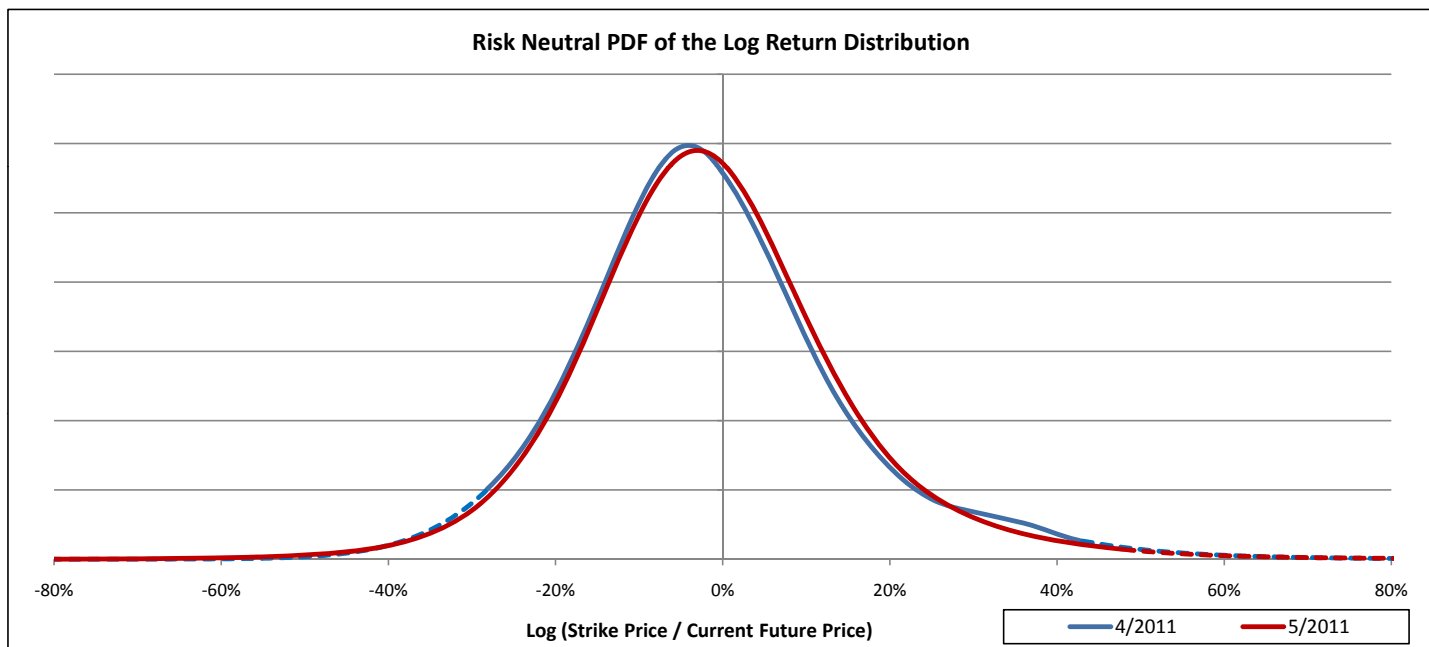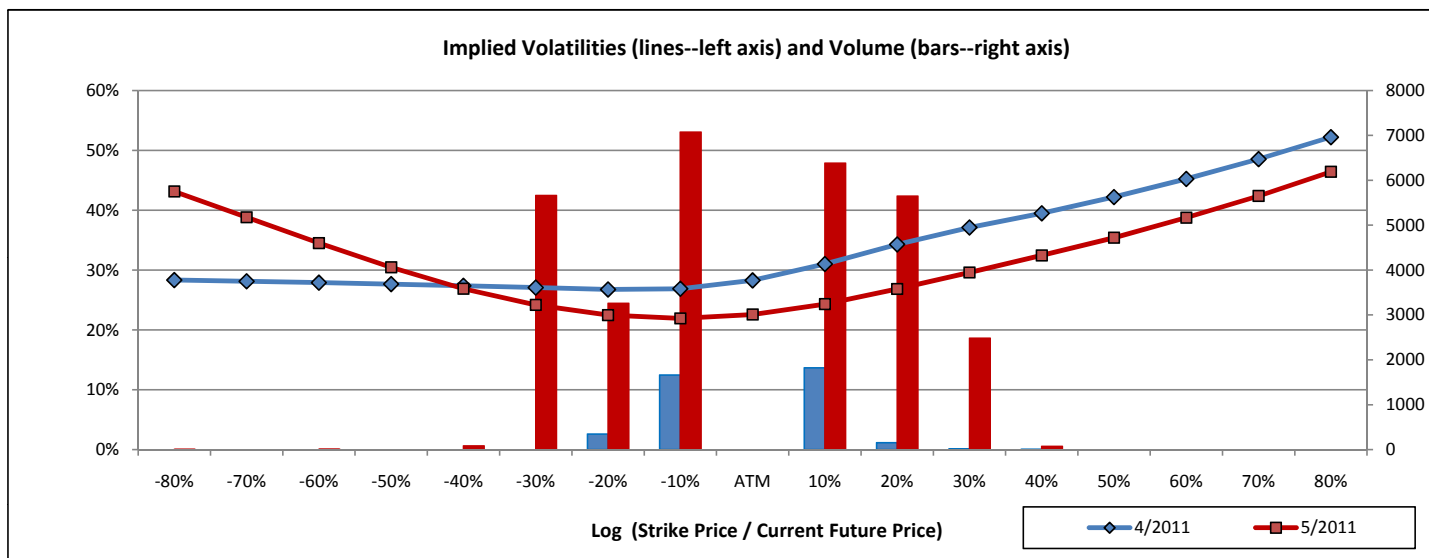

Implied Volatilities (lines--left axis) and Volume (bars--right axis)

Log (Strike Price / Current Future Price)

4/2011 ◆ 5/2011 ■

Risk Neutral PDF of the Log Return Distribution

Log (Strike Price / Current Future Price)

4/2011 — 5/2011 —

Probability of Extreme Returns

Decrease <= -20% — Increase >= 20% —

Statistics of the Log Return Distributions

	4/2011	5/2011	Change
10th Pct	-20.22%	-19.74%	0.5%
50th Pct	-2.69%	-2.07%	0.6%
90th Pct	19.08%	18.32%	-0.8%
Mean	-1.32%	-1.18%	0.1%
Std Dev	16.41%	16.31%	-0.1%
Skew	0.65	0.24	-0.41
Kurtosis	1.51	3.45	1.94