

FEDERAL RESERVE BANK OF MINNEAPOLIS

BANKING AND POLICY STUDIES

Minneapolis Options Report – January 2nd

Please find a copy of a new paper on market-based probabilities on our website:

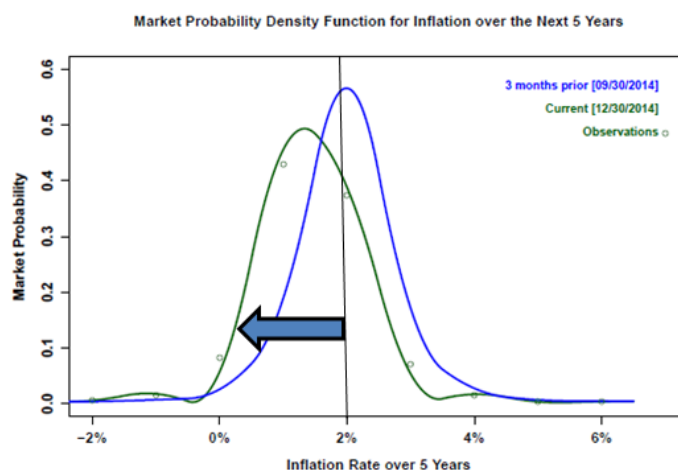
<https://www.minneapolisfed.org/banking/mpd/>. The paper discusses the usefulness for policymakers of market-based probabilities imputed from option prices. Feel free to share the link and/or provide comments to: option-report-feedback@mpls.frb.org.

Median inflation rates derived from CPI caps and floors rates fell again. At the same time, MPD skews for five and ten year treasury prices fell over the past two weeks perhaps foreshadowing an end to treasury rate declines in the near term. We further note an increase in the median 3-month LIBOR rate derived from options with three years to expiry.

Below we also highlight the positive MPD bias for foreign SIFIs and the rising uncertainty in the oil market. As tail risks for oil continue to rise, MPD skews suggest there is still a bias toward downside price moves.

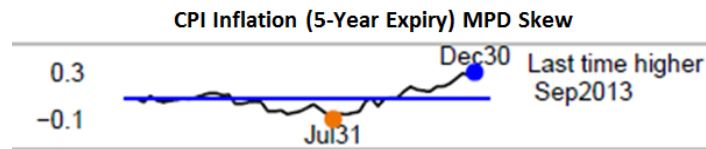
Inflation

- Medians of market-based inflation probability distributions, as derived from caps and floors on the CPI, continue to decline. The median expectations imply CPI inflation near 0% over the next year and less than 1% over the next two years. The median expectation over the next five years is 1.5%. Alternatively, the market probability of inflation *greater* than 3% over the next five years has fallen to a meager 6%.



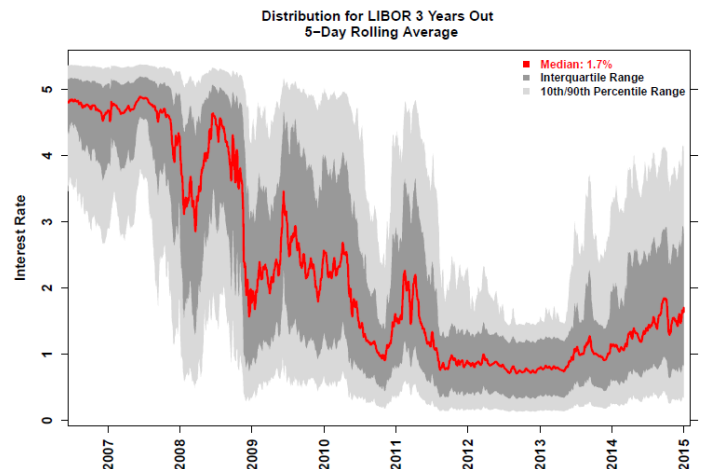
- Market-based uncertainty (MPD standard deviation) related to inflation has lifted but remains at recent low levels. This indicates high conviction related to the median inflation rate expectations.

- Currently, the inflation MPDs we calculate are exhibiting skews close to zero indicating no bias toward higher or lower inflation rates. The skews have become less negatively biased over the past six months as shown in the graph below.



Interest Rates

- The median 3-month LIBOR rate as derived from options on LIBOR with three years to expiry rose about 20 basis points to 1.67% (see graph below) over the past two weeks. Longer dated options (five years) on the same instrument produced an unchanged median of about 1.62% suggesting increased expectations of rate increases in the nearer term. The MPD standard deviations around these expectations are similar for both expiries while skew is higher for the shorter term MPD. This is consistent with the increased median noted above and for a bias toward rising short rates in the nearer term.



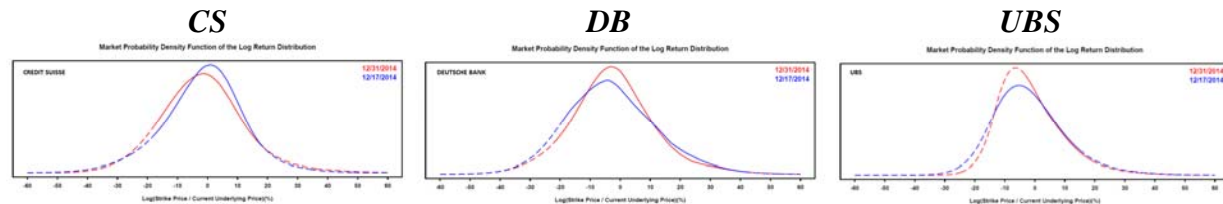
- MPDs derived from options on longer maturity treasury futures exhibited lower skews relative to two weeks ago. The MPD skew for near term changes in the 10-year treasury price remains close to zero indicating relatively little bias for the direction of rate changes in the near term. However, the MPD skew related to 5-year treasury prices has dropped below zero now *suggesting a bias toward rising 5-year rates*.

Banks & Insurance Companies

Volumes were light for options on equities including the S&P 500 index, and bank and insurance company stocks. The S&P 500 rallied to record territory increasing 2.3% since our last report. The average of the 17 US banks we follow rose 3.0% and the average of the 11 US insurance companies rose 3.1%. Across the universe of bank and insurance company equities, tail risks as measured by MPD standard deviations *remain low*. The average standard deviation derived from

options on US bank equities fell about -1.4%. The same average based on options on US insurance company equities fell -0.5%.

- Three foreign SIFI MPDs currently have *positive skew* implying more expectation for upward price moves than downward price moves in the near term. They are CS, DB, and UBS.

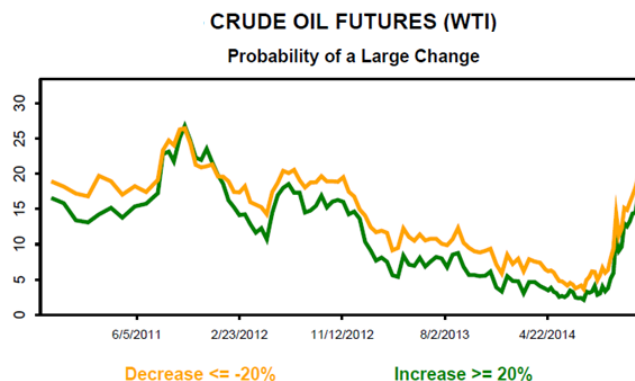


Other Commodity Markets

Spot prices were generally lower relative to two weeks ago across the range of commodities we track. Trading generally fell from two weeks ago and was light. Tail risks as measured by MPD standard deviations were down slightly.

Additional Details:

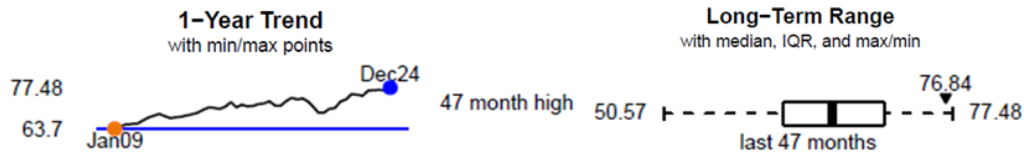
- Trading in options on oil futures was down from two weeks ago but remained strong. The standard deviation of the MPD derived from options on oil futures rose considerably and the skew became more negative. This means that future price uncertainty rose substantially as did the market's bias toward *lower prices*.



- Trading was light last week in all three currency markets we follow. MPD standard deviations continue to rise indicating greater uncertainty of future exchange rate outcomes. The dollar strengthened against both the Euro and the Yen over the past two weeks.
- Spot prices for corn, soybeans, and wheat futures dropped -2.8%, -1.1%, and -8.7% relative to two weeks ago. Options trading was very light and tail risk, as measured by MPD standard deviations, fell.

- After recent declines, cattle and hog spot prices rallied. Options volume for cattle futures was strong and spot prices rose 4.6% over the past two weeks. The MPD standard deviation derived from options on cattle futures remains near 12 month highs suggesting tail risks remain elevated in this market.
- The DJ US Real Estate Index finished near its four year high. For the year, the MPD derived from options on the real estate ETF has remained very stable despite a price increase near 20%.


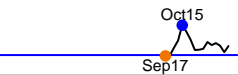

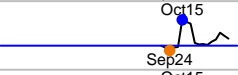

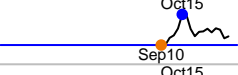

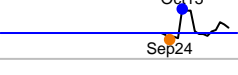



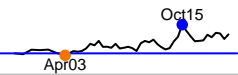

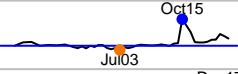

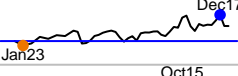

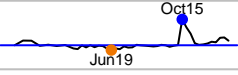


DJ US Real Estate Index ETF Price



Inflation MPD Statistics as of December 30, 2014

Indicator	Latest	2-Week Change	1-Year Trend		Long-Term Range			
with min/max points								
with median, IQR, and max/min								
Inflation (1-Year Expiry)								
Median	-0.03%	<div><div></div><div>0.044%</div></div>	2.2 -0.07	<div><div>Jun26</div><div>Dec17</div></div>	47 month low	-0.03 -0.07	<div><div></div><div>last 47 months</div></div>	2.92
MPD Std Dev	0.99%	<div><div></div><div>0.04%</div></div>	1.72 0.83	<div><div>Apr17</div><div>Aug28</div></div>		0.99 0.83	<div><div></div><div>last 47 months</div></div>	2.75
MPD Skew	0.01	<div><div>-0.011</div><div></div></div>	2.5 -0.58	<div><div>Apr17</div><div>Aug07</div></div>		0.01 -0.77	<div><div></div><div>last 47 months</div></div>	2.5
Market Prob of Less Than 1% Inflation	82.9%	<div><div>-2.5%</div><div></div></div>	85.35 11.88	<div><div>Jun26</div><div>Dec17</div></div>	47 month high	82.9 5.88	<div><div></div><div>last 47 months</div></div>	85.35
Market Prob of More Than 3% Inflation	0.29%	<div><div></div><div>0.054%</div></div>	18.71 0.23	<div><div>Jun26</div><div>Dec17</div></div>	47 month low	0.29 0.23	<div><div></div><div>last 47 months</div></div>	46.92
Inflation (2-Year Expiry)								
Median	0.85%	<div><div></div><div>0.061%</div></div>	2.2 0.79	<div><div>Jun26</div><div>Dec17</div></div>	46 month low	0.85 0.79	<div><div></div><div>last 46 months</div></div>	2.75
MPD Std Dev	1%	<div><div></div><div>0.039%</div></div>	1.09 0.88	<div><div>Feb13</div><div>Oct22</div></div>		1 0.88	<div><div></div><div>last 46 months</div></div>	1.84
MPD Skew	0.13	<div><div></div><div>0.0066</div></div>	0.13 -0.22	<div><div>Dec24</div><div>Jul31</div></div>	Last time higher Dec2013	0.13 -0.4	<div><div></div><div>last 46 months</div></div>	2.74
Market Prob of Less Than 1% Inflation	56.6%	<div><div>-2.9%</div><div></div></div>	59.47 10.74	<div><div>Jun26</div><div>Dec17</div></div>	46 month high	56.6 10.74	<div><div></div><div>last 46 months</div></div>	59.47
Market Prob of More Than 3% Inflation	2.34%	<div><div></div><div>0.53%</div></div>	21.41 1.8	<div><div>Jun26</div><div>Dec17</div></div>	46 month low	2.34 1.8	<div><div></div><div>last 46 months</div></div>	43.02
Inflation (5-Year Expiry)								
Median	1.42%	<div><div>-0.015%</div><div></div></div>	2.34 1.42	<div><div>Jul10</div><div>Dec30</div></div>	46 month low	1.42 1.42	<div><div></div><div>last 46 months</div></div>	2.83
MPD Std Dev	0.96%	<div><div>-0.00052%</div><div></div></div>	1.2 0.91	<div><div>Jan16</div><div>Jul24</div></div>		0.96 0.91	<div><div></div><div>last 46 months</div></div>	1.89
MPD Skew	0.3	<div><div></div><div>0.0055</div></div>	0.3 -0.1	<div><div>Dec30</div><div>Jul31</div></div>	Last time higher Sep2013	0.3 -0.22	<div><div></div><div>last 46 months</div></div>	1.39
Market Prob of Less Than 1% Inflation	31.82%	<div><div></div><div>0.45%</div></div>	31.82 7.13	<div><div>Jul31</div><div>Dec30</div></div>	46 month high	31.82 7.13	<div><div></div><div>last 46 months</div></div>	31.82
Market Prob of More Than 3% Inflation	5.77%	<div><div>-0.12%</div><div></div></div>	25.22 5.77	<div><div>Jun26</div><div>Dec30</div></div>	46 month low	5.77 5.77	<div><div></div><div>last 46 months</div></div>	41.72

Medium-to-Long Bond Price MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points	Long-Term Range with median, IQR, and max/min
5 Year Treasury (3-Month Expiry)				
Spot	118.9	-0.025% 	120.69 118.05 	118.05 - 118.9 - 120.69 last 3 months
MPD Std Dev	1.75%	-0.17% 	2.3 1.41 	1.41 - 1.75 - 2.3 last 3 months
MPD Skew	-0.26	-0.19 	0.36 -0.5 	-0.5 - -0.26 - 0.36 last 3 months
Market Prob of -3% or More Decline	4.88%	-1.1% 	8.74 2.44 	2.44 - 4.88 - 8.74 last 3 months
Volume	90542	-27% 	377550 0 	2054 - 90542 - 377550 last 3 months
10 Year Treasury (3-Month Expiry)				
Spot	126.8	-0.14% 	128.59 122.97 	122.97 - 126.8 - 128.59 last 14 months
MPD Std Dev	2.78%	-0.24% 	3.8 2.17 	2.17 - 2.78 - 3.8 last 14 months
MPD Skew	0.06	-0.25 	0.31 -0.38 	-0.75 - 0.06 - 0.31 14 month high last 14 months
Market Prob of -5% or More Decline	3.71%	-0.64% 	8.48 1.62 	1.62 - 3.71 - 8.48 last 14 months
Volume	235870	-55% 	954197 0 	5226 - 235870 - 954197 last 14 months

Short Interest Rates MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points	Long-Term Range with median, IQR, and max/min
3 Month LIBOR (3-Year Expiry)				
Median	1.67%	0.13%	1.85 1.04 Feb27 Jul18	0.72 2.19 last 47 months
MPD Std Dev	2.03%	0.61%	2.14 1.21 Jan16 Jul17	0.68 2.44 last 47 months
MPD Skew	2.93	2.1	3.91 0.63 Feb06 Jul17 Nov19	0.29 7.06 last 47 months
Market Prob of Less Than 0.5% LIBOR	15.27%	-3.4%	23.21 9.79 Feb06 Sep18	7.32 38.35 last 47 months
Market Prob of More Than 1% + Spot	61.47%	5.8%	67.85 40.33 Feb27 Sep18	7.61 71.73 last 47 months
3 Month LIBOR (5-Year Expiry)				
Median	1.62%	-0.018%	2.89 1.62 Apr03 Dec31	0.94 3.79 last 45 months
MPD Std Dev	2.05%	0.064%	2.76 1.94 Mar06 Dec10	1.5 2.99 last 45 months
MPD Skew	1.01	-0.011	2.13 0.43 Sep25 Nov27	0.35 4.1 last 45 months
Market Prob of Less Than 1% LIBOR	32.36%	0.18%	32.36 17.66 Apr03 Dec31	9.43 53.02 last 45 months
Market Prob of More Than 2% + Spot	41.12%	-1.5%	60.53 41.12 Nov12 Dec31	10.68 72.25 last 45 months

Equity Index MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points	Long-Term Range with median, IQR, and max/min
S&P 500 (6-Month Expiry)				
Spot	2058.9	2.3%	<div>2081.88</div> <div>1773.43</div>	<div>47 month high 1131.42</div> <div>2058.9</div> <div>2081.88</div>
MPD Std Dev	12.15%	-1.5%	<div>14.77</div> <div>8.87</div>	<div>12.15</div> <div>8.87</div> <div>24.27</div>
MPD Skew	-1.27	0.091	<div>-1.02</div> <div>-1.39</div>	<div>-1.52</div> <div>-1.27</div> <div>-0.86</div>
Market Prob of -20% or More Decline	6.94%	-2%	<div>10.32</div> <div>3.65</div>	<div>6.94</div> <div>3.65</div> <div>17.56</div>
Volume	42867	-9%	<div>203412</div> <div>0</div>	<div>42867</div> <div>13428</div> <div>347919</div>
S&P 500 (12-Month Expiry)				
Spot	2058.9	2.3%	<div>2081.88</div> <div>1773.43</div>	<div>47 month high 1131.42</div> <div>2058.9</div> <div>2081.88</div>
MPD Std Dev	18.32%	-1.9%	<div>20.23</div> <div>15.02</div>	<div>Last time higher Dec2012</div> <div>18.32</div> <div>32.71</div>
MPD Skew	-1.26	-0.0038	<div>-1.09</div> <div>-1.57</div>	<div>-1.57</div> <div>-1.26</div> <div>-0.98</div>
Market Prob of -20% or More Decline	13.48%	-2.1%	<div>16.05</div> <div>10.07</div>	<div>13.48</div> <div>5.51</div> <div>23.65</div>
Volume	26190	-24%	<div>123271</div> <div>0</div>	<div>26190</div> <div>3174</div> <div>161766</div>
iShares US Real Estate Index (3-Month Expiry)				
Spot	76.84	-0.052%	<div>77.48</div> <div>63.7</div>	<div>47 month high 50.57</div> <div>76.84</div> <div>77.48</div>
MPD Std Dev	7.2%	-1.4%	<div>9.69</div> <div>5.22</div>	<div>7.2</div> <div>4.77</div> <div>21.53</div>
MPD Skew	-0.73	0.77	<div>-0.61</div> <div>-1.55</div>	<div>-2.09</div> <div>-0.73</div> <div>-0.52</div>
Market Prob of -10% or More Decline	8.03%	-3.9%	<div>13.97</div> <div>4.45</div>	<div>8.03</div> <div>3.43</div> <div>25.19</div>
Volume	15659	770%	<div>122800</div> <div>0</div>	<div>15659</div> <div>62</div> <div>122800</div>

Exchange Rate MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points	Long-Term Range with median, IQR, and max/min
Dollar-Euro Futures (3-Month Expiry)				
Spot	1.21	-1.6%	1.39 1.21 	44 month low 1.21
MPD Std Dev	4.87%	0.29%	5.07 2.4 	4.87 2.4
MPD Skew	-0.29	-0.058	0.16 -0.37 	-0.85
Market Prob of -10% or More Decline	2.94%	0.76%	2.95 0.02 	Last time higher Sep2012 0.02
Volume	24196	-17%	79167 0 	2039 24196
Dollar-Pound Futures (3-Month Expiry)				
Spot	155.7	0.18%	171.39 155.42 	Last time lower Jul2013 150.08 155.7
MPD Std Dev	3.72%	0.0061%	4.39 2.36 	3.72 2.36
MPD Skew	-0.43	0.015	0.1 -0.92 	-0.92
Market Prob of -10% or More Decline	1.08%	-0.047%	2.66 0.01 	0.01 1.08
Volume	1432	-72%	36353 0 	104 1432
Dollar-Yen Futures (3-Month Expiry)				
Spot	83.49	-1.1%	98.79 83.08 	44 month low 83.08 83.49
MPD Std Dev	5.83%	0.022%	6.29 2.76 	Last time higher Sep2013 2.76 5.83
MPD Skew	-0.08	-0.084	0.34 -0.19 	Last time lower Feb2013 -0.44 -0.08
Market Prob of -10% or More Decline	4.82%	0.17%	5.99 0.02 	Last time higher Sep2013 0.02 4.82
Volume	4543	-50%	39827 0 	306 4543

Metal and Energy Commodity MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points	Long-Term Range with median, IQR, and max/min
Gold (6-Month Expiry)				
Spot	1184.43	-0.89%		
MPD Std Dev	12.73%	-0.29%		
MPD Skew	-0.38	-0.025		
Market Prob of -20% or More Decline	6.8%	-0.47%		
Volume	4527	11%		
Silver (6-Month Expiry)				
Spot	15.6	-2.1%		
MPD Std Dev	20.98%	-0.88%		
MPD Skew	-0.47	0.022		
Market Prob of -20% or More Decline	15.28%	-1.6%		
Volume	923	-0.54%		
West Texas Intermediate Crude (6-Month Expiry)				
Spot	55.44	-4.2%		
MPD Std Dev	32.48%	3.9%		
MPD Skew	-0.72	-0.15		
Market Prob of -20% or More Decline	23.65%	0.85%		
Volume	64224	-36%		

Agricultural Crop Commodity MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points		Long-Term Range with median, IQR, and max/min
Corn (6-Month Expiry)					
Spot	406.01	-2.6%	513.25 334.65		334.65 - 406.01 - 823.75 last 47 months
MPD Std Dev	18.22%	-0.38%	21.43 12.43		12.43 - 18.22 - 28.95 last 47 months
MPD Skew	0.08	0.041	0.31 -0.19		-0.19 - 0.08 - 0.32 last 47 months
Market Prob of -20% or More Decline	13.92%	-0.71%	18.97 5.73		5.73 - 13.92 - 28.15 last 47 months
Volume	14899	-44%	216660 0		6059 - 14899 - 472954 last 47 months
Soybeans (6-Month Expiry)					
Spot	1029.02	-1.1%	1331.75 934.57		934.57 - 1029.02 - 1691.25 last 47 months
MPD Std Dev	16.49%	-0.14%	17.52 10.93		10.93 - 16.49 - 22.65 last 47 months
MPD Skew	-0.21	0.044	0.17 -0.5		-0.5 - -0.21 - 0.51 last 47 months
Market Prob of -20% or More Decline	11.59%	-0.37%	12.67 4.07		4.07 - 11.59 - 20.23 last 47 months
Volume	20118	-41%	238213 0		679 - 20118 - 326132 last 47 months
Wheat (6-Month Expiry)					
Spot	594.03	-8.7%	743.75 492.25		492.25 - 594.03 - 930 last 47 months
MPD Std Dev	18.49%	-1.2%	21.56 14.22		12.95 - 18.49 - 28.19 last 47 months
MPD Skew	0.2	-0.038	0.34 0.03		0.01 - 0.2 - 0.54 last 47 months
Market Prob of -20% or More Decline	14.35%	-2.3%	19.59 7.8		5.67 - 14.35 - 28.7 last 47 months
Volume	1855	-83%	46977 0		179 - 1855 - 51689 last 47 months

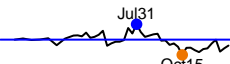
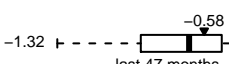
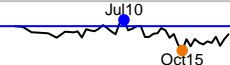

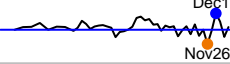
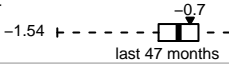

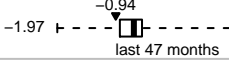
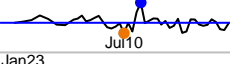
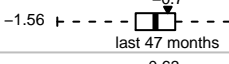
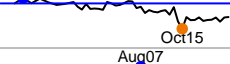
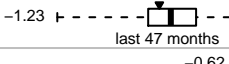

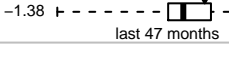
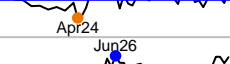
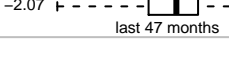
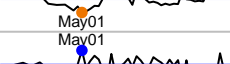
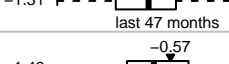
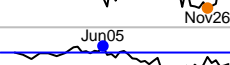
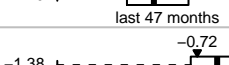
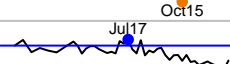
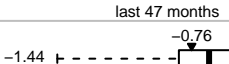
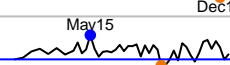



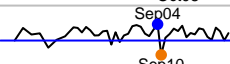
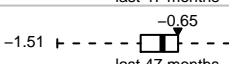
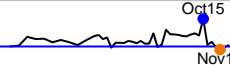
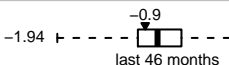
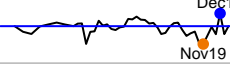
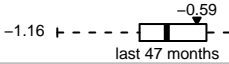

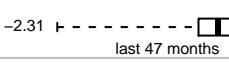
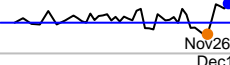
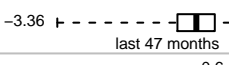
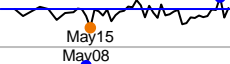
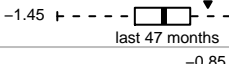

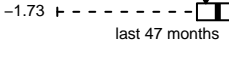


Agricultural Livestock Commodity MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points	Long-Term Range with median, IQR, and max/min
Cattle (6-Month Expiry)				
Spot	154.93	4.6%	170.32 130.12 Jan09 Nov19	129.05 — 154.93 — 170.32 last 17 months
MPD Std Dev	11.65%	-0.54%	12.2 3.6 Jan09 Dec17	17 month high 3.6 — 11.65 — 12.2 last 17 months
MPD Skew	-0.6	-0.1	-0.17 -0.94 Jan09 May08	-0.94 — -0.6 — -0.17 last 17 months
Market Prob of -5% or More Decline	29.28%	-2%	31.3 8.46 Jan09 Dec17	17 month high 8.46 — 29.28 — 31.3 last 17 months
Volume	13770	22%	33850 0	1263 — 13770 — 33850 last 17 months
Hogs (6-Month Expiry)				
Spot	91.56	3%	94.48 88.1 Nov19	88.1 — 91.56 — 94.48 last 3 months
MPD Std Dev	14.9%	-1.1%	16.77 13.88 Nov05 Oct22	13.88 — 14.9 — 16.77 last 3 months
MPD Skew	0.17	0.11	0.17 -0.37 Nov26 Dec31	3 month high -0.37 — 0.17 — 0.17 last 3 months
Market Prob of -5% or More Decline	40.3%	-0.2%	40.49 35.3 Oct15 Dec17	3 month high 35.3 — 40.3 — 40.49 last 3 months
Volume	1538	-75%	6204 0	53 — 1538 — 6204 last 3 months

Bank MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend		Long-Term Range
with min/max points					
with median, IQR, and max/min					
MPD Standard Deviation (3-Month Expiry)					
American Express	10.09%	-1%	13.33 7.82		7.82
Bank of America	11.41%	-1.4%	15.89 9.71		9.71
BB&T	9.3%	-1.2%	12.4 7.29		7.29
Barclays	14%	-1.2%	28.84 11.86		11.86
Bank of NY Mellon	10.24%	-1.7%	13.49 7.88		7.88
Citigroup	11.13%	-2.2%	15.52 8.52		8.52
Capital One	9.39%	-1.8%	12.94 7.72		7.72
Credit Suisse	14.28%		15.53 9.84		9.84
Deutsche Bank	14.23%	-0.91%	17.05 11.65		11.65
Fifth Third	9.73%	-1.7%	15.13 8.21		8.21
Goldman Sachs	10.82%	-1.6%	13.57 8.23		8.23
JP Morgan	9.96%	-1.9%	12.95 7.41		7.41
Keycorp	11.85%	-0.89%	14.47 8.98		8.98
Morgan Stanley	12.2%	-1.7%	17.04 9.7		9.7
PNC Financial	8.38%	-1.2%	10.91 7.45		7.45
Regions Financial	11.38%		15.36 10.57		10.57
SunTrust	11.13%		14.6 7.82		7.82
State Street	10.57%	-2%	13.7 8.73		8.73
UBS	10.84%	-1.3%	19.02 8.7		8.7
US Bancorp	8.35%	-0.84%	13.1 6.58		6.58
Wells Fargo	9.17%	-1.3%	12.75 7.16		7.16

Bank MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points	Long-Term Range with median, IQR, and max/min
MPD Skew (3-Month Expiry)				
American Express	-0.58	0.1	-0.21 -0.74 	-1.32 to -0.21 last 47 months 
Bank of America	-0.34	0.25	-0.02 -0.7 	-1.17 to -0.02 last 47 months 
BB&T	-0.7	-0.19	-0.22 -1.3 	Last time higher Oct2012 -1.54 to -0.15 last 47 months 
Barclays	-0.94	-1.2	1.94 -1.23 	Last time lower Sep2013 -1.97 to 1.94 last 47 months 
Bank of NY Mellon	-0.7	0.23	0.14 -1.09 	-1.56 to 0.14 last 47 months 
Citigroup	-0.63	0.099	-0.23 -0.89 	-1.23 to 0.06 last 47 months 
Capital One	-0.62	0.093	-0.24 -0.89 	-1.38 to -0.24 last 47 months 
Credit Suisse	0.38	0.56	0.72 -2 	-2.07 to 0.72 last 47 months 
Deutsche Bank	0.29	-0.019	0.35 -0.95 	-1.31 to 0.35 last 47 months 
Fifth Third	-0.57	-0.7	0.3 -1.49 	47 month low -1.49 to 0.3 last 47 months 
Goldman Sachs	-0.72	0.049	-0.36 -0.97 	-1.38 to -0.34 last 47 months 
JP Morgan	-0.76	0.2	-0.33 -0.96 	Last time lower Jun2012 -1.44 to -0.33 last 47 months 
Keycorp	-0.75	-0.37	0.28 -1.36 	-2.24 to 0.4 last 47 months 
Morgan Stanley	-0.62	-0.018	-0.26 -0.87 	-1.2 to -0.25 last 47 months 
PNC Financial	-0.65	-0.054	-0.39 -1.29 	-1.51 to 0.07 last 47 months 
Regions Financial	-0.9		0.68 -1.15 	Last time lower May2013 -1.94 to 0.68 last 46 months 
SunTrust	-0.59	-0.33	-0.26 -1.05 	47 month high -1.16 to -0.26 last 47 months 
State Street	-0.33	0.72	-0.13 -2.31 	47 month low -2.31 to -0.13 last 47 months 
UBS	0.91	0.23	0.91 -1.72 	Last time higher Oct2012 -3.36 to 0.91 last 47 months 
US Bancorp	-0.6	-0.39	-0.2 -1.3 	47 month high -1.45 to -0.2 last 47 months 
Wells Fargo	-0.85	0.29	-0.48 -1.19 	-1.73 to -0.42 last 47 months 

Bank MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend		Long-Term Range
with min/max points					
with median, IQR, and max/min					
Market Probability of -20% or More Decline (3-Month Expiry)					
American Express	3.93%	-1.3%			
Bank of America	4.86%	-1.9%			
BB&T	3.21%	-1.6%			
Barclays	7.98%	-3.5%			
Bank of NY Mellon	3.71%	-4%			
Citigroup	4.73%	-3.1%			
Capital One	3.36%	-2.5%			
Credit Suisse	8.78%	0.002%			
Deutsche Bank	9.7%	-2.4%			
Fifth Third	3.14%	-1.6%			
Goldman Sachs	4.73%	-2%			
JP Morgan	4.33%	-2%			
Keycorp	5.75%	-1.4%			
Morgan Stanley	6.35%	-2.6%			
PNC Financial	2.24%	-1.3%			
Regions Financial	4.72%				
SunTrust	5.36%	0.24%			
State Street	3.74%	-4.2%			
UBS	1.53%	-2.8%			
US Bancorp	2.23%	-0.046%			
Wells Fargo	3.21%	-1.7%			

Bank MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points	Long-Term Range with median, IQR, and max/min
Volume (3-Month Expiry)				
American Express	2395	7.8%	10151 0	2395 623 - 20941 last 47 months
Bank of America	67992	64%	132589 0	67992 7419 - 363160 last 47 months
BB&T	788	-39%	6490 0	788 190 - 6903 last 47 months
Barclays	780	86%	11011 0	780 13 - 15208 last 47 months
Bank of NY Mellon	307	-95%	15678 0	307 59 - 17091 last 47 months
Citigroup	12879	-61%	78527 0	12879 1104 - 284278 last 47 months
Capital One	420	-86%	6644 0	420 164 - 38646 last 47 months
Credit Suisse	581	35%	4011 0	581 0 - 14201 last 47 months
Deutsche Bank	5360	190%	25112 0	5360 62 - 29575 last 47 months
Fifth Third	1645	520%	6299 0	1645 28 - 19127 last 47 months
Goldman Sachs	1197	-73%	21840 0	1197 296 - 43413 last 47 months
JP Morgan	14868	73%	52517 0	14868 943 - 119246 last 47 months
Keycorp	228	3.6%	3014 0	228 44 - 76270 last 47 months
Morgan Stanley	1954	-70%	48955 0	1954 327 - 84281 last 47 months
PNC Financial	567	-33%	4810 0	567 83 - 12224 last 47 months
Regions Financial	850		4635 0	850 20 - 19649 last 46 months
SunTrust	512	21%	4232 0	512 61 - 13788 last 47 months
State Street	1088	480%	5339 0	1088 42 - 5370 last 47 months
UBS	103	-74%	2034 0	103 6 - 6502 last 47 months
US Bancorp	3606	64%	6376 0	3606 172 - 29201 last 47 months
Wells Fargo	3103	-61%	62697 0	3103 950 - 167820 last 47 months

Insurance Company MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points		Long-Term Range with median, IQR, and max/min
MPD Standard Deviation (3-Month Expiry)					
Aflac	8.71%	-1.2% <div></div>	12.28 7.29	<div></div> <div>Oct15</div> <div>Aug21</div>	8.71 7.29 <div></div> 28.3 last 47 months
AIG	9.97%	-1.8% <div></div>	15.15 8.7	<div></div> <div>Oct15</div> <div>Sep04</div>	9.97 8.7 <div></div> 34.63 last 47 months
Allstate	8.75%	-0.4% <div></div>	9.83 5.83	<div></div> <div>Oct15</div> <div>Aug28</div>	8.75 5.83 <div></div> 22.82 last 47 months
Ameriprise	12.19%	-0.078% <div></div>	15.19 8.98	<div></div> <div>Oct15</div> <div>Oct29</div>	12.19 8.98 <div></div> 28.12 last 47 months
Chubb	9.21%	<div></div> 1.1%	9.43 5.96	<div></div> <div>Oct15</div> <div>Nov12</div>	9.21 5.96 <div></div> 18.33 last 47 months
Hartford Financial	10.13%	-0.57% <div></div>	13.93 8.68	<div></div> <div>Oct15</div> <div>Jul31</div>	10.13 8.68 <div></div> 34.59 last 47 months
Lincoln National	12.42%	-0.066% <div></div>	16.63 10.28	<div></div> <div>Oct15</div> <div>Aug28</div>	12.42 10.28 <div></div> 35.56 last 47 months
Met Life	11.24%	-1.9% <div></div>	16.24 10.08	<div></div> <div>Oct15</div> <div>Jul24</div>	11.24 10.08 <div></div> 31.28 last 47 months
Principal Financial	11.99%	<div></div> 1.3%	17.34 8.31	<div></div> <div>Oct29</div> <div>Jul10</div>	11.99 8.02 <div></div> 34.89 last 47 months
Progressive	9.64%	<div></div> 0.27%	11.32 6.2	<div></div> <div>Mar20</div> <div>Jan09</div> <div>Jul10</div>	9.64 6.2 <div></div> 24.84 last 47 months
Prudential	11.27%	-2.4% <div></div>	16.3 10.11	<div></div> <div>Oct15</div> <div>Jul24</div>	11.27 10.11 <div></div> 30.06 last 47 months

Insurance Company MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points	Long-Term Range with median, IQR, and max/min
MPD Skew (3-Month Expiry)				
Aflac	-0.68	-0.083		
AIG	-0.23	0.25		
Allstate	-0.89	-0.16		
Ameriprise	-0.11	0.075		
Chubb	-0.9	-0.16		
Hartford Financial	-0.95	-0.33		
Lincoln National	-0.76	0.0042		
Met Life	-0.6	-0.07		
Principal Financial	-0.19	1.5		
Progressive	-0.13	-0.19		
Prudential	-0.75	-0.1		

Insurance Company MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points	Long-Term Range with median, IQR, and max/min
Market Probability of -20% or More Decline (3-Month Expiry)				
Aflac	2.37%	-1.4%		
AIG	3.14%	-2.7%		
Allstate	2.95%	-0.54%		
Ameriprise	5.76%	-0.85%		
Chubb	3.73%	1.2%		
Hartford Financial	4.22%	0.00011%		
Lincoln National	6.77%	-0.51%		
Met Life	5.2%	-3%		
Principal Financial	6.56%	2.1%		
Progressive	2.83%	0.41%		
Prudential	5.45%	-3.7%		

Insurance Company MPD Statistics as of December 31, 2014

Indicator	Latest	2-Week Change	1-Year Trend with min/max points	Long-Term Range with median, IQR, and max/min
Volume (3-Month Expiry)				
Aflac	1393	-23%	13324 0	1393 405 last 47 months
AIG	2221	-73%	38744 0	2221 432 last 47 months
Allstate	128	-19%	5708 0	128 76 last 47 months
Ameriprise	60	-89%	1071 0	60 5 last 47 months
Chubb	66	-71%	2541 0	66 11 last 47 months
Hartford Financial	285	-62%	13441 0	285 65 last 47 months
Lincoln National	291	36%	8403 0	291 51 last 47 months
Met Life	1831	-94%	29248 0	1831 319 last 47 months
Principal Financial	140	-41%	310 0	140 2 last 47 months
Progressive	56	-72%	474 0	56 0 last 47 months
Prudential	560	-34%	13225 0	560 222 last 47 months