Minneapolis Options Report – September 6th

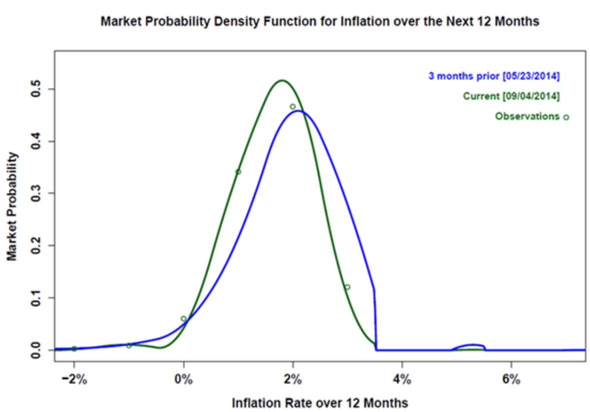
Please not the addition of the inflation MPD information to the spark table form of the report this week.

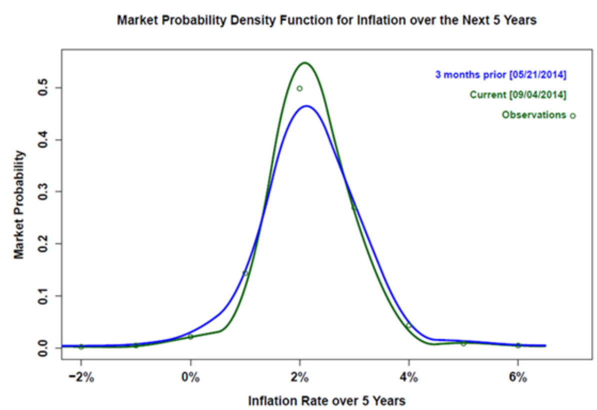
One year risk-neutral inflation expectations are biased toward lower rates and tail risks for 10-year rates remain low. Most bank stock MPDs exhibit more bias toward rising prices than they have in the past 4 years. Grain prices fell, cattle prices rose, and options activity on exchange rates was brisk.

Inflation

The median (risk-neutral) expected inflation rate for all expiries, as derived from caps and floors on the CPI, declined at the two and five year expiries. Market based uncertainty (MPD standard deviation) related to the median expectation is currently very low indicating high conviction about the expectation. Note narrowing of the middle of the MPDs in the graphs below.

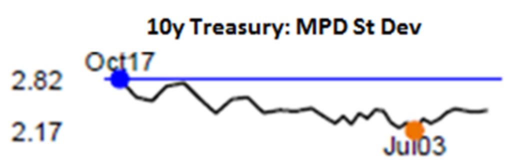
Risk neutral bias is for lower inflation rates over the shorter term as measured by MPD skew. Over the next five years, MPD skew is close to zero indicating no bias toward higher or lower inflation rates.





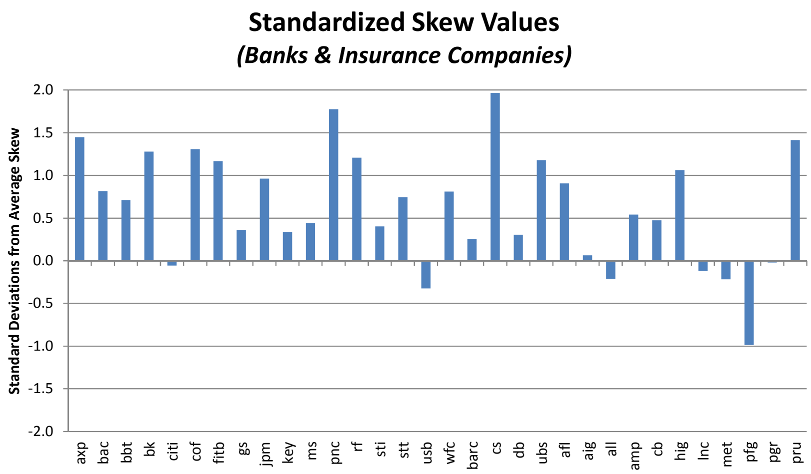
Interest Rates

The risk neutral bias for near-term changes in the 10-year treasury price remains close to zero indicating relatively little expectation for rate changes in the near term. This is measured by MPD skew. Tail risks for rate changes as measured by MPD standard deviation are relatively low.



Banks & Insurance Companies
The S&P 500 was relatively unchanged over the past two weeks rising 0.3%. The average bank and insurance company in our universe of companies outpaced the broader market rising 1.3% and 0.7% respectively. Across the universe of bank and insurance company equities, tail risks as measured by MPD standard deviations remain low.

MPD skews are exhibiting more upside bias than they have over the past four years. In the graph below, we present MPD skews adjusted for their average values and standard deviations since 2010. That is, the graph shows Z-scores for bank skews. The adjustment allows us to account for the differing liquidity for the various firms as well as the fact that equity MPDs tend to be negatively skewed.



The graph indicates that, along with the general increase in share prices, risk neutral expectations are more biased toward upside price moves than they have been on average since 2010. Only C and USB have negative Z-scores among banks. The upward bias in skew is less pervasive among insurance companies and there are clear differences in the magnitudes across the companies.

Other Commodity Markets
Spot prices were lower again across the range of physical commodities we track. Trading generally fell from two weeks ago. Tail risks as measured by MPD standard deviations were mixed. Across the set of exchange rate markets we follow, MPD standard deviations rose.

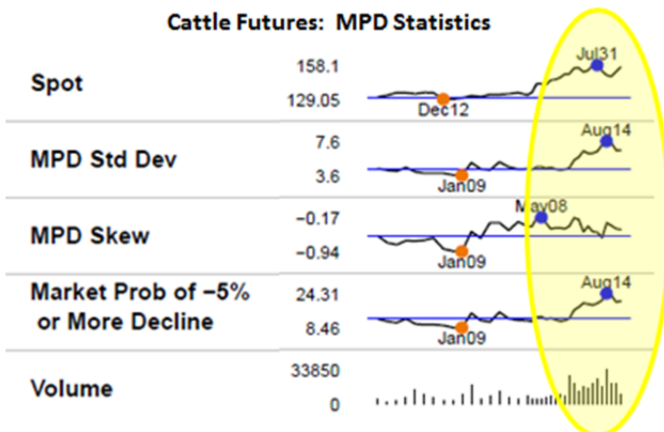
Additional Details:

- Trading in options on oil futures was light in both WTI and Brent crude markets. Traders had relatively more interest in trading options on WTI than Brent in the past two weeks which is a change from recent reports. MPD skews continue to indicate a bias toward lower prices.

- Trading was active again last week in all three currency markets we follow. MPD standard deviations, though at low levels, moved up indicating a change toward higher tail risk.

- Spot prices for corn, soybeans, and wheat futures dropped sharply. Options trading was relatively light and tail risks changes as measured by MPD standard deviations were mixed. MPD standard deviations remain near recent low levels.

- In contrast to the grain markets, spot prices for cattle futures remain near their recent highs. Tail risks have dropped from high levels over the past six weeks as has options activity even as prices rebounded.



Inflation MPD Statistics as of September 04, 2014

Indicator	Latest	2−Week Change	1−Year Trend with min/max points		Long−Term Range with median, IQR, and max/min
Inflation (1−Year Expiry)					
Spot	**1.62%**	−0.002%	2.36 (Jun26) / 1.52 (Sep26)		0.74 / 1.62 / 3.09, last 48 months
MPD Std Dev	**0.83%**	−0.0041%	1.72 (Apr17) / 0.83 (Aug28)	48 month low	0.83 / 0.83 / 2.75, last 48 months
MPD Skew	**−0.5**	0.063	2.5 (Apr17) / −0.61 (Oct24)		−0.77 / −0.5 / 2.5, last 48 months
Market Prob of Less Than 1% Inflation	**24.24%**	0.3%	33.57 (Nov07) / 11.88 (Jun26)		5.88 / 24.24 / 57.45, last 48 months
Inflation (2−Year Expiry)					
Spot	**1.87%**	−0.034%	2.22 (Jun26) / 1.65 (Nov07)		1.14 / 1.87 / 2.72, last 47 months
MPD Std Dev	**0.89%**	0.0057%	1.12 (Sep12) / 0.89 (Aug21)	47 month low	0.89 / 0.89 / 1.84, last 47 months
MPD Skew	**−0.13**	0.067	0.19 (Dec26) / −0.22 (Jul24)		−0.4 / −0.13 / 2.74, last 47 months
Market Prob of Less Than 1% Inflation	**17.47%**	0.99%	26.99 (Nov07) / 10.74 (Jun26)		10.74 / 17.47 / 46.32, last 47 months
Inflation (5−Year Expiry)					
Spot	**2.19%**	−0.037%	2.37 (Jul10) / 2.08 (Apr10)		1.64 / 2.19 / 2.73, last 47 months
MPD Std Dev	**0.95%**	0.026%	1.25 (Sep19) / 0.91 (Jul24)		0.91 / 0.95 / 1.89, last 47 months
MPD Skew	**0.06**	0.098	0.33 (Sep05) / −0.1 (Jul31)		−0.22 / 0.06 / 1.39, last 47 months
Market Prob of Less Than 1% Inflation	**10.17%**	1.2%	16.52 (Dec05) / 7.13 (Jul31)		7.13 / 10.17 / 31.67, last 47 months

Source: Bloomberg

Equity, Bond, and Index MPD Statistics as of September 04, 2014

S&P 500 (6−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend with min/max points	Long−Term Range with median, IQR, and max/min
Spot	1997.65	0.27%	1997.65 / 1655.08; Sep04, Sep05	48 month high; 1125.07 – 1997.65; 1997.65; last 48 months
MPD Std Dev	10.07%	0.041%	12 / 8.87; Sep05, Jul03	8.87 – 24.27; 10.07; last 48 months
MPD Skew	−1.2	0.077	−0.97 / −1.39; Sep19, May29	−1.52 – −0.86; −1.2; last 48 months
Market Prob of −20% or More Decline	5.04%	−0.19%	7.34 / 3.65; Sep05, Jul03	3.65 – 17.56; 5.04; last 48 months
Volume	31240	−28%	203412 / 0	13428 – 347919; 31240; last 48 months

S&P 500 (12−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend with min/max points	Long−Term Range with median, IQR, and max/min
Spot	1997.65	0.27%	1997.65 / 1655.08; Sep04, Sep05	48 month high; 1125.07 – 1997.65; 1997.65; last 48 months
MPD Std Dev	15.48%	0.32%	17.74 / 15.02; Oct03, Jul03	10.5 – 32.71; 15.48; last 48 months
MPD Skew	−1.22	0.033	−1.04 / −1.57; Sep05, May29	−1.57 – −0.98; −1.22; last 48 months
Market Prob of −20% or More Decline	10.74%	0.19%	13.79 / 10.56; Oct03, Aug21	Last time lower Mar2013; 5.51 – 23.65; 10.74; last 48 months
Volume	30419	−30%	123271 / 0	3174 – 161766; 30419; last 48 months

10 Year Treasury (3−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend with min/max points	Long−Term Range with median, IQR, and max/min
Spot	124.98	−0.3%	126.09 / 122.97; Oct31, Apr03	122.97 – 126.09; 124.98; last 11 months
MPD Std Dev	2.43%	0.016%	2.82 / 2.17; Oct17, Jul03	2.17 – 2.82; 2.43; last 11 months
MPD Skew	−0.06	0.026	−0.05 / −0.75; Jun19, Nov14	−0.75 – −0.05; −0.06; last 11 months
Market Prob of −5% or More Decline	2.52%	0.0054%	5.31 / 1.62; Oct17, Jun19	1.62 – 5.31; 2.52; last 11 months
Volume	240180	−12%	670307 / 0	5226 – 670307; 240180; last 11 months

iShares US Real Estate Index (3−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend with min/max points	Long−Term Range with median, IQR, and max/min
Spot	74.12	−0.26%	74.31 / 61.63; Aug21, Sep05	Last time higher May2013; 50.57 – 74.76; 74.12; last 48 months
MPD Std Dev	5.63%	−0.29%	11.09 / 5.22; Sep05, Jul17	4.77 – 21.53; 5.63; last 48 months
MPD Skew	−0.88	0.31	−0.52 / −1.55; Dec26, Jun05	−2.09 – −0.52; −0.88; last 48 months
Market Prob of −10% or More Decline	6.17%	−2.3%	18.66 / 4.45; Sep05, Jul17	3.43 – 25.19; 6.17; last 48 months
Volume	17839	−56%	72233 / 0	705 – 90810; 17839; last 48 months

Source: Bloomberg, FactSet

Exchange Rate MPD Statistics as of September 04, 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	**1.29**	−2.5%	1.39 / 1.29; May01; Sep04	Last time lower May2013	1.22; 1.29; 1.48; last 41 months
MPD Std Dev	**3.4%**	0.5%	4.45 / 2.4; Nov27; Jul03		2.4; 3.4; 9.19; last 41 months
MPD Skew	**−0.25**	−0.27	0.02 / −0.52; Aug21; Sep05	41 month high	−0.85; −0.25; 0.02; last 41 months
Market Prob of −10% or More Decline	**0.44%**	0.39%	1.95 / 0.02; Sep05; Jul03		0.02; 0.44; 13.01; last 41 months
Volume	**41854**	19%	67785 / 0		2039; 41854; 83954; last 41 months
Dollar−Pound Futures (3−Month Expiry)					
Spot	**163.18**	−1.6%	171.39 / 155.8; Jul03; Sep05		150.08; 163.18; 171.39; last 41 months
MPD Std Dev	**3.22%**	0.75%	3.99 / 2.36; Nov27; Aug14	41 month low	2.36; 3.22; 6.96; last 41 months
MPD Skew	**−0.25**	−0.18	0.1 / −0.53; Aug28; Sep05	41 month high	−0.59; −0.25; 0.1; last 41 months
Market Prob of −10% or More Decline	**0.32%**	0.31%	1.52 / 0.01; Sep05; Aug14	41 month low	0.01; 0.32; 8.51; last 41 months
Volume	**8848**	−29%	36353 / 0		104; 8848; 36353; last 41 months
Dollar−Yen Futures (3−Month Expiry)					
Spot	**95.1**	−1.3%	102.88 / 95.1; Oct03; Sep04	41 month low	95.1; 95.1; 130.66; last 41 months
MPD Std Dev	**3.63%**	0.25%	6.56 / 2.76; Sep05; Jul03		2.76; 3.63; 8.02; last 41 months
MPD Skew	**0.11**	0.16	0.34 / −0.08; Feb06; Nov14		−0.44; 0.11; 0.91; last 41 months
Market Prob of −10% or More Decline	**0.39%**	0.09%	6.64 / 0.02; Sep05; Jul24		0.02; 0.39; 10.78; last 41 months
Volume	**8210**	−63%	26706 / 0		306; 8210; 42005; last 41 months

Metal and Energy Commodity MPD Statistics as of September 04, 2014

Gold (6−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend (with min/max points)		Long−Term Range (with median, IQR, and max/min)
Spot	1267.3	−0.71%	1373.7 (Sep05) / 1213.8 (Dec26)		1213.5 – 1267.3 – 1859.2, last 47 months
MPD Std Dev	9.41%	−0.49%	15.67 (Sep05) / 9.39 (Jul10)		9.39 – 9.41 – 23.3, last 47 months
MPD Skew	−0.08	−0.029	0.02 (Aug28) / −0.53 (Oct03)	Last time higher Nov2012	−0.71 – −0.08 – 0.25, last 47 months
Market Prob of −20% or More Decline	2.39%	−0.54%	10.36 (Sep05) / 2.39 (Sep04)	47 month low	2.39 – 2.39 – 21.03, last 47 months
Volume	3158	1.3%	31121 / 0		691 – 3158 – 93550, last 47 months

Silver (6−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend (with min/max points)		Long−Term Range (with median, IQR, and max/min)
Spot	19.19	−1.5%	23.34 (Sep19) / 19.08 (May01)		18.6 – 19.19 – 48.61, last 47 months
MPD Std Dev	13.45%	−0.27%	24.39 (Sep05) / 13.44 (Aug28)	47 month low	13.44 – 13.45 – 40.41, last 47 months
MPD Skew	−0.01	−0.013	0.15 (Jul10) / −0.33 (Sep05)		−0.63 – −0.01 – 0.15, last 47 months
Market Prob of −20% or More Decline	7.55%	0.45%	20.85 (Sep05) / 6.54 (Aug28)	47 month low	6.54 – 7.55 – 32.41, last 47 months
Volume	1684	−64%	9415 / 0		134 – 1684 – 27970, last 47 months

West Texas Intermediate Crude (6−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend (with min/max points)		Long−Term Range (with median, IQR, and max/min)
Spot	92.81	0.14%	102.41 (Jun19) / 91.29 (Jan09)		79.47 – 92.81 – 114.82, last 47 months
MPD Std Dev	11.6%	−0.62%	16.9 (Sep05) / 10.25 (Jul24)		10.25 – 11.6 – 34, last 47 months
MPD Skew	−0.42	−0.18	−0.1 (Jun19) / −0.61 (Nov14)		−0.81 – −0.42 – 0, last 47 months
Market Prob of −20% or More Decline	5.69%	−0.39%	12.31 (Sep05) / 3.65 (Jul24)		3.65 – 5.69 – 26.43, last 47 months
Volume	11127	880%	85645 / 0		165 – 11127 – 180997, last 47 months

Brent Crude (6−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend (with min/max points)		Long−Term Range (with median, IQR, and max/min)
Spot	104.6	0.72%	112.48 (Jun19) / 103.16 (Aug14)	Last time lower Jun2013	91.39 – 104.6 – 121, last 29 months
MPD Std Dev	10.91%	−0.61%	16.82 (Sep05) / 10.08 (Jun12)		10.08 – 10.91 – 24.21, last 29 months
MPD Skew	−0.15	−0.016	0.09 (Jun19) / −0.61 (Jan09)		−0.79 – −0.15 – 0.09, last 29 months
Market Prob of −20% or More Decline	4.37%	−0.28%	12.4 (Sep05) / 3.04 (Jul03)		3.04 – 4.37 – 20.39, last 29 months
Volume	9125	−89%	95938 / 0		2900 – 9125 – 162136, last 29 months

Source: Bloomberg

Agricultural Commodity MPD Statistics as of September 04, 2014

Corn (6−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend with min/max points: max	1−Year Trend with min/max points: min		Long−Term Range with median, IQR, and max/min: latest	min	max	period
Spot	359.5	−2.6%	513.25 (May08)	359.5 (Sep04)	47 month low	359.5	359.5	823.75	last 47 months
MPD Std Dev	15.52%	0.3%	21.43 (Apr03)	12.43 (Jan23)		15.52	12.43	29.14	last 47 months
MPD Skew	−0.02	0.047	0.31 (Jun26)	−0.12 (Jan09)		−0.02	−0.12	0.36	last 47 months
Market Prob of −20% or More Decline	10.7%	1.4%	18.97 (Apr03)	5.73 (Jan23)		10.7	5.73	29.69	last 47 months
Volume	51071	−65%	216660	0		51071	6059	472954	last 47 months

Soybeans (6−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend: max	1−Year Trend: min		Long−Term Range: latest	min	max	period
Spot	1018.5	−2.6%	1343.75 (Sep05)	1018.5 (Sep04)	47 month low	1018.5	1018.5	1691.25	last 47 months
MPD Std Dev	13.82%	0.96%	15.76 (Apr17)	10.93 (Jan23)		13.82	10.93	23.07	last 47 months
MPD Skew	−0.36	−0.13	0.17 (Apr03)	−0.38 (Aug28)	47 month low	−0.36	−0.38	0.75	last 47 months
Market Prob of −20% or More Decline	8.75%	1.8%	10.49 (Apr17)	4.07 (Jan23)		8.75	4.07	22.49	last 47 months
Volume	15841	24%	238213	0		15841	679	326132	last 47 months

Wheat (6−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend: max	1−Year Trend: min		Long−Term Range: latest	min	max	period
Spot	550	−0.99%	743.75 (May08)	550 (Sep04)	47 month low	550	550	930	last 47 months
MPD Std Dev	15.37%	−1.1%	21.56 (Mar20)	12.95 (Dec12)		15.37	12.95	28.19	last 47 months
MPD Skew	0.14	−0.13	0.4 (Oct03)	0.03 (Jun12)		0.14	0.01	0.54	last 47 months
Market Prob of −20% or More Decline	10.68%	−0.13%	19.59 (Mar20)	5.67 (Dec12)		10.68	5.67	29.32	last 47 months
Volume	4163	−86%	46977	0		4163	362	51689	last 47 months

Cattle (3−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend: max	1−Year Trend: min		Long−Term Range: latest	min	max	period
Spot	156.7	5.5%	158.1 (Jul31)	129.05 (Dec12)		156.7	129.05	158.1	last 14 months
MPD Std Dev	6.57%	−0.84%	7.6 (Aug14)	3.6 (Jan09)	14 month high	6.57	3.6	7.6	last 14 months
MPD Skew	−0.44	−0.089	−0.17 (May08)	−0.94 (Jan09)		−0.44	−0.94	−0.17	last 14 months
Market Prob of −5% or More Decline	20.88%	−2.7%	24.31 (Aug14)	8.46 (Jan09)	14 month high	20.88	8.46	24.31	last 14 months
Volume	9508	−54%	33850	0		9508	1263	33850	last 14 months

Source: Bloomberg

Bank MPD Statistics as of September 04, 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)					
American Express	**8.03%**	−0.056%	11.38 Sep05; 7.82 Aug28	48 month low	8.03; 7.82 – 24.05; last 48 months
Bank of America	**10.4%**	0.17%	13.68 Oct03; 10.22 Aug21	48 month low	10.4; 10.22 – 44.07; last 48 months
BB&T	**7.91%**	0.09%	10.83 Sep05; 7.29 Jul03		7.91; 7.29 – 27.58; last 48 months
Barclays	**12.11%**	−0.67%	28.84 Jan23; 12.11 Sep04	48 month low	12.11; 12.11 – 42.39; last 48 months
Bank of NY Mellon	**8.92%**	−0.21%	12.33 Sep05; 7.88 Jul24		8.92; 7.88 – 27.34; last 48 months
Citigroup	**9.09%**	0.14%	13.39 Oct03; 8.52 Jul24		9.09; 8.52 – 33.38; last 48 months
Capital One	**8.36%**	−0.54%	12.11 Sep05; 7.72 Jul24		8.36; 7.72 – 29.49; last 48 months
Credit Suisse	**11.93%**	−0.3%	17.29 Sep19; 9.84 May01		11.93; 9.84 – 34.13; last 48 months
Deutsche Bank	**12.53%**	−1.2%	15.86 Sep05; 11.33 Nov27		12.53; 11.33 – 41.68; last 48 months
Fifth Third	**9.57%**	0.8%	15.13 Jun19; 8.21 May01		9.57; 8.21 – 30.73; last 48 months
Goldman Sachs	**8.6%**	0.23%	13.52 Oct03; 8.23 Jul03		8.6; 8.23 – 31.2; last 48 months
JP Morgan	**8.73%**	0.25%	11.72 Oct31; 7.41 Jul24		8.73; 7.41 – 30.37; last 48 months
Keycorp	**11.46%**	−0.66%	13.77 Sep05; 9.76 Jul03		11.46; 9.76 – 35.48; last 48 months
Morgan Stanley	**11%**	0.88%	15.25 Sep05; 10.11 Jul24		11; 10.11 – 41.77; last 48 months
PNC Financial	**7.6%**	0.082%	10.64 Oct03; 7.45 Jul03		7.6; 7.45 – 26.31; last 48 months
Regions Financial	**10.93%**	−0.1%	16.35 Sep19; 10.93 Sep04	48 month low	10.93; 10.93 – 39.37; last 48 months
SunTrust	**10.01%**	1.1%	14.02 Sep05; 8.87 Aug21	48 month low	10.01; 8.87 – 34.43; last 48 months
State Street	**8.73%**	−0.17%	12.4 Apr17; 8.73 Sep04	48 month low	8.73; 8.73 – 27.95; last 48 months
UBS	**10.25%**	−0.25%	19.02 Mar06; 10.04 Aug28	48 month low	10.25; 10.04 – 39.87; last 48 months
US Bancorp	**7.39%**	0.16%	9.27 Aug07; 6.58 Jul24	Last time higher Jun2013	7.39; 6.58 – 26.01; last 48 months
Wells Fargo	**7.43%**	−0.077%	10.94 Oct03; 7.16 Jun05		7.43; 7.16 – 28.37; last 48 months

Source: FactSet

Bank MPD Statistics as of September 04, 2014

MPD Skew (3−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend (with min/max points): max	Max date	Min	Min date		Long−Term Range (with median, IQR, and max/min): min	Latest	Max	
American Express	−0.38	0.033	−0.21	Jul31	−0.62	Oct03		−1.32	−0.38	−0.21	last 48 months
Bank of America	−0.32	0.081	−0.02	Jul10	−0.51	Oct17		−1.17	−0.32	−0.02	last 48 months
BB&T	−0.6	−0.18	−0.34	Aug07	−1.54	Nov14	Last time higher Dec2012	−1.54	−0.6	−0.15	last 48 months
Barclays	−0.55	0.045	1.94	Jan23	−1.97	Sep19		−1.97	−0.55	1.94	last 48 months
Bank of NY Mellon	−0.51	0.082	0.14	Aug07	−1.09	Jul10	48 month high	−1.56	−0.51	0.14	last 48 months
Citigroup	−0.53	−0.049	−0.23	Jan23	−0.75	Oct17		−1.23	−0.53	0.63	last 48 months
Capital One	−0.47	0.15	−0.24	Aug07	−0.81	Oct17	48 month high	−1.38	−0.47	−0.24	last 48 months
Credit Suisse	0.3	0.76	0.43	May22	−2	Apr24		−2.07	0.3	0.43	last 48 months
Deutsche Bank	−0.55	−0.015	0.35	Jun26	−0.95	May01		−1.31	−0.55	0.48	last 48 months
Fifth Third	−0.27	0.35	0.3	May01	−1.4	Jun12		−1.45	−0.27	0.3	last 48 months
Goldman Sachs	−0.59	0.13	−0.36	Jun05	−0.72	Aug21	Last time lower Dec2012	−1.38	−0.59	−0.34	last 48 months
JP Morgan	−0.52	0.038	−0.33	Jul17	−0.66	Aug14	Last time lower Aug2013	−1.44	−0.52	−0.33	last 48 months
Keycorp	−0.5	0.19	0.28	May15	−1.02	Jan09		−2.24	−0.5	0.4	last 48 months
Morgan Stanley	−0.56	−0.076	−0.26	Aug07	−0.67	Jun19	Last time higher Mar2013	−1.2	−0.56	−0.25	last 48 months
PNC Financial	−0.39	0.35	−0.39	Sep04	−1.07	Mar06	Last time higher Apr2011	−1.51	−0.39	0.07	last 48 months
Regions Financial	−0.28	−0.039	0.03	Aug14	−1.04	May15	Last time higher Jul2013	−1.94	−0.28	0.1	last 48 months
SunTrust	−0.63	−0.1	−0.34	Jul31	−1.05	May08		−1.16	−0.63	−0.18	last 48 months
State Street	−0.55	0.22	−0.13	Aug14	−0.77	Aug21	Last time lower May2013	−1.28	−0.55	−0.13	last 48 months
UBS	−0.01	1.2	0.45	Aug07	−3.36	Oct17	Last time higher Oct2012	−3.36	−0.01	0.97	last 48 months
US Bancorp	−0.95	−0.44	−0.31	Jul31	−1.3	May15		−1.45	−0.95	−0.31	last 48 months
Wells Fargo	−0.63	−0.11	−0.42	Dec26	−0.82	Jul31		−1.73	−0.63	−0.42	last 48 months

Source: FactSet

Bank MPD Statistics as of September 04, 2014

Market Probability of −20% or More Decline (3−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend (with min/max points): Max	Max date	Min	Min date		Long−Term Range (last 48 months, with median, IQR, and max/min): Latest	Min	Max
American Express	1.57%	−0.19%	5.78	Sep05	1.53	Aug28	48 month low	1.57	1.53	17.67
Bank of America	3.91%	0.017%	7.21	Feb06	3.13	Jul03		3.91	3.13	27.24
BB&T	2.17%	0.36%	6.15	Feb06	1.82	Aug21	48 month low	2.17	1.82	34.9
Barclays	5.54%	−2.3%	16.71	Jan23	5.54	Sep04	48 month low	5.54	5.54	30.94
Bank of NY Mellon	2.69%	−0.64%	7.59	Sep05	1.72	Jul31		2.69	1.72	21.34
Citigroup	2.79%	0.24%	7.58	Oct03	1.93	Jul24		2.79	1.93	24.59
Capital One	2.09%	−0.82%	6.6	Sep05	1.64	Jul24		2.09	1.64	21.29
Credit Suisse	4.99%	−1.8%	12.84	May15	3.77	Jul24		4.99	3.77	28.61
Deutsche Bank	7.05%	−0.95%	12.04	Sep05	4.99	Nov27		7.05	4.99	29.63
Fifth Third	3.24%	0.073%	9.25	Jun19	0.99	May01		3.24	0.99	27.19
Goldman Sachs	2.3%	0.014%	8.49	Oct03	1.79	Jun05		2.3	1.79	21.46
JP Morgan	2.8%	0.21%	6.72	Oct31	1.31	Jul24		2.8	1.31	20.52
Keycorp	5.02%	−1.7%	9.29	Sep05	2.82	Jul03		5.02	2.82	27.26
Morgan Stanley	5.13%	1.3%	10.76	Sep05	3.79	Aug21	48 month low	5.13	3.79	26.47
PNC Financial	1.43%	−0.32%	5.41	Feb06	1.43	Sep04	48 month low	1.43	1.43	17.91
Regions Financial	4.78%	−0.4%	11.22	Oct17	4.32	Jul10		4.78	3.64	29.69
SunTrust	3.98%	2%	9.69	Sep05	1.73	May08		3.98	1.73	26.4
State Street	2.23%	−0.85%	7.16	Apr17	2.23	Sep04	48 month low	2.23	2.23	19.69
UBS	3.12%	−1.8%	18.15	Mar06	3.12	Sep04	48 month low	3.12	3.12	27.33
US Bancorp	1.56%	0.27%	3.56	Feb06	0.74	Jul24		1.56	0.74	18.85
Wells Fargo	1.45%	−0.065%	5.3	Oct03	1.3	Jun05		1.45	1.3	20.71

Bank MPD Statistics as of September 04, 2014

Indicator	Latest	2−Week Change	1−Year Trend with min/max points		Long−Term Range with median, IQR, and max/min			
			max	min	min	latest	max	period
Volume (3−Month Expiry)								
American Express	**4388**	−39%	11926	0	623	4388	23041	last 48 months
Bank of America	**32906**	−60%	132589	0	7419	32906	363160	last 48 months
BB&T	**815**	−75%	6490	0	190	815	6903	last 48 months
Barclays	**11011**	3000%	11011	0	29	11011	15208	last 48 months
Bank of NY Mellon	**349**	370%	15678	0	59	349	17091	last 48 months
Citigroup	**7132**	20%	78527	0	1104	7132	284278	last 48 months
Capital One	**689**	−40%	9311	0	189	689	38646	last 48 months
Credit Suisse	**132**	120%	4011	0	0	132	14201	last 48 months
Deutsche Bank	**1728**	−23%	7910	0	62	1728	29575	last 48 months
Fifth Third	**722**	−84%	15351	0	28	722	19324	last 48 months
Goldman Sachs	**6349**	−5.1%	21840	0	296	6349	43413	last 48 months
JP Morgan	**6393**	−14%	52517	0	943	6393	119246	last 48 months
Keycorp	**732**	120%	2780	0	66	732	76270	last 48 months
Morgan Stanley	**2961**	−70%	32137	0	327	2961	84281	last 48 months
PNC Financial	**635**	−35%	4810	0	118	635	13224	last 48 months
Regions Financial	**367**	−90%	6989	0	20	367	19649	last 48 months
SunTrust	**436**	−89%	4232	0	61	436	13788	last 48 months
State Street	**577**	23%	5339	0	42	577	5370	last 48 months
UBS	**484**	460%	2766	0	6	484	6502	last 48 months
US Bancorp	**243**	−54%	5746	0	172	243	29201	last 48 months
Wells Fargo	**12339**	33%	121351	0	950	12339	167820	last 48 months

Insurance Company MPD Statistics as of September 04, 2014

MPD Standard Deviation (3−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend with min/max points: Max	Min	Max date	Min date		Long−Term Range with median, IQR, and max/min: Min	Latest	Max	
Aflac	7.6%	0.3%	11.93	7.29	Oct03	Aug21	48 month low	7.29	7.6	28.3	last 48 months
AIG	8.7%	−0.03%	13.72	8.7	Oct03	Sep04	48 month low	8.7	8.7	34.63	last 48 months
Allstate	8.07%	1.2%	11.13	5.83	Oct03	Aug28	48 month low	5.83	8.07	22.82	last 48 months
Ameriprise	9.91%	−0.58%	14.6	9.76	Sep19	Jun26		9.76	9.91	28.12	last 48 months
Chubb	6.76%	−0.71%	8.93	6.43	Sep05	Jul24		6.43	6.76	18.33	last 48 months
Hartford Financial	9.02%	−0.26%	14.96	8.68	Sep05	Jul31		8.68	9.02	34.59	last 48 months
Lincoln National	12.55%	1.7%	16.04	10.28	Sep05	Aug28	48 month low	10.28	12.55	35.56	last 48 months
Met Life	10.19%	−0.56%	14.31	10.08	Sep05	Jul24		10.08	10.19	31.28	last 48 months
Principal Financial	12.22%	1.6%	19.04	8.31	Nov14	Jul10		8.02	12.22	34.89	last 48 months
Progressive	8.89%	0.71%	11.32	6.2	Mar20	Jan09		6.2	8.89	24.84	last 48 months
Prudential	10.33%	−0.16%	14.32	10.11	Oct03	Jul24		10.11	10.33	30.06	last 48 months

Source: FactSet

Insurance Company MPD Statistics as of September 04, 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	**−0.61**	0.056	−0.32 / −0.94; Jun19 / Oct17		−1.24, −0.61, −0.32; last 48 months
AIG	**−0.52**	0.04	−0.28 / −0.91; Jul31 / Oct17		−1.25, −0.52, 1.25; last 48 months
Allstate	**−0.81**	0.31	−0.31 / −1.19; Jul31 / Aug14	Last time lower Apr2013	−1.39, −0.81, −0.12; last 48 months
Ameriprise	**−0.65**	0.032	−0.32 / −1.7; May15 / Sep19		−4.03, −0.65, 0.33; last 48 months
Chubb	**−0.67**	−0.2	−0.21 / −1.02; Aug14 / Oct17	48 month high	−1.56, −0.67, −0.21; last 48 months
Hartford Financial	**−0.44**	0.42	−0.16 / −0.86; Jul17 / Aug21	Last time lower Oct2012	−1.07, −0.44, −0.16; last 48 months
Lincoln National	**−0.73**	−0.16	0.15 / −0.96; May01 / Oct31		−1.59, −0.73, 0.15; last 48 months
Met Life	**−0.79**	−0.21	−0.31 / −0.89; Aug07 / Oct17	Last time higher Dec2012	−1.52, −0.79, −0.23; last 48 months
Principal Financial	**−1.62**	1.2	0.02 / −2.95; Jul10 / Nov27		−2.95, −1.62, 0.24; last 48 months
Progressive	**−1**	1.1	0.36 / −3.18; Jan23 / Sep19		−3.54, −1, 0.71; last 48 months
Prudential	**−0.42**	0.34	−0.36 / −0.94; May01 / Feb06		−1.45, −0.42, −0.36; last 48 months

Insurance Company MPD Statistics as of September 04, 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	**1.75%**	0.2%	6.05 Oct03 / 1.39 Jul03		1.75 / 1.39 – 20.31 / last 48 months
AIG	**2.55%**	−0.042%	7.76 Sep05 / 2.55 Sep04	48 month low	2.55 / 2.55 – 25.58 / last 48 months
Allstate	**2.29%**	0.88%	6.08 Oct03 / 0.56 May22		2.29 / 0.56 – 18.62 / last 48 months
Ameriprise	**3.69%**	−1.2%	9.8 Sep19 / 3.62 Jun26		3.69 / 3.62 – 22.78 / last 48 months
Chubb	**1.12%**	−0.37%	3.25 Sep05 / 0.64 Aug14	48 month low	1.12 / 0.64 – 14.62 / last 48 months
Hartford Financial	**3.12%**	−0.5%	10.63 Sep05 / 2.19 Jul31		3.12 / 2.19 – 23.29 / last 48 months
Lincoln National	**7.6%**	2.9%	11.28 Sep05 / 3.85 Aug28	48 month low	7.6 / 3.85 – 27.65 / last 48 months
Met Life	**4.17%**	−0.88%	9.25 Sep05 / 3.79 Jul24		4.17 / 3.79 – 20.81 / last 48 months
Principal Financial	**9.34%**	2.3%	18.82 Jul17 / 0.43 Jul10		9.34 / 0.43 – 28.98 / last 48 months
Progressive	**4.38%**	1.9%	4.7 Feb06 / 0 Dec26		4.38 / 0 – 39.73 / last 48 months
Prudential	**4.27%**	−0.95%	9.91 Oct03 / 3.99 Jul24		4.27 / 3.99 – 22.23 / last 48 months

Insurance Company MPD Statistics as of September 04, 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	**1010**	−60%	3933 0	1010 541 22718 last 48 months
AIG	**2225**	−82%	38744 0	2225 432 103998 last 48 months
Allstate	**275**	−32%	5708 0	275 119 93106 last 48 months
Ameriprise	**51**	−64%	1114 0	51 5 1317 last 48 months
Chubb	**286**	250%	2541 0	286 43 30168 last 48 months
Hartford Financial	**440**	−77%	13441 0	440 198 37285 last 48 months
Lincoln National	**290**	−61%	8403 0	290 51 10682 last 48 months
Met Life	**487**	29%	14685 0	487 319 161416 last 48 months
Principal Financial	**294**	280%	306 0	294 2 3846 last 48 months
Progressive	**26**	−93%	680 0	26 0 4335 last 48 months
Prudential	**4364**	380%	13225 0	4364 222 13225 last 48 months

Source: FactSet