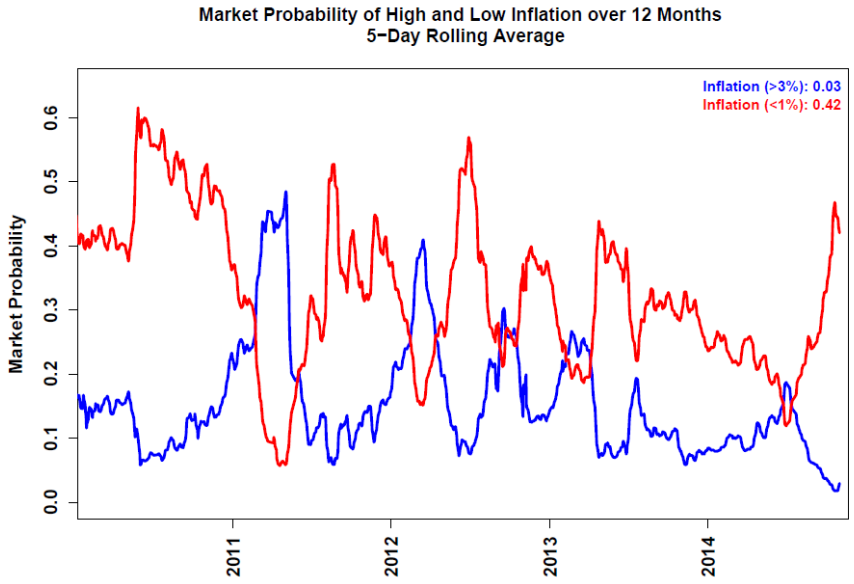
Minneapolis Options Report – October 31st

Markets generally retraced the large moves they experienced two weeks ago and uncertainty appears to have receded. Standard deviations of market-based probability distributions (MPDs) for inflation, interest rates, banks and commodities all declined during the last two weeks. Oil and inflation MPDs continue to indicate a bias toward lower prices.

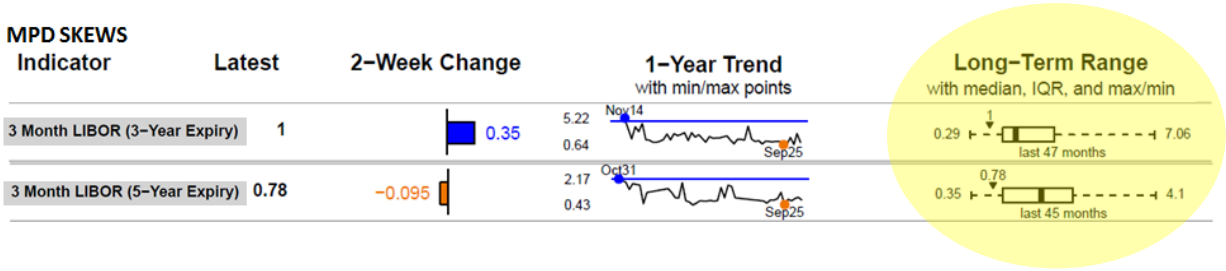
Inflation

Market probabilities for high inflation based on caps and floors on the CPI remain very low. Equivalently, market probabilities of inflation below 1% are elevated. This is especially true in the near-term where market probabilities of inflation of less than 1% remain at elevated (42% in the graph below).



Interest rates

Spot prices for three month LIBOR futures rose slightly from two weeks ago. We note that the market expectations calculated from LIBOR futures with 3 and 5 year expiries are biased toward higher rates (skew values = 1 and 0.78 below) but that bias remains historically low (shaded). This is consistent with expectations for lower inflation and lower short-term rate increases.



MPDs based on futures contracts for five and ten year Treasuries suggested a decline in tail risk relative to two weeks ago. The short-term spike in general market volatility has receded and this was reflected in MPD statistics in this report.

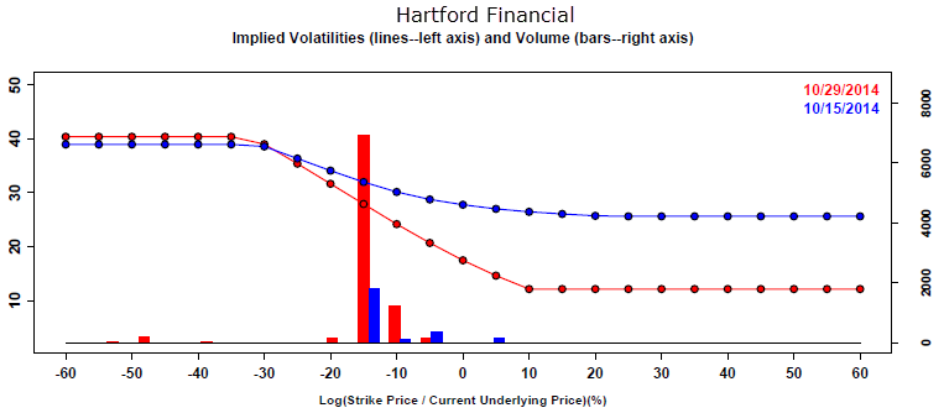
Banks and Insurance Companies

Equity markets rallied as volatility fell. The S&P 500 rose approximately 6.4% over the two weeks since our last report. The average bank in our 17 company universe rose 7.2% while the average of 11 insurance companies we follow rose 8.4%. Market probability densities based on bank and insurance company stocks also reflected the market moves since our last report. Standard deviations of the MPDs declined in excess of 300 basis points.

Additional Details:

- European banks did not experience the same reductions in MPD standard deviations as did large US banks. Moreover, the stock price for Credit Suisse fell during the past two weeks (the only bank to suffer a decline). The four European bank MPD standard deviations fell by an average of 2% while the US bank MPD standard deviations fell by 4%.

- Hartford Financial options experienced above average volume. The majority of the out-of-the-money volume occurred at prices below the current spot. Consistent with this trading pattern the market-based probability density became more negative.



Other commodity markets

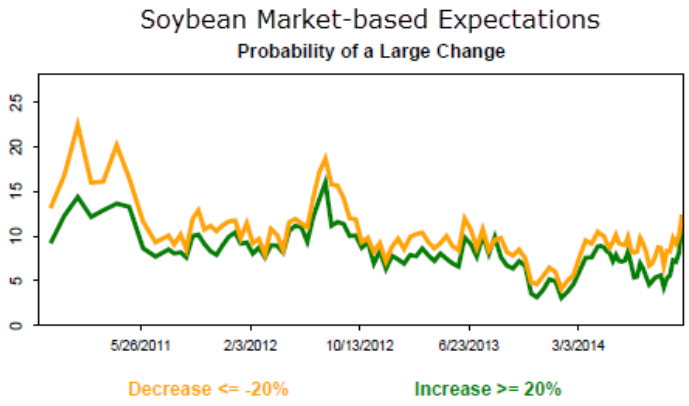
Tail risks, as measured by MPD standard deviations generally declined over the past two weeks. The MPDs for agricultural commodities, however, had a distinct trend from other markets. The soybean, corn, wheat and cattle markets experienced higher spot prices. The MPDs derived from options on futures prices in those markets indicated *higher* tail risks in the form of increased standard deviations and skews.

Additional Details:

- Trading in options on currency futures is robust as the dollar continues to strengthen. We note that our data does not incorporate the news of the Bank of Japan's updated policy strategies.

- Tail risks measured in the market for WTI crude oil moderated somewhat from our last report. Spot prices were slightly higher, the MPD standard deviation fell by 150 basis points, and the MPD skew was less negative.

- Uncertainty in the price of soybeans increased (see graph below). The standard deviation of the MPD derived from options on soybean futures increased nearly 300 basis points and is at a two year high.



- Silver and gold prices have been falling for the past 3 months and currently are near 4 year lows. The standard deviation of the MPD derived from options on silver futures, which briefly spiked in September, has begun to retrace the change. MPDs from both markets continue to show a bias toward lower prices.

Inflation MPD Statistics as of October 29, 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)					
Median	**1.21%**	0.22%	2.2 / 0.99 (Jun26, Oct15)	Last time lower Jun2012	0.75 – 1.21 – 2.92 (last 47 months)
MPD Std Dev	**0.96%**	0.12%	1.72 / 0.83 (Apr17, Aug28)		0.83 – 0.96 – 2.75 (last 47 months)
MPD Skew	**−0.46**	−0.23	2.5 / −0.61 (Apr17, Dec05)		−0.77 – −0.46 – 2.5 (last 47 months)
Market Prob of Less Than 1% Inflation	**40.32%**	−10%	50.63 / 11.88 (Oct15, Jun26)	Last time higher Jun2012	5.88 – 40.32 – 57.45 (last 47 months)
Market Prob of More Than 3% Inflation	**3.23%**	1.8%	18.71 / 1.48 (Jun26, Oct15)	47 month low	1.48 – 3.23 – 46.92 (last 47 months)
Inflation (2−Year Expiry)					
Median	**1.52%**	0.16%	2.2 / 1.37 (Jun26, Oct15)	Last time lower Jul2012	1.18 – 1.52 – 2.75 (last 46 months)
MPD Std Dev	**0.95%**	0.055%	1.09 / 0.88 (Oct31, Oct22)	46 month low	0.88 – 0.95 – 1.84 (last 46 months)
MPD Skew	**−0.02**	0.044	0.19 / −0.22 (Dec26, Jul31)		−0.4 – −0.02 – 2.74 (last 46 months)
Market Prob of Less Than 1% Inflation	**29.96%**	−4.1%	34.04 / 10.74 (Oct15, Jun26)	Last time higher Jul2012	10.74 – 29.96 – 44.28 (last 46 months)
Market Prob of More Than 3% Inflation	**6.37%**	2.2%	21.41 / 4.21 (Jun26, Oct15)	46 month low	4.21 – 6.37 – 43.02 (last 46 months)
Inflation (5−Year Expiry)					
Median	**1.91%**	0.081%	2.34 / 1.82 (Jul10, Oct15)	Last time lower Sep2011	1.64 – 1.91 – 2.83 (last 46 months)
MPD Std Dev	**0.96%**	0.01%	1.2 / 0.91 (Nov14, Jul24)		0.91 – 0.96 – 1.89 (last 46 months)
MPD Skew	**0.15**	0.013	0.21 / −0.1 (Dec05, Jul31)		−0.22 – 0.15 – 1.39 (last 46 months)
Market Prob of Less Than 1% Inflation	**17.1%**	−2.6%	19.72 / 7.13 (Oct15, Jul31)	Last time higher Dec2012	7.13 – 17.1 – 31.67 (last 46 months)
Market Prob of More Than 3% Inflation	**11.82%**	2%	25.22 / 9.83 (Jun26, Oct15)	46 month low	9.83 – 11.82 – 41.72 (last 46 months)

Source: Bloomberg

Medium−to−Long Interest Rates MPD Statistics as of October 29, 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	**119.44**	−1%	120.69 / 118.05; Oct15, Sep17; 1 month high	118.05 – 119.44 – 120.69; last 1 months
MPD Std Dev	**2.19%**	−0.11%	2.3 / 1.41; Oct15, Sep24; 1 month high	1.41 – 2.19 – 2.3; last 1 months
MPD Skew	**−0.05**	−0.41	0.36 / −0.5; Oct15, Sep10; 1 month high	−0.5 – −0.05 – 0.36; last 1 months
Market Prob of −3% or More Decline	**8.4%**	−0.34%	8.74 / 2.44; Oct15, Sep24; 1 month high	2.44 – 8.4 – 8.74; last 1 months
Volume	**8008**	−98%	377550 / 0	2054 – 8008 – 377550; last 1 months
10 Year Treasury (3−Month Expiry)				
Spot	**126.46**	−1.7%	128.59 / 122.97; Oct15, Apr03; 12 month high	122.97 – 126.46 – 128.59; last 12 months
MPD Std Dev	**3.12%**	−0.68%	3.8 / 2.17; Oct15, Jul03; 12 month high	2.17 – 3.12 – 3.8; last 12 months
MPD Skew	**0.05**	−0.2	0.29 / −0.75; Oct22, Nov14; 12 month high	−0.75 – 0.05 – 0.29; last 12 months
Market Prob of −5% or More Decline	**5.29%**	−3.2%	8.48 / 1.62; Oct15, Jun19; 12 month high	1.62 – 5.29 – 8.48; last 12 months
Volume	**13807**	−99%	954197 / 0	5226 – 13807 – 954197; last 12 months

Source: Chicago Mercantile Exchange

Short Interest Rates MPD Statistics as of October 29, 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	**1.52%**	0.22%	1.85 / 0.92 (Sep18 / Nov14)		0.72 – 1.52 – 2.19 (last 47 months)
MPD Std Dev	**1.39%**	0.18%	2.14 / 1.06 (Jul17 / Nov28)		0.68 – 1.39 – 2.61 (last 47 months)
MPD Skew	**1**	0.35	5.22 / 0.64 (Nov14 / Sep25)		0.29 – 1 – 7.06 (last 47 months)
Market Prob of Less Than 0.5% LIBOR	**15.06%**	−3.9%	27.67 / 9.79 (Nov14 / Sep18)		7.32 – 15.06 – 38.35 (last 47 months)
Market Prob of More Than 1% + Spot	**59.72%**	7.2%	67.85 / 32.97 (Sep18 / Nov07)		7.61 – 59.72 – 71.73 (last 47 months)
3 Month LIBOR (5−Year Expiry)					
Median	**2.23%**	0.29%	2.89 / 1.76 (Apr03 / Oct22)	Last time lower Jun2013	0.94 – 2.23 – 3.79 (last 45 months)
MPD Std Dev	**2.04%**	0.045%	2.76 / 1.97 (Mar06 / Oct09)	Last time lower May2013	1.5 – 2.04 – 2.99 (last 45 months)
MPD Skew	**0.78**	−0.095	2.17 / 0.43 (Oct31 / Sep25)		0.35 – 0.78 – 4.1 (last 45 months)
Market Prob of Less Than 1% LIBOR	**26.67%**	−4%	30.86 / 17.66 (Oct22 / Apr03)	Last time higher Jun2013	9.43 – 26.67 – 53.02 (last 45 months)
Market Prob of More Than 2% + Spot	**49.99%**	4.3%	57.72 / 41.49 (Apr03 / Nov28)		10.68 – 49.99 – 72.25 (last 45 months)

Source: Bloomberg

Equity Index MPD Statistics as of October 29, 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	**1982.3**	6.4%	2001.57 / 1756.54; Sep17; Oct31	1131.42 – 1982.3 – 2001.57; last 47 months
MPD Std Dev	**11.37%**	−3.4%	14.77 / 8.87; Oct15; Jul03	Last time higher Aug2012; 8.87 – 11.37 – 24.27; last 47 months
MPD Skew	**−1.21**	0.13	−0.98 / −1.39; Nov27; May29	−1.52 – −1.21 – −0.86; last 47 months
Market Prob of −20% or More Decline	**6.25%**	−4.1%	10.32 / 3.65; Oct15; Jul03	Last time higher Aug2012; 3.65 – 6.25 – 17.56; last 47 months
Volume	**129541**	−29%	203412 / 0	13428 – 129541 – 347919; last 47 months
S&P 500 (12−Month Expiry)				
Spot	**1982.3**	6.4%	2001.57 / 1756.54; Sep17; Oct31	1131.42 – 1982.3 – 2001.57; last 47 months
MPD Std Dev	**17.61%**	−2.6%	20.16 / 15.02; Oct15; Jul03	Last time higher Dec2012; 10.5 – 17.61 – 32.71; last 47 months
MPD Skew	**−1.28**	−0.15	−1.05 / −1.57; Dec12; May29	−1.57 – −1.28 – −0.98; last 47 months
Market Prob of −20% or More Decline	**12.93%**	−3.1%	16.05 / 10.07; Oct15; Sep17	Last time higher Dec2012; 5.51 – 12.93 – 23.65; last 47 months
Volume	**10179**	−51%	123271 / 0	3174 – 10179 – 161766; last 47 months
iShares US Real Estate Index (3−Month Expiry)				
Spot	**73.79**	4.1%	74.31 / 62.01; Aug21; Dec12	50.57 – 73.79 – 74.76; last 47 months
MPD Std Dev	**6.82%**	−2.9%	9.69 / 5.22; Oct15; Jul17	Last time higher Oct2013; 4.77 – 6.82 – 21.53; last 47 months
MPD Skew	**−1.03**	−0.18	−0.52 / −1.55; Dec26; Jun05	−2.09 – −1.03 – −0.52; last 47 months
Market Prob of −10% or More Decline	**7.8%**	−6.2%	14.24 / 4.45; Dec12; Jul17	3.43 – 7.8 – 25.19; last 47 months
Volume	**54480**	−56%	122800 / 0	705 – 54480 – 122800; last 47 months

Source: FactSet

Exchange Rate MPD Statistics as of October 29, 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	**1.26**	−1.6%	1.39 / 1.26; May01, Oct01	Last time lower Aug2012	1.22 – 1.26 – 1.48; last 42 months
MPD Std Dev	**3.77%**	−0.27%	4.45 / 2.4; Nov27, Jul03		2.4 – 3.77 – 9.19; last 42 months
MPD Skew	**0.08**	0.24	0.08 / −0.37; Oct29, May22	42 month high	−0.85 – 0.08 – 0.08; last 42 months
Market Prob of −10% or More Decline	**0.46%**	−0.6%	1.51 / 0.02; Nov27, Jul03		0.02 – 0.46 – 13.01; last 42 months
Volume	**38217**	−0.26%	79167 / 0		2039 – 38217 – 83954; last 42 months
Dollar−Pound Futures (3−Month Expiry)					
Spot	**160.13**	0.57%	171.39 / 159.22; Jul03, Oct15	Last time lower Sep2013	150.08 – 160.13 – 171.39; last 42 months
MPD Std Dev	**3.1%**	−0.51%	4.39 / 2.36; Sep10, Aug14		2.36 – 3.1 – 6.96; last 42 months
MPD Skew	**−0.24**	−0.0044	0.1 / −0.92; Aug28, Sep17		−0.92 – −0.24 – 0.1; last 42 months
Market Prob of −10% or More Decline	**0.24%**	−0.43%	2.66 / 0.01; Sep10, Aug14		0.01 – 0.24 – 8.51; last 42 months
Volume	**11738**	−11%	36353 / 0		104 – 11738 – 36353; last 42 months
Dollar−Yen Futures (3−Month Expiry)					
Spot	**91.96**	−2.6%	101.72 / 91.64; Oct31, Oct01	42 month low	91.64 – 91.96 – 130.66; last 42 months
MPD Std Dev	**3.97%**	−0.67%	5.4 / 2.76; Nov27, Jul03		2.76 – 3.97 – 8.02; last 42 months
MPD Skew	**0.1**	−0.14	0.34 / −0.08; Feb06, Nov14		−0.44 – 0.1 – 0.91; last 42 months
Market Prob of −10% or More Decline	**0.69%**	−0.73%	2.9 / 0.02; Dec12, Jul24		0.02 – 0.69 – 10.78; last 42 months
Volume	**15326**	33%	26706 / 0		306 – 15326 – 42005; last 42 months

Sources: Chicago Mercantile Exchange, Bloomberg

Metal and Energy Commodity MPD Statistics as of October 29, 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	**1226.15**	−1.6%	1352.4 / 1206.82; Mar06; Oct08	47 month low; 1226.15; 1206.82 – 1859.2; last 47 months
MPD Std Dev	**11.04%**	−0.6%	14.43 / 9.39; Dec12; Jul10	11.04; 9.39 – 23.3; last 47 months
MPD Skew	**−0.24**	0.013	0.02 / −0.49; Aug28; Oct31	−0.24; −0.71 – 0.25; last 47 months
Market Prob of −20% or More Decline	**4.51%**	−0.9%	9 / 2.39; Dec12; Sep04	4.51; 2.39 – 21.03; last 47 months
Volume	**1752**	−58%	31121 / 0	1752; 691 – 93550; last 47 months
Silver (6−Month Expiry)				
Spot	**17.34**	−1%	21.92 / 17.12; Oct31; Oct08	47 month low; 17.34; 17.12 – 48.61; last 47 months
MPD Std Dev	**16.8%**	−2.5%	21.07 / 13.16; Oct31; Sep10	16.8; 13.16 – 40.41; last 47 months
MPD Skew	**−0.5**	−0.1	0.15 / −0.57; Jul10; Oct01	Last time lower Jun2013; −0.5; −0.63 – 0.15; last 47 months
Market Prob of −20% or More Decline	**10.83%**	−3.3%	16.99 / 6.54; Nov14; Aug28	10.83; 6.54 – 32.41; last 47 months
Volume	**2442**	290%	9415 / 0	2442; 134 – 27970; last 47 months
West Texas Intermediate Crude (6−Month Expiry)				
Spot	**80.73**	2%	102.41 / 79.17; Jun19; Oct15	47 month low; 80.73; 79.17 – 114.82; last 47 months
MPD Std Dev	**17.25%**	−1.5%	18.77 / 10.25; Oct15; Jul24	Last time higher Dec2012; 17.25; 10.25 – 34; last 47 months
MPD Skew	**−0.52**	0.026	−0.1 / −0.61; Jun19; Nov14	−0.52; −0.81 – 0; last 47 months
Market Prob of −20% or More Decline	**12.29%**	−2%	14.32 / 3.65; Oct15; Jul24	Last time higher Dec2012; 12.29; 3.65 – 26.43; last 47 months
Volume	**7237**	730%	85645 / 0	7237; 165 – 180997; last 47 months

Sources: Chicago Mercantile Exchange, Bloomberg

Agricultural Commodity MPD Statistics as of October 29, 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	**389.38**	7.8%	513.25 / 334.65; May08, Oct01	47 month low; 334.65 389.38 823.75 last 47 months
MPD Std Dev	**17.27%**	1%	21.43 / 12.43; Apr03, Jan23	12.43 17.27 29.14 last 47 months
MPD Skew	**0.02**	0.032	0.31 / −0.19; Jun26, Sep24	−0.19 0.02 0.34 last 47 months
Market Prob of −20% or More Decline	**11.33%**	0.97%	18.97 / 5.73; Apr03, Jan23	5.73 11.33 29.69 last 47 months
Volume	**63227**	11%	216660 / 0	6059 63227 472954 last 47 months
Soybeans (6−Month Expiry)				
Spot	**1055.36**	8.8%	1331.75 / 934.57; Feb20, Oct01	47 month low; 934.57 1055.36 1691.25 last 47 months
MPD Std Dev	**17.52%**	2.9%	17.52 / 10.93; Oct29, Jan23	Last time higher Sep2012; 10.93 17.52 23.07 last 47 months
MPD Skew	**−0.11**	0.11	0.17 / −0.5; Apr03, Sep24	−0.5 −0.11 0.59 last 47 months
Market Prob of −20% or More Decline	**12.43%**	3.3%	12.43 / 4.07; Oct29, Jan23	Last time higher Sep2012; 4.07 12.43 22.49 last 47 months
Volume	**70255**	100%	238213 / 0	679 70255 326132 last 47 months
Wheat (6−Month Expiry)				
Spot	**551.45**	6.4%	743.75 / 492.25; May08, Sep24	492.25 551.45 930 last 47 months
MPD Std Dev	**16%**	0.69%	21.56 / 12.95; Mar20, Dec12	12.95 16 28.19 last 47 months
MPD Skew	**0.18**	0.011	0.35 / 0.03; Dec12, Jun12	0.01 0.18 0.54 last 47 months
Market Prob of −20% or More Decline	**10.77%**	0.68%	19.59 / 5.67; Mar20, Dec12	5.67 10.77 29.32 last 47 months
Volume	**13320**	140%	46977 / 0	362 13320 51689 last 47 months
Cattle (3−Month Expiry)				
Spot	**165.56**	3.4%	166.87 / 129.05; Oct08, Dec12	15 month high; 129.05 165.56 166.87 last 15 months
MPD Std Dev	**9.34%**	−0.077%	9.42 / 3.6; Oct15, Jan09	15 month high; 3.6 9.34 9.42 last 15 months
MPD Skew	**−0.39**	0.14	−0.17 / −0.94; May08, Jan09	−0.94 −0.39 −0.17 last 15 months
Market Prob of −5% or More Decline	**27.15%**	0.62%	27.15 / 8.46; Oct29, Jan09	15 month high; 8.46 27.15 27.15 last 15 months
Volume	**9269**	43%	33850 / 0	1263 9269 33850 last 15 months

Sources: Chicago Mercantile Exchange, Bloomberg

Bank MPD Statistics as of October 29, 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	**9.57%**	−3.8%	13.33 / 7.82	Oct15 / Aug28	Last time higher Jun2012	7.82 / 9.57 / last 47 months	24.05
Bank of America	**11.69%**	−4.2%	15.89 / 10.22	Oct15 / Aug21	Last time higher Feb2013	10.22 / 11.69 / last 47 months	44.07
BB&T	**8.03%**	−4.4%	12.4 / 7.29	Oct15 / Jul03	Last time higher Jul2012	7.29 / 8.03 / last 47 months	27.58
Barclays	**14.25%**	−1.6%	28.84 / 11.86	Jan23 / Sep24		11.86 / 14.25 / last 47 months	42.39
Bank of NY Mellon	**9.71%**	−3.8%	13.49 / 7.88	Oct15 / Jul24	Last time higher Nov2012	7.88 / 9.71 / last 47 months	27.34
Citigroup	**9.73%**	−5.8%	15.52 / 8.52	Oct15 / Jul24	Last time higher Dec2012	8.52 / 9.73 / last 47 months	33.38
Capital One	**8.68%**	−4.3%	12.94 / 7.72	Oct15 / Jul24	Last time higher Jun2013	7.72 / 8.68 / last 47 months	29.49
Credit Suisse	**12.72%**	−2.3%	15.53 / 9.84	May15 / May01		9.84 / 12.72 / last 47 months	34.13
Deutsche Bank	**15.32%**	−1.7%	17.05 / 11.33	Oct15 / Nov27	Last time higher Jul2013	11.33 / 15.32 / last 47 months	41.68
Fifth Third	**12.86%**	−0.8%	15.13 / 8.21	Jun19 / May01		8.21 / 12.86 / last 47 months	30.73
Goldman Sachs	**9.56%**	−4%	13.57 / 8.23	Oct15 / Jul03	Last time higher Jun2013	8.23 / 9.56 / last 47 months	31.2
JP Morgan	**8.97%**	−4%	12.95 / 7.41	Oct15 / Jul24	Last time higher Dec2012	7.41 / 8.97 / last 47 months	30.37
Keycorp	**12.36%**	−2.1%	14.47 / 9.76	Oct15 / Jul03	Last time higher Dec2012	9.76 / 12.36 / last 47 months	35.48
Morgan Stanley	**11.74%**	−5.3%	17.04 / 10.11	Oct15 / Jul24	Last time higher Jun2013	10.11 / 11.74 / last 47 months	41.77
PNC Financial	**9.1%**	−1.8%	10.91 / 7.45	Oct15 / Sep10	Last time higher Jul2013	7.45 / 9.1 / last 47 months	26.31
Regions Financial	**15.14%**	2.8%	15.36 / 10.57	Dec12 / Sep10		10.57 / 15.14 / last 47 months	39.37
SunTrust	**9.8%**	−4.8%	14.6 / 8.87	Oct15 / Aug21	Last time higher Jan2013	8.87 / 9.8 / last 47 months	34.43
State Street	**10.91%**	−2.8%	13.7 / 8.73	Oct15 / Sep04	Last time higher Jun2013	8.73 / 10.91 / last 47 months	27.95
UBS	**14.48%**	−2.2%	19.02 / 8.7	Mar06 / Sep24		8.7 / 14.48 / last 47 months	39.87
US Bancorp	**7.58%**	−5.5%	13.1 / 6.58	Oct15 / Jul24	Last time higher Jun2012	6.58 / 7.58 / last 47 months	26.01
Wells Fargo	**8.32%**	−4.4%	12.75 / 7.16	Oct15 / Jun05	Last time higher Dec2012	7.16 / 8.32 / last 47 months	28.37

Source: FactSet

Bank MPD Statistics as of October 29, 2014

MPD Skew (3−Month Expiry)

Indicator	Latest	2−Week Change	1−Year Trend (with min/max points)		Long−Term Range (with median, IQR, and max/min)
American Express	−0.62	0.12	−0.21 / −0.74; Jul31, Oct15	Last time lower Jun2013	−1.32 / −0.62 / −0.21; last 47 months
Bank of America	−0.6	0.093	−0.02 / −0.7; Jul10, Oct15	Last time lower Jul2012	−1.17 / −0.6 / −0.02; last 47 months
BB&T	−0.95	−0.14	−0.34 / −1.54; Aug07, Nov14		−1.54 / −0.95 / −0.15; last 47 months
Barclays	−0.52	−0.0076	1.94 / −1.11; Jan23, Sep24		−1.97 / −0.52 / 1.94; last 47 months
Bank of NY Mellon	−0.54	0.55	0.14 / −1.09; Aug07, Jul10		−1.56 / −0.54 / 0.14; last 47 months
Citigroup	−0.7	0.18	−0.23 / −0.89; Jan23, Oct15	Last time lower Jun2012	−1.23 / −0.7 / 0.63; last 47 months
Capital One	−0.32	0.21	−0.24 / −0.89; Aug07, Oct22	Last time lower Jul2013	−1.38 / −0.32 / −0.24; last 47 months
Credit Suisse	0.58	0.18	0.72 / −2; Sep10, Apr24		−2.07 / 0.58 / 0.72; last 47 months
Deutsche Bank	−0.41	−0.31	0.35 / −0.95; Jun26, May01		−1.31 / −0.41 / 0.35; last 47 months
Fifth Third	−1.35	0.068	0.3 / −1.42; May01, Oct15	Last time lower Aug2011	−1.45 / −1.35 / 0.3; last 47 months
Goldman Sachs	−0.83	0.13	−0.36 / −0.97; Jun05, Oct15	Last time lower Jun2012	−1.38 / −0.83 / −0.34; last 47 months
JP Morgan	−0.79	−0.024	−0.33 / −0.79; Jul17, Oct29	Last time lower May2013	−1.44 / −0.79 / −0.33; last 47 months
Keycorp	−0.8	−0.64	0.28 / −1.36; May15, Sep10		−2.24 / −0.8 / 0.4; last 47 months
Morgan Stanley	−0.69	0.086	−0.26 / −0.87; Aug07, Oct08	Last time lower Aug2012	−1.2 / −0.69 / −0.25; last 47 months
PNC Financial	−0.64	−0.21	−0.39 / −1.29; Sep04, Sep10		−1.51 / −0.64 / 0.07; last 47 months
Regions Financial	−0.7	−1.4	0.68 / −1.04; Oct15, May15	47 month high	−1.94 / −0.7 / 0.68; last 47 months
SunTrust	−0.78	−0.091	−0.34 / −1.05; Jul31, May08		−1.16 / −0.78 / −0.34; last 47 months
State Street	−0.61	0.094	−0.13 / −0.98; Aug14, Oct22	Last time lower Mar2013	−1.28 / −0.61 / −0.13; last 47 months
UBS	−1.18	−1.6	0.45 / −1.31; Oct15, Aug28	Last time higher Oct2012	−3.36 / −1.18 / 0.97; last 47 months
US Bancorp	−0.93	0.25	−0.31 / −1.3; Jul31, May15		−1.45 / −0.93 / −0.31; last 47 months
Wells Fargo	−1.19	−0.13	−0.42 / −1.19; Dec26, Oct29	Last time lower Jun2012	−1.73 / −1.19 / −0.42; last 47 months

Source: FactSet

Bank MPD Statistics as of October 29, 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)					
American Express	3.31%	−4.5%	7.79 / 1.53 (Oct15, Aug28)	Last time higher Jun2012	1.53 – 3.31 – 17.67 (last 47 months)
Bank of America	5.9%	−5%	10.91 / 3.13 (Oct15, Jul03)	Last time higher Feb2013	3.13 – 5.9 – 27.24 (last 47 months)
BB&T	2.66%	−5.5%	8.19 / 1.82 (Oct15, Aug21)	Last time higher Jun2012	1.82 – 2.66 – 34.9 (last 47 months)
Barclays	8.12%	−4.7%	16.71 / 5.5 (Jan23, Sep24)		5.5 – 8.12 – 30.94 (last 47 months)
Bank of NY Mellon	3.56%	−4.8%	8.35 / 1.72 (Oct15, Jul31)	Last time higher Jun2013	1.72 – 3.56 – 21.34 (last 47 months)
Citigroup	3.46%	−6.5%	9.93 / 1.93 (Oct15, Jul24)	Last time higher Dec2012	1.93 – 3.46 – 24.59 (last 47 months)
Capital One	2.25%	−5.7%	7.94 / 1.64 (Oct15, Jul24)	Last time higher Jun2013	1.64 – 2.25 – 21.29 (last 47 months)
Credit Suisse	5.39%	−4.3%	12.84 / 3.77 (May15, Jul24)		3.77 – 5.39 – 28.61 (last 47 months)
Deutsche Bank	10.25%	−3.5%	13.76 / 4.99 (Oct15, Nov27)	Last time higher Jun2013	4.99 – 10.25 – 29.63 (last 47 months)
Fifth Third	11.8%	4.3%	11.8 / 0.99 (Oct29, May01)	Last time higher Jul2012	0.99 – 11.8 – 21.5 (last 47 months)
Goldman Sachs	3.45%	−4.8%	8.27 / 1.79 (Oct15, Jun05)	Last time higher Oct2013	1.79 – 3.45 – 21.46 (last 47 months)
JP Morgan	2.87%	−4.1%	6.95 / 1.31 (Oct15, Jul24)	Last time higher Dec2012	1.31 – 2.87 – 20.52 (last 47 months)
Keycorp	5.84%	−2.7%	8.51 / 2.82 (Oct15, Jul03)	Last time higher Sep2013	2.82 – 5.84 – 27.26 (last 47 months)
Morgan Stanley	5.71%	−7.3%	13.03 / 3.79 (Oct15, Aug21)	Last time higher Jun2013	3.79 – 5.71 – 26.47 (last 47 months)
PNC Financial	3.75%	−1.4%	5.41 / 1.43 (Feb06, Sep04)		1.43 – 3.75 – 17.91 (last 47 months)
Regions Financial	14.66%	9%	14.66 / 4.26 (Oct29, Sep10)	Last time higher Jun2012	3.64 – 14.66 – 29.69 (last 47 months)
SunTrust	4.2%	−6%	10.15 / 1.73 (Oct15, May08)	Last time higher Jan2013	1.73 – 4.2 – 26.4 (last 47 months)
State Street	4.94%	−3.8%	8.74 / 2.23 (Oct15, Sep04)	Last time higher Jun2013	2.23 – 4.94 – 19.69 (last 47 months)
UBS	7.48%	−4.9%	18.15 / 2.28 (Mar06, Sep24)		2.28 – 7.48 – 27.33 (last 47 months)
US Bancorp	1.9%	−5%	6.91 / 0.74 (Oct15, Jul24)	Last time higher Nov2012	0.74 – 1.9 – 18.85 (last 47 months)
Wells Fargo	2.72%	−4.8%	7.53 / 1.3 (Oct15, Jun05)	Last time higher Dec2012	1.3 – 2.72 – 20.71 (last 47 months)

Source: FactSet

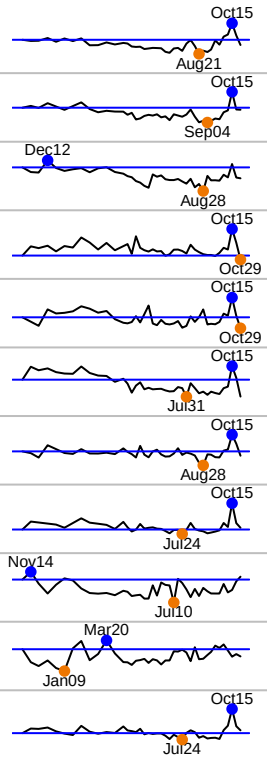
Bank MPD Statistics as of October 29, 2014

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	**4268**	−55%	11926 / 0	623 — 4268 — 20941 (last 47 months)
Bank of America	**17948**	−74%	132589 / 0	7419 — 17948 — 363160 (last 47 months)
BB&T	**1541**	150%	6490 / 0	190 — 1541 — 6903 (last 47 months)
Barclays	**1683**	−44%	11011 / 0	29 — 1683 — 15208 (last 47 months)
Bank of NY Mellon	**400**	−66%	15678 / 0	59 — 400 — 17091 (last 47 months)
Citigroup	**15898**	−53%	78527 / 0	1104 — 15898 — 284278 (last 47 months)
Capital One	**2270**	69%	9311 / 0	189 — 2270 — 38646 (last 47 months)
Credit Suisse	**319**	110%	4011 / 0	0 — 319 — 14201 (last 47 months)
Deutsche Bank	**14963**	71%	25112 / 0	62 — 14963 — 29575 (last 47 months)
Fifth Third	**2707**	1300%	15351 / 0	28 — 2707 — 19324 (last 47 months)
Goldman Sachs	**5638**	−40%	21840 / 0	296 — 5638 — 43413 (last 47 months)
JP Morgan	**24871**	55%	52517 / 0	943 — 24871 — 119246 (last 47 months)
Keycorp	**558**	−78%	3014 / 0	66 — 558 — 76270 (last 47 months)
Morgan Stanley	**11025**	−77%	48955 / 0	327 — 11025 — 84281 (last 47 months)
PNC Financial	**196**	−46%	4810 / 0	118 — 196 — 12224 (last 47 months)
Regions Financial	**506**	−74%	4635 / 0	20 — 506 — 19649 (last 47 months)
SunTrust	**1008**	−48%	4232 / 0	61 — 1008 — 13788 (last 47 months)
State Street	**667**	−33%	5339 / 0	42 — 667 — 5370 (last 47 months)
UBS	**276**	−9.2%	2766 / 0	6 — 276 — 6502 (last 47 months)
US Bancorp	**2790**	160%	5746 / 0	172 — 2790 — 29201 (last 47 months)
Wells Fargo	**20296**	−68%	121351 / 0	950 — 20296 — 167820 (last 47 months)

Source: FactSet

Insurance Company MPD Statistics as of October 29, 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	**8.74%**	−3.5%	12.28 / 7.29	Last time higher Jun2013	7.29 – 8.74 – 28.3 last 47 months
AIG	**11.38%**	−3.8%	15.15 / 8.7	Last time higher Jun2013	8.7 – 11.38 – 34.63 last 47 months
Allstate	**7.71%**	−2.1%	10.37 / 5.83		5.83 – 7.71 – 22.82 last 47 months
Ameriprise	**8.98%**	−6.2%	15.19 / 8.98	47 month low	8.98 – 8.98 – 28.12 last 47 months
Chubb	**6.39%**	−3%	9.43 / 6.39	47 month low	6.39 – 6.39 – 18.33 last 47 months
Hartford Financial	**8.72%**	−5.2%	13.93 / 8.68	Last time higher Sep2013	8.68 – 8.72 – 34.59 last 47 months
Lincoln National	**12.27%**	−4.4%	16.63 / 10.28	Last time higher Jun2013	10.28 – 12.27 – 35.56 last 47 months
Met Life	**11.31%**	−4.9%	16.24 / 10.08	Last time higher Nov2012	10.08 – 11.31 – 31.28 last 47 months
Principal Financial	**17.34%**	4.7%	19.04 / 8.31		8.02 – 17.34 – 34.89 last 47 months
Progressive	**8.65%**	0.041%	11.32 / 6.2		6.2 – 8.65 – 24.84 last 47 months
Prudential	**11.98%**	−4.3%	16.3 / 10.11	Last time higher Nov2012	10.11 – 11.98 – 30.06 last 47 months



Source: FactSet

Insurance Company MPD Statistics as of October 29, 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	**−1.08**	−0.19	−0.32 / −1.08; Jun19, Oct29	Last time lower Oct2012	−1.24, −1.08, −0.32; last 47 months
AIG	**−0.66**	0.083	−0.28 / −0.79; Jul31, Oct08	Last time lower Oct2013	−1.23, −0.66, 1.25; last 47 months
Allstate	**−0.84**	0.17	−0.31 / −1.19; Jul31, Aug14		−1.39, −0.84, −0.12; last 47 months
Ameriprise	**−0.5**	0.94	−0.32 / −1.59; May15, Jan09		−4.03, −0.5, 0.33; last 47 months
Chubb	**−0.69**	0.073	−0.21 / −0.96; Aug14, Oct22	Last time lower Oct2013	−1.56, −0.69, −0.21; last 47 months
Hartford Financial	**−1.59**	−1.1	−0.16 / −1.59; Jul17, Oct29	47 month low	−1.59, −1.59, −0.16; last 47 months
Lincoln National	**−0.85**	−0.23	0.15 / −0.96; May01, Oct31		−1.59, −0.85, 0.15; last 47 months
Met Life	**−0.63**	0.038	−0.31 / −0.79; Aug07, Jun26		−1.52, −0.63, −0.23; last 47 months
Principal Financial	**−0.92**	−1.1	0.21 / −2.95; Oct15, Nov27	Last time higher Jul2012	−2.95, −0.92, 0.24; last 47 months
Progressive	**−0.98**	−0.98	0.36 / −2.37; Jan23, May15		−3.54, −0.98, 0.71; last 47 months
Prudential	**−0.72**	−0.038	−0.36 / −0.94; May01, Feb06		−1.45, −0.72, −0.36; last 47 months

Source: FactSet

Insurance Company MPD Statistics as of October 29, 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	**4.04%**	−4.5%	8.55 / 1.39 — Oct15, Jul03	Last time higher Apr2013	1.39 — 4.04 — 20.31 last 47 months
AIG	**5.68%**	−5.9%	11.59 / 2.44 — Oct15, Sep10	Last time higher Nov2012	2.44 — 5.68 — 25.58 last 47 months
Allstate	**1.97%**	−1.6%	4.86 / 0.56 — Dec12, May22		0.56 — 1.97 — 18.62 last 47 months
Ameriprise	**2.4%**	−6.9%	9.69 / 2.4 — Feb06, Oct29	47 month low	2.4 — 2.4 — 22.78 last 47 months
Chubb	**0.92%**	−2.5%	3.37 / 0.64 — Oct15, Aug14	Last time higher Dec2012	0.64 — 0.92 — 14.62 last 47 months
Hartford Financial	**2.75%**	−5%	10.32 / 2.19 — Feb06, Jul31		2.19 — 2.75 — 23.29 last 47 months
Lincoln National	**5.62%**	−5.6%	11.23 / 3.85 — Oct15, Aug28	Last time higher Sep2013	3.85 — 5.62 — 27.65 last 47 months
Met Life	**5.65%**	−5.4%	11.04 / 3.79 — Oct15, Jul24	Last time higher Jun2013	3.79 — 5.65 — 20.81 last 47 months
Principal Financial	**17.08%**	10%	18.82 / 0.43 — Jul17, Jul10		0.43 — 17.08 — 28.98 last 47 months
Progressive	**2.79%**	0.8%	8.74 / 0 — Oct01, Dec26	Last time higher Jan2013	0 — 2.79 — 39.73 last 47 months
Prudential	**6.08%**	−6%	12.07 / 3.99 — Oct15, Jul24	Last time higher Nov2012	3.99 — 6.08 — 22.23 last 47 months

Source: FactSet

Insurance Company MPD Statistics as of October 29, 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	**631**	−41%	13324 / 0	450 / 631 / 22718 last 47 months
AIG	**1200**	−53%	38744 / 0	432 / 1200 / 103998 last 47 months
Allstate	**443**	−49%	5708 / 0	76 / 443 / 68926 last 47 months
Ameriprise	**729**	120%	1114 / 0	5 / 729 / 1114 last 47 months
Chubb	**1184**	450%	2541 / 0	43 / 1184 / 11114 last 47 months
Hartford Financial	**9016**	120%	13441 / 0	198 / 9016 / 37285 last 47 months
Lincoln National	**1024**	−2.2%	8403 / 0	51 / 1024 / 10682 last 47 months
Met Life	**1660**	−56%	14685 / 0	319 / 1660 / 161416 last 47 months
Principal Financial	**31**	−90%	310 / 0	2 / 31 / 3846 last 47 months
Progressive	**48**	300%	474 / 0	0 / 48 / 4283 last 47 months
Prudential	**3748**	−69%	13225 / 0	222 / 3748 / 13225 last 47 months

Source: FactSet