

Minneapolis Options Report – October 2nd

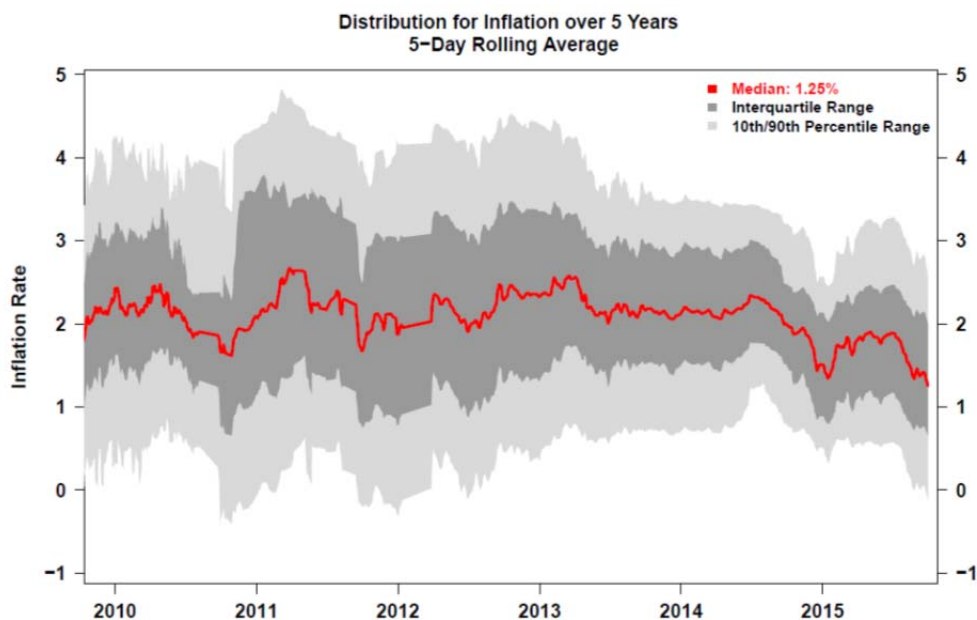
Market-implied inflation expectations increased for the 1-year tenor but decreased for the 2- and 5-year tenors. MPD skew indicated bias toward lower inflation levels for the 1-year tenor and higher inflation levels for the 2- and 5-year tenors. The 3-month LIBOR (3-year expiry) posted a new 1-year low as market implied standard deviations for the 3- and 5-year tenors trended downward from their 1-year highs seen in October 2014. MPD skews for dollar-euro and dollar-pound options indicated bias toward a stronger dollar. Investor uncertainty, as measured by MPD standard deviation, rose over the past two weeks for nearly all banking institutions we follow.

Inflation

Inflation measures were mixed over the past two weeks as expectations derived from the 1-year tenor rose to 0.8%, and longer term measures (2- and 5-year) fell to 1.0% and 1.3%, respectively. Market implied uncertainties were largely unchanged across all tenors (1-, 2-, 5-year) and remained near their respective 4-year medians (1.2%, 1.3%, 1.2%).

Additional Detail:

- The MPD skew for the 1-year inflation tenor decreased to -0.53, indicating a bias towards lower short term inflation. The 2- and 5-year tenors rose and MPD skew measures communicated bias towards higher future inflation rates.
- The 5-year inflation expectations measure posted a new multi-year high for market implied probability of inflation below 1% (38%) as it continued its downward trajectory commenced in August 2015 (see chart below).



Interest Rates

Spot prices for 5- and 10-year Treasuries increased over the 2-week period (+1.1% and +1.7%), and edged closer to their respective 4-year highs. Market implied uncertainty, as measured by MPD standard deviation, fell slightly for both over the 2-week period. MPD skews for 5- and 10-year tenors increased slightly, however the level of MPD skew for the 5-year treasury remained negative (-0.09) indicating bias towards lower prices and higher rates over its horizon.

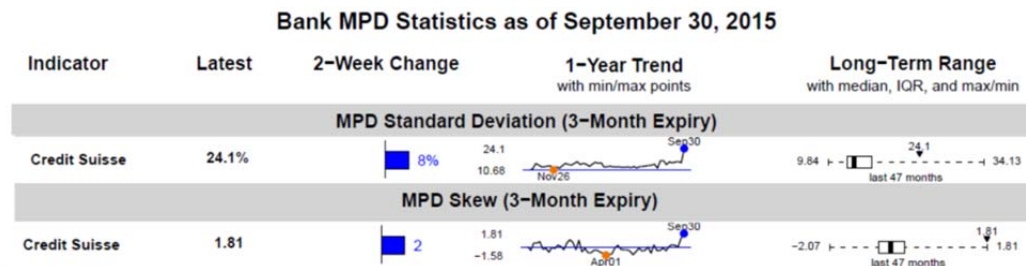
The median expectation for the 3-month LIBOR (3- and 5- year expiry) fell by -24 bps and -47 bps respectively. The market implied uncertainties for the rates were unchanged, settling at 1.15% and 1.71%. These levels remained below their 4-year lows. While the MPD skew for the 3-year tenor was largely unchanged, it increased for the 5-year tenor and both MPD skew levels indicated bias toward higher rates. The market-implied probability of the 3-month LIBOR 3-years out falling below 0.5% jumped to 24%. The probability of the 3-month LIBOR 5-years out falling below 1% increased to 39%.

Equity Markets

The S&P 500 index posted a -4% decline in returns over the two week period. Investor uncertainty rose for both the 6- and 12-month S&P 500 tenors — +1.3% and +2.0%, respectively — and both remained well above their 4-year median uncertainty values. Negative MPD skew implied bias towards lower prices in the future. Bank equities underperformed posting a -5.0% loss and insurance outperformed posting -3% loss over the two week period.

Additional Details:

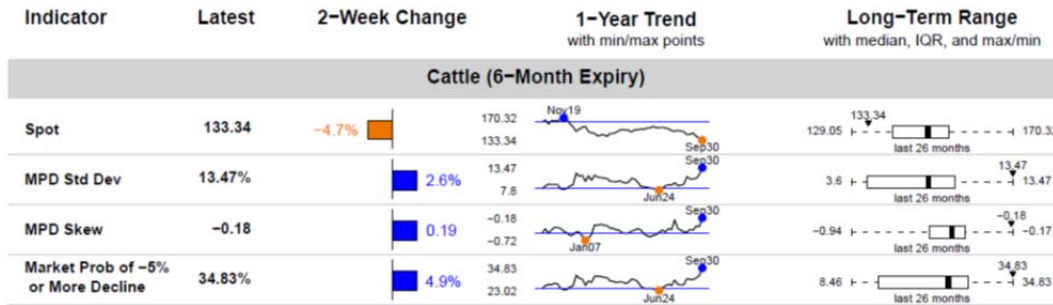
- Market implied uncertainty, as measured using MPD standard deviations, rose in the banking sector (+1.4%) with 18 out of 19 of the entities we follow showing increases. It was mixed across the insurance entities we follow, with 4 of 11 entities posting reduced MPD standard deviations.
- Market implied uncertainty for Credit Suisse jumped 8% over the two week period. Its MPD skew set a new 4-year high at 1.8 signaling a strong bias towards higher future prices (see table below).



Other Markets

- The dollar strengthened against the euro and pound and weakened slightly against the yen. MPD skew for the USD-Euro and USD-Pound declined and continued to signal bias towards a stronger dollar.
- Gold and silver spot prices fell (-0.3% and -3.0%) and remained near their four-year lows. The MPD skew for gold has risen steadily since June 2015 but remained biased towards lower future gold prices.

- WTI crude spot prices declined over 4% for the 2-week period. Market implied uncertainty, as measured by MPD standard deviations, held near its 4-year high. MPD skew declined and was negative, implying a bias toward lower future prices of crude.
- The spot price of the iShares US Real Estate Index outperformed the S&P500, posting a loss of -1%. While MPD skew rose and remained higher than its 4-year median, the level of MPD Skew indicated a bias towards lower future prices.
- Cattle spot prices fell nearly -5%, approaching its 2-year low. Market implied uncertainty rose to its 2-year high. MPD skew jumped to its highest level in two years, though it demonstrated bias towards lower future prices (see table below).



Inflation MPD Statistics as of September 30, 2015

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	0.75%	0.06%	1.9 -0.15 Apr29 Jan14	0.75 -0.15 2.65 last 47 months
MPD Std Dev	1.18%	0.034%	1.51 0.83 May06 Oct22	1.18 0.83 2.75 last 47 months
MPD Skew	-0.53	-0.023	0.2 -0.69 Jan14 Aug05	-0.53 -0.77 2.5 last 47 months
Market Prob of Less Than 1% Inflation	60.98%	-1.3%	85.35 27.11 Dec17 Apr29	60.98 11.88 85.35 last 47 months
Market Prob of More Than 3% Inflation	0.78%	-0.05%	15.81 0.23 Apr29 Dec17	0.78 0.23 40.43 last 47 months
Inflation (2-Year Expiry)				
Median	0.99%	-0.051%	1.85 0.72 Apr22 Jan07	0.99 0.72 2.22 last 46 months
MPD Std Dev	1.27%	-0.0034%	1.32 0.88 Apr29 Oct22	1.27 0.88 1.66 last 46 months
MPD Skew	0.12	0.016	0.22 -0.4 Jan07 Mar25	0.12 -0.4 2.74 last 46 months
Market Prob of Less Than 1% Inflation	50.28%	1.9%	61.36 24.27 Jan07 Oct01	50.28 10.74 61.36 last 46 months
Market Prob of More Than 3% Inflation	5.57%	-0.46%	17.23 1.8 Apr29 Dec17	5.57 1.8 27.1 last 46 months
Inflation (5-Year Expiry)				
Median	1.29%	-0.14%	1.98 1.29 Oct01 Sep30	1.29 1.29 2.6 last 46 months
MPD Std Dev	1.16%	-0.0054%	1.21 0.95 Jun10 Oct15	1.16 0.91 1.79 last 46 months
MPD Skew	0.33	0.051	0.71 -0.08 Jul29 Mar25	0.33 -0.1 0.71 last 46 months
Market Prob of Less Than 1% Inflation	38.01%	4.4%	38.01 14.62 Sep30 Oct01	38.01 7.13 38.01 last 46 months
Market Prob of More Than 3% Inflation	7.19%	-1.3%	15.28 5.02 Jun17 Jan07	7.19 5.02 37.29 last 46 months

Medium-to-Long Bond Price MPD Statistics as of September 30, 2015

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	120.48	1.1%		
MPD Std Dev	1.71%	-0.077%		
MPD Skew	-0.09	0.21		
Market Prob of -3% or More Decline	4.43%	-0.77%		
Volume	89282	120%		
10 Year Treasury (3-Month Expiry)				
Spot	128.73	1.7%		
MPD Std Dev	2.83%	-0.043%		
MPD Skew	0.03	0.069		
Market Prob of -5% or More Decline	3.99%	-0.5%		
Volume	282553	120%		

Short Interest Rates MPD Statistics as of September 30, 2015

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	1.11%	-0.24%		
MPD Std Dev	1.15%	-0.13%		
MPD Skew	0.89	-0.03		
Market Prob of Less Than 0.5% LIBOR	24.15%	6.7%		
Market Prob of More Than 1% + Spot	39.74%	-11%		
3 Month LIBOR (5-Year Expiry)				
Median	1.31%	-0.47%		
MPD Std Dev	1.71%	-0.024%		
MPD Skew	0.96	0.18		
Market Prob of Less Than 1% LIBOR	38.51%	8.3%		
Market Prob of More Than 2% + Spot	26.4%	-15%		

Equity Index MPD Statistics as of September 30, 2015

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	1920.03	-3.8%		
MPD Std Dev	15.28%	1.3%		
MPD Skew	-1.34	0.1		
Market Prob of -20% or More Decline	10.67%	1.5%		
Volume	47312	-56%		
S&P 500 (12-Month Expiry)				
Spot	1920.03	-3.8%		
MPD Std Dev	22.06%	2%		
MPD Skew	-1.27	0.22		
Market Prob of -20% or More Decline	17.06%	3.5%		
Volume	8626	-84%		
iShares US Real Estate Index (3-Month Expiry)				
Spot	70.95	-0.84%		
MPD Std Dev	9.96%	-0.38%		
MPD Skew	-0.78	0.09		
Market Prob of -10% or More Decline	14.94%	-1%		
Volume	17053	75%		

Exchange Rate MPD Statistics as of September 30, 2015

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	1.12	-0.88%		
MPD Std Dev	5.36%	-0.18%		
MPD Skew	-0.34	-0.13		
Market Prob of -10% or More Decline	4.1%	-0.22%		
Volume	16796	-19%		
Dollar-Pound Futures (3-Month Expiry)				
Spot	151.13	-2.4%		
MPD Std Dev	3.9%	-0.18%		
MPD Skew	-0.15	-0.1		
Market Prob of -10% or More Decline	1.04%	-0.048%		
Volume	7207	-1.5%		
Dollar-Yen Futures (3-Month Expiry)				
Spot	83.43	0.52%		
MPD Std Dev	5.67%	0.21%		
MPD Skew	0.14	-0.014		
Market Prob of -10% or More Decline	3.9%	0.44%		
Volume	9227	34%		

Metal and Energy Commodity MPD Statistics as of September 30, 2015

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	1116.13	-0.33%		
MPD Std Dev	13.12%	1%		
MPD Skew	-0.09	0.12		
Market Prob of -20% or More Decline	6.88%	1%		
Volume	13462	140%		
Silver (6-Month Expiry)				
Spot	14.57	-2.5%		
MPD Std Dev	20.19%	-0.83%		
MPD Skew	-0.33	-0.055		
Market Prob of -20% or More Decline	15.66%	-1.9%		
Volume	1296	-2.2%		
West Texas Intermediate Crude (6-Month Expiry)				
Spot	47.41	-4.4%		
MPD Std Dev	29.29%	-0.71%		
MPD Skew	-0.46	-0.034		
Market Prob of -20% or More Decline	23.82%	-1.9%		
Volume	18602	11%		

Agricultural Crop Commodity MPD Statistics as of September 30, 2015

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	399.14	0.4%		
MPD Std Dev	17.07%	-0.38%		
MPD Skew	0.07	-0.036		
Market Prob of -20% or More Decline	13%	-0.91%		
Volume	35256	-36%		
Soybeans (6-Month Expiry)				
Spot	897.24	0.44%		
MPD Std Dev	12.74%	-0.45%		
MPD Skew	-0.2	-0.064		
Market Prob of -20% or More Decline	6.58%	-0.83%		
Volume	21078	20%		
Wheat (6-Month Expiry)				
Spot	519.67	4.9%		
MPD Std Dev	17.78%	-0.33%		
MPD Skew	0.3	0.029		
Market Prob of -20% or More Decline	14.14%	-1%		
Volume	6863	-16%		

Agricultural Livestock Commodity MPD Statistics as of September 30, 2015

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	133.34	-4.7%		
MPD Std Dev	13.47%	2.6%		
MPD Skew	-0.18	0.19		
Market Prob of -5% or More Decline	34.83%	4.9%		
Volume	21093	140%		
Hogs (6-Month Expiry)				
Spot	69.06	3.3%		
MPD Std Dev	16.75%	-0.5%		
MPD Skew	-0.61	-0.0032		
Market Prob of -20% or More Decline	12.44%	-0.61%		
Volume	5250	180%		

Bank MPD Statistics as of September 30, 2015

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	11.98%	0.2%		
Bank of America	15.71%	1.5%		
BB&T	12.94%	1.3%		
Barclays	18.09%	1.7%		
Bank of NY Mellon	13.52%	0.97%		
Citigroup	14.9%	1.7%		
Capital One	14.13%	1.4%		
Credit Suisse	24.1%	8%		
Deutsche Bank	14.45%			
Fifth Third	14.15%	0.57%		
Goldman Sachs	14.05%	1.7%		
JP Morgan	13.66%	1.4%		
Keycorp	14.91%	-1.6%		
Morgan Stanley	15.88%	1.8%		
PNC Financial	13.17%	1.6%		
Regions Financial	17.2%	0.9%		
SunTrust	13.62%	0.5%		
State Street	14.17%	0.014%		
UBS	13.36%			
US Bancorp	12.62%	0.99%		
Wells Fargo	12.59%	1.1%		

Bank MPD Statistics as of September 30, 2015

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	-0.87	0.015		
Bank of America	-0.69	0.035		
BB&T	-0.91	0.077		
Barclays	0.24	0.8		
Bank of NY Mellon	-0.83	0.15		
Citigroup	-0.84	0.1		
Capital One	-0.88	-0.53		
Credit Suisse	1.81	2		
Deutsche Bank	-0.74			
Fifth Third	-0.44	0.32		
Goldman Sachs	-0.97	0.057		
JP Morgan	-0.95	0.14		
Keycorp	-0.67	0.61		
Morgan Stanley	-0.88	0.12		
PNC Financial	-0.72	0.18		
Regions Financial	-0.38	0.6		
SunTrust	-0.91	-0.065		
State Street	-0.28	0.36		
UBS	-0.04			
US Bancorp	-0.5	0.51		
Wells Fargo	-1.03	0.038		

Bank MPD Statistics as of September 30, 2015

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	6.29%	0.012%		
Bank of America	9.65%	1.5%		
BB&T	8.11%	2.2%		
Barclays	15.74%	3%		
Bank of NY Mellon	8.09%	1.2%		
Citigroup	9.62%	2.1%		
Capital One	8.82%	1.2%		
Credit Suisse	8.63%	-3.5%		
Deutsche Bank	10.06%			
Fifth Third	9.35%	0.8%		
Goldman Sachs	8.71%	2.1%		
JP Morgan	8.3%	1.4%		
Keycorp	9.89%	-0.41%		
Morgan Stanley	10.93%	2.2%		
PNC Financial	7.74%	1.9%		
Regions Financial	12.58%	2.2%		
SunTrust	8.12%	0.64%		
State Street	8.66%	-0.33%		
UBS	7.28%			
US Bancorp	7.61%	0.98%		
Wells Fargo	7.12%	1.2%		

Bank MPD Statistics as of September 30, 2015

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	6135	14%	32713 0	623 - 6135 - 32713 last 47 months
Bank of America	47235	29%	138459 0	7419 - 47235 - 363160 last 47 months
BB&T	4872	600%	6459 0	136 - 4872 - 6490 last 47 months
Barclays	181	470%	4055 0	8 - 181 - 11011 last 47 months
Bank of NY Mellon	341	-10%	13099 0	44 - 341 - 15678 last 47 months
Citigroup	10437	190%	140439 0	1104 - 10437 - 150972 last 47 months
Capital One	1055	260%	6937 0	148 - 1055 - 16299 last 47 months
Credit Suisse	382	4700%	15145 0	0 - 382 - 15145 last 47 months
Deutsche Bank	6538		25112 0	182 - 6538 - 29575 last 42 months
Fifth Third	2201	730%	7607 0	28 - 2201 - 19127 last 47 months
Goldman Sachs	9433	34%	15721 0	296 - 9433 - 28374 last 47 months
JP Morgan	12000	53%	132116 0	943 - 12000 - 132116 last 47 months
Keycorp	280	-17%	3300 0	44 - 280 - 76270 last 47 months
Morgan Stanley	5286	-78%	48955 0	327 - 5286 - 69872 last 47 months
PNC Financial	1293	63%	3466 0	83 - 1293 - 7855 last 47 months
Regions Financial	2231	39%	47940 0	20 - 2231 - 47940 last 46 months
SunTrust	913	-45%	4808 0	61 - 913 - 13788 last 47 months
State Street	375	80%	2086 0	42 - 375 - 5339 last 47 months
UBS	124		2034 0	6 - 124 - 6502 last 39 months
US Bancorp	2150	160%	9927 0	172 - 2150 - 29201 last 47 months
Wells Fargo	20466	58%	62697 0	950 - 20466 - 166145 last 47 months

Insurance Company MPD Statistics as of September 30, 2015

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	11.29%	0.44%		
AIG	13.48%	1.4%		
Allstate	11.3%	0.51%		
Ameriprise	13.76%	0.24%		
Chubb	7.81%	-1.6%		
Hartford Financial	14%	-1.1%		
Lincoln National	16.76%	1.7%		
Met Life	14.5%	0.69%		
Principal Financial	15.8%	-2.1%		
Progressive	10.73%	-1.5%		
Prudential	15.64%	0.28%		

Insurance Company MPD Statistics as of September 30, 2015

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	-0.81	0.13	-0.24 -1.17 Sep09 Aug26	-1.24 - -0.81 - -0.24 last 47 months
AIG	-0.77	-0.0016	-0.23 -0.97 Dec31 Sep02 Aug26	-1.18 - -0.77 - -0.03 last 47 months
Allstate	-0.96	-0.18	-0.3 -1.5 Nov12 Dec31 Aug26	-1.5 - -0.96 - -0.12 last 47 months
Ameriprise	-0.8	0.16	-0.11 -1.44 Oct15 Dec31 Aug19	-4.03 - -0.8 - 0.33 last 47 months
Chubb	-1.07	0.033	0.09 -1.42 Aug19 Sep02 Jul22	-1.56 - -1.07 - 0.09 last 47 months
Hartford Financial	-0.92	-0.078	-0.09 -1.59 Oct29 Jul22 Aug05	-1.59 - -0.92 - -0.09 last 47 months
Lincoln National	-0.78	0.13	-0.07 -1.15 Aug05 Aug26	-1.15 - -0.78 - 0.15 last 47 months
Met Life	-0.86	-0.096	-0.46 -0.96 Mar25 Aug05	-1.34 - -0.86 - -0.23 last 47 months
Principal Financial	-0.8	-0.44	0.21 -2.18 Oct15 Nov05 Mar04	-2.95 - -0.8 - 0.22 last 47 months
Progressive	-0.21	1.1	0.42 -2.75 Nov12 Mar04 Apr22	-3.54 - -0.21 - 0.42 last 46 months
Prudential	-0.95	-0.062	-0.33 -0.96 Apr22 Aug12	-1.44 - -0.95 - -0.33 last 47 months

Insurance Company MPD Statistics as of September 30, 2015

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	4.84%	0.23%		
AIG	7.32%	1.6%		
Allstate	5.69%	0.16%		
Ameriprise	8.53%	-0.22%		
Chubb	2.38%	-1.2%		
Hartford Financial	8.51%	-2.4%		
Lincoln National	12.8%	2.9%		
Met Life	9.46%	0.079%		
Principal Financial	11.97%	-4.7%		
Progressive	4.05%	-2.7%		
Prudential	10.13%	-0.86%		

Insurance Company MPD Statistics as of September 30, 2015

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	2303	41%	13168 0	2303 386 [] 22718 last 47 months
AIG	4622	57%	69392 0	4622 432 [] 103998 last 47 months
Allstate	1085	320%	4626 0	1085 63 [] 68926 last 47 months
Ameriprise	167	48%	881 0	167 5 [] 1114 last 47 months
Chubb	48	240%	9027 0	48 3 [] 11114 last 47 months
Hartford Financial	443	520%	9444 0	443 65 [] 37285 last 47 months
Lincoln National	575	41%	2635 0	575 51 [] 10682 last 47 months
Met Life	932	-30%	29248 0	932 319 [] 161416 last 47 months
Principal Financial	404	360%	545 0	404 2 [] 2956 last 47 months
Progressive	484	-78%	2216 0	484 0 [] 4283 last 46 months
Prudential	3024	270%	17185 0	3024 222 [] 17185 last 47 months