

FEDERAL RESERVE BANK OF MINNEAPOLIS

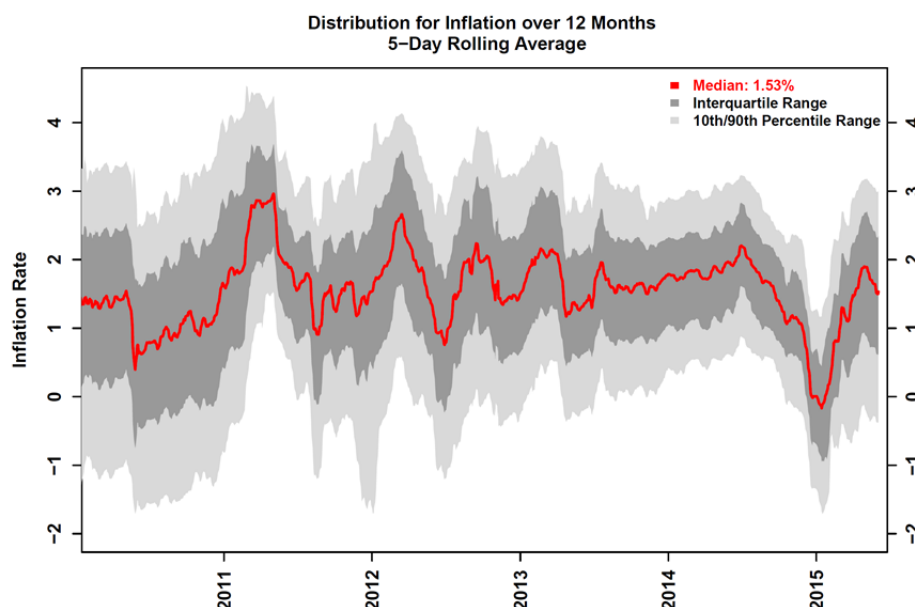
BANKING AND POLICY STUDIES

Minneapolis Options Report – June 5th

Over the past two weeks, market-implied inflation expectations declined across the tenors we follow (1-, 2-, and 5-year periods). Both long and short interest rates increased, except for the 5-year-out expectation of 3-month LIBOR, which decreased by 47 bps to 1.94%. MPD skews on treasury options continued to imply bias towards higher future rates at the long end of the curve. The dollar strengthened against the pound and yen, and remained strong relative to its 4-year range. The bank and insurance companies we monitor outperformed the S&P 500 over the past two weeks but investor uncertainty, as measured by MPD standard deviations, increased.

Inflation

Market-based inflation expectations derived from caps and floors on the CPI for 1-, 2-, and 5-year period continued to decline over the past two weeks. This decline can be observed most clearly in the 1-year tenor (see figure below).



Additional detail:

- Median expectations for inflation from market-based probability distributions (MPDs) currently sit at 1.6%, 1.68%, and 1.83% for the 1-, 2-, and 5-year tenors, respectively.
- MPD standard deviations remained fairly flat across tenors, suggesting little change in investor uncertainty. Current measures are near their 4-year medians.
- MPD skew on the 5-year tenor remains at the very high end of its 4-year range and positive (0.6), denoting a market-implied bias toward higher inflation rates over this time frame. Skew on the 2-year MPD is close to zero but it has been steadily rising since the end of March, implying a reduction in the market-implied bias toward lower rates for this period.

Inflation MPD Statistics as of June 03, 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	1.6%	-0.045%		
MPD Std Dev	1.38%	0.044%		
MPD Skew	-0.28	0.13		
Market Prob of Less Than 1% Inflation	33.38%	1.4%		
Market Prob of More Than 3% Inflation	10.93%	-0.17%		
Inflation (2-Year Expiry)				
Median	1.68%	-0.053%		
MPD Std Dev	1.27%	0.0072%		
MPD Skew	-0.01	0.061		
Market Prob of Less Than 1% Inflation	29.21%	1.4%		
Market Prob of More Than 3% Inflation	13.31%	-0.98%		
Inflation (5-Year Expiry)				
Median	1.83%	-0.0095%		
MPD Std Dev	1.19%	0.014%		
MPD Skew	0.6	0.17		
Market Prob of Less Than 1% Inflation	22.14%	0.26%		
Market Prob of More Than 3% Inflation	13.47%	0.067%		

Medium-to-Long Bond Price MPD Statistics as of June 03, 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	118.65	-0.43%	120.99 118.05	118.05 - 120.99 last 9 months
MPD Std Dev	1.93%	0.19%	2.3 1.41	1.41 - 2.3 last 9 months
MPD Skew	-0.54	-0.29	0.36 -0.54	-0.54 - 0.36 last 9 months
Market Prob of -3% or More Decline	6.61%	1.8%	8.74 2.44	2.44 - 8.74 last 9 months
Volume	60854	110%	377550 0	2054 - 377550 last 9 months
10 Year Treasury (3-Month Expiry)				
Spot	125.48	-0.85%	130.47 123.77	122.97 - 130.47 last 20 months
MPD Std Dev	3.24%	0.28%	3.8 2.17	2.17 - 3.8 last 20 months
MPD Skew	-0.34	-0.26	0.31 -0.39	-0.75 - 0.31 last 20 months
Market Prob of -5% or More Decline	6.49%	1.6%	8.48 1.62	1.62 - 8.48 last 20 months
Volume	311346	43%	1185098 0	5226 - 1185098 last 20 months

Short Interest Rates MPD Statistics as of June 03, 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	1.61%	0.2%		
MPD Std Dev	1.3%	-0.071%		
MPD Skew	0.4	-1.1		
Market Prob of Less Than 0.5% LIBOR	17.58%	-0.085%		
Market Prob of More Than 1% + Spot	56.85%	-0.29%		
3 Month LIBOR (5-Year Expiry)				
Median	1.94%	-0.47%		
MPD Std Dev	2.17%	0.45%		
MPD Skew	1.46	1.2		
Market Prob of Less Than 1% LIBOR	30.31%	3.1%		
Market Prob of More Than 2% + Spot	38.61%	-4.1%		

Equity Index MPD Statistics as of June 03, 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	2114.07	-0.55%		
MPD Std Dev	10.85%	0.013%		
MPD Skew	-1.4	-0.0092		
Market Prob of -20% or More Decline	6.1%	0.081%		
Volume	82224	11%		
S&P 500 (12-Month Expiry)				
Spot	2114.07	-0.55%		
MPD Std Dev	17.31%	-0.52%		
MPD Skew	-1.35	0.17		
Market Prob of -20% or More Decline	12.64%	-0.56%		
Volume	27229	75%		
iShares US Real Estate Index (3-Month Expiry)				
Spot	74.45	-2.5%		
MPD Std Dev	8.46%	-0.15%		
MPD Skew	-0.82	-0.045		
Market Prob of -10% or More Decline	12.73%	-1.2%		
Volume	28170	460%		

Exchange Rate MPD Statistics as of June 03, 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	1.13	1.8%		
MPD Std Dev	5.83%	-1.4%		
MPD Skew	-0.54	-0.48		
Market Prob of -10% or More Decline	5.7%	-2.2%		
Volume	35156	-64%		
Dollar-Pound Futures (3-Month Expiry)				
Spot	153.03	-1.5%		
MPD Std Dev	4.36%	-0.24%		
MPD Skew	-0.34	-0.27		
Market Prob of -10% or More Decline	2.12%	0.3%		
Volume	5848	-61%		
Dollar-Yen Futures (3-Month Expiry)				
Spot	80.52	-2.5%		
MPD Std Dev	4.83%	0.14%		
MPD Skew	-0.15	0.25		
Market Prob of -10% or More Decline	2.7%	0.1%		
Volume	4578	-80%		

Metal and Energy Commodity MPD Statistics as of June 03, 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	1187.13	-2%		
MPD Std Dev	11.37%	-0.13%		
MPD Skew	-0.32	-0.019		
Market Prob of -20% or More Decline	5.17%	0.083%		
Volume	8422	460%		
Silver (6-Month Expiry)				
Spot	16.58	-3.3%		
MPD Std Dev	18.87%	0.091%		
MPD Skew	-0.35	-0.073		
Market Prob of -20% or More Decline	14.89%	1.7%		
Volume	3457	92%		
West Texas Intermediate Crude (6-Month Expiry)				
Spot	60.96	0.91%		
MPD Std Dev	23.09%	0.78%		
MPD Skew	-0.62	-0.0046		
Market Prob of -20% or More Decline	18.89%	1.4%		
Volume	39555	150%		

Agricultural Crop Commodity MPD Statistics as of June 03, 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	376.97	2.5%		
MPD Std Dev	17.81%	-0.015%		
MPD Skew	0.55	-0.0017		
Market Prob of -20% or More Decline	14.48%	2.1%		
Volume	64418	26%		
Soybeans (6-Month Expiry)				
Spot	914.98	-0.61%		
MPD Std Dev	13.75%	-0.23%		
MPD Skew	0.13	0.051		
Market Prob of -20% or More Decline	6.92%	-0.61%		
Volume	17619	33%		
Wheat (6-Month Expiry)				
Spot	528.66	1.6%		
MPD Std Dev	19.88%	-1.7%		
MPD Skew	0.28	0.0068		
Market Prob of -20% or More Decline	18.08%	0.03%		
Volume	6454	-68%		

Agricultural Livestock Commodity MPD Statistics as of June 03, 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	153.67	1.5%		
MPD Std Dev	8.48%	-0.26%		
MPD Skew	-0.62	-0.072		
Market Prob of -5% or More Decline	24.44%	-0.15%		
Volume	15740	73%		
Hogs (6-Month Expiry)				
Spot	68.13	-7.5%		
MPD Std Dev	15.4%	-0.76%		
MPD Skew	-0.5	-0.058		
Market Prob of -5% or More Decline	10.64%	-0.1%		
Volume	1210	-76%		

Bank MPD Statistics as of June 03, 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	9.09%	0.57%		
Bank of America	9.76%	0.041%		
BB&T	8.35%	-0.15%		
Barclays	13.45%	-0.024%		
Bank of NY Mellon	8.92%	-0.14%		
Citigroup	9.64%	0.13%		
Capital One	8.37%	-0.08%		
Credit Suisse	12.95%	0.2%		
Deutsche Bank	14.45%			
Fifth Third	10.01%	1%		
Goldman Sachs	9.43%	0.8%		
JP Morgan	9.05%	-0.0088%		
Keycorp	10.95%	0.021%		
Morgan Stanley	10.5%	1.4%		
PNC Financial	7.83%	0.053%		
Regions Financial	10.5%	0.096%		
SunTrust	9.5%	1%		
State Street	9.09%	-0.044%		
UBS	13.36%			
US Bancorp	8.17%	0.56%		
Wells Fargo	8.45%	0.4%		

Bank MPD Statistics as of June 03, 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	-0.53	-0.066		
Bank of America	-0.26	0.044		
BB&T	-0.93	-0.091		
Barclays	-1.24	-0.082		
Bank of NY Mellon	-0.62	0.34		
Citigroup	-0.57	0.0054		
Capital One	-0.68	0.2		
Credit Suisse	-1.46	-0.78		
Deutsche Bank	-0.74			
Fifth Third	-0.76	-0.024		
Goldman Sachs	-0.65	0.029		
JP Morgan	-0.71	0.06		
Keycorp	-1	0.16		
Morgan Stanley	-0.6	-0.026		
PNC Financial	-0.84	0.053		
Regions Financial	-0.55	0.65		
SunTrust	-0.65	0.17		
State Street	-0.88	0.035		
UBS	-0.04			
US Bancorp	-0.69	0.18		
Wells Fargo	-0.81	-0.25		

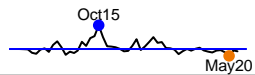
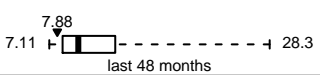
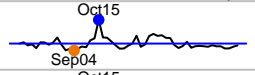

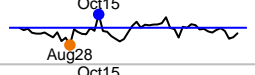
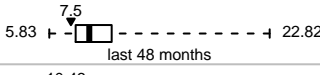
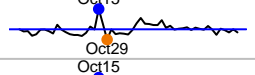

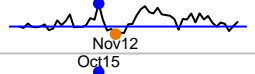

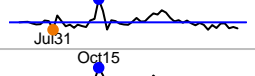

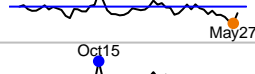
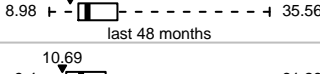
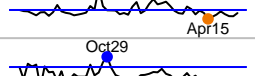
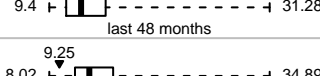

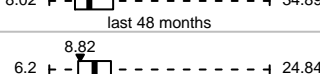
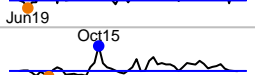
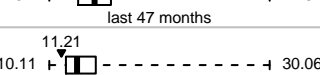

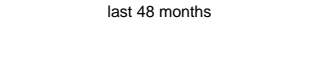
Bank MPD Statistics as of June 03, 2015

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	3.04%	0.85%	7.79 1.53 Oct15 Aug28	3.04 1.53 last 48 months 17.67
Bank of America	3.15%	-0.15%	10.91 3.13 Oct15 Jul03	3.15 3.13 last 48 months 27.24
BB&T	2.54%	-0.4%	8.19 1.68 Oct15 Aug21	2.54 1.68 last 48 months 34.9
Barclays	7.41%	-1.2%	18.72 2.33 Oct15 Nov05 Feb11	7.41 2.33 last 48 months 30.94
Bank of NY Mellon	2.89%	-0.64%	8.35 1.31 Oct15 Jan28	2.89 1.31 last 48 months 21.34
Citigroup	3.49%	0.16%	9.93 1.93 Oct15 Jul24	3.49 1.93 last 48 months 24.59
Capital One	2.39%	-0.37%	7.94 1.64 Oct15 Jul24	2.39 1.64 last 48 months 21.29
Credit Suisse	7.59%	0.032%	12.54 2.87 Oct15 Mar18 Nov26	7.59 2.87 last 48 months 28.61
Deutsche Bank	10.06%		19.81 5.74 Oct15 Aug28 Apr15	10.06 4.99 last 46 months 29.63
Fifth Third	4.12%	0.96%	11.8 1.18 Oct15 Aug29 Nov12	4.12 0.99 last 48 months 21.5
Goldman Sachs	3.56%	1.1%	8.27 1.79 Oct15 Jun05	3.56 1.79 last 48 months 21.46
JP Morgan	3.26%	-0.036%	6.95 1.31 Oct15 Jul24	3.26 1.31 last 48 months 20.52
Keycorp	4.87%	-0.42%	9.67 1.92 Oct15 Jan14 Nov26	4.87 1.92 last 48 months 27.26
Morgan Stanley	4.78%	2%	13.03 2.57 Oct15 Jan14 May27	4.78 2.57 last 48 months 26.47
PNC Financial	1.94%	-0.053%	6.3 1.43 Oct15 Sep04 Jan14	1.94 1.43 last 48 months 17.91
Regions Financial	3.76%	-0.98%	14.66 3.34 Oct15 Sep04 May27	3.76 3.34 last 47 months 29.69
SunTrust	3.03%	0.51%	10.15 1.95 Oct15 Nov26	3.03 1.73 last 48 months 26.4
State Street	3.27%	-0.19%	9.04 2.26 Oct15 Sep10 Dec24	3.27 2.26 last 48 months 19.69
UBS	7.28%		18.15 1.53 Oct15 Mar06 Dec31	7.28 1.53 last 43 months 27.33
US Bancorp	2.27%	0.25%	6.91 0.74 Oct15 Jul24	2.27 0.74 last 48 months 18.85
Wells Fargo	2.84%	0.87%	7.53 1.3 Oct15 Jun05	2.84 1.3 last 48 months 20.71

Bank MPD Statistics as of June 03, 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	1391	-88%	28004 0	1391 623 last 48 months 28004
Bank of America	71489	4.4%	138459 0	71489 7419 last 48 months 363160
BB&T	721	-5.6%	5688 0	721 136 last 48 months 6495
Barclays	101	-78%	11011 0	101 13 last 48 months 15208
Bank of NY Mellon	2159	310%	13099 0	2159 59 last 48 months 17091
Citigroup	7267	-44%	140439 0	7267 1104 last 48 months 150972
Capital One	563	-69%	5543 0	563 148 last 48 months 16299
Credit Suisse	493	110%	15145 0	493 0 last 48 months 15145
Deutsche Bank	6538		25112 0	6538 182 last 46 months 29575
Fifth Third	606	-88%	7607 0	606 28 last 48 months 19127
Goldman Sachs	2215	-65%	15721 0	2215 296 last 48 months 37943
JP Morgan	2686	-72%	79587 0	2686 943 last 48 months 119246
Keycorp	599	27%	3300 0	599 44 last 48 months 76270
Morgan Stanley	2755	-46%	48955 0	2755 327 last 48 months 84281
PNC Financial	476	-64%	4810 0	476 83 last 48 months 12224
Regions Financial	1006	-50%	47940 0	1006 20 last 47 months 47940
SunTrust	261	-69%	4808 0	261 61 last 48 months 13788
State Street	174	-73%	2086 0	174 42 last 48 months 5339
UBS	124		2034 0	124 6 last 43 months 6502
US Bancorp	345	-57%	9006 0	345 172 last 48 months 29201
Wells Fargo	7140	-20%	62697 0	7140 950 last 48 months 167820

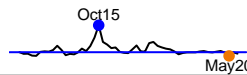
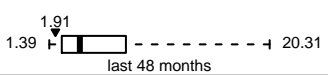
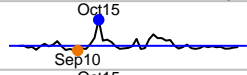

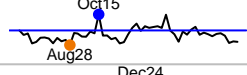
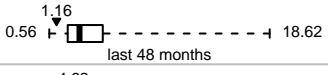
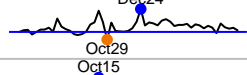
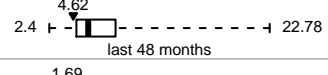
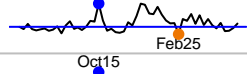

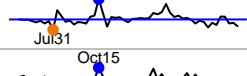
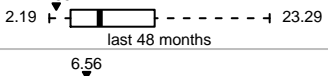
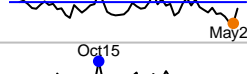
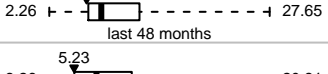
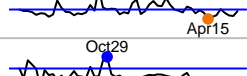
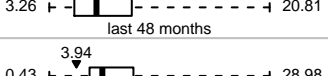
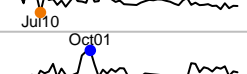
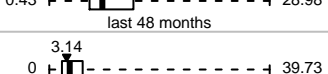
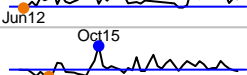
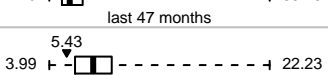

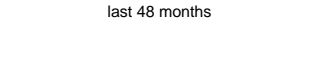
Insurance Company MPD Statistics as of June 03, 2015

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	7.88%	0.77%	12.28 7.11 	7.88 7.11  last 48 months
AIG	9.76%	0.63%	15.15 8.7 	9.76 8.7  last 48 months
Allstate	7.5%	0.77%	10.19 5.83 	7.5 5.83  last 48 months
Ameriprise	10.43%	0.004%	15.19 8.98 	10.43 8.98  last 48 months
Chubb	7.38%	1.1%	9.52 5.96 	7.38 5.96  last 48 months
Hartford Financial	8.92%	-0.019%	13.93 8.68 	8.92 8.68  last 48 months
Lincoln National	11.51%	2%	16.63 8.98 	11.51 8.98  last 48 months
Met Life	10.69%	0.68%	16.24 9.4 	10.69 9.4  last 48 months
Principal Financial	9.25%	0.99%	17.34 8.26 	9.25 8.02  last 48 months
Progressive	8.82%	0.96%	10.85 7.3 	8.82 6.2  last 47 months
Prudential	11.21%	-0.14%	16.3 10.11 	11.21 10.11  last 48 months




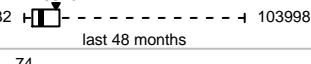
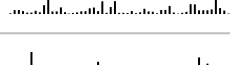
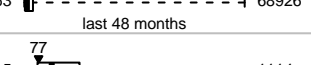
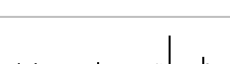
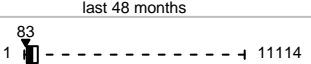



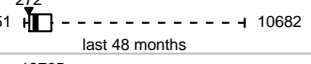

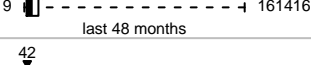
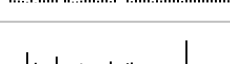
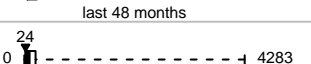

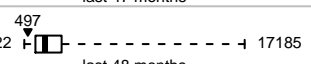




Insurance Company MPD Statistics as of June 03, 2015

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	-0.7	-0.0013		
AIG	-0.53	0.06		
Allstate	-0.39	0.2		
Ameriprise	-0.43	0.29		
Chubb	-0.74	0.19		
Hartford Financial	-0.69	0.4		
Lincoln National	-0.74	-0.13		
Met Life	-0.53	0.12		
Principal Financial	-1.02	0.42		
Progressive	-2.03	-1.2		
Prudential	-0.43	0.28		

Insurance Company MPD Statistics as of June 03, 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	1.91%	0.52%	8.55 1.39 	1.91 1.39  last 48 months
AIG	3.44%	0.44%	11.59 2.44 	3.44 2.44  last 48 months
Allstate	1.16%	0.15%	4.67 0.75 	1.16 0.56  last 48 months
Ameriprise	4.62%	-0.37%	9.67 2.4 	4.62 2.4  last 48 months
Chubb	1.69%	0.78%	3.86 0.55 	1.69 0.55  last 48 months
Hartford Financial	2.86%	-0.48%	7.78 2.19 	2.86 2.19  last 48 months
Lincoln National	6.56%	3.9%	11.23 2.26 	6.56 2.26  last 48 months
Met Life	5.23%	1.1%	11.04 3.26 	5.23 3.26  last 48 months
Principal Financial	3.94%	1.2%	17.08 0.43 	3.94 0.43  last 48 months
Progressive	3.14%	0.97%	8.74 0.9 	3.14 0  last 47 months
Prudential	5.43%	-0.7%	12.07 3.99 	5.43 3.99  last 48 months

Insurance Company MPD Statistics as of June 03, 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	1266	-60%	13324 0 	1266 405  22718 last 48 months
AIG	15340	13%	69392 0 	15340 432  103998 last 48 months
Allstate	74	-92%	4626 0 	74 63  68926 last 48 months
Ameriprise	77	-30%	1071 0 	77 5  1114 last 48 months
Chubb	83	-87%	9027 0 	83 11  11114 last 48 months
Hartford Financial	534	83%	9199 0 	534 65  37285 last 48 months
Lincoln National	272	-68%	8403 0 	272 51  10682 last 48 months
Met Life	13705	1100%	29248 0 	13705 319  161416 last 48 months
Principal Financial	42	-69%	545 0 	42 2  2956 last 48 months
Progressive	24	-82%	773 0 	24 0  4283 last 47 months
Prudential	497	-80%	17185 0 	497 222  17185 last 48 months