

History of MVA Index Rates Effective 1/1/2019

Based on Bloomberg Fair Value U.S. Dollar Denominated U.S Industrial A.
Please see the Market Value Adjustment Rider in your contract for more details.

	5 Year	7 Year	10 Year
7/1/2010	2.91%	3.70%	4.34%
8/1/2010	2.70%	3.49%	4.14%
9/1/2010	2.36%	3.15%	3.88%
10/1/2010	2.25%	3.01%	3.71%
11/1/2010	2.10%	2.86%	3.66%
12/1/2010	2.09%	2.90%	3.80%
1/1/2011	2.53%	3.38%	4.17%
2/1/2011	2.74%	3.59%	4.42%
3/1/2011	2.92%	3.77%	4.54%
4/1/2011	2.83%	3.66%	4.41%
5/1/2011	2.97%	3.77%	4.46%
6/1/2011	2.66%	3.48%	4.22%
7/1/2011	2.49%	3.32%	4.09%
8/1/2011	2.45%	3.31%	4.12%
9/1/2011	2.02%	2.79%	3.61%
10/1/2011	1.99%	2.66%	3.41%
11/1/2011	2.17%	2.91%	3.54%
12/1/2011	1.97%	2.71%	3.43%
1/1/2012	1.98%	2.71%	3.40%
2/1/2012	1.85%	2.57%	3.27%
3/1/2012	1.64%	2.40%	3.14%
4/1/2012	1.66%	2.38%	3.15%
5/1/2012	1.64%	2.30%	3.15%
6/1/2012	1.57%	2.17%	2.96%
7/1/2012	1.60%	2.10%	2.82%
8/1/2012	1.49%	2.00%	2.65%
9/1/2012	1.42%	1.99%	2.59%
10/1/2012	1.31%	1.94%	2.53%
11/1/2012	1.33%	1.93%	2.54%
12/1/2012	1.36%	1.94%	2.54%
1/1/2013	1.36%	1.94%	2.57%
2/1/2013	1.43%	2.03%	2.71%
3/1/2013	1.51%	2.15%	2.87%
4/1/2013	1.50%	2.13%	3.03%
5/1/2013	1.44%	2.02%	2.73%
6/1/2013	1.45%	2.03%	2.73%
7/1/2013	1.80%	2.47%	3.14%
8/1/2013	2.14%	2.88%	3.55%
9/1/2013	2.05%	2.86%	3.55%
10/1/2013	2.30%	3.11%	3.77%
11/1/2013	2.07%	2.89%	3.58%
12/1/2013	2.01%	2.85%	3.58%
1/1/2014	2.12%	3.01%	3.76%
2/1/2014	2.25%	3.11%	3.83%
3/1/2014	2.09%	2.88%	3.56%
4/1/2014	2.10%	2.87%	3.57%
5/1/2014	2.15%	2.88%	3.51%

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6/1/2014	2.03%	2.70%	3.32%
7/1/2014	1.99%	2.64%	3.25%
8/1/2014	2.02%	2.64%	3.24%
9/1/2014	1.99%	2.58%	3.17%
10/1/2014	2.08%	2.66%	3.22%
11/1/2014	2.04%	2.61%	3.16%
12/1/2014	2.09%	2.62%	3.15%
1/1/2015	2.09%	2.60%	3.10%
2/1/2015	2.05%	2.50%	2.96%
3/1/2015	1.92%	2.36%	2.81%
4/1/2015	1.99%	2.45%	2.92%
5/1/2015	1.87%	2.32%	2.79%
6/1/2015	2.04%	2.52%	3.03%
7/1/2015	2.25%	2.77%	3.36%
8/1/2015	2.34%	2.87%	3.43%
9/1/2015	2.36%	2.85%	3.37%
10/1/2015	2.39%	2.89%	3.42%
11/1/2015	2.29%	2.79%	3.31%
12/1/2015	2.41%	2.90%	3.41%
1/1/2016	2.46%	2.92%	3.43%
2/1/2016	2.48%	2.92%	3.42%
3/1/2016	2.26%	2.69%	3.17%
4/1/2016	2.29%	2.70%	3.17%
5/1/2016	2.03%	2.42%	2.88%
6/1/2016	1.92%	2.31%	2.77%
7/1/2016	1.93%	2.31%	2.76%
8/1/2016	1.76%	2.12%	2.54%
9/1/2016	1.73%	2.07%	2.49%
10/1/2016	1.79%	2.13%	2.55%
11/1/2016	1.88%	2.22%	2.63%
12/1/2016	2.09%	2.46%	2.89%
1/1/2017	2.51%	2.90%	3.33%
2/1/2017	2.53%	2.90%	3.30%
3/1/2017	2.51%	2.89%	3.29%
4/1/2017	2.55%	2.93%	3.33%
5/1/2017	2.44%	2.79%	3.19%
6/1/2017	2.42%	2.76%	3.16%
7/1/2017	2.33%	2.66%	3.04%
8/1/2017	2.38%	2.72%	3.10%
9/1/2017	2.31%	2.65%	3.04%
10/1/2017	2.28%	2.61%	2.99%
11/1/2017	2.41%	2.74%	3.11%
12/1/2017	2.49%	2.79%	3.15%
1/1/2018	2.57%	2.84%	3.16%
2/1/2018	2.71%	2.96%	3.27%
3/1/2018	2.93%	3.20%	3.51%

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	3 Year	5 Year	7 Year	10 Year
4/1/2018	2.85%	3.13%	3.41%	3.72%
5/1/2018	2.98%	3.24%	3.48%	3.75%
6/1/2018	3.14%	3.41%	3.65%	3.92%
7/1/2018	3.12%	3.37%	3.61%	3.86%
8/1/2018	3.17%	3.38%	3.60%	3.84%
9/1/2018	3.18%	3.39%	3.59%	3.82%
10/1/2018	3.20%	3.39%	3.58%	3.80%
11/1/2018	3.33%	3.53%	3.73%	3.95%
12/1/2018	3.38%	3.57%	3.77%	4.00%
1/1/2019	3.35%	3.51%	3.69%	3.90%