

HLB Option Sensitivity Analysis for HLB-Option, Flipper, and Knockout Advances

The Federal Home Loan Bank of Boston (Bank) is providing estimated valuations of the specific aforementioned advances for members' information and convenience only. The estimated valuations are generated by models obtained from external sources which are used for the Bank's own asset/liability management purposes. The models include the use of specific assumptions, for example, market volatility and discount curve adjusted for the Bank's spread, to estimate the value of the advance. The valuations represent theoretical market values only and should not be construed as a liquidation price for the aforementioned advances.

It is expressly understood that in providing this valuation information to members, the Bank is not performing any advisory service. The valuations are being provided without representation or warranty and the member shall be solely responsible for any decision it makes or actions it takes based on the valuations provided. It is recommended that institutions maintain independent capabilities to value their asset/liability positions, including the aforementioned advances.

The table depicts valuation estimates resulting from immediate, parallel interest-rate movements. In order to rule out negative interest rates, our model applies an effective floor of plus ten basis points to the yield curve for all down-rate scenarios. As a result, large down-rate shocks will reflect valuation at the floor rate of ten basis points in place of any negative interest rates that would otherwise be produced. Please note that the valuation estimates are from the Bank's perspective. Since the member holds the advance as a liability, positive price changes in the table correspond to the advance having a negative impact on the member's estimated market value of portfolio equity (and vice versa). The theoretical argument follows that as interest rates rise, the value of the advance to the Bank falls. In the case of an HLB-Option or a Flipper advance, the Bank would likely exercise its option to cancel the advance as the value falls below 100. In the case of a Knockout advance, the Bank is obligated to terminate the advance on any specified cancellation date if LIBOR is equal to or greater than the predetermined "strike rate." In either case, the member's cost to prepay the advance increases as interest rates fall.

To identify your advance, locate the appropriate start date and maturity date and then verify the coupon rate. The report is sorted in ascending order by start date, followed by coupon. Once the appropriate structure is determined, read across to view the sensitivity analysis that has been performed on the advance.

If you have any questions or would like further explanation of this analysis, contact Member Financial Strategies at 1-800-292-9644.

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
7/30/2007	1/30/2019	1/30/2018	3.99000	104.37764	104.29291	103.19513	102.11449	101.05160	100.14414	99.95115	99.87073
1/7/2008	1/8/2018	1/8/2018	2.59000	100.05755	100.05755	100.04298	100.02118	99.99948	99.97790	99.95643	99.93506
1/8/2008	1/8/2018	1/8/2018	2.57000	100.05711	100.05711	100.04254	100.02073	99.99904	99.97746	99.95598	99.93462
1/8/2008	1/8/2018	1/8/2018	2.64000	100.05866	100.05866	100.04409	100.02229	100.00059	99.97901	99.95754	99.93617
1/11/2008	1/11/2018	1/11/2018	2.72000	100.08310	100.08310	100.06307	100.03309	100.00326	99.97359	99.94407	99.91470
1/14/2008	1/16/2018	1/16/2018	3.24000	100.14398	100.14398	100.11484	100.07121	100.02782	99.98465	99.94172	99.89901
1/16/2008	1/16/2018	1/16/2018	2.38000	100.10576	100.10576	100.07663	100.03302	99.98964	99.94650	99.90358	99.86090
1/17/2008	1/17/2018	1/17/2018	2.25000	100.10623	100.10623	100.07528	100.02895	99.98286	99.93703	99.89144	99.84609
1/18/2008	1/18/2018	1/18/2018	2.29000	100.11448	100.11448	100.08171	100.03265	99.98385	99.93532	99.88705	99.83904
2/14/2008	2/14/2018	2/14/2018	3.19000	100.39863	100.39863	100.31541	100.19264	100.07060	99.94932	99.82878	99.70898
3/7/2008	3/7/2018	3/7/2018	3.55000	100.65071	100.65071	100.52424	100.34405	100.16507	99.98728	99.81068	99.63525
3/14/2008	3/14/2018	3/14/2018	2.40000	100.48655	100.48655	100.34528	100.14629	99.94866	99.75242	99.55752	99.36394
3/17/2008	3/19/2018	3/19/2018	3.30000	100.71488	100.71488	100.56246	100.34957	100.13814	99.92827	99.71983	99.51284
4/28/2008	4/30/2018	1/29/2018	2.15000	100.71655	100.71655	100.46462	100.13782	99.96168	99.88315	99.80506	99.72742
4/30/2008	4/30/2018	4/30/2013	3.74000	101.24654	101.24654	100.99383	100.66595	100.34075	100.01818	99.69823	99.38086
5/23/2008	5/23/2018	2/23/2018	3.27000	101.29879	101.29879	100.98519	100.59487	100.20797	99.94732	99.80164	99.65688
6/30/2008	7/2/2018	6/30/2011	3.69000	101.87558	101.87558	101.44543	100.94543	100.45022	99.95994	99.47444	98.99366
7/11/2008	7/11/2018	7/11/2012	3.75000	101.99980	101.99980	101.54205	101.01732	100.49788	99.98366	99.47459	98.97058
7/14/2008	7/16/2018	1/16/2018	2.50000	101.36785	101.36785	100.89623	100.35993	99.99497	99.95182	99.90891	98.86622
7/14/2008	7/16/2018	1/16/2018	3.25000	101.77827	101.77827	101.30564	100.76808	100.23612	99.98510	99.94216	99.89946
7/17/2008	7/17/2018	7/17/2013	3.75000	102.06230	102.06230	101.58587	101.04474	100.50916	99.97905	99.45432	98.93489
8/15/2008	8/15/2018	2/15/2018	3.83000	102.41481	102.41482	101.84559	101.22499	100.61127	100.05523	99.90162	99.77798
12/27/2011	12/27/2021	12/29/2014	3.55000	114.36678	111.87672	107.79258	103.88329	100.14008	96.55507	93.12079	89.83016
7/18/2012	7/18/2018	7/20/2015	2.72000	101.50335	101.50335	101.02518	100.48303	99.94646	99.41538	98.88971	98.36937
10/1/2012	10/1/2019	4/1/2015	2.25000	103.99337	103.51599	101.75828	100.04008	98.35950	96.71554	95.10722	93.53361
3/8/2013	3/8/2018	3/9/2015	1.78000	100.33116	100.33116	100.20284	100.02033	99.83904	99.65898	99.48012	99.30245
5/7/2014	5/7/2018	5/7/2015	1.76000	100.62077	100.62077	100.35093	100.00538	99.66271	99.32291	98.98592	98.65170
10/16/2014	10/16/2018	10/17/2016	2.48000	101.99067	101.99056	101.21408	100.42861	99.65310	98.88737	98.13126	97.38460
10/24/2014	10/24/2018	10/26/2015	1.74000	101.43529	101.43506	100.63285	99.82847	99.03446	98.25065	97.47685	96.71289
2/20/2015	2/20/2019	2/22/2016	1.79000	102.06817	101.95737	100.81512	99.69232	98.58755	97.50044	96.43062	95.37772
3/26/2015	3/26/2019	3/29/2016	1.61000	102.01220	101.85469	100.62085	99.40915	98.21796	97.04696	95.89558	94.76345
3/26/2015	3/26/2020	3/29/2016	1.59000	103.60358	102.80383	100.57747	98.41162	96.30326	94.25060	92.25189	90.30547
6/29/2015	7/1/2019	6/29/2017	2.74000	104.16291	103.85028	102.33937	100.85866	99.40679	97.98305	96.58677	95.21728
7/30/2015	7/30/2019	6/29/2017	1.80000	102.87963	102.51738	100.93823	99.39227	97.87764	96.39357	94.93928	93.51404
8/14/2015	8/14/2025	8/14/2020	1.85000	113.99799	108.07682	103.12524	99.36890	96.42130	93.89957	91.56039	89.31272
8/26/2015	8/26/2025	8/26/2020	1.75000	113.27429	107.49244	102.66958	98.99734	96.08363	93.55630	91.19789	88.92901
9/15/2015	9/16/2019	9/15/2016	1.75000	103.03296	102.58420	100.87508	99.20399	97.56887	95.96878	94.40280	92.87005
9/29/2015	9/30/2019	9/29/2016	1.61000	102.85290	102.37871	100.63374	98.92828	97.26017	95.62841	94.03204	92.47013
10/2/2015	10/2/2025	10/2/2020	1.69000	112.92703	107.18184	102.38366	98.70110	95.73524	93.13488	90.70080	88.35927
11/6/2015	11/7/2022	11/6/2018	1.40000	106.89015	104.16366	101.12318	99.57638	98.69368	97.87716	97.07190	96.27715
12/4/2015	12/4/2025	12/4/2018	1.36000	110.51039	105.38997	101.57711	99.57574	98.51860	97.62545	96.74975	95.88618
12/11/2015	12/12/2022	3/12/2018	1.99000	109.98768	106.79318	102.89350	100.44457	99.87287	99.68284	99.49412	99.30667
12/15/2015	12/15/2022	3/15/2018	1.99000	110.00426	106.80215	102.89761	100.44665	99.86704	99.66898	99.47230	99.27697
12/18/2015	12/18/2020	3/19/2018	2.24000	106.73812	105.42870	102.58666	100.49658	99.91104	99.70187	99.49415	99.28788
12/24/2015	12/24/2025	12/24/2020	1.99000	115.55059	109.15438	103.79336	99.62627	96.28507	93.41761	90.77821	88.25898
1/12/2016	1/12/2018	1/12/2018	1.87000	100.06232	100.06232	100.04046	100.00774	99.97518	99.94280	99.91059	99.87854
1/19/2016	1/19/2021	1/19/2018	1.15000	103.56110	102.34776	100.38171	99.97435	99.92287	99.87168	99.82076	99.77012
1/19/2016	1/20/2026	1/22/2019	1.35000	110.52826	105.41362	101.57359	99.45868	98.25456	97.23505	96.23904	95.25813
2/2/2016	2/2/2021	2/2/2018	0.78122	106.71134	105.29815	102.44021	100.41531	99.94343	99.93813	99.93299	99.92801
2/26/2016	2/26/2021	2/26/2018	0.89000	102.84974	101.69851	100.11966	99.87887	99.72357	99.56932	99.41606	99.26379
2/26/2016	2/26/2026	2/26/2021	1.49000	111.72123	106.14970	101.38014	97.57316	94.35530	91.45753	88.72891	86.11101
3/8/2016	3/8/2023	3/8/2018	0.99000	105.20474	102.63381	100.34332	99.87551	99.69525	99.51620	99.33835	99.16169
4/5/2016	4/5/2021	4/2/2018	0.99000	103.27459	101.17178	99.99591	99.74728	99.41857	99.09256	98.76921	98.44848
4/28/2016	4/30/2021	4/30/2018	0.77796	106.67974	105.01228	101.93191	99.84625	99.80370	99.80370	99.80370	99.80370
5/2/2016	5/4/2023	5/4/2018	0.78122	108.38117	104.92806	101.45670	99.89687	99.78422	99.77464	99.76559	99.75712
5/5/2016	5/5/2021	5/7/2018	0.89000	103.01784	101.75013	100.12658	99.70253	99.36183	99.02388	98.68877	98.35641
5/5/2016	5/5/2026	5/5/2021	1.49000	111.86997	106.19072	101.28563	97.32660	93.95175	90.90426	88.03847	85.29472
5/17/2016	5/17/2021	5/17/2018	0.82190	106.30195	104.58608	101.47679	99.78521	99.72662	99.68402	99.64214	99.60100
6/16/2016	6/16/2026	6/18/2018	0.69000	105.47643	102.15293	100.11334	99.48151	99.02647	98.57703	98.13168	97.69050
6/16/2016	6/16/2031	6/16/2021	1.21000	112.63272	105.80844	100.40184	96.23899	92.76423	89.64513	86.71549	83.91191
6/27/2016	6/27/2031	6/27/2018	0.69000	106.94609	102.64688	100.20701	99.45011	98.96806	98.49453	98.02562	97.56122

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
6/27/2016	6/27/2031	6/27/2019	0.91000	109.31666	103.95702	100.34180	98.25027	96.72726	95.32702	93.96044	92.62021
7/28/2016	7/30/2026	7/30/2018	0.67796	109.62789	104.33617	100.91618	99.67127	99.56634	99.56634	99.56634	99.56634
8/11/2016	8/11/2026	8/13/2018	0.81000	106.48431	102.72368	100.26581	99.34839	98.74073	98.14595	97.55765	96.97572
9/9/2016	9/9/2026	9/10/2018	0.80000	106.44866	102.68851	100.23024	99.23750	98.55290	97.88475	97.22439	96.57167
9/15/2016	9/15/2026	9/16/2019	0.99000	108.02889	103.61416	100.25705	98.03697	96.29929	94.69921	93.14367	91.62169
9/22/2016	9/22/2031	9/24/2018	0.65000	106.59214	102.44490	100.05596	99.07216	98.35021	97.64576	96.94982	96.26219
1/13/2017	1/16/2022	1/16/2018	0.33861	108.54858	106.19379	102.75879	100.45350	99.91084	99.86773	99.82484	99.78218
1/13/2017	1/13/2027	1/14/2019	1.31000	110.90511	105.49669	101.52352	99.42257	98.25634	97.25946	96.28369	95.32248
1/20/2017	1/22/2024	1/22/2019	0.33261	112.23326	107.40549	103.25449	100.37429	99.01092	98.70493	98.64626	98.60384
1/20/2017	1/20/2032	1/22/2018	0.93000	109.75438	104.18052	100.76791	99.95686	99.89728	99.83802	99.77909	99.72048
1/24/2017	1/24/2024	1/24/2019	0.32476	113.13909	108.21414	103.89648	100.76846	99.12902	98.69065	98.61306	98.56517
1/30/2017	2/1/2027	1/30/2020	0.34796	118.50743	110.05503	104.78391	101.02958	98.80731	97.85301	97.61342	97.61342
2/17/2017	2/20/2022	2/20/2018	0.42190	109.08086	106.59037	103.04936	100.57325	99.81210	99.75741	99.70337	99.64976
3/7/2017	3/7/2022	3/7/2018	0.51532	109.17988	106.63466	103.08787	100.60153	99.81287	99.79411	99.77744	99.76111
3/7/2017	3/8/2027	3/7/2019	1.50000	112.66408	106.70798	102.22228	99.63775	98.20568	97.06309	95.95908	94.87335
3/20/2017	3/20/2024	3/20/2019	1.55000	109.77652	105.65925	101.86717	99.57804	98.19216	97.02397	95.88818	94.77140
3/20/2017	3/22/2032	3/20/2018	1.04000	111.08995	104.95652	101.10158	99.87460	99.64733	99.43606	99.22611	99.01761
3/27/2017	3/29/2021	3/27/2018	0.52464	107.50168	105.93199	102.92066	100.57460	99.66706	99.59053	99.51976	99.44964
3/31/2017	4/2/2022	4/2/2018	0.33500	108.88327	106.27757	102.78413	100.42190	99.75479	99.74928	99.74605	99.74323
4/10/2017	4/11/2022	4/10/2018	0.35028	108.49183	105.88929	102.45885	100.23441	99.70164	99.67517	99.65017	99.62566
4/13/2017	4/13/2022	4/13/2018	0.35861	108.33353	105.73726	102.33550	100.16963	99.68874	99.65455	99.62156	99.58913
4/13/2017	4/15/2024	4/15/2019	1.45000	109.25040	105.19407	101.54525	99.34261	97.92652	96.69597	95.49741	94.31968
4/13/2017	4/13/2032	4/13/2018	0.99000	110.52378	104.61565	100.94634	99.80886	99.51646	99.24028	98.96641	98.69462
4/28/2017	4/30/2021	4/30/2018	0.37796	106.85085	105.19971	102.29501	100.23602	99.67299	99.67254	99.67254	99.67254
4/28/2017	4/28/2022	4/29/2019	1.59000	106.97306	104.55465	101.43926	99.42121	98.02573	96.76404	95.52996	94.31766
4/28/2017	4/29/2024	4/29/2019	0.37796	112.49334	107.21125	103.13421	100.26030	98.81316	98.39607	98.30284	98.24673
5/8/2017	5/10/2027	5/8/2018	1.30000	111.02633	105.53689	101.56322	99.90864	99.50138	99.16045	98.82242	98.48718
5/8/2017	5/10/2032	5/8/2018	1.15000	112.40703	105.77491	101.48418	99.85571	99.44839	99.10754	98.76962	98.43450
5/19/2017	5/21/2022	5/21/2018	0.43567	108.22771	105.53211	102.13926	100.03351	99.55577	99.50114	99.44896	99.39757
5/22/2017	5/24/2021	5/22/2018	0.44594	106.43991	104.73111	101.85120	99.95440	99.54143	99.48523	99.43031	99.37616
5/22/2017	5/24/2027	5/22/2018	1.09000	109.21965	104.31586	100.93413	99.75664	99.35616	98.97817	98.60344	98.23194
6/1/2017	6/7/2032	6/5/2018	0.99000	110.58876	104.63650	100.95035	99.68883	99.24088	98.82572	98.41435	98.00668
6/2/2017	6/7/2032	6/5/2018	0.99000	110.59082	104.63670	100.94982	99.68876	99.24088	98.82572	98.41435	98.00668
6/5/2017	6/6/2022	6/5/2018	0.49463	108.02980	105.29863	101.96272	99.95595	99.54587	99.53424	99.52533	99.51708
6/5/2017	6/5/2024	6/5/2019	0.49463	111.81840	106.44155	102.56839	99.93716	98.69943	98.40267	98.38293	98.38293
6/5/2017	6/7/2032	6/5/2018	0.99000	110.59219	104.64118	100.95797	99.68960	99.24088	98.82572	98.41435	98.00668
6/14/2017	6/14/2022	6/14/2019	1.59000	107.18063	104.65023	101.44951	99.31773	97.79598	96.41964	95.07643	93.75857
6/22/2017	6/22/2022	6/22/2018	0.65793	108.22532	105.43884	102.04642	99.95671	99.45134	99.39131	99.33652	99.28267
6/27/2017	6/27/2022	6/27/2018	0.67464	108.03250	105.25029	101.89625	99.88452	99.41995	99.34666	99.27826	99.21087
6/27/2017	6/27/2022	6/27/2019	1.60000	107.28357	104.71762	101.47960	99.30556	97.74484	96.33566	94.96149	93.61374
7/3/2017	7/3/2020	7/3/2018	0.33389	104.80086	103.81758	101.72323	100.07620	99.47005	99.45715	99.45370	99.45103
7/3/2017	7/6/2021	7/3/2018	0.33389	106.65971	104.81254	101.92316	99.96335	99.45393	99.44431	99.44066	99.43771
7/3/2017	7/3/2022	7/3/2019	0.33389	107.80296	104.80759	102.04131	99.87638	98.66708	98.32034	98.29663	98.29663
7/14/2017	7/14/2022	7/15/2019	1.62000	107.45111	104.83288	101.54143	99.30086	97.68105	96.22493	94.80719	93.41745
7/14/2017	7/16/2022	7/16/2018	0.05917	108.65363	105.74932	102.24597	99.95013	99.24089	99.18261	99.14471	99.10777
7/21/2017	7/23/2022	7/23/2018	0.06250	108.66381	105.74050	102.22845	99.92373	99.19774	99.11787	99.06107	99.00535
7/24/2017	7/25/2022	7/24/2019	1.63000	107.54691	104.89534	101.57131	99.29869	97.65144	96.17251	94.73343	93.32312
7/28/2017	7/28/2022	7/29/2019	1.60000	107.42133	104.78173	101.48902	99.23477	97.58467	96.09586	94.64692	93.22712
7/28/2017	7/30/2022	7/30/2018	0.07796	108.57142	105.62629	102.15736	99.91278	99.24167	99.22395	99.22395	99.22395
7/28/2017	7/30/2022	7/30/2018	0.37796	108.17909	105.27718	101.92462	99.89322	99.40227	99.39765	99.39765	99.39765
7/31/2017	7/31/2020	7/31/2018	0.33009	104.78260	103.74728	101.65432	100.00510	99.37521	99.36574	99.36574	99.36574
7/31/2017	1/31/2021	7/31/2018	0.33009	105.73522	104.31565	101.79352	99.96077	99.37497	99.36576	99.36576	99.36576
7/31/2017	7/31/2021	7/31/2018	0.33009	106.56590	104.64199	101.77655	99.86065	99.36739	99.36578	99.36578	99.36578
7/31/2017	1/31/2022	7/31/2018	0.33009	107.48761	105.04784	101.94138	99.94039	99.37737	99.36581	99.36581	99.36581
7/31/2017	7/31/2022	7/31/2018	0.33009	108.18746	105.27953	101.91933	99.87331	99.37100	99.36581	99.36581	99.36581
8/1/2017	8/1/2020	8/1/2018	0.07678	104.89989	103.86137	101.75364	100.03010	99.24156	99.21069	99.21069	99.21069
8/1/2017	8/1/2022	8/1/2018	0.07678	108.56835	105.61758	102.14801	99.90407	99.23125	99.21079	99.21079	99.21079
8/11/2017	8/11/2022	8/12/2019	1.59000	107.43676	104.76979	101.45830	99.18026	97.49627	95.97358	94.49195	93.04065
8/11/2017	8/13/2022	8/13/2018	0.41289	107.95406	105.03577	101.72726	99.77713	99.31935	99.28112	99.25345	99.22680
8/17/2017	8/17/2022	8/17/2018	0.12190	108.42084	105.43797	101.98569	99.78113	99.12128	99.05752	99.01952	98.98262
8/18/2017	8/20/2022	8/20/2018	0.43567	108.09111	105.14335	101.80070	99.79297	99.28184	99.22172	99.17513	99.12967

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
8/25/2017	8/25/2022	8/26/2019	1.55000	107.30992	104.63531	101.34373	99.06473	97.35413	95.79767	94.28311	92.80014
8/25/2017	8/27/2022	8/27/2018	0.46206	107.78189	104.84576	101.57131	99.68522	99.23787	99.16203	99.09655	99.03232
9/5/2017	9/6/2022	9/5/2019	1.55000	107.36158	104.65927	101.34401	99.03946	97.30141	95.72023	94.18239	92.67703
9/12/2017	9/12/2022	9/12/2018	0.54878	107.17590	104.24941	101.15007	99.52991	99.22114	99.18964	99.16496	99.14140
9/12/2017	9/12/2022	9/12/2019	1.49000	107.10141	104.42484	101.16744	98.89882	97.16158	95.56637	94.01320	92.49305
9/18/2017	9/19/2022	9/18/2019	1.62000	107.75257	104.97447	101.55739	99.15165	97.35152	95.73298	94.16304	92.62697
9/22/2017	9/22/2022	9/23/2019	1.65000	107.90990	105.10609	101.64957	99.20378	97.37862	95.74590	94.16386	92.61622
9/22/2017	9/24/2022	9/24/2018	0.65793	108.09532	105.04696	101.71700	99.71681	99.16594	99.08679	99.02957	98.97373
10/10/2017	10/11/2022	10/10/2018	0.00861	108.81101	105.62831	102.11664	99.77295	98.93318	98.85180	98.83584	98.82148
10/10/2017	10/11/2022	10/10/2018	0.34861	108.81101	105.62831	102.11664	99.77295	98.93318	98.85180	98.83584	98.82148
10/10/2017	10/11/2022	10/10/2018	0.59861	108.18071	105.08475	101.80016	99.85913	99.35069	99.31022	99.29273	99.27647
10/10/2017	10/11/2022	10/10/2019	1.75000	108.48169	105.57033	101.97079	99.38948	97.48010	95.80008	94.17829	92.59279
10/23/2017	10/24/2022	10/23/2018	0.61250	108.25881	105.12385	101.81950	99.84337	99.28739	99.20920	99.15686	99.10597
10/23/2017	10/24/2022	10/23/2019	1.79000	108.74020	105.77437	102.10581	99.45266	97.49308	95.77718	94.12441	92.50946
10/25/2017	10/25/2022	10/25/2018	0.36742	108.70380	105.51151	102.06443	99.84340	99.09775	98.99046	98.93321	98.87776
11/6/2017	11/7/2022	11/6/2018	0.39139	108.62107	105.38981	101.98599	99.81476	99.10767	99.04807	99.04211	99.03785
11/6/2017	11/7/2022	11/6/2019	1.82000	108.95747	105.94139	102.21329	99.49703	97.48361	95.72807	94.04139	92.39430
11/17/2017	11/17/2022	11/18/2019	1.88000	109.30501	106.23139	102.42322	99.62053	97.54638	95.75429	94.03852	92.36399
11/17/2017	11/19/2022	11/19/2018	0.42190	108.76627	105.49058	102.05195	99.82072	99.04261	98.93923	98.89844	98.85979
12/4/2017	12/4/2022	12/4/2018	0.48738	109.38520	106.01203	102.48197	100.06219	99.08976	98.97320	98.97187	98.97187
12/4/2017	12/5/2022	12/4/2019	2.00000	109.99899	106.81757	102.86203	99.90252	97.71705	95.86699	94.11022	92.39766
12/14/2017	12/14/2022	12/16/2019	2.04000	110.24998	107.02486	103.01155	99.98898	97.75082	95.86559	94.07979	92.34018
12/18/2017	12/19/2022	12/18/2018	1.75000	108.81704	105.73504	102.11487	99.95785	98.82799	97.89843	96.98789	96.09024