

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
4/5/2018	4/5/2023	4/5/2019	0.49500	114.00954	110.11770	106.19895	102.77147	100.27502	99.56684	99.55587	99.54593
4/13/2018	4/15/2023	4/15/2019	0.49694	114.22177	110.29548	106.33785	102.86171	100.28525	99.45215	99.41192	99.37523
4/27/2018	4/29/2023	4/29/2019	0.76475	114.94811	110.96307	106.93258	103.34652	100.56864	99.38382	99.28601	99.21437
5/4/2018	5/4/2023	5/6/2019	2.63000	111.15666	107.23518	103.49999	100.74644	99.72888	99.46835	99.21673	98.96697
5/4/2018	5/6/2023	5/6/2019	0.58150	114.74017	110.78790	106.81842	103.29695	100.58836	99.46072	99.41597	99.40318
5/8/2018	5/8/2023	5/8/2019	1.29125	113.63429	109.71521	105.82754	102.48791	100.17460	99.59701	99.57585	99.55746
5/17/2018	5/17/2023	5/17/2019	1.34000	113.91173	109.95818	106.02956	102.63053	100.22408	99.51867	99.47039	99.42789
5/17/2018	5/17/2023	5/18/2020	2.84000	112.16088	108.15594	104.26503	101.16639	99.08009	97.66717	96.44759	95.26421
5/24/2018	5/24/2021	5/24/2019	1.28925	108.01990	106.07672	103.98910	101.99907	100.27993	99.44323	99.35790	99.29704
5/24/2018	5/24/2023	5/26/2020	1.68925	111.21098	107.86144	104.86104	102.18675	100.06980	98.82860	98.43946	98.40567
6/5/2018	6/5/2023	6/5/2019	1.45125	113.01525	109.08665	105.25380	102.02909	99.93242	99.50104	99.48841	99.47852
6/5/2018	6/5/2023	6/5/2020	2.72000	111.77715	107.74703	103.88245	100.85883	98.83252	97.40644	96.14725	94.92226
6/25/2018	6/25/2021	6/25/2019	2.32163	106.84338	104.88778	102.83431	100.99592	99.83184	99.64943	99.58698	99.52550
6/25/2018	6/26/2023	6/25/2020	2.32163	110.10128	106.72549	103.79158	101.37239	99.78674	99.11145	98.94257	98.88766
6/25/2018	6/26/2023	6/25/2020	0.52163	112.22216	108.70771	105.51937	102.57287	99.97594	97.97818	96.86366	96.49323
6/27/2018	6/27/2023	6/27/2019	2.53000	111.08951	107.05136	103.27106	100.57789	99.54520	99.14455	98.75837	98.37556
7/2/2018	7/2/2023	7/2/2019	0.79700	113.60498	109.61795	105.72065	102.35260	99.94765	99.15137	99.12804	99.12804
7/2/2018	7/2/2023	7/2/2019	1.79700	112.32387	108.40004	104.64981	101.59254	99.81746	99.54596	99.54447	99.54447
7/2/2018	7/3/2023	7/2/2020	2.71000	111.93589	107.83278	103.91315	100.84082	98.75012	97.25248	95.92813	94.64204
7/30/2018	7/31/2023	7/30/2019	0.75050	114.37851	110.28699	106.27023	102.74565	100.08627	98.91647	98.76443	98.69661
7/30/2018	7/31/2023	7/30/2019	2.00050	112.77145	108.75986	104.92549	101.78136	99.87664	99.45437	99.37936	99.31004
8/23/2018	8/23/2023	8/23/2019	0.67694	113.54242	109.45897	105.51052	102.11206	99.68589	98.77610	98.66979	98.61612
8/28/2018	8/28/2023	8/28/2019	0.70681	113.54983	109.45152	105.49076	102.08312	99.65245	98.73404	98.61484	98.55021
9/4/2018	9/7/2021	9/4/2019	2.23613	106.50223	104.52953	102.53365	100.79382	99.77479	99.64168	99.63739	99.63438
9/25/2018	9/27/2021	9/25/2019	2.69000	107.21802	104.82812	102.31477	100.34725	99.36394	98.73145	98.11345	97.50230
9/25/2018	9/27/2021	9/25/2020	2.99000	108.02627	105.62075	103.02817	100.72386	98.82743	97.20797	95.68595	94.20217
10/3/2018	10/3/2023	10/3/2019	1.80763	113.17709	109.10980	105.27983	102.07636	99.96981	99.30942	99.27084	99.27084
10/26/2018	10/26/2023	10/28/2019	0.76475	113.68983	109.55247	105.62447	102.19965	99.63606	98.42635	98.25834	98.25834
10/29/2018	10/30/2023	10/29/2020	1.75163	111.04389	107.38543	104.31620	101.63866	99.57347	98.33594	97.84311	97.70974
11/6/2018	11/8/2021	11/6/2019	2.09238	106.50464	104.48314	102.48351	100.75261	99.72822	99.53809	99.52822	99.52242
12/17/2018	12/17/2021	12/17/2019	2.28819	106.09328	104.03311	102.03984	100.40874	99.57009	99.41485	99.37678	99.34220
12/24/2018	12/24/2021	12/24/2019	2.32375	105.83225	103.75995	101.77530	100.21214	99.49758	99.36646	99.31093	99.25795