

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
10/25/2017	10/25/2022	10/25/2018	0.74520	108.33239	104.15801	101.28645	99.72510	99.34017	99.26563	99.20513	99.14588
11/6/2017	11/7/2022	11/6/2018	0.78902	108.21478	104.02076	101.20510	99.69605	99.35483	99.33001	99.32067	99.31242
11/6/2017	11/7/2022	11/6/2019	1.82000	108.12708	104.11026	101.05412	98.89931	97.19433	95.61516	94.07763	92.57264
11/17/2017	11/17/2022	11/18/2019	1.88000	108.43908	104.35205	101.20761	98.97408	97.22033	95.60859	94.04194	92.50906
11/17/2017	11/19/2022	11/19/2018	0.88494	108.34433	104.12388	101.25600	99.68778	99.29275	99.22991	99.18576	99.14294
12/4/2017	12/4/2022	12/4/2018	0.48738	108.91610	104.58638	101.58642	99.82234	99.32072	99.28251	99.28087	99.28077
12/4/2017	12/5/2022	12/4/2019	2.00000	109.07143	104.84824	101.53931	99.16648	97.33820	95.68139	94.07609	92.50637
12/14/2017	12/14/2022	12/16/2019	2.04000	109.29595	105.02446	101.65370	99.22123	97.35021	95.66266	94.03063	92.43551
12/18/2017	12/19/2022	12/18/2018	1.75000	107.93269	103.93468	101.14388	99.69318	98.84591	98.07453	97.31411	96.56328
1/12/2018	1/14/2023	1/14/2019	0.70911	109.41995	104.98206	101.84764	99.88455	99.21982	99.12408	99.09517	99.06902
1/19/2018	1/19/2023	1/21/2020	2.26000	110.51002	106.00676	102.33894	99.62739	97.57245	95.77677	94.05716	92.37948
1/29/2018	1/30/2023	1/29/2019	2.05000	109.53245	105.17003	101.88894	99.98637	98.92937	98.04242	97.17434	96.31821
2/2/2018	2/4/2023	2/4/2019	0.02777	110.61098	105.96856	102.49274	99.93633	98.69778	98.43830	98.42598	98.42598
2/2/2018	2/4/2023	2/4/2019	0.77777	110.03374	105.49977	102.24999	100.08556	99.24421	99.12303	99.11806	99.11806
2/9/2018	2/9/2023	2/10/2020	2.33000	110.95252	106.35503	102.57920	99.75203	97.61191	95.75723	93.98928	92.26643
2/9/2018	2/9/2023	2/9/2022	2.77000	113.12855	108.20316	103.66109	99.53833	95.77199	92.27266	88.96610	85.81095
2/16/2018	2/19/2023	2/19/2019	0.85000	110.36359	105.78701	102.44875	100.16144	99.20258	99.01642	98.97178	98.93494
2/16/2018	2/19/2023	2/19/2019	0.87250	110.44397	105.85995	102.50639	100.19337	99.21083	99.01691	98.97178	98.93494
2/20/2018	2/21/2023	2/20/2020	2.44000	111.55233	106.86459	102.96485	100.01933	97.80111	95.90663	94.11353	92.36840
2/20/2018	2/21/2023	2/22/2022	2.87000	113.69791	108.71475	104.11229	99.92883	96.11277	92.57299	89.23301	86.04891