

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
1/12/2018	1/14/2023	1/14/2019	0.70911	109.80857	105.36143	102.09655	100.00865	99.27775	99.17780	99.14911	99.12295
1/19/2018	1/19/2023	1/21/2020	2.26000	110.59298	106.04743	102.35191	99.63172	97.61403	95.88545	94.23843	92.63159
1/29/2018	1/30/2023	1/29/2019	2.05000	109.62998	105.20479	101.87804	99.96452	98.97452	98.16887	97.38035	96.60201
2/2/2018	2/4/2023	2/4/2019	0.02777	111.09261	106.46803	102.88008	100.19044	98.83497	98.54829	98.53519	98.53519
2/2/2018	2/4/2023	2/4/2019	0.77777	110.44287	105.91055	102.53171	100.22906	99.30271	99.16976	99.16547	99.16547
2/9/2018	2/9/2023	2/10/2020	2.33000	111.05250	106.41352	102.60001	99.75910	97.65137	95.85920	94.16318	92.51090
2/9/2018	2/9/2023	2/9/2022	2.77000	113.21443	108.29724	103.75872	99.63551	95.88097	92.41493	89.15687	86.05470
2/16/2018	2/19/2023	2/19/2019	0.85000	110.80759	106.22498	102.75732	100.32493	99.26646	99.05292	99.00532	98.96614
2/16/2018	2/19/2023	2/19/2019	0.87250	110.88854	106.30178	102.82202	100.36077	99.27535	99.05373	99.00533	98.96614
2/20/2018	2/21/2023	2/20/2020	2.44000	111.66482	106.93723	102.99736	100.02689	97.82553	95.99025	94.26770	92.59171
2/20/2018	2/21/2023	2/22/2022	2.87000	113.79262	108.81903	104.21774	100.02962	96.22271	92.70848	89.41173	86.27873
3/5/2018	3/6/2023	3/5/2019	0.77457	110.92019	106.29119	102.78653	100.26140	99.08254	98.84888	98.83436	98.83371
3/15/2018	3/15/2023	3/15/2019	0.87450	111.17967	106.52044	102.96322	100.34765	99.07662	98.78301	98.74083	98.71606
3/20/2018	3/20/2023	3/20/2019	0.20175	111.58820	106.85382	103.12754	100.21259	98.54349	98.04920	97.97083	97.93585
3/21/2018	3/21/2023	3/21/2019	0.22249	111.58913	106.85327	103.12900	100.20198	98.53941	98.04045	97.95896	97.92139
3/29/2018	3/29/2023	3/29/2019	1.05200	111.65850	106.94895	103.28881	100.52424	99.07594	98.67758	98.58828	98.52629