

Parallel-Shift Sensitivity Analysis for HLB-Option and Knockout Advances

The Federal Home Loan Bank of Boston (Bank) is providing estimated valuations of the specific HLB-Option and Knockout advances set forth below 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 HLB-Option or Knockout advance.

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 HLB-Option and Knockout advances.

The table depicts valuation estimates resulting from immediate parallel interest-rate movements of plus/minus 400 basis points in 100 basis point increments. 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 by the indicated basis point shocks. Please note that the valuation estimates are from the Federal Home Loan Bank of Boston's perspective. Since the advance is held by the member 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 advance, the Bank would be likely to exercise its option to cancel the advance as the value falls below 100. In the case of a Knockout advance, the Bank would automatically terminate the advance on any specified cancellation date if LIBOR is equal to or greater than a predetermined "strike rate" four London Business days prior to the scheduled cancellation date. In either case, the member's cost to purchase the advance increases as interest rates fall.

To identify your advance, locate the appropriate 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 the Money Desk at 1-800-357-3452.

As of: **9/30/2015** Parallel-Shift Sensitivity Analysis for HLB-Option and Knockout Advances

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
10/26/2005	10/26/2015	10/26/2015	4.540	100.328	100.328	100.328	100.318	100.248	100.178	100.108	100.038
1/17/2006	1/19/2016	10/19/2015	4.080	101.258	101.258	101.258	101.175	100.873	100.572	100.274	100.042
4/24/2006	4/25/2016	10/26/2015	4.440	102.565	102.565	102.565	102.301	101.729	101.166	100.626	100.180
5/5/2006	5/5/2016	11/5/2015	4.350	102.634	102.634	102.634	102.348	101.749	101.161	100.607	100.176
5/5/2006	5/5/2016	11/5/2015	4.530	102.743	102.743	102.743	102.456	101.857	101.268	100.707	100.242
5/15/2006	5/16/2016	11/16/2015	4.350	102.767	102.767	102.767	102.455	101.827	101.210	100.628	100.175
5/15/2006	5/16/2016	11/16/2015	4.520	102.875	102.875	102.875	102.563	101.934	101.316	100.727	100.242
5/19/2006	5/19/2016	11/19/2015	4.510	102.906	102.906	102.906	102.587	101.951	101.325	100.729	100.239
6/12/2006	6/13/2016	12/14/2015	4.620	103.298	103.298	103.298	102.919	102.214	101.522	100.868	100.327
6/26/2006	6/27/2016	12/28/2015	4.730	103.560	103.560	103.560	103.147	102.402	101.672	100.979	100.393
7/24/2006	7/25/2016	10/26/2015	4.660	103.870	103.870	103.870	103.384	102.564	101.764	101.015	100.387
7/28/2006	7/28/2016	10/28/2015	4.490	103.766	103.766	103.766	103.272	102.445	101.641	100.894	100.284
8/25/2006	8/25/2016	11/25/2015	4.350	103.987	103.987	103.987	103.417	102.517	101.647	100.857	100.255
11/24/2006	11/25/2016	11/24/2015	4.190	104.911	104.911	104.911	104.078	102.926	101.837	100.896	100.227
12/1/2006	12/1/2016	12/1/2015	4.090	104.862	104.862	104.862	104.012	102.847	101.760	100.840	100.209
12/4/2006	12/5/2016	12/4/2015	4.080	104.896	104.896	104.896	104.033	102.858	101.760	100.834	100.200
12/5/2006	12/5/2016	12/7/2015	4.260	105.112	105.112	105.112	104.248	103.069	101.957	100.996	100.302
12/8/2006	12/8/2016	12/8/2015	3.990	104.821	104.821	104.821	103.950	102.769	101.673	100.760	100.145
12/12/2006	12/12/2016	12/14/2015	3.990	104.865	104.865	104.865	103.982	102.790	101.684	100.761	100.136
12/19/2006	12/19/2016	12/21/2015	4.190	105.191	105.191	105.191	104.285	103.069	101.927	100.947	100.246
12/28/2006	12/28/2016	12/28/2015	4.250	105.371	105.371	105.371	104.437	103.196	102.026	101.015	100.279
12/28/2006	12/28/2016	12/28/2015	4.400	105.561	105.561	105.561	104.626	103.381	102.200	101.164	100.386
1/12/2007	1/12/2017	10/13/2015	4.420	105.770	105.770	105.770	104.789	103.504	102.289	101.231	100.430
1/16/2007	1/17/2017	10/16/2015	4.790	106.320	106.320	106.320	105.320	104.014	102.763	101.630	100.718
2/2/2007	2/2/2017	11/2/2015	4.690	106.396	106.396	106.396	105.346	103.990	102.659	101.351	100.065
2/20/2007	2/21/2017	11/20/2015	4.850	106.870	106.870	106.870	105.757	104.342	102.954	101.590	100.251
2/20/2007	2/21/2017	11/20/2015	4.390	106.219	106.219	106.219	105.109	103.715	102.406	101.276	100.440
2/23/2007	2/23/2017	11/23/2015	4.250	106.044	106.044	106.044	104.929	103.534	102.233	101.127	100.338
2/23/2007	2/23/2017	11/23/2015	4.350	106.186	106.186	106.186	105.071	103.672	102.362	101.235	100.409
3/16/2007	3/16/2017	12/16/2015	4.090	106.055	106.055	106.055	104.873	103.430	102.107	101.007	100.250
3/23/2007	3/23/2017	12/23/2015	4.290	106.435	106.435	106.435	105.227	103.757	102.391	101.230	100.390
3/23/2007	3/23/2017	12/23/2015	4.290	106.435	106.435	106.435	105.227	103.757	102.391	101.230	100.390
4/9/2007	4/10/2017	10/9/2015	4.150	106.432	106.432	106.432	105.166	103.657	102.274	101.123	100.303
4/12/2007	4/12/2017	10/13/2015	4.250	106.611	106.611	106.611	105.336	103.817	102.415	101.236	100.383
4/13/2007	4/13/2017	10/13/2015	4.450	106.934	106.934	106.934	105.654	104.124	102.697	101.469	100.548
5/18/2007	5/18/2017	11/18/2015	4.190	106.936	106.936	106.936	105.538	103.928	102.454	101.227	100.369
5/22/2007	5/22/2017	11/23/2015	4.750	107.916	107.916	107.916	106.496	104.849	103.300	101.929	100.844
5/29/2007	5/30/2017	11/30/2015	4.250	107.177	107.177	107.177	105.736	104.091	102.577	101.309	100.408
6/7/2007	6/7/2017	12/7/2015	4.820	108.247	108.247	108.247	106.769	105.079	103.491	102.085	100.966
6/8/2007	6/8/2017	12/8/2015	4.490	107.695	107.695	107.695	106.218	104.540	102.984	101.649	100.655
6/18/2007	6/19/2017	12/18/2015	4.500	107.850	107.850	107.850	106.333	104.623	103.038	101.676	100.659
6/19/2007	6/19/2017	12/21/2015	4.650	108.111	108.111	108.111	106.592	104.875	103.272	101.874	100.790
6/22/2007	6/22/2017	12/22/2015	4.500	107.887	107.887	107.887	106.359	104.642	103.049	101.679	100.658
6/28/2007	6/28/2017	12/28/2015	4.500	107.962	107.962	107.962	106.413	104.678	103.070	101.688	100.655
7/13/2007	7/13/2017	10/13/2015	4.290	107.769	107.769	107.769	106.169	104.411	102.807	101.468	100.499
7/20/2007	7/20/2017	10/20/2015	4.290	107.853	107.853	107.853	106.226	104.450	102.828	101.472	100.490
7/27/2007	7/27/2017	10/27/2015	4.250	107.862	107.862	107.862	106.211	104.418	102.785	101.424	100.445
7/30/2007	1/30/2019	10/30/2015	3.990	113.499	113.499	112.630	109.333	106.368	103.867	101.933	100.621
7/31/2007	7/31/2017	11/2/2015	3.990	107.425	107.425	107.425	105.767	103.988	102.400	101.132	100.304
7/31/2007	7/31/2017	11/2/2015	3.990	107.425	107.425	107.425	105.767	103.988	102.400	101.132	100.304
7/31/2007	7/31/2017	11/2/2015	4.060	107.556	107.556	107.556	105.895	104.110	102.508	101.219	100.354
8/2/2007	8/2/2017	11/2/2015	4.050	107.560	107.560	107.560	105.892	104.106	102.508	101.216	100.352
8/2/2007	8/2/2017	11/2/2015	4.150	107.746	107.746	107.746	106.076	104.282	102.665	101.341	100.430
8/9/2007	8/9/2017	11/9/2015	3.990	107.525	107.525	107.525	105.833	104.034	102.429	101.142	100.298
8/16/2007	8/16/2017	11/16/2015	3.990	107.603	107.603	107.603	105.884	104.066	102.444	101.142	100.288
8/17/2007	8/17/2017	11/17/2015	4.000	107.633	107.633	107.633	105.910	104.089	102.462	101.155	100.294
9/4/2007	9/5/2017	12/4/2015	3.890	107.628	107.628	107.628	105.839	103.986	102.355	101.071	100.247
9/10/2007	9/11/2017	12/10/2015	3.690	107.297	107.297	107.297	105.493	103.648	102.052	100.841	100.111

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Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
9/11/2007	9/11/2017	12/11/2015	3.590	107.100	107.100	107.100	105.300	103.468	101.898	100.731	100.060
9/13/2007	9/13/2017	12/14/2015	3.990	107.913	107.913	107.913	106.089	104.205	102.531	101.193	100.306
9/27/2007	9/27/2017	12/28/2015	3.650	107.381	107.381	107.381	105.516	103.635	102.012	100.787	100.057
10/11/2007	10/11/2017	10/13/2015	3.990	108.223	108.223	108.223	106.292	104.341	102.616	101.242	100.311
10/15/2007	10/16/2017	10/15/2015	3.990	108.279	108.279	108.279	106.327	104.363	102.626	101.243	100.309
10/26/2007	10/26/2017	10/26/2015	3.390	107.128	107.128	107.128	105.168	103.264	101.678	100.548	100.015
11/5/2007	11/6/2017	11/5/2015	4.390	109.365	109.365	109.365	107.316	105.263	103.406	101.858	100.719
11/6/2007	11/6/2017	11/6/2015	3.480	107.423	107.423	107.423	105.419	103.482	101.858	100.680	100.061
11/19/2007	11/20/2017	11/19/2012	4.290	109.318	109.318	109.318	107.197	105.033	102.925	100.869	98.864
11/20/2007	11/20/2017	11/20/2015	3.740	108.124	108.124	108.124	106.045	104.031	102.293	100.959	100.152
11/23/2007	11/24/2017	11/23/2011	3.990	108.711	108.711	108.711	106.579	104.411	102.298	100.239	98.231
11/23/2007	11/24/2017	11/23/2011	3.990	108.711	108.711	108.711	106.579	104.411	102.298	100.239	98.231
11/29/2007	11/29/2017	11/30/2015	2.950	106.481	106.481	106.481	104.429	102.554	101.090	100.189	99.817
11/30/2007	11/30/2017	11/30/2015	3.190	107.017	107.017	107.017	104.938	103.002	101.432	100.387	99.895
12/10/2007	12/11/2017	12/10/2015	3.450	107.695	107.695	107.695	105.554	103.547	101.875	100.680	100.020
12/24/2007	12/26/2017	12/24/2012	3.990	109.066	109.066	109.066	106.796	104.540	102.344	100.205	98.121
1/4/2008	1/4/2018	10/5/2015	3.360	107.718	107.718	107.714	105.490	103.457	101.787	100.621	100.066
1/7/2008	1/8/2018	10/7/2015	2.590	105.978	105.978	105.970	103.838	102.021	100.721	100.085	99.972
1/8/2008	1/8/2018	10/8/2015	2.570	105.932	105.932	105.923	103.795	101.985	100.697	100.074	99.968
1/8/2008	1/8/2018	10/8/2015	2.640	106.093	106.093	106.085	103.943	102.106	100.775	100.103	99.970
1/11/2008	1/11/2018	10/13/2015	2.720	106.301	106.301	106.289	104.124	102.254	100.870	100.133	99.954
1/14/2008	1/16/2018	10/14/2015	3.240	107.550	107.550	107.533	105.283	103.250	101.607	100.484	99.998
1/16/2008	1/16/2018	10/16/2015	2.380	105.546	105.546	105.529	103.415	101.669	100.483	99.980	99.928
1/17/2008	1/17/2018	10/19/2015	2.250	105.249	105.249	105.231	103.148	101.460	100.352	99.958	99.908
1/18/2008	1/18/2018	10/19/2015	2.290	105.349	105.349	105.330	103.233	101.524	100.391	99.961	99.910
2/14/2008	2/14/2018	2/14/2012	3.190	107.691	107.691	107.638	105.216	102.844	100.538	98.295	96.114
2/25/2008	2/26/2018	11/25/2015	2.420	105.915	105.915	105.845	103.623	101.791	100.538	99.957	99.742
3/7/2008	3/7/2018	12/7/2015	3.550	108.766	108.766	108.680	106.262	104.058	102.220	100.875	100.102
3/14/2008	3/14/2018	12/14/2015	2.400	105.973	105.973	105.878	103.633	101.794	100.551	99.933	99.650
3/17/2008	3/19/2018	12/17/2015	3.300	108.259	108.259	108.151	105.729	103.558	101.798	100.591	99.948
4/28/2008	4/30/2018	10/28/2015	2.150	105.631	105.631	105.464	103.193	101.414	100.284	99.931	99.856
4/30/2008	4/30/2018	4/30/2013	3.740	109.796	109.796	109.608	106.954	104.359	101.840	99.396	97.023
5/23/2008	5/23/2018	11/23/2015	3.270	108.774	108.774	108.546	105.968	103.680	101.844	100.587	99.975
6/30/2008	7/2/2018	6/30/2011	3.690	110.311	110.311	109.990	107.155	104.390	101.711	99.115	96.598
7/11/2008	7/11/2018	7/11/2012	3.750	110.572	110.572	110.231	107.368	104.577	101.872	99.253	96.714
7/14/2008	7/16/2018	10/14/2015	2.500	107.083	107.083	106.764	104.239	102.174	100.744	100.068	99.942
7/14/2008	7/16/2018	10/14/2015	3.250	109.208	109.208	108.871	106.170	103.796	101.907	100.620	100.037
7/17/2008	7/17/2018	7/17/2013	3.750	110.635	110.635	110.279	107.400	104.592	101.873	99.239	96.687
8/15/2008	8/15/2018	11/16/2015	3.830	111.170	111.170	110.756	107.897	105.303	103.108	101.431	100.366
10/8/2010	10/8/2015	10/8/2015	2.250	100.050	100.050	100.050	100.047	100.025	100.004	99.982	99.961
12/27/2011	12/27/2021	12/29/2014	3.550	122.482	122.286	115.812	109.419	103.415	97.788	92.511	87.561
4/27/2012	4/27/2016	4/27/2013	1.430	100.834	100.834	100.834	100.567	99.996	99.431	98.872	98.320
4/30/2012	5/2/2016	4/30/2013	1.380	100.824	100.824	100.824	100.547	99.962	99.384	98.813	98.248
5/15/2012	5/15/2017	5/15/2014	2.510	104.134	104.134	104.134	102.758	101.143	99.560	98.010	96.492
5/15/2012	5/15/2017	11/17/2014	1.950	103.212	103.212	103.212	101.841	100.233	98.658	97.116	95.605
6/20/2012	6/20/2017	6/22/2015	1.630	102.848	102.848	102.848	101.354	99.655	97.992	96.365	94.772
7/16/2012	7/17/2017	7/16/2014	1.720	103.134	103.134	103.134	101.543	99.771	98.038	96.343	94.686
7/18/2012	7/18/2018	7/20/2015	2.720	107.721	107.721	107.364	104.518	101.748	99.066	96.469	93.953
7/19/2012	7/19/2017	7/21/2014	1.690	103.088	103.088	103.088	101.491	99.714	97.977	96.278	94.616
10/1/2012	10/1/2019	4/1/2015	2.250	109.136	109.136	107.367	103.330	99.458	95.754	92.208	88.813
10/5/2012	10/5/2017	10/6/2014	1.630	103.332	103.332	103.332	101.443	99.463	97.531	95.646	93.807
3/8/2013	3/8/2018	3/9/2015	1.780	104.400	104.400	104.312	101.860	99.469	97.146	94.889	92.695
5/7/2014	5/7/2018	5/7/2015	1.760	104.644	104.644	104.442	101.826	99.280	96.810	94.414	92.089
10/16/2014	10/16/2018	10/17/2016	0.069	104.808	104.808	104.231	101.882	100.604	99.913	99.619	99.495
10/24/2014	10/24/2018	10/26/2015	0.063	105.291	105.291	104.695	101.618	99.925	99.855	99.786	99.716
10/24/2014	10/24/2018	10/26/2015	0.063	105.291	105.291	104.695	101.618	99.925	99.855	99.786	99.716
2/20/2015	2/20/2019	2/22/2016	0.073	105.393	105.393	104.438	101.413	100.024	99.661	99.500	99.361
3/26/2015	3/26/2019	3/29/2016	0.066	104.836	104.836	103.766	100.978	99.808	99.406	99.158	98.927

