

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: **8/31/2015** 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
9/1/2005	9/1/2015	9/1/2015	4.130	100.011	100.011	100.011	100.011	100.008	100.005	100.003	100.000
9/30/2005	9/30/2015	9/30/2015	4.440	100.370	100.370	100.370	100.357	100.274	100.191	100.107	100.024
10/26/2005	10/26/2015	10/26/2015	4.540	100.706	100.706	100.706	100.673	100.519	100.366	100.213	100.061
1/17/2006	1/19/2016	10/19/2015	4.080	101.598	101.598	101.598	101.436	101.050	100.668	100.291	100.015
4/24/2006	4/25/2016	10/26/2015	4.440	102.935	102.935	102.935	102.563	101.909	101.265	100.649	100.159
5/5/2006	5/5/2016	11/5/2015	4.350	102.996	102.996	102.996	102.603	101.921	101.253	100.624	100.139
5/5/2006	5/5/2016	11/5/2015	4.530	103.120	103.120	103.120	102.726	102.044	101.374	100.736	100.218
5/15/2006	5/16/2016	11/16/2015	4.350	103.129	103.129	103.129	102.711	102.000	101.302	100.645	100.131
5/15/2006	5/16/2016	11/16/2015	4.520	103.252	103.252	103.252	102.833	102.121	101.422	100.756	100.211
5/19/2006	5/19/2016	11/19/2015	4.510	103.282	103.282	103.282	102.857	102.137	101.430	100.757	100.206
6/12/2006	6/13/2016	9/14/2015	4.620	103.683	103.683	103.683	103.199	102.411	101.637	100.903	100.284
6/26/2006	6/27/2016	9/28/2015	4.730	103.955	103.955	103.955	103.437	102.610	101.797	101.022	100.356
7/24/2006	7/25/2016	10/26/2015	4.660	104.258	104.258	104.258	103.669	102.767	101.884	101.050	100.355
7/28/2006	7/28/2016	10/28/2015	4.490	104.141	104.141	104.141	103.544	102.634	101.747	100.917	100.258
8/25/2006	8/25/2016	11/25/2015	4.350	104.350	104.350	104.350	103.675	102.691	101.739	100.864	100.194
11/24/2006	11/25/2016	11/24/2015	4.190	105.260	105.260	105.260	104.270	103.035	101.866	100.849	100.139
12/1/2006	12/1/2016	12/1/2015	4.090	105.203	105.203	105.203	104.191	102.945	101.776	100.784	100.142
12/4/2006	12/5/2016	9/4/2015	4.080	105.236	105.236	105.236	104.208	102.951	101.772	100.775	100.137
12/5/2006	12/5/2016	9/8/2015	4.260	105.467	105.467	105.467	104.437	103.175	101.982	100.942	100.198
12/8/2006	12/8/2016	9/8/2015	3.990	105.153	105.153	105.153	104.114	102.853	101.676	100.696	100.105
12/12/2006	12/12/2016	9/14/2015	3.990	105.198	105.198	105.198	104.142	102.871	101.684	100.695	100.101
12/12/2006	12/12/2016	9/14/2015	4.050	105.276	105.276	105.276	104.220	102.946	101.753	100.748	100.122
12/19/2006	12/19/2016	9/21/2015	4.190	105.540	105.540	105.540	104.454	103.156	101.934	100.881	100.169
12/28/2006	12/28/2016	9/28/2015	4.250	105.725	105.725	105.725	104.603	103.279	102.029	100.945	100.191
12/28/2006	12/28/2016	9/28/2015	4.400	105.927	105.927	105.927	104.803	103.476	102.213	101.100	100.264
1/12/2007	1/12/2017	10/13/2015	4.420	106.139	106.139	106.139	104.951	103.585	102.291	101.156	100.322
1/16/2007	1/17/2017	10/16/2015	4.790	106.719	106.719	106.719	105.506	104.118	102.784	101.568	100.596
2/2/2007	2/2/2017	11/2/2015	4.690	106.787	106.787	106.787	105.505	104.067	102.656	101.270	99.910
2/20/2007	2/21/2017	11/20/2015	4.390	106.585	106.585	106.585	105.222	103.749	102.368	101.173	100.311
2/20/2007	2/21/2017	11/20/2015	4.850	107.275	107.275	107.275	105.905	104.408	102.940	101.500	100.087
2/23/2007	2/23/2017	11/23/2015	4.250	106.398	106.398	106.398	105.028	103.557	102.188	101.021	100.212
2/23/2007	2/23/2017	11/23/2015	4.350	106.549	106.549	106.549	105.177	103.702	102.320	101.131	100.280
3/16/2007	3/16/2017	9/16/2015	4.090	106.396	106.396	106.396	104.933	103.419	102.030	100.881	100.156
3/23/2007	3/23/2017	9/23/2015	4.290	106.792	106.792	106.792	105.293	103.749	102.315	101.100	100.238
3/23/2007	3/23/2017	9/23/2015	4.290	106.792	106.792	106.792	105.293	103.749	102.315	101.100	100.238
4/9/2007	4/10/2017	10/9/2015	4.150	106.778	106.778	106.778	105.198	103.619	102.173	100.975	100.193
4/12/2007	4/12/2017	10/13/2015	4.250	106.965	106.965	106.965	105.373	103.783	102.316	101.089	100.249
4/13/2007	4/13/2017	10/13/2015	4.450	107.305	107.305	107.305	105.704	104.100	102.603	101.319	100.389
5/18/2007	5/18/2017	11/18/2015	4.190	107.285	107.285	107.255	105.522	103.846	102.319	101.054	100.211
5/22/2007	5/22/2017	11/23/2015	4.750	108.312	108.312	108.275	106.516	104.795	103.177	101.749	100.652
5/29/2007	5/30/2017	11/30/2015	4.250	107.531	107.531	107.481	105.708	103.996	102.431	101.127	100.234
6/7/2007	6/7/2017	9/8/2015	4.820	108.649	108.649	108.582	106.772	105.008	103.351	101.887	100.746
6/8/2007	6/8/2017	9/8/2015	4.490	108.069	108.069	108.000	106.196	104.448	102.832	101.455	100.454
6/18/2007	6/19/2017	9/18/2015	4.500	108.225	108.225	108.132	106.296	104.518	102.874	101.471	100.452
6/19/2007	6/19/2017	9/21/2015	4.650	108.499	108.499	108.407	106.566	104.778	103.112	101.664	100.580
6/22/2007	6/22/2017	9/22/2015	4.500	108.262	108.262	108.164	106.319	104.533	102.882	101.472	100.448
6/28/2007	6/28/2017	9/28/2015	4.500	108.337	108.337	108.226	106.364	104.562	102.896	101.475	100.442
7/13/2007	7/13/2017	10/13/2015	4.290	108.127	108.127	107.983	106.087	104.268	102.613	101.247	100.312
7/20/2007	7/20/2017	10/20/2015	4.290	108.210	108.210	108.051	106.135	104.298	102.627	101.249	100.306
7/27/2007	7/27/2017	10/27/2015	4.250	108.216	108.216	108.041	106.108	104.257	102.578	101.201	100.271
7/30/2007	1/30/2019	10/30/2015	3.990	113.831	113.831	111.963	108.637	105.671	103.206	101.372	100.258
7/31/2007	7/31/2017	11/2/2015	3.990	107.758	107.758	107.575	105.642	103.812	102.195	100.917	100.143
7/31/2007	7/31/2017	11/2/2015	3.990	107.758	107.758	107.575	105.642	103.812	102.195	100.917	100.143
7/31/2007	7/31/2017	11/2/2015	3.990	107.758	107.758	107.575	105.642	103.812	102.195	100.917	100.143
7/31/2007	7/31/2017	11/2/2015	4.060	107.894	107.894	107.711	105.775	103.936	102.301	100.997	100.185
8/2/2007	8/2/2017	11/2/2015	4.150	108.092	108.092	107.904	105.960	104.111	102.451	101.113	100.243
8/2/2007	8/2/2017	11/2/2015	4.050	107.897	107.897	107.710	105.770	103.932	102.298	100.994	100.180
8/9/2007	8/9/2017	11/9/2015	3.990	107.858	107.858	107.655	105.699	103.850	102.216	100.923	100.133

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8/16/2007	8/16/2017	11/16/2015	3.990	107.935	107.935	107.717	105.741	103.874	102.225	100.920	100.122
8/17/2007	8/17/2017	11/17/2015	4.000	107.966	107.966	107.745	105.767	103.896	102.242	100.932	100.125
9/4/2007	9/5/2017	9/4/2015	3.890	107.952	107.952	107.690	105.669	103.773	102.116	100.841	100.129
9/10/2007	9/11/2017	9/10/2015	3.690	107.605	107.605	107.330	105.307	103.429	101.819	100.637	100.048
9/11/2007	9/11/2017	9/11/2015	3.590	107.399	107.399	107.125	105.109	103.249	101.672	100.540	100.009
9/13/2007	9/13/2017	9/14/2015	3.990	108.245	108.245	107.965	105.915	103.984	102.285	100.948	100.159
9/27/2007	9/27/2017	9/28/2015	3.650	107.685	107.685	107.375	105.310	103.399	101.768	100.581	100.004
10/11/2007	10/11/2017	10/13/2015	3.990	108.556	108.556	108.211	106.086	104.091	102.344	100.975	100.152
10/15/2007	10/16/2017	10/15/2015	3.990	108.611	108.611	108.254	106.115	104.107	102.350	100.973	100.147
10/26/2007	10/26/2017	10/26/2015	3.390	107.410	107.410	107.034	104.922	103.007	101.436	100.371	99.905
11/5/2007	11/6/2017	11/5/2015	4.390	109.731	109.731	109.320	107.101	104.993	103.095	101.537	100.464
11/6/2007	11/6/2017	11/6/2015	3.480	107.713	107.713	107.311	105.164	103.215	101.599	100.486	99.929
11/19/2007	11/20/2017	11/19/2012	4.290	109.676	109.676	109.228	106.945	104.707	102.527	100.403	98.335
11/20/2007	11/20/2017	11/20/2015	3.740	108.435	108.435	107.994	105.782	103.741	102.001	100.713	100.008
11/23/2007	11/24/2017	11/23/2011	3.990	109.043	109.043	108.586	106.298	104.056	101.873	99.747	97.676
11/23/2007	11/24/2017	11/23/2011	3.990	109.043	109.043	108.586	106.298	104.056	101.873	99.747	97.676
11/29/2007	11/29/2017	11/30/2015	2.950	106.727	106.727	106.278	104.147	102.298	100.881	100.065	99.690
11/30/2007	11/30/2017	11/30/2015	3.190	107.283	107.283	106.825	104.653	102.724	101.193	100.208	99.761
12/10/2007	12/11/2017	9/10/2015	3.450	107.982	107.982	107.491	105.261	103.247	101.597	100.459	99.980
12/24/2007	12/26/2017	12/24/2012	3.990	109.398	109.398	108.853	106.474	104.147	101.882	99.678	97.533
1/4/2008	1/4/2018	10/5/2015	3.360	107.998	107.998	107.444	105.172	103.142	101.502	100.404	99.950
1/7/2008	1/8/2018	10/7/2015	2.590	106.194	106.194	105.656	103.538	101.777	100.548	99.991	99.840
1/8/2008	1/8/2018	10/8/2015	2.570	106.146	106.146	105.609	103.496	101.743	100.525	99.982	99.834
1/8/2008	1/8/2018	10/8/2015	2.640	106.313	106.313	105.773	103.640	101.857	100.596	100.005	99.841
1/11/2008	1/11/2018	10/13/2015	2.720	106.527	106.527	105.975	103.814	101.993	100.678	100.024	99.831
1/14/2008	1/16/2018	10/14/2015	3.240	107.820	107.820	107.236	104.952	102.931	101.329	100.297	99.899
1/16/2008	1/16/2018	10/16/2015	2.380	105.744	105.744	105.200	103.124	101.450	100.351	99.912	99.775
1/17/2008	1/17/2018	10/19/2015	2.250	105.437	105.437	104.899	102.869	101.260	100.248	99.884	99.743
1/18/2008	1/18/2018	10/19/2015	2.290	105.540	105.540	104.997	102.950	101.318	100.279	99.890	99.748
2/14/2008	2/14/2018	2/14/2012	3.190	107.957	107.957	107.271	104.770	102.330	99.960	97.657	95.419
2/25/2008	2/26/2018	11/25/2015	2.420	106.117	106.117	105.471	103.296	101.544	100.387	99.836	99.575
3/7/2008	3/7/2018	9/8/2015	3.550	109.062	109.062	108.335	105.880	103.677	101.868	100.606	100.024
3/14/2008	3/14/2018	9/14/2015	2.400	106.173	106.173	105.486	103.299	101.545	100.385	99.971	99.932
3/17/2008	3/19/2018	9/17/2015	3.300	108.534	108.534	107.778	105.335	103.184	101.477	100.346	99.960
4/28/2008	4/30/2018	10/28/2015	2.150	105.810	105.810	105.033	102.855	101.187	100.188	99.844	99.680
4/30/2008	4/30/2018	4/30/2013	3.740	110.108	110.108	109.190	106.458	103.796	101.215	98.712	96.284
5/23/2008	5/23/2018	11/23/2015	3.270	109.046	109.046	108.098	105.511	103.258	101.490	100.344	99.812
6/30/2008	7/2/2018	6/30/2011	3.690	110.618	110.618	109.491	106.582	103.754	101.016	98.365	95.798
7/11/2008	7/11/2018	7/11/2012	3.750	110.885	110.885	109.726	106.789	103.935	101.173	98.499	95.910
7/14/2008	7/16/2018	10/14/2015	2.500	107.291	107.291	106.252	103.803	101.842	100.530	99.961	99.800
7/14/2008	7/16/2018	10/14/2015	3.250	109.478	109.478	108.363	105.666	103.336	101.521	100.363	99.908
7/17/2008	7/17/2018	7/17/2013	3.750	110.947	110.947	109.767	106.814	103.944	101.167	98.479	95.877
8/15/2008	8/15/2018	11/16/2015	3.830	111.489	111.489	110.241	107.350	104.758	102.599	101.006	100.107
10/8/2010	10/8/2015	10/8/2015	2.250	100.237	100.237	100.237	100.219	100.114	100.009	99.905	99.800
12/27/2011	12/27/2021	12/29/2014	3.550	122.777	120.798	114.188	107.815	101.840	96.243	90.999	86.083
4/27/2012	4/27/2016	4/27/2013	1.430	100.953	100.953	100.953	100.580	99.928	99.283	98.647	98.019
4/30/2012	5/2/2016	4/30/2013	1.380	100.939	100.939	100.939	100.555	99.889	99.232	98.584	97.943
5/15/2012	5/15/2017	5/15/2014	2.510	104.343	104.343	104.318	102.604	100.911	99.253	97.631	96.042
5/15/2012	5/15/2017	11/17/2014	1.950	103.374	103.374	103.349	101.641	99.957	98.307	96.693	95.113
6/20/2012	6/20/2017	6/22/2015	1.630	102.983	102.983	102.889	101.080	99.306	97.571	95.874	94.214
7/16/2012	7/17/2017	7/16/2014	1.720	103.277	103.277	103.125	101.241	99.395	97.591	95.828	94.105
7/18/2012	7/18/2018	7/20/2015	2.720	107.948	107.948	106.771	103.855	101.026	98.288	95.639	93.075
7/19/2012	7/19/2017	7/21/2014	1.690	103.229	103.229	103.072	101.184	99.333	97.525	95.758	94.031
10/1/2012	10/1/2019	4/1/2015	2.250	109.324	109.324	106.371	102.291	98.386	94.651	91.079	87.662
10/5/2012	10/5/2017	10/6/2014	1.630	103.468	103.468	103.137	101.038	98.986	96.986	95.036	93.134
3/8/2013	3/8/2018	3/9/2015	1.780	104.548	104.548	103.804	101.279	98.824	96.440	94.126	91.879
5/7/2014	5/7/2018	5/7/2015	1.760	104.790	104.790	103.859	101.173	98.565	96.037	93.586	91.210
10/16/2014	10/16/2018	10/17/2016	0.069	104.815	104.815	103.332	101.278	100.149	99.537	99.263	99.100

