

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 prepay 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: 12/31/2013 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
1/7/2000	1/7/2015	1/7/2014	5.950	106.148	106.148	106.148	105.731	104.695	103.680	102.689	101.744
7/2/2004	7/2/2014	1/2/2014	3.990	102.028	102.028	102.028	101.880	101.372	100.870	100.373	99.880
12/13/2004	12/15/2014	3/13/2014	3.320	103.218	103.218	103.218	102.846	101.895	101.013	100.310	99.884
9/1/2005	9/1/2015	3/1/2014	4.130	106.986	106.986	106.986	105.997	104.303	102.645	101.020	99.430
9/30/2005	9/30/2015	3/30/2014	4.440	107.868	107.868	107.868	106.787	105.006	103.263	101.557	99.888
10/26/2005	10/26/2015	1/26/2014	4.540	108.373	108.373	108.373	107.206	105.351	103.538	101.765	100.030
1/17/2006	1/19/2016	1/17/2014	4.080	108.488	108.488	108.488	107.038	105.021	103.184	101.639	100.518
4/24/2006	4/25/2016	1/24/2014	4.440	110.433	110.433	110.433	108.566	106.277	104.180	102.375	100.974
5/5/2006	5/5/2016	2/5/2014	4.350	110.343	110.343	110.343	108.434	106.135	104.045	102.266	100.910
5/5/2006	5/5/2016	2/5/2014	4.530	110.771	110.771	110.771	108.855	106.537	104.412	102.577	101.142
5/15/2006	5/16/2016	2/18/2014	4.350	110.476	110.476	110.476	108.513	106.186	104.070	102.269	100.898
5/15/2006	5/16/2016	2/18/2014	4.520	110.885	110.885	110.885	108.915	106.570	104.420	102.566	101.117
5/19/2006	5/19/2016	2/19/2014	4.510	110.899	110.899	110.899	108.914	106.562	104.407	102.551	101.100
6/12/2006	6/13/2016	3/12/2014	4.620	111.485	111.485	111.485	109.373	106.951	104.732	102.810	101.298
6/26/2006	6/27/2016	3/26/2014	4.730	111.943	111.943	111.943	109.753	107.283	105.012	103.029	101.450
7/24/2006	7/25/2016	1/24/2014	4.660	112.128	112.128	112.128	109.794	107.267	104.957	102.956	101.373
7/28/2006	7/28/2016	1/28/2014	4.490	111.723	111.723	111.723	109.382	106.867	104.586	102.635	101.124
8/25/2006	8/25/2016	2/25/2014	4.350	111.696	111.696	111.696	109.213	106.656	104.360	102.426	100.958
11/24/2006	11/25/2016	2/24/2014	4.190	112.336	112.336	112.236	109.350	106.629	104.233	102.260	100.817
12/1/2006	12/1/2016	3/3/2014	4.090	112.110	112.110	111.990	109.108	106.404	104.044	102.125	100.765
12/4/2006	12/5/2016	3/4/2014	4.080	112.126	112.126	111.992	109.101	106.390	104.026	102.107	100.751
12/5/2006	12/5/2016	3/5/2014	4.260	112.661	112.661	112.526	109.612	106.864	104.439	102.437	100.961
12/8/2006	12/8/2016	3/10/2014	3.990	111.892	111.892	111.747	108.861	106.165	103.823	101.945	100.642
12/12/2006	12/12/2016	3/12/2014	3.990	111.936	111.936	111.778	108.881	106.175	103.826	101.942	100.636
12/12/2006	12/12/2016	3/12/2014	4.050	112.115	112.115	111.957	109.051	106.331	103.962	102.048	100.702
12/19/2006	12/19/2016	3/19/2014	4.190	112.616	112.616	112.433	109.490	106.722	104.294	102.299	100.849
12/28/2006	12/28/2016	3/28/2014	4.250	112.903	112.903	112.690	109.714	106.913	104.448	102.410	100.905
12/28/2006	12/28/2016	3/28/2014	4.400	113.358	113.358	113.145	110.150	107.319	104.806	102.709	101.118
1/12/2007	1/12/2017	1/13/2014	4.420	113.603	113.603	113.335	110.303	107.444	104.911	102.796	101.194
1/16/2007	1/17/2017	1/16/2014	4.790	114.808	114.808	114.520	111.433	108.493	105.844	103.573	101.780
1/23/2007	1/23/2014	1/23/2014	4.490	100.287	100.287	100.287	100.281	100.219	100.157	100.095	100.033
1/29/2007	1/29/2014	1/29/2014	4.790	100.386	100.386	100.386	100.378	100.300	100.222	100.144	100.066
2/2/2007	2/2/2017	2/2/2014	4.690	114.708	114.708	114.351	111.142	107.982	104.931	101.983	99.762
2/20/2007	2/21/2017	2/20/2014	4.850	115.465	115.465	115.032	111.755	108.531	105.418	102.413	99.511
2/20/2007	2/21/2017	2/20/2014	4.390	113.998	113.998	113.580	110.447	107.510	104.921	102.773	101.155
2/23/2007	2/23/2017	2/24/2014	4.250	113.576	113.576	113.152	110.032	107.123	104.575	102.487	100.949
2/23/2007	2/23/2017	2/24/2014	4.350	113.895	113.895	113.470	110.335	107.403	104.822	102.689	101.090
3/16/2007	3/16/2017	3/17/2014	4.090	113.303	113.303	112.792	109.654	106.748	104.239	102.213	100.781
3/21/2007	3/21/2017	3/21/2014	4.220	113.784	113.784	113.249	110.076	107.127	104.559	102.462	100.927
3/23/2007	3/23/2017	3/24/2014	4.290	114.037	114.037	113.491	110.301	107.331	104.733	102.603	101.022
3/23/2007	3/23/2017	3/24/2014	4.290	114.037	114.037	113.491	110.301	107.331	104.733	102.603	101.022
4/9/2007	4/10/2017	1/9/2014	4.150	113.786	113.786	113.165	109.961	106.998	104.440	102.367	100.881
4/12/2007	4/12/2017	1/13/2014	4.250	114.142	114.142	113.509	110.282	107.289	104.689	102.563	101.000
4/13/2007	4/13/2017	1/13/2014	4.450	114.820	114.820	114.176	110.913	107.871	105.195	102.979	101.301
4/23/2007	4/23/2014	1/23/2014	4.620	101.450	101.450	101.450	101.388	101.073	100.759	100.448	100.144
4/27/2007	4/27/2017	1/27/2014	4.250	114.319	114.319	113.618	110.350	107.325	104.700	102.553	100.972
5/2/2007	5/2/2014	2/3/2014	4.590	101.555	101.555	101.555	101.484	101.144	100.806	100.470	100.163
5/4/2007	5/5/2014	2/4/2014	4.550	101.580	101.580	101.580	101.505	101.157	100.811	100.467	100.155
5/18/2007	5/18/2017	2/18/2014	4.190	114.361	114.361	113.558	110.257	107.220	104.594	102.465	100.923
5/22/2007	5/22/2017	2/24/2014	4.750	116.334	116.334	115.491	112.087	108.899	106.068	103.673	101.797
5/29/2007	5/30/2017	2/28/2014	4.250	114.709	114.709	113.841	110.500	107.424	104.761	102.595	100.995
6/1/2007	6/2/2014	3/3/2014	4.500	101.912	101.912	101.912	101.803	101.378	100.958	100.545	100.178
6/7/2007	6/7/2017	3/7/2014	4.820	116.789	116.789	115.860	112.413	109.185	106.317	103.884	101.969
6/8/2007	6/8/2017	3/10/2014	4.490	115.652	115.652	114.729	111.334	108.183	105.425	103.138	101.413
6/11/2007	6/12/2017	3/11/2014	4.490	115.702	115.702	114.758	111.352	108.193	105.429	103.138	101.409
6/18/2007	6/19/2017	3/18/2014	4.500	115.824	115.824	114.842	111.417	108.240	105.461	103.156	101.412
6/19/2007	6/19/2017	3/19/2014	4.650	116.352	116.352	115.364	111.912	108.698	105.863	103.487	101.661
6/22/2007	6/22/2017	3/24/2014	4.500	115.862	115.862	114.864	111.431	108.248	105.462	103.153	101.404

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Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
6/28/2007	6/28/2017	3/28/2014	4.500	115.937	115.937	114.908	111.459	108.263	105.467	103.149	101.392
7/13/2007	7/13/2017	1/13/2014	4.290	115.372	115.372	114.276	110.838	107.684	104.956	102.737	101.101
7/20/2007	7/20/2017	1/21/2014	4.290	115.455	115.455	114.323	110.866	107.697	104.959	102.732	101.086
7/27/2007	7/27/2017	1/27/2014	4.250	115.393	115.393	114.227	110.760	107.590	104.857	102.641	101.013
7/30/2007	1/30/2019	1/30/2014	3.990	120.569	120.330	115.945	111.605	107.864	104.797	102.432	100.807
7/31/2007	7/31/2017	1/31/2014	3.990	114.496	114.496	113.329	109.920	106.834	104.211	102.129	100.680
7/31/2007	7/31/2017	1/31/2014	3.990	114.496	114.496	113.329	109.920	106.834	104.211	102.129	100.680
7/31/2007	7/31/2017	1/31/2014	4.060	114.750	114.750	113.577	110.151	107.041	104.389	102.267	100.766
8/2/2007	8/4/2014	2/3/2014	4.490	102.694	102.694	102.694	102.504	101.907	101.317	100.750	100.264
8/2/2007	8/2/2017	2/3/2014	4.050	114.737	114.737	113.556	110.131	107.027	104.384	102.285	100.812
8/2/2007	8/2/2017	2/3/2014	4.150	115.100	115.100	113.912	110.464	107.325	104.642	102.485	100.943
8/9/2007	8/9/2017	2/10/2014	3.990	114.596	114.596	113.380	109.955	106.858	104.231	102.158	100.728
8/16/2007	8/16/2017	2/18/2014	3.990	114.673	114.673	113.417	109.977	106.866	104.228	102.148	100.712
8/17/2007	8/17/2017	2/18/2014	4.000	114.721	114.721	113.458	110.013	106.898	104.254	102.166	100.722
8/20/2007	8/20/2014	2/20/2014	4.250	102.739	102.739	102.739	102.529	101.889	101.257	100.632	100.016
8/28/2007	8/28/2014	2/28/2014	4.350	102.900	102.900	102.900	102.680	102.018	101.366	100.742	100.217
8/30/2007	9/2/2014	2/28/2014	3.890	102.647	102.647	102.647	102.422	101.747	101.086	100.474	100.029
9/4/2007	9/5/2017	3/4/2014	3.890	114.522	114.522	113.167	109.721	106.623	104.024	101.999	100.641
9/10/2007	9/11/2017	3/10/2014	3.690	113.837	113.837	112.472	109.071	106.041	103.531	101.627	100.410
9/11/2007	9/11/2017	3/11/2014	3.590	113.462	113.462	112.109	108.739	105.749	103.291	101.454	100.301
9/12/2007	9/12/2014	3/12/2014	3.690	102.614	102.614	102.614	102.376	101.674	100.993	100.394	99.978
9/13/2007	9/15/2014	3/13/2014	3.990	102.859	102.859	102.859	102.617	101.906	101.211	100.568	100.077
9/13/2007	9/13/2017	3/13/2014	3.990	114.984	114.984	113.574	110.082	106.932	104.271	102.175	100.734
9/27/2007	9/29/2014	9/27/2010	4.490	103.392	103.392	103.392	103.132	102.380	101.639	100.909	100.189
9/27/2007	9/27/2017	3/27/2014	3.650	113.849	113.849	112.402	108.977	105.934	103.422	101.529	100.316
10/11/2007	10/14/2014	1/13/2014	4.180	103.332	103.332	103.332	103.051	102.260	101.488	100.769	100.193
10/11/2007	10/11/2017	1/13/2014	3.990	115.294	115.294	113.732	110.185	106.997	104.312	102.199	100.741
10/15/2007	10/16/2017	1/15/2014	3.990	115.349	115.349	113.758	110.199	107.004	104.313	102.195	100.732
10/25/2007	10/27/2014	1/27/2014	4.360	103.633	103.633	103.633	103.334	102.507	101.698	100.935	100.288
10/26/2007	10/26/2017	1/27/2014	3.390	113.135	113.135	111.583	108.194	105.232	102.845	101.102	100.157
11/2/2007	11/3/2014	2/3/2014	3.990	103.402	103.402	103.402	103.094	102.250	101.433	100.687	100.145
11/2/2007	11/3/2014	2/3/2014	4.190	103.573	103.573	103.573	103.264	102.419	101.597	100.836	100.243
11/5/2007	11/5/2014	2/5/2014	3.990	103.425	103.425	103.425	103.113	102.263	101.441	100.691	100.143
11/5/2007	11/6/2017	2/5/2014	4.390	117.144	117.144	115.390	111.688	108.325	105.434	103.079	101.337
11/6/2007	11/6/2017	2/6/2014	3.480	113.590	113.590	111.969	108.539	105.534	103.097	101.304	100.236
11/9/2007	11/10/2014	2/10/2014	4.330	103.777	103.777	103.777	103.457	102.591	101.748	100.959	100.320
11/13/2007	11/13/2014	2/13/2014	3.350	102.950	102.950	102.950	102.627	101.761	100.950	100.293	99.940
11/19/2007	11/19/2014	2/19/2014	3.750	103.364	103.364	103.364	103.032	102.146	101.293	100.541	100.039
11/19/2007	11/19/2014	2/19/2014	4.270	103.831	103.831	103.831	103.498	102.608	101.741	100.934	100.287
11/19/2007	11/20/2017	2/19/2014	4.290	116.921	116.921	114.927	110.886	106.963	103.204	99.600	96.145
11/20/2007	11/20/2017	2/20/2014	3.740	114.751	114.751	113.002	109.450	106.309	103.709	101.728	100.454
11/23/2007	11/24/2017	2/19/2014	3.990	115.782	115.782	113.765	109.731	105.821	102.074	98.483	95.040
11/23/2007	11/24/2017	2/24/2014	3.990	115.782	115.782	113.765	109.731	105.821	102.074	98.483	95.040
11/29/2007	11/29/2017	2/28/2014	2.950	111.709	111.709	110.074	106.825	104.061	101.936	100.537	99.883
11/30/2007	11/30/2017	2/28/2014	3.190	112.670	112.670	110.971	107.615	104.722	102.443	100.837	99.994
12/10/2007	12/11/2017	3/10/2014	3.450	113.809	113.809	111.998	108.526	105.496	103.049	101.260	100.186
12/24/2007	12/26/2017	3/24/2014	3.990	116.136	116.136	113.907	109.784	105.792	101.970	98.310	94.805
1/3/2008	1/5/2015	1/3/2014	3.650	103.751	103.751	103.751	103.342	102.331	101.375	100.564	100.086
1/4/2008	1/4/2018	1/6/2014	3.360	113.672	113.672	111.758	108.290	105.278	102.874	101.135	100.196
1/7/2008	1/7/2015	1/7/2014	3.490	103.606	103.606	103.606	103.194	102.179	101.230	100.451	100.033
1/7/2008	1/8/2018	1/7/2014	2.590	110.568	110.568	108.864	105.769	103.195	101.323	100.237	99.973
1/8/2008	1/8/2018	1/8/2014	2.570	110.486	110.486	108.791	105.705	103.143	101.286	100.222	99.969
1/8/2008	1/8/2018	1/8/2014	2.640	110.772	110.772	109.050	105.925	103.318	101.410	100.268	99.970
1/11/2008	1/11/2018	1/13/2014	2.720	111.121	111.121	109.356	106.179	103.518	101.545	100.317	99.955
1/14/2008	1/16/2018	1/14/2014	3.240	113.292	113.292	111.344	107.899	104.935	102.591	100.934	100.115
1/16/2008	1/16/2018	1/16/2014	2.380	109.764	109.764	108.105	105.118	102.677	100.956	100.106	99.930
1/17/2008	1/17/2018	1/17/2014	2.250	109.236	109.236	107.626	104.726	102.376	100.768	100.040	99.919
1/18/2008	1/20/2015	1/21/2014	2.350	102.513	102.513	102.513	102.082	101.091	100.306	99.962	99.906

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Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
1/18/2008	1/18/2018	1/21/2014	2.290	109.407	109.407	107.776	104.847	102.466	100.819	100.054	99.902
2/14/2008	2/14/2018	2/14/2014	3.190	113.344	113.344	110.791	106.583	102.528	98.651	94.944	91.398
2/25/2008	2/26/2018	2/25/2014	2.420	110.203	110.203	108.340	105.285	102.783	101.009	100.052	99.737
3/7/2008	3/9/2015	3/7/2014	2.890	103.476	103.476	103.476	102.948	101.796	100.801	100.118	99.786
3/7/2008	3/7/2018	3/7/2014	3.550	115.057	115.057	112.760	109.112	105.936	103.367	101.473	100.303
3/14/2008	3/14/2018	3/14/2014	2.400	110.226	110.226	108.304	105.254	102.764	101.008	100.055	99.666
3/17/2008	3/19/2018	3/17/2014	3.300	114.106	114.106	111.809	108.247	105.187	102.764	101.035	100.064
4/14/2008	4/14/2015	1/14/2014	2.750	103.582	103.582	103.582	102.972	101.680	100.409	99.161	97.933
4/28/2008	4/28/2015	1/28/2014	3.250	104.360	104.360	104.360	103.719	102.417	101.251	100.352	99.944
4/28/2008	4/30/2018	1/28/2014	2.150	109.441	109.441	107.457	104.518	102.184	100.632	99.966	99.859
4/30/2008	4/30/2018	1/30/2014	3.740	116.424	116.424	113.333	108.874	104.580	100.483	96.572	92.839
5/2/2008	5/4/2015	2/3/2014	3.990	105.419	105.419	105.419	104.759	103.414	102.151	101.059	100.283
5/5/2008	5/5/2015	2/5/2014	3.170	104.314	104.314	104.314	103.658	102.348	101.195	100.348	99.949
5/19/2008	5/19/2015	2/21/2014	4.700	106.580	106.580	106.580	105.878	104.470	103.088	101.730	100.397
5/23/2008	5/23/2018	2/24/2014	3.270	114.568	114.568	111.920	108.274	105.168	102.722	100.988	100.049
6/24/2008	6/24/2015	3/24/2014	3.830	105.745	105.745	105.745	104.956	103.480	102.115	100.959	100.157
6/30/2008	7/2/2018	3/30/2014	3.690	116.850	116.850	113.281	108.654	104.210	99.976	95.942	92.097
7/10/2008	7/10/2014	1/10/2014	4.800	102.547	102.547	102.547	102.388	101.858	101.333	100.814	100.300
7/11/2008	7/11/2018	1/11/2014	3.750	117.218	117.218	113.575	108.918	104.446	100.187	96.129	92.262
7/14/2008	7/14/2015	1/15/2014	4.900	107.622	107.622	107.622	106.770	105.202	103.665	102.158	100.681
7/14/2008	7/16/2018	1/14/2014	2.500	111.513	111.513	108.964	105.720	103.087	101.208	100.184	99.943
7/14/2008	7/16/2018	1/14/2014	3.250	114.967	114.967	112.023	108.322	105.184	102.728	100.999	100.133
7/17/2008	7/17/2018	1/17/2014	3.750	117.280	117.280	113.589	108.917	104.430	100.157	96.087	92.209
8/15/2008	8/15/2018	2/18/2014	3.830	117.957	117.957	114.595	110.567	107.073	104.218	102.047	100.616
5/13/2009	5/13/2014	2/13/2014	4.000	101.478	101.478	101.478	101.393	101.023	100.656	100.296	100.023
5/11/2010	5/11/2015	5/11/2015	3.700	105.097	105.097	105.097	104.415	102.968	101.322	99.245	96.829
5/24/2010	5/26/2015	2/26/2014	2.250	103.193	103.193	103.193	102.484	101.083	99.707	98.356	97.030
6/15/2010	6/15/2015	2/15/2014	2.280	103.363	103.363	103.363	102.602	101.146	99.717	98.315	96.939
10/8/2010	10/8/2015	10/9/2012	2.250	104.037	104.037	104.037	102.946	101.179	99.450	97.759	96.104
12/27/2011	12/27/2021	12/29/2014	3.550	126.088	117.817	109.745	101.138	88.107	76.153	65.186	55.121
4/27/2012	4/27/2016	4/27/2013	1.430	103.368	103.368	103.368	101.520	99.232	97.006	94.841	92.734
4/30/2012	5/2/2016	4/30/2013	1.380	103.269	103.269	103.269	101.399	99.099	96.862	94.687	92.570
5/15/2012	5/15/2017	5/15/2014	-0.219	105.764	105.764	104.931	101.835	100.294	99.907	99.878	99.878
5/15/2012	5/15/2017	11/17/2014	-0.219	105.951	105.951	105.117	102.435	100.892	100.171	99.913	99.849
6/20/2012	6/20/2017	6/22/2015	1.630	105.736	105.736	104.707	100.810	95.558	90.534	85.730	81.135
7/16/2012	7/17/2017	7/16/2014	-0.204	104.995	104.995	103.810	101.058	100.070	99.869	99.851	99.847
7/18/2012	7/18/2018	7/20/2015	-0.204	107.585	107.585	103.951	101.350	100.153	99.608	99.385	99.309
7/19/2012	7/19/2017	7/21/2014	-0.208	105.149	105.149	103.953	101.099	100.064	99.861	99.836	99.833
10/1/2012	10/1/2019	4/1/2015	-0.112	109.819	107.476	102.243	100.471	99.893	99.714	99.682	99.680
10/5/2012	10/5/2017	10/6/2014	-0.107	104.719	104.719	103.047	100.766	100.071	99.880	99.838	99.820
3/8/2013	3/8/2018	3/9/2015	-0.028	105.156	105.156	102.516	100.716	99.893	99.532	99.296	99.102