

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: **6/30/2015** 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
9/1/2005	9/1/2015	9/1/2015	4.130	100.723	100.723	100.723	100.696	100.526	100.357	100.188	100.019
9/30/2005	9/30/2015	9/30/2015	4.440	101.135	101.135	101.135	101.087	100.836	100.586	100.337	100.090
10/26/2005	10/26/2015	7/26/2015	4.540	101.488	101.488	101.488	101.413	101.091	100.772	100.454	100.139
1/17/2006	1/19/2016	7/17/2015	4.080	102.301	102.301	102.301	102.093	101.540	100.993	100.467	100.077
4/24/2006	4/25/2016	7/24/2015	4.440	103.700	103.700	103.700	103.281	102.459	101.653	100.890	100.258
5/5/2006	5/5/2016	8/5/2015	4.350	103.746	103.746	103.746	103.301	102.452	101.624	100.849	100.239
5/5/2006	5/5/2016	8/5/2015	4.530	103.901	103.901	103.901	103.456	102.606	101.774	100.988	100.331
5/15/2006	5/16/2016	8/17/2015	4.350	103.879	103.879	103.879	103.405	102.526	101.669	100.868	100.238
5/15/2006	5/16/2016	8/17/2015	4.520	104.030	104.030	104.030	103.556	102.677	101.817	101.004	100.330
5/19/2006	5/19/2016	8/19/2015	4.510	104.059	104.059	104.059	103.577	102.689	101.822	101.002	100.326
6/12/2006	6/13/2016	9/14/2015	4.620	104.479	104.479	104.479	103.927	102.971	102.038	101.157	100.422
6/26/2006	6/27/2016	9/28/2015	4.730	104.769	104.769	104.769	104.177	103.182	102.209	101.287	100.498
7/24/2006	7/25/2016	7/24/2015	4.660	105.061	105.061	105.061	104.382	103.305	102.255	101.272	100.465
7/28/2006	7/28/2016	7/28/2015	4.490	104.914	104.914	104.914	104.225	103.142	102.088	101.116	100.344
8/25/2006	8/25/2016	8/25/2015	4.350	105.099	105.099	105.099	104.314	103.156	102.038	101.033	100.280
11/24/2006	11/25/2016	8/24/2015	4.190	105.982	105.982	105.982	104.828	103.429	102.116	100.992	100.219
12/1/2006	12/1/2016	9/1/2015	4.090	105.907	105.907	105.907	104.729	103.322	102.014	100.918	100.191
12/4/2006	12/5/2016	9/4/2015	4.080	105.938	105.938	105.938	104.742	103.325	102.009	100.909	100.182
12/5/2006	12/5/2016	9/8/2015	4.260	106.200	106.200	106.200	105.002	103.576	102.239	101.091	100.284
12/8/2006	12/8/2016	9/8/2015	3.990	105.841	105.841	105.841	104.632	103.212	101.901	100.820	100.125
12/12/2006	12/12/2016	9/14/2015	3.990	105.885	105.885	105.885	104.658	103.227	101.908	100.819	100.117
12/12/2006	12/12/2016	9/14/2015	4.050	105.973	105.973	105.973	104.746	103.312	101.984	100.878	100.150
12/19/2006	12/19/2016	9/21/2015	4.190	106.261	106.261	106.261	105.000	103.541	102.180	101.024	100.229
12/28/2006	12/28/2016	9/28/2015	4.250	106.457	106.457	106.457	105.155	103.669	102.281	101.093	100.261
12/28/2006	12/28/2016	9/28/2015	4.400	106.685	106.685	106.685	105.381	103.889	102.484	101.260	100.367
1/12/2007	1/12/2017	7/13/2015	4.420	106.900	106.900	106.900	105.525	103.996	102.559	101.311	100.399
1/16/2007	1/17/2017	7/16/2015	4.790	107.544	107.544	107.544	106.141	104.586	103.101	101.764	100.703
2/2/2007	2/2/2017	8/2/2015	4.690	107.595	107.595	107.595	106.115	104.506	102.929	101.384	99.870
2/20/2007	2/21/2017	8/20/2015	4.390	107.341	107.341	107.341	105.774	104.140	102.618	101.319	100.383
2/20/2007	2/21/2017	8/20/2015	4.850	108.110	108.110	108.110	106.535	104.866	103.232	101.631	100.063
2/23/2007	2/23/2017	8/24/2015	4.250	107.130	107.130	107.130	105.557	103.925	102.418	101.154	100.283
2/23/2007	2/23/2017	8/24/2015	4.350	107.298	107.298	107.298	105.723	104.085	102.564	101.272	100.354
3/16/2007	3/16/2017	9/16/2015	4.090	107.100	107.100	107.100	105.428	103.757	102.241	101.002	100.196
3/21/2007	3/21/2017	9/21/2015	4.220	107.385	107.385	107.385	105.684	103.990	102.438	101.148	100.274
3/23/2007	3/23/2017	9/23/2015	4.290	107.531	107.531	107.531	105.819	104.115	102.545	101.232	100.321
3/23/2007	3/23/2017	9/23/2015	4.290	107.531	107.531	107.531	105.819	104.115	102.545	101.232	100.321
4/9/2007	4/10/2017	7/9/2015	4.150	107.493	107.493	107.478	105.695	103.960	102.387	101.100	100.237
4/12/2007	4/12/2017	7/13/2015	4.250	107.697	107.697	107.680	105.886	104.137	102.540	101.216	100.305
4/13/2007	4/13/2017	7/13/2015	4.450	108.071	108.071	108.053	106.251	104.485	102.851	101.464	100.461
4/27/2007	4/27/2017	7/27/2015	4.250	107.874	107.874	107.836	105.987	104.199	102.568	101.219	100.287
5/18/2007	5/18/2017	8/18/2015	4.190	108.007	108.007	107.922	106.016	104.184	102.526	101.174	100.274
5/22/2007	5/22/2017	8/24/2015	4.750	109.130	109.130	109.036	107.102	105.216	103.453	101.914	100.737
5/29/2007	5/30/2017	8/31/2015	4.250	108.263	108.263	108.151	106.209	104.340	102.644	101.250	100.307
6/7/2007	6/7/2017	9/8/2015	4.820	109.479	109.479	109.348	107.367	105.438	103.634	102.058	100.841
6/8/2007	6/8/2017	9/8/2015	4.490	108.842	108.842	108.709	106.735	104.826	103.073	101.591	100.529
6/11/2007	6/12/2017	9/11/2015	4.490	108.892	108.892	108.750	106.764	104.844	103.082	101.594	100.526
6/18/2007	6/19/2017	9/18/2015	4.500	108.999	108.999	108.841	106.835	104.895	103.115	101.611	100.529
6/19/2007	6/19/2017	9/21/2015	4.650	109.299	109.299	109.141	107.130	105.179	103.374	101.821	100.665
6/22/2007	6/22/2017	9/22/2015	4.500	109.037	109.037	108.872	106.857	104.909	103.121	101.613	100.526
6/28/2007	6/28/2017	9/28/2015	4.500	109.112	109.112	108.933	106.901	104.937	103.135	101.617	100.521
7/13/2007	7/13/2017	7/13/2015	4.290	108.865	108.865	108.650	106.585	104.609	102.824	101.365	100.364
7/20/2007	7/20/2017	7/20/2015	4.290	108.949	108.949	108.717	106.632	104.638	102.836	101.365	100.356
7/27/2007	7/27/2017	7/27/2015	4.250	108.948	108.948	108.699	106.596	104.588	102.780	101.313	100.316
7/30/2007	1/30/2019	7/30/2015	3.990	114.518	114.518	112.263	108.802	105.736	103.219	101.370	100.256
7/31/2007	7/31/2017	7/31/2015	3.990	108.445	108.445	108.186	106.088	104.106	102.368	101.015	100.181
7/31/2007	7/31/2017	7/31/2015	3.990	108.445	108.445	108.186	106.088	104.106	102.368	101.015	100.181
7/31/2007	7/31/2017	7/31/2015	4.060	108.593	108.593	108.334	106.231	104.240	102.483	101.098	100.212
8/2/2007	8/2/2017	8/3/2015	4.150	108.807	108.807	108.542	106.431	104.426	102.644	101.220	100.293

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Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
8/2/2007	8/2/2017	8/3/2015	4.050	108.594	108.594	108.330	106.225	104.233	102.477	101.093	100.226
8/9/2007	8/9/2017	8/10/2015	3.990	108.545	108.545	108.262	106.140	104.140	102.385	101.017	100.183
8/16/2007	8/16/2017	8/17/2015	3.990	108.622	108.622	108.321	106.180	104.161	102.392	101.014	100.174
8/17/2007	8/17/2017	8/17/2015	4.000	108.655	108.655	108.351	106.207	104.184	102.409	101.025	100.179
9/4/2007	9/5/2017	9/4/2015	3.890	108.622	108.622	108.268	106.083	104.040	102.275	100.925	100.132
9/10/2007	9/11/2017	9/10/2015	3.690	108.240	108.240	107.871	105.687	103.666	101.956	100.707	100.031
9/11/2007	9/11/2017	9/11/2015	3.590	108.017	108.017	107.649	105.473	103.475	101.801	100.604	99.985
9/13/2007	9/13/2017	9/14/2015	3.990	108.933	108.933	108.556	106.341	104.260	102.447	101.041	100.177
9/27/2007	9/27/2017	9/28/2015	3.650	108.313	108.313	107.901	105.676	103.626	101.901	100.650	99.976
10/11/2007	10/11/2017	7/13/2015	3.990	109.243	109.243	108.788	106.498	104.358	102.500	101.065	100.188
10/15/2007	10/16/2017	7/15/2015	3.990	109.298	109.298	108.828	106.524	104.372	102.504	101.063	100.186
10/26/2007	10/26/2017	7/27/2015	3.390	107.994	107.994	107.502	105.235	103.195	101.539	100.415	99.955
11/5/2007	11/6/2017	8/5/2015	4.390	110.487	110.487	109.950	107.563	105.302	103.284	101.638	100.503
11/6/2007	11/6/2017	8/6/2015	3.480	108.313	108.313	107.787	105.487	103.407	101.706	100.528	99.993
11/19/2007	11/20/2017	11/19/2012	4.290	110.415	110.415	109.831	107.375	104.969	102.629	100.353	98.140
11/20/2007	11/20/2017	8/20/2015	3.740	109.079	109.079	108.506	106.135	103.959	102.126	100.776	100.059
11/23/2007	11/24/2017	11/23/2011	3.990	109.731	109.731	109.135	106.675	104.267	101.925	99.648	97.433
11/23/2007	11/24/2017	11/23/2011	3.990	109.731	109.731	109.135	106.675	104.267	101.925	99.648	97.433
11/29/2007	11/29/2017	8/31/2015	2.950	107.235	107.235	106.654	104.388	102.430	100.958	100.107	99.821
11/30/2007	11/30/2017	8/31/2015	3.190	107.833	107.833	107.240	104.922	102.880	101.278	100.264	99.867
12/10/2007	12/11/2017	9/10/2015	3.450	108.576	108.576	107.943	105.562	103.427	101.690	100.513	99.938
12/24/2007	12/26/2017	12/24/2012	3.990	110.085	110.085	109.384	106.834	104.340	101.917	99.564	97.278
1/4/2008	1/4/2018	7/6/2015	3.360	108.577	108.577	107.871	105.451	103.302	101.588	100.447	99.990
1/7/2008	1/8/2018	7/7/2015	2.590	106.640	106.640	105.963	103.718	101.877	100.601	100.024	99.973
1/8/2008	1/8/2018	7/8/2015	2.570	106.589	106.589	105.913	103.674	101.841	100.579	100.016	99.969
1/8/2008	1/8/2018	7/8/2015	2.640	106.768	106.768	106.088	103.826	101.960	100.650	100.038	99.970
1/11/2008	1/11/2018	7/13/2015	2.720	106.996	106.996	106.300	104.009	102.098	100.733	100.062	99.954
1/14/2008	1/16/2018	7/14/2015	3.240	108.378	108.378	107.638	105.208	103.078	101.407	100.327	99.971
1/16/2008	1/16/2018	7/16/2015	2.380	106.154	106.154	105.471	103.283	101.534	100.388	99.972	99.929
1/17/2008	1/17/2018	7/17/2015	2.250	105.824	105.824	105.152	103.013	101.337	100.276	99.964	99.918
1/18/2008	1/18/2018	7/20/2015	2.290	105.934	105.934	105.255	103.096	101.397	100.308	99.960	99.906
2/14/2008	2/14/2018	2/14/2012	3.190	108.506	108.506	107.637	104.967	102.364	99.839	97.389	95.012
2/25/2008	2/26/2018	8/25/2015	2.420	106.533	106.533	105.725	103.444	101.622	100.427	99.926	99.754
3/7/2008	3/7/2018	9/8/2015	3.550	109.673	109.673	108.759	106.157	103.835	101.951	100.644	99.991
3/14/2008	3/14/2018	9/14/2015	2.400	106.586	106.586	105.734	103.440	101.617	100.433	99.889	99.653
3/17/2008	3/19/2018	9/17/2015	3.300	109.102	109.102	108.157	105.573	103.314	101.545	100.399	99.867
4/28/2008	4/30/2018	7/28/2015	2.150	106.181	106.181	105.227	102.964	101.245	100.212	99.933	99.858
4/30/2008	4/30/2018	4/30/2013	3.740	110.752	110.752	109.609	106.706	103.881	101.145	98.496	95.930
5/23/2008	5/23/2018	8/24/2015	3.270	109.609	109.609	108.440	105.719	103.367	101.542	100.379	99.905
6/30/2008	7/2/2018	6/30/2011	3.690	111.254	111.254	109.868	106.789	103.799	100.910	98.117	95.417
7/11/2008	7/11/2018	7/11/2012	3.750	111.530	111.530	110.108	107.002	103.985	101.071	98.254	95.532
7/14/2008	7/14/2015	7/14/2015	4.900	100.191	100.191	100.191	100.186	100.148	100.111	100.073	100.035
7/14/2008	7/16/2018	7/14/2015	2.500	107.721	107.721	106.467	103.915	101.898	100.561	99.993	99.942
7/14/2008	7/16/2018	7/14/2015	3.250	110.038	110.038	108.680	105.851	103.427	101.566	100.380	99.971
7/17/2008	7/17/2018	7/17/2013	3.750	111.593	111.593	110.146	107.023	103.991	101.062	98.232	95.496
8/15/2008	8/15/2018	8/17/2015	3.830	112.149	112.149	110.628	107.592	104.884	102.655	101.038	100.135
10/8/2010	10/8/2015	10/8/2012	2.250	100.625	100.625	100.625	100.569	100.297	100.027	99.759	99.491
12/27/2011	12/27/2021	12/29/2014	3.550	123.389	120.794	114.008	107.501	101.408	95.711	90.381	85.392
4/27/2012	4/27/2016	4/27/2013	1.430	101.199	101.199	101.199	100.780	99.963	99.160	98.369	97.591
4/30/2012	5/2/2016	4/30/2013	1.380	101.177	101.177	101.177	100.745	99.915	99.098	98.295	97.505
5/15/2012	5/15/2017	5/15/2014	2.510	104.775	104.775	104.698	102.809	100.951	99.136	97.362	95.628
5/15/2012	5/15/2017	11/17/2014	1.950	103.710	103.710	103.633	101.751	99.903	98.098	96.334	94.610
6/20/2012	6/20/2017	6/22/2015	1.630	103.264	103.264	103.104	101.128	99.193	97.304	95.460	93.660
7/16/2012	7/17/2017	7/16/2014	1.720	103.573	103.573	103.348	101.298	99.291	97.333	95.424	93.561
7/18/2012	7/18/2018	7/20/2015	-0.175	108.303	108.303	106.861	103.780	100.860	99.924	99.871	99.817
7/19/2012	7/19/2017	7/21/2014	1.690	103.520	103.520	103.291	101.235	99.224	97.262	95.348	93.481
10/1/2012	10/1/2019	4/1/2015	2.250	109.711	109.711	106.190	101.959	97.913	94.051	90.363	86.840
10/5/2012	10/5/2017	10/6/2014	1.630	103.748	103.748	103.310	101.044	98.832	96.680	94.584	92.543

