

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.

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
4/8/1998	4/8/2013	1/8/2013	5.490	101.967	101.967	101.967	101.868	101.510	101.155	100.802	100.453
8/19/1998	8/19/2013	2/19/2013	5.490	103.995	103.995	103.995	103.717	102.992	102.278	101.577	100.916
8/19/1998	8/19/2013	2/19/2013	5.490	103.995	103.995	103.995	103.717	102.992	102.278	101.577	100.916
12/14/1998	12/16/2013	12/14/2012	4.890	105.175	105.175	105.175	104.721	103.665	102.633	101.650	100.797
12/14/1998	12/16/2013	12/14/2012	5.390	105.704	105.704	105.704	105.249	104.190	103.152	102.150	101.241
12/15/1998	12/16/2013	12/17/2012	4.880	105.164	105.164	105.164	104.710	103.655	102.622	101.640	100.787
1/7/2000	1/7/2015	1/7/2013	5.950	112.693	112.693	112.693	111.442	109.262	107.162	105.198	103.444
12/5/2002	12/5/2012	12/5/2012	3.790	100.053	100.053	100.053	100.050	100.036	100.023	100.009	99.996
3/6/2003	3/6/2013	12/6/2012	2.990	100.797	100.797	100.797	100.736	100.469	100.204	100.004	99.982
7/2/2004	7/2/2014	1/3/2013	3.990	106.417	106.417	106.417	105.588	103.978	102.401	100.855	99.341
12/13/2004	12/15/2014	12/13/2012	3.320	106.870	106.870	106.870	105.699	103.695	101.952	100.670	100.061
9/1/2005	9/1/2015	12/1/2012	4.130	111.529	111.529	111.529	109.780	106.961	104.229	101.583	99.017
9/30/2005	9/30/2015	12/30/2012	4.440	112.752	112.752	112.752	110.924	108.009	105.186	102.453	99.805
10/26/2005	10/26/2015	1/26/2013	4.540	113.367	113.367	113.367	111.470	108.476	105.580	102.778	100.065
1/17/2006	1/19/2016	1/17/2013	4.080	112.976	112.976	112.976	110.862	107.746	104.986	102.726	101.092
4/19/2006	4/19/2013	1/22/2013	4.630	101.800	101.800	101.800	101.687	101.299	100.914	100.532	100.189
4/24/2006	4/25/2016	1/24/2013	4.440	115.317	115.317	115.317	112.890	109.477	106.419	103.864	101.896
5/5/2006	5/5/2016	2/5/2013	4.350	115.127	115.127	115.127	112.672	109.252	106.209	103.690	101.783
5/5/2006	5/5/2016	2/5/2013	4.530	115.753	115.753	115.753	113.290	109.844	106.753	104.157	102.151
5/15/2006	5/16/2016	2/15/2013	4.350	115.260	115.260	115.260	112.768	109.318	106.247	103.703	101.773
5/15/2006	5/16/2016	2/15/2013	4.520	115.857	115.857	115.857	113.356	109.881	106.764	104.149	102.125
5/19/2006	5/19/2016	2/19/2013	4.510	115.859	115.859	115.859	113.349	109.867	106.745	104.127	102.100
6/12/2006	6/13/2016	12/12/2012	4.620	116.567	116.567	116.567	113.966	110.407	107.211	104.510	102.399
6/26/2006	6/27/2016	12/26/2012	4.730	117.145	117.145	117.145	114.489	110.877	107.619	104.836	102.630
6/28/2006	6/28/2013	12/28/2012	4.950	102.887	102.887	102.887	102.679	102.097	101.522	100.957	100.434
6/30/2006	7/1/2013	12/31/2012	4.890	102.893	102.893	102.893	102.681	102.091	101.508	100.938	100.419
7/14/2006	7/15/2013	1/14/2013	4.890	103.083	103.083	103.083	102.852	102.224	101.604	100.998	100.446
7/24/2006	7/25/2016	1/24/2013	4.660	117.254	117.254	117.254	114.502	110.828	107.532	104.738	102.541
7/28/2006	7/28/2016	1/28/2013	4.490	116.662	116.662	116.662	113.908	110.252	106.993	104.270	102.164
8/21/2006	8/21/2013	1/2/2013	4.750	103.483	103.483	103.483	103.203	102.475	101.757	101.050	100.352
8/25/2006	8/25/2016	2/25/2013	4.350	116.481	116.481	116.481	113.634	109.934	106.663	103.967	101.916
10/10/2006	10/10/2013	1/10/2013	4.250	103.707	103.707	103.707	103.357	102.493	101.647	100.867	100.263
10/12/2006	10/15/2013	1/14/2013	4.500	103.987	103.987	103.987	103.630	102.751	101.891	101.078	100.410
11/6/2006	11/6/2013	2/6/2013	4.290	104.063	104.063	104.063	103.674	102.736	101.821	100.975	100.304
11/17/2006	11/18/2013	2/19/2013	4.350	104.265	104.265	104.265	103.857	102.885	101.938	101.061	100.364
11/24/2006	11/25/2016	2/25/2013	4.190	116.945	116.945	116.945	113.763	109.879	106.498	103.756	101.714
11/30/2006	12/2/2013	2/28/2013	4.350	104.434	104.434	104.434	104.004	102.993	102.001	101.028	100.073
12/1/2006	12/1/2016	3/1/2013	4.090	116.609	116.609	116.609	113.415	109.548	106.213	103.534	101.579
12/4/2006	12/5/2016	12/4/2012	4.080	116.614	116.614	116.614	113.404	109.530	106.191	103.510	101.557
12/5/2006	12/5/2016	12/5/2012	4.260	117.347	117.347	117.347	114.121	110.204	106.792	104.019	101.943
12/6/2006	12/6/2013	12/6/2012	4.400	104.534	104.534	104.534	104.097	103.074	102.079	101.159	100.425
12/8/2006	12/8/2016	12/10/2012	3.990	116.280	116.280	116.280	113.067	109.207	105.898	103.256	101.367
12/12/2006	12/12/2016	12/12/2012	3.990	116.325	116.325	116.325	113.095	109.225	105.906	103.257	101.360
12/12/2006	12/12/2016	12/12/2012	4.050	116.570	116.570	116.570	113.335	109.449	106.106	103.424	101.479
12/19/2006	12/19/2016	12/19/2012	4.190	117.224	117.224	117.224	113.947	110.011	106.593	103.825	101.765
12/20/2006	12/20/2013	12/20/2012	4.500	104.812	104.812	104.812	104.352	103.288	102.249	101.280	100.492
12/28/2006	12/28/2016	12/28/2012	4.250	117.577	117.577	117.577	114.258	110.284	106.820	104.001	101.882
12/28/2006	12/28/2016	12/28/2012	4.400	118.198	118.198	118.198	114.865	110.857	107.340	104.440	102.227
1/12/2007	1/12/2017	1/14/2013	4.420	118.465	118.465	118.465	115.069	111.028	107.487	104.569	102.344
1/16/2007	1/17/2017	1/16/2013	4.790	120.077	120.077	120.077	116.627	112.500	108.831	105.713	103.237
1/23/2007	1/23/2014	1/23/2013	4.490	105.226	105.226	105.226	104.707	103.547	102.417	101.372	100.532
1/29/2007	1/29/2014	1/29/2013	4.790	105.655	105.655	105.655	105.124	103.945	102.785	101.643	100.519
2/2/2007	2/2/2017	2/2/2013	4.690	119.866	119.866	119.866	116.308	111.958	107.799	103.823	100.019
2/20/2007	2/21/2017	2/20/2013	4.850	120.800	120.800	120.800	117.144	112.720	108.493	104.453	100.591
2/20/2007	2/21/2017	2/20/2013	4.390	118.827	118.827	118.827	115.263	111.134	107.528	104.570	102.320
2/23/2007	2/23/2017	2/25/2013	4.250	118.250	118.250	118.250	114.693	110.591	107.033	104.148	101.984
2/23/2007	2/23/2017	2/25/2013	4.350	118.680	118.680	118.680	115.111	110.986	107.388	104.448	102.218
3/16/2007	3/16/2017	12/17/2012	4.090	117.802	117.802	117.802	114.172	110.071	106.553	103.735	101.668
3/21/2007	3/21/2017	12/21/2012	4.220	118.426	118.426	118.426	114.759	110.609	107.022	104.123	101.955
3/23/2007	3/23/2017	12/24/2012	4.290	118.756	118.756	118.756	115.071	110.898	107.278	104.336	102.118
3/23/2007	3/23/2017	12/24/2012	4.290	118.756	118.756	118.756	115.071	110.898	107.278	104.336	102.118
4/9/2007	4/10/2017	1/9/2013	4.150	118.351	118.351	118.351	114.605	110.437	106.857	103.985	101.862
4/12/2007	4/12/2017	1/14/2013	4.250	118.817	118.817	118.817	115.049	110.848	107.218	104.284	102.086
4/13/2007	4/13/2017	1/14/2013	4.450	119.715	119.715	119.715	115.918	111.664	107.954	104.899	102.561
4/23/2007	4/23/2014	1/23/2013	4.620	106.532	106.532	106.532	105.842	104.424	103.054	101.805	100.778
4/27/2007	4/27/2017	1/28/2013	4.250	118.994	118.994	118.994	115.156	110.918	107.255	104.291	102.063
5/2/2007	5/2/2014	2/4/2013	4.590	106.604	106.604	106.604	105.897	104.454	103.066	101.811	100.797
5/4/2007	5/5/2014	2/4/2013	4.550	106.584	106.584	106.584	105.872	104.421	103.026	101.770	100.759

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
5/18/2007	5/18/2017	2/19/2013	4.190	118.970	118.970	118.970	115.044	110.782	107.118	104.172	101.980
5/22/2007	5/22/2017	2/22/2013	4.750	121.558	121.558	121.558	117.543	113.127	109.240	105.960	103.370
5/29/2007	5/30/2017	2/28/2013	4.250	119.383	119.383	119.383	115.392	111.086	107.373	104.370	102.116
6/1/2007	6/2/2014	3/1/2013	4.500	106.862	106.862	106.862	106.093	104.566	103.104	101.799	100.761
6/7/2007	6/7/2017	12/7/2012	4.820	122.090	122.090	122.090	117.991	113.528	109.597	106.277	103.630
6/8/2007	6/9/2014	12/10/2012	4.730	107.305	107.305	107.305	106.520	104.969	103.478	102.121	101.008
6/8/2007	6/8/2017	12/10/2012	4.490	120.590	120.590	120.590	116.528	112.142	108.329	105.181	102.768
6/11/2007	6/12/2017	12/11/2012	4.490	120.640	120.640	120.640	116.558	112.162	108.341	105.186	102.768
6/18/2007	6/19/2017	12/18/2012	4.500	120.774	120.774	120.774	116.655	112.239	108.398	105.222	102.783
6/19/2007	6/19/2017	12/19/2012	4.650	121.466	121.466	121.466	117.327	112.874	108.976	105.711	103.162
6/22/2007	6/22/2017	12/24/2012	4.500	120.811	120.811	120.811	116.677	112.254	108.405	105.221	102.774
6/28/2007	6/28/2017	12/28/2012	4.500	120.886	120.886	120.886	116.723	112.283	108.421	105.223	102.767
7/13/2007	7/13/2017	1/14/2013	4.290	120.090	120.090	120.090	115.886	111.480	107.689	104.620	102.312
7/20/2007	7/20/2017	1/22/2013	4.290	120.174	120.174	120.174	115.934	111.512	107.705	104.622	102.302
7/27/2007	7/27/2017	1/28/2013	4.250	120.068	120.068	120.068	115.800	111.372	107.568	104.498	102.193
7/30/2007	1/30/2019	1/30/2013	3.990	124.958	124.958	123.644	117.686	112.413	108.051	104.639	102.150
7/31/2007	7/31/2017	1/31/2013	3.990	118.885	118.885	118.885	114.643	110.297	106.617	103.696	101.573
7/31/2007	7/31/2017	1/31/2013	3.990	118.885	118.885	118.885	114.643	110.297	106.617	103.696	101.573
7/31/2007	7/31/2017	1/31/2013	4.060	119.216	119.216	119.216	114.962	110.592	106.877	103.913	101.740
8/2/2007	8/4/2014	2/4/2013	4.490	107.633	107.633	107.633	106.731	105.029	103.413	101.983	100.858
8/2/2007	8/2/2017	2/4/2013	4.050	119.191	119.191	119.191	114.932	110.568	106.869	103.936	101.802
8/2/2007	8/2/2017	2/4/2013	4.150	119.665	119.665	119.665	115.389	110.991	107.241	104.248	102.039
8/9/2007	8/9/2017	2/11/2013	3.990	118.984	118.984	118.984	114.700	110.340	106.657	103.746	101.646
8/16/2007	8/16/2017	2/19/2013	3.990	119.062	119.062	119.062	114.742	110.365	106.667	103.743	101.629
8/17/2007	8/17/2017	2/19/2013	4.000	119.121	119.121	119.121	114.794	110.411	106.707	103.774	101.650
8/20/2007	8/20/2014	8/20/2013	4.250	107.413	107.413	107.413	106.480	104.732	103.059	101.575	100.399
8/28/2007	8/28/2014	2/28/2013	4.350	107.685	107.685	107.685	106.733	104.968	103.297	101.832	100.704
8/30/2007	9/2/2014	2/28/2013	3.890	106.926	106.926	106.926	105.967	104.203	102.571	101.216	100.287
9/4/2007	9/5/2017	12/4/2012	3.890	118.800	118.800	118.800	114.406	110.033	106.372	103.502	101.477
9/10/2007	9/11/2017	12/10/2012	3.690	117.895	117.895	117.895	113.513	109.202	105.641	102.910	101.065
9/11/2007	9/11/2017	12/11/2012	3.590	117.410	117.410	117.410	113.050	108.778	105.275	102.631	100.894
9/12/2007	9/12/2014	12/12/2012	3.690	106.672	106.672	106.672	105.694	103.912	102.289	100.993	100.193
9/13/2007	9/15/2014	12/13/2012	3.990	107.248	107.248	107.248	106.261	104.458	102.786	101.390	100.401
9/13/2007	9/13/2017	12/13/2012	3.990	119.372	119.372	119.372	114.917	110.488	106.754	103.804	101.671
9/27/2007	9/29/2014	9/27/2010	4.490	108.331	108.331	108.331	107.310	105.443	103.617	101.832	100.087
9/27/2007	9/27/2017	12/27/2012	3.650	117.863	117.863	117.863	113.409	109.076	105.505	102.777	100.951
10/11/2007	10/14/2014	1/11/2013	4.180	107.930	107.930	107.930	106.880	104.991	103.229	101.726	100.627
10/11/2007	10/11/2017	1/11/2013	3.990	119.683	119.683	119.683	115.089	110.609	106.838	103.861	101.708
10/15/2007	10/16/2017	1/15/2013	3.990	119.738	119.738	119.738	115.118	110.627	106.847	103.863	101.702
10/25/2007	10/27/2014	1/25/2013	4.360	108.429	108.429	108.429	107.349	105.418	103.603	102.025	100.804
10/26/2007	10/26/2017	1/28/2013	3.390	116.864	116.864	116.864	112.339	108.076	104.633	102.127	100.566
11/2/2007	11/3/2014	2/4/2013	3.990	107.791	107.791	107.791	106.700	104.766	102.987	101.512	100.494
11/2/2007	11/3/2014	2/4/2013	4.190	108.182	108.182	108.182	107.089	105.146	103.340	101.805	100.686
11/5/2007	11/5/2014	2/5/2013	3.990	107.813	107.813	107.813	106.718	104.779	102.994	101.514	100.491
11/5/2007	11/6/2017	2/5/2013	4.390	121.973	121.973	121.973	117.167	112.501	108.497	105.234	102.762
11/6/2007	11/6/2017	2/6/2013	3.480	117.418	117.418	117.418	112.822	108.508	105.011	102.427	100.784
11/9/2007	11/10/2014	2/11/2013	4.330	108.539	108.539	108.539	107.430	105.462	103.622	102.034	100.823
11/13/2007	11/13/2014	2/13/2013	3.350	106.634	106.634	106.634	105.529	103.605	101.920	100.667	99.988
11/19/2007	11/19/2014	2/19/2013	3.750	107.489	107.489	107.489	106.367	104.399	102.616	101.184	100.247
11/19/2007	11/19/2014	2/19/2013	3.750	107.489	107.489	107.489	106.367	104.399	102.616	101.184	100.247
11/19/2007	11/19/2014	2/19/2013	4.270	108.528	108.528	108.528	107.400	105.408	103.550	101.955	100.753
11/19/2007	11/20/2017	2/19/2013	4.290	121.639	121.639	121.639	116.567	111.424	106.544	101.914	97.518
11/20/2007	11/20/2017	2/20/2013	3.740	118.865	118.865	118.865	114.126	109.668	105.984	103.134	101.179
11/23/2007	11/24/2017	2/23/2013	3.990	120.170	120.170	120.170	115.101	109.983	105.129	100.523	96.152
11/23/2007	11/24/2017	2/23/2013	3.990	120.170	120.170	120.170	115.101	109.983	105.129	100.523	96.152
11/29/2007	11/29/2017	2/28/2013	2.950	114.954	114.954	114.954	110.415	106.339	103.213	101.091	99.978
11/30/2007	11/30/2017	2/28/2013	3.190	116.179	116.179	116.179	111.552	107.343	104.024	101.667	100.268
12/7/2007	12/7/2012	12/7/2012	3.450	100.067	100.067	100.067	100.063	100.044	100.025	100.007	99.988
12/10/2007	12/11/2017	12/10/2012	3.450	117.603	117.603	117.603	112.846	108.489	104.967	102.380	100.720
12/11/2007	12/11/2012	12/11/2012	3.760	100.115	100.115	100.115	100.109	100.079	100.049	100.020	99.990
12/20/2007	12/20/2012	12/20/2012	3.600	100.200	100.200	100.200	100.188	100.135	100.081	100.027	99.973
12/20/2007	12/20/2012	12/20/2012	3.750	100.208	100.208	100.208	100.197	100.143	100.089	100.035	99.982
12/24/2007	12/26/2017	12/24/2012	3.990	120.525	120.525	120.525	115.264	110.058	105.124	101.202	99.994
12/26/2007	12/26/2012	12/26/2012	3.460	100.250	100.250	100.250	100.235	100.165	100.095	100.025	99.955
12/26/2007	12/26/2012	12/26/2012	3.960	100.286	100.286	100.286	100.271	100.201	100.131	100.061	99.991
1/2/2008	1/2/2013	1/2/2013	3.490	100.320	100.320	100.320	100.301	100.212	100.123	100.035	99.946
1/3/2008	1/5/2015	1/3/2013	3.650	107.766	107.766	107.766	106.547	104.464	102.606	101.150	100.247
1/4/2008	1/4/2018	1/4/2013	3.360	117.368	117.368	117.364	112.525	108.181	104.700	102.185	100.633

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
1/7/2008	1/7/2013	1/7/2013	2.990	100.316	100.316	100.316	100.294	100.191	100.089	99.987	99.886
1/7/2008	1/7/2013	1/7/2013	3.590	100.379	100.379	100.379	100.357	100.255	100.152	100.051	99.949
1/7/2008	1/7/2015	1/7/2013	3.490	107.445	107.445	107.445	106.224	104.147	102.320	100.925	100.113
1/7/2008	1/8/2018	1/7/2013	2.590	113.416	113.416	113.408	108.871	105.002	102.195	100.544	99.910
1/8/2008	1/8/2013	1/8/2013	3.150	100.341	100.341	100.341	100.319	100.214	100.109	100.004	99.900
1/8/2008	1/8/2018	1/8/2013	2.570	113.313	113.313	113.305	108.776	104.922	102.136	100.511	99.896
1/8/2008	1/8/2018	1/8/2013	2.640	113.675	113.675	113.667	109.104	105.196	102.336	100.621	99.932
1/11/2008	1/11/2018	1/11/2013	2.720	114.112	114.112	114.101	109.488	105.515	102.567	100.741	99.965
1/14/2008	1/16/2018	1/14/2013	3.240	116.856	116.856	116.840	111.992	107.690	104.284	101.860	100.422
1/16/2008	1/16/2013	1/16/2013	2.550	100.333	100.333	100.333	100.306	100.179	100.053	99.927	99.802
1/16/2008	1/16/2018	1/16/2013	2.380	112.381	112.381	112.365	107.910	104.191	101.618	100.218	99.794
1/17/2008	1/17/2018	1/17/2013	2.250	111.711	111.711	111.694	107.316	103.706	101.283	100.080	99.767
1/18/2008	1/18/2013	1/18/2013	2.550	100.347	100.347	100.347	100.319	100.187	100.055	99.924	99.794
1/18/2008	1/20/2015	1/18/2013	2.350	105.098	105.098	105.098	103.875	101.937	100.546	99.951	99.767
1/18/2008	1/18/2018	1/18/2013	2.290	111.926	111.926	111.908	107.501	103.852	101.381	100.105	99.769
1/24/2008	1/24/2013	1/24/2013	2.500	100.382	100.382	100.382	100.350	100.202	100.055	99.908	99.761
1/25/2008	1/25/2013	1/25/2013	2.250	100.350	100.350	100.350	100.318	100.167	100.017	99.867	99.718
1/25/2008	1/25/2013	1/25/2013	2.650	100.412	100.412	100.412	100.380	100.229	100.079	99.929	99.780
1/28/2008	1/28/2013	1/28/2013	2.990	100.490	100.490	100.490	100.456	100.297	100.139	99.981	99.824
1/30/2008	1/30/2013	1/30/2013	2.670	100.452	100.452	100.452	100.417	100.253	100.089	99.926	99.764
2/7/2008	2/7/2013	2/7/2013	2.490	100.477	100.477	100.477	100.437	100.249	100.062	99.876	99.690
2/13/2008	2/13/2013	2/13/2013	2.920	100.608	100.608	100.608	100.564	100.358	100.153	99.949	99.746
2/14/2008	2/14/2018	2/14/2013	3.190	116.852	116.852	116.779	111.362	106.123	101.165	96.473	92.030
2/19/2008	2/19/2013	2/19/2010	2.590	100.583	100.583	100.583	100.534	100.310	100.088	99.867	99.646
2/25/2008	2/25/2013	2/25/2013	3.090	100.747	100.747	100.747	100.694	100.452	100.212	99.973	99.735
2/25/2008	2/26/2018	2/25/2013	2.420	112.865	112.865	112.761	108.197	104.394	101.735	100.233	99.620
3/7/2008	3/9/2015	12/7/2012	2.890	106.654	106.654	106.654	105.320	103.159	101.414	100.297	99.977
3/7/2008	3/7/2018	3/7/2013	3.550	118.961	118.961	118.826	113.744	109.203	105.523	102.761	100.957
3/10/2008	3/11/2013	12/10/2012	2.390	100.670	100.670	100.670	100.604	100.324	100.055	99.980	99.953
3/12/2008	3/12/2013	12/12/2012	2.010	100.569	100.569	100.569	100.502	100.220	99.997	99.963	99.931
3/14/2008	3/14/2018	12/14/2012	2.400	112.865	112.865	112.719	108.149	104.355	101.719	100.276	99.935
3/17/2008	3/19/2018	3/18/2013	3.300	117.736	117.736	117.567	112.545	108.117	104.596	102.072	100.492
3/28/2008	3/28/2013	12/28/2012	2.820	100.924	100.924	100.924	100.840	100.514	100.191	99.869	99.550
4/14/2008	4/14/2015	1/14/2013	2.750	106.607	106.607	106.607	105.193	102.811	100.495	98.243	96.052
4/28/2008	4/28/2015	1/28/2013	3.250	107.935	107.935	107.935	106.489	104.145	102.153	100.712	99.995
4/28/2008	4/30/2018	1/28/2013	2.150	111.806	111.806	111.556	107.067	103.451	101.077	100.000	99.693
4/30/2008	4/30/2018	4/30/2013	3.740	120.537	120.537	120.210	114.506	108.997	104.202	101.292	100.022
5/2/2008	5/4/2015	2/4/2013	3.990	109.808	109.808	109.808	108.335	105.907	103.718	101.933	100.695
5/5/2008	5/5/2015	2/5/2013	3.170	107.801	107.801	107.801	106.344	104.000	102.038	100.672	99.979
5/8/2008	5/8/2015	2/8/2013	2.960	107.309	107.309	107.309	105.850	103.533	101.649	100.433	99.858
5/19/2008	5/19/2015	2/21/2013	4.700	111.749	111.749	111.749	110.230	107.692	105.225	102.829	100.500
5/23/2008	5/23/2013	2/25/2013	4.040	101.953	101.953	101.953	101.792	101.312	100.837	100.377	100.011
5/23/2008	5/23/2018	2/25/2013	3.270	118.165	118.165	117.800	112.655	108.151	104.584	102.038	100.471
5/27/2008	5/28/2013	5/27/2011	3.490	101.735	101.735	101.735	101.568	101.075	100.587	100.104	99.625
6/6/2008	6/6/2013	12/6/2012	3.990	102.084	102.084	102.084	101.904	101.386	100.873	100.365	99.862
6/16/2008	6/17/2013	12/16/2012	4.070	102.250	102.250	102.250	102.056	101.507	100.963	100.426	99.894
6/24/2008	6/24/2015	12/24/2012	3.830	109.957	109.957	109.957	108.377	105.824	103.549	101.736	100.493
6/30/2008	6/30/2015	12/31/2012	3.370	108.817	108.817	108.817	107.235	104.716	102.568	100.983	100.136
6/30/2008	7/2/2018	12/30/2012	3.690	120.908	120.908	120.344	114.456	108.776	103.420	98.367	93.599
7/1/2008	7/1/2015	1/2/2013	4.600	112.049	112.049	112.049	110.436	107.775	105.194	102.688	100.256
7/7/2008	7/8/2013	1/7/2013	4.590	102.805	102.805	102.805	102.583	101.975	101.374	100.780	100.193
7/8/2008	7/8/2013	1/8/2013	4.250	102.597	102.597	102.597	102.376	101.768	101.168	100.575	99.989
7/10/2008	7/10/2014	1/10/2013	4.800	107.826	107.826	107.826	106.976	105.333	103.723	102.147	100.601
7/11/2008	7/11/2018	1/11/2013	3.750	121.342	121.342	120.741	114.819	109.106	103.720	98.640	93.847
7/14/2008	7/14/2015	7/15/2013	4.900	113.012	113.012	113.012	111.363	108.653	106.014	103.458	101.121
7/14/2008	7/16/2018	1/14/2013	2.500	114.262	114.262	113.774	108.939	104.939	102.091	100.455	99.852
7/14/2008	7/16/2018	1/14/2013	3.250	118.542	118.542	118.009	112.768	108.209	104.617	102.061	100.520
7/17/2008	7/17/2018	7/17/2013	3.750	121.405	121.405	120.780	114.840	109.185	104.532	101.668	100.105
7/21/2008	7/22/2013	1/22/2013	3.000	101.950	101.950	101.950	101.711	101.069	100.440	100.027	99.844
8/15/2008	8/15/2018	2/15/2013	3.830	122.170	122.170	121.505	115.969	111.039	106.983	103.841	101.621
9/8/2008	9/9/2013	12/10/2012	2.890	102.272	102.272	102.272	101.968	101.195	100.484	100.050	99.967
5/13/2009	5/13/2014	5/13/2013	4.000	105.877	105.877	105.877	105.151	103.684	102.200	100.748	99.559
9/28/2009	9/30/2013	12/28/2012	2.920	102.466	102.466	102.466	102.133	101.302	100.534	100.053	99.910
5/11/2010	5/11/2015	5/11/2015	3.700	109.167	109.167	109.167	107.679	105.091	102.115	98.545	94.678
5/24/2010	5/26/2015	5/11/2015	2.250	105.668	105.668	105.668	104.174	101.693	99.284	96.944	94.671
6/15/2010	6/15/2015	12/15/2012	2.280	105.870	105.870	105.870	104.333	101.796	99.334	98.929	96.944
4/27/2012	4/27/2016	4/29/2013	-0.147	104.361	104.361	104.361	102.109	100.222	99.931	99.911	99.903
4/30/2012	5/2/2016	4/30/2013	-0.147	104.208	104.208	104.208	101.958	100.174	99.942	99.935	99.935

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
5/15/2012	5/15/2017	5/15/2014	-0.150	105.936	105.936	105.936	102.716	100.710	99.916	99.636	99.564
5/15/2012	5/15/2017	11/17/2014	-0.150	106.358	106.358	106.358	103.057	100.911	99.870	99.370	99.162
7/16/2012	7/17/2017	7/16/2014	-0.116	105.240	105.240	105.240	102.016	100.305	99.706	99.529	99.482
7/18/2012	7/18/2018	7/20/2015	-0.125	108.287	108.287	107.660	103.073	100.793	99.724	99.176	98.918
7/19/2012	7/19/2017	7/21/2014	-0.129	105.149	105.149	105.149	101.932	100.255	99.674	99.497	99.447
10/1/2012	10/1/2019	4/1/2015	0.000	110.273	110.273	107.582	102.650	100.406	99.391	98.929	98.688
10/5/2012	10/5/2017	10/6/2014	0.003	104.980	104.980	104.980	101.523	99.961	99.353	99.080	98.937
10/5/2012	10/5/2017	10/6/2014	0.003	104.980	104.980	104.980	101.523	99.961	99.353	99.080	98.937