

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
2/27/1997	2/27/2012	8/27/2008	6.580	119.871	116.068	112.423	108.974	105.864	103.276	101.386	100.328
4/8/1998	4/8/2013	10/8/2008	5.490	119.582	114.653	110.133	106.208	103.150	101.118	100.145	99.806
8/19/1998	8/19/2013	8/19/2008	5.490	120.741	115.464	110.648	106.516	103.318	101.202	100.202	99.955
8/19/1998	8/19/2013	8/19/2008	5.490	120.741	115.464	110.648	106.516	103.318	101.202	100.202	99.955
8/25/1998	8/19/2013	10/27/2008	5.490	120.741	115.464	110.647	106.512	103.313	101.190	100.159	99.955
8/27/1998	8/19/2013	10/27/2008	5.490	120.741	115.464	110.647	106.512	103.313	101.190	100.159	99.955
9/30/1998	9/30/2013	9/30/2008	5.220	119.769	114.447	109.628	105.602	102.616	100.770	100.019	99.800
10/30/1998	10/30/2008	10/30/2003	4.990	101.261	101.129	100.876	100.623	100.372	100.123	99.874	99.627
11/25/1998	11/25/2008	11/25/2003	5.200	101.690	101.477	101.154	100.833	100.514	100.197	99.883	99.570
12/14/1998	12/16/2013	9/15/2008	4.890	118.426	112.966	108.185	104.375	101.751	100.362	99.949	99.817
12/14/1998	12/16/2013	12/15/2008	5.390	121.075	115.498	110.488	106.272	103.085	101.037	100.006	99.507
12/15/1998	12/16/2013	9/15/2008	4.880	118.373	112.916	108.140	104.340	101.727	100.352	99.947	99.816
1/15/1999	1/15/2009	1/15/2004	5.160	102.408	101.967	101.500	101.038	100.581	100.128	99.679	99.236
1/19/1999	1/20/2009	1/21/2003	4.980	102.393	101.947	101.467	100.991	100.520	100.054	99.592	99.135
1/19/1999	1/20/2009	1/21/2003	4.980	102.393	101.947	101.467	100.991	100.520	100.054	99.592	99.135
1/29/1999	1/29/2009	1/29/2003	4.980	102.518	102.063	101.557	101.057	100.561	100.070	99.584	99.103
2/18/1999	2/18/2009	8/18/2008	5.080	102.850	102.314	101.761	101.215	100.675	100.195	99.987	99.937
2/18/1999	2/18/2009	8/18/2008	5.430	103.047	102.510	101.956	101.409	100.869	100.355	100.042	99.955
4/23/1999	4/27/2009	10/23/2008	5.190	103.892	103.130	102.383	101.648	100.924	100.294	100.024	99.983
4/23/1999	4/27/2009	10/23/2008	5.500	104.125	103.361	102.614	101.877	101.152	100.471	100.021	99.983
4/26/1999	4/27/2009	10/27/2008	5.190	103.892	103.130	102.383	101.648	100.924	100.294	100.024	99.983
4/26/1999	4/27/2009	10/27/2008	5.500	104.125	103.361	102.614	101.877	101.152	100.471	100.021	99.983
5/6/1999	5/6/2009	11/6/2008	5.310	104.083	103.252	102.480	101.720	100.976	100.330	100.024	99.983
6/7/1999	6/8/2009	9/8/2008	5.700	104.869	103.950	103.088	102.242	101.411	100.628	100.122	99.936
6/7/1999	6/8/2009	9/8/2008	6.040	105.164	104.243	103.380	102.532	101.700	100.895	100.264	99.982
7/1/1999	7/1/2009	10/1/2008	6.110	105.569	104.567	103.638	102.728	101.836	100.977	100.298	99.944
7/23/1999	7/23/2009	10/23/2008	5.400	105.239	104.218	103.230	102.261	101.315	100.480	100.021	99.983
9/8/1999	9/8/2009	9/8/2008	5.620	106.060	104.883	103.769	102.677	101.612	100.664	100.111	99.928
10/8/1999	10/8/2009	10/8/2008	5.580	106.413	105.150	103.952	102.777	101.638	100.646	100.073	99.821
11/1/1999	11/2/2009	11/3/2008	5.540	106.685	105.343	104.081	102.842	101.644	100.629	100.099	99.996
11/8/1999	11/9/2009	11/10/2008	5.960	107.336	105.984	104.697	103.435	102.203	101.073	100.276	99.990
11/9/1999	11/9/2009	8/11/2008	5.570	106.831	105.483	104.200	102.941	101.722	100.680	100.112	99.981
12/10/1999	12/10/2009	9/10/2008	5.710	107.436	105.999	104.627	103.281	101.978	100.840	100.164	99.934
12/17/1999	12/17/2009	9/17/2008	5.910	107.827	106.381	104.986	103.619	102.288	101.088	100.278	99.956
12/20/1999	12/21/2009	9/22/2008	5.810	107.752	106.302	104.897	103.520	102.182	100.989	100.228	99.932
12/22/1999	12/22/2009	9/22/2008	5.840	107.810	106.360	104.951	103.570	102.229	101.027	100.245	99.936
1/7/2000	1/7/2015	10/7/2008	5.950	126.915	120.219	114.293	109.250	105.250	102.385	100.681	99.958
1/13/2000	1/13/2010	10/14/2008	5.910	108.203	106.672	105.204	103.764	102.365	101.112	100.272	99.888
1/25/2000	1/25/2010	10/27/2008	5.970	108.490	106.947	105.443	103.969	102.534	101.235	100.333	99.991
1/27/2000	1/27/2010	10/27/2008	6.080	108.689	107.143	105.632	104.151	102.707	101.384	100.417	99.994
1/27/2000	1/27/2010	10/27/2008	6.210	108.886	107.338	105.826	104.343	102.895	101.552	100.520	100.073
2/7/2000	2/8/2010	11/7/2008	5.950	108.601	106.994	105.461	103.959	102.500	101.195	100.305	99.991
2/16/2000	2/16/2010	11/3/2008	5.950	108.601	106.994	105.461	103.959	102.500	101.195	100.305	99.991
2/16/2000	2/16/2010	8/18/2008	6.470	109.548	107.926	106.364	104.832	103.335	101.922	100.776	100.152
2/16/2000	2/16/2010	8/18/2008	6.690	109.893	108.268	106.703	105.169	103.667	102.234	101.015	100.251
3/6/2000	3/8/2010	9/8/2008	6.390	109.678	107.975	106.351	104.761	103.214	101.786	100.669	100.100
3/13/2000	3/15/2010	9/15/2008	6.090	109.309	107.604	105.964	104.357	102.804	101.414	100.423	99.994
3/14/2000	3/15/2010	8/14/2008	6.090	109.309	107.604	105.964	104.359	102.812	101.423	100.429	100.020
3/15/2000	3/15/2010	9/15/2008	5.950	109.080	107.376	105.738	104.134	102.588	101.231	100.327	99.967
3/21/2000	3/22/2010	9/22/2008	6.120	109.478	107.765	106.103	104.477	102.902	101.486	100.458	99.995
3/22/2000	3/22/2010	9/22/2008	5.960	109.212	107.502	105.842	104.218	102.653	101.274	100.345	99.962
4/5/2000	4/5/2010	10/6/2008	5.950	109.329	107.549	105.856	104.200	102.611	101.224	100.312	99.911
4/11/2000	4/12/2010	10/14/2008	5.950	109.445	107.658	105.944	104.268	102.660	101.254	100.324	99.904
4/11/2000	4/12/2010	10/14/2008	6.050	109.617	107.828	106.113	104.435	102.820	101.391	100.399	99.933
4/11/2000	4/12/2010	10/14/2008	6.470	110.339	108.543	106.822	105.137	103.501	101.988	100.786	100.108
4/11/2000	4/12/2010	10/14/2008	6.560	110.493	108.697	106.974	105.288	103.648	102.123	100.885	100.155
4/11/2000	4/12/2010	10/14/2008	6.750	110.820	109.020	107.294	105.606	103.960	102.408	101.104	100.269
4/12/2000	4/12/2010	10/14/2008	5.990	109.514	107.726	106.011	104.335	102.724	101.309	100.353	99.915
4/13/2000	4/13/2010	10/14/2008	6.560	110.511	108.714	106.988	105.299	103.657	102.129	100.889	100.156
4/24/2000	4/26/2010	10/24/2008	6.450	110.555	108.746	106.983	105.259	103.585	102.036	100.806	100.102
5/3/2000	5/3/2010	11/3/2008	6.240	110.206	108.334	106.555	104.818	103.147	101.652	100.557	100.073
5/3/2000	5/3/2010	11/3/2008	6.360	110.419	108.545	106.765	105.025	103.347	101.827	100.674	100.115
5/15/2000	5/17/2010	8/15/2008	6.990	111.810	109.911	108.079	106.288	104.544	102.896	101.471	100.468
5/30/2000	6/1/2010	9/2/2008	6.490	111.075	109.111	107.250	105.432	103.674	102.070	100.821	100.157
8/8/2000	8/9/2010	11/10/2008	5.990	111.060	108.917	106.869	104.877	103.005	101.422	100.383	100.005
8/18/2000	8/18/2010	8/18/2008	6.090	111.416	109.262	107.185	105.165	103.256	101.616	100.489	100.026
10/5/2000	10/5/2010	10/6/2008	5.710	111.127	108.818	106.620	104.501	102.568	101.046	100.186	99.853
10/10/2000	10/12/2010	10/10/2008	5.840	111.527	109.208	106.985	104.838	102.861	101.256	100.283	99.877
10/13/2000	10/13/2010	10/14/2008	5.750	111.343	109.025	106.802	104.658	102.695	101.130	100.217	99.849
10/23/2000	10/25/2010	10/23/2008	5.640	111.287	108.959	106.703	104.532	102.561	101.022	100.165	99.853
12/5/2000	12/6/2010	9/5/2008	5.410	111.134	108.656	106.297	104.055	102.100	100.698	100.069	99.910
12/11/2000	12/13/2010	9/11/2008	5.170	110.666	108.187	105.817	103.585	101.704	100.461	99.996	99.863
12/12/2000	12/13/2010	9/12/2008	5.110	110.522	108.045	105.677	103.455	101.599	100.405	99.985	99.856
12/15/2000	12/15/2010	9/15/2008	5.120	110.574	108.095	105.721	103.492	101.626	100.418	99.986	99.851
12/20/2000	12/20/2010	9/22/2008	4.950	110.236	107.757	105.376	103.163	101.367	100.295	99.949	99.810
12/21/2000	12/21/2010	9/22/2008	4.860	110.032	107.555	105.176	102.977	101.226	100.236	99.933	99.793
1/11/2001	1/11/2011	10/14/2008	5.370	111.441	108.869	106.414	104.095	102.102	100.699	100.035	99.773
1/12/2001	1/12/2011	10/14/2008	5.300	111.283	108.712	106.257	103.944	101.977	100.623	100.004	99.756
2/5/2001	2/7/2011	11/5/2008	4.820	110.291	107.660	105.169	102.904	101.147	100.197	99.990	99.970
2/7/2001	2/7/2011	11/7/2008	4.820	110.291	107.660	105.169	102.904	1			

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
4/23/2001	4/25/2011	4/24/2006	5.350	112.447	109.606	106.863	104.204	101.628	99.130	96.707	94.358
6/1/2001	6/1/2011	9/2/2008	4.990	111.633	108.658	105.874	103.381	101.441	100.313	99.976	99.886
12/13/2001	12/13/2011	9/15/2008	4.920	113.193	109.686	106.413	103.577	101.471	100.302	99.954	99.833
6/3/2002	6/4/2012	9/3/2008	4.490	112.948	108.979	105.428	102.612	100.805	100.074	99.920	99.827
6/4/2002	6/4/2012	9/4/2008	4.490	112.948	108.979	105.428	102.612	100.805	100.074	99.920	99.827
12/5/2002	12/5/2012	9/5/2008	3.790	111.135	106.832	103.377	101.118	100.137	99.944	99.848	99.752
3/6/2003	3/6/2013	9/8/2008	2.990	107.911	103.860	101.268	100.143	99.959	99.860	99.762	99.663
1/27/2004	1/27/2009	10/27/2008	2.890	101.445	100.995	100.498	100.100	99.848	99.608	99.368	99.130
2/5/2004	12/18/2008	12/19/2005	5.150	102.003	101.688	101.299	100.913	100.530	100.150	99.773	99.400
2/5/2004	4/26/2010	10/24/2008	6.200	110.116	108.310	106.551	104.832	103.174	101.680	100.576	99.991
2/5/2004	12/14/2010	9/15/2008	5.820	112.236	109.737	107.341	105.038	102.945	101.279	100.296	99.949
2/9/2004	2/9/2009	8/1/2008	3.110	101.667	101.142	100.618	100.150	99.994	99.969	99.944	99.919
2/17/2004	2/17/2009	8/18/2008	2.910	101.625	101.092	100.546	100.100	99.980	99.933	99.886	99.839
3/4/2004	3/4/2009	9/4/2008	2.970	101.782	101.156	100.563	100.096	99.959	99.866	99.773	99.680
3/12/2004	3/12/2009	9/12/2008	2.690	101.674	101.041	100.429	100.042	99.918	99.802	99.687	99.572
4/1/2004	4/1/2009	10/1/2008	2.770	101.877	101.146	100.481	100.039	99.860	99.690	99.522	99.354
5/24/2004	5/26/2009	8/25/2008	3.580	102.941	102.097	101.274	100.491	100.048	99.946	99.874	99.802
5/28/2004	5/28/2009	8/28/2008	3.700	103.061	102.215	101.386	100.588	100.080	99.951	99.873	99.796
6/11/2004	6/11/2009	9/11/2008	3.750	103.211	102.296	101.434	100.603	100.079	99.930	99.817	99.705
6/18/2004	6/20/2011	9/18/2008	4.120	109.369	106.424	103.742	101.613	100.357	99.971	99.830	99.693
7/2/2004	7/2/2014	10/2/2008	3.990	114.216	108.730	104.476	101.666	100.286	99.902	99.727	99.556
8/5/2004	8/5/2009	11/5/2008	3.470	103.384	102.306	101.297	100.399	99.951	99.687	99.428	99.171
12/13/2004	12/15/2014	9/15/2008	3.320	110.812	105.696	102.253	100.464	99.994	99.869	99.745	99.622
12/17/2004	12/17/2009	9/17/2008	3.710	104.750	103.326	101.956	100.727	100.082	99.915	99.786	99.657
5/5/2005	5/5/2010	5/5/2006	4.190	106.588	104.748	103.004	101.415	100.336	100.009	99.836	99.669
5/17/2005	5/17/2010	8/18/2008	4.070	106.510	104.660	102.887	101.294	100.273	99.990	99.940	99.893
6/6/2005	6/7/2010	9/8/2008	3.890	106.314	104.392	102.577	101.017	100.155	99.951	99.850	99.748
7/18/2005	7/19/2010	10/20/2008	4.160	107.205	105.179	103.235	101.499	100.354	99.925	99.701	99.484
9/1/2005	9/1/2015	9/2/2008	4.130	116.287	110.075	105.320	102.132	100.459	99.989	99.895	99.810
9/19/2005	9/19/2012	9/19/2008	3.820	110.987	106.874	103.472	101.191	100.153	99.927	99.792	99.658
9/26/2005	9/26/2012	9/26/2008	3.890	111.351	107.214	103.741	101.359	100.208	99.928	99.774	99.621
9/30/2005	9/30/2015	9/30/2008	4.440	118.692	112.204	106.996	103.260	101.002	100.080	99.836	99.669
10/26/2005	10/26/2015	10/27/2008	4.540	119.457	112.838	107.498	103.611	101.196	100.127	99.772	99.534
10/28/2005	10/28/2015	10/28/2008	4.140	116.774	110.461	105.578	102.279	100.506	100.014	99.939	99.881
10/28/2005	10/28/2015	10/28/2008	4.310	117.918	111.466	106.371	102.806	100.752	99.983	99.709	99.468
11/4/2005	11/4/2010	11/4/2008	4.520	108.755	106.392	104.160	102.152	100.688	100.064	99.991	99.980
11/21/2005	11/21/2012	8/21/2008	4.290	113.313	108.950	105.140	102.284	100.592	100.014	99.939	99.881
12/22/2005	12/22/2008	9/22/2008	4.750	101.900	101.582	101.182	100.785	100.391	100.001	99.939	99.881
1/6/2006	1/6/2016	10/6/2008	4.020	116.071	109.718	104.962	101.866	100.333	99.903	99.718	99.536
1/17/2006	1/19/2016	10/17/2008	4.080	116.627	110.203	105.324	102.092	100.423	100.312	99.896	99.694
3/20/2006	3/21/2011	9/21/2008	4.760	110.525	107.795	105.166	102.616	100.143	100.131	99.989	99.975
4/11/2006	4/11/2011	10/14/2008	4.980	111.235	108.423	105.762	103.347	101.441	100.312	99.896	99.694
4/19/2006	4/19/2013	10/20/2008	4.630	115.723	110.916	106.666	103.331	101.140	100.131	99.989	99.975
4/24/2006	4/25/2016	10/24/2008	4.440	119.614	112.682	107.210	103.328	101.005	100.049	99.939	99.881
4/28/2006	4/28/2011	10/28/2008	5.090	111.774	108.940	106.197	103.540	100.965	100.053	99.986	99.972
5/5/2006	5/6/2013	11/5/2008	4.780	116.445	111.546	107.215	103.751	101.399	100.235	99.991	99.974
5/5/2006	5/5/2016	11/5/2008	4.350	118.852	111.963	106.629	102.924	100.797	100.053	99.986	99.972
5/5/2006	5/5/2016	11/5/2008	4.530	120.150	113.103	107.548	103.567	101.137	100.137	99.989	99.975
5/5/2006	5/5/2016	5/5/2009	4.980	123.427	116.043	110.002	105.393	102.247	100.398	99.337	98.566
5/9/2006	5/9/2011	8/11/2008	5.050	111.647	108.747	106.013	103.538	101.573	100.372	99.993	99.968
5/15/2006	5/16/2016	8/15/2008	4.350	118.984	112.084	106.718	102.983	100.827	100.053	99.956	99.912
5/15/2006	5/16/2016	8/15/2008	4.520	120.216	113.166	107.590	103.593	101.151	100.136	99.964	99.919
5/19/2006	5/19/2016	8/19/2008	4.510	120.181	113.136	107.564	103.573	101.141	100.132	99.956	99.904
6/12/2006	6/13/2016	9/12/2008	4.620	121.063	113.868	108.139	103.972	101.358	100.191	99.914	99.797
6/26/2006	6/27/2016	9/26/2008	4.730	122.055	114.760	108.863	104.499	101.676	100.295	99.905	99.748
6/28/2006	6/28/2013	12/28/2006	4.950	117.773	112.739	108.205	104.497	101.872	100.422	99.947	99.780
6/28/2006	6/28/2013	9/29/2008	4.950	117.773	112.739	108.205	104.497	101.872	100.422	99.947	99.780
6/30/2006	7/1/2013	9/30/2008	4.890	117.314	112.239	107.753	104.136	101.634	100.325	99.967	99.877
7/14/2006	7/15/2013	10/14/2008	4.890	117.504	112.415	107.890	104.235	101.693	100.340	99.974	99.661
7/19/2006	7/19/2011	10/20/2008	5.250	112.903	109.809	106.873	104.203	102.031	100.596	99.947	99.780
7/20/2006	7/20/2011	10/20/2008	5.300	113.066	109.969	106.994	104.118	101.336	100.191	99.914	99.797
7/24/2006	7/25/2016	10/24/2008	4.660	121.658	114.357	108.506	104.225	101.502	100.215	99.905	99.748
7/28/2006	7/28/2016	10/28/2008	4.490	120.431	113.267	107.613	103.584	101.129	100.088	99.956	99.912
8/1/2006	8/1/2016	8/3/2009	4.890	123.221	115.699	109.625	105.060	101.996	100.137	99.828	97.953
8/11/2006	8/11/2011	8/11/2008	4.790	111.689	108.539	105.602	103.056	101.176	100.198	99.983	99.953
8/21/2006	8/21/2013	8/21/2008	4.750	117.071	111.934	107.414	103.846	101.446	100.258	99.966	99.908
8/25/2006	8/25/2016	8/25/2008	4.350	119.487	112.398	106.898	103.077	100.866	100.055	99.932	99.863
8/28/2006	8/29/2011	8/28/2008	4.890	112.238	109.064	106.062	103.427	101.432	100.304	99.966	99.884
9/22/2006	9/22/2011	9/22/2008	4.790	112.104	108.857	105.808	103.168	101.228	100.215	99.921	99.779
9/29/2006	9/29/2011	9/29/2008	4.590	111.562	108.319	105.286	102.725	100.934	100.107	99.878	99.716
10/10/2006	10/10/2013	10/10/2008	4.250	114.710	109.583	105.326	102.277	100.541	99.958	99.748	99.555
10/12/2006	10/15/2013	10/14/2008	4.500	116.050	110.839	106.387	103.031	100.935	100.056	99.786	99.579
10/20/2006	10/20/2009	10/20/2008	4.930	105.794	104.524	103.297	102.093	100.912	100.056	99.786	99.579
10/30/2006	10/31/2011	10/30/2008	4.850	112.670	109.319	106.086	102.973	100.716	100.092	99.838	99.588
11/3/2006	11/3/2011	11/3/2008	4.690	112.043	108.644	105.421	102.343	100.465	100.013	99.757	99.505
11/6/2006	11/6/2013	11/6/2008	4.290	115.010	109.808	105.493	102.384	100.600	100.021	99.982	99.966
11/10/2006	11/13/2012	8/11/2008	4.390	113.645	109.273	105.434	102.502	100.703	100.046	99.966	99.930
11/17/2006	11/18/2013	8/18/2008	4.350	115.465	110.230	105.835	102.621	100.716	100.039	99.951	99.901
11/24/2006	11/25/2016	8/25/2008	4.190	118.654	111.559	106.181	102.580	100.615	99.997	99.921	99.852
11/30/2006	12/2/2013	9/2/2008	4.350	115.405	110.128	105.747	102.561	100.693	100.036	99.912	99.824
12/1/2006	12/1/2016	9/2/2008	4.090	117.728	110.715	105.530	102.				

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
12/12/2006	12/12/2016	9/12/2008	4.050	117.550	110.571	105.420	102.082	100.398	99.967	99.849	99.734
12/13/2006	12/15/2008	9/15/2008	4.890	101.861	101.550	101.169	100.791	100.417	100.103	99.945	99.821
12/13/2006	12/14/2009	12/15/2008	4.830	106.277	104.844	103.469	102.126	100.912	100.109	99.660	99.293
12/19/2006	12/19/2011	9/19/2008	4.490	111.815	108.332	105.132	102.516	100.782	100.059	99.885	99.750
12/19/2006	12/19/2016	12/19/2008	4.190	118.693	111.551	106.160	102.553	100.588	99.811	99.402	99.026
12/20/2006	12/20/2013	12/22/2008	4.500	116.414	111.063	106.510	103.092	100.964	99.976	99.521	99.141
12/21/2006	12/21/2011	9/22/2008	4.530	111.976	108.488	105.272	102.626	100.847	100.076	99.886	99.746
12/27/2006	12/27/2013	12/29/2008	4.500	116.502	111.143	106.570	103.133	100.986	99.980	99.505	99.106
12/28/2006	12/28/2016	9/29/2008	4.250	119.259	112.042	106.535	102.800	100.712	100.003	99.825	99.666
12/28/2006	12/28/2016	12/29/2008	4.400	120.418	113.042	107.324	103.332	100.982	99.939	99.462	99.061
1/8/2007	1/9/2012	10/8/2008	4.750	112.826	109.246	105.944	103.159	101.184	100.186	99.850	99.658
1/12/2007	1/12/2017	1/12/2009	4.420	120.509	113.073	107.339	103.334	100.973	99.884	99.351	98.912
1/16/2007	1/17/2017	1/17/2012	4.790	123.468	115.680	109.383	104.378	100.310	96.825	93.687	90.767
1/23/2007	1/23/2014	10/23/2008	4.490	116.551	111.132	106.536	103.097	100.959	100.056	99.886	99.746
1/23/2007	1/23/2017	10/23/2008	4.460	120.956	113.470	107.646	103.550	101.091	100.073	99.886	99.746
1/29/2007	1/29/2014	1/29/2009	4.790	118.246	112.730	107.924	104.154	101.607	100.211	99.512	99.009
2/2/2007	2/2/2017	11/3/2008	4.690	122.651	114.913	108.822	104.391	101.591	100.239	99.769	99.509
2/9/2007	2/9/2012	8/11/2008	4.750	113.077	109.415	106.038	103.196	101.185	100.189	99.985	99.960
2/9/2007	2/9/2012	8/11/2008	4.750	113.077	109.415	106.038	103.196	101.185	100.189	99.985	99.960
2/9/2007	2/9/2017	8/11/2008	4.470	121.006	113.466	107.630	103.533	101.088	100.117	99.978	99.953
2/12/2007	2/13/2012	2/12/2009	4.880	113.591	109.915	106.499	103.573	101.435	100.198	99.524	99.001
2/15/2007	2/15/2012	2/17/2009	4.990	114.008	110.323	106.884	103.905	101.674	100.329	99.592	99.054
2/20/2007	2/21/2017	8/20/2008	4.390	120.526	113.053	107.298	103.296	100.964	100.076	99.945	99.887
2/20/2007	2/21/2017	2/21/2012	4.850	124.002	115.761	109.184	104.194	100.207	96.772	93.642	90.695
2/23/2007	2/23/2017	8/25/2008	4.250	119.454	112.128	106.570	102.808	100.716	100.020	99.931	99.867
2/23/2007	2/23/2017	8/25/2008	4.350	120.237	112.802	107.100	103.161	100.892	100.059	99.937	99.874
2/28/2007	3/1/2010	9/1/2008	4.890	107.149	105.475	103.891	102.339	100.819	100.059	99.937	99.874
3/2/2007	3/2/2012	9/2/2008	4.490	112.267	108.549	105.196	102.501	100.752	100.055	99.924	99.837
3/9/2007	3/10/2014	3/9/2009	4.450	116.424	110.916	106.318	102.925	100.845	99.780	99.125	98.544
3/16/2007	3/16/2017	9/16/2008	4.090	118.210	111.034	105.718	102.254	100.462	99.971	99.840	99.714
3/20/2007	3/20/2012	9/22/2008	4.550	112.710	108.970	105.553	102.775	100.919	100.103	99.891	99.754
3/21/2007	3/21/2017	9/22/2008	4.220	119.284	111.950	106.416	102.700	100.657	99.998	99.841	99.701
3/23/2007	3/23/2017	3/23/2009	4.290	119.859	112.442	106.800	102.953	100.749	99.672	98.991	98.378
3/23/2007	3/23/2017	3/23/2009	4.290	119.859	112.442	106.800	102.953	100.749	99.672	98.991	98.378
3/23/2007	3/23/2017	6/23/2009	4.290	119.859	112.442	106.800	102.953	100.749	99.672	98.991	98.378
3/30/2007	3/30/2012	9/30/2008	4.670	113.277	109.506	105.866	102.407	100.530	99.937	99.729	99.536
4/2/2007	4/2/2012	4/2/2009	4.590	112.859	109.049	105.598	102.789	100.898	99.828	99.120	98.488
4/9/2007	4/9/2009	10/9/2008	4.750	103.325	102.581	101.886	101.202	100.535	100.072	99.848	99.658
4/9/2007	4/10/2017	10/9/2008	4.150	118.723	111.430	106.003	102.429	100.530	99.937	99.729	99.536
4/12/2007	4/12/2017	10/14/2008	4.250	119.535	112.121	106.535	102.770	100.688	99.970	99.742	99.544
4/13/2007	4/13/2017	4/13/2009	4.450	121.133	113.503	107.617	103.506	101.041	99.777	99.006	98.341
4/18/2007	4/20/2009	10/20/2008	4.940	103.609	102.854	102.128	101.412	100.711	100.159	99.803	99.574
4/23/2007	4/23/2012	10/23/2008	4.650	113.351	109.515	105.989	103.090	101.101	100.143	99.803	99.574
4/23/2007	4/23/2014	4/23/2010	4.620	117.673	112.023	107.217	103.539	100.924	98.965	97.286	95.715
4/27/2007	4/27/2012	4/27/2009	4.550	113.028	109.196	105.685	102.834	100.915	99.807	99.042	98.345
4/27/2007	4/27/2017	10/27/2008	4.250	119.712	112.282	106.653	102.847	100.725	100.068	99.963	99.918
5/2/2007	5/2/2014	5/3/2010	4.590	117.368	111.693	106.936	103.313	100.733	98.770	97.076	95.487
5/4/2007	5/5/2014	5/4/2009	4.550	117.182	111.520	106.786	103.247	101.011	99.769	98.953	98.236
5/14/2007	5/16/2011	8/14/2008	4.500	110.200	107.319	104.631	102.336	100.742	100.068	99.963	99.918
5/18/2007	5/18/2017	8/18/2008	4.190	119.237	111.838	106.300	102.614	100.619	100.002	99.943	99.893
5/22/2007	5/22/2012	5/22/2009	4.690	113.710	109.786	106.182	103.212	101.142	99.890	99.031	98.268
5/22/2007	5/22/2012	5/22/2009	4.690	113.710	109.786	106.182	103.212	101.142	99.890	99.031	98.268
5/22/2007	5/22/2012	5/22/2009	4.710	113.786	109.860	106.251	103.267	101.179	99.911	99.047	98.284
5/22/2007	5/22/2017	5/22/2012	4.750	123.796	115.797	109.340	104.163	99.884	96.168	92.797	89.653
5/25/2007	5/25/2012	8/25/2008	4.650	113.597	109.673	106.073	103.121	101.104	100.156	99.952	99.883
5/29/2007	5/30/2017	8/29/2008	4.250	119.855	112.370	106.706	102.873	100.729	99.998	99.910	99.827
6/1/2007	6/1/2010	9/2/2008	4.990	108.291	106.355	104.520	102.753	101.223	100.264	99.974	99.886
6/1/2007	6/2/2014	9/2/2008	4.500	117.002	111.299	106.572	103.080	100.938	100.084	99.925	99.838
6/7/2007	6/7/2012	9/8/2008	4.940	114.717	110.700	107.003	103.866	101.584	100.332	99.965	99.858
6/7/2007	6/7/2017	6/8/2009	4.820	124.322	116.220	109.790	105.051	101.946	100.170	99.106	98.274
6/8/2007	6/9/2014	9/8/2008	4.730	118.401	112.597	107.678	103.898	101.415	100.230	99.934	99.828
6/8/2007	6/8/2017	9/8/2008	4.490	121.647	113.869	107.874	103.664	101.138	100.119	99.910	99.806
6/11/2007	6/12/2017	9/11/2008	4.490	121.697	113.915	107.908	103.687	101.151	100.121	99.901	99.786
6/18/2007	6/19/2017	9/18/2008	4.500	121.866	114.065	108.024	103.767	101.194	100.131	99.886	99.752
6/18/2007	6/19/2017	6/18/2009	4.840	124.647	116.514	110.023	105.220	102.050	100.218	99.111	98.245
6/19/2007	6/19/2017	9/19/2008	4.650	123.090	115.134	108.890	104.385	101.552	100.242	99.907	99.772
6/20/2007	6/20/2012	9/22/2008	4.890	114.701	110.676	106.952	103.808	101.539	100.311	99.941	99.801
6/20/2007	6/20/2012	9/22/2008	4.960	114.973	110.941	107.201	104.016	101.681	100.372	99.955	99.811
6/22/2007	6/22/2017	9/22/2008	4.500	121.903	114.100	108.049	103.785	101.203	100.132	99.879	99.737
6/26/2007	6/26/2012	6/26/2009	5.130	115.719	111.666	107.872	104.578	102.077	100.434	99.351	98.474
6/28/2007	6/28/2017	9/29/2008	4.500	121.978	114.168	108.100	103.819	101.222	100.135	99.865	99.707
7/13/2007	7/13/2012	10/14/2008	4.690	114.056	109.971	106.254	103.217	101.142	100.149	99.830	99.628
7/13/2007	7/13/2017	10/14/2008	4.290	120.206	112.588	106.849	102.957	100.772	99.986	99.747	99.547
7/13/2007	7/13/2017	7/13/2011	4.900	125.206	116.966	110.346	105.212	101.220	97.966	95.133	92.535
7/18/2007	7/18/2017	7/19/2010	4.780	124.281	116.146	109.696	104.925	101.571	99.118	97.114	95.301
7/19/2007	7/19/2012	7/20/2009	4.890	114.926	110.816	107.027	103.840	101.532	100.045	99.003	98.097
7/20/2007	7/20/2017	10/20/2008	4.290	120.290	112.664	106.905	102.993	100.790	99.986	99.747	99.547
7/24/2007	7/24/2012	7/24/2009	4.820	114.716	110.607	106.822	103.664	101.407	99.960	98.926	98.011
7/27/2007	7/27/2012	10/27/2008	4.590	113.840	109.752	106.029	103.028	101.019	100.099	100.000	100.000
7/27/2007	7/28/2014	10/27/2008	4.350	116.580	110.863	106.159	102.767	100.765	99.986	99.747	99.547
7/27/2007	7/27/2017	10/27/2008	4.180	119.480	111.980	106.371	102.645				

Start Date	Maturity		Coupon	Next Call							
	Date	Date		-300	-200	-100	Base	+100	+200	+300	+400
8/2/2007	8/2/2017	11/3/2008	4.050	118.248	110.897	105.548	102.117	100.406	99.998	99.993	99.987
8/2/2007	8/2/2017	11/3/2008	4.150	119.054	111.571	106.055	102.438	100.537	99.999	99.993	99.988
8/6/2007	8/6/2012	11/6/2008	4.490	113.381	109.244	105.558	102.658	100.808	100.073	99.986	99.969
8/6/2007	8/6/2012	11/6/2008	4.490	113.381	109.244	105.558	102.658	100.808	100.073	99.986	99.969
8/9/2007	8/11/2014	8/9/2011	4.860	119.464	113.484	108.345	104.086	100.561	97.512	94.746	92.150
8/9/2007	8/9/2017	8/11/2008	3.990	117.846	110.566	105.305	101.971	100.347	99.991	99.966	99.941
8/9/2007	8/9/2017	8/11/2008	3.990	117.846	110.566	105.305	101.971	100.347	99.991	99.966	99.941
8/13/2007	8/13/2012	8/13/2009	4.590	113.871	109.715	105.971	102.970	100.921	99.586	98.551	97.597
8/16/2007	8/16/2017	8/18/2008	3.990	117.923	110.637	105.355	102.002	100.360	99.984	99.940	99.896
8/17/2007	8/17/2012	8/18/2008	4.150	112.146	108.045	104.487	101.871	100.408	99.991	99.944	99.897
8/17/2007	8/17/2012	8/18/2008	4.350	112.953	108.823	105.163	102.357	100.644	100.032	99.953	99.906
8/17/2007	8/17/2017	8/18/2008	4.000	118.015	110.714	105.411	102.036	100.373	99.984	99.937	99.890
8/20/2007	8/20/2010	8/20/2009	4.590	108.336	106.213	104.167	102.267	100.722	99.545	98.532	97.565
8/20/2007	8/20/2014	8/20/2009	4.250	115.993	110.248	105.591	102.316	100.387	99.186	98.179	97.216
8/20/2007	8/20/2014	8/20/2009	4.250	115.993	110.248	105.591	102.316	100.387	99.186	98.179	97.216
8/24/2007	8/24/2010	8/25/2008	4.460	108.116	105.991	103.940	102.055	100.655	100.052	99.942	99.875
8/24/2007	8/24/2012	8/25/2008	4.050	111.821	107.730	104.208	101.679	100.325	99.981	99.914	99.848
8/28/2007	8/28/2014	8/28/2009	4.350	116.691	110.920	106.188	102.776	100.652	99.322	98.267	97.279
8/30/2007	8/30/2012	8/31/2009	4.390	113.273	109.123	105.407	102.522	100.615	99.348	98.302	97.311
8/30/2007	9/2/2014	9/2/2008	3.890	113.810	108.296	104.105	101.420	100.199	99.957	99.870	99.782
8/31/2007	8/31/2012	8/31/2009	4.370	113.204	109.055	105.342	102.471	100.580	99.323	98.278	97.284
9/4/2007	9/4/2012	9/4/2008	4.190	112.338	108.166	104.566	101.914	100.417	99.989	99.891	99.798
9/4/2007	9/4/2012	9/4/2008	4.220	112.461	108.283	104.667	101.985	100.449	99.994	99.894	99.800
9/4/2007	9/5/2017	9/4/2008	3.890	117.097	109.909	104.813	101.672	100.248	99.954	99.858	99.762
9/6/2007	9/7/2010	9/8/2008	4.160	107.523	105.338	103.274	101.470	100.312	99.981	99.878	99.777
9/7/2007	9/7/2012	9/8/2008	4.090	111.964	107.806	104.254	101.698	100.323	99.973	99.871	99.769
9/10/2007	9/11/2017	9/10/2008	3.690	115.568	108.680	103.948	101.192	100.114	99.923	99.810	99.698
9/11/2007	9/13/2010	9/11/2009	4.430	108.171	105.973	103.876	101.966	100.458	99.279	98.222	97.201
9/11/2007	9/11/2017	9/11/2008	3.590	114.783	108.055	103.525	100.976	100.064	99.911	99.799	99.687
9/12/2007	9/12/2014	9/12/2008	3.690	112.759	107.386	103.429	101.037	100.093	99.921	99.806	99.691
9/13/2007	9/15/2014	9/14/2009	3.990	114.533	108.937	104.588	101.697	99.980	98.790	97.733	96.710
9/13/2007	9/13/2017	9/13/2010	3.990	117.989	110.655	105.328	101.707	99.134	97.018	95.079	93.222
9/14/2007	9/14/2011	9/15/2008	4.090	109.802	106.611	103.754	101.554	100.304	99.967	99.847	99.726
9/14/2007	9/14/2012	9/14/2010	4.390	113.277	109.064	105.323	102.302	99.896	97.815	95.878	94.012
9/17/2007	9/17/2012	9/17/2009	4.220	112.613	108.423	104.768	102.042	100.281	99.051	97.981	96.951
9/27/2007	9/27/2010	9/29/2008	4.250	107.951	105.744	103.617	101.725	100.442	99.989	99.828	99.672
9/27/2007	9/29/2014	9/27/2010	4.490	117.576	111.391	106.271	102.691	100.144	98.022	96.050	94.149
9/27/2007	9/27/2017	9/29/2008	3.650	115.415	108.575	103.877	101.160	100.106	99.888	99.732	99.576
9/28/2007	9/28/2010	9/29/2008	4.290	108.050	105.841	103.709	101.801	100.484	99.997	99.831	99.672
9/28/2007	9/28/2012	9/29/2008	3.850	111.207	107.077	103.628	101.287	100.184	99.919	99.760	99.601
10/3/2007	10/3/2012	10/3/2008	3.830	110.996	106.825	103.421	101.151	100.130	99.869	99.695	99.522
10/9/2007	10/9/2012	10/9/2009	4.400	113.439	109.113	105.110	102.098	100.354	99.124	98.009	96.923
10/11/2007	10/14/2014	4/13/2009	4.180	115.726	109.964	105.383	102.223	100.439	99.501	98.806	98.148
10/11/2007	10/11/2017	10/14/2008	3.990	118.055	110.682	105.361	101.991	100.355	99.893	99.694	99.498
10/15/2007	10/16/2017	10/15/2008	3.990	118.110	110.732	105.397	102.014	100.364	99.888	99.675	99.466
10/22/2007	10/22/2012	10/22/2008	3.990	111.872	107.643	104.065	101.558	100.269	99.881	99.653	99.428
10/25/2007	10/27/2014	10/25/2011	4.360	116.953	111.068	106.142	102.117	98.717	95.680	92.851	90.158
10/26/2007	10/26/2017	10/27/2008	3.390	113.433	107.012	102.844	100.659	100.033	99.986	99.969	99.952
10/29/2007	10/29/2009	10/29/2008	4.250	105.059	103.785	102.538	101.331	100.368	99.939	99.692	99.447
10/29/2007	10/29/2012	10/29/2009	3.990	111.949	107.713	104.116	101.560	99.898	98.631	97.465	96.332
11/2/2007	11/3/2014	11/2/2009	3.990	114.571	108.897	104.541	101.646	99.854	98.543	97.362	96.219
11/2/2007	11/3/2014	11/2/2010	4.190	115.761	109.956	105.341	101.920	99.312	97.094	95.043	93.076
11/5/2007	11/5/2014	11/5/2009	3.990	114.593	108.917	104.555	101.655	99.857	98.542	97.356	96.208
11/5/2007	11/6/2017	11/5/2012	4.390	121.412	113.447	107.142	102.037	97.690	93.811	90.230	86.865
11/6/2007	11/6/2017	11/6/2008	3.480	114.013	107.408	103.085	100.761	100.033	99.986	99.969	99.952
11/8/2007	11/9/2009	11/10/2008	4.100	104.930	103.594	102.324	101.108	100.237	99.994	99.969	99.944
11/9/2007	11/10/2014	11/9/2011	4.330	116.683	110.777	105.886	101.883	98.485	95.435	92.589	89.879
11/13/2007	11/14/2011	11/13/2008	3.760	109.118	105.797	102.962	100.991	100.086	99.751	99.467	99.185
11/13/2007	11/13/2012	11/13/2008	3.680	110.616	106.404	103.056	100.934	100.050	99.729	99.448	99.169
11/13/2007	11/13/2014	8/13/2008	3.350	110.925	105.805	102.333	100.504	100.000	99.964	99.928	99.892
11/19/2007	11/19/2014	11/19/2009	3.750	113.320	107.818	103.722	101.126	99.499	98.211	97.003	95.823
11/19/2007	11/19/2014	11/19/2009	3.750	113.320	107.818	103.722	101.126	99.499	98.211	97.003	95.823
11/19/2007	11/19/2014	11/21/2011	4.270	116.429	110.548	105.676	101.694	98.302	95.247	92.389	89.666
11/19/2007	11/20/2017	11/19/2012	4.290	120.483	112.409	106.218	101.306	97.113	93.320	89.777	86.423
11/20/2007	11/20/2017	11/22/2010	3.740	116.217	109.162	104.187	100.813	98.278	96.080	94.018	92.027
11/23/2007	11/24/2017	11/23/2011	3.990	117.832	109.998	104.539	100.583	97.315	94.338	91.516	88.808
11/23/2007	11/24/2017	11/23/2011	3.990	117.832	109.998	104.539	100.583	97.315	94.338	91.516	88.808
11/29/2007	11/29/2017	8/29/2008	2.950	110.213	104.659	101.476	100.164	99.969	99.889	99.809	99.729
11/30/2007	11/30/2017	11/30/2009	3.190	112.001	105.928	102.169	100.107	98.707	97.446	96.219	95.015
12/6/2007	12/6/2017	12/7/2009	3.250	112.290	106.088	102.248	100.120	98.681	97.402	96.162	94.945
12/7/2007	12/7/2012	12/7/2009	3.450	109.687	105.501	102.362	100.369	98.946	97.664	96.419	95.198
12/10/2007	12/10/2010	12/10/2009	3.870	107.526	105.090	102.841	100.985	99.523	98.218	96.960	95.728
12/10/2007	12/11/2017	12/10/2010	3.450	113.885	107.290	102.841	99.806	97.398	95.212	93.125	91.103
12/11/2007	12/11/2012	12/11/2009	3.760	111.068	106.764	103.306	100.976	99.398	98.073	96.811	95.577
12/14/2007	12/14/2010	12/15/2008	3.690	107.138	104.706	102.484	100.810	99.995	99.595	99.231	98.869
12/20/2007	12/20/2012	12/21/2009	3.600	110.465	106.206	102.872	100.690	99.169	97.841	96.560	95.306
12/20/2007	12/20/2012	12/21/2009	3.750	111.114	106.683	103.014	100.824	99.357	98.042	96.762	95.507
12/24/2007	12/26/2017	12/24/2012	3.990	118.106	110.403	104.553	99.826	95.705	91.921	88.358	84.978
12/26/2007	12/26/2012	12/26/2008	3.460	109.913	105.704	102.506	100.635	99.892	99.841	99.084	98.691
12/26/2007	12/26/2012	12/27/2010	3.960	112.100	107.723	103.997	101.049	98.594	96.352	94.214	92.145
1/2/2008	1/2/2013	1/4/2010	3.490	109.931	105.668	102.462					

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
1/8/2008	1/8/2013	1/8/2010	3.150	108.499	104.413	101.600	99.833	98.413	97.066	95.747	94.453
1/8/2008	1/8/2018	10/8/2008	2.570	107.481	102.852	100.612	100.001	99.811	99.622	99.435	99.248
1/8/2008	1/8/2018	10/8/2008	2.640	107.947	103.130	100.729	100.017	99.824	99.635	99.448	99.261
1/10/2008	1/10/2011	1/12/2009	3.100	105.827	103.355	101.323	100.155	99.633	99.196	98.763	98.335
1/11/2008	1/11/2018	1/12/2009	2.720	108.515	103.490	100.889	99.923	99.460	99.021	98.587	98.156
1/14/2008	1/16/2018	1/14/2011	3.240	112.359	106.122	102.012	99.131	96.723	94.485	92.333	90.244
1/16/2008	1/16/2013	10/16/2008	2.550	105.967	102.453	100.552	100.002	99.789	99.579	99.370	99.161
1/16/2008	1/16/2013	1/16/2009	2.690	106.566	102.879	100.755	99.906	99.438	98.986	98.538	98.094
1/16/2008	1/16/2015	1/16/2009	2.640	107.048	102.904	100.707	99.879	99.415	98.962	98.515	98.071
1/16/2008	1/16/2018	10/16/2008	2.380	106.329	102.213	100.381	99.965	99.753	99.543	99.334	99.125
1/17/2008	1/17/2018	10/17/2008	2.250	105.564	101.810	100.259	99.923	99.460	99.021	98.587	98.156
1/18/2008	1/18/2013	1/20/2009	2.550	105.981	102.465	100.558	99.834	99.369	98.911	98.458	98.009
1/18/2008	1/20/2015	10/20/2008	2.350	105.582	102.004	100.345	99.923	99.460	99.021	98.587	98.156
1/18/2008	1/18/2018	10/20/2008	2.290	105.803	101.936	100.295	99.923	99.460	99.021	98.587	98.156
1/24/2008	1/24/2012	7/24/2009	2.440	104.983	102.072	100.392	99.373	98.434	97.515	96.612	95.727
1/24/2008	1/24/2013	1/25/2010	2.500	105.811	102.353	100.345	98.862	97.456	96.078	94.727	93.401
1/25/2008	1/25/2013	1/26/2009	2.250	104.609	100.909	100.174	99.688	99.207	98.731	98.260	97.793
1/25/2008	1/25/2013	1/25/2011	2.650	106.426	102.673	99.951	97.566	95.283	93.068	90.916	88.825
1/28/2008	1/28/2010	1/28/2009	2.630	103.481	101.973	100.567	99.878	99.387	98.903	98.423	97.948
1/28/2008	1/28/2013	1/28/2011	2.990	107.948	103.875	100.876	98.405	96.094	93.860	91.692	89.585
1/30/2008	1/30/2013	2/1/2010	2.670	106.583	102.906	100.642	99.026	97.528	96.066	94.634	93.230
2/7/2008	2/7/2013	2/8/2010	2.490	105.697	102.234	100.245	98.742	97.310	95.909	94.535	93.187
2/8/2008	2/8/2011	8/8/2008	1.990	103.114	101.008	100.092	99.992	99.970	99.948	99.926	99.904
2/8/2008	2/8/2013	8/8/2008	1.990	103.676	101.053	100.093	99.992	99.970	99.948	99.926	99.904
2/13/2008	2/13/2013	2/14/2011	2.920	107.613	103.600	100.601	98.097	95.758	93.501	91.310	89.183
2/14/2008	2/14/2018	2/14/2012	3.190	111.350	105.132	100.898	97.421	94.228	91.191	88.277	85.475
2/15/2008	2/16/2010	2/17/2009	2.350	103.092	101.522	100.274	99.696	99.167	98.643	98.125	97.613
2/19/2008	2/19/2013	2/19/2010	2.590	106.134	102.374	100.416	98.900	97.438	96.005	94.600	93.222
2/22/2008	2/22/2011	2/23/2009	2.500	104.496	101.933	100.361	99.782	99.235	98.695	98.161	97.633
2/25/2008	2/25/2013	2/25/2011	3.090	108.453	104.261	101.116	98.547	96.168	93.876	91.654	89.495
2/25/2008	2/26/2018	2/25/2009	2.420	106.668	102.411	100.459	99.739	99.180	98.630	98.085	97.547
3/7/2008	3/9/2015	3/7/2011	2.890	108.397	103.732	100.477	97.856	95.445	93.130	90.887	88.710
3/7/2008	3/7/2018	3/7/2013	3.550	114.820	107.733	102.203	97.549	93.386	89.529	85.897	82.452
3/10/2008	3/11/2013	3/10/2010	2.390	105.317	101.973	100.012	98.435	96.920	95.436	93.983	92.559
3/11/2008	3/11/2011	3/11/2009	2.090	103.391	101.190	100.069	99.448	98.853	98.265	97.684	97.112
3/12/2008	3/12/2013	3/12/2009	2.010	103.777	101.106	100.015	99.398	98.800	98.210	97.627	97.052
3/14/2008	3/14/2011	9/15/2008	1.990	103.152	101.030	100.096	99.948	99.827	99.706	99.586	99.465
3/14/2008	3/14/2018	3/15/2010	2.400	106.472	102.264	100.071	98.454	96.929	95.437	93.977	92.546
3/17/2008	3/18/2013	3/17/2011	2.690	106.668	102.787	99.871	97.336	94.931	92.604	90.348	88.158
3/17/2008	3/17/2015	3/17/2011	2.620	106.409	102.407	99.640	97.150	94.756	92.434	90.182	87.977
3/17/2008	3/19/2018	3/18/2013	3.300	112.930	106.209	100.923	96.401	92.299	88.469	84.848	81.408
3/25/2008	3/27/2023	3/25/2013	3.150	112.094	105.151	100.049	95.662	91.625	87.819	84.207	80.771
3/26/2008	3/26/2018	3/26/2012	2.980	109.875	104.116	100.047	96.564	93.310	90.075	87.222	84.357
3/28/2008	3/28/2013	3/28/2011	2.800	107.198	103.173	100.196	97.630	95.197	92.843	90.561	88.347
3/28/2008	3/28/2013	3/28/2011	2.820	107.289	103.248	100.253	97.683	95.248	92.893	90.610	88.395
3/28/2008	3/28/2018	3/30/2009	2.020	104.386	101.265	100.055	99.391	98.750	98.117	97.492	96.875
3/28/2008	3/28/2018	3/28/2011	2.770	109.046	103.744	100.285	97.587	95.126	92.769	90.487	88.273
3/31/2008	3/31/2011	3/31/2009	1.990	103.246	101.106	100.033	99.369	98.719	98.078	97.445	96.821
4/14/2008	4/14/2015	4/14/2011	2.750	107.117	102.823	99.902	97.327	94.866	92.483	90.174	87.934
4/28/2008	4/28/2015	4/28/2011	3.250	110.680	105.499	101.711	98.771	96.178	93.728	91.367	89.081
4/28/2008	4/30/2018	10/28/2008	2.150	105.111	101.610	100.217	99.391	98.750	98.117	97.492	96.875
4/30/2008	4/30/2018	4/30/2013	3.740	116.380	108.883	103.113	98.311	94.033	90.064	86.326	82.781
5/1/2008	5/1/2013	8/1/2008	2.190	104.469	101.442	100.175	100.000	99.997	99.994	99.991	99.988
5/5/2008	5/5/2015	5/5/2011	3.170	110.033	104.943	101.255	98.349	95.758	93.302	90.934	88.641
5/8/2008	5/8/2015	5/10/2010	2.960	108.838	104.108	101.164	99.196	97.497	95.866	94.274	92.717
5/19/2008	5/21/2018	5/20/2013	3.890	117.647	109.868	103.866	98.921	94.539	90.500	86.709	83.121
5/23/2008	5/23/2018	5/23/2011	3.270	112.858	106.410	102.010	98.785	96.057	93.530	91.112	88.776
5/27/2008	5/27/2010	5/27/2009	2.790	104.264	102.426	100.791	99.822	99.023	98.240	97.469	96.711
5/27/2008	5/27/2011	5/27/2010	3.220	106.703	103.896	101.553	99.673	97.941	96.261	94.619	93.013
5/27/2008	5/28/2013	5/27/2011	3.490	110.564	105.945	102.244	99.273	96.615	94.094	91.663	89.310
5/29/2008	5/29/2018	5/31/2011	3.460	113.558	106.466	102.225	99.194	96.533	94.012	91.580	89.227
6/16/2008	6/17/2013	6/16/2011	4.070	113.364	108.482	104.316	100.955	98.094	95.466	92.964	90.554
6/24/2008	6/24/2015	6/24/2011	3.830	114.310	108.470	103.926	100.414	97.484	94.825	92.309	89.890
6/30/2008	7/1/2013	6/30/2009	2.920	107.803	103.650	101.117	99.883	99.053	98.266	97.492	96.732
6/30/2008	7/1/2013	6/30/2010	3.450	110.330	105.744	102.381	100.082	98.242	96.536	94.884	93.270
6/30/2008	6/30/2015	6/30/2010	3.370	111.503	106.163	102.470	100.030	98.101	96.319	94.595	92.913
6/30/2008	7/2/2018	6/30/2011	3.690	115.408	107.722	102.979	99.719	96.988	94.445	92.002	89.640
7/1/2008	7/1/2018	7/1/2012	3.750	116.291	108.700	103.315	99.097	95.418	92.009	88.776	85.689
7/14/2008	7/16/2018	7/14/2009	2.500	107.207	102.671	100.509	99.431	98.510	97.611	96.729	95.864
7/14/2008	7/16/2018	7/14/2011	3.250	112.736	106.259	101.802	98.471	95.624	92.984	90.461	88.027
7/17/2008	7/17/2018	7/17/2013	3.750	116.561	108.907	102.981	98.011	93.576	89.468	85.607	81.955
7/21/2008	7/22/2013	7/21/2009	3.000	108.282	103.520	100.993	99.919	98.981	98.064	97.164	96.281
5/2/2008	5/4/2015	5/2/2011	3.990	115.577	109.821	104.662	99.413	93.955	88.856	84.747	81.752
5/19/2008	5/19/2015	5/21/2012	4.700	119.793	113.027	106.391	99.434	92.265	85.552	80.084	75.902
5/23/2008	5/23/2013	5/23/2011	4.040	113.218	108.494	103.916	98.966	93.603	88.571	84.552	81.544
6/6/2008	6/6/2013	6/6/2011	3.990	113.015	108.293	104.005	99.777	95.341	90.899	86.798	83.185
6/10/2008	6/11/2012	6/10/2010	3.940	110.987	107.069	103.568	99.917	95.997	92.589	90.018	87.985
7/1/2008	7/1/2015	7/1/2011	4.600	119.212	112.652	106.896	101.318	95.608	90.244	85.749	82.153
7/7/2008	7/8/2013	7/7/2011	4.590	116.074	111.041	106.217	101.236	95.883	90.671	86.084	82.347
7/8/2008	7/8/2013	7/8/2011	4.250	114.421	109.532	105.037	100.629	96.047	91.502	87.263	83.486
7/10/2008	7/10/2014	7/10/2012	4.800	119.127	113.106	107.190	101.060	94.520	87.993	82.240	77.352
7/14/2008	7/14/2015	7/15/2013	4.900	121.379	114.279	107.132	99.714	91.990	84.381	77.683	72.008