

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	11/28/2008	6.580	118.016	114.437	111.047	107.918	105.158	102.890	101.246	100.339
4/8/1998	4/8/2013	10/8/2008	5.490	117.437	112.837	108.796	105.401	102.763	100.976	100.211	99.987
8/19/1998	8/19/2013	11/19/2008	5.490	118.453	113.566	109.288	105.721	102.961	101.101	100.216	99.867
8/19/1998	8/19/2013	11/19/2008	5.490	118.453	113.566	109.288	105.721	102.961	101.101	100.216	99.867
8/25/1998	8/19/2013	10/27/2008	5.490	118.452	113.564	109.284	105.715	102.954	101.077	100.244	99.971
8/27/1998	8/19/2013	10/27/2008	5.490	118.452	113.564	109.284	105.715	102.954	101.077	100.244	99.971
9/30/1998	9/30/2013	12/30/2008	5.220	117.527	112.642	108.396	104.934	102.340	100.709	100.135	99.785
10/30/1998	10/30/2008	10/30/2003	4.990	100.416	100.412	100.328	100.245	100.162	100.078	99.995	99.912
11/25/1998	11/25/2008	11/25/2003	5.200	100.809	100.711	100.558	100.405	100.253	100.101	99.950	99.799
12/14/1998	12/16/2013	12/15/2008	5.390	118.722	113.591	109.169	105.541	102.779	100.956	100.039	99.625
12/14/1998	12/16/2013	12/15/2008	4.890	116.203	111.242	107.093	103.835	101.539	100.281	99.749	99.497
12/15/1998	12/16/2013	12/15/2008	4.880	116.152	111.196	107.053	103.803	101.517	100.270	99.745	99.495
1/15/1999	1/15/2009	1/15/2004	5.160	101.463	101.123	100.826	100.531	100.239	99.948	99.659	99.372
1/19/1999	1/20/2009	1/21/2003	4.980	101.479	101.138	100.827	100.519	100.212	99.908	99.606	99.305
1/19/1999	1/20/2009	1/21/2003	4.980	101.479	101.138	100.827	100.519	100.212	99.908	99.606	99.305
1/29/1999	1/29/2009	1/29/2003	4.980	101.604	101.261	100.925	100.592	100.261	99.932	99.605	99.280
2/18/1999	2/18/2009	11/18/2008	5.430	102.003	101.583	101.200	100.821	100.448	100.160	99.979	99.846
2/18/1999	2/18/2009	11/18/2008	5.080	101.866	101.446	101.064	100.685	100.319	100.076	99.930	99.799
4/23/1999	4/27/2009	10/23/2008	5.500	102.945	102.353	101.778	101.209	100.651	100.235	100.034	99.959
4/23/1999	4/27/2009	10/23/2008	5.190	102.766	102.174	101.599	101.031	100.485	100.145	100.011	99.936
4/26/1999	4/27/2009	10/27/2008	5.500	102.945	102.353	101.778	101.209	100.651	100.235	100.034	99.959
4/26/1999	4/27/2009	10/27/2008	5.190	102.766	102.174	101.599	101.031	100.485	100.145	100.011	99.936
5/6/1999	5/6/2009	11/6/2008	5.310	102.907	102.231	101.631	101.039	100.482	100.123	99.954	99.854
6/7/1999	6/8/2009	12/8/2008	6.040	103.837	103.074	102.385	101.705	101.038	100.430	100.013	99.748
6/7/1999	6/8/2009	12/8/2008	5.700	103.600	102.838	102.150	101.472	100.810	100.253	99.891	99.676
7/1/1999	7/1/2009	1/2/2009	6.110	104.202	103.353	102.599	101.858	101.133	100.478	100.125	99.661
7/23/1999	7/23/2009	10/23/2008	5.400	103.993	103.144	102.329	101.529	100.768	100.245	100.022	99.959
9/8/1999	9/8/2009	12/8/2008	5.620	104.743	103.724	102.787	101.870	100.996	100.303	99.888	99.662
10/8/1999	10/8/2009	10/8/2008	5.580	105.088	103.983	102.962	101.963	101.023	100.322	100.015	99.989
11/1/1999	11/2/2009	11/3/2008	5.540	105.351	104.164	103.079	102.017	101.026	100.325	99.994	99.883
11/8/1999	11/9/2009	11/10/2008	5.960	105.930	104.739	103.631	102.544	101.502	100.627	100.146	99.926
11/9/1999	11/9/2009	11/10/2008	5.570	105.492	104.304	103.199	102.117	101.104	100.370	100.008	99.877
12/10/1999	12/10/2009	12/10/2008	5.710	106.058	104.783	103.589	102.421	101.322	100.449	99.952	99.679
12/17/1999	12/17/2009	12/17/2008	5.910	106.414	105.136	103.921	102.730	101.597	100.652	100.061	99.662
12/20/1999	12/21/2009	12/22/2008	5.810	106.356	105.079	103.852	102.652	101.513	100.582	100.021	99.785
12/22/1999	12/22/2009	12/22/2008	5.840	106.409	105.131	103.902	102.698	101.555	100.614	100.038	99.785
1/7/2000	1/7/2015	10/7/2008	5.950	124.229	118.067	112.787	108.389	104.899	102.338	100.782	100.124
1/13/2000	1/13/2010	10/14/2008	5.910	106.774	105.410	104.121	102.859	101.661	100.669	100.170	99.995
1/25/2000	1/25/2010	10/27/2008	5.970	107.051	105.684	104.360	103.063	101.828	100.789	100.225	99.995
1/27/2000	1/27/2010	10/27/2008	6.080	107.231	105.864	104.533	103.229	101.980	100.909	100.281	100.002
1/27/2000	1/27/2010	10/27/2008	6.210	107.405	106.036	104.704	103.399	102.142	101.042	100.348	100.012
2/7/2000	2/8/2010	11/7/2008	5.950	107.179	105.736	104.384	103.060	101.799	100.760	100.182	99.930
2/16/2000	2/8/2010	11/3/2008	5.950	107.179	105.736	104.384	103.060	101.799	100.760	100.182	99.930
2/16/2000	2/16/2010	11/17/2008	6.470	108.036	106.586	105.206	103.852	102.541	101.353	100.511	100.056
2/16/2000	2/16/2010	11/17/2008	6.690	108.343	106.891	105.508	104.152	102.832	101.615	100.667	100.155
3/6/2000	3/8/2010	12/8/2008	6.390	108.195	106.661	105.220	103.808	102.449	101.246	100.390	99.893
3/13/2000	3/15/2010	12/15/2008	6.090	107.879	106.347	104.889	103.461	102.104	100.954	100.197	99.788
3/14/2000	3/15/2010	11/14/2008	6.090	107.879	106.347	104.889	103.463	102.107	100.969	100.276	99.955
3/15/2000	3/15/2010	12/15/2008	5.950	107.673	106.143	104.686	103.262	101.916	100.808	100.112	99.746
3/21/2000	3/22/2010	12/22/2008	6.120	108.042	106.509	105.030	103.582	102.203	101.025	100.239	99.785
3/22/2000	3/22/2010	12/22/2008	5.960	107.804	106.273	104.795	103.351	101.985	100.855	100.135	99.785
4/5/2000	4/5/2010	10/6/2008	5.950	107.924	106.309	104.798	103.323	101.935	100.799	100.207	99.999
4/11/2000	4/12/2010	10/14/2008	6.560	108.982	107.358	105.820	104.313	102.860	101.554	100.567	100.133
4/11/2000	4/12/2010	10/14/2008	6.050	108.194	106.577	105.045	103.547	102.129	100.945	100.273	99.997
4/11/2000	4/12/2010	10/14/2008	5.950	108.040	106.424	104.893	103.397	101.990	100.835	100.224	99.997
4/11/2000	4/12/2010	10/14/2008	6.750	109.276	107.649	106.108	104.599	103.137	101.801	100.739	100.217
4/11/2000	4/12/2010	10/14/2008	6.470	108.843	107.220	105.683	104.178	102.730	101.441	100.512	100.094
4/12/2000	4/12/2010	10/14/2008	5.990	108.102	106.485	104.953	103.457	102.045	100.879	100.242	99.998
4/13/2000	4/13/2010	10/14/2008	6.560	109.000	107.376	105.835	104.326	102.870	101.561	100.571	100.134
4/24/2000	4/26/2010	10/24/2008	6.450	109.063	107.439	105.860	104.316	102.830	101.507	100.553	100.101
5/3/2000	5/3/2010	11/3/2008	6.240	108.752	107.044	105.450	103.895	102.422	101.166	100.368	99.982
5/3/2000	5/3/2010	11/3/2008	6.360	108.944	107.235	105.639	104.081	102.599	101.307	100.451	100.018
5/15/2000	5/17/2010	11/17/2008	6.990	110.226	108.505	106.860	105.250	103.693	102.254	101.080	100.350
5/30/2000	6/1/2010	12/1/2008	6.490	109.578	107.779	106.104	104.468	102.905	101.530	100.525	99.963
8/8/2000	8/9/2010	11/10/2008	5.990	109.683	107.713	105.851	104.047	102.380	101.049	100.276	99.946
8/18/2000	8/18/2010	11/18/2008	6.090	110.023	108.049	106.159	104.326	102.621	101.224	100.364	99.965
10/5/2000	10/5/2010	10/6/2008	5.710	109.809	107.670	105.659	103.735	102.022	100.732	100.156	99.995
10/10/2000	10/12/2010	10/10/2008	5.840	110.186	108.043	106.008	104.055	102.292	100.925	100.237	99.993
10/13/2000	10/13/2010	10/14/2008	5.750	110.018	107.876	105.841	103.892	102.147	100.817	100.191	99.989
10/23/2000	10/25/2010	10/23/2008	5.640	109.980	107.840	105.772	103.797	102.046	100.740	100.155	99.972
12/5/2000	12/6/2010	12/5/2008	5.410	109.823	107.518	105.358	103.340	101.625	100.463	99.884	99.627
12/11/2000	12/13/2010	12/11/2008	5.170	109.397	107.097	104.930	102.927	101.287	100.273	99.800	99.564
12/12/2000	12/13/2010	12/12/2008	5.110	109.264	106.966	104.802	102.809	101.195	100.223	99.781	99.551
12/15/2000	12/15/2010	12/15/2008	5.120	109.315	107.016	104.846	102.845	101.221	100.237	99.785	99.548
12/20/2000	12/20/2010	12/22/2008	4.950	109.006	106.712	104.537	102.557	101.003	100.125	99.661	99.457
12/21/2000	12/21/2010	12/22/2008	4.860	108.818	106.526	104.355	102.391	100.887	100.070	99.661	99.457
1/11/2001	1/11/2011	10/14/2008	5.370	110.114	107.722	105.472	103.389	101.648	100.518	100.059	99.979
1/12/2001	1/12/2011	10/14/2008	5.300	109.969	107.578	105.329	103.256	101.537	100.462	100.038	99.975
2/5/2001	2/7/2011	11/5/2008	4.820	109.072	106.617	104.341	102.320	100.821	100.122	99.902	99.801
2/7/2001	2/7/2011	11/7/2008	4.820	109.072	106.617	104.341					

Start Date	Maturity	Next Call	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
	Date	Date									
4/23/2001	4/25/2011	4/24/2006	5.350	111.127	108.478	105.924	103.445	101.038	98.701	96.431	94.226
6/1/2001	6/1/2011	12/1/2008	4.990	110.337	107.546	105.010	102.786	101.091	100.139	99.752	99.560
12/13/2001	12/13/2011	12/15/2008	4.920	111.695	108.415	105.473	102.989	101.160	100.154	99.735	99.512
6/3/2002	6/4/2012	12/3/2008	4.490	111.346	107.671	104.559	102.131	100.590	99.904	99.641	99.462
6/4/2002	6/4/2012	12/4/2008	4.490	111.346	107.671	104.559	102.131	100.590	99.904	99.641	99.462
12/5/2002	12/5/2012	12/5/2008	3.790	109.504	105.680	102.745	100.819	99.972	99.690	99.509	99.331
3/6/2003	3/6/2013	12/8/2008	2.990	106.495	103.065	100.863	99.960	99.722	99.539	99.358	99.177
1/27/2004	1/27/2009	10/27/2008	2.890	100.885	100.544	100.236	100.070	99.988	99.914	99.839	99.764
2/5/2004	12/18/2008	12/19/2005	5.150	101.100	100.846	100.626	100.408	100.191	99.975	99.760	99.546
2/5/2004	4/26/2010	10/24/2008	6.200	108.667	107.046	105.471	103.932	102.470	101.218	100.412	100.041
2/5/2004	12/14/2010	12/15/2008	5.820	110.853	108.535	106.335	104.247	102.391	100.968	100.133	99.727
2/9/2004	2/9/2009	11/10/2008	3.110	101.017	100.600	100.248	100.036	99.926	99.819	99.712	99.606
2/17/2004	2/17/2009	11/17/2008	2.910	101.009	100.591	100.224	100.031	99.901	99.772	99.643	99.515
3/4/2004	3/4/2009	12/4/2008	2.970	101.086	100.584	100.178	99.901	99.718	99.541	99.365	99.190
3/12/2004	3/12/2009	12/12/2008	2.690	101.025	100.523	100.115	99.861	99.660	99.462	99.264	99.067
4/1/2004	4/1/2009	1/2/2009	2.770	101.162	100.578	100.110	99.799	99.544	99.293	99.044	98.796
5/24/2004	5/26/2009	11/24/2008	3.580	102.060	101.386	100.735	100.223	100.003	99.849	99.696	99.542
5/28/2004	5/28/2009	11/28/2008	3.700	102.160	101.485	100.827	100.279	100.026	99.866	99.707	99.548
6/11/2004	6/11/2009	12/11/2008	3.750	102.274	101.518	100.827	100.223	99.882	99.676	99.480	99.286
6/18/2004	6/20/2011	12/18/2008	4.120	108.230	105.504	103.091	101.217	100.178	99.763	99.531	99.312
7/2/2004	7/2/2014	1/2/2009	3.990	112.231	107.427	103.827	101.389	100.135	99.631	99.353	99.102
8/5/2004	8/5/2009	11/5/2008	3.470	102.455	101.531	100.702	100.131	99.961	99.865	99.769	99.674
12/13/2004	12/15/2014	12/15/2008	3.320	109.139	104.794	101.854	100.296	99.798	99.582	99.376	99.171
12/17/2004	12/17/2009	12/17/2008	3.710	103.716	102.457	101.274	100.340	99.891	99.662	99.451	99.240
5/5/2005	5/5/2010	5/5/2006	4.190	105.491	103.812	102.255	100.901	100.166	100.002	99.995	99.912
5/17/2005	5/17/2010	11/17/2008	4.070	105.433	103.755	102.170	100.824	100.137	99.926	99.797	99.668
6/6/2005	6/7/2010	12/8/2008	3.890	105.270	103.512	101.891	100.592	99.953	99.706	99.521	99.337
7/18/2005	7/19/2010	10/20/2008	4.160	106.116	104.266	102.515	101.019	100.211	100.006	99.953	99.901
9/1/2005	9/1/2015	11/1/2008	4.130	114.166	108.750	104.696	101.906	100.379	99.796	99.582	99.413
9/19/2005	9/19/2012	12/19/2008	3.820	109.451	105.761	102.850	100.884	99.937	99.646	99.449	99.254
9/26/2005	9/26/2012	12/26/2008	3.890	109.798	106.083	103.100	101.041	100.062	99.631	99.353	99.102
9/30/2005	9/30/2015	12/30/2008	4.440	116.424	110.737	106.267	103.004	100.957	99.998	99.591	99.336
10/26/2005	10/26/2015	10/27/2008	4.540	117.123	111.309	106.718	103.335	101.164	100.220	99.964	99.892
10/28/2005	10/28/2015	10/28/2008	4.310	115.684	110.051	105.687	102.569	100.701	100.029	99.943	99.866
10/28/2005	10/28/2015	10/28/2008	4.140	114.623	109.142	104.965	102.061	100.497	100.007	99.930	99.852
11/4/2005	11/4/2010	11/4/2008	4.520	107.623	105.428	103.397	101.618	100.438	99.991	99.875	99.782
11/21/2005	11/21/2012	11/21/2008	4.290	111.593	107.626	104.330	101.879	100.471	99.977	99.817	99.678
12/22/2005	12/22/2008	12/22/2008	4.750	101.065	100.810	100.580	100.351	100.123	100.002	99.995	99.912
1/6/2006	1/6/2016	10/6/2008	4.020	113.930	108.437	104.387	101.660	100.324	99.999	99.983	99.966
1/17/2006	1/19/2016	10/17/2008	4.080	114.454	108.899	104.739	101.891	100.420	100.002	99.949	99.896
3/20/2006	3/21/2011	12/21/2008	4.760	109.328	106.784	104.341	101.967	101.023	100.322	100.015	99.989
4/11/2006	4/11/2011	10/14/2008	4.980	109.980	107.352	104.914	102.748	101.086	100.242	99.998	99.967
4/19/2006	4/19/2013	10/20/2008	4.630	113.767	109.380	105.696	102.837	100.937	100.149	99.978	99.925
4/24/2006	4/25/2016	10/24/2008	4.440	117.207	111.170	106.489	103.099	100.966	100.130	99.958	99.889
4/28/2006	4/28/2011	10/28/2008	5.090	110.500	107.859	105.305	102.826	100.419	100.006	99.978	99.950
5/5/2006	5/6/2013	11/5/2008	4.780	114.416	109.928	106.159	103.203	101.179	100.215	99.905	99.800
5/5/2006	5/5/2016	11/5/2008	4.350	116.477	110.483	105.939	102.701	100.765	100.023	99.857	99.761
5/5/2006	5/5/2016	11/5/2008	4.530	117.679	111.523	106.770	103.305	101.105	100.156	99.875	99.779
5/5/2006	5/5/2016	5/5/2009	4.980	120.735	114.206	108.997	105.013	102.190	100.409	99.329	98.607
5/9/2006	5/9/2011	11/10/2008	5.050	110.360	107.647	105.146	102.928	101.214	100.275	99.940	99.820
5/15/2006	5/16/2016	11/17/2008	4.350	116.610	110.615	106.038	102.769	100.804	100.032	99.836	99.710
5/15/2006	5/16/2016	11/17/2008	4.520	117.750	111.601	106.827	103.344	101.128	100.162	99.858	99.732
5/19/2006	5/19/2016	11/19/2008	4.510	117.720	111.580	106.808	103.329	101.119	100.158	99.852	99.718
6/12/2006	6/13/2016	12/12/2008	4.620	118.526	112.236	107.331	103.711	101.337	100.147	99.878	99.450
6/26/2006	6/27/2016	12/26/2008	4.730	119.463	113.076	108.015	104.225	101.658	100.285	99.661	99.457
6/28/2006	6/28/2013	12/28/2006	4.950	115.664	111.055	107.091	103.916	101.630	100.339	100.015	99.989
6/28/2006	6/28/2013	12/29/2008	4.950	115.664	111.055	107.091	103.916	101.630	100.339	99.661	99.457
6/30/2006	7/1/2013	12/30/2008	4.890	115.179	110.529	106.632	103.551	101.383	100.214	99.661	99.457
7/14/2006	7/15/2013	10/14/2008	4.890	115.369	110.717	106.777	103.655	101.454	100.341	99.993	99.952
7/19/2006	7/19/2011	10/20/2008	5.250	111.540	108.648	105.956	103.561	101.645	100.476	100.011	99.958
7/20/2006	7/20/2011	10/20/2008	5.300	111.695	108.789	106.007	103.312	100.701	100.000	100.000	100.000
7/24/2006	7/25/2016	10/24/2008	4.660	119.080	112.706	107.689	103.965	101.490	100.328	99.973	99.904
7/28/2006	7/28/2016	10/28/2008	4.490	117.942	111.718	106.883	103.360	101.114	100.183	99.957	99.880
8/1/2006	8/1/2016	8/3/2009	4.890	120.510	113.890	108.675	104.727	101.943	100.110	99.894	99.769
8/11/2006	8/11/2011	11/12/2008	4.790	110.365	107.422	104.762	102.504	100.887	100.137	99.896	99.784
8/21/2006	8/21/2013	11/21/2008	4.750	114.960	110.297	106.384	103.337	101.262	100.245	99.893	99.744
8/25/2006	8/25/2016	11/25/2008	4.350	117.063	110.930	106.239	102.890	100.859	100.048	99.819	99.668
8/28/2006	8/29/2011	11/28/2008	4.890	110.896	107.945	105.220	102.879	101.146	100.245	99.907	99.739
9/22/2006	9/22/2011	12/22/2008	4.790	110.738	107.713	104.960	102.627	100.945	100.069	99.661	99.457
9/29/2006	9/29/2011	12/29/2008	4.590	110.232	107.225	104.498	102.240	100.690	100.339	99.661	99.457
10/10/2006	10/10/2013	10/10/2008	4.250	112.705	108.137	104.515	101.900	100.442	100.006	99.978	99.950
10/12/2006	10/15/2013	10/14/2008	4.500	113.971	109.283	105.465	102.593	100.764	100.078	99.977	99.936
10/20/2006	10/20/2009	10/20/2008	4.930	104.581	103.479	102.427	101.396	100.384	99.999	99.983	99.966
10/30/2006	10/31/2011	10/30/2008	4.850	111.256	108.110	105.072	102.137	100.411	100.069	99.983	99.898
11/3/2006	11/3/2011	11/3/2008	4.690	110.622	107.404	104.376	101.547	100.170	99.983	99.899	99.802
11/6/2006	11/6/2013	11/6/2008	4.290	112.976	108.337	104.661	102.004	100.496	99.974	99.849	99.750
11/10/2006	11/13/2012	11/10/2008	4.390	111.903	107.906	104.577	102.062	100.555	99.994	99.846	99.729
11/17/2006	11/18/2013	11/17/2008	4.350	113.413	108.741	104.988	102.234	100.611	99.997	99.832	99.700
11/24/2006	11/25/2016	11/24/2008	4.190	116.281	110.186	105.608	102.430	100.645	99.981	99.794	99.643
11/30/2006	12/2/2013	12/1/2008	4.350	113.341	108.626	104.899	102.175	100.550	99.869	99.619	99.446
12/1/2											

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
12/12/2006	12/12/2016	12/12/2008	4.050	115.250	109.283	104.900	101.939	100.363	99.774	99.537	99.340
12/13/2006	12/15/2008	12/15/2008	4.890	101.003	100.749	100.538	100.328	100.119	99.911	99.705	99.499
12/13/2006	12/14/2009	12/15/2008	4.830	105.050	103.781	102.583	101.431	100.483	99.956	99.695	99.490
12/19/2006	12/19/2011	12/19/2008	4.490	110.397	107.167	104.326	102.045	100.558	99.835	99.551	99.333
12/19/2006	12/19/2016	12/19/2008	4.190	116.306	110.176	105.588	102.410	100.585	99.835	99.551	99.333
12/20/2006	12/20/2013	12/22/2008	4.500	114.302	109.505	105.606	102.676	100.809	99.958	99.621	99.397
12/21/2006	12/21/2011	12/22/2008	4.530	110.550	107.315	104.454	102.145	100.612	99.951	99.631	99.408
12/27/2006	12/27/2013	12/29/2008	4.500	114.390	109.592	105.672	102.722	100.837	99.967	99.610	99.368
12/28/2006	12/28/2016	12/29/2008	4.250	116.837	110.635	105.944	102.655	100.710	100.339	99.661	99.457
12/28/2006	12/28/2016	12/29/2008	4.400	117.904	111.542	106.668	103.166	100.988	99.988	99.587	99.339
1/8/2007	1/9/2012	10/8/2008	4.750	111.323	107.983	105.038	102.614	100.924	100.172	99.992	99.968
1/12/2007	1/12/2017	1/12/2009	4.420	117.964	111.539	106.655	103.151	100.971	99.928	99.464	99.169
1/16/2007	1/17/2017	1/17/2012	4.790	120.710	113.885	108.357	103.810	99.954	96.563	93.485	90.628
1/23/2007	1/23/2014	10/23/2008	4.490	114.422	109.573	105.634	102.685	100.807	100.090	99.964	99.901
1/23/2007	1/23/2017	10/23/2008	4.460	118.387	111.920	106.954	103.364	101.099	100.174	99.963	99.899
1/29/2007	1/29/2014	1/29/2009	4.790	116.032	111.055	106.898	103.669	101.439	100.195	99.592	99.220
2/2/2007	2/2/2017	11/3/2008	4.690	119.942	113.206	108.008	104.168	101.614	100.349	99.921	99.806
2/9/2007	2/9/2012	11/10/2008	4.750	111.557	108.134	105.120	102.644	100.920	100.137	99.893	99.786
2/9/2007	2/9/2017	11/10/2008	4.470	118.418	111.899	106.927	103.344	101.099	100.146	99.862	99.756
2/12/2007	2/13/2012	2/12/2009	4.880	112.046	108.609	105.544	102.993	101.144	100.086	99.522	99.140
2/15/2007	2/15/2012	2/17/2009	4.990	112.444	108.995	105.900	103.294	101.361	100.202	99.589	99.178
2/20/2007	2/21/2017	11/20/2008	4.390	117.986	111.548	106.644	103.135	100.978	100.093	99.832	99.692
2/20/2007	2/21/2017	2/21/2012	4.850	120.844	113.654	107.995	103.491	99.688	96.370	93.322	90.464
2/23/2007	2/23/2017	11/24/2008	4.250	117.001	110.711	105.981	102.670	100.749	100.000	99.807	99.662
2/23/2007	2/23/2017	11/24/2008	4.350	117.721	111.323	106.466	103.007	100.908	100.063	99.822	99.677
2/28/2007	3/1/2010	12/1/2008	4.890	105.927	104.411	103.006	101.628	100.275	100.945	100.273	99.997
3/2/2007	3/2/2012	12/2/2008	4.490	110.777	107.317	104.355	102.020	100.521	99.874	99.643	99.471
3/9/2007	3/10/2014	3/9/2009	4.450	114.310	109.381	105.447	102.534	100.682	99.699	99.139	98.696
3/16/2007	3/16/2017	12/16/2008	4.090	115.855	109.725	105.203	102.128	100.447	99.956	99.695	99.490
3/20/2007	3/20/2012	12/22/2008	4.550	111.209	107.739	104.709	102.291	100.699	99.951	99.631	99.408
3/21/2007	3/21/2017	12/22/2008	4.220	116.848	110.558	105.848	102.572	100.661	99.835	99.551	99.333
3/23/2007	3/23/2017	3/23/2009	4.290	117.378	111.007	106.203	102.816	100.744	99.659	99.048	98.567
3/23/2007	3/23/2017	3/23/2009	4.290	117.378	111.007	106.203	102.816	100.744	99.659	99.048	98.567
3/23/2007	3/23/2017	6/23/2009	4.290	117.378	111.007	106.203	102.816	100.744	99.659	99.048	98.567
3/30/2007	3/30/2012	12/30/2008	4.670	111.749	108.190	104.769	101.478	100.275	100.945	100.273	99.997
4/2/2007	4/2/2012	4/2/2009	4.590	111.312	107.760	104.704	102.270	100.624	99.671	99.075	98.579
4/9/2007	4/9/2009	10/9/2008	4.750	102.273	101.684	101.161	100.645	100.198	100.017	99.992	99.968
4/9/2007	4/10/2017	10/9/2008	4.150	116.314	110.069	105.457	102.295	100.555	100.003	99.975	99.947
4/12/2007	4/12/2017	10/14/2008	4.250	117.063	110.694	105.947	102.632	100.691	100.022	99.973	99.940
4/13/2007	4/13/2017	4/13/2009	4.450	118.534	111.951	106.939	103.334	101.036	99.761	99.020	98.469
4/18/2007	4/20/2009	10/20/2008	4.940	102.525	101.934	101.380	100.832	100.317	100.057	99.994	99.939
4/23/2007	4/23/2012	10/23/2008	4.650	111.793	108.233	105.107	102.585	100.882	100.155	99.975	99.911
4/23/2007	4/23/2014	4/23/2010	4.620	115.490	110.420	106.280	103.088	100.688	98.806	97.200	95.732
4/27/2007	4/27/2012	4/27/2009	4.550	111.488	107.940	104.825	102.349	100.671	99.673	99.021	98.461
4/27/2007	4/27/2017	10/27/2008	4.250	117.240	110.869	106.078	102.722	100.741	100.031	99.940	99.866
5/2/2007	5/2/2014	5/3/2010	4.590	115.183	110.086	105.999	102.860	100.483	98.602	96.982	95.496
5/4/2007	5/5/2014	5/4/2009	4.550	115.010	109.934	105.874	102.834	100.826	99.651	98.906	98.308
5/14/2007	5/16/2011	11/14/2008	4.500	109.011	106.328	103.889	101.850	100.527	100.008	99.855	99.729
5/18/2007	5/18/2017	11/18/2008	4.190	116.794	110.459	105.750	102.496	100.663	99.983	99.810	99.679
5/22/2007	5/22/2012	5/22/2009	4.690	112.106	108.462	105.269	102.687	100.868	99.731	98.965	98.330
5/22/2007	5/22/2012	5/22/2009	4.690	112.106	108.462	105.269	102.687	100.868	99.731	98.965	98.330
5/22/2007	5/22/2012	5/22/2009	4.710	112.178	108.532	105.331	102.738	100.902	99.753	98.980	98.343
5/22/2007	5/22/2017	5/22/2012	4.750	121.002	114.003	108.295	103.545	99.464	95.837	92.526	89.446
5/25/2007	5/25/2012	11/25/2008	4.650	112.000	108.363	105.175	102.609	100.876	100.113	99.865	99.714
5/29/2007	5/30/2017	12/1/2008	4.250	117.371	110.963	106.140	102.758	100.752	99.882	99.543	99.293
6/1/2007	6/1/2010	12/1/2008	4.990	107.055	105.280	103.629	102.063	100.782	100.053	99.737	99.560
6/1/2007	6/2/2014	12/1/2008	4.500	114.836	109.735	105.691	102.687	100.794	99.952	99.648	99.472
6/7/2007	6/7/2012	12/8/2008	4.940	113.027	109.273	105.976	103.259	101.283	100.195	99.750	99.534
6/7/2007	6/7/2017	6/8/2009	4.820	121.474	114.420	108.930	104.820	101.982	100.198	99.101	98.313
6/8/2007	6/9/2014	12/8/2008	4.730	116.159	110.935	106.690	103.446	101.259	100.141	99.701	99.487
6/8/2007	6/8/2017	12/8/2008	4.490	118.997	112.289	107.184	103.505	101.174	100.068	99.647	99.445
6/11/2007	6/12/2017	12/11/2008	4.490	119.047	112.338	107.222	103.531	101.190	100.073	99.641	99.428
6/18/2007	6/19/2017	12/18/2008	4.500	119.209	112.488	107.339	103.616	101.240	100.091	99.661	99.457
6/18/2007	6/19/2017	6/18/2009	4.840	121.788	114.713	109.164	104.994	102.099	100.260	99.118	98.293
6/19/2007	6/19/2017	12/19/2008	4.650	120.342	113.458	108.126	104.208	101.603	100.243	99.785	99.548
6/20/2007	6/20/2012	12/22/2008	4.890	113.021	109.272	105.954	103.229	101.260	100.183	99.661	99.457
6/20/2007	6/20/2012	12/22/2008	4.960	113.280	109.520	106.179	103.415	101.387	100.247	99.661	99.457
6/22/2007	6/22/2017	12/22/2008	4.500	119.247	112.525	107.367	103.636	101.252	100.095	99.661	99.457
6/26/2007	6/26/2012	6/26/2009	5.130	113.993	110.208	106.800	103.928	101.741	100.248	99.240	98.455
6/28/2007	6/28/2017	12/29/2008	4.500	119.322	112.599	107.423	103.675	101.276	100.102	99.661	99.457
7/13/2007	7/13/2012	10/14/2008	4.690	112.376	108.584	105.307	102.683	100.895	100.143	99.987	99.951
7/13/2007	7/13/2017	10/14/2008	4.290	117.671	111.140	106.258	102.831	100.776	100.054	99.973	99.937
7/13/2007	7/13/2017	7/13/2011	4.900	122.294	115.106	109.383	104.812	101.089	99.932	95.144	92.594
7/18/2007	7/18/2017	7/19/2010	4.780	121.440	114.376	108.862	104.689	101.564	99.147	97.146	95.379
7/19/2007	7/19/2012	7/20/2009	4.890	113.207	109.382	106.012	103.251	101.217	99.849	98.872	98.074
7/20/2007	7/20/2017	10/20/2008	4.290	117.754	111.222	106.320	102.873	100.800	100.059	99.958	99.903
7/24/2007	7/24/2012	7/24/2009	4.820	113.010	109.195	105.837	103.100	101.104	99.767	98.803	98.000
7/27/2007	7/27/2012	10/27/2008	4.590	112.179	108.405	105.126	102.530	100.799	100.105	99.966	99.891
7/27/2007	7/28/2014	10/27/2008	4.350	114.454	109.391	105.365	102.436	100.663	100.027	99.946	99.869
7/27/2007	7/27/2017	10/27/2008	4.250	117.539	111.051	106.184	102.778	100.761	100.037	99.940	99.866
7/27/2007	7/27/2017	10/27/2008	4.180	117.018	110.616						

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	115.870	109.603	105.057	102.010	100.436	99.946	99.835	99.748
8/6/2007	8/6/2012	11/6/2008	4.490	111.719	107.898	104.675	102.177	100.616	100.009	99.869	99.771
8/6/2007	8/6/2012	11/6/2008	4.490	111.719	107.898	104.675	102.177	100.616	100.009	99.869	99.771
8/9/2007	8/11/2014	8/9/2011	4.860	117.169	111.757	107.222	103.409	100.136	97.228	94.563	92.066
8/9/2007	8/9/2017	11/10/2008	3.990	115.508	109.321	104.842	101.866	100.377	99.931	99.809	99.703
8/9/2007	8/9/2017	11/10/2008	3.990	115.508	109.321	104.842	101.866	100.377	99.931	99.809	99.703
8/13/2007	8/13/2012	8/13/2009	4.590	112.189	108.344	105.060	102.463	100.634	99.387	98.449	97.621
8/16/2007	8/16/2017	11/17/2008	3.990	115.586	109.398	104.898	101.903	100.396	99.930	99.789	99.663
8/17/2007	8/17/2012	11/17/2008	4.350	111.320	107.531	104.343	101.928	100.502	99.987	99.834	99.705
8/17/2007	8/17/2012	11/17/2008	4.150	110.555	106.817	103.743	101.485	100.305	99.941	99.807	99.679
8/17/2007	8/17/2017	11/17/2008	4.000	115.670	109.469	104.951	101.938	100.411	99.933	99.787	99.659
8/20/2007	8/20/2010	8/20/2009	4.590	107.205	105.259	103.401	101.704	100.342	99.297	98.412	97.590
8/20/2007	8/20/2014	8/20/2009	4.250	113.882	108.796	104.815	101.977	100.179	99.023	98.119	97.295
8/20/2007	8/20/2014	8/20/2009	4.250	113.882	108.796	104.815	101.977	100.179	99.023	98.119	97.295
8/24/2007	8/24/2010	11/24/2008	4.460	107.007	105.064	103.199	101.532	100.429	100.000	99.837	99.689
8/24/2007	8/24/2012	11/24/2008	4.050	110.251	106.544	103.504	101.320	100.250	99.923	99.775	99.627
8/28/2007	8/28/2014	8/28/2009	4.350	114.569	109.461	105.409	102.446	100.480	99.191	98.213	97.353
8/30/2007	8/30/2012	8/31/2009	4.390	111.631	107.830	104.583	102.082	100.355	99.172	98.231	97.377
8/30/2007	9/2/2014	12/1/2008	3.890	111.870	107.057	103.505	101.161	100.068	99.712	99.536	99.367
8/31/2007	8/31/2012	8/31/2009	4.370	111.566	107.767	104.526	102.038	100.322	99.148	98.210	97.354
9/4/2007	9/4/2012	12/4/2008	4.190	110.718	106.903	103.798	101.512	100.250	99.783	99.584	99.408
9/4/2007	9/4/2012	12/4/2008	4.220	110.834	107.011	103.888	101.576	100.280	99.793	99.589	99.414
9/4/2007	9/5/2017	12/4/2008	3.890	114.826	108.732	104.398	101.575	100.186	99.724	99.527	99.349
9/6/2007	9/7/2010	12/8/2008	4.160	106.499	104.480	102.605	101.016	100.103	99.760	99.571	99.388
9/7/2007	9/7/2012	12/8/2008	4.090	110.366	106.581	103.523	101.324	100.161	99.754	99.558	99.375
9/10/2007	9/11/2017	12/10/2008	3.690	113.448	107.637	103.596	101.100	100.015	99.668	99.468	99.274
9/11/2007	9/13/2010	9/11/2009	4.430	107.099	105.074	103.163	101.446	100.093	99.037	98.122	97.255
9/11/2007	9/11/2017	12/11/2008	3.590	112.735	107.079	103.198	100.877	99.937	99.646	99.449	99.254
9/12/2007	9/12/2014	12/12/2008	3.690	110.908	106.267	102.912	100.815	99.944	99.664	99.465	99.268
9/13/2007	9/15/2014	9/14/2009	3.990	112.554	107.657	103.962	101.408	99.775	98.647	97.709	96.836
9/13/2007	9/13/2017	9/13/2010	3.990	115.644	109.417	104.870	101.584	99.086	97.005	95.140	93.390
9/13/2007	9/13/2017	9/13/2010	3.990	115.644	109.417	104.870	101.584	99.086	97.005	95.140	93.390
9/14/2007	9/14/2011	12/15/2008	4.090	108.565	105.620	103.087	101.163	100.131	99.748	99.540	99.337
9/14/2007	9/14/2012	9/14/2010	4.390	111.614	107.745	104.480	101.825	99.612	97.656	95.840	94.103
9/17/2007	9/17/2012	9/17/2009	4.220	110.987	107.161	104.001	101.624	100.014	98.869	97.924	97.042
9/27/2007	9/27/2010	12/29/2008	4.250	106.911	104.887	102.947	101.268	100.232	100.102	99.661	99.457
9/27/2007	9/29/2014	9/27/2010	4.490	115.213	109.607	105.324	102.237	99.869	97.861	96.004	94.233
9/27/2007	9/27/2017	12/29/2008	3.650	113.324	107.573	103.548	101.078	100.009	100.102	99.661	99.457
9/28/2007	9/28/2010	12/29/2008	4.290	107.003	104.978	103.033	101.337	100.270	100.102	99.661	99.457
9/28/2007	9/28/2012	12/29/2008	3.850	109.663	105.962	103.003	100.980	100.038	100.102	99.661	99.457
10/3/2007	10/3/2012	1/5/2009	3.830	109.420	105.675	102.771	100.829	100.072	99.998	99.990	99.982
10/9/2007	10/9/2012	10/9/2009	4.400	111.714	107.602	103.996	101.503	99.965	98.858	97.891	96.961
10/11/2007	10/14/2014	4/13/2009	4.180	113.661	108.586	104.678	101.926	100.294	99.417	98.829	98.314
10/11/2007	10/11/2017	10/14/2008	3.990	115.699	109.438	104.909	101.899	100.401	99.998	99.968	99.937
10/15/2007	10/16/2017	10/15/2008	3.990	115.755	109.493	104.949	101.926	100.414	99.997	99.953	99.909
10/22/2007	10/22/2012	10/22/2008	3.990	110.258	106.450	103.375	101.216	100.216	99.996	99.936	99.875
10/25/2007	10/27/2014	10/25/2011	4.360	114.819	109.568	105.198	101.514	98.294	95.370	92.644	90.061
10/26/2007	10/26/2017	10/27/2008	3.390	111.539	106.165	102.564	100.572	100.025	99.953	99.881	99.809
10/29/2007	10/29/2009	10/29/2008	4.250	103.962	102.863	101.791	100.795	100.194	100.016	99.936	99.856
10/29/2007	10/29/2012	10/29/2009	3.990	110.336	106.526	103.429	101.181	99.633	98.464	97.432	96.451
11/2/2007	11/3/2014	11/2/2009	3.990	112.580	107.613	103.913	101.336	99.622	98.371	97.303	96.305
11/2/2007	11/3/2014	11/2/2010	4.190	113.687	108.566	104.601	101.549	99.091	96.961	95.009	93.158
11/5/2007	11/5/2014	11/5/2009	3.990	112.603	107.635	103.929	101.346	99.627	98.371	97.298	96.295
11/5/2007	11/6/2017	11/5/2012	4.390	118.748	111.779	106.115	101.320	97.115	93.313	89.802	86.515
11/6/2007	11/6/2017	11/6/2008	3.480	112.038	106.497	102.784	100.670	99.994	99.864	99.766	99.668
11/8/2007	11/9/2009	11/10/2008	4.100	103.844	102.667	101.573	100.595	100.081	99.928	99.821	99.715
11/9/2007	11/10/2014	11/9/2011	4.330	114.552	109.276	104.929	101.250	98.024	95.087	92.345	89.745
11/13/2007	11/14/2011	11/13/2008	3.760	107.874	104.845	102.361	100.674	100.035	99.887	99.766	99.646
11/13/2007	11/13/2012	11/13/2008	3.680	109.045	105.310	102.467	100.659	100.022	99.878	99.760	99.642
11/13/2007	11/13/2014	11/13/2008	3.350	109.232	104.878	101.912	100.365	99.958	99.838	99.720	99.602
11/19/2007	11/19/2014	11/19/2009	3.750	111.434	106.676	103.184	100.838	99.268	98.061	96.986	95.957
11/19/2007	11/19/2014	11/19/2009	3.750	111.434	106.676	103.184	100.838	99.268	98.061	96.986	95.957
11/19/2007	11/19/2014	11/21/2011	4.270	114.321	109.081	104.745	101.077	97.850	94.908	92.157	89.544
11/19/2007	11/20/2017	11/19/2012	4.290	117.608	110.631	105.102	100.483	96.415	92.717	89.269	86.016
11/20/2007	11/20/2017	11/22/2010	3.740	114.045	108.089	103.804	100.663	98.180	96.039	94.065	92.188
11/23/2007	11/24/2017	11/23/2011	3.990	114.988	108.494	103.769	100.071	96.896	94.010	91.299	88.709
11/23/2007	11/24/2017	11/23/2011	3.990	114.988	108.494	103.769	100.071	96.896	94.010	91.299	88.709
11/29/2007	11/29/2017	12/1/2008	2.950	108.670	104.055	101.241	100.058	99.709	99.463	99.219	98.976
11/30/2007	11/30/2017	11/30/2009	3.190	110.261	105.206	101.904	99.886	98.519	97.372	96.294	95.244
12/6/2007	12/6/2017	12/7/2009	3.250	110.501	105.321	101.965	99.884	98.467	97.289	96.194	95.130
12/7/2007	12/7/2012	12/7/2009	3.450	108.152	104.502	101.828	100.000	98.665	97.512	96.418	95.352
12/10/2007	12/10/2010	12/10/2009	3.870	106.486	104.233	102.208	100.525	99.178	98.003	96.895	95.818
12/10/2007	12/11/2017	12/10/2010	3.450	111.933	106.390	102.499	99.613	97.251	95.146	93.170	91.271
12/11/2007	12/11/2012	12/11/2009	3.760	109.443	105.623	102.685	100.596	99.107	97.888	96.768	95.686
12/14/2007	12/14/2010	12/15/2008	3.690	106.130	103.887	101.897	100.476	99.893	99.661	99.457	99.255
12/20/2007	12/20/2012	12/21/2009	3.600	108.884	105.147	102.306	100.326	98.889	97.680	96.547	95.446
12/20/2007	12/20/2012	12/21/2009	3.750	109.425	105.302	102.216	100.342	99.015	97.847	96.723	95.623
12/24/2007	12/26/2017	12/24/2012	3.990	115.441	108.799	103.489	98.993	94.980	91.288	87.833	84.564
12/26/2007	12/26/2012	12/26/2008	3.460	108.374	104.716	101.999	100.414	99.848	99.595	99.358	99.123
12/26/2007	12/26/2012	12/27/2010	3.960	110.422	106.506	103.269	100.611	98.305	96.188	94.180	92.242
1/2/2008	1/2/2013	1/4/2010	3.490	108.349							

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	107.034	103.541	101.112	99.455	98.144	96.942	95.778	94.638
1/8/2008	1/8/2018	10/8/2008	2.570	106.250	102.362	100.375	100.012	99.989	99.967	99.945	99.923
1/8/2008	1/8/2018	10/8/2008	2.640	106.656	102.625	100.486	100.013	99.991	99.969	99.947	99.924
1/10/2008	1/10/2011	1/12/2009	3.100	104.902	102.635	100.850	99.968	99.631	99.355	99.081	98.808
1/11/2008	1/11/2018	1/12/2009	2.720	107.155	102.961	100.647	99.836	99.523	99.244	98.968	98.693
1/14/2008	1/16/2018	1/14/2011	3.240	110.570	105.337	101.675	98.900	96.558	94.415	92.382	90.422
1/16/2008	1/16/2013	10/16/2008	2.550	104.773	101.838	100.274	100.022	99.978	99.934	99.889	99.845
1/16/2008	1/16/2013	1/16/2009	2.690	105.300	102.213	100.420	99.811	99.510	99.217	98.927	98.639
1/16/2008	1/16/2015	1/16/2009	2.640	105.771	102.305	100.414	99.796	99.495	99.203	98.913	98.624
1/16/2008	1/16/2018	10/16/2008	2.380	105.246	101.768	100.213	100.015	99.970	99.926	99.882	99.838
1/17/2008	1/17/2018	10/17/2008	2.250	104.579	101.383	100.123	100.010	99.962	99.915	99.868	99.821
1/18/2008	1/18/2013	1/20/2009	2.550	104.787	101.852	100.266	99.767	99.465	99.168	98.872	98.579
1/18/2008	1/20/2015	10/20/2008	2.350	104.495	101.491	100.169	100.017	99.961	99.906	99.851	99.795
1/18/2008	1/18/2018	10/20/2008	2.290	104.790	101.506	100.152	100.012	99.962	99.912	99.863	99.813
1/24/2008	1/24/2012	7/24/2009	2.440	104.018	101.504	100.023	99.137	98.353	97.585	96.829	96.086
1/24/2008	1/24/2013	1/25/2010	2.500	104.644	101.755	99.912	98.542	97.288	96.068	94.873	93.699
1/25/2008	1/25/2013	1/26/2009	2.250	103.161	100.415	99.998	99.678	99.359	99.043	98.729	98.417
1/25/2008	1/25/2013	1/25/2011	2.650	105.109	101.951	99.477	97.250	95.120	93.055	91.046	89.091
1/28/2008	1/28/2010	1/28/2009	2.630	102.618	101.283	100.221	99.805	99.478	99.154	98.831	98.511
1/28/2008	1/28/2013	1/28/2011	2.990	106.477	103.017	100.353	98.046	95.883	93.797	91.772	89.802
1/30/2008	1/30/2013	2/1/2010	2.670	105.326	102.254	100.216	98.708	97.355	96.049	94.769	93.514
2/7/2008	2/7/2013	2/8/2010	2.490	104.527	101.631	99.810	98.425	97.147	95.902	94.681	93.483
2/13/2008	2/13/2013	2/14/2011	2.920	106.228	102.791	100.105	97.758	95.562	93.450	91.401	89.410
2/14/2008	2/14/2018	2/14/2012	3.190	109.330	104.119	100.189	96.837	93.758	90.851	88.070	85.397
2/15/2008	2/16/2010	2/17/2009	2.350	102.293	100.891	100.014	99.622	99.254	98.889	98.527	98.168
2/19/2008	2/19/2013	2/19/2010	2.590	104.678	101.621	99.930	98.568	97.266	95.991	94.740	93.511
2/22/2008	2/22/2011	2/23/2009	2.500	103.686	101.320	100.099	99.687	99.303	98.922	98.543	98.168
2/25/2008	2/25/2013	2/25/2011	3.090	106.936	103.351	100.582	98.187	95.953	93.808	91.727	89.705
2/25/2008	2/26/2018	2/25/2009	2.420	105.556	101.978	100.243	99.663	99.264	98.872	98.483	98.098
3/7/2008	3/9/2015	3/7/2011	2.890	106.980	102.995	100.048	97.560	95.275	93.097	90.992	88.949
3/7/2008	3/7/2018	3/7/2013	3.550	112.682	106.393	101.231	96.732	92.670	88.907	85.376	82.037
3/10/2008	3/11/2013	3/10/2010	2.390	104.212	101.409	99.603	98.155	96.793	95.464	94.161	92.882
3/11/2008	3/11/2011	3/11/2009	2.090	102.694	100.698	99.817	99.363	98.928	98.498	98.071	97.649
3/12/2008	3/12/2013	3/12/2009	2.010	102.908	100.640	99.780	99.328	98.890	98.457	98.028	97.603
3/14/2008	3/14/2018	3/15/2010	2.400	105.383	101.826	99.728	98.192	96.806	95.467	94.155	92.869
3/17/2008	3/18/2013	3/17/2011	2.690	105.387	102.072	99.423	97.042	94.784	92.603	90.488	88.432
3/17/2008	3/17/2015	3/17/2011	2.620	105.186	101.791	99.204	96.859	94.616	92.443	90.332	88.281
3/17/2008	3/19/2018	3/18/2013	3.300	110.965	104.956	99.968	95.580	91.575	87.850	84.341	81.016
3/25/2008	3/27/2023	3/25/2013	3.150	111.556	104.636	99.385	94.958	90.944	87.220	83.716	80.395
3/26/2008	3/26/2018	3/26/2012	2.980	108.115	103.186	99.347	95.976	92.852	89.880	87.033	84.298
3/28/2008	3/28/2013	3/28/2011	2.820	105.887	102.477	99.783	97.372	95.086	92.879	90.738	88.657
3/28/2008	3/28/2013	3/28/2011	2.800	105.807	102.411	99.729	97.323	95.038	92.832	90.691	88.611
3/28/2008	3/28/2018	3/30/2009	2.020	103.579	100.877	99.840	99.332	98.850	98.374	97.902	97.435
3/28/2008	3/28/2018	3/28/2011	2.770	107.651	103.171	99.975	97.364	95.004	92.775	90.626	88.544
3/31/2008	3/31/2011	3/31/2009	1.990	102.571	100.647	99.816	99.316	98.827	98.343	97.863	97.388
4/14/2008	4/14/2015	4/14/2011	2.750	105.788	102.166	99.437	97.002	94.688	92.453	90.284	88.179
4/28/2008	4/28/2015	4/28/2011	3.250	109.057	104.612	101.238	98.460	95.977	93.651	91.420	89.264
4/28/2008	4/30/2018	10/28/2008	2.150	104.204	101.204	100.110	100.009	99.923	99.837	99.752	99.666
4/30/2008	4/30/2018	4/30/2013	3.740	113.883	107.349	102.008	97.378	93.219	89.360	85.735	82.306
5/2/2008	5/4/2015	5/2/2011	3.990	113.921	108.917	104.250	99.322	94.498	90.251	86.662	83.639
5/5/2008	5/5/2015	5/5/2011	3.170	108.457	104.060	100.757	98.007	95.531	93.201	90.964	88.802
5/8/2008	5/8/2015	5/10/2010	2.960	107.385	103.395	100.776	98.893	97.301	95.811	94.365	92.951
5/19/2008	5/19/2015	5/21/2012	4.700	117.646	111.564	105.548	99.103	92.757	87.055	82.183	78.048
5/19/2008	5/21/2018	5/20/2013	3.890	115.013	108.210	102.694	97.958	93.684	89.753	86.071	82.596
5/23/2008	5/23/2013	5/23/2011	4.040	111.559	107.404	103.295	98.699	94.091	89.940	86.394	83.382
5/23/2008	5/23/2018	5/23/2011	3.270	111.039	105.605	101.660	98.565	95.905	93.466	91.159	88.943
5/27/2008	5/27/2010	5/27/2009	2.790	103.410	101.750	100.374	99.581	98.939	98.311	97.691	97.078
5/27/2008	5/27/2011	5/27/2010	3.220	105.741	103.164	101.039	99.292	97.703	96.174	94.682	93.221
5/27/2008	5/28/2013	5/27/2011	3.490	108.834	104.812	101.597	98.847	96.333	93.951	91.658	89.439
5/29/2008	5/29/2018	5/31/2011	3.460	111.018	105.437	101.713	98.832	96.278	93.883	91.584	89.361
6/6/2008	6/6/2013	6/6/2011	3.990	111.276	107.130	103.298	99.399	95.394	91.527	87.936	84.702
6/10/2008	6/11/2012	6/10/2010	3.940	109.535	106.050	102.799	99.423	96.268	93.542	91.272	89.334
6/16/2008	6/17/2013	6/16/2011	4.070	111.428	107.049	103.437	100.407	97.723	95.229	92.859	90.578
6/24/2008	6/24/2015	6/24/2011	3.830	112.401	107.300	103.293	100.041	97.234	94.673	92.266	89.965
6/30/2008	7/1/2013	6/30/2009	2.920	106.342	102.875	100.715	99.610	98.904	98.267	97.643	97.028
6/30/2008	7/1/2013	6/30/2010	3.450	108.628	104.693	101.837	99.725	97.989	96.409	94.897	93.426
6/30/2008	6/30/2015	6/30/2010	3.370	109.826	105.283	102.065	99.759	97.905	96.235	94.645	93.102
6/30/2008	7/2/2018	6/30/2011	3.690	112.613	106.461	102.404	99.327	96.693	94.257	91.940	89.708
7/1/2008	7/1/2015	7/1/2011	4.600	117.012	111.295	106.216	101.020	95.573	90.574	86.512	83.079
7/7/2008	7/8/2013	7/7/2011	4.590	114.113	109.616	105.321	100.771	95.701	90.833	86.695	83.234
7/8/2008	7/8/2013	7/8/2011	4.250	112.570	108.236	104.240	100.158	95.824	91.591	87.639	84.066
7/10/2008	7/10/2014	7/10/2012	4.800	116.980	111.455	106.012	100.362	94.148	88.707	82.717	78.244
7/11/2008	7/11/2018	7/11/2012	3.750	113.694	107.292	102.433	98.385	94.812	91.501	88.380	85.410
7/14/2008	7/14/2015	7/15/2013	4.900	119.079	112.416	105.781	98.914	91.597	84.506	78.251	72.989
7/14/2008	7/16/2018	7/14/2009	2.500	106.040	102.221	100.215	99.197	98.413	97.665	96.930	96.207
7/14/2008	7/16/2018	7/14/2011	3.250	110.925	105.440	101.420	98.218	95.442	92.890	90.475	88.160
7/17/2008	7/17/2018	7/17/2013	3.750	113.994	107.276	101.768	96.974	92.660	88.663	84.916	81.379
7/21/2008	7/22/2013	7/21/2009	3.000	106.471	102.361	100.491	99.588	98.806	98.041	97.289	96.549
8/15/2008	8/15/2018	8/15/2011	3.830	115.320	108.300	104.079	100.301	97.139	94.346	91.769	89.334
8/19/2008	8/19/2013	8/19/2010	3.440	108.627	104.488	101.658	99.540	97.698	95.957	94.270	92.625
9/8/2008	9/9/2013	9/8/2009	2.890	106.372	102.881	100.674	99.386	98.432	97.552	96.695	95.853