

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		Next Call		Coupon	-300	-200	-100	Base	+100	+200	+300	+400
	Date	Date	Date	Date									
2/27/1997	2/27/2012	8/27/2009	6.580	117.199	117.152	114.917	112.268	109.775	107.507	105.502	103.788		
4/8/1998	4/8/2013	10/8/2009	5.490	120.541	118.877	115.199	111.796	108.807	106.264	104.167	102.505		
8/19/1998	8/19/2013	8/19/2009	5.490	122.569	120.093	116.096	112.448	109.274	106.590	104.380	102.633		
8/19/1998	8/19/2013	8/19/2009	5.490	122.569	120.093	116.096	112.448	109.274	106.590	104.380	102.633		
8/25/1998	8/19/2013	10/26/2009	5.490	122.569	120.095	116.096	112.450	109.273	106.585	104.375	102.622		
8/27/1998	8/19/2013	10/27/2009	5.490	122.569	120.095	116.095	112.448	109.270	106.581	104.370	102.617		
9/30/1998	9/30/2013	9/30/2009	5.220	122.068	119.322	115.288	111.645	108.511	105.891	103.769	102.122		
12/14/1998	12/16/2013	3/16/2009	5.390	123.940	120.655	116.424	112.612	109.332	106.584	104.341	102.582		
12/14/1998	12/16/2013	9/14/2009	4.890	121.719	118.485	114.372	110.729	107.648	105.125	103.128	101.628		
12/14/1998	12/16/2013	9/14/2009	5.390	123.940	120.655	116.424	112.612	109.332	106.584	104.341	102.582		
12/15/1998	12/16/2013	9/15/2009	4.880	121.674	118.441	114.330	110.690	107.613	105.094	103.102	101.607		
9/8/1999	9/8/2009	9/8/2009	5.620	100.609	100.609	100.609	100.582	100.473	100.364	100.256	100.148		
10/8/1999	10/8/2009	10/8/2009	5.580	101.069	101.069	101.069	101.017	100.824	100.633	100.441	100.251		
11/1/1999	11/2/2009	8/2/2009	5.540	101.447	101.447	101.447	101.368	101.106	100.845	100.585	100.326		
11/8/1999	11/9/2009	8/9/2009	5.960	101.672	101.672	101.672	101.584	101.302	101.021	100.742	100.464		
11/9/1999	11/9/2009	8/9/2009	5.570	101.563	101.563	101.563	101.475	101.192	100.912	100.633	100.355		
12/10/1999	12/10/2009	9/10/2009	5.710	102.094	102.094	102.094	101.957	101.588	101.221	100.858	100.498		
12/17/1999	12/17/2009	9/17/2009	5.910	102.282	102.282	102.282	102.132	101.743	101.357	100.974	100.595		
12/20/1999	12/21/2009	9/21/2009	5.810	102.308	102.308	102.308	102.150	101.750	101.353	100.960	100.571		
12/22/1999	12/22/2009	9/22/2009	5.840	102.336	102.336	102.336	102.176	101.774	101.374	100.977	100.587		
1/7/2000	1/7/2015	10/7/2009	5.950	131.512	126.206	121.111	116.568	112.654	109.340	106.593	104.364		
1/13/2000	1/13/2010	10/13/2009	5.910	102.725	102.725	102.725	102.518	102.054	101.594	101.137	100.694		
1/25/2000	1/25/2010	10/26/2009	5.970	102.952	102.952	102.952	102.717	102.219	101.726	101.237	100.763		
1/27/2000	1/27/2010	10/27/2009	6.080	103.040	103.040	103.040	102.801	102.297	101.798	101.304	100.823		
1/27/2000	1/27/2010	10/27/2009	6.210	103.105	103.105	103.105	102.866	102.362	101.862	101.368	100.885		
2/7/2000	2/8/2010	11/9/2009	5.950	103.173	103.173	103.173	102.903	102.366	101.834	101.309	100.806		
2/16/2000	2/8/2010	11/2/2009	5.950	103.173	103.173	103.173	102.903	102.366	101.834	101.309	100.807		
2/16/2000	2/16/2010	8/17/2009	6.470	103.594	103.594	103.594	103.303	102.742	102.187	101.639	101.105		
2/16/2000	2/16/2010	8/17/2009	6.690	103.717	103.717	103.717	103.425	102.864	102.309	101.760	101.221		
3/6/2000	3/8/2010	9/8/2009	6.390	103.905	103.905	103.905	103.559	102.942	102.333	101.732	101.155		
3/13/2000	3/15/2010	9/14/2009	6.090	103.840	103.840	103.840	103.475	102.839	102.212	101.595	101.007		
3/14/2000	3/15/2010	8/14/2009	6.090	103.840	103.840	103.840	103.475	102.839	102.212	101.595	101.009		
3/15/2000	3/15/2010	9/15/2009	5.950	103.752	103.752	103.752	103.387	102.752	102.124	101.508	100.924		
3/21/2000	3/22/2010	9/21/2009	6.120	103.978	103.978	103.978	103.594	102.938	102.291	101.656	101.049		
3/22/2000	3/22/2010	9/22/2009	5.960	103.874	103.874	103.874	103.490	102.835	102.188	101.554	100.952		
4/5/2000	4/5/2010	10/5/2009	5.950	104.099	104.099	104.099	103.675	102.981	102.296	101.628	101.002		
4/11/2000	4/12/2010	10/13/2009	5.950	104.214	104.214	104.214	103.770	103.057	102.353	101.666	101.023		
4/11/2000	4/12/2010	10/13/2009	6.050	104.285	104.285	104.285	103.841	103.127	102.423	101.735	101.088		
4/11/2000	4/12/2010	10/13/2009	6.470	104.583	104.583	104.583	104.138	103.423	102.717	102.025	101.363		
4/11/2000	4/12/2010	10/13/2009	6.560	104.647	104.647	104.647	104.202	103.486	102.781	102.087	101.422		
4/11/2000	4/12/2010	10/13/2009	6.750	104.781	104.781	104.781	104.336	103.620	102.914	102.219	101.548		
4/12/2000	4/12/2010	10/13/2009	5.990	104.243	104.243	104.243	103.799	103.085	102.381	101.693	101.049		
4/13/2000	4/13/2010	10/13/2009	6.560	104.665	104.665	104.665	104.217	103.499	102.790	102.094	101.426		
4/24/2000	4/26/2010	10/26/2009	6.450	104.819	104.819	104.819	104.333	103.579	102.835	102.106	101.409		
5/3/2000	5/3/2010	11/3/2009	6.240	104.784	104.784	104.784	104.277	103.503	102.742	101.999	101.301		
5/3/2000	5/3/2010	11/3/2009	6.360	104.876	104.876	104.876	104.369	103.595	102.833	102.088	101.384		
5/15/2000	5/17/2010	8/17/2009	6.990	105.631	105.631	105.631	105.079	104.264	103.461	102.674	101.915		
5/30/2000	6/1/2010	8/31/2009	6.490	105.498	105.498	105.498	104.901	104.046	103.205	102.385	101.608		
8/8/2000	8/9/2010	11/9/2009	5.990	106.223	106.223	106.213	105.380	104.335	103.314	102.341	101.465		
8/18/2000	8/18/2010	8/18/2009	6.090	106.479	106.479	106.459	105.590	104.520	103.475	102.477	101.572		
10/5/2000	10/5/2010	10/5/2009	5.710	106.836	106.836	106.762	105.700	104.502	103.346	102.277	101.349		
10/10/2000	10/12/2010	10/13/2009	5.840	107.105	107.105	107.023	105.932	104.714	103.537	102.445	101.486		
10/13/2000	10/13/2010	10/13/2009	5.750	107.012	107.012	106.928	105.834	104.614	103.438	102.348	101.399		
10/23/2000	10/25/2010	10/23/2009	5.640	107.065	107.065	106.969	105.828	104.577	103.376	102.265	101.308		
12/5/2000	12/6/2010	9/8/2009	5.410	107.408	107.408	107.264	105.953	104.593	103.304	102.145	101.179		
12/11/2000	12/13/2010	9/11/2009	5.170	107.180	107.180	107.028	105.691	104.318	103.025	101.881	100.951		
12/12/2000	12/13/2010	9/14/2009	5.110	107.097	107.097	106.945	105.608	104.237	102.947	101.812	100.892		
12/15/2000	12/15/2010	9/15/2009	5.120	107.139	107.139	106.985	105.640	104.263	102.968	101.827	100.901		
12/20/2000	12/20/2010	9/21/2009	4.950	106.971	106.971	106.811	105.448	104.061	102.767	101.639	100.751		
12/21/2000	12/21/2010	9/21/2009	4.860	106.858	106.858	106.696	105.330	103.943	102.654	101.540	100.673		
1/11/2001	1/11/2011	10/13/2009	5.370	107.891	107.891	107.705	106.251	104.801	103.440	102.231	101.240		
1/12/2001	1/12/2011	10/13/2009	5.300	107.802	107.802	107.616	106.159	104.707	103.349	102.146	101.168		
2/5/2001	2/7/2011	11/5/2009	4.820	107.444	107.444	107.205	105.655	104.154	102.776	101.614	100.723		
2/7/2001	2/7/2011	11/9/2009	4.820	107.444	107.444	107.205	105.655	104.153	102.775	101.610	100.717		
2/26/2001	2/28/2011	8/26/2009	4.790	107.677	107.677	107.342	105.730	104.177	102.766	101.576	100.671		
2/26/2001	2/28/2011	8/26/2009	5.060	108.110	108.110	107.775	106.159	104.593	103.152	101.907	100.918		
2/26/2001	2/28/2011	8/26/2009	5.450	108.735	108.735	108.399	106.778	105.198	103.721	102.414	101.335		
2/27/2001	2/28/2011	8/27/2009	4.760	107.629	107.629	107.294	105.683	104.131	102.725	101.546	100.651		
2/27/2001	2/28/2011	8/27/2009	5.020	108.046	108.046	107.710	106.095	104.530	103.094	101.864	100.889		
3/1/2001	3/1/2011	9/1/2009	5.270	108.461	108.461	108.121	106.501	104.927	103.471	102.205	101.178		
3/14/2001	3/14/2011	9/14/2009	4.860	107.978	107.978	107.585	105.935	104.350	102.910	101.696	100.765		
4/23/2001	4/25/2011	4/24/2006	5.350	109.407	109.407	108.836	107.054	105.298	103.580	101.899	100.254		
6/1/2001	6/1/2011	9/1/2009	4.990	109.287	109.287	108.562	106.697	104.933	103.352	102.023	100.993		
12/13/2001	12/13/2011	9/14/2009	4.920	111.821	111.821	110.060	107.714	105.581	103.739	102.229	101.079		
6/3/2002	6/4/2012	9/3/2009	4.490	112.958	112.749	110.084	107.450	105.166	103.276	101.814			

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
12/13/2004	12/15/2014	9/14/2009	3.320	117.085	112.729	108.833	105.682	103.283	101.567	100.482	99.973
12/17/2004	12/17/2009	9/17/2009	3.710	101.432	101.432	101.432	101.283	100.896	100.513	100.166	99.940
5/5/2005	5/5/2010	5/5/2006	4.190	103.235	103.235	103.235	102.726	101.954	101.211	100.569	100.127
5/17/2005	5/17/2010	8/17/2009	4.070	103.278	103.278	103.278	102.732	101.928	101.158	100.507	100.089
6/6/2005	6/7/2010	9/8/2009	3.890	103.360	103.360	103.360	102.749	101.890	101.082	100.432	100.032
7/18/2005	7/19/2010	10/19/2009	4.160	104.079	104.079	104.079	103.328	102.353	101.432	100.660	100.124
9/1/2005	9/1/2015	9/1/2009	4.130	122.657	117.562	112.973	109.150	106.090	103.714	101.973	100.802
9/19/2005	9/19/2012	9/21/2009	3.820	112.160	111.602	108.626	105.960	103.758	102.052	100.844	100.130
9/26/2005	9/26/2012	9/28/2009	3.890	112.458	111.865	108.861	106.162	103.923	102.178	100.920	100.165
9/30/2005	9/30/2015	9/30/2009	4.440	124.619	119.319	114.520	110.470	107.170	104.571	102.586	101.173
10/26/2005	10/26/2015	10/26/2009	4.540	125.341	119.964	115.089	110.962	107.587	104.911	102.855	101.370
10/28/2005	10/28/2015	10/28/2009	4.140	122.928	117.735	113.071	109.187	106.075	103.661	101.884	100.689
10/28/2005	10/28/2010	10/28/2009	4.310	123.956	118.678	113.911	109.917	106.690	104.151	102.247	100.927
11/4/2005	11/4/2010	11/4/2009	4.520	105.788	105.788	105.680	104.506	103.251	102.094	101.113	100.396
11/21/2005	11/21/2012	8/21/2009	4.290	114.407	113.533	110.341	107.451	105.011	103.050	101.563	100.543
1/6/2006	1/6/2016	10/6/2009	4.020	122.456	117.270	112.637	108.803	105.754	103.416	101.721	100.616
1/17/2006	1/19/2016	10/19/2009	4.080	122.883	117.635	112.947	109.059	105.958	103.565	101.816	100.655
3/20/2006	3/21/2011	9/21/2009	4.760	107.907	107.907	107.485	105.811	104.160	102.543	100.961	99.410
4/11/2006	4/11/2011	10/13/2009	4.980	108.562	108.562	108.052	106.325	104.673	103.174	101.899	100.914
4/19/2006	4/19/2013	10/19/2009	4.630	117.465	115.765	112.196	108.989	106.265	104.043	102.308	101.049
4/24/2006	4/25/2016	10/26/2009	4.440	125.559	119.979	114.980	110.783	107.381	104.696	102.652	101.192
4/28/2006	4/28/2011	10/28/2009	5.090	108.992	108.992	108.409	106.622	104.861	103.139	101.455	99.806
5/5/2006	5/6/2013	11/5/2009	4.780	118.256	116.455	112.825	109.553	106.762	104.471	102.660	101.315
5/5/2006	5/5/2016	11/5/2009	4.350	125.043	119.506	114.560	110.426	107.093	104.468	102.500	101.112
5/5/2006	5/5/2016	11/5/2009	4.530	126.197	120.562	115.507	111.255	107.789	105.049	102.943	101.424
5/5/2006	5/5/2016	11/5/2009	4.980	129.109	123.244	117.925	113.389	109.630	106.584	104.181	102.362
5/9/2006	5/9/2011	11/9/2009	5.050	109.076	109.076	108.447	106.643	104.926	103.369	102.049	101.019
5/15/2006	5/16/2016	8/17/2009	4.350	125.073	119.524	114.563	110.416	107.073	104.444	102.467	101.075
5/15/2006	5/16/2016	8/17/2009	4.520	126.168	120.524	115.459	111.201	107.734	104.991	102.886	101.365
5/19/2006	5/19/2016	8/19/2009	4.510	126.113	120.471	115.406	111.149	107.684	104.944	102.845	101.332
6/12/2006	6/13/2016	9/14/2009	4.620	126.937	121.214	116.063	111.720	108.171	105.347	103.167	101.573
6/26/2006	6/27/2016	9/28/2009	4.730	127.721	121.910	116.670	112.236	108.601	105.688	103.423	101.747
6/28/2006	6/28/2013	3/30/2009	4.950	119.634	117.507	113.722	110.303	107.376	104.955	103.021	101.556
6/28/2006	6/28/2013	9/28/2009	4.950	119.634	117.507	113.722	110.303	107.376	104.955	103.021	101.556
6/30/2006	7/1/2013	9/30/2009	4.890	119.437	117.298	113.519	110.115	107.205	104.805	102.894	101.455
7/14/2006	7/15/2013	10/14/2009	4.890	119.627	117.407	113.600	110.178	107.262	104.863	102.949	101.516
7/19/2006	7/19/2011	10/19/2009	5.250	110.470	110.470	109.541	107.536	105.638	103.940	102.484	101.325
7/20/2006	7/20/2011	10/20/2009	5.300	110.585	110.585	109.650	107.623	105.632	103.689	101.792	99.940
7/24/2006	7/25/2016	10/26/2009	4.660	127.426	121.595	116.372	111.966	108.363	105.491	103.265	101.628
7/28/2006	7/28/2016	10/28/2009	4.490	126.319	120.579	115.455	111.161	107.673	104.921	102.812	101.296
8/1/2006	8/1/2016	11/2/2009	4.890	129.013	123.057	117.695	113.146	109.397	106.374	104.002	102.221
8/11/2006	8/11/2011	8/11/2009	4.790	109.859	109.859	108.819	106.773	104.879	103.215	101.858	100.838
8/21/2006	8/21/2013	8/21/2009	4.750	119.553	117.117	113.268	109.842	106.944	104.583	102.726	101.358
8/25/2006	8/25/2016	8/25/2009	4.350	125.510	119.826	114.765	110.547	107.149	104.484	102.478	101.065
8/28/2006	8/29/2011	8/28/2009	4.890	110.309	110.309	109.166	107.077	105.139	103.441	102.034	100.968
9/22/2006	9/22/2011	9/22/2009	4.790	110.418	110.418	109.133	106.987	105.012	103.296	101.897	100.848
9/29/2006	9/29/2011	9/29/2009	4.590	110.072	110.072	108.749	106.598	104.640	102.956	101.612	100.639
10/10/2006	10/10/2013	10/13/2009	4.250	118.085	115.365	111.555	108.244	105.523	103.366	101.760	100.672
10/12/2006	10/15/2013	10/13/2009	4.500	119.212	116.431	112.541	109.127	106.280	103.991	102.237	100.982
10/20/2006	10/20/2009	10/20/2009	4.930	101.109	101.109	101.109	101.045	100.819	100.594	100.370	100.147
10/30/2006	10/31/2011	10/31/2009	4.850	111.074	111.074	109.555	107.248	104.990	102.792	100.653	98.570
11/3/2006	11/3/2011	8/3/2009	4.690	110.747	110.747	109.212	106.900	104.638	102.437	100.294	98.207
11/6/2006	11/6/2013	11/6/2009	4.290	118.577	115.684	111.816	108.459	105.699	103.508	101.869	100.740
11/10/2006	11/13/2012	11/10/2009	4.390	114.645	113.813	110.626	107.729	105.271	103.274	101.754	100.695
11/17/2006	11/18/2013	8/17/2009	4.350	118.982	115.997	112.087	108.684	105.879	103.644	101.960	100.786
11/24/2006	11/25/2016	8/24/2009	4.190	124.853	119.143	114.108	109.947	106.623	104.051	102.148	100.840
11/30/2006	12/2/2013	8/31/2009	4.350	119.151	116.089	112.170	108.769	105.965	103.735	102.055	100.890
12/1/2006	12/1/2016	9/1/2009	4.090	124.209	118.578	113.622	109.545	106.310	103.821	102.001	100.781
12/4/2006	12/5/2016	9/4/2009	4.080	124.154	118.526	113.573	109.498	106.267	103.781	101.965	100.756
12/5/2006	12/5/2016	12/7/2009	4.260	125.381	119.626	114.542	110.331	106.957	104.331	102.376	101.007
12/6/2006	12/6/2013	12/7/2009	4.400	119.420	116.313	112.362	108.922	106.078	103.812	102.096	100.877
12/8/2006	12/8/2016	9/8/2009	3.990	123.554	117.981	113.092	109.087	105.922	103.506	101.758	100.624
12/11/2006	12/11/2009	9/11/2009	4.690	101.733	101.733	101.733	101.594	101.223	100.855	100.493	100.172
12/12/2006	12/12/2016	9/14/2009	3.990	123.565	117.988	113.093	109.084	105.915	103.495	101.744	100.609
12/12/2006	12/12/2016	9/14/2009	4.050	123.972	118.352	113.412	109.354	106.140	103.672	101.872	100.687
12/13/2006	12/14/2009	9/14/2009	4.830	101.825	101.825	101.825	101.680	101.301	100.924	100.550	100.207
12/19/2006	12/19/2011	9/21/2009	4.490	110.863	110.863	109.077	106.757	104.686	102.941	101.575	100.606
12/19/2006	12/19/2016	9/21/2009	4.190	124.953	119.220	114.167	109.993	106.662	104.080	102.170	100.862
12/20/2006	12/20/2013	9/21/2009	4.500	120.037	116.823	112.809	109.304	106.392	104.059	102.267	100.987
12/21/2006	12/21/2011	9/21/2009	4.530	110.985	110.985	109.187	106.857	104.776	103.016	101.632	100.643
12/27/2006	12/27/2013	9/28/2009	4.500	120.124	116.863	112.835	109.317	106.396	104.054	102.255	100.969
12/28/2006	12/28/2016	9/28/2009	4.250	125.402	119.606	114.496	110.268	106.883	104.247	102.286	100.927
12/28/2006	12/28/2016	9/28/2009	4.400	126.434	120.536	115.321	110.979	107.479	104.733	102.654	101.174
1/8/2007	1/9/2012	10/8/2009	4.750	111.769	111.769	109.860	107.475	105.334	103.514	102.046	100.962
1/12/2007	1/12/2017	10/13/2009	4.420	126.668	120.734	115.500	111.141	107.624	104.865	102.770	101.279
1/16/2007	1/17/2017	1/17/2012	4.790	129.266	123.096	117.577	112.861	108.824	105.319	102.213	99.404
1/23/2007	1/23/2014	10/23/2009	4.490	120.416	116.988	112.915	109.371	106.433	104.076	102.272	100.985
1/23/2007	1/23/2017	10/23/2009	4.460	127.000	121.013	115.735	111.333	107.775	104.976	102.841	101.310
1/29/2007	1/29/2014	10/29/2009	4.790	121.860	118.354	114.183	110.518	107.440	104.933	102.966	101.509
2/2/2007	2/2										

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
2/15/2007	2/15/2012	8/17/2009	4.990	112.876	112.850	110.726	108.235	105.984	104.059	102.483	101.282
2/20/2007	2/21/2017	8/20/2009	4.390	126.646	120.672	115.411	111.041	107.523	104.761	102.676	101.196
2/20/2007	2/21/2017	2/21/2012	4.850	128.216	121.343	115.778	111.120	107.298	104.011	101.092	98.469
2/23/2007	2/23/2017	8/24/2009	4.250	125.672	119.794	114.630	110.363	106.952	104.299	102.326	100.957
2/23/2007	2/23/2017	8/24/2009	4.350	126.370	120.421	115.185	110.842	107.355	104.622	102.569	101.119
2/28/2007	3/1/2010	9/1/2009	4.890	102.893	102.893	102.893	102.568	101.974	101.387	100.806	100.232
3/2/2007	3/2/2012	9/2/2009	4.490	111.786	111.732	109.539	107.071	104.897	103.092	101.684	100.683
3/9/2007	3/10/2014	9/9/2009	4.450	120.763	117.037	112.912	109.343	106.396	104.048	102.257	100.988
3/16/2007	3/16/2017	9/16/2009	4.090	124.650	118.867	113.807	109.656	106.368	103.836	101.984	100.751
3/20/2007	3/20/2012	9/21/2009	4.550	112.171	112.088	109.803	107.296	105.091	103.245	101.797	100.761
3/21/2007	3/21/2017	9/21/2009	4.220	125.582	119.689	114.526	110.266	106.867	104.228	102.273	100.921
3/23/2007	3/23/2017	9/23/2009	4.290	126.083	120.136	114.917	110.600	107.142	104.450	102.435	101.027
3/23/2007	3/23/2017	9/23/2009	4.290	126.083	120.136	114.917	110.600	107.142	104.450	102.435	101.027
3/30/2007	3/30/2012	9/21/2009	4.670	112.621	112.522	110.129	107.402	104.748	102.175	99.680	97.260
4/2/2007	4/2/2012	10/2/2009	4.590	112.443	112.339	109.984	107.443	105.208	103.338	101.867	100.809
4/9/2007	4/10/2017	10/9/2009	4.150	125.204	119.335	114.208	109.995	106.648	104.058	102.155	100.871
4/12/2007	4/12/2017	10/13/2009	4.250	125.921	119.968	114.764	110.468	107.040	104.371	102.387	101.015
4/13/2007	4/13/2017	10/13/2009	4.450	127.343	121.245	115.892	111.442	107.851	105.033	102.890	101.355
4/23/2007	4/23/2012	10/23/2009	4.650	112.877	112.738	110.272	107.686	105.407	103.500	101.986	100.884
4/23/2007	4/23/2014	4/23/2010	4.620	122.079	118.042	113.786	110.087	107.015	104.540	102.601	101.104
4/27/2007	4/27/2012	10/27/2009	4.550	112.651	112.505	110.021	107.432	105.171	103.274	101.793	100.733
4/27/2007	4/27/2017	10/27/2009	4.250	125.996	120.004	114.774	110.462	107.021	104.338	102.345	100.967
5/2/2007	5/2/2014	5/3/2010	4.590	122.041	117.961	113.711	110.026	106.974	104.517	102.591	101.092
5/4/2007	5/5/2014	11/4/2009	4.550	121.883	117.790	113.549	109.877	106.842	104.406	102.531	101.180
5/14/2007	5/16/2011	8/14/2009	4.500	108.175	108.175	107.518	105.711	104.019	102.544	101.349	100.491
5/18/2007	5/18/2017	8/18/2009	4.190	125.663	119.698	114.497	110.220	106.817	104.183	102.238	100.900
5/22/2007	5/22/2012	8/24/2009	4.690	113.366	113.178	110.556	107.898	105.565	103.604	102.048	100.906
5/22/2007	5/22/2012	8/24/2009	4.690	113.366	113.178	110.556	107.898	105.565	103.604	102.048	100.906
5/22/2007	5/22/2012	8/24/2009	4.710	113.423	113.235	110.612	107.951	105.612	103.646	102.082	100.929
5/22/2007	5/22/2017	5/22/2012	4.750	129.706	123.342	117.660	112.772	108.546	104.825	101.487	98.445
5/25/2007	5/25/2012	8/25/2009	4.650	113.291	113.098	110.463	107.804	105.474	103.521	101.981	100.857
5/29/2007	5/30/2017	8/31/2009	4.250	126.137	120.107	114.844	110.506	107.043	104.360	102.368	100.980
6/1/2007	6/1/2010	9/1/2009	4.990	104.227	104.227	104.227	103.634	102.784	101.954	101.183	100.539
6/1/2007	6/2/2014	9/1/2009	4.500	121.964	117.696	113.434	109.753	106.722	104.299	102.447	101.124
6/7/2007	6/7/2012	9/8/2009	4.940	114.298	114.084	111.365	108.643	106.230	104.186	102.531	101.276
6/7/2007	6/7/2017	9/8/2009	4.820	130.319	123.892	118.205	113.433	109.536	106.415	103.983	102.169
6/8/2007	6/9/2014	9/8/2009	4.730	123.178	118.811	114.450	110.658	107.498	104.943	102.947	101.475
6/8/2007	6/8/2017	9/8/2009	4.490	127.916	121.719	116.271	111.749	108.099	105.227	103.039	101.463
6/11/2007	6/12/2017	9/11/2009	4.490	127.934	121.730	116.276	111.749	108.094	105.219	103.029	101.451
6/18/2007	6/19/2017	9/18/2009	4.500	128.037	121.811	116.337	111.793	108.125	105.236	103.034	101.444
6/18/2007	6/19/2017	9/18/2009	4.840	130.528	124.061	118.340	113.537	109.611	106.462	104.007	102.172
6/19/2007	6/19/2017	9/21/2009	4.650	129.133	122.799	117.209	112.551	108.767	105.763	103.445	101.745
6/20/2007	6/20/2012	9/21/2009	4.890	114.330	114.094	111.307	108.561	106.136	104.089	102.436	101.186
6/20/2007	6/20/2012	9/21/2009	4.960	114.535	114.299	111.507	108.751	106.310	104.240	102.561	101.282
6/22/2007	6/22/2017	9/22/2009	4.500	128.051	121.816	116.336	111.788	108.117	105.226	103.023	101.430
6/26/2007	6/26/2012	9/28/2009	5.130	115.119	114.872	112.037	109.243	106.752	104.621	102.875	101.521
6/28/2007	6/28/2017	9/28/2009	4.500	128.080	121.830	116.340	111.784	108.107	105.213	103.005	101.407
7/13/2007	7/13/2012	10/13/2009	4.690	114.043	113.769	110.881	108.129	105.721	103.717	102.130	100.967
7/13/2007	7/13/2017	10/13/2009	4.290	126.657	120.531	115.202	110.808	107.299	104.567	102.523	101.098
7/13/2007	7/13/2017	7/13/2011	4.900	131.135	124.579	118.787	113.906	109.833	106.412	103.476	100.910
7/18/2007	7/18/2017	7/19/2010	4.780	130.278	123.789	118.074	113.292	109.393	106.271	103.804	101.847
7/19/2007	7/19/2012	10/19/2009	4.890	114.724	114.439	111.504	108.704	106.233	104.160	102.484	101.221
7/20/2007	7/20/2017	10/20/2009	4.290	126.692	120.548	115.207	110.804	107.290	104.551	102.503	101.076
7/24/2007	7/24/2012	10/26/2009	4.820	114.580	114.287	111.331	108.533	106.071	104.009	102.351	101.116
7/27/2007	7/27/2012	10/27/2009	4.590	113.922	113.625	110.672	107.907	105.507	103.513	101.953	100.826
7/27/2007	7/28/2014	10/27/2009	4.350	121.849	117.262	112.961	109.285	106.278	103.898	102.104	100.857
7/27/2007	7/27/2017	10/27/2009	4.180	125.929	119.850	114.583	110.264	106.834	104.175	102.216	100.879
7/27/2007	7/27/2017	10/27/2009	4.250	126.437	120.304	114.982	110.604	107.117	104.401	102.384	100.989
7/30/2007	1/30/2019	10/30/2009	3.990	127.278	120.436	114.719	110.153	106.613	103.934	102.001	100.718
7/31/2007	7/31/2017	11/2/2009	3.990	124.589	118.648	113.532	109.372	106.108	103.624	101.832	100.657
7/31/2007	7/31/2017	11/2/2009	3.990	124.589	118.648	113.532	109.372	106.108	103.624	101.832	100.657
7/31/2007	7/31/2017	11/2/2009	4.060	125.094	119.096	113.923	109.706	106.382	103.838	101.990	100.758
8/2/2007	8/4/2014	11/2/2009	4.490	122.612	117.978	113.621	109.882	106.809	104.354	102.477	101.136
8/2/2007	8/2/2017	11/2/2009	4.050	125.039	119.068	113.914	109.710	106.393	103.852	102.005	100.771
8/2/2007	8/2/2017	11/2/2009	4.150	125.761	119.713	114.477	110.189	106.790	104.163	102.235	100.921
8/6/2007	8/6/2012	11/6/2009	4.490	113.744	113.409	110.436	107.677	105.305	103.346	101.838	100.768
8/6/2007	8/6/2012	11/6/2009	4.490	113.744	113.409	110.436	107.677	105.305	103.346	101.838	100.768
8/9/2007	8/11/2014	8/9/2011	4.860	124.534	119.790	115.281	111.333	107.946	105.006	102.408	100.060
8/9/2007	8/9/2017	11/9/2009	3.990	124.623	118.691	113.576	109.413	106.140	103.648	101.845	100.653
8/9/2007	8/9/2017	11/9/2009	3.990	124.623	118.691	113.576	109.413	106.140	103.648	101.845	100.653
8/13/2007	8/13/2012	8/13/2009	4.590	114.139	113.768	110.768	107.975	105.560	103.557	101.993	100.865
8/16/2007	8/16/2017	8/17/2009	3.990	124.641	118.699	113.573	109.401	106.124	103.627	101.819	100.624
8/17/2007	8/17/2012	8/17/2009	4.150	112.830	112.439	109.482	106.777	104.484	102.657	101.290	100.373
8/17/2007	8/17/2012	8/17/2009	4.350	113.448	113.057	110.073	107.320	104.969	103.058	101.597	100.585
8/17/2007	8/17/2017	8/17/2009	4.000	124.718	118.765	113.630	109.448	106.161	103.655	101.839	100.635
8/20/2007	8/20/2010	8/20/2009	4.590	104.909	104.909	104.886	104.015	102.950	101.934	101.043	100.357
8/20/2007	8/20/2014	8/20/2009	4.250	121.460	116.800	112.458	108.768	105.748	103.374	101.546	100.401
8/20/2007	8/20/2014	8/20/2009	4.250	121.460	116.800	112.458	108.768	105.748	103.374	101.546	100.401
8/24/2007	8/24/2010	8/24/2009	4.460	104.819	104.819	104.793	103.906	102.832	101.812	100.931	100.265
8/24/2007	8/24/2012	8/24/2009	4.050	112.599	112.173	109.213					

Start Date	Maturity		Next Call		Coupon	-300	-200	-100	Base	+100	+200	+300	+400
	Date	Date	Date	Date									
8/31/2007	8/31/2012	8/31/2009	4.370	113.680	113.218	110.197	107.412	105.033	103.104	101.632	100.598		
9/4/2007	9/4/2012	9/4/2009	4.190	113.163	112.680	109.683	106.944	104.627	102.772	101.387	100.472		
9/4/2007	9/4/2012	9/4/2009	4.220	113.257	112.774	109.773	107.027	104.700	102.832	101.433	100.500		
9/4/2007	9/5/2012	9/4/2009	3.890	124.003	118.133	113.081	108.986	105.785	103.368	101.645	100.553		
9/6/2007	9/7/2010	9/8/2009	4.160	104.657	104.657	104.614	103.673	102.569	101.548	100.704	100.154		
9/7/2007	9/7/2012	9/8/2009	4.090	112.883	112.385	109.395	106.676	104.389	102.575	101.232	100.371		
9/10/2007	9/11/2017	9/10/2009	3.690	122.566	116.866	111.978	108.059	105.032	102.785	101.222	100.293		
9/11/2007	9/13/2010	9/11/2009	4.430	105.033	105.033	104.984	104.017	102.893	101.840	100.940	100.298		
9/11/2007	9/11/2017	9/11/2009	3.590	121.842	116.234	111.439	107.611	104.673	102.511	101.038	100.194		
9/12/2007	9/12/2014	9/14/2009	3.690	118.675	114.267	110.233	106.893	104.271	102.309	100.952	100.168		
9/13/2007	9/15/2014	9/14/2009	3.990	120.241	115.713	111.524	108.006	105.188	103.024	101.456	100.459		
9/13/2007	9/13/2017	9/13/2010	3.990	124.758	118.786	113.636	109.448	106.148	103.582	101.567	99.935		
9/13/2007	9/13/2017	9/13/2010	3.990	124.758	118.786	113.636	109.448	106.148	103.582	101.567	99.935		
9/14/2007	9/14/2011	9/14/2009	4.090	108.804	108.804	107.575	105.500	103.650	102.125	100.970	100.237		
9/14/2007	9/14/2012	9/14/2010	4.390	113.913	113.378	110.329	107.523	105.124	103.129	101.470	100.054		
9/17/2007	9/17/2012	9/17/2009	4.220	113.410	112.860	109.826	107.055	104.710	102.827	101.415	100.476		
9/27/2007	9/27/2010	9/28/2009	4.250	104.994	104.994	104.928	103.906	102.747	101.677	100.782	100.180		
9/27/2007	9/29/2014	9/27/2010	4.490	122.880	117.526	112.371	108.181	105.050	102.868	101.207	99.871		
9/27/2007	9/27/2017	9/28/2009	3.650	122.326	116.630	111.756	107.859	104.855	102.633	101.098	100.197		
9/28/2007	9/28/2010	9/28/2009	4.290	105.052	105.052	104.986	103.959	102.798	101.723	100.819	100.202		
9/28/2007	9/28/2012	9/28/2009	3.850	112.351	111.748	108.747	106.057	103.832	102.102	100.870	100.134		
10/3/2007	10/3/2012	10/5/2009	3.830	112.340	111.714	108.715	106.034	103.824	102.110	100.898	100.167		
10/9/2007	10/9/2012	10/9/2009	4.400	114.250	113.581	110.302	107.057	103.960	101.568	100.441	100.059		
10/11/2007	10/14/2014	10/13/2009	4.180	121.392	116.741	112.433	108.789	105.843	103.542	101.846	100.703		
10/11/2007	10/11/2017	10/13/2009	3.990	124.904	118.881	113.704	109.498	106.192	103.676	101.858	100.670		
10/15/2007	10/16/2017	10/15/2009	3.990	124.928	118.893	113.708	109.497	106.187	103.668	101.848	100.659		
10/22/2007	10/22/2012	10/22/2009	3.990	113.067	112.350	109.275	106.515	104.214	102.411	101.088	100.252		
10/25/2007	10/27/2014	10/25/2011	4.360	122.429	117.678	113.252	109.417	106.115	103.223	100.623	98.241		
10/26/2007	10/26/2017	10/26/2009	3.390	120.592	115.078	110.432	106.763	103.992	101.993	100.696	99.978		
10/29/2007	10/29/2009	10/29/2009	4.250	101.062	101.062	101.062	100.989	100.739	100.489	100.241	99.994		
10/29/2007	10/29/2012	10/29/2009	3.990	113.144	112.395	109.303	106.531	104.222	102.409	101.077	100.235		
11/2/2007	11/3/2014	11/2/2009	3.990	120.518	115.893	111.655	108.107	105.270	103.094	101.515	100.487		
11/2/2007	11/3/2014	11/2/2010	4.190	121.575	116.874	112.545	108.881	105.907	103.507	101.545	99.884		
11/5/2007	11/5/2014	11/5/2009	3.990	120.526	115.897	111.655	108.103	105.263	103.085	101.505	100.476		
11/5/2007	11/6/2017	11/5/2012	4.390	128.042	121.632	115.918	110.977	106.636	102.753	99.218	95.947		
11/6/2007	11/6/2017	11/6/2009	3.480	121.294	115.696	110.960	107.203	104.350	102.266	100.884	100.174		
11/8/2007	11/9/2009	8/10/2009	4.100	101.150	101.150	101.150	101.062	100.781	100.501	100.223	100.016		
11/9/2007	11/10/2014	11/9/2011	4.330	122.346	117.590	113.168	109.330	106.019	103.110	100.488	98.078		
11/13/2007	11/14/2011	8/13/2009	3.760	108.731	108.731	107.169	105.011	103.155	101.684	100.649	100.102		
11/13/2007	11/13/2012	8/13/2009	3.680	112.276	111.457	108.398	105.706	103.524	101.855	100.713	100.118		
11/13/2007	11/13/2014	8/13/2009	3.350	117.160	112.810	108.914	105.759	103.349	101.618	100.506	100.022		
11/19/2007	11/19/2014	11/19/2009	3.750	119.298	114.754	110.616	107.193	104.497	102.466	101.048	100.155		
11/19/2007	11/19/2014	11/21/2011	4.270	122.067	117.314	112.904	109.076	105.774	102.864	100.238	97.815		
11/19/2007	11/20/2017	11/19/2012	4.290	125.449	119.348	113.737	109.022	104.946	101.295	97.955	94.865		
11/20/2007	11/20/2017	11/22/2010	3.740	123.226	117.363	112.361	108.346	105.205	102.744	100.759	99.090		
11/23/2007	11/24/2017	11/23/2011	3.990	122.680	115.894	111.079	107.216	104.072	101.377	98.951	96.697		
11/23/2007	11/24/2017	11/23/2011	3.990	122.680	115.894	111.079	107.216	104.072	101.377	98.951	96.697		
11/29/2007	11/29/2017	8/31/2009	2.950	117.517	112.458	108.241	104.995	102.646	101.070	100.186	99.889		
11/30/2007	11/30/2017	11/30/2009	3.190	119.245	113.915	109.444	105.950	103.357	101.554	100.417	99.755		
12/6/2007	12/6/2017	12/7/2009	3.250	119.701	114.312	109.791	106.243	103.594	101.725	100.529	99.805		
12/7/2007	12/7/2012	12/7/2009	3.450	111.739	110.804	107.762	105.128	103.032	101.484	100.462	99.821		
12/10/2007	12/10/2010	12/10/2009	3.870	105.342	105.342	105.194	103.881	102.564	101.421	100.553	99.953		
12/10/2007	12/11/2017	12/10/2010	3.450	121.167	115.571	110.836	107.085	104.181	101.908	100.045	98.442		
12/11/2007	12/11/2012	12/11/2009	3.760	112.836	111.872	108.744	105.990	103.744	102.023	100.819	100.037		
12/14/2007	12/14/2010	9/14/2009	3.690	105.135	105.135	104.982	103.656	102.343	101.223	100.411	99.993		
12/20/2007	12/20/2012	12/21/2009	3.600	112.379	111.376	108.265	105.552	103.373	101.726	100.605	99.879		
12/20/2007	12/20/2012	12/21/2009	3.750	112.895	111.851	108.386	105.017	102.345	100.885	100.206	99.770		
12/24/2007	12/26/2017	12/24/2012	3.990	123.305	117.553	112.169	107.601	103.598	99.993	96.667	93.548		
12/26/2007	12/26/2012	9/28/2009	3.460	111.955	110.928	107.841	105.172	103.049	101.482	100.459	99.951		
12/26/2007	12/26/2012	12/27/2010	3.960	113.683	112.639	109.433	106.583	104.194	102.193	100.467	98.919		
1/2/2008	1/2/2013	1/4/2010	3.490	112.127	111.068	107.968	105.289	103.158	101.576	100.501	99.781		
1/3/2008	1/5/2015	1/3/2011	3.650	118.954	114.403	110.289	106.902	104.199	102.013	100.172	98.550		
1/4/2008	1/4/2018	1/4/2011	3.360	120.611	115.067	110.406	106.730	103.888	101.633	99.764	98.136		
1/7/2008	1/7/2013	10/7/2009	2.990	110.431	109.375	106.424	103.958	102.094	100.808	100.102	99.782		
1/7/2008	1/7/2013	1/7/2011	3.590	112.524	111.438	108.299	105.567	103.313	101.416	99.759	98.254		
1/7/2008	1/7/2015	1/7/2011	3.490	118.098	113.620	109.597	106.313	103.708	101.599	99.812	98.228		
1/7/2008	1/8/2018	10/7/2009	2.590	115.114	110.442	106.630	103.763	101.765	100.537	99.961	99.695		
1/8/2008	1/8/2013	1/8/2010	3.150	110.998	109.927	106.920	104.378	102.416	101.027	100.129	99.523		
1/8/2008	1/8/2018	10/8/2009	2.570	114.974	110.328	106.539	103.694	101.716	100.510	99.947	99.685		
1/8/2008	1/8/2018	10/8/2009	2.640	115.462	110.727	106.854	103.931	101.884	100.602	99.986	99.703		
1/10/2008	1/10/2011	10/13/2009	3.100	104.546	104.546	104.363	102.947	101.646	100.650	100.065	99.774		
1/11/2008	1/11/2018	10/13/2009	2.720	116.027	111.189	107.220	104.210	102.079	100.715	100.024	99.703		
1/14/2008	1/16/2018	1/14/2011	3.240	119.773	114.330	109.779	106.210	103.462	101.269	99.440	97.832		
1/16/2008	1/16/2013	10/16/2009	2.550	108.960	107.901	105.126	102.887	101.288	100.313	99.871	99.636		
1/16/2008	1/16/2013	10/16/2009	2.690	109.452	108.379	105.537	103.218	101.522	100.448	99.930	99.668		
1/16/2008	1/16/2015	10/16/2009	2.640	113.552	109.576	106.159	103.523	101.651	100.492	99.935	99.660		
1/16/2008	1/16/2018	10/16/2009	2.380	113.682	109.274	105.712	103.075	101.299	100.274	99.835	99.600		
1/17/2008	1/17/2018	10/19/2009	2.250	112.802	108.568	105.175	102.685	101.041	100.153	99.789	99.555		
1/18/2008	1/18/2013	10/19/2009	2.550	108.974	107.907	105.128	102.888	101.287	100.311	99.865	99.621		

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
1/25/2008	1/25/2013	10/25/2009	2.250	107.962	106.739	103.234	99.825	96.545	93.390	90.355	87.435
1/25/2008	1/25/2013	1/25/2011	2.650	109.377	108.153	105.127	102.848	101.040	99.479	98.016	96.609
1/28/2008	1/28/2010	10/28/2009	2.630	101.322	101.322	101.322	101.083	100.581	100.084	99.592	99.105
1/28/2008	1/28/2013	1/28/2011	2.990	110.605	109.364	106.158	103.651	101.714	100.054	98.540	97.102
1/30/2008	1/30/2013	2/1/2010	2.670	109.485	108.358	105.503	103.186	101.495	100.393	99.679	99.122
2/7/2008	2/7/2013	2/8/2010	2.490	108.901	107.754	104.985	102.768	101.206	100.201	99.533	98.978
2/13/2008	2/13/2013	2/14/2011	2.920	110.487	109.260	106.276	103.780	101.739	99.975	98.376	96.873
2/14/2008	2/14/2018	2/14/2012	3.190	116.584	110.543	107.655	104.298	101.416	98.815	96.380	94.057
2/15/2008	2/16/2010	8/16/2009	2.350	101.305	101.305	101.305	101.017	100.463	99.916	99.374	98.839
2/19/2008	2/19/2013	2/19/2010	2.590	109.345	107.964	104.399	101.836	100.720	100.058	99.497	98.952
2/22/2008	2/22/2011	8/22/2009	2.500	103.965	103.965	103.659	102.086	100.538	99.022	97.536	96.079
2/25/2008	2/25/2013	2/25/2011	3.090	111.200	109.777	106.514	103.922	101.873	100.116	98.511	96.991
2/25/2008	2/26/2018	8/25/2009	2.420	114.001	109.516	105.884	103.189	101.364	100.293	99.943	99.874
3/7/2008	3/9/2015	3/7/2011	2.890	114.984	110.811	107.173	104.266	101.959	100.012	98.284	96.684
3/7/2008	3/7/2018	3/7/2013	3.550	122.241	116.350	111.035	106.378	102.223	98.437	94.933	91.652
3/10/2008	3/11/2013	3/10/2010	2.390	108.756	107.452	104.714	102.547	101.042	100.061	99.347	98.725
3/11/2008	3/11/2011	9/11/2009	2.090	103.413	103.413	103.038	101.581	100.518	100.010	99.865	99.749
3/12/2008	3/12/2013	9/14/2009	2.010	107.369	106.130	103.648	101.748	100.535	100.000	99.845	99.721
3/14/2008	3/14/2018	3/15/2010	2.400	113.894	109.432	105.823	103.151	101.337	100.178	99.376	98.712
3/17/2008	3/18/2013	3/17/2011	2.690	109.907	108.526	105.611	103.181	101.167	99.395	97.756	96.197
3/17/2008	3/17/2015	3/17/2011	2.620	112.940	107.716	104.945	102.665	100.821	99.154	97.574	96.048
3/17/2008	3/19/2018	3/18/2013	3.300	120.401	114.728	109.582	105.065	101.009	97.292	93.834	90.588
3/25/2008	3/27/2023	3/25/2013	3.150	119.831	113.581	108.049	103.537	99.649	96.108	92.804	89.677
3/26/2008	3/26/2018	3/26/2012	2.980	115.111	110.552	106.787	103.505	100.627	97.977	95.476	93.086
3/28/2008	3/28/2013	3/28/2011	2.800	110.390	108.782	105.667	103.213	101.209	99.451	97.815	96.250
3/28/2008	3/28/2013	3/28/2011	2.820	110.465	108.856	105.729	103.263	101.253	99.487	97.851	96.284
3/28/2008	3/28/2018	9/28/2009	2.020	111.331	107.395	104.289	102.054	100.651	100.012	99.799	99.636
3/28/2008	3/28/2018	3/28/2011	2.770	116.538	111.563	107.481	104.322	101.850	99.795	97.986	96.324
3/31/2008	3/31/2011	9/30/2009	1.990	103.361	103.361	102.910	101.450	100.422	99.968	99.786	99.619
4/14/2008	4/14/2015	4/14/2011	2.750	113.637	108.364	105.431	102.983	101.026	99.262	97.600	96.000
4/28/2008	4/28/2015	4/28/2011	3.250	117.139	112.646	108.691	105.474	102.862	100.661	98.714	96.925
4/28/2008	4/30/2018	10/28/2009	2.150	112.295	108.116	104.812	102.415	100.861	100.071	99.730	99.479
4/30/2008	4/30/2018	4/30/2013	3.740	122.132	116.464	111.010	106.288	102.119	98.312	94.787	91.477
5/2/2008	5/4/2015	5/2/2011	3.990	121.327	116.433	112.015	108.237	104.740	101.235	97.896	94.540
5/5/2008	5/5/2015	5/5/2011	3.170	116.713	112.279	108.387	105.223	102.647	100.463	98.517	96.725
5/8/2008	5/8/2015	5/10/2010	2.960	115.538	111.245	107.515	104.581	102.424	100.887	99.762	98.856
5/19/2008	5/19/2015	5/21/2012	4.700	125.020	119.463	114.283	109.540	104.791	99.921	95.119	90.424
5/19/2008	5/21/2018	5/20/2013	3.890	123.472	117.543	111.946	107.072	102.763	98.860	95.251	91.863
5/23/2008	5/23/2013	5/23/2011	4.040	115.621	113.754	110.237	107.071	103.949	100.681	97.407	94.133
5/23/2008	5/23/2018	5/23/2011	3.270	120.403	114.771	110.077	106.364	103.404	100.947	98.818	96.897
5/27/2008	5/27/2010	8/27/2009	2.790	102.325	102.325	102.325	101.751	100.923	100.109	99.308	98.520
5/27/2008	5/27/2011	5/27/2010	3.220	105.948	105.948	105.248	103.428	101.861	100.680	99.729	98.893
5/27/2008	5/28/2013	5/27/2011	3.490	113.542	111.556	108.073	105.165	102.752	100.663	98.775	97.002
5/29/2008	5/29/2018	5/31/2011	3.460	118.829	111.836	107.887	104.787	102.442	100.430	98.590	96.845
6/6/2008	6/6/2013	6/6/2011	3.990	115.582	113.527	109.855	106.680	103.791	100.943	98.050	95.210
6/10/2008	6/11/2012	6/10/2010	3.940	111.447	111.226	108.430	105.575	103.032	100.883	99.024	97.501
6/16/2008	6/17/2013	6/16/2011	4.070	116.019	113.901	110.198	107.008	104.311	102.008	99.936	98.034
6/24/2008	6/24/2015	6/24/2011	3.830	120.578	115.721	111.353	107.701	104.682	102.113	99.855	97.808
6/30/2008	7/1/2013	9/30/2009	2.920	111.606	109.666	106.505	103.932	102.020	100.727	100.050	99.782
6/30/2008	7/1/2013	6/30/2010	3.450	113.713	111.694	108.305	105.446	103.203	101.498	100.186	99.102
6/30/2008	6/30/2015	6/30/2010	3.370	117.959	113.361	109.291	106.008	103.500	101.630	100.223	99.084
6/30/2008	7/2/2018	6/30/2011	3.690	120.947	113.576	109.142	105.683	103.048	100.868	98.912	97.073
7/1/2008	7/1/2015	7/1/2011	4.600	124.574	118.491	113.489	109.355	105.660	102.033	98.434	95.104
7/7/2008	7/8/2013	7/7/2011	4.590	118.334	116.070	112.204	108.718	105.452	102.058	98.628	95.344
7/8/2008	7/8/2013	7/8/2011	4.250	116.976	114.717	110.937	107.611	104.556	101.537	98.505	95.564
7/10/2008	7/10/2014	7/10/2012	4.800	123.904	119.103	114.277	109.755	105.299	100.706	96.073	91.623
7/11/2008	7/11/2018	7/11/2012	3.750	121.911	115.964	110.834	106.602	103.019	99.850	96.947	94.219
7/14/2008	7/14/2015	7/15/2013	4.900	126.489	120.919	114.998	109.322	103.717	97.999	92.304	86.866
7/14/2008	7/16/2018	10/14/2009	2.500	114.876	110.144	106.348	103.524	101.583	100.427	99.897	99.638
7/14/2008	7/16/2018	7/14/2011	3.250	120.460	114.778	110.060	106.312	103.283	100.739	98.500	96.462
7/17/2008	7/17/2018	7/17/2013	3.750	122.776	116.880	111.226	106.305	101.942	97.953	94.259	90.798
7/21/2008	7/22/2013	10/21/2009	3.000	112.099	109.780	105.750	102.122	100.497	100.167	99.937	99.712
8/15/2008	8/15/2018	8/15/2011	3.830	125.122	118.756	113.395	109.057	105.531	102.574	100.013	97.721
8/19/2008	8/19/2013	8/19/2010	3.440	114.141	111.626	107.618	104.565	102.467	100.966	99.779	98.720
9/8/2008	9/9/2013	9/8/2009	2.890	112.049	109.741	106.526	103.931	102.017	100.738	100.072	99.860
5/13/2009	5/13/2014	5/13/2013	4.000	123.522	119.036	113.786	108.655	103.473	98.108	92.727	87.573