

HLB Option Sensitivity Analysis for HLB-Option, Flipper, and Knockout Advances

The Federal Home Loan Bank of Boston (Bank) is providing estimated valuations of the specific aforementioned advances 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 aforementioned advances.

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 the aforementioned advances.

The table depicts valuation estimates resulting from immediate, parallel interest-rate movements. 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. Please note that the valuation estimates are from the Bank's perspective. Since the member holds the advance 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 or a Flipper advance, the Bank would likely exercise its option to cancel the advance as the value falls below 100. In the case of a Knockout advance, the Bank is obligated to terminate the advance on any specified cancellation date if LIBOR is equal to or greater than the predetermined "strike rate." In either case, the member's cost to prepay the advance increases as interest rates fall.

To identify your advance, locate the appropriate start date and 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 Member Financial Strategies at 1-800-292-9644.

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
3/16/2007	3/16/2017	3/16/2017	4.09000	100.18	100.18	100.18	100.16	100.11	100.07	100.03	99.98
3/23/2007	3/23/2017	3/23/2017	4.29000	100.27	100.27	100.27	100.24	100.17	100.11	100.05	99.99
4/9/2007	4/10/2017	4/10/2017	4.15000	100.47	100.47	100.47	100.40	100.29	100.18	100.07	99.96
4/12/2007	4/12/2017	4/12/2017	4.25000	100.51	100.51	100.51	100.44	100.32	100.20	100.09	99.97
4/13/2007	4/13/2017	4/13/2017	4.45000	100.54	100.54	100.54	100.47	100.35	100.23	100.11	99.99
5/18/2007	5/18/2017	5/18/2017	4.19000	100.92	100.92	100.92	100.78	100.56	100.35	100.13	99.92
5/29/2007	5/30/2017	5/30/2017	4.25000	101.07	101.07	101.07	100.91	100.66	100.41	100.17	99.92
6/7/2007	6/7/2017	3/7/2017	4.82000	101.33	101.33	101.33	101.14	100.87	100.60	100.33	100.08
6/8/2007	6/8/2017	3/8/2017	4.49000	101.25	101.25	101.25	101.06	100.78	100.51	100.24	100.03
6/18/2007	6/19/2017	3/20/2017	4.50000	101.39	101.39	101.39	101.17	100.86	100.56	100.26	100.03
6/19/2007	6/19/2017	3/20/2017	4.65000	101.43	101.43	101.43	101.21	100.91	100.61	100.31	100.06
6/22/2007	6/22/2017	3/22/2017	4.50000	101.42	101.42	101.42	101.19	100.88	100.57	100.27	100.03
6/28/2007	6/28/2017	3/28/2017	4.50000	101.50	101.50	101.50	101.25	100.93	100.60	100.28	100.03
7/13/2007	7/13/2017	4/13/2017	4.29000	101.61	101.61	101.61	101.32	100.95	100.58	100.23	99.99
7/20/2007	7/20/2017	4/20/2017	4.29000	101.69	101.69	101.69	101.38	100.99	100.61	100.24	99.99
7/27/2007	7/27/2017	4/27/2017	4.25000	101.76	101.76	101.76	101.42	101.02	100.61	100.24	99.97
7/30/2007	1/30/2019	5/1/2017	3.99000	107.77	107.77	106.88	104.95	103.16	101.65	100.58	100.01
7/31/2007	7/31/2017	5/1/2017	3.99000	101.70	101.70	101.70	101.35	100.93	100.52	100.16	99.92
7/31/2007	7/31/2017	5/1/2017	3.99000	101.70	101.70	101.70	101.35	100.93	100.52	100.16	99.92
7/31/2007	7/31/2017	5/1/2017	4.06000	101.73	101.73	101.73	101.38	100.96	100.55	100.18	99.93
8/2/2007	8/2/2017	5/2/2017	4.05000	101.74	101.74	101.74	101.39	100.97	100.55	100.18	99.93
8/9/2007	8/9/2017	5/9/2017	3.99000	101.80	101.80	101.80	101.41	100.97	100.54	100.17	99.90
8/16/2007	8/16/2017	5/16/2017	3.99000	101.87	101.87	101.87	101.47	101.01	100.56	100.17	99.89
8/17/2007	8/17/2017	5/17/2017	4.00000	101.89	101.89	101.89	101.48	101.02	100.57	100.17	99.89
9/4/2007	9/5/2017	3/6/2017	3.89000	102.04	102.04	102.04	101.57	101.06	100.56	100.14	99.99
9/10/2007	9/11/2017	3/10/2017	3.69000	102.00	102.00	102.00	101.50	100.98	100.47	100.09	99.98
9/11/2007	9/11/2017	3/13/2017	3.59000	101.94	101.94	101.94	101.45	100.92	100.42	100.07	99.97
9/13/2007	9/13/2017	3/13/2017	3.99000	102.18	102.18	102.18	101.68	101.15	100.63	100.18	99.98
9/27/2007	9/27/2017	3/27/2017	3.65000	102.14	102.14	102.14	101.59	101.02	100.48	100.08	99.94
10/11/2007	10/11/2017	4/11/2017	3.99000	102.49	102.49	102.49	101.89	101.28	100.70	100.21	99.96
10/15/2007	10/16/2017	4/17/2017	3.99000	102.55	102.55	102.55	101.93	101.31	100.71	100.21	99.95
10/26/2007	10/26/2017	4/26/2017	3.39000	102.26	102.26	102.26	101.61	100.96	100.38	100.01	99.82
11/5/2007	11/6/2017	5/5/2017	4.39000	103.06	103.06	103.05	102.36	101.68	101.02	100.44	100.04
11/6/2007	11/6/2017	5/8/2017	3.48000	102.43	102.43	102.42	101.73	101.06	100.45	100.04	99.80
11/19/2007	11/20/2017	11/19/2012	4.29000	103.16	103.16	103.14	102.41	101.69	100.98	100.28	99.59
11/20/2007	11/20/2017	5/22/2017	3.74000	102.75	102.75	102.73	102.01	101.29	100.63	100.13	99.82
11/23/2007	11/24/2017	11/23/2011	3.99000	102.98	102.98	102.96	102.22	101.49	100.77	100.06	99.36
11/23/2007	11/24/2017	11/23/2011	3.99000	102.98	102.98	102.96	102.22	101.49	100.77	100.06	99.36
11/29/2007	11/29/2017	5/30/2017	2.95000	102.25	102.25	102.22	101.47	100.75	100.19	99.85	99.60
11/30/2007	11/30/2017	5/30/2017	3.19000	102.44	102.44	102.41	101.65	100.92	100.31	99.92	99.66
12/10/2007	12/11/2017	3/10/2017	3.45000	102.74	102.74	102.70	101.92	101.15	100.48	100.06	99.97
12/24/2007	12/26/2017	12/24/2012	3.99000	103.34	103.34	103.28	102.45	101.64	100.84	100.05	99.27
1/7/2008	1/8/2018	4/7/2017	2.59000	102.26	102.26	102.18	101.33	100.56	100.07	99.90	99.80
1/8/2008	1/8/2018	4/10/2017	2.57000	102.24	102.24	102.17	101.31	100.55	100.06	99.89	99.78
1/8/2008	1/8/2018	4/10/2017	2.64000	102.30	102.30	102.23	101.37	100.60	100.09	99.90	99.79
1/11/2008	1/11/2018	4/11/2017	2.72000	102.39	102.39	102.31	101.45	100.66	100.12	99.91	99.79
1/14/2008	1/16/2018	4/14/2017	3.24000	102.90	102.90	102.81	101.93	101.09	100.38	100.00	99.84
1/16/2008	1/16/2018	4/17/2017	2.38000	102.13	102.13	102.04	101.17	100.42	100.00	99.85	99.72
1/17/2008	1/17/2018	4/17/2017	2.25000	102.02	102.02	101.93	101.06	100.34	99.97	99.83	99.70
1/18/2008	1/18/2018	4/18/2017	2.29000	102.06	102.06	101.97	101.10	100.36	99.98	99.83	99.70
2/14/2008	2/14/2018	2/14/2012	3.19000	103.11	103.11	102.98	102.02	101.08	100.15	99.24	98.35
3/7/2008	3/7/2018	3/7/2017	3.55000	103.67	103.67	103.51	102.49	101.51	100.67	100.12	99.98
3/14/2008	3/14/2018	3/14/2017	2.40000	102.53	102.53	102.36	101.34	100.49	100.03	99.96	99.92
3/17/2008	3/19/2018	3/17/2017	3.30000	103.52	103.52	103.34	102.29	101.29	100.48	100.04	99.95
4/28/2008	4/30/2018	4/28/2017	2.15000	102.54	102.54	102.30	101.18	100.33	99.94	99.77	99.61
4/30/2008	4/30/2018	4/30/2017	3.74000	104.43	104.43	104.18	103.00	101.83	100.69	99.56	98.46
5/23/2008	5/23/2018	5/23/2017	3.27000	104.08	104.08	103.79	102.55	101.41	100.51	99.99	99.71
6/30/2008	7/2/2018	6/30/2011	3.69000	105.01	105.01	104.64	103.28	101.95	100.64	99.35	98.09
7/11/2008	7/11/2018	7/11/2012	3.75000	105.19	105.19	104.79	103.41	102.06	100.72	99.41	98.13
7/14/2008	7/16/2018	4/14/2017	2.50000	103.49	103.49	103.09	101.76	100.68	100.07	99.87	99.75
7/14/2008	7/16/2018	4/14/2017	3.25000	104.54	104.54	104.14	102.76	101.51	100.54	100.03	99.85

As of:

2/28/2017

HLB Option Sensitivity Analysis for HLB-Option and Knockout Advances

Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
7/17/2008	7/17/2018	5/14/2017	3.75000	105.25	105.25	104.84	103.45	102.07	100.72	99.40	98.10
8/15/2008	8/15/2018	5/15/2017	3.83000	105.67	105.67	105.20	103.73	102.34	101.16	100.33	99.90
12/27/2011	12/27/2021	12/29/2014	3.55000	117.38	116.94	111.92	107.04	102.41	98.01	93.83	89.85
5/15/2012	5/15/2017	11/17/2014	1.95000	100.41	100.41	100.41	100.28	100.07	99.86	99.66	99.46
6/20/2012	6/20/2017	6/22/2015	1.63000	100.51	100.51	100.51	100.28	99.98	99.68	99.38	99.08
7/16/2012	7/17/2017	7/16/2014	1.72000	100.66	100.66	100.66	100.36	99.98	99.61	99.24	98.87
7/18/2012	7/18/2018	7/20/2015	2.72000	103.82	103.82	103.41	102.02	100.65	99.31	98.00	96.70
7/19/2012	7/19/2017	7/21/2014	1.69000	100.66	100.66	100.66	100.35	99.97	99.59	99.21	98.84
10/1/2012	10/1/2019	4/1/2015	2.25000	105.91	105.91	104.31	101.73	99.22	96.79	94.43	92.14
10/5/2012	10/5/2017	10/6/2014	1.63000	100.99	100.99	100.99	100.42	99.83	99.24	98.67	98.10
3/8/2013	3/8/2018	3/9/2015	1.78000	101.84	101.84	101.69	100.67	99.67	98.68	97.72	96.77
5/7/2014	5/7/2018	5/7/2015	1.76000	102.12	102.12	101.86	100.67	99.50	98.36	97.23	96.11
10/16/2014	10/16/2018	10/17/2016	2.48000	104.10	104.10	103.49	101.85	100.25	98.69	97.15	95.65
10/24/2014	10/24/2018	10/26/2015	1.74000	102.91	102.91	102.29	100.64	99.03	97.45	95.91	94.39
10/24/2014	10/24/2018	10/26/2015	1.74000	102.91	102.91	102.29	100.64	99.03	97.45	95.91	94.39
2/20/2015	2/20/2019	2/22/2016	1.79000	103.59	103.59	102.66	100.69	98.77	96.89	95.06	93.27
3/26/2015	3/26/2019	3/29/2016	1.61000	103.38	103.38	102.36	100.30	98.30	96.34	94.43	92.57
3/26/2015	3/26/2020	3/29/2016	1.59000	104.95	104.95	102.72	99.70	96.77	93.95	91.22	88.59
6/29/2015	7/1/2019	6/29/2017	0.71706	105.56	105.56	104.25	102.19	100.56	99.93	99.79	99.72
7/30/2015	7/30/2019	8/1/2016	1.80000	104.41	104.41	103.02	100.62	98.29	96.02	93.82	91.68
8/14/2015	8/14/2025	8/14/2020	1.85000	115.87	111.63	106.18	101.59	97.66	94.16	90.94	87.93
8/19/2015	8/19/2025	8/21/2017	0.99000	108.51	105.79	102.52	100.53	99.65	99.13	98.67	98.21
8/25/2015	8/25/2020	8/25/2017	0.95000	103.36	103.36	101.62	100.24	99.57	99.09	98.61	98.15
8/26/2015	8/26/2025	8/26/2020	1.75000	115.07	110.94	105.58	101.06	97.18	93.69	90.48	87.46
9/14/2015	9/14/2020	9/14/2017	1.05000	103.77	103.77	101.88	100.36	99.58	99.02	98.50	97.98
9/15/2015	9/16/2019	9/15/2016	1.75000	104.52	104.52	102.98	100.45	98.00	95.62	93.31	91.07
9/18/2015	9/18/2020	9/18/2017	1.09000	103.93	103.93	101.98	100.41	99.59	99.02	98.48	97.96
9/29/2015	9/30/2019	9/29/2016	1.61000	104.22	104.22	102.64	100.08	97.60	95.19	92.85	90.58
10/2/2015	10/2/2020	10/2/2017	0.89000	103.24	103.24	101.51	100.16	99.41	98.82	98.25	97.69
10/2/2015	10/2/2025	10/2/2020	1.69000	114.73	110.59	105.24	100.69	96.75	93.21	89.93	86.84
11/6/2015	11/6/2020	11/6/2017	1.05000	103.93	103.93	101.92	100.33	99.41	98.71	98.05	97.41
11/6/2015	11/7/2022	11/6/2018	1.40000	108.08	107.12	103.57	100.81	98.69	96.91	95.28	93.72
12/4/2015	12/4/2025	12/4/2018	1.36000	112.09	108.37	104.13	100.98	98.64	96.71	94.98	93.34
12/8/2015	12/8/2020	3/8/2017	1.38000	105.29	105.29	102.85	100.90	100.06	99.97	99.95	99.93
12/11/2015	12/12/2022	12/11/2017	0.46306	109.74	108.47	104.30	101.82	100.36	99.60	99.18	98.89
12/15/2015	12/16/2019	3/15/2017	1.39000	103.94	103.94	102.45	100.76	100.04	99.95	99.91	99.87
12/15/2015	12/15/2022	12/15/2017	0.46344	109.73	108.45	104.27	101.81	100.46	99.90	99.71	99.65
12/18/2015	12/18/2020	12/18/2017	0.74317	106.67	106.67	103.76	101.79	100.60	100.07	99.88	99.81
12/24/2015	12/24/2020	12/26/2017	1.25000	104.84	104.84	102.48	100.60	99.45	98.59	97.80	97.03
12/24/2015	12/24/2025	12/24/2020	1.99000	117.80	112.90	106.98	101.99	97.69	93.84	90.31	87.01
1/12/2016	1/13/2020	4/12/2017	1.87000	105.45	105.45	103.71	101.61	100.35	99.93	99.80	99.69
1/19/2016	1/19/2021	1/19/2018	1.15000	104.54	104.54	102.23	100.42	99.27	98.36	97.52	96.70
1/19/2016	1/20/2026	1/22/2019	1.35000	112.18	108.35	104.04	100.69	98.06	95.81	93.75	91.80
1/22/2016	1/22/2020	4/24/2017	1.46000	104.29	104.29	102.67	100.88	100.05	99.83	99.68	99.53
1/29/2016	1/29/2021	5/1/2017	1.42000	105.64	105.64	103.01	100.97	100.06	99.80	99.63	99.47
2/2/2016	2/2/2021	2/2/2018	0.43456	106.37	106.37	103.38	101.38	100.15	99.52	99.21	99.02
2/26/2016	2/26/2021	2/26/2018	0.89000	103.61	103.61	101.55	99.95	98.83	97.86	96.92	96.01
2/26/2016	2/26/2026	2/26/2021	1.49000	113.59	109.37	103.91	99.22	95.07	91.29	87.77	84.45
3/8/2016	3/8/2023	3/8/2018	0.99000	106.05	105.08	102.21	100.23	98.94	97.89	96.92	95.98
3/18/2016	3/18/2020	3/20/2017	0.39317	104.95	104.95	103.11	101.12	100.08	99.89	99.83	99.78
4/5/2016	4/5/2021	4/12/2017	0.99000	104.12	104.12	100.85	99.81	98.73	97.67	96.63	95.60
4/8/2016	4/8/2020	4/10/2017	0.40928	103.76	103.76	102.09	100.49	99.89	99.76	99.65	99.54
4/12/2016	4/12/2021	4/12/2017	0.41789	104.03	104.03	101.77	100.28	99.87	99.75	99.63	99.51
4/28/2016	4/28/2020	4/28/2017	0.43900	104.36	104.36	102.52	100.68	99.87	99.65	99.49	99.33
4/28/2016	4/28/2021	4/28/2017	0.43900	105.35	105.35	102.60	100.65	99.86	99.65	99.49	99.33
4/28/2016	4/28/2021	4/30/2018	0.43900	106.34	106.34	102.75	100.72	99.71	99.27	99.04	98.87
5/2/2016	5/2/2023	5/4/2018	0.43456	108.04	106.50	102.82	100.85	99.80	99.30	99.02	98.82
5/2/2016	5/4/2026	5/2/2017	0.43456	108.20	105.24	102.15	100.36	99.81	99.63	99.46	99.29
5/5/2016	5/5/2021	5/7/2018	0.89000	103.77	103.77	101.59	99.84	98.52	97.34	96.21	95.10
5/5/2016	5/5/2026	5/5/2021	1.49000	113.88	109.47	103.85	99.02	94.72	90.79	87.14	83.69
5/6/2016	5/6/2026	5/8/2017	0.43372	106.93	104.35	101.66	100.18	99.78	99.59	99.40	99.22

As of:

2/28/2017

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Start Date	Maturity Date	Next Call Date	Coupon	-300	-200	-100	Base	+100	+200	+300	+400
5/10/2016	5/11/2026	5/10/2017	0.49000	104.57	102.78	100.91	100.02	99.78	99.59	99.40	99.21
5/12/2016	5/12/2026	5/12/2017	0.49000	104.57	102.78	100.91	100.02	99.77	99.58	99.38	99.18
5/13/2016	5/13/2026	5/15/2017	0.43372	107.30	104.59	101.77	100.20	99.76	99.55	99.34	99.14
5/17/2016	5/17/2021	5/17/2018	0.44178	105.94	105.94	102.40	100.50	99.57	99.13	98.86	98.65
5/20/2016	5/20/2026	5/22/2017	0.59000	105.52	103.40	101.19	100.07	99.76	99.54	99.31	99.09
6/3/2016	6/3/2026	6/5/2017	0.29167	107.59	104.70	101.70	100.23	99.92	99.89	99.88	99.88
6/6/2016	6/8/2026	6/6/2017	0.29639	104.78	104.78	102.71	100.90	100.07	99.89	99.87	99.86
6/6/2016	6/6/2031	6/6/2017	0.59000	107.18	103.99	101.40	100.08	99.62	99.29	98.97	98.65
6/8/2016	6/8/2026	6/8/2017	0.59000	105.55	103.41	101.20	100.07	99.70	99.43	99.17	98.90
6/14/2016	6/16/2031	6/14/2017	0.49000	105.92	103.22	101.05	100.01	99.65	99.37	99.08	98.80
6/16/2016	6/16/2020	6/16/2017	0.32039	104.57	104.57	101.99	100.15	99.86	99.82	99.78	99.74
6/16/2016	6/16/2026	6/18/2018	0.69000	106.50	104.03	101.44	99.51	98.06	96.77	95.54	94.34
6/16/2016	6/16/2031	6/16/2021	1.21000	115.16	109.20	102.99	97.87	93.41	89.38	85.66	82.16
6/24/2016	6/24/2026	6/26/2017	0.59000	105.57	103.40	101.18	100.04	99.64	99.32	99.00	98.69
6/27/2016	6/27/2031	6/27/2018	0.69000	108.44	104.74	101.69	99.56	98.03	96.71	95.45	94.22
6/27/2016	6/27/2031	6/27/2019	0.91000	111.26	106.55	102.44	99.20	96.59	94.28	92.11	90.04
6/30/2016	6/30/2020	6/30/2017	0.39817	104.42	104.42	101.79	100.10	99.83	99.75	99.67	99.60
6/30/2016	6/30/2021	6/30/2017	0.59000	102.59	102.55	100.92	100.00	99.62	99.29	98.96	98.64
7/8/2016	7/8/2026	7/10/2017	0.45000	104.27	102.55	100.81	99.93	99.53	99.17	98.82	98.47
7/14/2016	7/14/2021	7/14/2017	0.37317	104.39	104.32	101.73	100.28	99.79	99.64	99.52	99.40
7/22/2016	7/22/2026	7/24/2017	0.55000	105.24	103.16	101.07	99.98	99.51	99.11	98.72	98.34
7/22/2016	7/22/2026	7/24/2017	0.55000	105.24	103.16	101.07	99.98	99.51	99.11	98.72	98.34
7/28/2016	7/28/2026	7/30/2018	0.33900	110.04	105.72	102.02	100.28	99.43	99.03	98.79	98.62
8/1/2016	8/1/2031	8/1/2017	0.49000	105.97	103.24	101.07	99.95	99.45	99.03	98.62	98.22
8/11/2016	8/11/2026	8/13/2018	0.81000	107.76	104.84	101.86	99.64	97.97	96.52	95.14	93.80
8/12/2016	8/12/2021	8/14/2017	0.23372	104.51	104.41	101.74	100.21	99.62	99.37	99.17	98.98
8/19/2016	8/19/2021	8/21/2017	0.25233	104.68	104.58	101.83	100.24	99.60	99.32	99.10	98.89
9/2/2016	9/2/2026	9/5/2017	0.69000	106.65	104.09	101.54	100.09	99.40	98.88	98.39	97.89
9/9/2016	9/9/2026	9/10/2018	0.80000	107.73	104.80	101.81	99.55	97.82	96.29	94.85	93.44
9/9/2016	9/9/2031	9/11/2017	0.39000	104.73	102.52	100.75	99.77	99.20	98.68	98.17	97.66
9/12/2016	9/12/2031	9/12/2017	0.39000	104.72	102.51	100.75	99.77	99.20	98.67	98.16	97.65
9/15/2016	9/15/2026	9/16/2019	0.99000	109.58	106.07	102.27	99.04	96.31	93.82	91.49	89.25
9/15/2016	9/15/2026	9/16/2019	0.99000	109.58	106.07	102.27	99.04	96.31	93.82	91.49	89.25
9/16/2016	9/16/2021	9/18/2017	0.12039	104.93	104.78	101.85	100.30	99.73	99.59	99.54	99.50
9/22/2016	9/22/2031	9/22/2017	0.39000	104.72	102.50	100.74	99.74	99.14	98.60	98.05	97.52
9/22/2016	9/22/2031	9/24/2018	0.65000	108.01	104.46	101.48	99.22	97.49	95.94	94.47	93.03
9/26/2016	9/26/2031	9/26/2017	0.42000	105.10	102.71	100.82	99.76	99.14	98.58	98.03	97.49
10/3/2016	10/5/2026	10/3/2017	0.59000	105.74	103.44	101.22	99.92	99.22	98.63	98.06	97.50
10/7/2016	10/7/2026	10/10/2017	0.69000	106.72	104.08	101.54	100.04	99.26	98.64	98.06	97.48
10/21/2016	10/21/2031	10/23/2017	0.55000	106.77	103.69	101.25	99.86	99.10	98.47	97.85	97.24
1/13/2017	1/13/2022	1/16/2018	0.00178	107.74	107.34	103.55	101.25	99.90	99.28	99.00	98.85
1/13/2017	1/13/2027	1/14/2019	1.31000	113.02	108.44	104.07	100.82	98.39	96.36	94.53	92.81
1/20/2017	1/22/2024	1/22/2019	0.00011	111.42	108.51	104.14	101.57	99.91	98.93	98.37	98.04