

Federal Home Loan Bank of Des Moines Monthly Price Report

The Federal Home Loan Bank of Des Moines (Bank) is providing estimated valuations for specific Convertible, Amortizing and Non-Amortizing advances set forth below for members' information and convenience only. The estimated valuations are generated by models used for the Bank's own asset/liability management purposes. The models use 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 prices only and should not be construed as a liquidation price for the specific advance.**

It is expressly understood that in providing these valuations to members, the Bank is not performing any advisory service. The valuations are provided without representation or warranty and the member is solely responsible for any decision it makes or actions it takes based on the valuations provided. It is recommended that members maintain independent capabilities to value their asset/liability positions, including Convertible, Amortizing and Non-Amortizing advances. You should consult with your own tax, legal, accounting, credit and financial advisors with respect to the transaction structure and information detailed herein.

The table depicts valuation estimates resulting from immediate parallel interest-rate movements of plus/minus 400 basis points in 100 basis point increments. To identify your advance, locate the appropriate maturity date and verify the advance rate. The advances in report are grouped by advance type and then within each type sorted in ascending order by maturity date. Once the appropriate structure is located, read across to view the sensitivity analysis for that advance.

If you have any questions, contact the Money Desk at 800.544.3452, ext. 2122.

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
050812A00050	8/12/2005	4.97	8/12/2025	102.8103	102.1849401	101.5672202	100.9569959	100.354131	99.75849256	99.16995091	98.58837943	98.01365451
050823A00085	8/23/2005	4.78	8/25/2025	102.90002	102.2377793	101.5840868	100.9387778	100.3016917	99.67267154	99.0515647	98.43822225	97.83249898
050823A00088	8/23/2005	4.78	8/25/2025	102.90002	102.2377793	101.5840868	100.9387778	100.3016917	99.67267153	99.0515647	98.43822225	97.83249898
050902A00032	9/2/2005	4.69	8/22/2025	102.80514	102.151547	101.5062865	100.8692035	100.2401431	99.61895409	99.00548904	98.39960425	97.80115954
050923A00096	9/23/2005	4.86	9/22/2025	103.3005	102.5593808	101.8289283	101.1089166	100.3991228	99.69932985	99.0093272	98.32891	97.65787912
051003A00009	10/3/2005	5.15	10/15/2025	103.75678	102.9510405	102.1578697	101.3769762	100.6080757	99.85089299	99.10516094	98.37062061	97.64702083
051107A00075	11/7/2005	5.29	11/17/2025	104.38981	103.4889957	102.6038058	101.7338381	100.8787015	100.0380181	99.21142294	98.39856311	97.59909751
060308A00014	3/8/2006	5.44	3/16/2026	106.07425	104.8370087	103.6288501	102.4487507	101.2957386	100.1688865	99.06730877	97.99015963	96.93663063
060808A00022	8/8/2006	5.57	6/15/2026	107.55704	106.0634126	104.5982914	103.1609261	101.750595	100.3666005	99.00826899	97.67494922	96.36601155
070518A00023	5/18/2007	5.46	5/18/2027	107.12687	105.6777156	104.2614929	102.8771991	101.5238707	100.2005805	98.90643523	97.64057473	96.4021701
100809A00029	8/9/2010	4.23	8/15/2025	102.3818	101.7496801	101.1253868	100.508774	99.89970033	99.29802775	98.70362167	98.11635074	97.53608675
100824A00009	8/24/2010	3.91	9/2/2025	102.35186	101.6702812	100.9977859	100.3341914	99.67932187	99.0330059	98.39507663	97.76537149	97.1437321
100930A00008	9/30/2010	3.82	9/30/2025	102.55196	101.7926385	101.0445606	100.3074803	99.58115641	98.86535461	98.15984746	97.46441397	96.77883944
110414A00007	4/14/2011	3.95	1/21/2025	100.41678	100.3131863	100.2098533	100.1067762	100.0039539	99.90138532	99.79906954	99.6970055	99.59519219
110505A00022	5/5/2011	4.59	5/15/2026	105.75975	104.3646292	102.99475	101.6494855	100.3282281	99.03038957	97.7554007	96.50271019	95.27178412
110701A00011	7/1/2011	3.87	7/1/2026	102.89642	102.0493142	101.2172069	100.3996871	99.59635939	98.80684297	98.03077116	97.2677906	96.51756066
110719A00017	7/19/2011	3.68	7/20/2026	102.74338	101.8949816	101.0616373	100.2429343	99.43847455	98.64787471	97.87076569	97.10679184	96.35561036
110805A00014	8/5/2011	4.06	8/17/2026	105.97685	104.324045	102.7051939	101.1193202	99.5654803	98.04276656	96.55030551	95.08725623	93.65280884
110824A00006	8/24/2011	2.69	8/24/2026	102.73632	101.5569375	100.3994364	99.26321825	98.14770962	97.05235804	95.97663105	94.92001527	93.88201551
110909A00006	9/9/2011	2.26	9/9/2026	101.69241	100.7709814	99.86644972	98.97834646	98.10621703	97.24962402	96.40814635	95.58137854	94.76892993
111007A00007	10/7/2011	3.92	10/7/2031	117.88087	111.923927	106.3421599	101.1091288	96.20041483	91.59345374	87.26738538	83.20291592	79.38219197
111216A00001	12/16/2011	3.95	12/30/2031	122.12504	114.7883438	107.9580626	101.596335	95.6683254	90.14196575	84.987722	80.17838162	75.68885974
120113A00012	1/13/2012	3.62	1/15/2027	106.59713	104.5272074	102.5083006	100.5388161	98.6172249	96.7420564	94.9118959	93.12538194	91.38120391
120113A00013	1/13/2012	3.87	1/15/2032	121.67474	114.3114797	107.45941	101.0801084	95.13824	89.60129175	84.4393332	79.62479866	75.13228876
120127A00018	1/27/2012	3.64	2/1/2027	106.78731	104.6693181	102.6042718	100.590487	98.62634849	96.71030416	94.84086229	93.01658858	91.23610348
120127A00019	1/27/2012	3.87	1/30/2032	121.77407	114.3680032	107.478509	101.0665868	95.09638081	89.53491222	84.35183376	79.51920664	75.01129755
120410A00005	4/10/2012	2.35	4/12/2027	102.68037	101.3454672	100.0398769	98.76271155	97.51311586	96.29026765	95.09337619	93.92168074	92.77444912
120411A00013	4/11/2012	3.59	4/15/2027	107.3306	105.00131	102.7344974	100.5280821	98.38007246	96.28855673	94.25169964	92.26773855	90.33498002
120621A00009	6/21/2012	3.18	6/21/2032	113.12001	107.6396476	102.5167768	97.72483448	93.2394122	89.03806818	85.10015719	81.40667616	77.94012385
120709A00016	7/9/2012	3.2	7/15/2027	107.0952	104.5215306	102.0234691	99.59833858	97.2435794	94.95673823	92.73546322	90.57749897	88.48068195
120806A00015	8/6/2012	2.38	8/6/2027	102.73269	101.3424422	99.98443417	98.65765532	97.36113157	96.09392725	94.85514324	93.64391522	92.45941201
120807A00026	8/7/2012	2.42	8/9/2027	102.78926	101.39816	100.0393256	98.71174168	97.4144334	96.14646438	94.90693481	93.6949797	92.50976725
120808A00006	8/8/2012	2.06	8/9/2027	102.39422	101.006826	99.65164505	98.32766489	97.03391123	95.76944825	94.53337673	93.32483228	92.14298372

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
120827A00048	8/27/2012	2.01	8/27/2027	102.78176	101.1167844	99.49336192	97.91009908	96.36566286	94.85877582	93.38821328	91.95280069	90.55141114
120827A00052	8/27/2012	2.01	8/27/2027	102.78176	101.1167844	99.49336192	97.91009908	96.36566286	94.85877582	93.38821328	91.95280069	90.55141114
121116A00006	11/16/2012	2.64	11/13/2025	101.93496	101.0578963	100.1959063	99.3486046	98.51561779	97.69658515	96.89115797	96.0989991	95.31978244
121116A00021	11/16/2012	2.35	11/17/2025	101.77296	100.8847687	100.0120547	99.15441211	98.31145274	97.48280175	96.66809696	95.86698833	95.07913744
121116A00022	11/16/2012	2.78	11/16/2029	111.29334	106.3276717	101.6149534	97.14100399	92.89250532	88.85694807	85.02257881	81.37835052	77.91387671
121120A00010	11/20/2012	1.93	11/22/2027	103.02432	101.102548	99.23321704	97.41452694	95.64475105	93.92223309	92.24538377	90.61267765	89.02265017
121120A00011	11/20/2012	2.22	11/22/2027	104.80552	102.193	99.66384205	97.21488307	94.84309657	92.5455886	90.31959113	88.16245579	86.07164792
121217A00009	12/17/2012	2.02	12/17/2027	103.32925	101.3205831	99.36855497	97.47115785	95.62647096	93.83265429	92.0879447	90.39065216	88.73915618
130107A00002	1/7/2013	3.22	1/18/2028	108.48344	105.3857019	102.3936119	99.50296162	96.70974071	94.01012165	91.40045026	88.87723678	86.43714735
130206A00004	2/6/2013	2.14	2/7/2028	102.98622	101.3175761	99.69435907	98.11494162	96.57776948	95.08135627	93.62427993	92.20517934	90.82275129
130206A00009	2/6/2013	2.83	2/7/2028	106.29489	103.6368308	101.0671686	98.58236268	96.17904048	93.85398715	91.60413673	89.42656424	87.31847815
130207A00012	2/7/2013	2.9	2/7/2033	109.30854	105.0425728	101.0264659	97.24284235	93.6756849	90.31021539	87.13279003	84.13080403	81.29260497
130211A00017	2/11/2013	3.27	2/15/2028	108.84782	105.6668071	102.5962948	99.63179533	96.76903399	94.00393572	91.33261436	88.75136265	86.25664271
130405A00006	4/5/2013	2.41	4/7/2025	100.5518	100.2826397	100.0149283	99.74865463	99.4838071	99.22037418	98.95834446	98.69770667	98.43844968
130405A00007	4/5/2013	2.91	4/17/2028	108.38138	105.0319396	101.8043201	98.69341553	95.69436367	92.80253369	90.01351361	87.32309862	84.72727998
130424A00004	4/24/2013	2.46	4/24/2025	100.66429	100.3479842	100.0336713	99.72133353	99.4109522	99.10250892	98.79598552	98.49136406	98.18862683
130424A00005	4/24/2013	3.07	4/24/2030	113.62997	108.1756276	103.0199643	98.1450596	93.53415724	89.17158498	85.04267935	81.13371556	77.43184276
130531A00021	5/31/2013	3.22	5/30/2028	109.72124	106.2332626	102.8759989	99.6438615	96.53153139	93.53394418	90.64627659	87.86393359	85.18253637
130913A00018	9/13/2013	3.72	9/13/2028	107.35837	105.0297934	102.7747843	100.5903706	98.4737224	96.42214613	94.43307738	92.50407336	90.63280626
130925A00035	9/25/2013	1.53	6/25/2025	100.62916	100.0957914	99.56804231	99.0458269	98.52905794	98.01765008	97.51151975	97.01058509	96.51476597
130926A00009	9/26/2013	4	10/2/2028	113.58192	109.6821164	105.9398159	102.3477301	98.89895699	95.58695506	92.40552232	89.34877624	86.41113518
131018A00006	10/18/2013	3.28	10/20/2025	102.52059	101.6560221	100.8064041	99.97134707	99.15047587	98.34342828	97.54985439	96.76941601	96.00178626
131217A00024	12/17/2013	4.34	1/2/2029	115.45536	111.2760693	107.2752036	103.4441651	99.77482065	96.25947077	92.89082426	89.66197422	86.56637573
140219A00005	2/19/2014	3.13	2/20/2029	106.02063	103.8136502	101.6780972	99.61106475	97.60978669	95.67162924	93.79408351	91.97475867	90.21137563
140423A00036	4/23/2014	4.03	4/23/2029	115.22565	110.7403541	106.4587786	102.3705787	98.46599236	94.73580168	91.17129983	87.76425984	84.50690565
140521A00019	5/21/2014	3.43	5/22/2028	110.38208	106.9041857	103.5557694	100.3313278	97.22562291	94.23366576	91.35070355	88.57220706	85.89385893
140626A00036	6/26/2014	3.55	6/26/2029	114.00123	109.3572807	104.9328326	100.7163368	96.69690956	92.86429379	89.20881999	85.72136925	82.39333905
140717A00027	7/17/2014	3.14	7/17/2026	104.14881	102.6240099	101.1302283	99.66657066	98.23217766	96.82622267	95.44791017	94.09647426	92.77117726
140815A00032	8/15/2014	3.59	10/15/2029	114.61957	109.6727338	104.9723086	100.5046799	96.25706204	92.21744059	88.37452111	84.71768223	81.23693182
140911A00033	9/11/2014	3.02	9/13/2027	105.6334	103.4136508	101.2575905	99.16290905	97.12739986	95.14895283	93.22554928	91.35525725	89.53622705
140917A00030	9/17/2014	3.23	9/17/2029	111.28196	107.1298158	103.1738405	99.40349025	95.80885076	92.38059527	89.10994644	85.98864079	83.00889573
140924A00057	9/24/2014	3.25	9/25/2028	110.1042	106.4893092	103.0196199	99.68847328	96.48955142	93.41685969	90.46470813	87.62769438	84.90068746
141117A00011	11/17/2014	3.81	11/17/2034	127.91262	117.5699498	108.1888952	99.67386637	91.93926656	84.90840384	78.51252276	72.68994556	67.3853102

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
150203A00027	2/3/2015	2.26	2/4/2030	104.9863	102.299081	99.71547566	97.23057879	94.8397576	92.53863112	90.32305478	88.18910601	86.13307081
150213A00014	2/13/2015	2.41	2/13/2025	100.21352	100.1093666	100.00544	99.90174199	99.7982719	99.69502887	99.59201212	99.48922085	99.38665429
150219A00016	2/19/2015	2.68	2/19/2025	100.50802	100.2944396	100.0817728	99.87001158	99.65914995	99.44918211	99.24010228	99.03190471	98.82458374
150220A00022	2/20/2015	2.8	2/20/2025	100.33389	100.1923732	100.0512678	99.91056977	99.77027723	99.63038845	99.49090164	99.35181508	99.213127
150224A00010	2/24/2015	2.34	2/24/2025	100.32143	100.1656812	100.0104119	99.85561936	99.70130129	99.54745555	99.39407998	99.24117241	99.08873072
150227A00011	2/27/2015	2.33	2/27/2025	100.4633	100.2281122	99.99404322	99.7610808	99.52921709	99.29844429	99.06875464	98.84014049	98.61259425
150311A00003	3/11/2015	2.72	3/31/2025	100.75107	100.4218276	100.0947396	99.7697892	99.44695539	99.12621758	98.8075554	98.49094875	98.17637778
150317A00013	3/17/2015	2.58	3/17/2025	100.46815	100.2571766	100.0471034	99.83792603	99.62963872	99.4222357	99.21571125	99.01005973	98.80527551
150319A00012	3/19/2015	3.13	3/19/2029	111.10348	106.8015721	102.6922091	98.76569402	95.01287199	91.42510074	87.99421859	84.7125147	81.57270136
150319A00013	3/19/2015	3.25	3/19/2030	113.9356	108.5849315	103.5218256	98.7292438	94.19124886	89.89293022	85.82033206	81.9603867	78.30085308
150320A00019	3/20/2015	2.25	3/20/2025	100.56507	100.2662187	99.96917019	99.67391156	99.38042644	99.08869875	98.79871255	98.51045214	98.22390197
150401A00008	4/1/2015	2.62	4/1/2025	100.5505	100.2981172	100.0469954	99.79712885	99.54850801	99.30112365	99.05496657	98.81002768	98.56629796
150410A00021	4/10/2015	2.27	4/10/2025	100.35581	100.1615656	99.96818656	99.77566507	99.58399493	99.39317003	99.20318434	99.01403185	98.82570664
150414A00037	4/14/2015	2.34	4/14/2025	100.37471	100.1776727	99.98152748	99.78627099	99.59189665	99.39839797	99.20576849	99.01400186	98.82309178
150422A00019	4/22/2015	2.62	4/22/2025	100.67749	100.3669525	100.0583424	99.75163735	99.44681961	99.14387176	98.84277659	98.54351706	98.24607637
150427A00014	4/27/2015	2.98	4/27/2035	112.13375	106.5866055	101.4276544	96.62508314	92.14997018	87.97600004	84.07920921	80.43775833	77.03172806
150512A00029	5/12/2015	3.03	5/12/2025	100.94863	100.5823991	100.2188337	99.85790679	99.49958962	99.1438538	98.7906714	98.44001487	98.09185704
150519A00013	5/19/2015	2.98	5/19/2025	100.97965	100.594049	100.2114063	99.83168429	99.45484951	99.08086899	98.70971028	98.3413414	97.97573086
150601A00261	6/1/2015	3.19	2/11/2033	111.00813	106.6334433	102.5083902	98.61609436	94.94095615	91.46854927	88.18552417	85.07952014	82.13908508
150601A00270	6/1/2015	3.12	3/21/2031	108.50068	105.1970497	102.0431259	99.03072567	96.15217288	93.40026656	90.76824806	88.24977087	85.83887265
150601A00342	6/1/2015	3.97	8/26/2033	114.07286	109.5553327	105.3025643	101.2960577	97.51876326	93.95495846	90.59013514	87.41089673	84.40486504
150601A00396	6/1/2015	3.61	1/3/2029	106.39824	104.3126208	102.2927588	100.3360287	98.4399323	96.60208854	94.82022762	93.09218481	91.41589487
150601A00404	6/1/2015	4.29	1/17/2029	115.14851	110.9348348	106.9025306	103.042793	99.34729038	95.80813997	92.41788045	89.16944731	86.05614944
150601A00405	6/1/2015	4.63	1/17/2034	132.71527	122.9582435	114.0354032	105.8699863	98.39270431	91.540977	85.25825029	79.49338633	74.20011826
150601A00411	6/1/2015	3.38	1/24/2029	105.9341	103.853814	101.8392076	99.88765402	97.99665478	96.16382894	94.38690685	92.66372407	90.99221578
150601A00426	6/1/2015	3.37	2/21/2029	106.02906	103.906125	101.8512794	99.86176562	97.93495991	96.06836341	94.25959537	92.50638675	90.80657413
150601A00440	6/1/2015	3.27	3/16/2029	105.93182	103.769351	101.6773239	99.65284653	97.69317011	95.7956782	93.95787944	92.17740076	90.4519808
150601A00450	6/1/2015	3.28	4/27/2029	106.06549	103.8591746	101.7258712	99.66254107	97.66629858	95.73439865	93.86422891	92.0533023	90.29925019
150601A00460	6/1/2015	3.05	5/16/2029	105.6696	103.4285813	101.2628685	99.16928878	97.14483007	95.18662844	93.29195972	91.45823175	89.68297702
150601A00475	6/1/2015	3.04	6/1/2029	105.64936	103.4078511	101.2417122	99.14776465	97.12299154	95.16452453	93.26963539	91.4357282	89.66033197
150601A00477	6/1/2015	3.21	6/1/2029	106.35441	104.044883	101.8137793	99.65777478	97.57371223	95.55859052	93.60955572	91.72389292	89.8990184
150601A00506	6/1/2015	3.14	7/6/2029	106.07467	103.7456643	101.4972392	99.32591577	97.22839232	95.20153311	93.24235872	91.34803725	89.51587592
150601A00512	6/1/2015	3.79	7/16/2029	114.61539	109.9151644	105.438835	101.1745144	97.11101436	93.2377969	89.54493326	86.0230652	82.66336914

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
150601A00522	6/1/2015	4.52	7/25/2030	121.34599	115.4515853	109.8897442	104.6398325	99.68260533	95.00010672	90.57557664	86.39336499	82.43885236
150601A00523	6/1/2015	4.55	7/25/2031	124.55517	117.5630167	111.0255056	104.9104358	99.18805865	93.8308759	88.81345784	84.11227729	79.70555776
150601A00528	6/1/2015	3.08	7/27/2029	105.94023	103.6123058	101.3649947	99.19480955	97.09844456	95.07276027	93.1147739	91.22165049	89.39069452
150601A00559	6/1/2015	3.06	8/31/2029	105.99544	103.6253636	101.3385611	99.13139093	97.00039601	94.94229512	92.95397271	91.03246937	89.17497289
150601A00664	6/1/2015	3.78	1/16/2032	120.6787	113.3471102	106.5253408	100.1750347	94.2609187	88.7505388	83.61402084	78.82385275	74.3546862
150601A00665	6/1/2015	3.82	1/14/2033	123.28403	114.8966745	107.1628369	100.0277224	93.44141228	87.3584054	81.73720617	76.53995231	71.73207927
150601A00666	6/1/2015	3.88	1/16/2035	128.41161	117.8927598	108.3656453	99.73027592	91.89726807	84.78666977	78.32692017	72.45392845	67.11025809
150601A00667	6/1/2015	3.88	1/16/2036	130.50179	118.9428668	108.5657362	99.24142922	90.85574302	83.30747906	76.50689968	70.3743747	64.8391941
150601A00668	6/1/2015	3.89	1/16/2037	132.54435	119.952723	108.7466904	98.76370936	89.86119446	81.91397204	74.8120697	68.45879621	62.76907273
150601A00677	6/1/2015	2.39	1/30/2025	100.16646	100.0831486	99.99997329	99.91693782	99.83404181	99.75128491	99.66866679	99.58618709	99.50384547
150601A00678	6/1/2015	2.12	1/30/2025	100.07351	100.0291193	99.98480234	99.9405573	99.89638405	99.85228241	99.80825223	99.76429331	99.72040551
150601A00684	6/1/2015	2.25	2/7/2025	100.12033	100.052827	99.98545615	99.91822022	99.85111883	99.78415155	99.71731796	99.65061766	99.58405022
150601A00688	6/1/2015	2.61	2/21/2025	100.31944	100.1750545	100.0310901	99.88754914	99.74442983	99.60173028	99.45944861	99.31758296	99.17613148
150601A00689	6/1/2015	2.81	2/28/2025	100.38134	100.2176139	100.0544196	99.89175413	99.7296149	99.56799941	99.40690514	99.2463296	99.08627031
150601A00690	6/1/2015	2.34	2/28/2025	100.1624	100.075485	99.98880272	99.90235471	99.81614	99.7301576	99.64440652	99.55888575	99.47359432
150601A00696	6/1/2015	2.83	3/13/2025	100.46957	100.269814	100.0708708	99.87273123	99.67539034	99.47884322	99.28308503	99.08811094	98.89391617
150601A00733	6/1/2015	2.72	5/1/2025	100.77984	100.4439585	100.1103111	99.77887772	99.44963632	99.12256524	98.79764307	98.47484868	98.15416123
150601A00734	6/1/2015	2.92	5/1/2025	100.81918	100.4835091	100.1500737	99.81884722	99.48980779	99.16293382	98.838204	98.51559732	98.19509301
150601A00736	6/1/2015	2.87	5/1/2030	106.27778	103.575257	100.9786538	98.48287004	96.08308915	93.77476086	91.55358468	89.41549447	87.35664406
150601A00739	6/1/2015	2.35	5/6/2025	100.37861	100.1771997	99.97691287	99.77773814	99.57966543	99.38268481	99.18678643	98.9919606	98.79819772
150601A00832	6/1/2015	7.17	8/28/2025	102.24757	101.9046951	101.5650263	101.2285121	100.8951035	100.5647526	100.2374124	99.91303724	99.59158211
150601A00851	6/1/2015	7.12	4/30/2027	108.12625	106.8671955	105.6350568	104.429026	103.248329	102.092221	100.9599858	99.85093414	98.76440242
150601A00864	6/1/2015	7.37	3/31/2028	111.83914	110.035969	108.2810632	106.5727326	104.9093623	103.289406	101.7113826	100.1738728	98.67551627
150601A00868	6/1/2015	7.08	6/5/2028	112.21159	110.2681191	108.3795553	106.5439043	104.7592565	103.0237856	101.3357442	99.69346013	98.09533226
150601A00871	6/1/2015	6.74	7/31/2028	111.86098	109.8770517	107.9502754	106.0785392	104.259824	102.4921997	100.7738213	99.1029238	97.47781866
150601A00872	6/1/2015	7.42	7/31/2028	113.17946	111.1713061	109.2210037	107.3264133	105.4854913	103.6962841	101.9569241	100.2656247	98.62067683
150601A00875	6/1/2015	7.14	9/29/2028	113.23584	111.1355867	109.0979739	107.1206201	105.20125	103.3376915	101.5278701	99.76980401	98.06159911
150601A00883	6/1/2015	6.21	11/30/2028	111.86424	109.7003144	107.6031618	105.5701694	103.5988484	101.6868252	99.83183475	98.03171544	96.28440322
150601A00888	6/1/2015	5.92	3/1/2029	111.98041	109.6793611	107.4528802	105.2979332	103.2116285	101.191213	99.23406434	97.33768381	95.49968949
150601A00889	6/1/2015	6.55	3/2/2029	113.40104	111.069841	108.8141923	106.6310172	104.5173862	102.4705099	100.4877314	98.56651879	96.70445899
150601A00893	6/1/2015	6.49	4/6/2029	113.79688	111.3675995	109.0194723	106.7491035	104.5532682	102.4288994	100.3730788	98.38302909	96.45610548
150601A00897	6/1/2015	6.15	5/28/2029	113.25611	110.7922384	108.4120128	106.111894	103.8885149	101.7386749	99.65933032	97.64758561	95.70068522
150601A00899	6/1/2015	7.07	6/14/2029	114.76256	112.3414739	110.0020818	107.7409237	105.5547111	103.4403184	101.3947736	99.41524965	97.49905632

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
150601A00905	6/1/2015	6.14	10/29/2029	114.49446	111.7743287	109.1535932	106.6277631	104.1925879	101.8440387	99.57829545	97.39173465	95.28091771
150601A00906	6/1/2015	6.2	11/1/2029	114.65357	111.9294173	109.3048147	106.7752667	104.3365154	101.9845253	99.71547012	97.52572023	95.4118314
150601A00912	6/1/2015	5.96	11/30/2029	114.26365	111.5035498	108.8457353	106.2855364	103.8185275	101.4405161	99.14752928	96.93580054	94.80175775
150601A00916	6/1/2015	7.27	4/5/2030	134.65702	128.7217555	123.0998487	117.772853	112.7235153	107.9356904	103.3942639	99.08507957	94.99487391
150601A00918	6/1/2015	5.62	4/28/2025	100.8845	100.7129681	100.5422816	100.3724323	100.2034135	100.0352184	99.86784037	99.70127281	99.53550923
150601A00927	6/1/2015	6.08	8/7/2030	115.89155	112.8376798	109.9083208	107.0972425	104.3985729	101.8067765	99.31663278	96.92321583	94.62187596
150601A00928	6/1/2015	5.94	8/21/2030	115.50009	112.4530708	109.530384	106.7257988	104.0334482	101.4478016	98.96364328	96.57605219	94.28038327
150601A00929	6/1/2015	5.91	8/30/2030	116.27939	113.0543054	109.9637572	107.0009187	104.1593605	101.4330249	98.81620232	96.30350879	93.88986497
150601A00935	6/1/2015	6.46	11/21/2030	118.79289	115.356271	112.0683018	108.9211932	105.9076203	103.0206948	100.2539353	97.60124088	95.05686607
150601A00939	6/1/2015	5.79	1/17/2031	117.05168	113.5744055	110.2511199	107.0735813	104.0340481	101.1252491	98.34035079	95.67292873	93.11693987
150601A00943	6/1/2015	6.44	5/9/2031	120.28882	116.5247147	112.9350215	109.5100105	106.2405695	103.1181604	100.1347789	97.28291774	94.55553204
150601A00948	6/1/2015	6.04	10/22/2031	118.47343	114.7673644	111.2374868	107.8736463	104.6663592	101.6067591	98.68655305	95.89797995	93.23377295
150601A01024	6/1/2015	5.33	2/27/2026	105.63173	104.4439587	103.2830567	102.1481224	101.0382899	99.95273132	98.89065503	97.8513034	96.83395114
150601A01041	6/1/2015	5.99	10/2/2036	133.55739	126.1109212	119.2489434	112.9180333	107.0701552	101.6620739	96.65483824	92.01332303	87.70582342
150603A00012	6/3/2015	2.77	6/3/2030	106.75963	103.8576821	101.0736244	98.40161656	95.83615129	93.37203315	91.00435857	88.72849754	86.54007646
150603A00017	6/3/2015	2.84	6/3/2025	101.05948	100.6319528	100.2080404	99.78769873	99.3708828	98.95754832	98.54765175	98.14115029	97.73800184
150603A00032	6/3/2015	2.21	6/3/2025	100.51833	100.2382753	99.96009294	99.68376049	99.40925775	99.1365649	98.86566236	98.59653088	98.32915149
150604A00039	6/4/2015	2.82	6/4/2030	106.90657	104.000584	101.2126585	98.53694123	95.96791704	93.50038293	91.12942826	88.85041634	86.6589673
150610A00008	6/10/2015	3.58	6/10/2030	116.65438	110.9939038	105.6489957	100.6003697	95.83001511	91.32110704	87.05792257	83.02576304	79.21088225
150610A00009	6/10/2015	3.03	6/10/2025	101.19231	100.7451662	100.3019814	99.86270411	99.42728251	98.99566588	98.56780434	98.14364889	97.72315137
150615A00024	6/15/2015	2.26	6/16/2025	100.54286	100.2572325	99.97357072	99.69185578	99.41206559	99.13417842	98.85817286	98.58402785	98.31172268
150617A00017	6/17/2015	2.27	6/17/2025	100.54748	100.2609219	99.9763457	99.6937329	99.41306101	99.13430798	98.85745208	98.58247194	98.30934654
150617A00018	6/17/2015	2.45	6/17/2025	100.57628	100.2898798	100.0054587	99.72299673	99.44247174	99.1638617	98.88714499	98.61230031	98.33930673
150617A00030	6/17/2015	2.91	6/16/2025	101.32215	100.7863914	100.2563715	99.73199596	99.2131744	98.69981843	98.19184151	97.68915893	97.19168776
150701A00056	7/1/2015	2.34	7/1/2025	100.63976	100.3166532	99.99606664	99.67796776	99.3623248	99.04910659	98.73828254	98.42982258	98.12369717
150714A00003	7/14/2015	3.76	7/12/2030	109.8296	106.8003261	103.8957158	101.1095247	98.43586375	95.86918094	93.40423941	91.03609763	88.76009067
150720A00012	7/20/2015	2.99	7/21/2025	101.47121	100.9103583	100.3557163	99.80717729	99.26464071	98.72800824	98.19718371	97.67207302	97.1525841
150721A00027	7/21/2015	3.74	7/22/2030	117.34298	111.5664735	106.1171812	100.9747676	96.12026972	91.53599499	87.20542981	83.1131548	79.24476668
150722A00033	7/22/2015	2.47	7/22/2025	100.67276	100.3415758	100.0130838	99.68724571	99.36402597	99.04338955	98.72530213	98.40973003	98.09664018
150722A00035	7/22/2015	2.92	7/22/2025	101.56779	100.9341039	100.3084327	99.69062745	99.08053961	98.47802446	97.88294089	97.29515126	96.71452133
150727A00013	7/27/2015	3.04	7/28/2025	101.50447	100.9248175	100.3517765	99.78523787	99.22509136	98.67122921	98.12354607	97.58193893	97.04630707
150729A00028	7/29/2015	2.25	7/29/2025	100.6313	100.2972192	99.96589775	99.63729416	99.31137118	98.98809229	98.66742167	98.3493242	98.0337654
150729A00041	7/29/2015	2.44	7/29/2025	100.66827	100.3343524	100.0031895	99.67473946	99.34896512	99.0258301	98.70529872	98.38733597	98.07190751

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
150731A00016	7/31/2015	3.04	7/31/2025	101.52587	100.9378938	100.3567131	99.78221373	99.21428122	98.65280345	98.09767091	97.54877653	97.00601566
150803A00033	8/3/2015	3.41	8/2/2030	113.60836	108.610287	103.8860334	99.41876418	95.19277858	91.19342746	87.40703705	83.82083839	80.42290236
150803A00036	8/3/2015	3.41	8/2/2030	113.60836	108.610287	103.8860334	99.41876418	95.19277858	91.19342746	87.40703705	83.82083839	80.42290236
150803A00037	8/3/2015	3.41	8/2/2030	113.60836	108.610287	103.8860334	99.41876418	95.19277858	91.19342746	87.40703705	83.82083839	80.42290236
150803A00038	8/3/2015	3.41	8/2/2030	113.60836	108.610287	103.8860334	99.41876418	95.19277858	91.19342746	87.40703705	83.82083839	80.42290236
150803A00039	8/3/2015	3.01	8/2/2030	107.4254	104.4249401	101.5493315	98.79225611	96.14776116	93.61023746	91.17439718	88.83525321	86.58810003
150803A00041	8/3/2015	3.01	8/2/2030	107.4254	104.4249401	101.5493315	98.79225611	96.14776116	93.61023746	91.17439718	88.83525321	86.58810003
150803A00042	8/3/2015	3.01	8/2/2030	107.4254	104.4249401	101.5493315	98.79225611	96.14776116	93.61023746	91.17439718	88.83525321	86.58810003
150812A00052	8/14/2015	2.13	8/14/2025	100.65698	100.2856475	99.91771009	99.55311802	99.19182079	98.83376902	98.47891435	98.12720942	97.77860787
150814A00029	8/14/2015	2.39	8/14/2025	100.72423	100.3529667	99.98509699	99.62056768	99.25932849	98.90133016	98.54652447	98.19486421	97.84630314
150817A00099	8/17/2015	3.19	8/17/2027	107.30563	104.6408521	102.0562636	99.5489508	97.11612633	94.75512296	92.4633874	90.23847462	88.07804235
150819A00012	8/19/2015	3.04	8/19/2025	101.66108	101.0205269	100.3880538	99.76350404	99.14672931	98.53758482	97.9359294	97.34162537	96.75453838
150819A00013	8/19/2015	3.51	8/19/2030	116.23178	110.4114257	104.9249647	99.75140884	94.87119863	90.26610084	85.9191113	81.81436546	77.93705609
150824A00033	8/24/2015	2.22	8/25/2025	100.66695	100.2924734	99.92147425	99.55389684	99.18968856	98.82879796	98.47117468	98.11676943	97.76553398
150824A00050	8/24/2015	2.03	8/25/2025	100.6254	100.2507553	99.87959208	99.5118565	99.14749576	98.78645822	98.42869336	98.07415175	97.72278501
150826A00038	8/26/2015	2.94	8/26/2026	104.33387	102.6686254	101.0379822	99.44092442	97.87647897	96.34371016	94.84171816	93.36963713	91.92663366
150826A00039	8/26/2015	3.22	8/27/2029	112.92311	108.1370986	103.584499	99.25264474	95.12963062	91.20425963	87.46599671	83.90492583	80.51171007
150925A00034	9/25/2015	2.36	9/25/2025	100.80216	100.3843232	99.97083492	99.56162344	99.15661493	98.75573738	98.35892052	97.96609576	97.57719614
150929A00076	9/29/2015	2.28	9/29/2025	100.77085	100.3519224	99.93738205	99.52715097	99.12115427	98.71931892	98.32157367	97.92784899	97.53807701
150929A00083	9/29/2015	2.09	9/29/2025	100.72433	100.3052275	99.89051918	99.48012689	99.07397559	98.67199206	98.27410483	97.88024419	97.49034209
150929A00087	9/29/2015	2.09	9/29/2025	100.72433	100.3052275	99.89051918	99.48012689	99.07397559	98.67199206	98.27410483	97.88024419	97.49034209
151001A00023	10/1/2015	2.02	10/1/2025	100.75179	100.2983876	99.85007793	99.40676983	98.96837096	98.53479137	98.10594343	97.68174174	97.26210304
151013A00033	10/13/2015	2.23	10/14/2025	100.81745	100.3608717	99.90948055	99.46318204	99.02188071	98.58548363	98.1539003	97.72704255	97.30482449
151029A00008	10/29/2015	2.28	10/29/2025	100.84883	100.3877315	99.93196529	99.48142667	99.0360155	98.59563432	98.1601883	97.72958512	97.30373491
151030A00026	10/30/2015	3.29	10/30/2030	113.36215	108.200224	103.3312507	98.73665018	94.39912703	90.30257317	86.43198013	82.77335819	79.31366193
151106A00011	11/6/2015	3.1	1/15/2026	102.80503	101.7516061	100.7197624	99.70884408	98.71821889	97.74727977	96.79544372	95.86215057	94.94686186
151116A00025	11/16/2015	3.04	11/14/2025	102.29385	101.4123434	100.5460215	99.69449839	98.85739688	98.03435255	97.22501318	96.42903824	95.6460984
151118A00037	11/18/2015	2.75	11/18/2025	102.10252	101.1960894	100.3064471	99.43312315	98.57566562	97.73363906	96.90662394	96.09421595	95.29602523
151120A00019	11/20/2015	2.72	11/20/2030	107.05459	103.9325375	100.9454251	98.08618844	95.34818243	92.72515762	90.21123374	87.80087536	85.4888694
151125A00037	11/25/2015	2.41	11/25/2025	100.99202	100.4890156	99.99235838	99.50191557	99.01755748	98.53915824	98.06659565	97.59975101	97.13850903
151204A00011	12/4/2015	2.28	12/4/2025	101.03939	100.4985286	99.9649691	99.43855266	98.91912071	98.40651964	97.90060055	97.4012191	96.90823532
151209A00024	12/9/2015	2.22	12/9/2025	101.00897	100.4671279	99.93263444	99.40532258	98.88503212	98.37160787	97.86489948	97.3647612	96.8710517
151223A00036	12/23/2015	2.64	12/23/2025	102.31929	101.2547555	100.2121711	99.19086472	98.1901905	97.20952843	96.24828316	95.30588273	94.38177749

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
151223A00072	12/23/2015	2.81	12/23/2025	102.43105	101.441186	100.4704284	99.51823085	98.5840646	97.66742082	96.76780966	95.88475942	95.01781566
151223A00074	12/23/2015	3.01	12/23/2027	107.91772	104.8921581	101.9680817	99.14152346	96.40869788	93.76598848	91.2099391	88.73724582	86.34474933
151223A00077	12/23/2015	3.57	12/24/2035	128.60627	117.1517252	106.8679727	97.62749147	89.31731908	81.83732343	75.09868442	69.02256203	63.53892736
151223A00078	12/23/2015	2.28	12/23/2025	101.04793	100.5026982	99.96493541	99.43447228	98.91114379	98.39479013	97.88525649	97.38239292	96.88605409
151228A00013	12/28/2015	2.27	12/29/2025	101.04468	100.4983318	99.95949334	99.42799602	98.90367305	98.38636294	97.8759093	97.37216065	96.87497022
151229A00026	12/29/2015	2.28	12/29/2025	101.05062	100.504011	99.96492231	99.43318359	98.90862766	98.39109268	97.88042192	97.37646361	96.87907066
151229A00079	12/29/2015	3	12/30/2025	102.5902	101.5814914	100.5925932	99.62292806	98.67193879	97.73908967	96.82386526	95.92576949	95.04432474
151229A00080	12/29/2015	3.49	12/30/2030	116.8794	110.6859982	104.8681527	99.40104384	94.26161477	89.42844144	84.88160867	80.60259638	76.57417498
151229A00081	12/29/2015	3.76	12/31/2035	129.72212	118.2440245	107.9367004	98.67272062	90.33920868	82.83610573	76.07465345	69.97606354	64.47034981
160106A00042	1/6/2016	2.43	1/6/2026	101.16537	100.581316	100.0058023	99.43862383	98.87958039	98.32847837	97.78513068	97.24935635	96.72098036
160113A00030	1/13/2016	2.52	1/13/2025	100.08008	100.0439555	100.007874	99.97183621	99.93584201	99.89989133	99.86398407	99.82812015	99.79229948
160115A00011	1/15/2016	2.18	1/15/2026	101.02173	100.4366261	99.86012784	99.29202623	98.73211792	98.18020649	97.63610213	97.09962134	96.57058669
160119A00019	1/19/2016	2.95	1/19/2027	105.24421	103.1778454	101.1626438	99.19700571	97.27939014	95.40831549	93.58235671	91.80014273	90.06035394
160119A00025	1/19/2016	3.05	1/19/2028	107.96799	104.8755437	101.8886967	99.00324358	96.2151716	93.52065136	90.91602703	88.39780742	85.9626575
160119A00026	1/19/2016	3.14	1/19/2029	110.73525	106.605445	102.6546134	98.87403187	95.25544855	91.79105699	88.47346955	85.29569253	82.25110297
160119A00027	1/19/2016	3.25	1/18/2030	113.56119	108.3862268	103.4819665	98.83278989	94.42406386	90.24207135	86.27394917	82.50763034	78.93179062
160119A00028	1/19/2016	3.34	1/21/2031	116.0945	109.8668134	104.0202698	98.529464	93.37081265	88.5224165	83.96393172	79.67645153	75.64239748
160119A00029	1/19/2016	3.39	1/20/2032	118.34423	111.0826723	104.3282756	98.04277407	92.1909854	86.7405456	81.66166921	76.9269312	72.51106841
160119A00030	1/19/2016	3.44	1/18/2033	120.72205	112.4242359	104.775876	97.72236075	91.21395005	85.20531543	79.65512759	74.52568417	69.78257409
160119A00072	1/19/2016	2.77	1/21/2031	107.11042	103.8454683	100.7340685	97.76758097	94.93791722	92.23750125	89.6592338	87.19645905	84.84293393
160122A00029	1/22/2016	2.48	1/22/2025	100.1306	100.0694795	100.008449	99.94750752	99.88665496	99.82589108	99.76521569	99.70462859	99.64412958
160126A00004	1/26/2016	2.52	1/26/2026	102.46638	101.3210241	100.2014983	99.10693791	98.03651222	96.98942711	95.964923	94.96227298	93.98078109
160129A00066	1/29/2016	3.04	1/29/2031	114.82533	108.5960251	102.7503512	97.2626064	92.10894347	87.26722629	82.71689813	78.43886098	74.4153647
160129A00067	1/29/2016	2.53	1/29/2026	102.36905	101.2787552	100.2116256	99.16692905	98.14396388	97.14205737	96.16056433	95.19886567	94.25636713
160201A00016	2/1/2016	2.1	2/2/2026	101.04115	100.4163565	99.80136509	99.19592211	98.59978175	98.01270707	97.43446958	96.86484885	96.30363215
160209A00006	2/9/2016	1.91	2/9/2026	100.92369	100.2980792	99.682327	99.07617618	98.4793782	97.89169348	97.31289105	96.74274815	96.18104982
160209A00008	2/9/2016	2.45	2/10/2031	106.15991	102.9440637	99.87199003	96.93592707	94.12858837	91.44313321	88.87313625	86.41255951	84.05572636
160210A00042	2/10/2016	2.57	2/10/2026	102.3913	101.2696717	100.1725676	99.09918784	98.04876886	97.02057962	96.01391985	95.02811841	94.06253183
160210A00049	2/10/2016	1.78	2/10/2026	100.89191	100.2657161	99.64941003	99.04272833	98.44542144	97.85724885	97.27797869	96.70738735	96.14525907
160210A00051	2/10/2016	2.28	2/10/2031	105.86637	102.6543104	99.58603481	96.65376768	93.85021454	91.16852766	88.60227559	86.14541502	83.79226471
160210A00054	2/10/2016	1.78	2/10/2026	100.89191	100.2657161	99.64941003	99.04272834	98.44542145	97.85724885	97.2779787	96.70738735	96.14525907
160211A00035	2/11/2016	2.25	2/11/2025	100.21108	100.094592	99.97839185	99.86247381	99.74683679	99.63147976	99.51640165	99.40160143	99.28707805
160211A00036	2/11/2016	2.41	2/11/2026	102.21631	101.0930243	99.99436605	98.9195292	97.86774514	96.83827807	95.83042324	94.84350528	93.87687671

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
160211A00038	2/11/2016	1.83	2/11/2026	100.87375	100.2480606	99.63224453	99.02604122	98.42920145	97.84148502	97.2626604	96.69250425	96.13080111
160212A00037	2/12/2016	3.03	2/12/2031	114.32738	108.0920685	102.242584	96.75296001	91.59911239	86.75869291	82.21095531	77.93663222	73.91782215
160212A00047	2/12/2016	1.94	2/12/2026	100.94339	100.3170793	99.70065366	99.09385553	98.49643508	97.90815159	97.32877299	96.75807549	96.19584317
160222A00005	2/22/2016	2.79	2/22/2028	107.38288	104.2051362	101.1385245	98.17850245	95.32074647	92.56113634	89.89574406	87.32082353	84.83280092
160222A00018	2/22/2016	2.59	2/23/2026	102.48489	101.3275126	100.1962136	99.09012251	98.00840372	96.95025828	95.91492179	94.90166258	93.90978001
160222A00019	2/22/2016	3.09	2/21/2031	114.74278	108.4691176	102.5848652	97.06372835	91.88132662	87.0150432	82.44388794	78.14837196	74.11039251
160303A00020	3/3/2016	2.97	3/3/2031	114.57246	108.2569209	102.3356788	96.78196602	91.57097666	86.67970844	82.08682205	77.77251219	73.71838933
160303A00035	3/3/2016	2.14	3/3/2026	101.2603	100.5189604	99.7905705	99.07476038	98.37117441	97.67947096	96.99932169	96.33041086	95.67243476
160307A00024	3/7/2016	2.17	3/6/2026	101.15816	100.4901889	99.8334347	99.18758858	98.55235009	97.92743037	97.31255157	96.70744632	96.1118572
160307A00027	3/7/2016	2.71	3/6/2026	102.68844	101.5000343	100.3390882	99.20465535	98.0958351	97.01176711	95.95162921	94.91463529	93.90003338
160307A00028	3/7/2016	2.91	3/7/2028	107.85374	104.6300417	101.5201091	98.51925342	95.62300619	92.82711167	90.12751499	87.52035123	85.00193521
160307A00029	3/7/2016	3.21	3/7/2031	115.55149	109.2150533	103.273666	97.70052105	92.47077584	87.56139413	82.95100504	78.61977392	74.54928391
160328A00038	3/28/2016	2.54	3/30/2026	102.69787	101.4280895	100.1806645	98.95504967	97.7507166	96.56715351	95.40386473	94.26037009	93.13620428
160328A00045	3/28/2016	2.49	3/27/2026	102.63691	101.3905314	100.1743338	98.98723532	97.82820094	96.6962444	95.59042516	94.50984576	93.45364943
160329A00017	3/29/2016	2.48	3/30/2026	102.62075	101.3517153	100.1050206	98.88012346	97.67649581	96.49362615	95.33101913	94.18819486	93.06468832
160330A00054	3/30/2016	2.9	3/31/2031	114.25535	107.876869	101.9010323	96.30021077	91.0488223	86.12316563	81.50127188	77.16276863	73.08875538
160330A00056	3/30/2016	2.26	3/31/2025	100.47451	100.2247897	99.97630935	99.72905786	99.48302615	99.23820524	98.99458621	98.75216025	98.51091864
160401A00016	4/1/2016	2.42	4/1/2025	100.49999	100.2476833	99.99664562	99.74686275	99.4983253	99.25102401	99.00494968	98.76009323	98.51644563
160404A00019	4/4/2016	2.48	4/4/2031	106.39732	103.0910742	99.93602204	96.92382692	94.04667698	91.2972474	88.66866666	86.15448535	83.74864738
160412A00029	4/12/2016	2.48	4/14/2031	106.39762	103.0910922	99.93579076	96.92337897	94.04604195	91.29645211	88.66773539	86.15344003	83.74750778
160413A00014	4/13/2016	2.55	4/14/2031	106.63316	103.3192724	100.156956	97.13784948	94.25412046	91.49842475	88.86387273	86.34399807	83.93272884
160413A00016	4/13/2016	2.55	4/14/2031	106.63316	103.3192724	100.156956	97.13784948	94.25412046	91.49842475	88.86387273	86.34399807	83.93272884
160413A00021	4/13/2016	2.48	4/13/2026	102.73584	101.4111977	100.1104139	98.83289555	97.57806854	96.34537745	95.13428461	93.94426939	92.7748276
160413A00033	4/13/2016	2.32	4/13/2026	102.35711	101.1195541	99.90419004	98.71046589	97.5378431	96.38580082	95.2538351	94.14145826	93.0481982
160414A00042	4/13/2016	2.48	4/13/2026	102.73584	101.4111977	100.1104139	98.83289555	97.57806854	96.34537745	95.13428461	93.94426939	92.7748276
160421A00016	4/21/2016	2.26	4/21/2026	102.53808	101.2182814	99.92255891	98.65030925	97.4009444	96.17389572	94.96861305	93.78456406	92.62123345
160422A00026	4/22/2016	2.62	4/22/2026	102.88458	101.5707076	100.2822592	99.01852103	97.77880178	96.56243609	95.36878333	94.19722643	93.04717081
160427A00004	4/27/2016	2.09	4/27/2026	101.18087	100.4677183	99.76679356	99.07775383	98.40027022	97.73402653	97.07871864	96.43405393	95.79975072
160428A00028	4/28/2016	2	4/28/2026	101.17355	100.4596032	99.75789583	99.06808105	98.38983019	97.72282727	97.06676839	96.42136111	95.78632388
160504A00004	5/4/2016	2.3	5/4/2026	102.64251	101.2974302	99.9762676	98.67844231	97.40338909	96.15056053	94.91942636	93.70947276	92.52020178
160511A00015	5/11/2016	2.42	5/11/2026	102.80399	101.4062488	100.0349585	98.68942471	97.36898161	96.07298592	94.80081595	93.55187072	92.3255691
160511A00016	5/11/2016	2.48	5/12/2031	106.46635	103.1160615	99.92072403	96.87170445	93.96092021	91.18079709	88.52423376	85.98456902	83.55555153
160523A00086	5/23/2016	2.2	5/26/2026	102.62608	101.2180977	99.83741596	98.48330671	97.15506457	95.85200878	94.57348209	93.31884976	92.08749862

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
160524A00015	11/25/2016	2.71	11/25/2026	104.40981	102.4986868	100.632032	98.80854869	97.02698386	95.28612904	93.58481845	91.92192718	90.29636949
160524A00027	5/24/2016	3.06	5/27/2031	114.97884	108.4484067	102.3385153	96.6198383	91.26524004	86.24960011	81.54965416	77.14384797	73.01220351
160603A00014	6/3/2016	1.74	6/3/2026	101.09999	100.3079571	99.52971372	98.76488105	98.01309635	97.27401043	96.54728701	95.83260209	95.12964338
160603A00029	6/3/2016	2.18	6/3/2031	105.777	102.4018517	99.18470373	96.11666374	93.18940417	90.39512648	87.72652391	85.17674707	82.73937226
160606A00004	6/6/2016	2.43	6/8/2026	102.90141	101.4626236	100.0510047	98.66585234	97.30648739	95.97225342	94.66251586	93.37666108	92.11409547
160606A00005	6/6/2016	2.92	6/6/2031	114.12525	107.5956731	101.4887484	95.77486469	90.4266349	85.41871484	80.72764111	76.33168252	72.21070398
160606A00018	6/6/2016	1.74	6/5/2026	101.10066	100.3081698	99.5294823	98.76422199	98.01202546	97.27254291	96.54543748	95.83038463	95.12707155
160608A00019	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397363
160608A00020	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397363
160608A00023	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397364
160608A00024	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397363
160608A00025	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397364
160608A00026	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397363
160608A00027	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397364
160608A00028	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397364
160608A00029	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397364
160608A00030	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397364
160608A00031	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397364
160608A00032	6/8/2016	2.36	6/8/2026	102.85702	101.3908229	99.953509	98.54429019	97.1624074	95.80712849	94.47774711	93.17358154	91.89397363
160608A00033	6/8/2016	2.44	6/9/2031	106.39637	103.0067801	99.77569457	96.69419376	93.75393161	90.94709174	88.26635023	85.7048412	83.25612508
160608A00034	6/8/2016	2.44	6/9/2031	106.39637	103.0067801	99.77569457	96.69419376	93.75393161	90.94709174	88.26635023	85.7048412	83.25612508
160609A00075	6/9/2016	1.94	6/9/2026	101.19808	100.4051438	99.62601189	98.86031085	98.1076773	97.36776146	96.64022648	95.92474779	95.22101259
160613A00047	6/15/2016	2.18	6/16/2025	100.80572	100.3435321	99.88558156	99.43181479	98.98217449	98.5366044	98.09504932	97.65745502	97.22376825
160615A00031	6/15/2016	2.51	6/17/2030	110.84312	105.3205559	100.1093438	95.19031522	90.54557568	86.15841601	82.01322788	78.09542582	74.3913751
160616A00027	6/16/2016	2.27	6/16/2026	102.71146	101.252239	99.82097796	98.41694578	97.03943365	95.68775694	94.36125412	93.0592858	91.78123379
160616A00029	6/16/2016	1.58	6/16/2026	100.97459	100.181566	99.40238946	98.63667816	97.8840671	97.14420489	96.41675318	95.70138598	94.99778912
160628A00038	6/28/2016	1.88	6/27/2025	100.74964	100.2569172	99.76900867	99.28584098	98.80734523	98.3334539	97.86410074	97.39922077	96.93875027
160628A00039	6/28/2016	2.01	6/29/2026	102.5083	101.0131194	99.54728957	98.11002565	96.70056668	95.31817823	93.96215127	92.63180109	91.32646619
160628A00049	6/28/2016	1.88	6/27/2025	100.74964	100.2569172	99.76900867	99.28584098	98.80734523	98.3334539	97.86410074	97.39922077	96.93875027
160629A00066	6/29/2016	2.61	6/30/2036	115.64876	106.5010087	98.262358	90.83358462	84.1269758	78.06492601	72.5787146	67.60743755	63.0970732
160630A00012	6/30/2016	2.11	6/30/2025	100.83768	100.3369299	99.84114195	99.35023866	98.86414818	98.38280006	97.90612525	97.434056	96.96652588
160701A00020	7/1/2016	2.13	7/1/2026	102.57841	101.0792932	99.60965146	98.16869544	96.75565904	95.36980301	94.01041373	92.67680207	91.36830238
160701A00039	7/1/2016	1.92	7/1/2026	102.3814	100.8818228	99.41176491	97.97043407	96.55706243	95.17090906	93.81125874	92.47742086	91.16872832

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
160705A00104	7/5/2016	2.1	7/6/2026	102.55653	101.044308	99.56196254	98.10868682	96.68369812	95.28624136	93.9155879	92.57103433	91.25190146
160706A00010	7/6/2016	1.99	7/7/2025	100.80702	100.2871912	99.77271831	99.26351902	98.75951244	98.26061933	97.76676208	97.27786464	96.79385247
160706A00026	7/6/2016	2.19	7/6/2027	104.47204	101.9560897	99.51378716	97.14254844	94.83989533	92.6034519	90.43093951	88.32017216	86.26905213
160706A00027	7/6/2016	2.29	7/6/2028	106.4123	102.8891081	99.50200041	96.24498739	93.11237805	90.09876214	87.19899472	84.40818153	81.7216654
160706A00028	7/6/2016	2.39	7/6/2029	108.44284	103.9080585	99.59005847	95.47734053	91.55907638	87.82506559	84.26569579	80.87190562	77.63515026
160706A00029	7/6/2016	2.49	7/8/2030	110.3527	104.8039763	99.57078558	94.63352958	89.97392978	85.57492904	81.42060387	77.49608331	73.78747408
160706A00030	7/6/2016	2.59	7/7/2031	112.10896	105.5629471	99.4469907	93.73055319	88.38541853	83.38550353	78.70668618	74.32664858	70.22473334
160711A00004	7/11/2016	1.51	7/13/2026	100.96758	100.134142	99.31549041	98.51122157	97.72094454	96.944283	96.18087456	95.43037002	94.6924328
160712A00019	7/12/2017	2.32	7/12/2027	104.83003	102.2936161	99.83174868	97.44179583	95.12123701	92.86765635	90.67873757	88.55225916	86.48608983
160713A00015	7/13/2016	1.57	7/13/2026	101.01855	100.1844141	99.36507846	98.5601411	97.76921055	96.99190998	96.22787646	95.47676033	94.73822454
160714A00018	9/6/2016	2.28	9/4/2026	103.14666	101.4697314	99.82798024	98.22036645	96.64588931	95.10358732	93.59253623	92.11184726	90.66066528
160714A00020	9/6/2016	2.28	9/4/2026	103.14666	101.4697314	99.82798024	98.22036645	96.64588931	95.10358732	93.59253623	92.11184726	90.66066528
160714A00023	8/10/2016	2.49	8/10/2028	107.29377	103.662763	100.1747057	96.82317889	93.60208751	90.50564473	87.52835419	84.66499362	81.9105995
160714A00024	9/20/2016	2.5	9/20/2028	107.53956	103.79439	100.2003174	96.75038176	93.43798486	90.25687186	87.201111	84.26507472	81.44342204
160714A00029	8/10/2016	2.27	8/10/2026	102.99794	101.3890782	99.81310496	98.2690792	96.75609468	95.2732793	93.81979345	92.39482847	90.99760525
160719A00026	7/19/2016	1.87	7/20/2026	101.2062	100.3704984	99.54962203	98.74316792	97.95074392	97.17197251	96.40649006	95.65394626	94.91400345
160726A00005	7/26/2016	2.28	7/27/2026	102.94084	101.3696657	99.83017009	98.32146098	96.842682	95.39300825	93.97164486	92.57782561	91.21081161
160729A00017	7/31/2017	2.47	7/31/2029	108.91386	104.30329	99.91560152	95.73883672	91.76174298	87.97372848	84.36481967	80.92562173	77.64728188
160801A00002	8/1/2016	1.58	8/3/2026	101.07817	100.2038078	99.34520243	98.50191717	97.67353301	96.85964658	96.05986943	95.27382735	94.50115967
160802A00003	8/2/2016	2.53	8/1/2031	112.33633	105.6984445	99.50099519	93.71241157	88.30354707	83.24747926	78.51932907	74.09609551	69.95650461
160810A00025	8/10/2016	2.17	8/10/2026	102.86909	101.2455334	99.65606374	98.09966434	96.57536002	95.08221421	93.61932692	92.18583296	90.78090024
160810A00027	8/10/2016	2.13	8/10/2026	102.74154	101.1538719	99.59941317	98.07717781	96.58621714	95.12561993	93.69451055	92.29204716	90.91742009
160810A00028	8/10/2016	2.19	8/10/2026	102.93615	101.2934193	99.6852417	98.11058693	96.56846567	95.05792779	93.57806031	92.12798555	90.70685944
160810A00029	8/10/2016	2.17	8/10/2026	102.86909	101.2455334	99.65606374	98.09966434	96.57536002	95.08221421	93.61932692	92.18583296	90.78090024
160810A00030	8/10/2016	2.24	8/11/2031	105.82152	102.3675697	99.07868401	95.94538679	92.95882247	90.11070793	87.39329156	84.79931552	82.32198089
160811A00011	8/11/2016	2.25	8/11/2026	102.97062	101.3593326	99.78101557	98.2347257	96.71955323	95.23462277	93.77909157	92.35214802	90.9530102
160812A00006	8/12/2016	2.16	8/12/2026	102.92789	101.3314209	99.76845672	98.23799695	96.73908125	95.27078742	93.83222938	92.42255545	91.0409466
160815A00005	8/15/2016	2.23	8/17/2026	102.96877	101.3415508	99.74783377	98.18664821	96.65706268	95.15818124	93.68914173	92.2491141	90.83729895
160815A00006	8/15/2016	2.23	8/17/2026	102.96877	101.3415508	99.74783377	98.18664821	96.65706268	95.15818124	93.68914173	92.2491141	90.83729895
160815A00007	8/15/2016	2.23	8/17/2026	102.96877	101.3415508	99.74783377	98.18664821	96.65706268	95.15818124	93.68914173	92.2491141	90.83729895
160819A00015	10/12/2016	2.3	10/13/2026	103.39376	101.608776	99.86309219	98.15554079	96.48500262	94.85040119	93.25070072	91.6849042	90.15205154
160824A00019	8/24/2016	1.98	8/25/2031	105.18861	101.7492441	98.47447702	95.35485385	92.38153208	89.5462416	86.84124376	84.25929352	81.7936046
160830A00037	8/30/2016	2.16	8/29/2025	101.14408	100.4780114	99.82069589	99.17195836	98.53163175	97.89955332	97.27556453	96.65951086	96.05124171

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
160830A00038	8/30/2016	2.24	8/28/2026	103.04176	101.3846791	99.76208754	98.17297612	96.61637269	95.09134279	93.59698776	92.13244301	90.69687638
160906A00027	9/6/2016	2.03	9/8/2031	105.41422	101.9268102	98.60804558	95.44813897	92.43795081	89.56893836	86.83311254	84.22299825	81.73159781
160908A00022	9/8/2016	2.21	9/8/2026	103.0701	101.3745372	99.71577999	98.09272935	96.50432629	94.94955335	93.42743252	91.93702332	90.47742093
160908A00023	9/8/2016	2.21	9/8/2026	103.0701	101.3745372	99.71577999	98.09272935	96.50432629	94.94955335	93.42743252	91.93702332	90.47742093
160908A00024	9/8/2016	2.21	9/8/2026	103.0701	101.3745372	99.71577999	98.09272935	96.50432629	94.94955335	93.42743252	91.93702332	90.47742093
160908A00025	9/8/2016	2.21	9/8/2026	103.0701	101.3745372	99.71577999	98.09272935	96.50432629	94.94955335	93.42743252	91.93702332	90.47742093
160908A00026	9/8/2016	2.21	9/8/2026	103.0701	101.3745372	99.71577999	98.09272935	96.50432629	94.94955335	93.42743252	91.93702332	90.47742093
160908A00027	9/8/2016	2.21	9/8/2026	103.0701	101.3745372	99.71577999	98.09272935	96.50432629	94.94955335	93.42743252	91.93702332	90.47742093
160908A00028	9/8/2016	2.21	9/8/2026	103.0701	101.3745372	99.71577999	98.09272935	96.50432629	94.94955335	93.42743252	91.93702332	90.47742093
160908A00030	9/8/2016	2.21	9/8/2026	103.0701	101.3745372	99.71577999	98.09272935	96.50432629	94.94955335	93.42743252	91.93702332	90.47742093
160908A00031	9/8/2016	2.21	9/8/2026	103.0701	101.3745372	99.71577999	98.09272935	96.50432629	94.94955335	93.42743252	91.93702332	90.47742093
160908A00032	9/8/2016	2.17	9/8/2026	102.93277	101.2761055	99.65525368	98.06914564	96.51675247	94.99708556	93.50919464	92.05216586	90.62512002
160908A00033	9/8/2016	2.17	9/8/2026	102.93277	101.2761055	99.65525368	98.06914564	96.51675247	94.99708556	93.50919464	92.05216586	90.62512002
160908A00034	9/8/2016	2.17	9/8/2026	102.93277	101.2761055	99.65525368	98.06914564	96.51675247	94.99708556	93.50919464	92.05216586	90.62512002
160908A00035	9/8/2016	2.3	9/8/2031	106.09161	102.5875281	99.25268588	96.07727946	93.05214583	90.16871962	87.41899003	84.79546116	82.29111532
160908A00036	9/8/2016	2.3	9/8/2031	106.09161	102.5875281	99.25268588	96.07727946	93.05214583	90.16871962	87.41899003	84.79546116	82.29111532
160922A00014	9/22/2016	2.06	9/22/2026	103.00246	101.2750362	99.58469258	97.93030243	96.31078377	94.72509848	93.17224996	91.65128099	90.16127176
160923A00009	9/23/2016	2.24	9/23/2031	105.8779	102.3803925	99.05185588	95.88249082	92.86314647	89.98526912	87.24085914	84.62243124	82.12297787
160928A00029	9/28/2016	2.52	9/29/2036	110.51327	104.2442876	98.47111724	93.14769484	88.23269273	83.68899549	79.48323646	75.58538847	71.96840228
160928A00030	9/28/2016	2.52	9/29/2036	110.51327	104.2442876	98.47111724	93.14769484	88.23269273	83.68899549	79.48323646	75.58538847	71.96840228
160928A00032	9/28/2016	2.52	9/29/2036	110.51327	104.2442876	98.47111724	93.14769484	88.23269273	83.68899549	79.48323646	75.58538847	71.96840228
160928A00033	9/28/2016	2.46	9/29/2036	110.14475	103.8918639	98.13375769	92.8244464	87.92267749	83.3914038	79.19732085	75.31045817	71.70381819
160928A00041	9/28/2016	3.26	9/29/2036	115.05839	108.5908461	102.631885	97.13442549	92.05621402	87.359293	83.00952888	78.97619558	75.23160609
160928A00042	9/28/2016	3.05	9/29/2036	113.76856	107.3573633	101.4511266	96.00305598	90.97116068	86.31772208	82.00882427	78.01393951	74.30556177
160928A00044	9/28/2016	2.89	9/29/2036	112.78583	106.4175669	100.5515011	95.14106016	90.14445337	85.52414424	81.24638267	77.28079202	73.60000419
160930A00032	9/30/2016	2.15	9/30/2031	105.43878	102.0334801	98.79099842	95.70195678	92.75758785	89.94969414	87.27060702	84.71314888	82.27059833
160930A00033	9/30/2016	1.8	9/30/2026	101.26199	100.3462464	99.44732701	98.5647596	97.69809031	96.84688247	96.01071582	95.18918569	94.38190229
161005A00016	10/5/2016	2.32	10/6/2031	106.22211	102.6724279	99.29599818	96.0826825	93.02301601	90.10815675	87.32984041	84.68033854	82.15242019
161014A00019	10/14/2016	2.39	10/15/2031	106.47578	102.9173484	99.53261883	96.31142703	93.24428209	90.32231781	87.53724725	84.8813209	82.34728812
161014A00026	10/14/2016	2.16	10/14/2031	105.93354	102.3873408	99.01445822	95.80474282	92.74871474	89.83751879	87.0628789	84.41705631	81.89281099
161014A00029	10/14/2016	2.51	10/15/2031	107.20359	103.6148704	100.2015501	96.95335316	93.86068613	90.91458762	88.10668236	85.42913881	82.87463012
161109A00018	11/9/2016	2.63	11/9/2026	104.15502	102.2902711	100.4680222	98.68705255	96.94618868	95.24429789	93.58028664	91.95309889	90.36171458
161116A00006	11/16/2016	2.39	11/16/2026	101.9865	100.9783394	99.98945442	99.01929773	98.06734687	97.13309889	96.21606942	95.31579182	94.43181632

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
161118A00026	12/20/2016	3.03	12/21/2026	105.20697	103.2183528	101.2775815	99.38320732	97.53383633	95.72812619	93.96478373	92.24256284	90.56026238
161207A00014	12/7/2016	2.75	12/8/2031	108.24256	104.5348398	101.0121155	97.66334624	94.47823368	91.44716959	88.56118497	85.81190302	83.19149606
161214A00023	12/14/2016	3.3	12/15/2031	118.12071	110.9358925	104.2477874	98.01930952	92.21633008	86.80742437	81.76364465	77.05831301	72.66683252
161214A00034	12/14/2016	2.65	12/14/2026	102.34802	101.2948993	100.2623504	99.24978733	98.25664773	97.28239041	96.32649415	95.38845679	94.46779433
161222A00013	12/22/2016	2.93	12/22/2026	105.01132	103.0779574	101.1918448	99.35149982	97.55550218	95.80248644	94.09113948	92.42019805	90.78844645
161222A00030	12/22/2016	3.09	12/22/2026	105.49498	103.4977301	101.5486364	99.6462362	97.78912363	95.97594486	94.20539583	92.47622003	90.78720642
161222A00036	12/22/2016	2.69	12/22/2026	102.37196	101.3265187	100.3014745	99.29624354	98.31026813	97.3430116	96.39395705	95.46260654	94.54848014
161222A00037	12/22/2016	3.08	12/22/2031	108.88389	105.2798087	101.8526472	98.59194836	95.48795608	92.53156353	89.71426556	87.02811468	84.46568068
161227A00073	12/27/2016	2.83	12/28/2026	104.5342	102.7155553	100.940821	99.20862774	97.51765572	95.86663645	94.2543503	92.67962417	91.14132933
161229A00018	12/29/2016	2.46	12/29/2026	102.23388	101.1791799	100.1451514	99.13120239	98.13676612	97.16129719	96.20427036	95.26517969	94.34353759
161229A00019	12/29/2016	2.46	12/29/2026	102.23388	101.1791799	100.1451514	99.13120239	98.13676612	97.16129719	96.20427036	95.26517969	94.34353759
170105A00010	1/5/2017	2.61	1/5/2027	102.39788	101.3035391	100.2310362	99.17974503	98.14906249	97.13840815	96.14722308	95.17496887	94.22112668
170106A00030	1/6/2017	2.39	1/6/2027	102.24258	101.1486429	100.0765627	99.0257091	97.99547794	96.98528784	95.99457896	95.02281205	94.06946745
170111A00009	1/11/2017	3.16	1/11/2028	108.25116	105.1756904	102.2046586	99.33393062	96.55955999	93.87777907	91.28498985	88.7777553	86.35279109
170111A00011	1/11/2017	3.24	1/11/2029	111.08799	106.9723247	103.0341926	99.26498111	95.65653899	92.20115275	88.89152075	85.72072891	82.68222793
170111A00012	1/11/2017	3.31	1/11/2030	113.8222	108.6592194	103.765396	99.12525481	94.72428855	90.54889522	86.58631678	82.82458237	79.25245565
170111A00013	1/11/2017	3.4	1/10/2031	116.39887	110.1908897	104.3611512	98.88454629	93.73776027	88.89913651	84.34855021	80.06729235	76.03796305
170111A00014	1/11/2017	3.47	1/12/2032	118.86023	111.6015895	104.8482578	98.56221625	92.70850179	87.2549444	82.17193027	77.43218617	73.01058306
170111A00016	1/11/2017	3.51	1/11/2033	121.23959	112.9394636	105.2872453	98.22857478	91.71393256	85.69818199	80.14016022	75.00230915	70.25034255
170112A00015	1/12/2017	2.32	1/12/2027	102.16638	101.0726253	100.0007301	98.95007048	97.92004155	96.91006123	95.91956906	94.94802518	93.99490941
170119A00006	1/19/2017	2.85	1/21/2025	100.14206	100.0837442	100.0255145	99.96736777	99.90930374	99.85132224	99.79342311	99.73560616	99.67787121
170120A00008	1/20/2017	3.63	1/20/2034	124.42662	115.0236687	106.4336497	98.58128203	91.39864498	84.82442226	78.80322817	73.28500538	68.22448684
170120A00009	1/20/2017	3.67	1/22/2035	126.92531	116.4628918	106.9901046	98.40693553	90.62400294	83.56137526	77.14752632	71.31841112	66.01664744
170120A00010	1/20/2017	3.71	1/22/2036	129.29887	117.788395	107.4579957	98.17863208	89.83606163	82.32907308	75.56793715	69.47304864	63.97373525
170120A00011	1/20/2017	3.75	1/20/2037	131.58524	119.038197	107.8745444	97.93176923	89.06733803	81.15614277	74.08828634	67.76715929	62.1077685
170123A00039	1/23/2017	2.79	1/23/2026	102.61424	101.5388626	100.4859963	99.45493755	98.44501365	97.45557947	96.4860159	95.53572855	94.60414652
170124A00017	1/24/2017	2.82	1/23/2032	108.59017	104.8277428	101.2550202	97.86056592	94.63372295	91.5645549	88.64379249	85.86278409	83.21345035
170130A00010	1/30/2017	2.92	1/30/2025	100.20705	100.123761	100.040611	99.95760003	99.87472777	99.79199389	99.70939806	99.62693994	99.5446192
170130A00031	1/30/2017	2.96	7/30/2025	101.47192	100.8868717	100.3085587	99.73686611	99.17168069	98.61289185	98.06039149	97.51407392	96.97383581
170130A00036	1/30/2017	3.11	1/31/2033	110.05894	105.8744906	101.9271991	98.201029	94.68116562	91.35391174	88.20659519	85.22748479	82.40571366
170130A00039	1/30/2017	2.74	1/31/2028	103.69237	102.0884696	100.5275854	99.00821099	97.52890067	96.08827056	94.68499525	93.31780492	91.98548255
170130A00043	1/30/2017	2.64	1/29/2027	102.43528	101.3400315	100.2678501	99.21805114	98.18997235	97.18297686	96.19645211	95.22980865	94.28247908
170130A00046	1/30/2017	2.52	1/30/2026	101.24139	100.6497958	100.068319	99.49667249	98.93458131	98.38178112	97.83801773	97.3030466	96.77663236

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
170203A00012	2/3/2017	3.63	2/2/2035	126.59376	116.1191784	106.6383343	98.05053269	90.26580671	83.20372577	76.79233877	70.96723933	65.67073839
170203A00013	2/3/2017	3.67	2/1/2036	128.91916	117.4037528	107.071961	97.79406421	89.45524829	81.95382356	75.1996612	69.11282318	63.6223608
170207A00055	2/7/2017	2.36	2/8/2027	102.29705	101.1606389	100.0474265	98.95673401	97.88791194	96.84033522	95.81340226	94.80653377	93.81917175
170216A00043	2/16/2017	3.17	2/16/2027	105.9235	103.7703944	101.6719259	99.62633045	97.6319131	95.68704663	93.79016842	91.93977725	90.13443039
170216A00044	2/16/2017	3.52	2/17/2032	119.42661	112.0519125	105.1963785	98.82051112	92.88802516	87.365567	82.22246301	77.43049078	72.96367099
170216A00045	2/16/2017	3.73	2/17/2037	131.50481	118.8893899	107.6729389	97.69020377	88.79635536	80.86436676	73.78273823	67.45352347	61.79061591
170224A00020	2/24/2017	3.08	2/24/2027	105.79558	103.6201853	101.5004219	99.4344747	97.42060331	95.45713765	93.54247465	91.67507489	89.85345955
170224A00021	2/24/2017	3.4	2/24/2032	118.61938	111.2534108	104.4077873	98.04281545	92.12203131	86.61192484	81.48168568	76.7029721	72.24970086
170224A00039	5/24/2017	3.17	5/24/2027	106.64327	104.2165099	101.857576	99.56419263	97.33417734	95.16543343	93.05594583	91.00377751	89.00706594
170224A00044	5/24/2017	3.29	5/24/2029	112.22999	107.7262602	103.4315449	99.33505478	95.4266141	91.69662115	88.136013	84.73623247	81.48919738
170228A00014	2/28/2017	2.89	3/1/2027	105.59763	103.4064346	101.2716134	99.19131663	97.16376963	95.18726992	93.26018387	91.38094321	89.54804186
170228A00015	2/28/2017	2.87	5/28/2025	100.99788	100.5874255	100.1803018	99.77647198	99.37589614	98.97853508	98.5843502	98.19330353	97.80535769
170309A00014	3/9/2017	2.58	3/9/2027	102.64802	101.4657587	100.3081449	99.17445217	98.06398033	96.97605591	95.91003098	94.86528195	93.84120843
170313A00032	3/13/2017	3.69	6/14/2032	121.3666	113.6116033	106.4232691	99.75694238	93.57171282	87.8300824	82.49766422	77.54290955	72.93686
170313A00033	3/13/2017	3.31	3/15/2027	106.44438	104.2098008	102.0333675	99.91314722	97.84728462	95.8340015	93.87159275	91.95842264	90.0929214
170313A00034	3/13/2017	3.31	3/15/2027	106.44438	104.2098008	102.0333675	99.91314722	97.84728462	95.8340015	93.87159275	91.95842264	90.0929214
170313A00035	3/13/2017	3.31	3/15/2027	106.44438	104.2098008	102.0333675	99.91314722	97.84728462	95.8340015	93.87159275	91.95842264	90.0929214
170313A00041	3/13/2017	3.21	3/15/2032	109.70941	105.9238689	102.331468	98.9203734	95.67957059	92.59880304	89.66851496	86.87979836	84.22434466
170313A00045	3/13/2017	3.22	3/15/2032	110.00329	106.1133222	102.4231801	98.9206062	95.59419349	92.43331887	89.42808377	86.56925974	83.84823844
170317A00044	3/17/2017	3.11	3/17/2027	105.76226	103.6170783	101.5284998	99.49466497	97.51378486	95.58414201	93.70408689	91.8720347	90.08646229
170322A00022	3/22/2017	3.89	9/23/2041	144.12474	126.5637699	111.5349922	98.64901579	87.57880792	78.04938386	69.82925071	62.72329773	56.56688201
170322A00023	3/22/2017	3.82	9/22/2039	137.81514	122.4827562	109.1468409	97.5305869	87.39720281	78.54392764	70.79696879	64.00721626	58.04661073
170322A00024	3/22/2017	3.72	9/22/2036	130.6528	118.4543676	107.5702248	97.84945773	89.15930815	81.38289681	74.41724621	68.17155897	62.56571734
170322A00025	3/22/2017	3.58	3/22/2033	122.22889	113.7025692	105.8548932	98.62781371	91.96854866	85.82908026	80.16570108	74.93860552	70.11152214
170322A00026	3/22/2017	3.22	3/22/2028	108.95174	105.6703796	102.5058766	99.45335615	96.50818349	93.66594714	90.92244647	88.27368005	85.71583471
170322A00033	3/22/2017	3.61	3/24/2042	125.11936	114.7871135	105.6250635	97.48094274	90.22405023	83.74200829	77.93802755	72.72860095	68.04155629
170327A00070	3/29/2017	3.05	3/29/2027	106.26237	103.9864127	101.7705927	99.61287354	97.51130601	95.46402353	93.46923776	91.52523451	89.63037001
170327A00072	3/29/2017	3.09	3/29/2027	106.35294	104.075939	101.8590972	99.70037724	97.59782947	95.54958668	93.55385993	91.6089345	89.71316607
170327A00078	3/27/2019	3.04	3/27/2026	103.224	101.9752962	100.7567762	99.56735792	98.4060076	97.27174002	96.16361557	95.08073769	94.02225041
170327A00079	3/27/2019	3.19	3/29/2027	106.27987	104.0097002	101.7994042	99.64695682	97.5504204	95.50793931	93.51773552	91.57810462	89.6874121
170327A00080	3/27/2019	3.43	3/27/2029	112.43064	108.079442	103.923508	99.95296158	96.1584884	92.53129774	89.06308986	85.74602545	82.5726971
170406A00029	4/6/2017	3.01	4/6/2027	105.82446	103.5728084	101.382178	99.25056669	97.17605307	95.15678959	93.19099932	91.27697278	89.41306498
170406A00031	4/6/2017	3.01	4/6/2027	105.82446	103.5728084	101.382178	99.25056669	97.17605307	95.15678959	93.19099932	91.27697278	89.41306498

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
170406A00032	4/6/2017	3.01	4/6/2027	105.82446	103.5728084	101.382178	99.25056669	97.17605307	95.15678959	93.19099932	91.27697278	89.41306498
170406A00033	4/6/2017	3.01	4/6/2027	105.82446	103.5728084	101.382178	99.25056669	97.17605307	95.15678959	93.19099932	91.27697278	89.41306498
170406A00034	4/6/2017	3.01	4/6/2027	105.82446	103.5728084	101.382178	99.25056669	97.17605307	95.15678959	93.19099932	91.27697278	89.41306498
170406A00036	4/6/2017	3.07	4/6/2032	109.50709	105.5924342	101.8808452	98.35975534	95.01747499	91.84312439	88.82657207	85.95837819	83.2297425
170407A00001	4/6/2017	2.97	4/6/2027	105.57182	103.3851156	101.2572259	99.18623334	97.1702903	95.20762007	93.29651388	91.43532779	89.62247988
170427A00044	4/27/2017	3.02	4/27/2027	106.10009	103.7520862	101.4679479	99.24557837	97.08296451	94.97817108	92.92933703	90.93467224	88.99245431
170427A00046	4/27/2017	3.1	4/27/2028	108.80861	105.4312745	102.1774792	99.0420605	96.02009594	93.1068943	90.29798327	87.58909804	84.97617054
170427A00047	4/27/2017	3.18	4/27/2029	111.57378	107.1560459	102.9403953	98.91653446	95.07475036	91.40587141	87.90123432	84.55265341	81.35239179
170502A00028	5/2/2017	2.84	5/3/2027	105.90851	103.5426185	101.2415657	99.00322572	96.82555219	94.70657716	92.64440774	90.63722283	88.68326988
170511A00011	5/11/2017	2.41	5/11/2027	102.62355	101.3578419	100.119692	98.9082682	97.72277076	96.56243079	95.42650863	94.31429259	93.22509753
170524A00027	5/24/2017	2.32	5/24/2027	102.51048	101.2449771	100.0070678	98.79591617	97.61072035	96.45070942	95.31514187	94.20330419	93.11450958
170609A00043	6/9/2017	3.07	6/9/2032	117.38696	109.7631818	102.6994504	96.15152683	90.07888736	84.44439212	79.21398637	74.35642971	69.84305015
170609A00052	6/11/2018	2.9	6/9/2027	106.09455	103.6312595	101.2380313	98.91247371	96.65229432	94.4552925	92.31935488	90.24245141	88.22263152
170613A00032	6/13/2017	2.45	6/13/2025	100.95047	100.4957024	100.0450422	99.59843085	99.15581378	98.71713742	98.28234916	97.8513973	97.42423108
170614A00019	6/14/2017	2.48	6/13/2025	100.92785	100.4735707	100.023388	99.57724472	99.13508653	98.69686006	98.26251292	97.8319936	97.40525155
170619A00089	6/16/2017	2.79	6/16/2027	105.71595	103.2961995	100.9465974	98.66467481	96.44806832	94.29451293	92.20183703	90.16795798	88.19087774
170619A00092	6/16/2017	2.79	6/16/2027	105.71595	103.2961995	100.9465974	98.66467481	96.44806832	94.29451293	92.20183703	90.16795798	88.19087774
170619A00095	6/16/2017	2.79	6/16/2027	105.71595	103.2961995	100.9465974	98.66467481	96.44806832	94.29451293	92.20183703	90.16795798	88.19087774
170619A00096	6/16/2017	2.79	6/16/2027	105.71595	103.2961995	100.9465974	98.66467481	96.44806832	94.29451293	92.20183703	90.16795798	88.19087774
170619A00101	6/16/2017	2.74	6/16/2027	105.4258	103.0810149	100.8036272	98.59127541	96.44169698	94.35272327	92.32227496	90.34835772	88.42905812
170622A00036	6/22/2017	3.23	6/22/2032	118.00751	110.3536618	103.263143	96.69133092	90.59736305	84.94379981	79.69632132	74.82345259	70.29631416
170622A00037	6/22/2017	3.27	6/22/2033	120.17294	111.4925362	103.5241819	96.2053121	89.47917414	83.2942596	77.60379473	72.36528288	67.54009326
170622A00038	6/22/2017	3.32	6/22/2034	122.45073	112.7396744	103.9052613	95.86299092	88.53694025	81.85884964	75.76731336	70.20705902	65.12830614
170622A00039	6/22/2017	3.36	6/22/2035	124.60327	113.8685231	104.189633	95.4559615	87.56903151	80.4411368	73.99411298	68.15825443	62.87135897
170622A00040	6/22/2017	3.41	6/23/2036	126.74517	114.9877635	104.4802096	95.08116237	86.66600933	79.12480791	72.36048907	66.28728874	60.82937748
170623A00028	6/23/2017	2.79	6/23/2027	105.91164	103.4123357	100.985207	98.62775509	96.33758296	94.11239084	91.94997181	89.84820735	87.80506326
170711A00010	7/11/2017	2.38	7/12/2027	102.75921	101.408333	100.0881856	98.79781219	97.53629654	96.30275832	95.09635119	93.91626127	92.7617056
170713A00021	7/13/2017	3.25	7/13/2037	122.85823	112.5421841	103.3215959	95.0685872	87.67112642	81.03097412	75.06190369	69.68816083	64.84312869
170728A00040	7/28/2017	2.44	1/27/2025	100.15648	100.0814805	100.0066012	99.93184167	99.85720146	99.78268034	99.70827803	99.63399423	99.55982866
170803A00020	8/3/2017	2.84	8/3/2027	106.29226	103.678345	101.1423721	98.68153756	96.29316037	93.97467352	91.72361817	89.53763833	87.41447582
170809A00005	8/9/2017	2.61	8/11/2025	101.33821	100.7207332	100.1107809	99.50821491	98.91290136	98.32470972	97.74351258	97.16918554	96.60160714
170822A00020	8/22/2017	2.59	8/22/2025	101.39039	100.7425912	100.103065	99.47165355	98.84820312	98.23256366	97.6245889	97.02413621	96.43106651
170822A00023	8/23/2017	3.95	8/23/2028	112.71155	108.9470446	105.3308201	101.8561898	98.51680672	95.30664695	92.21999082	89.25140573	86.39572986

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
170918A00007	9/18/2017	2.8	9/20/2027	106.48309	103.7371278	101.0761393	98.49694246	95.9964982	93.57190306	91.22038214	88.93928228	86.72606573
170921A00055	9/21/2017	2.82	9/21/2027	106.32112	103.6605277	101.0830024	98.58545666	96.16494064	93.81863157	91.54382761	89.33794183	87.19849653
170921A00056	9/21/2017	2.82	9/21/2027	106.32112	103.6605277	101.0830024	98.58545666	96.16494064	93.81863157	91.54382761	89.33794183	87.19849653
170921A00057	9/21/2017	2.79	9/21/2027	106.03981	103.4671487	100.9740434	98.55754996	96.21485453	93.94326453	91.74020244	89.60320015	87.52989357
170929A00046	9/29/2017	2.49	9/30/2027	102.94636	101.5249593	100.1371416	98.78183368	97.45800526	96.16466703	94.90086896	93.66569832	92.45827793
171011A00013	10/11/2017	2.77	10/13/2026	104.24019	102.4473672	100.693982	98.97887062	97.30090985	95.65901945	94.05215999	92.47933095	90.93956885
171018A00011	10/18/2017	2.68	10/18/2027	106.54251	103.7152793	100.9777386	98.3265256	95.75842511	93.27036185	90.8593937	88.52270486	86.25759966
171026A00009	10/26/2017	2.75	10/27/2025	101.9193	101.0887432	100.2717071	99.46786034	98.67688535	97.89847473	97.13233081	96.37816523	95.63569864
171026A00010	10/26/2017	2.84	10/26/2026	104.45322	102.6236781	100.8350515	99.08617369	97.37591521	95.70318647	94.06693617	92.46614968	90.89984745
171026A00011	10/26/2017	2.94	10/26/2027	107.09609	104.2448347	101.4844842	98.81164289	96.22306509	93.71564428	91.2864062	88.93250235	86.65120395
171030A00023	10/30/2017	2.9	11/1/2027	107.01956	104.153341	101.3789793	98.69304986	96.0922753	93.57351739	91.13377037	88.77015461	86.47991063
171109A00016	11/9/2017	2.94	11/9/2032	115.40869	108.1730866	101.4757817	95.2729739	89.52467442	84.19435339	79.24862294	74.65695095	70.39140227
171129A00020	11/29/2017	2.89	11/30/2026	104.79052	102.8618904	100.978411	99.13875789	97.34165115	95.58585657	93.87018384	92.19348468	90.55465104
171206A00020	12/6/2017	2.62	12/6/2027	103.39921	101.8517505	100.3430499	98.87181943	97.43682486	96.03688243	94.67085622	93.33765585	92.03623431
171206A00038	12/6/2017	2.69	12/6/2027	106.86101	103.8963998	101.0299054	98.25774818	95.5763188	92.9821665	90.4719911	88.04263551	85.69107877
171206A00048	12/6/2017	3.04	12/6/2032	118.01948	109.9059347	102.4226803	95.51722162	89.14169453	83.25243615	77.80959626	72.7767865	68.12076342
171207A00024	12/7/2017	2.93	12/7/2027	107.18289	104.2699194	101.4543981	98.73250151	96.10057733	93.5551377	91.09285086	88.71053312	86.40514138
171207A00025	12/7/2017	2.91	12/7/2027	106.99338	104.135888	101.3734683	98.70239576	96.11911614	93.62023498	91.20250954	88.862841	86.59826715
171207A00026	12/7/2017	2.93	12/7/2027	107.18289	104.2699194	101.4543981	98.73250151	96.10057733	93.5551377	91.09285086	88.71053312	86.40514138
171219A00063	12/19/2017	2.8	12/20/2027	107.26928	104.2614687	101.3543688	98.54405303	95.82677302	93.19894715	90.65715218	88.19811529	85.81870654
171219A00067	12/19/2017	2.72	12/20/2027	106.51405	103.7277719	101.0340688	98.42929624	95.90997729	93.47279288	91.11457358	88.83229185	86.62305475
180102A00021	1/2/2018	2.82	1/2/2026	102.42795	101.4119604	100.41609	99.43974944	98.48236828	97.54339823	96.62231193	95.71860198	94.83178005
180104A00017	1/4/2018	2.77	1/3/2025	100.02297	100.0146398	100.0063138	99.99799552	99.98968494	99.98138204	99.97308682	99.96479925	99.95651933
180104A00018	1/4/2018	2.97	1/4/2027	105.1827	103.1570445	101.1809197	99.25280168	97.37122272	95.53477039	93.74208505	91.99185752	90.28282673
180104A00023	1/4/2018	2.91	1/4/2028	106.515	103.8527369	101.2779645	98.78723723	96.37727108	94.04493204	91.78722814	89.601302	87.48442389
180104A00024	1/4/2018	2.98	1/4/2028	107.35583	104.4251704	101.5937443	98.85758857	96.21292497	93.65614903	91.1838211	88.79265763	86.47952304
180104A00041	1/4/2018	3.08	1/4/2033	116.27555	109.0332996	102.3383118	96.14533774	90.41312898	85.10406405	80.18381034	75.62101931	71.38705154
180109A00028	1/9/2018	2.6	1/9/2025	100.05861	100.0336005	100.0086142	99.98365531	99.95872388	99.93381983	99.90894311	99.88409368	99.85927147
180110A00028	1/10/2018	2.85	1/10/2025	100.06975	100.0419768	100.0142321	99.98651834	99.95883562	99.93118386	99.90356298	99.87597294	99.84841368
180110A00029	1/10/2018	3.13	1/10/2028	108.15284	105.08154	102.1144861	99.24754987	96.47679483	93.79846257	91.20896385	88.70486983	86.2829039
180111A00007	1/11/2018	2.66	1/14/2025	100.09152	100.0526105	100.0137508	99.97493931	99.93617581	99.89746025	99.85879251	99.82017252	99.78160016
180116A00014	1/16/2018	3.01	1/19/2027	105.36847	103.300786	101.2842961	99.31739493	97.39854093	95.52625177	93.69910176	91.91571915	90.17478372
180116A00015	1/16/2018	3.06	1/18/2028	107.99214	104.9019823	101.9172781	99.03382684	96.24762436	93.55484911	90.95185267	88.43515075	86.00141481

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
180118A00004	1/18/2018	2.88	1/17/2025	100.1172	100.0699879	100.0228382	99.97575053	99.9287246	99.88176033	99.83485759	99.78801626	99.7412362
180118A00037	1/18/2018	2.88	1/21/2025	100.14382	100.0855057	100.0272745	99.96912627	99.91106074	99.85307775	99.79517713	99.73735869	99.67962225
180118A00039	1/18/2018	3.09	1/19/2027	105.53414	103.4647069	101.4464991	99.47791389	97.55740866	95.68350016	93.85476181	92.06982103	90.32735676
180125A00027	1/25/2018	2.69	1/24/2025	100.32009	100.1781166	100.0365632	99.89543117	99.75471877	99.61442406	99.47454514	99.33508015	99.19602722
180126A00011	1/26/2018	2.72	1/26/2028	103.8317	102.2131726	100.636284	99.0996268	97.60184917	96.14165533	94.71780273	93.32909938	91.97440145
180126A00029	1/26/2018	2.88	1/27/2025	100.18375	100.1087871	100.0339426	99.95921707	99.8846102	99.81012174	99.73575141	99.66149893	99.58736403
180130A00070	1/30/2018	3.14	1/29/2027	105.71096	103.6128656	101.5671339	99.57210914	97.62619809	95.7278696	93.87565182	92.06812934	90.30394058
180130A00085	1/30/2018	2.79	1/30/2025	100.20266	100.1193061	100.0360948	99.95302336	99.87009147	99.78729876	99.70464489	99.62212952	99.5397523
180131A00022	1/31/2018	2.96	1/30/2025	100.21038	100.1270921	100.0439392	99.96092537	99.87805026	99.79531354	99.71271487	99.63025391	99.54793034
180201A00022	2/1/2018	2.99	2/3/2025	100.24099	100.1466062	100.0524062	99.95838755	99.86454979	99.77089235	99.6774147	99.58411631	99.49099668
180205A00019	2/5/2018	2.88	2/5/2025	100.25194	100.1519331	100.0521375	99.95254853	99.85316563	99.75398811	99.65501531	99.55624657	99.45768124
180207A00002	2/7/2018	3.13	2/6/2026	102.99332	101.878944	100.7886738	99.72173102	98.67737253	97.65488649	96.65359069	95.67283106	94.7119802
180207A00003	2/7/2018	3.28	2/7/2028	108.81627	105.6586113	102.6100354	99.66613972	96.82272755	94.07579691	91.42153009	88.85628394	86.37658071
180222A00025	2/22/2018	3.48	2/22/2033	121.95255	113.4795678	105.6769473	98.48771777	91.86004249	85.74673207	80.1048049	74.89509122	70.08187639
180222A00026	2/22/2018	2.98	2/21/2025	100.37805	100.233601	100.0895766	99.94597574	99.80279672	99.6600376	99.5176965	99.37577158	99.23426097
180222A00027	2/22/2018	3.24	2/22/2028	109.06845	105.8576533	102.7590443	99.76803647	96.88026518	94.09157089	91.39798829	88.7957358	86.28120579
180305A00030	3/5/2018	3.12	3/5/2025	100.70461	100.4416515	100.1800732	99.91986412	99.66101345	99.40351055	99.14734486	98.89250594	98.63898345
180309A00011	3/9/2018	3.19	3/10/2025	100.7609	100.4841414	100.208918	99.93521473	99.66301894	99.3923181	99.12309983	98.85535188	98.58906215
180313A00026	3/13/2018	3.34	3/13/2028	109.27557	106.0129853	102.8658177	99.82928815	96.8988484	94.0701675	91.33911991	88.70177428	86.15438283
180321A00015	3/21/2018	3.02	3/21/2025	100.68621	100.4202391	100.1557862	99.89283835	99.63138242	99.37140524	99.11289381	98.85583531	98.60021707
180322A00030	3/22/2018	2.79	3/24/2025	100.49621	100.2918717	100.088509	99.88611899	99.68469396	99.4842263	99.2847085	99.08613313	98.88849283
180322A00040	3/22/2018	3.16	3/21/2031	110.77259	106.5865707	102.6217376	98.86443114	95.30193322	91.92239453	88.71476976	85.66875804	82.77474815
180322A00044	3/22/2018	3.18	3/22/2033	111.34653	106.8854719	102.6811221	98.71598448	94.9739007	91.43993664	88.10028123	84.94215396	81.95372075
180323A00013	3/23/2018	3.18	3/23/2028	109.09618	105.8032767	102.6278411	99.56497016	96.60999695	93.75847991	91.00619014	88.34909963	85.78337024
180328A00010	3/28/2018	3.1	3/28/2025	100.64219	100.4007144	100.1603954	99.92122908	99.68320724	99.44632165	99.21056418	98.97592678	98.74240148
180329A00003	3/29/2018	3.08	3/29/2028	108.81177	105.5074506	102.3215432	99.24907667	96.28532648	93.42579755	90.66621109	88.00249258	85.43076051
180402A00013	4/2/2018	2.99	4/3/2028	107.22105	104.4291695	101.7337937	99.13099341	96.61701936	94.18829594	91.84141198	89.57311226	87.38028951
180403A00006	4/3/2018	3.07	4/3/2028	108.81385	105.4958664	102.2972208	99.2128987	96.23813366	93.3683899	90.59934956	87.92690059	85.34712538
180403A00014	4/3/2018	3.11	4/3/2025	100.90775	100.5677038	100.2299544	99.89447879	99.56125408	99.23025763	98.9014671	98.57486045	98.25041594
180403A00041	4/3/2018	2.91	4/3/2025	100.65814	100.3998341	100.1428594	99.88720324	99.63285539	99.37980579	99.12804451	98.87756167	98.62834754
180410A00002	4/10/2018	3.14	4/11/2033	111.26188	106.7617362	102.5227935	98.52710693	94.75811305	91.20051306	87.84016712	84.66399838	81.6599055
180412A00034	4/12/2018	3.23	4/15/2030	114.42904	108.9782844	103.8244139	98.94966328	94.33742271	89.97215766	85.83933367	81.92534667	78.2174585
180412A00036	4/12/2018	3.54	4/15/2038	132.37009	118.5924321	106.4714015	95.79533823	86.38079622	78.06864706	70.72073849	64.2170273	58.45311704

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
180503A00040	5/3/2018	3.3	5/5/2025	100.99198	100.6449454	100.3002953	99.9580095	99.61806374	99.280434	98.94509662	98.61202826	98.28120588
180508A00038	5/8/2018	3.57	5/9/2033	112.95624	108.352839	104.0185941	99.93488888	96.08454683	92.45171084	89.02173272	85.7810724	82.71720625
180517A00018	5/17/2018	3.46	5/17/2033	112.82688	108.2199346	103.8827349	99.79660156	95.94429984	92.30992073	88.87876951	85.63726448	82.57284474
180517A00024	5/17/2018	3.46	5/17/2033	112.82688	108.2199346	103.8827349	99.79660156	95.94429984	92.30992073	88.87876951	85.63726448	82.57284474
180521A00025	5/21/2018	3.24	5/21/2025	101.12673	100.7349176	100.3461503	99.96039445	99.57761513	99.19777781	98.82084852	98.44679383	98.07558081
180529A00042	5/29/2018	3.42	5/30/2028	110.12467	106.6369071	103.2796164	100.0472299	96.93444518	93.93621347	91.04772588	88.26440089	85.58187228
180529A00057	5/29/2018	3.09	5/30/2028	106.54453	104.1076941	101.7522925	99.47500993	97.27268406	95.14230152	93.08099	91.08601072	89.15475138
180530A00024	5/30/2018	3.44	5/30/2029	112.93369	108.398576	104.0744475	99.95038068	96.01607628	92.26181792	88.67843606	85.25727445	81.99015879
180530A00025	5/30/2018	3.49	5/30/2030	115.63466	110.0469417	104.7690571	99.78217582	95.0687105	90.61222461	86.39735157	82.40971975	78.63588325
180530A00026	5/30/2018	3.55	5/30/2031	118.12136	111.4843333	105.2734032	99.4588862	94.0133161	88.91126618	84.12918797	79.64526344	75.43926961
180530A00027	5/30/2018	3.61	6/1/2032	120.69692	113.0006576	105.864735	99.24517241	93.10166539	87.39725648	82.09804152	77.17290288	72.59326725
180530A00028	5/30/2018	3.67	5/31/2033	123.3823	114.6278168	106.5836733	99.18801649	92.38468794	86.12267597	80.35561973	75.04136323	70.14155412
180530A00030	5/30/2018	3.68	5/30/2034	125.66109	115.8630978	106.9404784	98.80956819	91.39512742	84.62945271	78.45158665	72.80661384	67.64503356
180605A00031	6/5/2018	3.37	6/5/2030	108.29075	105.3514918	102.5315015	99.82488066	97.22606277	94.7297961	92.3311237	90.02536489	87.80809797
180615A00039	6/15/2018	3.49	6/15/2028	110.49065	106.9526827	103.5486335	100.2727151	97.11942096	94.08351163	91.15999982	88.34413712	85.63140111
180618A00036	6/18/2018	3.89	6/18/2048	158.47388	133.8147542	113.8041921	97.50337521	84.17061673	73.21880772	64.18225759	56.69081301	50.44962562
180619A00020	6/19/2018	3.1	6/19/2025	101.2917	100.8194839	100.3516812	99.88822842	99.42906487	98.97413108	98.52336862	98.07672017	97.63412943
180619A00021	6/19/2018	3.24	6/19/2028	109.93813	106.3914674	102.979725	99.69704847	96.53786588	93.4968766	90.56903646	87.74954389	85.03382694
180620A00014	6/20/2018	3.4	6/20/2028	110.2157	106.6687807	103.2566797	99.97354521	96.81381242	93.77218737	90.84363212	88.02335099	85.30677746
180620A00038	6/20/2018	3.4	6/20/2028	110.2157	106.6687807	103.2566797	99.97354521	96.81381242	93.77218737	90.84363212	88.02335099	85.30677746
180621A00017	6/21/2018	3.42	6/21/2028	110.2932	106.7421836	103.3262256	100.0394642	96.8763205	93.83148751	90.89991508	88.07679604	85.35755316
180621A00068	6/21/2018	3.32	6/23/2025	101.38959	100.9065333	100.4280808	99.95416964	99.48473549	99.01971496	98.55904592	98.10266743	97.65051963
180622A00004	6/22/2018	3.47	12/22/2028	111.87208	107.7939244	103.8894938	100.1504609	96.56894076	93.13746626	89.84896406	86.69673143	83.67441491
180622A00005	6/22/2018	3.5	7/2/2029	113.44098	108.8045261	104.3878038	100.1792183	96.1678487	92.34340481	88.69618725	85.21705037	81.89736775
180622A00006	6/22/2018	3.53	12/21/2029	114.79159	109.6601179	104.7931923	100.1757598	95.79370097	91.63376814	87.68352678	83.93130162	80.36612638
180628A00068	6/28/2018	3.12	6/28/2028	108.00005	105.0337889	102.1756666	99.42102501	96.76543812	94.20469706	91.73479827	89.3519321	87.05247218
180713A00031	7/13/2018	3.06	7/14/2025	100.85961	100.5313535	100.205714	99.88265891	99.56215423	99.24416667	98.92866353	98.61561271	98.30498269
180716A00054	7/16/2018	3.59	7/16/2040	137.76195	121.6250171	107.695584	95.6526513	85.22380242	76.17761022	68.3172645	61.47521912	55.508691
180716A00062	7/16/2018	2.91	7/16/2025	100.8395	100.5098499	100.1828461	99.85845661	99.53664681	99.21738269	98.90063087	98.58635858	98.27453366
180717A00021	7/17/2018	3.34	7/17/2028	109.33154	106.0249666	102.8441185	99.78343009	96.83762027	94.00167309	91.27082255	88.6405386	86.10651388
180717A00026	7/17/2018	3.24	7/16/2025	101.73756	101.1151548	100.5004431	99.89328646	99.29354566	98.70108475	98.11577112	97.53747539	96.96607128
180717A00047	7/17/2018	3.3	9/17/2025	102.05581	101.334223	100.6228501	99.9214713	99.22987673	98.54786245	97.87523014	97.21178691	96.55734517
180718A00008	7/18/2018	3.37	7/18/2028	110.04387	106.4570739	103.009372	99.69454207	96.50667804	93.44017236	90.48969911	87.650198	84.91685944

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
180719A00064	7/19/2018	3.3	7/21/2025	101.60022	101.0395057	100.484991	99.93656953	99.39414101	98.85760745	98.32687297	97.80184374	97.28242797
180719A00065	7/19/2018	3.36	7/20/2026	104.59627	103.0302652	101.495589	99.9913689	98.51676673	97.07097463	95.6532138	94.26273318	92.89880819
180727A00028	7/27/2018	3.25	7/27/2026	104.60713	103.0200757	101.4650217	99.94106492	98.44733983	96.98301263	95.54727996	94.13936743	92.75852831
180727A00038	7/27/2018	3.36	7/25/2025	101.66592	101.0939894	100.5284976	99.96933502	99.41639581	98.86957637	98.32877538	97.79389379	97.26483468
180727A00039	7/27/2018	3.48	7/27/2028	110.78086	107.1241595	103.6096061	100.2308837	96.98199212	93.85723077	90.85118238	87.95869698	85.17487713
180730A00081	7/30/2018	3.5	7/28/2028	110.86045	107.1996386	103.6812007	100.2988076	97.04644631	93.91840443	90.9092536	88.01383349	85.22723695
180813A00045	8/13/2018	2.89	8/13/2025	100.93948	100.5674498	100.1988151	99.83352683	99.47153465	99.11278921	98.75724224	98.40484645	98.05555556
180814A00010	8/14/2018	3.1	8/14/2025	101.71303	101.085392	100.4655037	99.85322529	99.24841718	98.65094294	98.06066952	97.47746707	96.90120885
180814A00032	8/14/2018	3.1	8/14/2025	101.71303	101.085392	100.4655037	99.85322529	99.24841718	98.65094294	98.06066952	97.47746707	96.90120885
180814A00033	8/14/2018	3.25	8/13/2027	107.65117	104.9878187	102.4044392	99.89813124	97.46612154	95.10575581	92.81449288	90.58989899	88.4296424
180816A00038	8/16/2018	3.38	8/16/2028	110.56981	106.863295	103.3025836	99.88112032	96.59268024	93.43135393	90.39152942	87.46787536	84.65532519
180820A00055	8/20/2018	3.37	8/21/2028	110.57025	106.8503142	103.2771379	99.84409934	96.54491572	93.37362357	90.32456063	87.39234866	84.5718774
180823A00035	8/23/2018	3.05	8/22/2025	101.74056	101.0908334	100.4494072	99.81612405	99.19082942	98.57337265	97.96360685	97.36138878	96.76657873
180823A00053	8/23/2018	3.2	8/23/2028	110.26489	106.5372315	102.9570535	99.51768668	96.21280218	93.03639396	89.98276006	87.0464852	84.2224246
180823A00055	8/23/2018	3.44	8/23/2033	122.66992	113.6932616	105.4644559	97.91673003	90.98962144	84.62834623	78.78323814	73.40924549	68.46548004
180827A00020	8/27/2018	3.21	8/27/2025	101.83066	101.1675211	100.5130205	99.86698562	99.22925307	98.59966344	97.9780614	97.36429558	96.7582184
180828A00032	8/28/2018	3.49	8/29/2033	123.13246	114.1207883	105.8606374	98.2848295	91.33253945	84.9486622	79.08324705	73.69099025	68.73078003
180829A00008	8/29/2018	3.23	8/30/2027	107.72535	105.0152433	102.38753	99.83918461	97.36731235	94.96914473	92.64203315	90.38344277	88.19094667
180831A00019	8/31/2018	3.21	9/2/2025	101.87628	101.1965014	100.5257918	99.86396616	99.21084893	98.56626897	97.93005966	97.30205868	96.6821079
180904A00012	9/4/2018	3.35	9/4/2030	115.89953	110.0289823	104.4980672	99.28526828	94.37054633	89.73523155	85.36192236	81.23439247	77.33750517
180904A00014	9/4/2018	3.37	9/1/2028	110.65164	106.9006253	103.2985346	99.83860253	96.5144148	93.31988564	90.24923887	87.29699008	84.45793005
180905A00017	9/5/2018	3.43	9/6/2033	120.14389	112.2386518	104.9684342	98.27739834	92.11494618	86.43520208	81.19654665	76.36119907	71.89484246
180906A00032	9/6/2018	3.24	9/5/2025	102.13176	101.3678827	100.615496	99.87434335	99.1441739	98.42474423	97.71581808	97.01716609	96.32856553
180907A00013	9/7/2018	3.27	9/8/2025	102.16997	101.4007631	100.6432339	99.89712037	99.16216497	98.43811793	97.72473685	97.0217865	96.32903853
180910A00028	9/10/2018	3.56	9/9/2033	123.79924	114.7305053	106.419712	98.7989369	91.80669676	85.38730624	79.49030253	74.06992982	69.08467711
180910A00033	9/10/2018	3.43	9/8/2028	110.92737	107.1519913	103.5271143	100.0458737	96.70175957	93.48859764	90.40052912	87.43199269	84.57770746
180912A00011	9/12/2018	3.41	9/11/2026	105.12083	103.4072683	101.7299058	100.0876642	98.47950435	96.904428	95.36147626	93.84972735	92.36829487
180913A00012	9/13/2018	3.31	9/13/2033	112.54633	107.7784116	103.2992858	99.08830651	95.12647523	91.39629889	87.88165989	84.56769809	81.44070371
180913A00030	9/13/2018	3.33	9/12/2025	102.03756	101.3297645	100.6317921	99.94344174	99.26451505	98.59481925	97.93416675	97.28237502	96.63926643
180913A00033	9/13/2018	3.31	9/13/2033	112.54633	107.7784116	103.2992858	99.08830651	95.12647523	91.39629889	87.88165989	84.56769809	81.44070371
180914A00013	9/14/2018	3.48	9/14/2028	111.1602	107.3639571	103.7195753	100.2201017	96.85894437	93.6298522	90.52689514	87.5444455	84.67716051
180914A00028	9/14/2018	3.37	9/12/2025	102.06585	101.3579373	100.6598553	99.97139618	99.29236186	98.62255946	97.96180138	97.30990507	96.66669289
180914A00029	9/14/2018	3.48	9/14/2028	111.1602	107.3639571	103.7195753	100.2201017	96.85894437	93.6298522	90.52689514	87.5444455	84.67716051

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
180914A00049	9/14/2018	3.37	9/14/2033	112.83354	108.0534313	103.5628543	99.34111183	95.3691564	91.62944985	88.10583305	84.78340759	81.64842842
180920A00014	9/20/2018	3.59	9/20/2028	111.61923	107.7978508	104.12983	100.6081165	97.22603074	93.97724019	90.8557388	87.85582804	84.97209907
180925A00013	9/25/2018	3.41	9/25/2028	105.8418	103.8531625	101.9237084	100.0511856	98.23344898	96.46845051	94.75423404	93.08893052	91.47075349
180925A00116	9/25/2018	3.28	9/25/2028	105.74229	103.753004	101.8229845	99.94997456	98.13182385	96.36647953	94.65198101	92.98645506	91.36811132
181003A00019	10/3/2018	3.44	10/3/2025	102.52588	101.6821765	100.8524446	100.0363428	99.23353637	98.44370165	97.66652532	96.90170409	96.14894434
181003A00032	10/3/2018	3.23	10/3/2025	101.26896	100.8130805	100.3623289	99.91661085	99.47583314	99.03990516	98.6087386	98.18224739	97.76034763
181004A00029	10/4/2018	3.7	10/4/2028	112.14819	108.2784442	104.5652714	101.0014272	97.58005	94.29463658	91.13902029	88.10735166	85.1940799
181010A00025	10/10/2018	3.48	10/10/2030	109.35092	106.2054111	103.1942081	100.3103489	97.54728803	94.89886569	92.35928271	89.92307681	87.58510079
181029A00051	2/5/2019	3.69	2/5/2029	113.11656	108.8913908	104.8504352	100.9846419	97.2854567	93.74479158	90.3549963	87.10883231	83.99944808
181029A00097	10/29/2018	3.53	10/27/2028	110.30464	106.8515989	103.5367158	100.3536218	97.29627772	94.35895515	91.5362187	88.82290939	86.21412901
181031A00070	3/1/2019	3.77	3/1/2029	113.66674	109.3591878	105.2419164	101.3054471	97.54083256	93.93962042	90.4938226	87.19588708	84.03867138
181105A00015	11/5/2018	3.57	11/5/2025	102.91319	101.9817071	101.0672135	100.1692488	99.28736672	98.42113669	97.57014353	96.73398664	95.91227937
181109A00028	11/9/2018	3.72	11/9/2026	106.19914	104.3147091	102.473143	100.6732173	98.91374823	97.19359363	95.51165058	93.86685409	92.25817545
181109A00029	11/9/2018	3.72	11/9/2026	106.19914	104.3147091	102.473143	100.6732173	98.91374823	97.19359363	95.51165058	93.86685409	92.25817545
181116A00006	11/16/2018	3.18	11/17/2025	101.3753	100.8726273	100.3762503	99.88603609	99.40185749	98.92359088	98.45111622	97.98431692	97.52307965
181211A00042	12/11/2018	3.7	12/11/2028	111.5485	107.7921975	104.1912456	100.7382759	97.42631079	94.24874213	91.19930964	88.27208052	85.46143039
181214A00030	12/14/2018	3.47	12/14/2033	121.11801	112.7326146	105.0404703	97.97899449	91.4916194	85.52718687	80.03940238	74.9863472	70.33004175
181218A00040	12/18/2018	3.23	6/18/2030	107.87788	104.9492919	102.1395833	99.44286727	96.85359323	94.36652479	91.97671961	89.67951094	87.47049036
181220A00041	12/20/2018	3.36	12/18/2026	105.84047	103.8534049	101.913932	100.0206176	98.17208064	96.36699088	94.60406669	92.88207286	91.19981858
181226A00030	12/26/2018	2.91	12/26/2028	105.32063	103.2123868	101.1702163	99.19149782	97.27373845	95.41456175	93.61170144	91.86299546	90.16638049
181227A00019	12/28/2020	3.1	12/29/2025	102.68364	101.6771584	100.6903903	99.72276171	98.77371951	97.8427319	96.92928712	96.03289264	95.15307419
181227A00027	12/27/2018	3.24	12/26/2025	102.80102	101.8021105	100.8226101	99.86195709	98.91961109	97.99505213	97.0877798	96.1973123	95.32318562
181227A00028	12/27/2018	3.46	12/27/2028	111.86849	107.7770971	103.8605564	100.1104555	96.51883379	93.07815442	89.78127898	86.62144446	83.59224138
190102A00015	1/2/2019	2.97	1/3/2034	110.83496	106.1621695	101.7761666	97.65605713	93.78265156	90.13831249	86.70681778	83.47323651	80.42381679
190102A00020	1/2/2019	2.97	1/3/2034	110.83496	106.1621695	101.7761666	97.65605713	93.78265156	90.13831249	86.70681778	83.47323651	80.42381679
190102A00022	1/2/2019	2.97	1/3/2034	110.83496	106.1621695	101.7761666	97.65605713	93.78265156	90.1383125	86.70681778	83.47323651	80.42381679
190102A00024	1/2/2019	2.97	1/3/2034	110.83496	106.1621695	101.7761666	97.65605713	93.78265156	90.13831249	86.70681778	83.47323651	80.42381679
190102A00050	1/2/2019	3.38	1/3/2034	122.8821	113.5526348	105.0294786	97.23808463	90.11117903	83.58801561	77.61371117	72.13865177	67.11796188
190103A00020	1/3/2019	3.12	1/5/2026	102.93259	101.836982	100.7648965	99.71557607	98.68829924	97.68237468	96.69713977	95.73195908	94.786223
190104A00006	1/4/2019	2.83	1/5/2026	101.39953	100.8145387	100.2380949	99.66998959	99.1100226	98.55800063	98.01373677	97.47705029	96.94776633
190104A00033	1/4/2019	3.37	1/31/2029	111.75783	107.5752441	103.5748104	99.74759746	96.08516256	92.57952181	89.22312243	86.00881698	82.92983927
190104A00034	1/4/2019	3.18	1/4/2029	108.87045	105.5272527	102.3195437	99.24091469	96.28530443	93.44697385	90.72048716	88.10069389	85.58271218
190104A00035	1/4/2019	3.1	1/5/2026	102.89464	101.8052116	100.7391184	99.69561833	98.67399595	97.67356589	96.69367114	95.73368167	94.79299304

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
190104A00038	1/4/2019	3.25	1/4/2029	110.42293	106.5712681	102.8836252	99.35203807	95.96897918	92.72732817	89.62034719	86.64165808	83.78522104
190110A00004	1/10/2019	3.09	1/10/2025	100.07665	100.0488648	100.0211143	99.99339485	99.96570643	99.93804896	99.91042239	99.88282667	99.85526172
190110A00005	1/10/2019	3.2	1/9/2026	102.86606	101.8286227	100.8121116	99.81589631	98.83937315	97.881962	96.94310535	96.02226724	95.11893216
190111A00026	1/11/2019	3.48	1/11/2034	123.81619	114.4255936	105.8472456	98.00595414	90.83387291	84.26974874	78.25824911	72.74936163	67.69785711
190114A00040	1/14/2019	2.89	1/14/2025	100.10064	100.0617225	100.0228552	99.98403601	99.94526485	99.90654163	99.86786626	99.82923863	99.79065865
190118A00006	1/18/2019	3.14	1/18/2034	112.11055	107.1897492	102.5769252	98.24937069	94.18624526	90.36840812	86.77826738	83.39964355	80.21764593
190122A00043	1/22/2019	2.96	1/22/2025	100.16012	100.0989753	100.0379196	99.976953	99.91607533	99.8552864	99.79458598	99.73397389	99.67344992
190122A00045	1/22/2019	3.17	1/22/2027	105.89059	103.8061139	101.7734061	99.79083843	97.85684575	95.96992347	94.12862477	92.33155788	90.57738355
190122A00046	1/22/2019	3.29	1/22/2029	111.70634	107.5393445	103.5532248	99.73914743	96.08875645	92.59414808	89.2478436	86.04276409	82.97220673
190129A00073	1/29/2019	3.11	1/29/2029	105.68736	103.532071	101.4453709	99.42450981	97.4668676	95.56994773	93.73137064	91.9488674	90.22027379
190131A00013	1/31/2019	3.48	1/31/2034	120.28676	112.04838	104.4975794	97.571662	91.21402054	85.37351597	80.00391991	75.06341688	70.51415945
190131A00019	1/31/2019	3.44	1/30/2034	123.56466	114.1365723	105.5281811	97.66323764	90.4729801	83.89536	77.87435422	72.35935099	67.30460121
190131A00023	1/31/2019	3.02	1/30/2034	111.51826	106.6231567	102.0344589	97.72956856	93.68774885	89.88995464	86.31868222	82.95783341	79.79259262
190205A00017	2/5/2019	3.36	2/5/2029	111.04706	107.10735	103.338034	99.73070536	96.27742674	92.97069759	89.80342739	86.76891065	83.86080363
190205A00020	2/5/2019	3.32	2/5/2029	110.88915	106.9538469	103.1887608	99.58549812	96.13612925	92.83316076	89.66950892	86.63847469	83.73372044
190205A00021	2/5/2019	3.32	2/5/2029	110.88915	106.9538469	103.1887608	99.58549812	96.13612925	92.83316076	89.66950892	86.63847469	83.73372044
190205A00022	2/5/2019	3.32	2/5/2029	110.88915	106.9538469	103.1887608	99.58549812	96.13612925	92.83316076	89.66950892	86.63847469	83.73372044
190205A00023	2/5/2019	3.32	2/5/2029	110.88915	106.9538469	103.1887608	99.58549812	96.13612925	92.83316076	89.66950892	86.63847469	83.73372044
190211A00016	2/11/2019	3.01	2/11/2025	100.29971	100.183139	100.0668559	99.95085495	99.83513524	99.71969568	99.60453519	99.48965275	99.37504732
190211A00017	2/11/2019	3.12	2/11/2026	103.01686	101.8887771	100.785393	99.70590159	98.6495325	97.61554823	96.60324234	95.61193785	94.64098573
190225A00026	2/25/2019	3.43	2/27/2034	123.65556	114.1445881	105.4669157	97.54444736	90.30681478	83.69057056	77.63847363	72.09885205	67.02503418
190227A00033	2/27/2019	2.65	2/27/2026	101.44854	100.8155936	100.1927346	99.57969233	98.97620902	98.38203641	97.7969353	97.2206751	96.65303348
190301A00012	3/1/2019	3.41	3/1/2029	112.16056	107.8843556	103.7974145	99.8903029	96.15411298	92.58042962	89.16130035	85.88920703	82.75703954
190305A00015	3/5/2019	3.32	3/5/2029	111.07305	107.062798	103.2288533	99.56239524	96.05509428	92.69908566	89.48694041	86.41163848	83.46654364
190305A00017	3/5/2019	3.12	3/5/2026	103.28325	102.0520411	100.849079	99.67339059	98.5240446	97.4001519	96.30086329	95.22536727	94.17288793
190308A00016	3/8/2019	3.18	3/8/2034	117.79121	110.012453	102.8753537	96.321533	90.29829655	84.75804892	79.65777172	74.95855782	70.62519534
190308A00026	3/8/2019	3.18	3/8/2034	117.79121	110.012453	102.8753537	96.321533	90.29829655	84.75804892	79.65777172	74.95855782	70.62519534
190314A00027	3/22/2019	2.92	3/21/2025	100.55048	100.3285045	100.1075227	99.88752637	99.6685089	99.45046368	99.23338419	99.01726397	98.8020966
190315A00017	3/15/2019	2.88	3/15/2034	110.99106	106.034918	101.3939248	97.04449862	92.96501976	89.13565679	85.53820576	82.15594483	78.97350281
190315A00019	3/15/2019	2.88	3/15/2034	110.99106	106.034918	101.3939248	97.04449862	92.96501976	89.13565679	85.53820576	82.15594482	78.97350281
190315A00023	3/15/2019	2.88	3/15/2034	110.99106	106.034918	101.3939248	97.04449862	92.96501976	89.13565679	85.53820576	82.15594483	78.97350281
190315A00029	3/15/2019	2.88	3/15/2034	110.99106	106.034918	101.3939248	97.04449862	92.96501976	89.13565679	85.53820576	82.15594483	78.97350281
190322A00008	3/22/2019	2.64	3/20/2026	101.48043	100.8076238	100.1461978	99.49583549	98.85622935	98.22708366	97.60811415	96.99904735	96.39962013

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
190327A00027	3/27/2019	2.66	1/15/2025	100.09457	100.0529143	100.0113151	99.96976817	99.9282735	99.88683095	99.8454404	99.80410177	99.76281494
190327A00030	3/27/2019	2.9	3/27/2036	111.94216	106.2252886	100.9294011	96.01799118	91.45806884	87.21979193	83.27614135	79.60263168	76.17705357
190328A00046	3/28/2019	2.7	3/4/2025	100.39479	100.2200069	100.0458358	99.87227533	99.69932223	99.52697328	99.35522531	99.18407515	99.01351964
190402A00004	4/2/2019	2.9	4/2/2029	110.56414	106.226148	102.0842302	98.12841874	94.34931659	90.73805697	87.28627004	83.98605186	80.82993556
190402A00005	4/2/2019	2.77	4/2/2032	110.23391	105.3780496	100.8173261	96.53100503	92.49995477	88.70651299	85.13436487	81.76843222	78.59477224
190403A00010	4/3/2019	3.08	4/3/2029	110.5107	106.3579684	102.3922965	98.60422424	94.98482146	91.52565316	88.21874971	85.05657876	82.03201899
190403A00013	4/3/2019	3.05	4/3/2029	110.14039	106.0926667	102.2258311	98.53077673	94.99890068	91.62207621	88.39262382	85.30328439	82.34719397
190403A00014	4/3/2019	3.05	4/3/2029	110.14039	106.0926667	102.2258311	98.53077673	94.99890068	91.62207621	88.39262382	85.30328439	82.34719397
190404A00015	4/4/2019	2.88	4/3/2026	103.2527	101.9314139	100.6335412	99.35850793	98.10576053	96.87476294	95.66499595	94.47595649	93.30715705
190409A00019	4/9/2019	2.91	4/9/2029	110.65034	106.2913388	102.130152	98.1567163	94.36153999	90.73566518	87.2706346	83.95846061	80.79159635
190422A00030	4/22/2019	2.93	12/22/2025	102.46392	101.4777389	100.5105257	99.56173772	98.63085182	97.71736457	96.82079126	95.94066503	95.07653607
190426A00023	4/26/2019	2.91	6/24/2026	103.71027	102.2213932	100.7614401	99.3296429	97.92525837	96.547569	95.19588184	93.86952748	92.56785902
190501A00015	5/1/2019	2.78	5/1/2029	105.3508	103.0353888	100.7983478	98.63636978	96.54630931	94.52517598	92.57012555	90.67845185	88.84757908
190502A00016	5/2/2019	2.87	5/1/2026	103.42414	102.0272146	100.6562767	99.31066302	97.98973079	96.69285876	95.41944605	94.16891141	92.9406924
190506A00026	5/6/2019	3.03	5/4/2029	110.47	106.2445794	102.2128718	98.36491257	94.6912987	91.18315814	87.83211714	84.63026962	81.57014862
190510A00049	5/10/2019	2.58	5/8/2026	101.62622	100.868393	100.1236267	99.39156207	98.67185354	97.96416847	97.26818668	96.58359982	95.91011081
190514A00020	5/14/2019	2.66	5/14/2025	100.82542	100.4539508	100.0852299	99.71922575	99.35590837	98.99524809	98.63721569	98.28178241	97.92891989
190514A00021	5/14/2019	2.72	11/14/2025	102.01179	101.1316294	100.2666398	99.41643302	98.58063218	97.75887321	96.95080418	96.15608484	95.37438616
190515A00035	5/15/2019	2.82	2/15/2029	109.19049	105.187684	101.3605698	97.70039431	94.19889205	90.84825671	87.64111265	84.57048835	81.6297918
190520A00020	5/20/2019	2.39	5/20/2026	101.53065	100.778168	100.0386135	99.31163312	98.59688518	97.89404086	97.20278362	96.52280865	95.85382223
190529A00061	5/29/2019	2.46	5/29/2026	101.53458	100.7774368	100.0333421	99.30193758	98.58287803	97.87583111	97.1804769	96.49650736	95.82362565
190530A00008	5/30/2019	2.38	5/30/2025	100.84057	100.424601	100.0120602	99.60290309	99.19708828	98.79457494	98.39532291	97.99929267	97.60644537
190531A00037	5/31/2019	2.61	5/31/2029	109.62802	105.152135	100.8858096	96.8181501	92.93888901	89.23834153	85.70736957	82.33734808	79.12013363
190531A00038	5/31/2019	2.82	5/31/2034	118.50819	108.9925481	100.3370892	92.45904875	85.28403049	78.74512527	72.78212296	67.34081082	62.37234853
190605A00007	6/5/2019	2.47	6/5/2026	103.04876	101.5671403	100.1146819	98.69059054	97.29410356	95.92448511	94.5810251	93.26303805	91.96986203
190605A00023	6/5/2019	2.64	6/5/2029	108.95391	104.7011932	100.6470349	96.78103195	93.09338085	89.57484217	86.21670518	83.01075463	79.94923996
190605A00024	6/5/2019	2.64	6/5/2029	108.95391	104.7011932	100.6470349	96.78103195	93.09338085	89.57484217	86.21670518	83.01075463	79.94923996
190605A00025	6/5/2019	2.64	6/5/2029	108.95391	104.7011932	100.6470349	96.78103195	93.09338085	89.57484217	86.21670518	83.01075463	79.94923996
190605A00027	6/5/2019	2.64	6/5/2029	108.95391	104.7011932	100.6470349	96.78103195	93.09338085	89.57484217	86.21670518	83.01075463	79.94923996
190606A00027	6/6/2019	2.51	6/5/2026	102.99967	101.5683465	100.1639045	98.7856488	97.43291095	96.10504495	94.80142611	93.52145024	92.26453278
190606A00028	6/6/2019	2.74	6/6/2029	109.87069	105.3841677	101.1080914	97.03150022	93.14406053	89.43602676	85.8982049	82.5219184	79.29897644
190606A00029	6/6/2019	2.96	6/6/2034	119.04082	109.5253948	100.869182	92.98952136	85.81211728	79.27015237	73.3035	67.85802329	62.88495069
190618A00002	6/18/2019	2.11	6/18/2025	100.81984	100.3516749	99.88786035	99.4283376	98.97304713	98.52193051	98.07493041	97.63199051	97.19305554

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
190620A00033	6/20/2019	2.1	6/20/2029	104.0184	101.6866527	99.43518833	97.26056657	95.15951893	93.12894002	91.16587825	89.2675272	87.43121741
190625A00023	6/25/2019	2.47	6/25/2027	105.12325	102.6284666	100.2059502	97.85319149	95.56778438	93.34742089	91.18988637	89.0930551	87.05488617
190625A00024	6/25/2019	2.26	6/25/2025	100.88793	100.4007762	99.918327	99.44051012	98.967259	98.49850838	98.03419427	97.57425385	97.1186255
190628A00007	6/28/2019	2.28	6/28/2034	107.93069	103.1481987	98.6721276	94.47925304	90.54831776	86.85984802	83.3959908	80.14036685	77.07793815
190702A00068	7/2/2019	2.69	7/1/2039	118.80864	107.6363176	97.79923482	89.12202339	81.4537084	74.66416875	68.64112751	63.28759277	58.51967915
190702A00071	7/2/2019	2.69	7/1/2039	118.80864	107.6363176	97.79923482	89.12202339	81.4537084	74.66416875	68.64112751	63.28759277	58.51967915
190703A00017	7/3/2019	2.33	5/4/2026	102.57476	101.2318786	99.91285566	98.61710861	97.34407423	96.09320703	94.86397853	93.65587669	92.4684052
190708A00028	7/8/2019	2.57	7/2/2029	108.76717	104.456575	100.3498829	96.43626599	92.70553444	89.14809297	85.75490302	82.5174473	79.42769675
190708A00029	7/8/2019	2.57	7/2/2029	108.76717	104.456575	100.3498829	96.43626599	92.70553444	89.14809296	85.75490302	82.5174473	79.42769675
190708A00030	7/8/2019	2.57	7/2/2029	108.76717	104.456575	100.3498829	96.43626599	92.70553444	89.14809297	85.75490302	82.5174473	79.42769675
190708A00032	7/8/2019	2.58	7/2/2029	108.81081	104.4988821	100.390908	96.47606316	92.7441549	89.18558544	85.79131387	82.55282063	79.46207453
190712A00016	7/12/2019	2.39	7/12/2029	104.59424	102.2115092	99.91194141	97.69192935	95.54804964	93.47705144	91.47584654	89.54150006	87.67122179
190718A00012	7/18/2019	2.55	7/18/2029	108.1596	104.1169618	100.2622324	96.58549584	93.07741504	89.72919791	86.53256211	83.47970255	80.56326104
190724A00021	7/24/2019	2.33	7/23/2027	105.11697	102.5432226	100.0457948	97.62196413	95.26912424	92.98477857	90.76653472	88.61209941	86.51927366
190724A00023	7/24/2019	2.13	7/24/2025	101.0037	100.4361084	99.87488936	99.31993717	98.77114715	98.22841699	97.69164662	97.16073817	96.63559589
190724A00024	7/24/2019	2.49	7/24/2029	109.35145	104.7377561	100.346536	96.16588184	92.18458695	88.39210089	84.7784875	81.33438575	78.05097333
190726A00017	7/26/2019	2.44	7/24/2026	103.17764	101.6125148	100.0788481	98.57575972	97.102403	95.65796207	94.24165064	92.85271059	91.49041075
190802A00011	8/2/2019	2.01	8/2/2029	103.93172	101.519812	99.19340164	96.94872815	94.7822268	92.69051469	90.67038014	88.71877282	86.83279458
190807A00021	8/7/2019	2	8/7/2026	102.54589	100.9487892	99.38424475	97.85133203	96.34915734	94.87686047	93.4336131	92.01861729	90.63110413
190809A00020	8/9/2019	2.44	8/9/2034	115.18813	105.6518774	96.99711939	89.13733541	81.9949283	75.50025862	69.59079127	64.21033746	59.30838108
190809A00021	8/9/2019	2.12	8/9/2029	107.71239	103.0942363	98.70097602	94.52046662	90.54128758	86.75269318	83.14456876	79.70739017	76.432186
190813A00051	8/13/2019	2.19	8/13/2029	107.24499	102.8871161	98.73971642	94.7913832	91.03139639	87.4496755	84.03673755	80.7836581	77.68203501
190813A00052	8/13/2019	2.24	8/13/2029	107.46698	103.1020819	98.94796233	94.99319879	91.2270566	87.63944142	84.22085725	80.96236733	77.85555789
190814A00003	8/14/2019	2.01	8/14/2029	107.21963	102.5997589	98.20555142	94.02479355	90.04599671	86.258353	82.65169097	79.21643455	75.94356486
190819A00030	8/19/2019	2.01	8/20/2029	107.23939	102.6034223	98.19454689	94.00043449	90.00949395	86.21082294	82.59416306	79.14985807	75.86881526
190820A00021	8/20/2019	2.13	8/20/2029	107.41909	102.7906553	98.38857067	94.20056267	90.21509214	86.42130482	82.80898677	79.36852294	76.09085869
190823A00009	8/23/2019	1.8	8/23/2029	103.37253	101.0043848	98.7197556	96.51498376	94.38659509	92.33129235	90.34594504	88.42757976	86.57337123
190826A00018	8/26/2019	1.9	8/27/2029	106.74782	102.105009	97.69053356	93.49195479	89.49757884	85.69640927	82.07810145	78.63292023	75.35170053
190826A00030	8/26/2019	1.72	8/26/2026	102.29679	100.6491431	99.03578136	97.45569664	95.90792413	94.39153632	92.9056412	91.44938051	90.0219281
190826A00032	8/26/2019	1.72	8/24/2029	103.22186	100.8253233	98.5137941	96.28353659	94.13100309	92.05282702	90.04581239	88.106924	86.23327817
190826A00057	8/26/2019	1.87	8/26/2025	100.93864	100.2815469	99.63298578	98.99279302	98.36080741	97.73687188	97.12083333	96.51254253	95.91185399
190826A00058	8/26/2019	1.91	8/26/2026	102.48085	100.8339238	99.2212244	97.64174862	96.09453404	94.57865546	93.09322299	91.63738042	90.21030353
190826A00060	8/26/2019	2.02	8/26/2027	104.24232	101.5947944	99.0277638	96.53827871	94.12351721	91.78078006	89.50748448	87.3011582	85.15943384

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
190826A00063	8/26/2019	2.05	8/28/2028	105.7642	102.113806	98.60893141	95.24296109	92.00962258	88.90296437	85.91733748	83.04737808	80.28799129
190826A00065	8/26/2019	2.09	8/28/2029	107.25937	102.6138545	98.19643591	93.99469833	89.99697204	86.19228276	82.57030618	79.12132574	75.8361934
190828A00015	8/28/2019	2.04	8/28/2029	107.02576	102.3856596	97.97346204	93.77676235	89.78389876	85.98390457	82.36646266	78.92186329	75.64096493
190828A00019	8/28/2019	2	3/28/2028	105.01366	101.7807075	98.66394601	95.65850074	92.75973295	89.96322882	87.26478692	84.66040631	82.14627551
190828A00020	8/28/2019	1.95	5/28/2027	103.71199	101.310629	98.97688203	96.70847039	94.50320753	92.35899309	90.27380887	88.24571518	86.27284726
190829A00032	8/29/2019	1.69	8/28/2026	101.18096	100.3019899	99.43891865	98.59130162	97.75871422	96.94074781	96.13700896	95.34711874	94.57071199
190829A00039	8/29/2019	1.85	8/29/2034	106.08186	101.1432748	96.53112603	92.22007262	88.186961	84.41061984	80.8716759	77.55238815	74.43649827
190829A00045	8/29/2019	1.9	8/28/2026	102.47257	100.8204143	99.20266223	97.61830381	96.06636931	94.54592657	93.05607912	91.59596449	90.16475256
190830A00002	8/30/2019	1.93	8/28/2026	102.52279	100.8702024	99.25202329	97.66724548	96.11489902	94.59405153	93.10380635	91.64330083	90.21170466
190905A00019	9/5/2019	2.08	9/5/2029	106.82091	102.4262795	98.24627776	94.26916034	90.4838948	86.88011241	83.44806415	80.17858001	77.0630312
190905A00021	9/5/2019	2.08	9/5/2029	106.82091	102.4262795	98.24627776	94.26916034	90.4838948	86.88011241	83.44806415	80.17858001	77.0630312
190905A00023	9/5/2019	2.08	9/5/2029	106.82091	102.4262795	98.24627776	94.26916034	90.4838948	86.88011241	83.44806415	80.17858001	77.0630312
190905A00024	9/5/2019	2.08	9/5/2029	106.82091	102.4262795	98.24627776	94.26916034	90.4838948	86.88011241	83.44806415	80.17858001	77.0630312
190905A00025	9/5/2019	2.08	9/5/2029	106.82091	102.4262795	98.24627776	94.26916034	90.4838948	86.88011241	83.44806415	80.17858001	77.0630312
190910A00044	9/10/2019	2.02	9/10/2026	102.79851	101.0733693	99.38589636	97.73496668	96.11950078	94.53846109	92.99084991	91.47570743	89.99210991
190911A00016	9/11/2019	1.9	9/11/2029	103.72071	101.271896	98.91116779	96.63460639	94.43849302	92.31930086	90.2736837	88.29846546	86.39063036
190913A00018	9/13/2019	2.11	9/11/2026	101.55362	100.6329199	99.72911992	98.84174458	97.97033902	97.11446564	96.2737032	95.44764606	94.63590343
190923A00012	9/23/2019	2.43	9/25/2034	115.23336	105.5788385	96.82708965	88.88850743	81.68282704	75.1381075	69.18982867	63.78009042	58.85690205
190923A00020	9/23/2019	2.05	9/24/2029	107.54803	102.8120375	98.31201204	94.03491766	89.96851499	86.10130589	82.42248403	78.92188913	75.58996453
190925A00009	9/25/2019	2	9/25/2026	102.75548	101.0355359	99.35368652	97.70883644	96.0999328	94.52596032	92.98593968	91.47892598	90.00400724
190926A00002	9/30/2019	2.01	9/29/2034	106.93719	101.9182498	97.23357011	92.8570135	88.76471727	84.93487552	81.34754686	77.98448128	74.8289642
190926A00015	9/26/2019	2.32	11/26/2030	109.79603	103.8978019	98.35553727	93.14593694	88.24733705	83.63958969	79.30394949	75.22296932	71.38040418
190926A00016	9/26/2019	2.28	5/24/2030	109.06765	103.6709371	98.57533409	93.7625076	89.21533458	84.91781253	80.85498063	77.01284694	73.37832096
190926A00017	9/26/2019	2.23	9/26/2029	108.02313	103.2827223	98.77824643	94.49667982	90.42579036	86.55408659	82.8707683	79.36568084	76.02927269
190930A00071	9/30/2019	2.05	9/29/2025	101.20779	100.456814	99.71694336	98.98793628	98.26955499	97.56156859	96.86375278	96.17588971	95.49776769
190930A00075	9/30/2019	2.19	9/29/2027	104.85203	102.1041441	99.44209333	96.8626347	94.3626719	91.93924826	89.58953931	87.31084572	85.10058672
190930A00077	9/30/2019	2.23	9/28/2029	108.03072	103.2847891	98.77530742	94.48920425	90.41420949	86.53879671	82.85213361	79.34403608	76.00492549
191004A00001	10/4/2019	2.47	10/4/2034	114.84234	105.2256451	96.50886571	88.60259616	81.42676155	74.90959756	68.98674839	63.60046687	58.69890463
191004A00002	10/4/2019	2.08	10/4/2029	107.33593	102.5907596	98.08295058	93.79935772	89.72763537	85.85618648	82.17411276	78.67116851	75.33771771
191004A00003	10/4/2019	1.89	10/5/2026	102.6228	100.8661425	99.14778382	97.46655908	95.82135497	94.21110255	92.63477508	91.09138584	89.57998617
191004A00017	10/4/2019	2.02	10/4/2029	106.62576	102.1710544	97.93720439	93.91203165	90.08409609	86.44264343	82.97756064	79.67933453	76.53901317
191004A00019	10/4/2019	2.02	10/4/2029	106.62576	102.1710544	97.93720439	93.91203165	90.08409609	86.44264343	82.97756064	79.67933453	76.53901317
191004A00022	10/4/2019	2.02	10/4/2029	106.62576	102.1710544	97.93720439	93.91203165	90.08409609	86.44264343	82.97756064	79.67933453	76.53901317

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
191004A00023	10/4/2019	2.02	10/4/2029	106.62576	102.1710544	97.93720439	93.91203165	90.08409609	86.44264343	82.97756064	79.67933453	76.53901317
191004A00032	10/4/2019	2.01	1/3/2028	104.71228	101.7120439	98.81362515	96.01300469	93.30634854	90.68999545	88.16044808	85.71436467	83.34855111
191007A00029	10/7/2019	1.88	10/9/2029	106.78198	102.0248185	97.50676061	93.21452374	89.13564039	85.25839913	81.57179445	78.06548016	74.72972621
191008A00007	10/8/2019	1.67	10/9/2029	103.19536	100.7179699	98.33096326	96.0302685	93.81202463	91.67257207	89.60844078	87.61633907	85.69314321
191008A00014	10/8/2019	1.85	10/8/2026	102.61061	100.8150186	99.06011829	97.34474538	95.6677781	94.02813374	92.42476698	90.85666835	89.3228628
191009A00009	10/9/2019	1.8	10/9/2026	101.32431	100.3648963	99.423424	98.49938486	97.59229133	96.70167451	95.82708314	94.96808277	94.12425499
191011A00027	10/11/2019	1.84	10/11/2029	103.62645	101.1385766	98.74147832	96.43106488	94.20345829	92.05498291	89.98215344	87.98166372	86.05037633
191015A00025	10/15/2019	2.01	10/15/2029	103.85596	101.3659031	98.96660759	96.65398905	94.42417351	92.27348893	90.19845321	88.1957631	86.26228367
191017A00022	10/17/2019	2.25	7/17/2028	106.31849	102.7681212	99.35578268	96.07535583	92.92103144	89.88728917	86.96888142	84.16081829	81.45835332
191017A00026	10/17/2019	2.3	7/17/2029	108.07806	103.5229132	99.18676809	95.05794672	91.12545378	87.37893531	83.80863769	80.40536957	77.1604665
191021A00021	10/21/2019	2.22	12/21/2027	105.29444	102.3194121	99.44420905	96.66493944	93.97788434	91.37949042	88.86636153	86.43525078	84.08305312
191025A00009	10/25/2019	2.26	5/25/2029	107.68945	103.2826237	99.08168826	95.07597942	91.25543915	87.61057814	84.13244076	80.81257235	77.64298865
191025A00010	10/25/2019	2.24	7/25/2028	106.31722	102.7459062	99.31407558	96.01551972	92.84434126	89.79493778	86.86198519	84.04042222	81.32543588
191031A00033	10/31/2019	2.2	5/31/2028	105.93879	102.5203608	99.23060725	96.06401459	93.01533739	90.07958158	87.25199099	84.52803475	81.90339535
191101A00004	11/1/2019	1.91	11/1/2029	106.11668	101.9198893	97.92877345	94.13198564	90.51886617	87.07939868	83.80416781	80.68432001	77.71152706
191101A00005	11/1/2019	1.83	11/2/2026	102.81696	100.9551713	99.13694148	97.36098899	95.62607549	93.93100721	92.27463304	90.65584269	89.07356497
191104A00022	11/4/2019	2.17	8/4/2027	104.54794	101.9544064	99.43842453	96.99720186	94.62806626	92.32845934	90.09593069	87.92813259	85.82281488
191104A00023	11/4/2019	2.24	8/4/2028	106.36022	102.761894	99.30491914	95.98296077	92.79000921	89.72035731	86.76858343	83.92953531	81.19831508
191104A00024	11/4/2019	2.26	8/3/2029	107.95989	103.363263	98.98945282	94.82648158	90.86307802	87.08863397	83.49316166	80.06725401	76.80204764
191104A00025	11/4/2019	2.33	8/2/2030	109.53964	103.9490795	98.67998422	93.71217927	89.02686443	84.6065091	80.43475986	76.4963554	72.77704793
191105A00007	11/5/2019	1.98	11/5/2026	103.06701	101.2209298	99.41678226	97.65337067	95.92954188	94.24418266	92.59621806	90.98460984	89.40835496
191105A00012	11/5/2019	2.07	11/3/2034	107.33206	102.2139258	97.44169698	92.98795157	88.82768413	84.93807248	81.29827098	77.88922486	74.69350311
191106A00022	11/6/2019	2.34	1/2/2030	108.9026	103.8855462	99.13078365	94.62323267	90.34876123	86.29411726	82.44686931	78.79535154	75.32861263
191108A00013	11/8/2019	2.25	11/8/2029	108.66678	103.786166	99.15402653	94.75645763	90.58040556	86.61360697	82.8445372	79.26236212	75.85689346
191108A00014	11/8/2019	2.25	11/8/2029	108.66678	103.786166	99.15402653	94.75645763	90.58040556	86.61360697	82.8445372	79.26236212	75.85689346
191112A00022	11/12/2019	2.36	11/13/2029	108.30374	103.706852	99.34209006	95.19640802	91.25756495	87.51406852	83.95512533	80.5705947	77.35094594
191112A00023	11/12/2019	2.36	11/13/2029	108.30374	103.706852	99.34209006	95.19640802	91.25756495	87.51406852	83.95512533	80.5705947	77.35094594
191113A00013	11/13/2019	2.17	11/13/2026	103.358	101.4640005	99.6148909	97.80933345	96.04603493	94.32374938	92.64127604	90.99745733	89.39117701
191115A00028	11/15/2019	2.34	9/28/2029	108.55388	103.7956204	99.27424803	94.97667757	90.89062012	87.00453156	83.30756277	79.78951368	76.44079052
191115A00029	11/15/2019	2.07	11/15/2029	104.00517	101.5105352	99.10748362	96.79185866	94.55972175	92.40734103	90.33117906	88.32788131	86.39426546
191115A00030	11/15/2019	2.35	11/9/2029	108.7588	103.8859623	99.26094349	94.86989143	90.69979548	86.73843225	82.97431415	79.39664148	75.99525796
191120A00005	11/20/2019	2.63	11/20/2034	116.51414	106.704885	97.82226436	89.77334439	82.47496819	75.85268128	69.83978108	64.3764745	59.40913074
191120A00006	11/20/2019	2.67	11/20/2035	117.96709	107.2022554	97.54240636	88.86738739	81.07070301	74.0579045	67.74517216	62.05807061	56.93045539

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
191120A00024	11/20/2019	2.23	11/16/2029	108.19919	103.3212755	98.6925462	94.29901692	90.12755579	86.16582876	82.40224709	78.8259187	75.42660289
191121A00009	11/21/2019	2.55	11/21/2036	118.46788	106.7497632	96.33351256	87.06633854	78.81414529	71.45915933	64.89786862	59.03923066	53.80311355
191121A00010	11/21/2019	2.59	11/20/2037	119.82331	107.1724165	96.0269718	86.1979262	77.52093214	69.85300324	63.06964036	57.06235672	51.73654494
191121A00034	11/21/2019	2.28	11/2/2029	108.39223	103.5468254	98.94706246	94.57925651	90.43055211	86.48886902	82.74285159	79.18182182	75.79573564
191122A00003	11/22/2019	2.32	11/22/2039	113.7451	103.6859579	94.78161305	86.88344463	79.8633194	73.61062661	68.0297566	63.03795719	58.56350936
191122A00018	11/26/2019	3.11	11/22/2039	128.17321	113.3640095	100.5255673	89.38019825	79.69088562	71.25513469	63.89977984	57.47659535	51.85858225
191122A00020	11/26/2019	3.2	11/23/2037	126.33553	113.3484757	101.8905766	91.77091899	82.82344202	74.90358511	67.88540327	61.65908208	56.12879525
191122A00021	11/26/2019	3.4	11/22/2038	130.43572	116.3262466	103.9798728	93.16277095	83.67341697	75.33797604	68.00636537	61.54889426	55.85339431
191125A00036	11/25/2019	2.29	11/23/2029	108.51837	103.6141164	98.96120642	94.54548041	90.35365096	86.37324071	82.59252896	79.00050205	75.58680721
191126A00023	11/26/2019	1.81	5/27/2025	100.59123	100.1841469	99.7803569	99.37982046	98.98249833	98.58835188	98.19734313	97.80943467	97.4245897
191126A00026	11/26/2019	1.91	11/25/2026	103.02782	101.1274608	99.27142662	97.45842168	95.68719558	93.95654237	92.2652988	90.6123424	88.99658983
191203A00009	12/3/2019	2.21	12/3/2029	107.66073	103.0386349	98.65244007	94.48874548	90.53498707	86.77937766	83.2108547	79.81903191	76.59415439
191203A00010	12/3/2019	2.21	12/3/2029	107.66073	103.0386349	98.65244007	94.48874548	90.53498707	86.77937766	83.2108547	79.81903191	76.59415439
191203A00011	12/3/2019	2.21	12/3/2029	107.66073	103.0386349	98.65244007	94.48874548	90.53498707	86.77937766	83.2108547	79.81903191	76.59415439
191206A00005	12/6/2019	2.18	12/7/2026	103.48643	101.5287	99.61872477	97.75502658	95.93618802	94.16084536	92.42768601	90.73544627	89.0829091
191206A00008	12/6/2019	2.44	12/6/2030	110.53112	104.5858477	99.00054965	93.75157387	88.8169362	84.17619711	79.81034562	75.7016926	71.83377253
191206A00009	12/6/2019	2.87	12/4/2037	122.27954	109.5138502	98.26247452	88.33540685	79.56747187	71.81496506	64.95276217	58.87183042	53.47708395
191206A00013	12/6/2019	3.05	12/6/2044	137.31168	117.6015403	101.2142319	87.55523553	76.14029832	66.57441854	58.53492774	51.75785636	46.02693183
191209A00005	12/9/2019	2.22	12/10/2029	107.19865	102.8973338	98.81033597	94.92561881	91.23189263	87.71856175	84.37567802	81.19389769	78.16444139
191220A00001	12/20/2019	2.62	12/19/2031	112.84385	105.8521547	99.3471989	93.29250026	87.65449237	82.40227557	77.50739233	72.94362259	68.68679726
191220A00002	12/20/2019	3.02	12/20/2038	125.49959	111.6482659	99.54722732	88.96239822	79.69227351	71.56323315	64.42555154	58.14999546	52.62492134
191223A00055	12/23/2019	2.46	12/7/2029	109.40773	104.4451419	99.7384236	95.2730661	91.03545827	87.01282463	83.19316992	79.56522752	76.11841156
191223A00056	12/23/2019	2.46	12/14/2029	109.43375	104.45249	99.72897932	95.2485498	90.99744357	86.96275069	83.13235257	79.49486948	76.03961182
191224A00002	12/24/2019	2.17	12/24/2029	104.39468	101.8083878	99.31907942	96.92227535	94.61373875	92.3894581	90.24563372	88.17866508	86.18513906
191226A00019	12/26/2019	2.4	12/22/2028	107.5962	103.6031426	99.7811616	96.1220304	92.61796355	89.26158906	86.04592414	82.96435253	80.0106033
191226A00020	12/26/2019	2.44	12/21/2029	109.36009	104.3626157	99.62468083	95.13146561	90.86906844	86.82444783	82.98536471	79.34032905	75.87855014
200103A00002	1/3/2020	2.07	1/3/2030	106.95109	102.6025057	98.47307557	94.5503528	90.82267305	87.27909745	83.90936338	80.70383881	77.65348008
200108A00021	1/13/2020	1.97	1/13/2025	100.05698	100.0209061	99.984871	99.94887919	99.91293063	99.87702523	99.84116291	99.80534359	99.76956718
200109A00006	1/9/2020	1.95	1/9/2030	104.08348	101.4604797	98.93727726	96.50920262	94.17184325	91.92102395	89.75279242	87.66340588	85.64931851
200109A00008	1/9/2020	1.95	1/9/2030	104.08348	101.4604797	98.93727726	96.50920262	94.17184325	91.92102395	89.75279242	87.66340588	85.64931851
200110A00022	1/13/2020	2	1/6/2025	100.02833	100.0116766	99.99503835	99.97841685	99.96181212	99.94522411	99.9286528	99.91209816	99.89556017
200110A00037	1/10/2020	2.32	1/10/2030	108.29866	103.5695065	99.08558463	94.83274066	90.79771819	86.96809463	83.33222411	79.87918457	76.59872889
200110A00038	1/10/2020	2.32	1/10/2030	108.29866	103.5695065	99.08558463	94.83274066	90.79771819	86.96809463	83.33222411	79.87918457	76.59872889

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200110A00039	1/10/2020	2.32	1/10/2030	108.29866	103.5695065	99.08558463	94.83274066	90.79771819	86.96809463	83.33222411	79.87918457	76.59872889
200110A00043	1/10/2020	2.32	1/10/2030	108.29866	103.5695065	99.08558463	94.83274066	90.79771819	86.96809463	83.33222411	79.87918457	76.59872889
200110A00053	1/10/2020	1.99	1/10/2025	100.17804	100.0645349	99.95130417	99.83834187	99.725647	99.61321859	99.50105565	99.38915722	99.27752232
200114A00006	1/15/2020	1.99	1/15/2025	100.06617	100.0245439	99.98296863	99.94144566	99.89997487	99.85855618	99.81718946	99.77587462	99.73461155
200115A00013	1/15/2020	2.18	1/15/2030	106.45555	102.5225439	98.780224	95.21797472	91.82583944	88.594474	85.5151053	82.57949306	79.77989425
200116A00012	1/16/2020	2.16	1/19/2027	103.65175	101.580273	99.56124714	97.59297659	95.67383229	93.80225057	91.97672996	90.19582817	88.45815927
200121A00009	1/24/2020	1.94	1/24/2025	100.10084	100.0342567	99.96777127	99.90138599	99.83510065	99.76891502	99.70282888	99.63684201	99.57095417
200122A00035	1/22/2020	1.94	1/22/2025	100.09267	100.0316267	99.97067518	99.90981211	99.8490373	99.78835056	99.72775169	99.66724051	99.60681682
200123A00013	1/27/2020	1.89	1/27/2025	100.10935	100.0344484	99.95966755	99.88500555	99.81046213	99.73603702	99.66172993	99.58754059	99.51346873
200123A00048	1/23/2020	1.7	1/23/2025	100.08627	100.0224209	99.95866231	99.89499854	99.83142939	99.76795464	99.70457408	99.64128748	99.57809465
200124A00008	1/24/2020	1.92	1/22/2027	103.2894	101.232571	99.22696442	97.27096335	95.36301782	93.5016379	91.68539086	89.91289851	88.18283464
200127A00016	1/27/2020	1.81	1/27/2025	100.10334	100.0284412	99.95366553	99.87900866	99.80447037	99.73005037	99.65574839	99.58156416	99.50749739
200127A00023	1/27/2020	1.8	1/27/2025	100.10258	100.0276904	99.95291528	99.87825905	99.8037214	99.72930204	99.6550007	99.5808171	99.50675098
200127A00030	1/27/2020	1.8	1/27/2025	100.10258	100.0276904	99.95291528	99.87825905	99.8037214	99.72930204	99.6550007	99.5808171	99.50675098
200128A00028	1/28/2020	1.81	1/28/2025	100.10707	100.0294022	99.95186119	99.87444555	99.797155	99.71998926	99.64294801	99.56603097	99.48923784
200130A00006	1/30/2020	1.77	1/30/2025	100.1112	100.0279936	99.94492569	99.86199671	99.77920631	99.69655415	99.61403991	99.53166324	99.44942381
200130A00016	1/30/2020	1.58	1/30/2025	100.1018	100.0185355	99.93541064	99.85242556	99.76957987	99.68687322	99.60430527	99.52187566	99.43958407
200130A00027	1/31/2020	1.79	1/31/2025	100.11655	100.030566	99.94473228	99.8590445	99.77350227	99.68810524	99.60285306	99.51774537	99.43278181
200130A00046	1/30/2020	1.81	1/29/2027	101.51793	100.4303507	99.36453062	98.31984334	97.29568604	96.29147861	95.30666255	94.34069991	93.39307238
200131A00015	2/5/2020	1.73	2/5/2025	100.12913	100.0293188	99.92970994	99.83030654	99.73110798	99.6321136	99.53332277	99.43473482	99.33634913
200131A00016	1/31/2020	1.73	1/31/2025	100.11138	100.0254057	99.93957641	99.85389305	99.76835524	99.68296262	99.59771483	99.51261153	99.42765235
200131A00032	1/31/2020	2.1	1/31/2030	107.78031	102.7167156	97.92160977	93.37935687	89.07531276	84.99575768	81.127833	77.45948257	73.97939838
200131A00038	1/31/2020	1.73	1/30/2025	100.10787	100.0246625	99.9415975	99.85867138	99.77588382	99.69323451	99.6107231	99.52834927	99.44611267
200203A00046	2/3/2020	1.98	2/3/2040	108.59414	101.2414227	94.59439245	88.57419331	83.11165025	78.14599669	73.62377888	69.49791101	65.72685947
200204A00001	2/4/2020	1.79	2/4/2025	100.13141	100.0343627	99.93750457	99.84083975	99.74436761	99.64808758	99.55199906	99.45610146	99.36039422
200204A00012	2/4/2020	1.98	2/4/2027	103.30562	101.2163007	99.17954363	97.19367205	95.25707475	93.36820398	91.52557236	89.72775008	87.97336218
200204A00020	2/4/2020	1.6	2/4/2025	100.12055	100.0234295	99.92650411	99.82977303	99.73323559	99.63689122	99.54073929	99.44477923	99.34901043
200206A00008	2/6/2020	1.64	2/6/2025	100.22999	100.0502782	99.87121944	99.69281163	99.51505112	99.33793435	99.16145777	98.98561786	98.8104111
200206A00027	2/6/2020	2.15	2/6/2030	107.5566	102.7959234	98.28496868	94.0091611	89.95486098	86.10929667	82.46050433	78.99727219	75.70908908
200206A00031	2/6/2020	2.15	2/6/2030	107.5566	102.7959234	98.28496868	94.0091611	89.95486098	86.10929667	82.46050433	78.99727219	75.70908908
200206A00032	2/6/2020	2.15	2/6/2030	107.5566	102.7959234	98.28496868	94.0091611	89.95486098	86.10929667	82.46050433	78.99727219	75.70908908
200206A00033	2/6/2020	2.15	2/6/2030	107.5566	102.7959234	98.28496868	94.0091611	89.95486098	86.10929667	82.46050433	78.99727219	75.70908908
200206A00034	2/6/2020	1.84	2/6/2025	100.25177	100.071933	99.89274826	99.71421372	99.53632582	99.35908101	99.18247577	99.0065066	98.83117002

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200207A00009	2/7/2020	1.58	2/7/2025	100.12872	100.02329	99.91809243	99.81312636	99.70839097	99.60388546	99.49960904	99.39556092	99.29174033
200207A00017	2/7/2020	1.96	2/8/2027	103.28369	101.1829023	99.1351701	97.13879094	95.19213135	93.29362254	91.44175732	89.63508715	87.87221932
200207A00018	2/7/2020	2.14	2/7/2030	108.01084	102.921506	98.10284901	93.53905565	89.21531956	85.11777222	81.23341843	77.55007667	74.0563238
200210A00005	2/10/2020	1.77	2/10/2027	103.05935	100.9518303	98.89770463	96.89525871	94.94284318	93.03887427	91.18183062	89.3702503	87.60272797
200210A00007	2/10/2020	1.78	2/10/2025	100.26868	100.0794736	99.89099643	99.70324592	99.51621779	99.32990779	99.1443117	98.95942534	98.77524456
200210A00009	2/10/2020	1.57	2/10/2025	100.13769	100.0239535	99.91048348	99.79728355	99.68435266	99.57168981	99.45929402	99.34716428	99.23529962
200210A00021	2/10/2020	1.76	2/10/2025	100.1503	100.0366385	99.92324764	99.81012566	99.69727156	99.58468435	99.47236305	99.36030669	99.2485143
200212A00003	2/12/2020	1.63	2/12/2025	100.15154	100.0322551	99.91326294	99.79456733	99.67616709	99.5580611	99.44024821	99.32272729	99.20549721
200212A00013	2/12/2020	1.98	2/12/2027	103.36142	101.2402101	99.17378818	97.16033934	95.19812447	93.28547634	91.42079587	89.60254876	87.82926222
200214A00005	2/14/2020	1.59	2/14/2025	100.15357	100.0287379	99.9042349	99.78005553	99.65619847	99.53266242	99.40944608	99.28654818	99.16396744
200214A00007	2/14/2020	1.59	2/14/2025	100.15357	100.0287379	99.9042349	99.78005553	99.65619847	99.53266242	99.40944608	99.28654818	99.16396744
200214A00014	2/18/2020	1.8	2/18/2025	100.1848	100.0489802	99.91353832	99.77847454	99.64378727	99.50947491	99.37553588	99.24196859	99.10877148
200214A00020	2/18/2020	1.78	1/15/2025	100.05727	100.0156517	99.97408393	99.93256845	99.89110516	99.84969393	99.80833468	99.7670273	99.72577168
200220A00013	2/20/2020	2.09	12/14/2029	107.59702	102.6609052	97.98085812	93.54228897	89.33151278	85.33568869	81.54276359	77.94141981	74.5210266
200220A00014	2/20/2020	2.09	12/21/2029	107.61604	102.6615828	97.96506707	93.51173813	89.28776442	85.28017066	81.47678056	77.86616354	74.43758529
200220A00015	2/20/2020	1.57	2/20/2025	100.17112	100.0296672	99.88862222	99.74798568	99.60775583	99.46793085	99.32850897	99.18948842	99.05086743
200220A00026	2/20/2020	2.22	2/21/2040	110.13499	102.2191538	95.09908617	88.68255723	82.88901792	77.64802388	72.8978811	68.58448285	64.6603097
200221A00003	2/25/2020	1.69	2/25/2025	100.1939	100.0387036	99.88399174	99.72976154	99.57601071	99.42273701	99.26993825	99.1176122	98.96575668
200221A00004	2/21/2020	1.69	2/21/2025	100.18015	100.0360345	99.89234272	99.74907248	99.60622192	99.46378918	99.32177241	99.18016978	99.03897946
200221A00012	2/21/2020	2.14	2/21/2040	109.48988	101.6242251	94.54932192	88.17351721	82.41676658	77.20906768	72.48911404	68.20313923	64.303923
200221A00013	2/21/2020	1.69	2/21/2025	100.18015	100.0360345	99.89234272	99.74907248	99.60622192	99.46378918	99.32177241	99.18016978	99.03897946
200221A00016	2/21/2020	1.69	2/21/2025	100.18015	100.0360345	99.89234272	99.74907248	99.60622192	99.46378918	99.32177241	99.18016978	99.03897946
200221A00023	2/21/2020	2.05	12/7/2029	107.38018	102.4672468	97.80833625	93.38902852	89.19579227	85.21592758	81.43751081	77.84934321	74.4409033
200221A00024	2/21/2020	2.05	12/28/2029	107.43496	102.4671231	97.75891091	93.2954228	89.06268772	85.04760284	81.23787525	77.62196769	74.18904833
200221A00031	2/21/2020	1.69	2/21/2025	100.18015	100.0360345	99.89234272	99.74907248	99.60622192	99.46378918	99.32177241	99.18016978	99.03897946
200224A00001	2/24/2020	1.59	2/24/2025	100.17519	100.0227841	99.87084473	99.71937168	99.56836281	99.41781599	99.26772909	99.1181	98.96892664
200224A00007	2/24/2020	1.59	2/24/2025	100.17519	100.0227841	99.87084473	99.71937168	99.56836281	99.41781599	99.26772909	99.1181	98.96892664
200224A00019	2/24/2020	1.59	2/18/2025	100.15623	100.0204398	99.88502754	99.74999338	99.61533567	99.48105281	99.34714321	99.21360529	99.08043747
200224A00020	2/24/2020	1.59	2/24/2025	100.17519	100.0227841	99.87084473	99.71937168	99.56836281	99.41781599	99.26772909	99.1181	98.96892664
200224A00024	2/24/2020	1.59	2/24/2025	100.17519	100.0227841	99.87084473	99.71937168	99.56836281	99.41781599	99.26772909	99.1181	98.96892664
200224A00025	2/24/2020	1.59	1/23/2025	100.07427	100.0104806	99.94678114	99.88317589	99.81966463	99.75624716	99.69292326	99.62969274	99.56655537
200224A00046	2/24/2020	1.59	2/24/2025	100.17519	100.0227841	99.87084473	99.71937168	99.56836281	99.41781599	99.26772909	99.1181	98.96892664
200225A00012	2/25/2020	1.57	2/25/2025	100.17524	100.0200683	99.86537819	99.71116966	99.55744044	99.40418831	99.25141104	99.09910644	98.94727232

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200225A00017	2/25/2020	1.94	2/25/2030	107.04748	101.9314853	97.09031914	92.5077748	88.16869143	84.05887741	80.16504301	76.47473817	72.97629485
200225A00018	2/25/2020	1.94	2/25/2030	107.04748	101.9314853	97.09031914	92.5077748	88.16869143	84.05887741	80.16504301	76.47473817	72.97629485
200225A00023	2/25/2020	1.62	2/25/2025	100.18302	100.027833	99.87313384	99.71891628	99.56517805	99.41191693	99.25913071	99.10681717	98.95497414
200225A00028	2/25/2020	1.89	12/21/2029	106.61943	101.6895641	97.01671634	92.58617958	88.38416212	84.39772657	80.61473248	77.02378325	73.61417681
200225A00029	2/25/2020	1.89	12/28/2029	106.63466	101.6866348	96.99749726	92.55237564	88.33733127	84.33929203	80.54599406	76.94592765	73.52828708
200225A00049	2/25/2020	1.79	2/24/2040	107.15595	99.90773486	93.35332999	87.41545921	82.02629938	77.1262433	72.6628328	68.58983832	64.86646375
200225A00050	2/25/2020	1.57	2/25/2025	100.17524	100.0200683	99.86537819	99.71116966	99.55744044	99.40418831	99.25141104	99.09910644	98.94727232
200226A00004	2/26/2020	1.58	2/26/2025	100.17993	100.0219834	99.86453727	99.70758811	99.55113356	99.39517129	99.23969899	99.08471437	98.93021514
200226A00006	2/26/2020	1.57	2/26/2025	100.17835	100.0204028	99.86295852	99.70601122	99.54955853	99.39359812	99.23812768	99.08314491	98.92864753
200226A00008	2/26/2020	1.38	2/26/2025	100.16111	100.0030518	99.84549958	99.68844603	99.53188883	99.37582561	99.22025405	99.06517182	98.91057661
200226A00009	2/26/2020	1.75	2/26/2030	106.48798	101.3695174	96.52676944	91.94344265	87.60429796	83.49507232	79.60241079	75.91380376	72.4175288
200226A00016	2/26/2020	1.57	2/26/2025	100.17835	100.0204028	99.86295852	99.70601122	99.54955853	99.39359812	99.23812768	99.08314491	98.92864753
200226A00025	2/26/2020	1.38	2/26/2025	100.16111	100.0030518	99.84549958	99.68844603	99.53188883	99.37582561	99.22025405	99.06517182	98.91057661
200227A00004	2/27/2020	1.65	2/27/2030	105.97328	100.8651489	96.03250963	91.45906819	87.12958593	83.02980085	79.14635967	75.46675488	71.97926664
200227A00006	2/27/2020	1.47	2/27/2025	100.16535	100.004654	99.84447499	99.68480846	99.52565192	99.36700296	99.20885916	99.05121813	98.89407749
200227A00009	2/27/2020	1.47	2/27/2025	100.16535	100.004654	99.84447499	99.68480846	99.52565192	99.36700296	99.20885916	99.05121813	98.89407749
200227A00016	2/27/2020	1.47	2/27/2025	100.16535	100.004654	99.84447499	99.68480846	99.52565192	99.36700296	99.20885916	99.05121813	98.89407749
200227A00027	2/27/2020	1.47	2/27/2025	100.16535	100.004654	99.84447499	99.68480846	99.52565192	99.36700296	99.20885916	99.05121813	98.89407749
200227A00030	2/27/2020	1.59	2/27/2026	101.33502	100.1739585	99.0393442	97.93028595	96.84592853	95.78545447	94.74808202	93.73306319	92.73968198
200227A00046	2/27/2020	1.52	3/1/2027	101.24592	100.1201376	99.01735817	97.93691431	96.87816052	95.84047583	94.82326259	93.82594534	92.84796984
200228A00012	3/3/2020	1.4	3/3/2025	100.16474	99.99300485	99.82186094	99.65130618	99.48133754	99.31195197	99.14314646	98.97491803	98.8072637
200228A00014	2/28/2020	1.4	2/28/2025	100.15671	99.99325929	99.83034096	99.66795073	99.50608603	99.34474437	99.18392321	99.02362007	98.86383248
200228A00019	2/28/2020	1.21	2/20/2025	100.12014	99.97874192	99.83775166	99.69716976	99.5569944	99.41722379	99.27785616	99.13888973	99.00032274
200228A00025	2/28/2020	1.57	3/2/2027	102.5406	100.3842912	98.28363348	96.23679459	94.24202001	92.29762685	90.40200026	88.55359012	86.75090781
200228A00026	2/28/2020	2.14	2/28/2035	111.96698	102.1326473	93.25636035	85.23938581	77.99364493	71.44051727	65.50978109	60.13867719	55.2710815
200228A00059	2/28/2020	1.79	2/28/2030	106.28197	101.1770442	96.34704445	91.77572665	87.44789697	83.34933471	79.46672452	75.78759384	72.30025489
200228A00067	2/28/2020	1.4	2/28/2025	100.15671	99.99325929	99.83034096	99.66795073	99.50608603	99.34474436	99.18392321	99.02362007	98.86383248
200228A00071	2/28/2020	1.74	12/14/2029	105.85957	100.9661627	96.32722995	91.92825845	87.75563229	83.79657598	80.03909833	76.47194039	73.08452707
200228A00091	2/28/2020	1.72	12/7/2029	105.74826	100.8752825	96.2548513	91.87260803	87.71508549	83.7696446	80.02441933	76.4682656	73.09071372
200302A00002	3/2/2020	1.12	3/3/2025	100.13049	99.95865057	99.78740877	99.61675805	99.44669532	99.27721753	99.10832164	98.94000462	98.77226348
200302A00005	3/2/2020	1.31	3/3/2025	100.14925	99.97753278	99.80640817	99.63587267	99.46592323	99.29655681	99.1277704	98.95956102	98.79192568
200302A00011	3/2/2020	1.31	2/27/2025	100.13958	99.97892098	99.81877302	99.6591374	99.5000117	99.34139349	99.18328036	99.02566992	98.86855979
200302A00016	3/2/2020	1.36	3/3/2025	100.15786	99.98612838	99.81499304	99.64444685	99.47448673	99.30510968	99.13631266	98.96809269	98.8004468

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200302A00033	3/2/2020	1.31	3/3/2025	100.14925	99.97753278	99.80640817	99.63587267	99.46592323	99.29655681	99.1277704	98.95956102	98.79192568
200302A00036	3/2/2020	1.45	3/2/2026	101.17809	100.0099472	98.86860645	97.75315689	96.66272599	95.59648	94.55362188	93.53338922	92.53505244
200302A00045	3/4/2020	1.31	3/4/2025	100.15168	99.97719832	99.80333247	99.63007638	99.45742682	99.28538059	99.1139345	98.9430854	98.77283014
200302A00053	3/2/2020	1.31	3/3/2025	100.14925	99.97753278	99.80640817	99.63587267	99.46592323	99.29655681	99.1277704	98.95956102	98.79192568
200302A00054	3/2/2020	1.31	3/3/2025	100.14925	99.97753278	99.80640817	99.63587267	99.46592323	99.29655681	99.1277704	98.95956102	98.79192568
200302A00060	3/2/2021	1.44	3/3/2025	100.17163	99.99988133	99.82872884	99.65816552	99.48818834	99.31879426	99.14998027	98.98174337	98.8140806
200303A00001	3/3/2020	1.15	3/3/2025	100.13565	99.96380844	99.7925602	99.62190305	99.45183392	99.28234974	99.11344748	98.9451241	98.77737663
200303A00010	3/3/2020	1.34	3/3/2025	100.15441	99.98269014	99.81155909	99.64101718	99.47106133	99.30168853	99.13289575	98.96468002	98.79703835
200303A00012	3/3/2020	1.71	3/1/2030	105.86992	100.7729993	95.95085966	91.38725268	87.0669819	82.97582479	79.10046492	75.42842922	71.94803002
200303A00018	3/3/2020	1.27	3/3/2025	100.14236	99.9706563	99.79954027	99.62901333	99.45907242	99.28971452	99.1209366	98.95273568	98.78510878
200303A00028	3/3/2020	1.54	3/4/2030	104.33544	99.96567754	95.82206138	91.89141772	88.16142328	84.62054089	81.25796472	78.06356959	75.02786411
200303A00034	3/3/2020	1.21	3/3/2025	100.13204	99.96034158	99.78923843	99.61872432	99.44879622	99.27945108	99.11068589	98.94249767	98.77488344
200304A00002	3/4/2020	0.98	3/4/2025	100.10811	99.93354327	99.75958905	99.58624653	99.41351244	99.24138356	99.06985666	98.89892856	98.72859608
200304A00005	3/4/2020	0.98	3/4/2025	100.10811	99.93354327	99.75958905	99.58624653	99.41351244	99.24138356	99.06985666	98.89892856	98.72859608
200304A00010	3/4/2020	1.2	3/4/2027	101.90984	99.7518586	97.64978088	95.60175871	93.60602366	91.66087982	89.76470015	87.91592302	86.11304904
200304A00012	3/4/2020	0.98	3/4/2025	100.10811	99.93354327	99.75958905	99.58624653	99.41351244	99.24138356	99.06985666	98.89892856	98.72859608
200304A00018	3/4/2020	0.98	3/4/2025	100.10811	99.93354327	99.75958905	99.58624653	99.41351244	99.24138356	99.06985666	98.89892856	98.72859608
200304A00020	3/4/2020	0.98	3/4/2025	100.10811	99.93354327	99.75958905	99.58624653	99.41351244	99.24138356	99.06985666	98.89892856	98.72859608
200304A00030	3/4/2020	1.6	12/22/2028	104.39928	100.4698477	96.70951135	93.11011972	89.6639619	86.36373695	83.20252981	80.17378887	77.27130491
200304A00032	3/4/2020	1.6	12/15/2028	104.38378	100.4725911	96.72895435	93.1448337	89.71262155	86.42511283	83.27548152	80.25725863	77.36431169
200304A00033	3/4/2020	1.17	3/4/2025	100.12719	99.95274279	99.77890767	99.60568224	99.43306325	99.26104751	99.08963183	98.91881305	98.74858803
200304A00035	3/4/2020	1.17	3/4/2025	100.12719	99.95274279	99.77890767	99.60568224	99.43306325	99.26104751	99.08963183	98.91881305	98.74858803
200304A00052	3/6/2020	2.11	3/8/2027	103.7473	101.5617121	99.43277951	97.35862982	95.33746625	93.36756599	91.44727644	89.57501172	87.74924936
200304A00053	3/6/2020	2.33	3/6/2025	100.34059	100.1603561	99.98077333	99.8018427	99.62356066	99.44592363	99.26892808	99.0925705	98.9168474
200304A00054	3/6/2020	2.35	3/8/2027	104.27604	102.0845134	99.94977002	97.86992769	95.84318625	93.86781958	91.94217193	90.06465436	88.23374146
200305A00001	3/5/2020	1.14	3/5/2025	100.1239	99.94669679	99.77012799	99.59418966	99.41887838	99.24419077	99.07012347	98.89667315	98.7238365
200305A00002	3/5/2020	1.14	3/5/2025	100.1239	99.94669679	99.77012799	99.59418966	99.41887838	99.24419077	99.07012347	98.89667315	98.7238365
200305A00007	3/5/2020	1.14	3/5/2025	100.1239	99.94669679	99.77012799	99.59418966	99.41887838	99.24419077	99.07012347	98.89667315	98.7238365
200305A00012	3/5/2020	1.14	3/5/2025	100.1239	99.94669679	99.77012799	99.59418966	99.41887838	99.24419077	99.07012347	98.89667315	98.7238365
200305A00020	3/5/2020	0.95	3/5/2025	100.10451	99.92718184	99.75049203	99.57443474	99.39900654	99.22420401	99.05002376	98.87646243	98.70351667
200305A00029	3/5/2020	1.14	3/5/2025	100.1239	99.94669679	99.77012799	99.59418966	99.41887838	99.24419077	99.07012347	98.89667315	98.7238365
200305A00030	3/5/2020	1.58	3/5/2030	105.20208	100.1121645	95.29740481	90.74149865	86.42919594	82.34622608	78.47922966	74.81569526	71.34390092
200305A00032	3/5/2020	1.58	3/5/2030	105.20208	100.1121645	95.29740481	90.74149865	86.42919594	82.34622608	78.47922966	74.81569526	71.34390092

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200305A00035	3/5/2020	1.25	3/5/2026	100.94762	99.77287539	98.62528693	97.5039217	96.40788961	95.33634042	94.28846154	93.263476	92.26064047
200305A00036	3/5/2020	1.36	3/5/2027	102.08822	99.92909635	97.82588599	95.7767405	93.77989108	91.83364147	89.9363643	88.08649767	86.28254192
200305A00037	3/5/2020	1.43	3/6/2028	103.10866	99.96382919	96.9305935	94.00433719	91.18066799	88.45540277	85.82455602	83.28432915	80.83110037
200305A00038	3/5/2020	1.51	3/5/2029	104.21911	100.0979255	96.16152403	92.40062429	88.80646568	85.3707752	82.0857373	78.94396574	75.93847748
200305A00039	3/5/2020	1.58	3/5/2030	105.20208	100.1121645	95.29740481	90.74149865	86.42919594	82.34622608	78.47922966	74.81569526	71.34390092
200306A00001	3/6/2020	1.11	3/6/2026	100.78271	99.60632835	98.45720805	97.33441311	96.23704778	95.16425652	94.11522178	93.0891619	92.08532916
200306A00013	3/6/2020	1.01	3/6/2025	100.1024	99.92246223	99.7431832	99.56455549	99.38657553	99.20923974	99.0325446	98.85648658	98.68106221
200306A00014	3/6/2020	1.38	3/6/2030	104.16616	99.10028755	94.30880867	89.77544331	85.48496645	81.42313195	77.57660413	73.93289457	70.48030368
200306A00022	3/6/2020	1.2	3/8/2027	101.74252	99.57942371	97.47252383	95.41995873	93.4199446	91.47077112	89.57079771	87.71845005	85.91221683
200306A00028	3/6/2020	1.01	3/6/2025	100.1024	99.92246223	99.7431832	99.56455549	99.38657553	99.20923974	99.0325446	98.85648658	98.68106221
200306A00031	3/6/2020	1.01	3/6/2025	100.1024	99.92246223	99.7431832	99.56455549	99.38657553	99.20923974	99.0325446	98.85648658	98.68106221
200306A00040	3/6/2020	1.01	3/6/2025	100.1024	99.92246223	99.7431832	99.56455549	99.38657553	99.20923974	99.0325446	98.85648658	98.68106221
200306A00046	3/6/2020	1.01	3/3/2025	100.09761	99.92595919	99.75489894	99.58442763	99.4145422	99.24523961	99.07651687	98.90837097	98.74079896
200306A00048	3/6/2020	1.04	3/6/2035	102.00927	96.9910654	92.32200499	87.97363749	83.92008499	80.13778871	76.6052839	73.30299815	70.21307047
200306A00050	3/6/2020	0.87	3/6/2030	101.2432	98.61147409	96.08258577	93.65160803	91.31389055	89.06503852	86.90089685	84.81753541	82.81123535
200306A00055	3/6/2020	0.82	3/6/2025	100.08269	99.90263003	99.72322811	99.54447963	99.36638096	99.18892852	99.01211872	98.83594804	98.66041296
200306A00057	3/6/2020	0.92	3/8/2027	101.24944	99.15577524	97.11732658	95.13224649	93.19876762	91.3151954	89.47990444	87.69133501	85.94798986
200306A00058	3/6/2020	1.06	3/6/2030	101.54444	98.90873997	96.37590623	93.94102291	91.59944274	89.34677351	87.17886231	85.09178089	83.08181188
200306A00064	3/6/2020	1.2	3/8/2027	101.74252	99.57942371	97.47252383	95.41995873	93.4199446	91.47077112	89.57079771	87.71845005	85.91221683
200306A00065	3/6/2020	1.38	3/6/2030	104.16616	99.10028755	94.30880867	89.77544331	85.48496645	81.42313195	77.57660413	73.93289457	70.48030368
200306A00066	3/6/2020	1.2	3/8/2027	101.74252	99.57942371	97.47252383	95.41995873	93.4199446	91.47077112	89.57079771	87.71845005	85.91221683
200306A00077	3/6/2020	1.06	3/6/2025	100.11142	99.93147336	99.75218282	99.57354365	99.39555224	99.21820504	99.04149852	98.86542915	98.68999347
200306A00087	3/8/2021	1.26	3/7/2025	100.1498	99.96704455	99.7849673	99.60356264	99.42282679	99.24275601	99.06334658	98.88459483	98.70649707
200309A00005	3/9/2020	0.77	3/7/2025	100.07481	99.8919988	99.70986747	99.5284107	99.34762466	99.16750558	98.98804971	98.80925334	98.63111277
200309A00007	3/9/2020	1.11	3/9/2027	101.54582	99.38232034	97.27509316	95.22227253	93.22207018	91.27277158	89.37273224	87.52037418	85.71418261
200309A00020	3/9/2020	0.96	3/10/2025	100.0992	99.90823367	99.71801087	99.52852464	99.33977063	99.15174454	98.96444209	98.77785906	98.59199123
200309A00021	3/9/2020	1.05	3/9/2026	100.71512	99.53113284	98.37477627	97.24509404	96.14117225	95.06213832	94.00715869	92.97543663	91.96621024
200309A00027	3/9/2020	0.97	3/10/2025	100.10111	99.91014667	99.71992135	99.53043259	99.34167606	99.15364746	98.96634252	98.77975699	98.59388667
200309A00030	3/9/2020	1.11	3/9/2027	101.54582	99.38232034	97.27509316	95.22227253	93.22207018	91.27277158	89.37273224	87.52037418	85.71418261
200309A00033	3/9/2020	1.06	3/9/2026	100.72712	99.54305038	98.38661893	97.25686301	96.1528687	95.07376339	94.01871348	92.98692222	91.97762769
200309A00034	3/9/2020	0.96	3/9/2035	101.5903	96.59265725	91.94273037	87.61218835	83.57525813	79.80847646	76.29046568	73.00173291	69.92448972
200309A00038	3/9/2020	1.26	3/11/2030	103.54523	98.48278949	93.69541617	89.16675145	84.88149389	80.82532856	76.98485784	73.34753757	69.90161799
200309A00046	3/9/2020	0.78	3/11/2025	100.08132	99.88746275	99.69436679	99.50203144	99.31045212	99.11962429	98.92954345	98.74020515	98.55160495

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200309A00081	3/9/2020	1.18	3/8/2030	102.89988	98.23303151	93.8153919	89.63220758	85.6696778	81.91489079	78.35576139	74.98097356	71.77992714
200309A00082	3/9/2020	1.18	3/8/2030	102.89988	98.23303151	93.8153919	89.63220758	85.6696778	81.91489079	78.35576139	74.98097356	71.77992714
200309A00084	3/9/2020	1.06	3/9/2027	101.4246	99.26519997	97.16318204	95.1166231	93.1236844	91.1826027	89.29168654	87.44931264	85.65392259
200310A00003	3/10/2020	1.1	3/10/2025	100.12602	99.93501574	99.74475752	99.55523596	99.36644673	99.17838551	98.99104805	98.8044301	98.61852745
200310A00005	3/10/2020	1.41	3/8/2030	104.32305	99.24813147	94.44828346	89.90717039	85.60951866	81.54103757	77.68835056	74.03893167	70.58104679
200310A00015	3/10/2020	1.37	3/11/2030	104.11709	99.03994372	94.23843618	89.69617923	85.39784593	81.32909719	77.47651257	73.82752632	70.37036823
200310A00020	3/10/2020	1.1	3/10/2025	100.12602	99.93501574	99.74475752	99.55523596	99.36644673	99.17838551	98.99104805	98.8044301	98.61852745
200310A00021	3/10/2020	1.1	3/10/2025	100.12602	99.93501574	99.74475752	99.55523596	99.36644673	99.17838551	98.99104805	98.8044301	98.61852745
200310A00028	3/10/2020	1.1	3/10/2025	100.12602	99.93501574	99.74475752	99.55523596	99.36644673	99.17838551	98.99104805	98.8044301	98.61852745
200310A00033	3/10/2020	0.91	3/10/2025	100.10506	99.913926	99.72353744	99.53388785	99.34497284	99.15678807	98.96932923	98.78259206	98.59657231
200310A00034	3/10/2020	1.41	3/11/2030	104.32504	99.24254526	94.435898	89.88869842	85.5856103	81.51228578	77.65529611	74.00206769	70.54082286
200310A00038	3/10/2020	1.41	3/11/2030	104.32504	99.24254526	94.435898	89.88869842	85.5856103	81.51228578	77.65529611	74.00206769	70.54082286
200310A00040	3/10/2020	1.36	3/10/2028	102.89204	99.74034275	96.70082806	93.76884242	90.93995724	88.2099556	85.57482052	83.03072407	80.57401706
200310A00041	3/10/2020	1.39	3/12/2029	103.72713	99.59832808	95.65549252	91.88924	88.2907184	84.85157057	81.56390358	78.42026002	75.41359136
200310A00042	3/10/2020	1.41	3/11/2030	104.32504	99.24254526	94.435898	89.88869842	85.5856103	81.51228578	77.65529611	74.00206769	70.54082286
200310A00051	3/10/2020	1.41	3/8/2030	104.32305	99.24813147	94.44828346	89.90717039	85.60951866	81.54103757	77.68835056	74.03893167	70.58104679
200310A00054	3/10/2020	1.1	3/10/2025	100.12602	99.93501574	99.74475752	99.55523596	99.36644673	99.17838551	98.99104805	98.8044301	98.61852745
200310A00065	3/13/2020	1.1	3/13/2025	100.13155	99.93226496	99.73378919	99.53611562	99.3392393	99.14315535	98.94785892	98.75334519	98.55960939
200310A00067	3/10/2020	0.94	3/10/2025	100.07337	99.92662437	99.78035274	99.63455118	99.48921727	99.34434861	99.19994284	99.05599759	98.9125105
200310A00073	3/12/2020	2.12	3/11/2027	103.7824	101.5884942	99.45162357	97.36989412	95.34149142	93.36467606	91.43777981	89.55920205	87.72740641
200311A00006	3/13/2020	1.12	3/10/2025	100.12985	99.93884175	99.74857846	99.55905186	99.3702576	99.18219137	98.9948489	98.80822596	98.62231834
200311A00015	3/11/2020	1.26	3/11/2027	101.87136	99.69972747	97.58590628	95.52796568	93.52405722	91.57240788	89.6713163	87.81914931	86.01433857
200311A00026	3/11/2020	1.34	3/11/2030	103.58734	99.01799031	94.69038441	90.59027604	86.70434035	83.02010751	79.52590305	76.21079267	73.06453124
200311A00031	3/11/2020	1.41	12/24/2027	102.87505	99.92869129	97.08176321	94.3303739	91.67080476	89.09950332	86.61307481	84.20827419	81.88199863
200311A00040	3/12/2020	1.3	3/11/2025	100.16673	99.97291279	99.77986342	99.58757257	99.39603569	99.20524829	99.01520591	98.82590411	98.63733851
200311A00050	3/2/2021	1.46	3/2/2026	101.18989	100.0216736	98.88026027	97.76473922	96.67423793	95.60792266	94.56499631	93.54469645	92.54629347
200311A00052	3/2/2021	1.43	2/28/2025	100.16162	99.99816727	99.83524293	99.6728467	99.51097603	99.3496284	99.1888013	99.02849224	98.86869873
200311A00055	3/11/2020	1.66	12/17/2027	103.6075	100.6682543	97.82750587	95.08142607	92.42635447	89.85879304	87.37539795	84.97297188	82.64845672
200312A00004	3/13/2020	1.23	1/24/2025	100.0533	99.98675546	99.9203106	99.85396585	99.78772097	99.72157574	99.65552993	99.58958333	99.52373571
200312A00006	3/12/2020	1.23	3/12/2025	100.15533	99.95877093	99.76299971	99.5680088	99.37379345	99.18034899	98.98767074	98.7957541	98.60459448
200312A00009	3/12/2020	1.46	3/12/2027	102.32547	100.1453489	98.02204725	95.95367575	93.93842369	91.97455533	90.06040611	88.19437902	86.37494128
200312A00014	3/12/2020	1.04	3/12/2025	100.13375	99.93705456	99.74114936	99.54602686	99.35168229	99.1581109	98.96530801	98.77326895	98.58198912
200312A00015	3/12/2020	1.23	3/10/2025	100.15092	99.95988481	99.76959369	99.58003933	99.39121739	99.20312356	99.01575358	98.82910321	98.64316824

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200312A00037	3/12/2020	1.3	3/12/2025	100.16912	99.9725496	99.7767598	99.58175036	99.38751655	99.19405366	99.00135706	98.80942211	98.61824424
200313A00032	3/18/2020	1.46	3/18/2025	100.21772	100.0045191	99.7922397	99.58087505	99.37041915	99.16086607	98.95220996	98.74444498	98.53756537
200316A00008	3/16/2020	1.31	3/15/2030	102.17572	99.59179455	97.10694485	94.71650163	92.41604885	90.20140997	88.06863326	86.01397819	84.03390267
200316A00009	3/16/2020	1.25	3/14/2025	100.16379	99.96170409	99.76044764	99.56001564	99.36040296	99.16160451	98.96361524	98.76643014	98.57004425
200316A00037	3/16/2020	1.06	3/14/2025	100.14159	99.93935906	99.73796509	99.53739805	99.33765278	99.13872414	98.94060704	98.74329644	98.54678732
200316A00049	3/16/2020	1.25	3/14/2025	100.16379	99.96170409	99.76044764	99.56001564	99.36040296	99.16160451	98.96361524	98.76643014	98.57004425
200316A00050	3/16/2020	1.54	3/16/2027	102.51363	100.3208932	98.1855115	96.10556972	94.0792326	92.10474132	90.18040952	88.30461968	86.4758196
200316A00055	3/16/2020	1.06	3/14/2025	100.14159	99.93935906	99.73796509	99.53739805	99.33765278	99.13872414	98.94060704	98.74329644	98.54678732
200317A00009	3/17/2020	1.61	3/16/2035	104.60279	99.46761402	94.68923071	90.23859989	86.08930324	82.21728764	78.6006359	75.21936115	72.05522247
200317A00023	3/17/2020	1.1	3/17/2025	100.15587	99.94533753	99.73570729	99.52697148	99.31912431	99.11216003	98.90607293	98.70085736	98.4965077
200317A00024	3/17/2020	1.09	3/17/2025	100.09968	99.94646512	99.79377646	99.64160958	99.48996161	99.33882968	99.18821096	99.03810261	98.88850185
200317A00027	3/17/2020	1.29	3/17/2025	100.17901	99.96862495	99.75913741	99.55054169	99.34283203	99.13600271	98.93004808	98.72496253	98.52074048
200317A00043	3/17/2020	1.29	3/15/2030	102.38658	99.72469804	97.1668563	94.7080729	92.34364128	90.06911361	87.88028477	85.77317741	83.74402809
200317A00045	3/19/2020	1.43	3/19/2025	100.21407	99.99811135	99.78310045	99.56902713	99.35588521	99.14366855	98.93237107	98.72198675	98.5125096
200317A00065	3/19/2020	2.05	3/19/2025	100.34831	100.1321633	99.91695803	99.70269095	99.48935591	99.27694677	99.06545743	98.85488187	98.64521411
200318A00012	3/18/2020	1.68	3/18/2033	105.28594	100.2259799	95.50572186	91.0988985	86.98147263	83.13143503	79.52862003	76.15453904	72.99223009
200318A00013	3/18/2020	1.5	3/18/2025	100.22627	100.0130569	99.80076528	99.58938842	99.37892035	99.16935514	98.96068694	98.75290991	98.54601829
200318A00038	3/18/2020	1.48	3/18/2025	100.22199	100.008788	99.79650249	99.58513173	99.37466975	99.16511061	98.95644845	98.74867744	98.54179183
200318A00047	3/18/2020	1.29	3/18/2025	100.19854	99.98519086	99.7727609	99.56124836	99.35064722	99.14095151	98.93215532	98.72425278	98.51723808
200318A00054	3/18/2020	1.56	3/18/2025	100.23909	100.0258637	99.81355365	99.60215848	99.39167215	99.18208875	98.97340241	98.7656073	98.55869766
200319A00035	3/19/2020	1.72	3/18/2033	105.4933	100.4224176	95.69195643	91.27559378	87.14924235	83.2908469	79.68019959	76.29877312	73.12956997
200320A00049	3/25/2020	1.47	3/25/2025	100.23995	100.0073944	99.77592632	99.54553643	99.31621712	99.08796092	98.86076041	98.63460826	98.40949719
200320A00052	3/25/2020	1.47	3/25/2025	100.23995	100.0073944	99.77592632	99.54553643	99.31621712	99.08796092	98.86076041	98.63460826	98.40949719
200323A00090	3/23/2020	1.55	3/23/2027	101.57317	100.1964599	98.85117823	97.53635069	96.2510457	94.99436766	93.76545536	92.56348031	91.38764524
200324A00012	3/25/2020	1.78	3/25/2025	100.31223	100.0795658	99.84798598	99.61748468	99.38805435	99.15968753	98.93237679	98.7061148	98.48089428
200324A00013	3/25/2020	1.78	3/25/2025	100.31223	100.0795658	99.84798598	99.61748468	99.38805435	99.15968753	98.93237679	98.7061148	98.48089428
200324A00029	3/24/2020	1.86	3/24/2025	100.32693	100.0970067	99.86814181	99.64033175	99.4135692	99.1878469	98.96315767	98.7394944	98.51685004
200324A00066	3/26/2020	1.81	3/26/2025	100.32304	100.0875956	99.8532616	99.62003011	99.38789334	99.1568436	98.92687324	98.69797468	98.47014044
200325A00009	3/27/2020	1.67	3/27/2025	100.29343	100.055273	99.81824845	99.58235037	99.3475707	99.1139015	98.88133487	98.64986304	98.41947825
200325A00016	3/30/2020	1.67	3/31/2025	100.30713	100.0579032	99.80991044	99.56314203	99.31758892	99.07324219	98.83009301	98.58813262	98.34735235
200325A00030	3/25/2020	1.5	3/25/2025	100.26562	100.0328232	99.80111989	99.57049804	99.34095001	99.11246828	98.88504537	98.65867389	98.43334653
200325A00046	3/25/2020	1.76	3/25/2025	100.30757	100.0749096	99.84333697	99.61284286	99.38341969	99.15506001	98.92775638	98.70150147	98.47628801
200326A00009	3/27/2020	1.54	3/27/2025	100.2624	100.0242885	99.78731305	99.55146388	99.31673294	99.08311229	98.85059404	98.6191704	98.38883365

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200326A00011	3/30/2020	1.54	3/31/2025	100.27465	100.025481	99.77754196	99.53082706	99.28532726	99.04103364	98.79793736	98.55602968	98.31530192
200326A00016	3/26/2020	1.54	3/25/2025	100.25627	100.0236911	99.79219786	99.56178281	99.33243843	99.10415725	98.87693185	98.6507549	98.42561911
200326A00028	3/26/2020	1.54	3/26/2025	100.25933	100.0239899	99.78975551	99.5566233	99.32458547	99.0936343	98.86376216	98.63496147	98.40722475
200326A00029	3/26/2020	1.82	3/26/2027	103.17193	100.9454153	98.77764831	96.66665061	94.61052369	92.60744907	90.65568411	88.75355819	86.89946896
200326A00032	3/26/2020	1.49	3/26/2030	102.71664	100.0497157	97.48692978	95.02330139	92.65412282	90.37494497	88.18156136	86.06999322	84.03647558
200326A00037	3/26/2020	1.78	3/26/2035	105.386	100.3562099	95.6711612	91.30302643	87.22647427	83.41842864	79.85785092	76.5255447	73.40398047
200327A00031	3/27/2020	1.18	3/27/2025	100.17646	99.93848528	99.70164579	99.46593206	99.23133607	98.99784986	98.76546558	98.53417543	98.30397167
200327A00037	3/27/2020	1.18	3/27/2026	100.99977	99.76418929	98.55861351	97.38195996	96.23319867	95.11134805	94.01547208	92.94467766	91.89811221
200327A00043	3/27/2020	1.48	3/27/2028	103.57612	100.3628213	97.26528847	94.27865904	91.39830548	88.61982485	85.93902623	83.35191884	80.85470108
200327A00045	3/27/2020	2.24	3/27/2034	112.97499	103.8689579	95.5783044	88.02547934	81.14069515	74.86111095	69.13010768	63.89664238	59.11467252
200327A00046	3/27/2020	1.23	3/27/2025	100.18839	99.95040239	99.71354402	99.47781148	99.24319674	99.00969187	98.77728898	98.54598028	98.31575805
200327A00047	3/27/2020	0.99	3/27/2025	100.15019	99.91205284	99.67505453	99.43918509	99.20443643	98.97080055	98.73826954	98.50683554	98.27649078
200327A00048	3/27/2020	1.18	3/24/2025	100.17026	99.94057587	99.71195064	99.48437939	99.25785481	99.03236966	98.80791675	98.58448898	98.36207929
200327A00051	3/27/2020	0.99	3/27/2025	100.15019	99.91205284	99.67505453	99.43918509	99.20443643	98.97080055	98.73826954	98.50683554	98.27649078
200327A00056	3/27/2020	1.18	3/27/2025	100.17646	99.93848528	99.70164579	99.46593206	99.23133607	98.99784986	98.76546558	98.53417543	98.30397167
200327A00060	3/27/2020	1.18	3/27/2025	100.17646	99.93848528	99.70164579	99.46593206	99.23133607	98.99784986	98.76546558	98.53417543	98.30397167
200327A00061	3/31/2020	1.18	3/31/2025	100.18472	99.93569641	99.68790616	99.44133946	99.19598729	98.95184074	98.70889097	98.46712923	98.22654686
200327A00073	3/27/2020	0.99	3/27/2025	100.15019	99.91205284	99.67505453	99.43918509	99.20443643	98.97080055	98.73826954	98.50683554	98.27649078
200327A00084	3/27/2020	1.1	3/27/2025	100.21258	99.89155458	99.57259623	99.25568094	98.94078908	98.62790129	98.31699848	98.00806175	97.70107249
200327A00094	3/27/2020	1.6	3/27/2030	104.62625	100.2055348	96.0158492	92.04366792	88.27633315	84.70199304	81.3095461	78.08858983	75.02937307
200330A00006	3/30/2020	0.9	3/28/2025	100.1302	99.88933931	99.64963642	99.41108654	99.17368134	98.93741259	98.70227213	98.46825186	98.2353438
200330A00008	3/30/2020	1.09	3/28/2025	100.15679	99.91608855	99.67654597	99.43815324	99.2009021	98.96478436	98.72979193	98.49591676	98.26315091
200330A00028	3/30/2020	1.09	3/28/2025	100.15679	99.91608855	99.67654597	99.43815324	99.2009021	98.96478436	98.72979193	98.49591676	98.26315091
200330A00037	3/30/2020	1.09	3/28/2025	100.15679	99.91608855	99.67654597	99.43815324	99.2009021	98.96478436	98.72979193	98.49591676	98.26315091
200330A00038	3/30/2020	1.79	3/29/2030	106.3309	101.1511921	96.25406275	91.62259873	87.24099357	83.09446746	79.16919461	75.45223623	71.93147864
200330A00041	4/1/2020	1.09	4/1/2025	100.16404	99.91229816	99.66181934	99.41259316	99.16461027	98.91786141	98.67233739	98.42802914	98.18492766
200330A00044	3/30/2020	1.09	3/28/2025	100.15679	99.91608855	99.67654597	99.43815324	99.2009021	98.96478436	98.72979193	98.49591676	98.26315091
200330A00045	3/30/2020	1.47	3/30/2027	102.39379	100.1656993	97.99667748	95.88471931	93.82790766	91.8244067	89.87245759	87.97037452	86.11654095
200330A00047	3/30/2020	1.5	3/30/2035	104.0185	98.91177789	94.15989748	89.73397883	85.6077448	81.75727122	78.16075866	74.79832796	71.65183671
200330A00054	3/30/2021	1.19	3/30/2026	100.91825	99.67670733	98.46548015	97.28346978	96.12963026	95.00296498	93.90252383	92.82740052	91.77673004
200330A00058	3/30/2020	1.49	3/29/2030	104.12815	99.72161121	95.5456328	91.58670602	87.8321908	84.27025183	80.88980318	77.68045695	74.63247578
200330A00066	3/30/2020	1.08	3/31/2025	100.15974	99.91075625	99.66300733	99.4164818	99.17117064	98.92706493	98.68415586	98.44243466	98.20189268
200330A00079	3/30/2020	1.51	3/30/2035	104.07154	98.96220634	94.20790328	89.77972814	85.65139043	81.79895375	78.20060757	74.83646259	71.68836716

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200331A00011	3/31/2020	1.09	3/31/2025	100.16224	99.91325026	99.66549722	99.41896756	99.1736523	98.92954251	98.68662937	98.44490411	98.2043581
200331A00016	3/31/2020	1.11	3/31/2026	100.91897	99.67318719	98.4579149	97.27204228	96.114514	94.98432465	93.88051584	92.8021735	91.74842529
200331A00017	3/31/2020	0.9	3/31/2025	100.13471	99.88555894	99.63764114	99.39095003	99.14547655	98.90121173	98.65814666	98.41627256	98.1755807
200331A00022	4/1/2020	1.07	4/1/2025	100.15899	99.90725478	99.65678435	99.40756655	99.159592	98.91285144	98.6673357	98.42303569	98.17994243
200331A00056	3/31/2020	0.96	3/29/2030	101.46186	98.88441479	96.40607452	94.02215187	91.72822045	89.52009443	87.39381377	85.3456305	83.37199588
200331A00060	3/31/2020	1.09	3/31/2025	100.16224	99.91325026	99.66549722	99.41896756	99.1736523	98.92954251	98.68662937	98.44490411	98.2043581
200401A00001	4/1/2020	1.01	4/1/2025	100.14383	99.89212462	99.64167941	99.39248672	99.14453719	98.89782155	98.65233064	98.40805536	98.16498673
200401A00012	4/2/2020	1	4/2/2025	100.14286	99.88840167	99.63523565	99.38335153	99.13273959	98.88339022	98.63529389	98.38844118	98.14282277
200401A00013	4/1/2020	1.01	4/1/2025	100.14383	99.89212462	99.64167941	99.39248672	99.14453719	98.89782155	98.65233064	98.40805536	98.16498673
200401A00023	4/1/2020	0.82	4/1/2025	100.116	99.864123	99.61351117	99.36415521	99.1160457	98.86917331	98.62352883	98.37910309	98.13588706
200402A00009	4/2/2020	1.03	4/2/2025	100.15052	99.89604977	99.64287093	99.39097404	99.14034938	98.89098734	98.64287839	98.39601311	98.15038217
200402A00014	4/2/2020	0.84	4/2/2025	100.12238	99.86774119	99.61439384	99.36233184	99.11154542	98.86202491	98.61376071	98.36674334	98.12096343
200402A00038	4/2/2020	0.84	4/2/2025	100.12238	99.86774119	99.61439384	99.36233184	99.11154542	98.86202491	98.61376071	98.36674334	98.12096343
200402A00041	4/2/2020	1.03	4/2/2025	100.15052	99.89604977	99.64287093	99.39097404	99.14034938	98.89098734	98.64287839	98.39601311	98.15038217
200402A00044	4/2/2020	1.65	4/2/2030	105.60183	100.4307735	95.54264133	90.92046928	86.54840274	82.411618	78.49624922	74.7893212	71.27868713
200403A00006	4/3/2020	1.05	4/3/2025	100.15732	99.90008555	99.64417293	99.38957184	99.1362722	98.88426403	98.63353747	98.38408274	98.13589017
200406A00006	4/6/2020	1.13	4/7/2025	100.18563	99.91733465	99.65048524	99.38506714	99.12106879	98.85847878	98.59728579	98.33747863	98.07904625
200406A00014	4/6/2020	1.33	4/6/2035	103.54722	98.41438937	93.64122604	89.19822256	85.05855777	81.19782962	77.59381894	74.22627786	71.07674023
200406A00027	4/6/2020	1.31	4/5/2030	103.677	99.26372108	95.082376	91.1193275	87.36181417	83.79788984	80.41636732	77.20676625	74.15926483
200406A00029	4/6/2020	1.61	4/5/2030	105.01634	100.2145558	95.67198667	91.37318429	87.30369689	83.45000333	79.79944853	76.34018376	73.06111125
200406A00030	4/6/2020	1.61	4/5/2030	105.01634	100.2145558	95.67198667	91.37318429	87.30369689	83.45000333	79.79944853	76.34018376	73.06111125
200406A00032	4/6/2020	1.09	4/4/2025	100.22253	99.88141864	99.5426381	99.2061602	98.87196145	98.54001871	98.21030914	97.88281021	97.5574997
200406A00033	4/6/2020	1.09	4/4/2025	100.22253	99.88141864	99.5426381	99.2061602	98.87196145	98.54001871	98.21030914	97.88281021	97.5574997
200406A00035	4/6/2020	1.05	4/4/2025	100.20724	99.86874459	99.53255339	99.19863975	98.86698052	98.53755281	98.2103341	97.88530212	97.56243494
200406A00036	4/6/2020	1.09	4/4/2025	100.22253	99.88141864	99.5426381	99.2061602	98.87196145	98.54001871	98.21030914	97.88281021	97.5574997
200406A00053	4/6/2020	1.13	4/7/2025	100.18563	99.91733465	99.65048524	99.38506714	99.12106879	98.85847878	98.59728579	98.33747863	98.07904625
200407A00001	4/8/2020	2.41	4/7/2025	100.53025	100.2613614	99.99391673	99.72790578	99.46331695	99.20013881	98.93836003	98.67796941	98.41895588
200407A00004	4/7/2020	0.99	4/7/2025	100.16943	99.90093257	99.63388214	99.36826682	99.10407497	98.8412951	98.57991583	98.3199259	98.0613142
200408A00021	4/8/2020	0.99	4/4/2025	100.16419	99.9039653	99.64509783	99.38757533	99.13138729	98.8765233	98.62297308	98.37072646	98.11977334
200413A00009	4/13/2020	0.77	4/13/2027	100.51678	99.31772788	98.14422593	96.99551064	95.87084624	94.76952535	93.69086769	92.63421876	91.59894858
200413A00013	4/13/2020	1.19	4/12/2030	101.91863	99.23258304	96.65277269	94.17405998	91.79159096	89.50078098	87.29729785	85.17704624	83.1361531
200414A00009	4/14/2020	0.82	4/14/2025	100.0748	99.87834365	99.68278453	99.48811146	99.29431791	99.1013974	98.9093435	98.71814986	98.52781021
200414A00024	4/14/2020	1.37	4/14/2027	102.18787	99.92984228	97.73398351	95.59823721	93.52062537	91.49924671	89.53227324	87.61794698	85.75457683

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200415A00021	4/15/2020	1.37	4/15/2027	102.2077	99.93849289	97.73049353	95.58166299	93.49004565	91.4537647	89.47101835	87.54007619	85.65927579
200415A00023	4/15/2020	1.71	4/15/2030	105.93836	100.7245939	95.79774253	91.14055154	86.73689604	82.57169775	78.63085155	74.90115759	71.37025851
200415A00024	4/15/2020	2.2	4/16/2035	112.64565	102.6675134	93.671274	85.55473631	78.22683512	71.60637476	65.6209142	60.20578306	55.30321265
200415A00031	4/15/2020	0.97	4/15/2025	100.15431	99.8640528	99.57549046	99.28860541	99.00338297	98.71980862	98.43786802	98.15754699	97.87883152
200415A00035	4/17/2020	2.16	4/16/2025	100.50588	100.2122213	99.92029061	99.63007149	99.34154878	99.05470755	98.76953304	98.48601066	98.20412598
200415A00037	4/15/2020	0.97	4/15/2025	100.15431	99.8640528	99.57549046	99.28860541	99.00338297	98.71980862	98.43786802	98.15754699	97.87883152
200415A00038	4/15/2020	1.37	4/15/2027	102.2077	99.93849289	97.73049353	95.58166299	93.49004565	91.4537647	89.47101835	87.54007619	85.65927579
200417A00002	4/17/2020	0.96	4/17/2025	100.15428	99.85851839	99.56451618	99.27225428	98.98171718	98.69288954	98.40575624	98.12030231	97.83651297
200417A00008	4/17/2020	0.96	4/17/2025	100.15428	99.85851839	99.56451618	99.27225428	98.98171718	98.69288954	98.40575624	98.12030231	97.83651297
200417A00009	4/17/2020	1.35	4/16/2027	102.16402	99.8926205	97.6825522	95.5317786	93.43834202	91.40036343	89.41603863	87.48363465	85.60148644
200417A00014	4/17/2020	0.96	4/17/2025	100.15428	99.85851839	99.56451618	99.27225428	98.98171718	98.69288954	98.40575624	98.12030231	97.83651297
200417A00016	4/21/2020	2.18	4/21/2025	100.53589	100.2283889	99.92277733	99.61903714	99.31715112	99.01710226	98.71887375	98.42244901	98.12781162
200417A00019	4/17/2020	0.77	4/17/2025	100.12155	99.82559661	99.53139967	99.2389473	98.9482239	98.65921407	98.37190258	98.08627439	97.80231465
200421A00026	4/21/2020	1.34	4/19/2030	103.45451	99.03351316	94.84597314	90.87808993	87.11695899	83.5505044	80.1674213	76.95712271	73.90969017
200421A00032	4/21/2020	1.31	4/21/2027	102.08344	99.79944452	97.57745813	95.41543063	93.31139296	91.26345374	89.26979567	87.32867205	85.43840356
200423A00006	4/23/2020	0.82	4/23/2025	100.14405	99.83152932	99.52096031	99.21232895	98.90561709	98.60080679	98.29788035	97.99682029	97.69760931
200423A00017	4/23/2020	1.82	4/23/2035	109.6526	99.76042254	90.8496761	82.81767796	75.57297085	69.03404724	63.12822234	57.79063983	52.96339381
200424A00014	4/28/2020	1.01	4/23/2025	100.17861	99.86629085	99.55592603	99.24749425	98.94097747	98.63635783	98.33361771	98.03273973	97.73370668
200424A00022	4/24/2020	1.39	4/24/2030	103.68397	99.24631289	95.04344039	91.06145139	87.28734291	83.70894868	80.31488086	77.09447628	74.03774652
200427A00017	4/27/2020	1.02	4/25/2025	100.18496	99.86712606	99.55131102	99.23749444	98.92565737	98.61578111	98.30784717	98.00183732	97.69773354
200427A00018	4/27/2020	1.51	4/27/2028	103.49131	100.203047	97.03591169	93.98481925	91.04492912	88.21162829	85.48051937	82.84740935	80.30829894
200428A00002	4/28/2020	1.47	4/26/2030	105.10674	99.87152196	94.92669561	90.2547199	85.83920262	81.66481587	77.71722168	73.98300329	70.44960153
200428A00003	4/29/2020	1.01	4/29/2025	100.18809	99.85923986	99.53254503	99.20798113	98.88552742	98.5651634	98.24686883	97.93062376	97.61640846
200428A00009	4/28/2020	1.08	4/29/2030	101.6148	98.9361594	96.36350379	93.89170546	91.51592026	89.23157282	87.03433975	84.92013407	82.88509064
200428A00011	4/30/2020	1.95	4/29/2025	100.49853	100.1690409	99.84171077	99.51651466	99.19343181	98.8724417	98.55352408	98.23665896	97.92182659
200428A00018	4/28/2020	1.33	4/27/2035	103.08535	98.09506379	93.45037403	89.1231357	85.08775203	81.32092283	77.80142113	74.50989312	71.42867866
200429A00009	4/29/2020	0.78	4/29/2025	100.13849	99.80945248	99.48257168	99.15782665	98.83519652	98.51466069	98.19619884	97.8797909	97.56541707
200429A00010	4/29/2020	0.78	4/29/2025	100.13849	99.80945248	99.48257168	99.15782665	98.83519652	98.51466069	98.19619884	97.8797909	97.56541707
200429A00021	5/4/2020	0.97	4/29/2025	100.17488	99.84605684	99.51938904	99.19485205	98.87242511	98.55208772	98.23381967	97.91760098	97.60341194
200429A00030	4/29/2020	1.41	4/29/2030	103.93996	99.26236582	94.83750129	90.65021458	86.68634526	82.93265172	79.37674692	76.00703883	72.81267545
200429A00043	5/1/2020	1.56	4/30/2025	100.37283	100.0408498	99.71105581	99.38342814	99.05794553	98.73458702	98.41333191	98.09415978	97.77705046
200429A00044	5/1/2020	1.86	4/30/2025	100.47274	100.1405509	99.81055073	99.48271792	99.15703118	98.83346953	98.51201229	98.192639	97.87532951
200429A00045	5/1/2020	1.54	4/30/2025	100.36617	100.034203	99.70442281	99.37680882	99.05133982	98.72799485	98.40675321	98.08759449	97.77049853

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200429A00046	5/1/2020	2.07	4/30/2025	100.54268	100.2103416	99.88019717	99.55222077	99.22639113	98.9026873	98.58108855	98.26157446	97.94412484
200429A00047	5/1/2020	2.7	4/30/2025	100.75248	100.4197139	100.0891365	99.7607293	99.434471	99.11034059	98.78831735	98.46838083	98.15051084
200429A00049	4/29/2020	1.25	4/29/2026	101.10027	99.78094072	98.48516909	97.21237499	95.96199448	94.73348175	93.52630838	92.33996267	91.17394898
200429A00050	5/1/2020	2.61	4/30/2025	100.72251	100.3898035	100.059288	99.73094237	99.4047453	99.08067583	98.75871323	98.43883706	98.12102712
200429A00051	5/1/2020	2.54	4/30/2025	100.6992	100.36654	100.0360725	99.70777475	99.38162532	99.05760324	98.73568781	98.41585858	98.09809535
200429A00053	5/1/2020	2.18	4/30/2025	100.57931	100.2468987	99.91667864	99.58862702	99.26272254	98.93894422	98.61727136	98.29768351	97.98016049
200429A00054	4/29/2020	1.04	4/29/2025	100.19799	99.86912713	99.54241202	99.21782795	98.89535416	98.57497015	98.2566557	97.94039084	97.62615585
200429A00056	5/1/2020	1.54	4/30/2025	100.36617	100.034203	99.70442281	99.37680882	99.05133982	98.72799485	98.40675321	98.08759449	97.77049853
200429A00057	4/29/2020	1.4	4/29/2027	102.31352	100.0051174	97.75990459	95.57580788	93.45083667	91.3830767	89.37068663	87.41189484	85.50499635
200429A00058	5/1/2020	1.83	4/30/2025	100.46275	100.1305807	99.80060123	99.47278894	99.14712261	98.82358128	98.50214425	98.18279108	97.86550161
200429A00061	4/29/2020	1.66	10/29/2029	105.37717	100.6145621	96.09391789	91.80175301	87.72539716	83.85294445	80.17320354	76.67565125	73.35038938
200430A00008	4/30/2020	0.94	4/30/2025	100.16635	99.83480089	99.50543298	99.17822926	98.85316852	98.53022981	98.20939245	97.89063604	97.57394044
200430A00009	4/30/2020	1.16	4/30/2026	100.98302	99.66196391	98.36422059	97.08922384	95.83642767	94.60530308	93.39533746	92.20603395	91.03691085
200430A00017	4/30/2020	0.94	4/30/2025	100.16635	99.83480089	99.50543298	99.17822926	98.85316852	98.53022981	98.20939245	97.89063604	97.57394044
200430A00027	4/30/2020	1.31	4/30/2035	103.02008	97.92372495	93.18402391	88.77174757	84.66032348	80.82557369	77.24548119	73.89998068	70.7707709
200430A00030	4/30/2020	0.96	4/30/2025	100.17302	99.84144763	99.51206597	99.18484858	98.85977423	98.53682198	98.21597115	97.89720133	97.58049237
200501A00002	5/1/2020	1.3	5/1/2035	102.97238	97.84033918	93.0699198	88.63129404	84.49736267	80.64348303	77.0472281	73.68817071	70.54769031
200501A00009	5/4/2020	0.67	5/1/2025	100.05403	99.81959317	99.58644776	99.35457821	99.12397318	98.89462145	98.66651193	98.43963369	98.21397592
200504A00004	5/4/2020	0.75	5/5/2025	100.13506	99.7895303	99.44639093	99.1056125	98.76717064	98.4310413	98.09720078	97.76562571	97.436293
200504A00006	5/4/2020	0.94	5/5/2025	100.17331	99.82801558	99.48509936	99.14453873	98.80630943	98.47038754	98.13674946	97.80537191	97.47623194
200504A00007	5/4/2020	1.47	5/4/2028	103.37326	100.0686219	96.88636184	93.82133654	90.86864157	88.02360296	85.28176513	82.63887954	80.090894
200505A00004	5/5/2020	0.77	5/5/2025	100.14199	99.7964546	99.45330053	99.11250746	98.77405104	98.43790721	98.10405228	97.77246286	97.44311589
200505A00005	5/5/2020	0.77	5/5/2025	100.14199	99.7964546	99.45330053	99.11250746	98.77405104	98.43790721	98.10405228	97.77246286	97.44311589
200506A00002	5/8/2020	0.97	5/5/2025	100.18372	99.83840028	99.49546202	99.15487946	98.81662834	98.48068474	98.14702506	97.81562602	97.48646466
200506A00005	5/6/2020	0.97	5/6/2025	100.18519	99.83712597	99.49147819	99.14822483	98.807341	98.46880218	98.13258415	97.79866307	97.46701539
200506A00010	5/6/2020	0.94	5/6/2026	100.80299	99.46572525	98.15233266	96.86223222	95.59485852	94.34966402	93.12611834	91.92370764	90.74193389
200511A00006	5/11/2020	1.65	5/13/2030	105.65587	100.3777639	95.39408306	90.68695336	86.23967063	82.03661993	78.06319918	74.30574869	70.75148583
200511A00017	5/11/2020	0.83	2/3/2025	100.03707	99.94286002	99.84883635	99.75499375	99.6613317	99.56784966	99.47454712	99.38142355	99.28847842
200511A00018	5/11/2020	0.98	2/2/2026	100.59473	99.50530791	98.43930569	97.39597712	96.37460565	95.37450462	94.39501572	93.43550755	92.49537423
200511A00019	5/11/2020	1.18	2/1/2027	101.60482	99.54256714	97.53214329	95.57189665	93.66024281	91.79565953	89.97668374	88.20190874	86.4699816
200511A00020	5/11/2020	1.4	2/1/2028	102.92419	99.87566722	96.93281288	94.0913669	91.34726715	88.69663932	86.13578691	83.66118195	81.2694562
200511A00021	5/11/2020	1.53	2/1/2029	104.20785	100.1766607	96.32293527	92.63792718	89.11336633	85.74143368	82.51473396	79.42627026	76.46942028
200511A00022	5/11/2020	1.6	2/1/2030	105.23588	100.2336075	95.49766082	91.01249577	86.76355454	82.73719972	78.92065125	75.30192789	71.86979319

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200511A00023	5/11/2020	1.7	2/3/2031	106.1937	100.2279816	94.63428787	89.38752318	84.46441167	79.84335521	75.50430399	71.42863774	67.59905668
200512A00001	5/12/2020	1.17	5/12/2027	101.77146	99.45009345	97.19459127	95.00270463	92.8722761	90.80123473	88.78759198	86.82943791	84.92493757
200512A00010	5/12/2020	1.48	5/10/2030	104.39465	99.53955207	94.95093711	90.61265782	86.50962711	82.62774584	78.95383306	75.47556159	72.1813984
200512A00011	5/12/2020	1.48	5/10/2030	104.39465	99.53955207	94.95093711	90.61265782	86.50962711	82.62774584	78.95383306	75.47556159	72.1813984
200512A00013	5/12/2020	1.17	5/12/2027	101.77146	99.45009345	97.19459127	95.00270463	92.8722761	90.80123473	88.78759198	86.82943791	84.92493757
200512A00014	5/12/2020	1.17	5/12/2027	101.77146	99.45009345	97.19459127	95.00270463	92.8722761	90.80123473	88.78759198	86.82943791	84.92493757
200512A00017	5/12/2020	0.85	5/12/2025	100.18297	99.73848433	99.29796904	98.86136909	98.42863223	97.99970714	97.5745434	97.15309148	96.73530272
200512A00018	5/12/2020	0.85	5/12/2025	100.18297	99.73848433	99.29796904	98.86136909	98.42863223	97.99970714	97.5745434	97.15309148	96.73530272
200512A00020	5/12/2020	0.86	5/12/2025	100.18834	99.74171219	99.29908094	98.86039154	98.42559134	97.99462861	97.56745254	97.14401323	96.72426162
200512A00021	5/12/2020	0.86	5/12/2025	100.18834	99.74171219	99.29908094	98.86039154	98.42559134	97.99462861	97.56745254	97.14401323	96.72426162
200513A00003	5/13/2020	0.68	5/13/2025	100.11784	99.75037434	99.38560963	99.02351983	98.66407544	98.30724741	97.95300712	97.60132637	97.25217734
200514A00008	5/14/2020	1.23	5/14/2030	102.95514	98.50327208	94.28927498	90.29892791	86.5189358	82.93686762	79.54109568	76.32073943	73.26561361
200518A00019	5/19/2020	0.9	5/19/2025	100.17736	99.79361723	99.41282101	99.03493525	98.65992659	98.28776213	97.91840953	97.55183688	97.1880128
200520A00009	5/20/2020	1.63	5/20/2038	106.93906	97.25966409	88.67839631	81.05897659	74.28301554	68.24756062	62.8629935	58.05122462	53.74414137
200521A00005	5/21/2020	0.75	5/21/2030	100.92334	98.23706319	95.658254	93.18165835	90.80231505	88.5155408	86.3169127	84.20225199	82.16760893
200521A00013	5/21/2020	2.09	5/21/2035	111.5888	101.5810907	92.56792578	84.4448931	77.11904418	70.50758042	64.53669929	59.14057675	54.26046914
200521A00015	5/21/2020	2.14	5/21/2036	112.57952	101.6710816	91.93652832	83.24268646	75.47213406	68.52126575	62.29860534	56.72333175	51.72399035
200521A00016	5/21/2020	2.18	5/21/2037	113.467	101.6775824	91.25233087	82.02509469	73.85076793	66.60253309	60.16947444	54.45451304	49.37261866
200521A00017	5/21/2020	2.22	5/21/2038	114.47359	101.8090567	90.71037499	80.97394955	72.4236664	64.90706203	58.29204154	52.46406601	47.32374021
200522A00009	5/22/2020	0.96	5/22/2030	101.34656	98.4732664	95.71842288	93.07611488	90.54076182	88.10709992	85.77016213	83.52525951	81.36796389
200527A00012	5/27/2020	1.2	5/27/2027	101.89095	99.5145999	97.20523391	94.96059658	92.77852219	90.65693025	88.59382165	86.58727492	84.63544275
200527A00013	5/27/2020	1.13	11/25/2026	101.37711	99.49584289	97.65848075	95.86373642	94.11037231	92.39719483	90.72305251	89.08683424	87.48746759
200527A00014	5/27/2020	1.06	5/27/2026	100.89217	99.50079193	98.13514304	96.79457594	95.47846087	94.1861887	92.91717008	91.67083465	90.44663025
200527A00015	5/27/2020	0.99	11/26/2025	100.50789	99.60238725	98.71309848	97.83959523	96.98146042	96.13829156	95.30970009	94.4953108	93.69476126
200527A00016	5/27/2020	0.92	5/27/2025	100.19575	99.79000759	99.38754269	98.98831819	98.59229509	98.19943497	97.80970006	97.42305317	97.0394577
200529A00022	6/1/2020	0.98	6/1/2026	100.78603	99.38222249	98.00460057	96.65249879	95.32527117	94.02229304	92.74296019	91.48668805	90.25291087
200601A00009	6/1/2020	0.84	6/2/2025	100.16973	99.74759747	99.32900688	98.91391816	98.50228753	98.09407192	97.68922901	97.28771716	96.88949539
200604A00005	6/4/2020	0.89	6/4/2025	100.1934	99.76572455	99.34169294	98.92125767	98.50437312	98.09099443	97.6810775	97.27457898	96.8714562
200604A00009	6/4/2020	0.7	6/4/2025	100.14579	99.71784269	99.29354258	98.87284626	98.4557079	98.04208248	97.63192572	97.22519409	96.82184478
200604A00010	6/4/2020	0.89	6/4/2025	100.1934	99.76572455	99.34169294	98.92125767	98.50437312	98.09099443	97.6810775	97.27457898	96.8714562
200604A00012	6/4/2020	1.59	6/4/2030	105.35323	100.0277744	95.00256369	90.2591824	85.78043111	81.5502436	77.55360664	73.77648584	70.20575718
200604A00013	6/4/2020	2.21	6/4/2035	112.82698	102.7251027	93.62863974	85.43179111	78.0404019	71.37062647	65.34775316	59.90516806	54.98344088
200604A00014	6/4/2020	2.42	6/4/2040	119.09097	104.4878289	91.91235336	81.06821042	71.70393874	63.60595164	56.59265807	50.50952122	45.22490136

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200605A00005	6/5/2020	0.99	6/5/2025	100.2379	99.80737511	99.38053972	98.95734864	98.53775532	98.12171398	97.70917963	97.30010802	96.89445567
200605A00014	6/5/2020	1.02	6/5/2025	100.29584	99.78682414	99.28298462	98.78424244	98.2905204	97.80174287	97.31783569	96.83872623	96.36434326
200605A00016	6/5/2020	1.02	6/5/2025	100.29584	99.78682414	99.28298462	98.78424244	98.2905204	97.80174287	97.31783569	96.83872623	96.36434326
200605A00017	6/5/2020	1.02	6/5/2025	100.29584	99.78682414	99.28298462	98.78424244	98.2905204	97.80174287	97.31783569	96.83872623	96.36434326
200605A00018	6/5/2020	0.91	6/5/2025	100.23948	99.73068564	99.22706583	98.7285414	98.23503518	97.74647154	97.26277638	96.78387707	96.30970242
200608A00001	6/8/2020	1.34	6/7/2030	103.46995	98.95521168	94.68402929	90.64169248	86.81446345	83.18950646	79.75482376	76.49919634	73.41212922
200610A00006	6/10/2020	1.11	6/10/2027	101.66949	99.281704	96.9634615	94.71232239	92.52594628	90.40208965	88.33860111	86.33341698	84.38455712
200611A00010	6/11/2020	1.08	6/11/2027	101.62258	99.20966652	96.86589663	94.58890041	92.3764063	90.2262338	88.13628917	86.10456149	84.12911878
200611A00011	6/11/2020	1.2	6/9/2028	102.51613	99.13277988	95.87826421	92.74701388	89.73373008	86.83337016	84.04113377	81.35244993	78.76296476
200611A00019	6/11/2020	0.88	12/11/2025	100.42728	99.48160774	98.55363958	97.64287894	96.74885088	95.8710978	95.00917862	94.16266811	93.33115611
200611A00020	6/11/2020	0.81	6/11/2025	100.16597	99.71920069	99.27641104	98.83755115	98.40256876	97.97141256	97.54403212	97.1203779	96.70040124
200612A00004	6/12/2020	1.42	6/12/2040	103.87085	96.15985114	89.2378504	83.01175471	77.4004658	72.33323134	67.74823622	63.59139564	59.81532015
200615A00019	6/17/2020	1.34	6/16/2025	100.41652	99.95538431	99.49847925	99.04575106	98.59714255	98.15259753	97.71206088	97.27547845	96.84279705
200616A00005	6/16/2020	0.74	6/17/2030	100.90396	98.16068227	95.5288857	93.00304506	90.57795033	88.24868656	86.01061511	83.85935623	81.79077287
200623A00028	6/23/2020	1.23	6/23/2038	103.06117	96.50526139	90.53048147	85.07714844	80.09231053	75.52893071	71.34517807	67.503809	63.97162625
200626A00014	6/26/2020	0.62	6/26/2025	100.12659	99.63840228	99.15495717	98.67618996	98.20203297	97.73241986	97.26728554	96.80656615	96.35019906
200629A00020	6/29/2020	1.4	6/28/2030	104.33405	98.97444159	93.92097375	89.15462602	84.65765781	80.41351206	76.40673038	72.62287473	69.04845503
200629A00021	6/29/2020	1.21	6/29/2028	102.58344	99.14601009	95.84148115	92.66401416	89.60806156	86.66834842	83.83985753	81.11781529	78.4976785
200629A00023	6/29/2020	0.95	6/29/2026	100.78861	99.30894101	97.85831894	96.43596591	95.04112963	93.67308405	92.33112813	91.01458483	89.72280004
200708A00011	7/10/2020	2.87	7/10/2031	113.93716	107.325067	101.146715	95.37131824	89.97042788	84.91774606	80.18895255	75.76154635	71.61470075
200709A00002	7/10/2020	1.66	7/10/2025	100.64486	100.1173024	99.59527391	99.0786845	98.5674493	98.06148528	97.56071109	97.06504707	96.57441518
200709A00003	7/10/2020	1.63	7/10/2026	101.85207	100.3348513	98.84774532	97.38992485	95.96059627	94.55899417	93.18438017	91.83604164	90.51329065
200709A00004	7/10/2020	1.4	7/10/2025	100.5071	99.97996209	99.4583489	98.94217164	98.43134556	97.92578764	97.42541658	96.93015274	96.43991814
200709A00005	7/10/2020	2.23	7/10/2030	108.92294	103.4080899	98.20772545	93.30228057	88.67350643	84.30437539	80.17899312	76.28251739	72.6010832
200709A00006	7/10/2020	2.58	7/10/2030	110.85631	105.2887069	100.0377418	95.08373947	90.40835023	85.99445147	81.82605917	77.88824647	74.16706841
200709A00007	7/10/2020	1.67	7/9/2027	103.16386	100.6568116	98.22343392	95.86112916	93.56741071	91.33989489	89.17629597	87.07442151	85.03216785
200709A00008	7/10/2020	1.88	7/10/2026	102.2368	100.7165085	99.22637873	97.76558713	96.33333857	94.92886628	93.55143051	92.20031741	90.87483779
200709A00019	7/9/2020	0.77	7/9/2025	100.1967	99.59433584	98.99922861	98.41125073	97.83027437	97.25617477	96.68883009	96.12812137	95.57393246
200709A00021	7/9/2020	0.83	7/9/2025	100.23315	99.63061471	99.03534003	98.44719648	97.8660562	97.29179438	96.72428918	96.16342161	95.60907547
200709A00025	7/9/2020	1.37	7/9/2030	103.86131	98.89957445	94.2170942	89.79651342	85.62165402	81.677425	77.94974359	74.42546244	71.09230254
200716A00004	7/16/2020	0.97	7/16/2027	101.36309	98.89290904	96.49664603	94.17161857	91.91526507	89.725134	87.59887836	85.53425043	83.52909677
200720A00012	7/20/2020	0.77	7/15/2025	100.17753	99.63774434	99.10376096	98.57549011	98.05284038	97.53572227	97.0240482	96.51773243	96.016691
200720A00034	7/20/2020	0.77	7/21/2025	100.18262	99.62642596	99.07639671	98.53242549	97.99441254	97.4622603	96.93587332	96.41515822	95.90002363

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200720A00035	7/20/2020	1.81	7/20/2035	108.78812	98.78225613	89.78886873	81.69995054	74.41953374	67.86228995	61.95230265	56.62198669	51.81113657
200720A00037	7/22/2020	2.1	7/21/2025	100.92784	100.3692703	99.81688306	99.27057236	98.73023818	98.19578272	97.66711029	97.14412729	96.62674212
200720A00039	7/22/2020	2.48	7/21/2025	101.14076	100.5815115	100.0284506	99.48147146	98.94047408	98.40536055	97.87603514	97.35240416	96.83437597
200720A00042	7/22/2020	2.04	7/21/2026	102.53299	100.9811139	99.4603502	97.96983423	96.50873209	95.07624019	93.67158388	92.29401614	90.94281633
200720A00044	7/22/2020	2.22	7/21/2026	102.81546	101.2612843	99.73825992	98.24552281	96.78223798	95.34760082	93.94083568	92.56119458	91.20795595
200724A00011	7/24/2020	1.41	7/26/2038	104.73528	94.98951146	86.37129303	78.73841627	71.96760885	65.95190513	60.59839525	55.82629628	51.56529804
200730A00011	7/30/2020	1.15	7/28/2028	102.41101	98.90201913	95.531046	92.2919207	89.17878358	86.18606907	83.30848904	80.54101737	77.87887532
200730A00013	7/30/2020	0.74	1/30/2025	100.02535	99.94221925	99.85922492	99.77636938	99.6936523	99.61107334	99.52863217	99.44632845	99.36416186
200803A00011	8/3/2020	0.72	8/4/2025	100.16444	99.57011451	98.98281097	98.40240691	97.82878134	97.26181608	96.70139568	96.14740735	95.59974087
200811A00003	8/11/2020	0.57	8/11/2025	100.12533	99.51146277	98.90509424	98.30609138	97.7143205	97.12965111	96.55195588	95.9811105	95.41699359
200812A00004	8/12/2020	0.59	8/12/2025	100.13825	99.5216082	98.9125357	98.31089448	97.71654905	97.12936721	96.54921994	95.97598129	95.40952832
200813A00019	8/13/2020	1.44	8/13/2030	104.23459	99.18504889	94.42356655	89.93200116	85.69345434	81.69217958	77.91349729	74.34371652	70.97006295
200813A00020	8/13/2020	1.44	8/13/2030	104.23459	99.18504889	94.42356655	89.93200116	85.69345434	81.69217958	77.91349729	74.34371652	70.97006295
200813A00023	8/13/2020	0.86	10/14/2025	100.36706	99.50678483	98.66130164	97.83023257	97.01321064	96.20988126	95.41990168	94.64294053	93.87867732
200814A00003	8/14/2020	0.96	8/14/2035	101.56079	96.37380437	91.56058385	87.08964001	82.93242329	79.06302457	75.45791124	72.09569128	68.9569024
200814A00009	8/18/2020	1.36	8/16/2028	103.20216	99.62985724	96.19947113	92.90458336	89.73910737	86.6972659	83.77357338	80.96281927	78.26005264
200814A00011	8/18/2020	1.58	8/16/2030	105.3614	99.85082627	94.6608008	89.77104094	85.16265121	80.81802178	76.72073418	72.85547449	69.20795337
200818A00004	8/18/2020	0.92	8/18/2026	100.81694	99.20540174	97.6271237	96.08114196	94.5665302	93.08239747	91.62788641	90.20217171	88.80445854
200818A00005	8/18/2020	1.05	8/18/2027	101.63937	99.047813	96.53483806	94.09757797	91.73329098	89.43935377	87.21325541	85.05259166	82.95505968
200818A00006	8/18/2020	1.18	8/18/2028	102.54845	98.98290695	95.5593021	92.27120781	89.11252715	86.07747355	83.16055302	80.3565475	77.66049925
200818A00007	8/18/2020	1.31	8/20/2029	103.60568	99.06520165	94.74796905	90.64184784	86.73542763	83.01797637	79.47939614	76.11018212	72.90138444
200818A00008	8/18/2020	1.5	8/18/2031	105.04708	98.62386923	92.63316162	87.04365646	81.82647154	76.95494607	72.40445882	68.15226192	64.17732916
200818A00009	8/18/2020	1.7	8/18/2033	107.10574	98.82643624	91.24975951	84.31243316	77.95718252	72.13213776	66.79029839	61.88905347	57.38975126
200818A00010	8/18/2020	1.88	8/20/2035	109.53346	99.41874211	90.33332039	82.16674295	74.82094133	68.20878509	62.25281186	56.88411064	52.04133897
200818A00012	8/18/2020	0.97	8/18/2027	101.39793	98.84765692	96.37567123	93.97905208	91.65501268	89.40089017	87.2141391	85.09232525	83.0331199
200824A00020	8/26/2020	1.57	8/26/2025	100.74063	100.0842708	99.43643367	98.79695828	98.16568353	97.54245241	96.92711195	96.319513	95.71951017
200825A00007	8/27/2020	4.79	8/27/2026	107.29854	105.6073158	103.9511589	102.3290411	100.7399762	99.18301642	97.65724997	96.16179962	94.69582099
200826A00019	8/26/2020	0.98	8/26/2026	100.92907	99.29553502	97.69598733	96.12942864	94.59490299	93.09149137	91.61830986	90.17450795	88.75926697
200826A00021	8/26/2020	0.83	8/26/2025	100.25222	99.59765635	98.95160513	98.31389928	97.68437795	97.06288441	96.4492659	95.84337352	95.24506211
200827A00007	8/27/2020	0.77	8/27/2025	100.21344	99.55630254	98.90773894	98.26758658	97.63568273	97.01186886	96.39599044	95.78789688	95.18744136
200828A00002	8/28/2020	0.73	8/28/2026	100.64613	99.00748411	97.4030421	95.8317977	94.29278559	92.78507788	91.3077823	89.86004044	88.44102612
200909A00001	9/9/2020	0.98	9/8/2028	102.13221	98.51181412	95.03763556	91.70296044	88.50142224	85.42698376	82.47391795	79.63678983	76.91043976
200910A00006	9/10/2020	0.96	9/10/2027	101.39273	98.7896627	96.26796473	93.82458857	91.45661995	89.16127332	86.93588515	84.77790766	82.6849029

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
200911A00011	9/11/2020	1.18	9/11/2030	102.87626	97.8206261	93.05701062	88.56682998	84.33278853	80.33877854	76.56979216	73.01184036	69.65187839
200911A00012	9/11/2020	1.18	9/11/2030	102.87626	97.8206261	93.05701062	88.56682998	84.33278853	80.33877854	76.56979216	73.01184036	69.65187839
200911A00013	9/11/2020	0.69	9/11/2025	100.18993	99.42030103	98.66252728	97.91633634	97.18146363	96.45765259	95.74465438	95.04222757	94.35013788
200916A00015	9/16/2020	0.72	9/16/2025	100.19505	99.48359893	98.78221153	98.0906713	97.40877196	96.73631295	96.07309925	95.41894117	94.7736542
200922A00015	9/24/2020	1.09	9/24/2025	100.47495	99.74062293	99.01698338	98.30379871	97.60084366	96.90789942	96.22475336	95.55119885	94.88703503
200922A00027	9/24/2020	1.65	9/23/2025	100.8862	100.1529204	99.43026656	98.71800932	98.01592554	97.3237984	96.64141722	95.96857723	95.30507935
200922A00034	9/24/2020	2.24	9/23/2026	103.18218	101.4528636	99.76066964	98.10446731	96.48317307	94.89574725	93.34119179	91.8185481	90.32689506
200922A00036	9/24/2020	1.55	9/23/2025	100.81245	100.0794665	99.35710991	98.64514693	97.94335444	97.25151568	96.56942002	95.89686272	95.23364477
200922A00037	9/24/2020	2.76	9/23/2025	101.70487	100.968259	100.2423054	99.52678186	98.82146471	98.12613655	97.44058617	96.76460826	96.09800323
200922A00039	9/24/2020	3	9/23/2025	101.88188	101.1445484	100.4178813	99.7016516	98.99563534	98.29961507	97.61337946	96.93672307	96.26944623
200925A00002	9/25/2020	0.74	9/25/2025	100.21664	99.48065667	98.75542251	98.04070772	97.33628484	96.64193294	95.95743735	95.28258948	94.61718659
200925A00008	9/25/2020	0.74	9/25/2025	100.21664	99.48065667	98.75542251	98.04070772	97.33628484	96.64193294	95.95743735	95.28258948	94.61718659
200928A00003	9/28/2020	0.55	9/26/2025	100.13459	99.39545177	98.66715886	97.94947883	97.2421812	96.54504209	95.85784402	95.18037569	94.51243172
200928A00009	9/28/2020	1.51	9/28/2032	105.3164	97.887794	91.03302938	84.70485038	78.86012994	73.45948426	68.46692942	63.84957118	59.57732469
201001A00011	10/1/2020	0.71	6/17/2025	100.12534	99.66225386	99.20344362	98.74885408	98.29842708	97.85210555	97.40983344	96.97155572	96.53721838
201001A00012	10/1/2020	0.74	9/16/2025	100.20941	99.49790519	98.79646129	98.10486512	97.42291039	96.75039653	96.0871285	95.43291662	94.78757636
201007A00008	10/7/2020	1.22	10/7/2030	103.01131	98.04410805	93.36376479	88.95199179	84.7917661	80.86723297	77.16361986	73.66715711	70.36500496
201007A00010	10/7/2020	1.22	10/7/2030	103.01131	98.04410805	93.36376479	88.95199179	84.7917661	80.86723297	77.16361986	73.66715711	70.36500496
201007A00014	10/7/2020	0.8	10/7/2025	100.30545	99.46693169	98.64250424	97.83181163	97.03451198	96.25027469	95.47877995	94.71971834	93.97279042
201015A00003	10/15/2020	0.75	10/15/2025	100.24367	99.45328172	98.67529405	97.909418	97.15537246	96.41288494	95.6816913	94.96153538	94.2521687
201015A00020	10/15/2020	0.94	10/15/2027	101.36774	98.67964317	96.07818807	93.56011235	91.12229648	88.76175496	86.4756298	84.26118434	82.1157974
201015A00024	10/19/2020	1.53	10/18/2027	103.07198	100.299221	97.61470174	95.01510849	92.49727549	90.05817495	87.69491007	85.40470845	83.18491591
201015A00025	10/19/2020	1.54	10/18/2027	103.10016	100.3270056	97.64209559	95.04212085	92.52391535	90.08445103	87.72083081	85.43028203	83.21015025
201015A00030	10/19/2020	2.39	10/18/2027	105.49589	102.6887007	99.97057314	97.33817119	94.78830356	92.31791791	89.92409385	87.60403632	85.35506939
201015A00032	10/19/2020	2.33	10/19/2026	103.47949	101.6777603	99.9160009	98.19304784	96.50777923	94.85911465	93.24601318	91.66747161	90.12252275
201019A00005	10/19/2020	0.79	10/20/2025	100.28131	99.47718434	98.68589162	97.90712347	97.1405844	96.38598818	95.64305741	94.91152326	94.1911251
201021A00011	10/21/2020	1.11	10/21/2027	101.89191	99.12812798	96.45265734	93.86218493	91.35354391	88.92370464	86.56976782	84.28895803	82.07861764
201021A00012	10/21/2020	1.85	10/19/2035	109.26416	99.02487657	89.84212053	81.60104031	74.19981742	67.5481261	61.56578461	56.18157055	51.3321798
201022A00012	10/26/2020	2.25	10/24/2030	109.30286	103.5045118	98.05138959	92.92117146	88.09309279	83.54782616	79.2673748	75.23497447	71.43500312
201028A00003	10/30/2020	1.42	2/27/2026	101.13583	99.97600091	98.84260515	97.73474634	96.65156976	95.59225843	94.55603106	93.54214011	92.54987
201028A00005	10/30/2020	1.85	10/31/2025	101.18711	100.3489728	99.52466514	98.71384576	97.9161859	97.13136739	96.35908227	95.59903233	94.85092875
201028A00011	10/28/2020	0.91	4/28/2026	100.64193	99.32836622	98.03854392	96.77186309	95.52774375	94.30562508	93.10496462	91.92523754	90.76593588
201029A00002	10/29/2020	0.59	10/29/2025	100.19009	99.36106577	98.54566933	97.74356823	96.95443973	96.17797143	95.4138609	94.66181528	93.92155089

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
201029A00004	10/29/2020	1.49	10/29/2038	105.58179	95.63845394	86.86197185	79.10301286	72.23241757	66.13835804	60.72391249	55.90499158	51.6085636
201030A00001	11/2/2020	2.54	10/29/2040	121.44836	106.3545799	93.39613403	82.25472177	72.66120581	64.38779411	57.24149611	51.05864258	45.7002918
201030A00002	11/2/2020	2.8	10/29/2040	125.32573	109.947229	96.73302899	85.36142953	75.56033051	67.09935321	59.78324552	53.44635803	47.94801281
201030A00003	11/2/2020	2.58	10/29/2040	122.04488	106.9072951	93.90950248	82.73267681	73.10722499	64.80495705	57.63253448	51.42598342	46.04609503
201030A00004	11/2/2020	2.56	10/29/2040	121.74662	106.6309375	93.65281826	82.49369929	72.8842154	64.59637558	57.4370153	51.242313	45.87319341
201030A00005	11/2/2020	2.49	10/29/2040	120.70272	105.6636858	92.75442346	81.65727797	72.10368182	63.86634043	56.75269815	50.59946653	45.26803776
201030A00012	10/30/2020	0.63	10/30/2025	100.2245	99.39260239	98.57442141	97.76962154	96.97787699	96.19887248	95.43230281	94.67787245	93.93529516
201030A00016	10/30/2020	1.14	10/8/2027	101.95959	99.22860749	96.58390968	94.02223965	91.54048778	89.13568274	86.8049843	84.5456765	82.35516125
201030A00017	10/30/2020	1.14	10/15/2027	101.96881	99.21951686	96.55761132	93.97980721	91.48296388	89.06407843	86.72027864	84.44881637	82.24706129
201030A00018	10/30/2020	1.15	10/22/2027	102.00632	99.23831363	96.55881327	93.96450321	91.45221085	89.01890075	86.66166781	84.37773082	82.16442642
201030A00019	10/30/2020	1.15	10/29/2027	102.01573	99.22940177	96.53270176	93.92227756	91.39492422	88.9475734	86.57728676	84.28124971	82.05676547
201103A00005	11/3/2020	0.89	11/4/2030	101.12932	98.18521634	95.36816834	92.67152947	90.08905257	87.61486164	85.24342727	82.96954381	80.78830822
201105A00003	11/6/2020	2.24	11/4/2030	109.27041	103.4447738	97.96763944	92.81639487	87.97000805	83.4089051	79.11486227	75.07090646	71.26122349
201105A00016	11/9/2020	2.18	11/8/2027	104.99348	102.1374655	99.37378661	96.69897318	94.10970786	91.60281514	89.17525448	86.82411383	84.54660342
201109A00012	11/9/2020	1.39	11/8/2030	103.98598	98.76578223	93.85418141	89.23113841	84.87802081	80.7774962	76.91343492	73.27082061	69.83566781
201110A00003	11/10/2020	1.12	11/10/2027	101.89659	99.13798727	96.47018869	93.8897032	91.39319322	88.97746792	86.63947587	84.37629811	82.18514165
201116A00024	11/18/2020	2.36	11/15/2034	113.88955	104.2170452	95.46047161	87.52790629	80.33709668	73.81439779	67.89383248	62.51625852	57.62862972
201116A00025	11/18/2020	1.96	11/15/2032	108.8446	101.1657709	94.0860738	87.55567685	81.52912725	75.96494709	70.82526757	66.07549859	61.68403004
201118A00009	11/18/2020	0.61	11/18/2025	100.22512	99.34169627	98.47374442	97.62086508	96.78266847	95.95877817	95.14883053	94.35247412	93.56936925
201119A00021	11/23/2020	2.22	11/21/2030	109.19447	103.3267558	97.81269966	92.62919102	87.75474023	83.16935857	78.85444616	74.79268892	70.96796357
201119A00023	11/23/2020	2.23	11/21/2030	109.2533	103.3838731	97.86818335	92.68311075	87.80716201	83.22034502	78.90405671	74.84098001	71.01498878
201123A00010	11/25/2020	1.48	11/24/2025	100.94986	100.0475982	99.16139378	98.29081876	97.43546263	96.59492913	95.76883565	94.95681265	94.1585031
201123A00011	11/25/2020	1.41	11/24/2025	100.88622	99.9842737	99.09837851	98.22810892	97.37305448	96.53281901	95.70701997	94.8952879	94.09726584
201203A00005	12/3/2020	0.78	12/3/2026	100.86728	98.96686834	97.11135022	95.29939464	93.52972167	91.80109752	90.11233246	88.462279	86.84983006
201204A00015	12/8/2020	1.07	12/8/2025	100.60349	99.66502651	98.74397175	97.83984521	96.95218375	96.08054096	95.22448647	94.38360519	93.55749665
201207A00009	12/7/2020	1.01	12/7/2027	101.60674	98.78897175	96.06605402	93.43425453	90.89000844	88.42991171	86.05071286	83.74930513	81.52271916
201207A00021	12/7/2020	1.85	12/7/2050	110.64418	97.81520072	86.99981817	77.83748282	70.03744104	63.36447584	57.62768153	52.67160625	48.36924553
201208A00029	12/10/2020	1.52	12/9/2025	101.03308	100.0897097	99.16387942	98.25510212	97.36291005	96.48685243	95.62649468	94.78141771	93.95121724
201210A00021	12/10/2020	0.89	12/10/2027	101.54227	98.64646972	95.84750483	93.14162058	90.52523225	87.99491335	85.54738769	83.17952194	80.88831852
201211A00001	12/11/2020	0.95	12/11/2030	101.92954	97.1253357	92.60053793	88.33704036	84.31801535	80.52781442	76.95187927	73.57665999	70.38953987
201215A00001	12/15/2020	0.76	12/15/2025	100.31638	99.36048054	98.42268135	97.50247168	96.59936052	95.71287499	94.84255952	93.98797504	93.14869826
201216A00004	12/16/2020	0.74	9/8/2025	100.20298	99.5132369	98.83295177	98.16192654	97.49997314	96.84690855	96.20255467	95.56673814	94.93929013
201216A00013	12/16/2020	0.59	12/16/2025	100.22891	99.26967311	98.32867316	97.40539052	96.49932881	95.61001003	94.73697375	93.87977625	93.03798984

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
201218A00014	12/18/2020	0.57	12/18/2025	100.21079	99.24625122	98.30014388	97.37194862	96.46116087	95.56729485	94.68988273	93.82847376	92.98263353
201221A00014	12/21/2020	0.76	12/19/2025	100.32022	99.35349836	98.40528761	97.47505796	96.56230201	95.6665313	94.78727545	93.92408128	93.07651205
201221A00015	12/21/2020	0.88	12/4/2026	100.90885	99.00829689	97.15264337	95.34056429	93.57077889	91.84205257	90.15319486	88.50305755	86.89053287
201221A00022	12/21/2020	0.51	12/19/2025	100.15661	99.13666573	98.13771784	97.15911765	96.20024579	95.26050783	94.33933304	93.43617325	92.55050173
201223A00012	12/23/2020	0.91	12/18/2026	100.98261	99.04486541	97.15375339	95.30787072	93.50586245	91.74642346	90.02829627	88.35026895	86.71117312
201223A00013	12/23/2020	0.9	12/11/2026	100.95526	99.03601722	97.16253948	95.33346235	93.54746821	91.80328738	90.09969605	88.43551432	86.80960426
201228A00013	12/28/2020	0.84	12/30/2030	100.97725	97.99705293	95.14707475	92.42042592	89.8106343	87.31161634	84.91765108	82.62335606	80.42366503
210104A00006	11/22/2021	0.88	11/20/2026	100.88972	99.02674718	97.20698247	95.42917226	93.69210598	91.99461579	90.33557483	88.7138954	87.12852745
210104A00007	11/23/2021	0.88	11/23/2026	100.89424	99.02312462	97.19558199	95.41033888	93.66617001	91.96189352	90.29636918	88.66849659	87.07721353
210104A00009	12/20/2021	0.89	12/18/2026	100.94296	99.00561203	97.11489479	95.26939932	93.46777087	91.70870454	89.99094304	88.31327463	86.67453112
210104A00010	11/22/2021	0.88	11/20/2026	100.88972	99.02674718	97.20698247	95.42917226	93.69210598	91.99461579	90.33557483	88.7138954	87.12852745
210104A00011	11/23/2021	0.88	11/23/2026	100.89424	99.02312462	97.19558199	95.41033888	93.66617001	91.96189352	90.29636918	88.66849659	87.07721353
210104A00012	12/20/2021	0.89	12/18/2026	100.94296	99.00561203	97.11489479	95.26939932	93.46777087	91.70870454	89.99094304	88.31327463	86.67453112
210107A00007	1/7/2021	0.84	1/7/2026	100.43577	99.35316023	98.29397077	97.25744763	96.24286778	95.2495387	94.27679676	93.32400573	92.39055538
210114A00009	1/19/2021	2.66	1/17/2030	110.57232	105.4747856	100.6448693	96.06710718	91.72700993	87.61099615	83.70633053	80.00106672	76.48399432
210125A00006	1/27/2021	2.16	1/26/2027	103.6406	101.572638	99.55627082	97.5898666	95.67185924	93.80074351	91.9750722	90.19345342	88.45454803
210125A00007	1/27/2021	2.98	1/27/2031	113.94338	107.7642922	101.9653227	96.5210347	91.4078289	86.60379643	82.08858942	77.84330181	73.85035994
210127A00008	1/27/2021	0.93	1/27/2027	101.07091	99.02776267	97.03576896	95.0933102	93.19883043	91.35083434	89.54788434	87.78859788	86.07164491
210127A00009	1/27/2021	1.3	7/27/2029	103.53145	99.05377124	94.79378076	90.73977937	86.88075617	83.20634695	79.70679265	76.3729007	73.19600914
210127A00010	1/27/2021	1.41	7/26/2030	104.39862	98.96734435	93.84980338	89.02629423	84.47844922	80.1891404	76.14238942	72.32328455	68.71790408
210129A00013	1/29/2021	0.65	1/9/2025	100.006	99.98104464	99.95612019	99.93122296	99.90635289	99.88150993	99.85669405	99.83190518	99.80714329
210201A00001	2/1/2021	0.77	12/16/2025	100.32704	99.36838404	98.42793178	97.50516739	96.59959577	95.71074016	94.83814126	93.9813565	93.1399592
210201A00002	2/1/2021	1.19	2/1/2036	102.37931	96.93332976	91.8952549	87.22943306	82.90365187	78.88878469	75.15847154	71.68883524	68.45822849
210201A00003	2/2/2021	0.74	10/15/2025	100.23569	99.44533227	98.6673791	97.90153719	97.1475254	96.40507129	95.67391069	94.95378745	94.24445312
210201A00004	2/3/2021	1.15	2/3/2025	100.06728	99.97304463	99.87899484	99.78512616	99.69143808	99.59793006	99.50460158	99.41145211	99.31848112
210201A00012	2/3/2021	0.75	11/17/2025	100.2786	99.39860332	98.53395632	97.68426404	96.84914129	96.02821597	95.22112858	94.42753166	93.64708929
210208A00004	2/11/2021	0.76	10/15/2025	100.25166	99.46123117	98.68320899	97.91729881	97.16321951	96.4206986	95.68947192	94.9692833	94.25988427
210208A00008	2/11/2021	0.78	11/17/2025	100.3053	99.42516696	98.56039281	97.71057493	96.87532807	96.05428013	95.24707155	94.45335486	93.67279412
210209A00029	2/12/2021	0.8	12/15/2025	100.35507	99.39896711	98.46096927	97.54056353	96.63725883	95.75058226	94.88007818	94.02530746	93.18584678
210212A00004	2/12/2021	1.1	2/12/2036	102.31464	96.85979311	91.81416137	87.14192293	82.8107239	78.79131349	75.0572228	71.584479	68.35135079
210212A00006	2/12/2021	0.77	2/12/2026	100.37383	99.20677906	98.06697193	96.95346283	95.86534771	94.80176356	93.76188612	92.74492774	91.75013537
210212A00007	2/12/2021	0.76	2/12/2026	100.36021	99.1992209	98.06528804	96.95746848	95.87486537	94.81662256	93.78192233	92.76998326	91.78005818
210212A00008	2/12/2021	0.95	10/13/2026	100.9625	99.20005681	97.47649379	95.79065726	94.14143928	92.52777425	90.94863686	89.40304015	87.89003373

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
210212A00014	2/17/2021	1.38	2/17/2026	101.0677	99.9351766	98.82788125	97.74498042	96.68567527	95.64920153	94.6348276	93.64185284	92.66960596
210212A00016	2/17/2021	1.32	2/18/2025	100.1195	99.98374485	99.84837081	99.71337475	99.57875504	99.44451011	99.31063834	99.17713817	99.04400803
210216A00006	2/16/2021	1.44	2/15/2030	104.85997	99.81417248	95.03937757	90.51963544	86.24002175	82.18656358	78.34617353	74.70658893	71.25631533
210216A00007	2/16/2021	1.3	2/16/2029	103.6328	99.56116685	95.6707287	91.95246331	88.39784524	84.99881908	81.74777079	78.63750079	75.66119904
210216A00008	2/16/2021	0.71	2/17/2026	100.39151	99.26173467	98.15717649	97.07700117	96.02040921	94.98663572	93.97494856	92.98464657	92.01505802
210216A00009	2/16/2021	0.92	2/16/2027	101.26082	99.15543013	97.10379334	95.10416526	93.15487355	91.25431294	89.40094201	87.59328002	85.82990405
210216A00011	2/17/2021	0.83	12/15/2025	100.38408	99.42783205	98.4896852	97.56913241	96.66568257	95.77886271	94.90821717	94.05330678	93.21370816
210217A00005	2/17/2021	0.83	2/14/2031	101.19506	98.12447783	95.19136206	92.38828122	89.70825996	87.1447502	84.69160202	82.34303673	80.09362191
210218A00010	2/18/2021	1.72	2/18/2031	106.34261	100.3309694	94.69644459	89.41344735	84.45825691	79.80887263	75.44488042	71.34733023	67.49862366
210218A00011	2/22/2021	0.85	10/24/2025	100.33527	99.520046	98.71800286	97.92881831	97.15218519	96.38780603	95.63539272	94.89466611	94.16535567
210219A00004	2/19/2021	0.91	2/19/2026	100.53162	99.39699308	98.28778072	97.20313953	96.14226091	95.10437139	94.08873073	93.09463015	92.12139068
210219A00008	2/22/2021	0.86	12/1/2025	100.39579	99.47729753	98.57549912	97.68994178	96.82019034	95.96582508	95.12644101	94.3016472	93.49106626
210224A00002	2/25/2021	0.88	11/3/2025	100.37402	99.53149763	98.70303169	97.88827593	97.08689251	96.2985546	95.52294591	94.75976035	94.00870152
210224A00003	2/26/2021	0.9	12/3/2025	100.43562	99.51152668	98.60432646	97.71356167	96.83878923	95.97958188	95.13552743	94.30622814	93.49130008
210224A00004	2/26/2021	0.91	12/18/2025	100.46558	99.50080059	98.55443525	97.62596289	96.71488	95.82070184	94.94296152	94.0812092	93.23501135
210224A00006	2/26/2021	0.88	10/21/2025	100.3558	99.54863197	98.7543833	97.97274548	97.20342007	96.44611797	95.70055908	94.96647195	94.24359343
210225A00003	3/1/2021	0.93	9/24/2025	100.3565	99.62265734	98.8994969	98.18678646	97.48430084	96.79182132	96.10913534	95.43603636	94.77232358
210225A00006	2/25/2021	0.98	2/25/2026	100.61822	99.46697457	98.34186822	97.24202142	96.16659198	95.11477476	94.08579962	93.07892962	92.09345917
210225A00007	2/25/2021	1.79	8/23/2030	106.55164	100.9902787	95.75276962	90.81858022	86.16858865	81.78497697	77.65113542	73.75157407	70.07184151
210225A00012	3/1/2021	0.91	8/25/2025	100.3038	99.65177708	99.00819291	98.37288877	97.74570569	97.12648874	96.51508689	95.91135293	95.31514333
210225A00013	3/1/2021	0.93	10/6/2025	100.37364	99.60712257	98.85225192	98.10876706	97.37641196	96.65493823	95.94410482	95.24367778	94.55342993
210225A00016	3/1/2021	0.88	7/15/2025	100.23734	99.69736509	99.16319748	98.63474381	98.11191263	97.59461445	97.08276166	96.5762685	96.07505099
210226A00002	2/26/2021	0.86	2/26/2025	100.06599	99.90817832	99.75086706	99.5940524	99.437732	99.28190354	99.12656472	98.97171322	98.81734678
210226A00004	3/1/2021	1.04	12/5/2025	100.56985	99.63967144	98.72659558	97.83015609	96.94990181	96.08539776	95.23622443	94.40197708	93.5822651
210226A00012	2/26/2021	2.31	2/26/2036	114.32416	103.5181362	93.85113052	85.19630808	77.44158755	70.48785487	64.24740307	58.6425668	53.60452639
210302A00005	3/5/2021	0.92	9/10/2025	100.33086	99.63519247	98.94912987	98.27247802	97.60504427	96.94664121	96.29708645	95.65620252	95.02381667
210303A00006	3/4/2021	0.97	10/10/2025	100.41114	99.63359379	98.86803793	98.11419354	97.37179347	96.64057864	95.92029773	95.21070692	94.51156957
210304A00002	3/5/2021	0.93	7/10/2025	100.25807	99.73169315	99.2108306	98.69539841	98.18531188	97.68048806	97.18084573	96.68630531	96.19678887
210304A00006	3/4/2021	1.02	3/4/2026	100.6731	99.50275855	98.35942206	97.24216369	96.1501001	95.08238745	94.03821917	93.01682396	92.01746387
210305A00006	3/8/2021	1.02	8/11/2025	100.35482	99.74076232	99.13420137	98.53499751	97.94301738	97.35813086	96.78021092	96.20913356	95.64477772
210305A00013	3/5/2021	2.41	3/5/2036	115.4239	104.540367	94.80419471	86.08751623	78.27734948	71.27379874	64.98847792	59.34313104	54.26842426
210311A00007	3/11/2021	1.06	3/11/2026	100.72975	99.54031694	98.37876573	97.24412803	96.13547763	95.05193039	93.99264186	92.95680509	91.94364855
210312A00008	3/12/2021	1.13	3/12/2026	100.81561	99.62294591	98.45830399	97.32070328	96.20921122	95.12293764	94.06103244	93.02268335	92.00711383

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
210315A00003	3/15/2021	1.13	3/13/2026	100.81712	99.62176999	98.45456623	97.31452304	96.20070166	95.11220615	94.04818095	93.00780865	91.9903079
210319A00003	3/19/2021	0.95	3/19/2025	100.11013	99.89432918	99.67946877	99.46554546	99.25255305	99.04048541	98.82933647	98.6191002	98.40977062
210319A00009	3/19/2021	1.1	3/19/2026	100.84491	99.58550018	98.35122214	97.14133621	95.95512866	94.79191382	93.65103273	92.53185181	91.43376161
210324A00002	3/24/2021	2.06	3/24/2031	108.48994	102.325516	96.55170616	91.14170436	86.07068343	81.31563927	76.85524722	72.66973058	68.74074013
210324A00003	3/24/2021	1.18	3/24/2026	100.89578	99.67046252	98.47468754	97.30740082	96.16759462	95.05430824	93.96662526	92.90367105	91.86461041
210330A00021	3/30/2021	2.16	3/28/2031	109.11856	102.9248468	97.12384773	91.68858086	86.59406236	81.81714534	77.33637487	73.13185535	69.18512893
210330A00022	3/30/2021	1.27	3/30/2026	101.01884	99.77662809	98.56474473	97.38208917	96.22761513	95.10032572	93.99927055	92.92354304	91.87227792
210331A00007	3/31/2021	1.25	3/31/2031	102.29748	99.15783847	96.1602277	93.29689467	90.56056711	87.94442215	85.44205553	83.04745297	80.75496381
210407A00012	4/7/2021	0.94	4/7/2025	100.13447	99.86626818	99.59950712	99.33417702	99.07026633	98.80776362	98.54665758	98.28693703	98.02859091
210407A00013	4/7/2021	1.23	4/7/2026	100.99522	99.73266516	98.4988802	97.29288732	96.11374836	94.96056727	93.83248772	92.72869095	91.6483937
210408A00007	4/8/2021	1.05	4/8/2031	101.91717	98.74494179	95.71796756	92.82822728	90.06820782	87.43086497	84.90959096	82.49818437	80.19082239
210409A00010	4/9/2021	1.05	4/9/2031	101.90057	98.76255321	95.76752954	92.90762878	90.17547456	87.56415008	85.0671662	82.67843212	80.39222813
210420A00009	4/20/2021	1.08	12/5/2025	100.60743	99.67706234	98.76379835	97.86717312	96.98673543	96.12205028	95.27269808	94.43827407	93.61838759
210420A00010	4/20/2021	1.08	12/12/2025	100.62035	99.67098076	98.7394284	97.82519347	96.92779672	96.04677643	95.18168763	94.33210134	93.49760386
210420A00035	4/20/2021	1.92	4/20/2034	106.58097	100.8816621	95.6025814	90.70811285	86.16594167	81.94672455	78.02379707	74.37291171	70.97200289
210423A00001	4/23/2021	1.72	4/23/2036	105.94171	100.2144241	94.92244414	90.02718969	85.49385594	81.29101617	77.39026805	73.76591943	70.39470878
210423A00003	4/23/2021	1.31	4/23/2031	102.77068	99.57139138	96.51863024	93.60431105	90.82085233	88.16114585	85.61852384	83.1867287	80.8598849
210428A00006	4/28/2021	1.23	4/28/2026	101.06991	99.75334182	98.46056451	97.19097862	95.94400279	94.71907489	93.51565117	92.33320558	91.17122898
210428A00007	4/28/2021	1.74	10/27/2028	104.8009	101.0101438	97.37656558	93.89284765	90.55205557	87.34761162	84.27327453	81.32312049	78.49152532
210428A00008	4/28/2021	1.93	4/26/2030	107.12709	101.8533236	96.87080403	92.16199016	87.71048225	83.50094325	79.5190247	75.75129817	72.18519183
210428A00015	4/28/2021	2.02	4/28/2031	108.30168	102.0532859	96.20648896	90.73345949	85.60842598	80.80751666	76.30861045	72.09120039	68.13626838
210429A00005	4/29/2021	2.08	4/29/2031	108.68177	102.4189887	96.55867022	91.07292647	85.93593054	81.12375908	76.61424305	72.38683092	68.42246313
210507A00008	5/7/2021	1.94	5/7/2031	107.80912	101.5535368	95.70172757	90.22560453	85.09917059	80.29835074	75.80084096	71.58596974	67.63457104
210507A00009	5/7/2021	2.02	5/7/2032	108.95915	101.7483589	95.06670642	88.87265827	83.12813853	77.79822384	72.85086793	68.25665143	63.98855465
210512A00011	5/12/2021	1.16	5/12/2026	101.03724	99.64173929	98.27273286	96.92952548	95.61144956	94.31786015	93.04813397	91.80166849	90.57788107
210512A00012	5/12/2021	1.16	5/12/2026	101.03724	99.64173929	98.27273286	96.92952548	95.61144956	94.31786015	93.04813397	91.80166849	90.57788107
210514A00007	5/14/2021	0.95	5/15/2028	101.0428	99.31440007	97.633821	95.99935026	94.40934957	92.86225132	91.35655503	89.89082392	88.46368172
210514A00010	5/14/2021	1.34	5/14/2031	102.85706	99.65919682	96.60849852	93.69678997	90.91641312	88.2601909	85.72139376	83.29370863	80.97121035
210514A00033	5/18/2021	2.8	5/18/2028	107.92668	104.508383	101.2172151	98.04778907	94.99497407	92.05388254	89.21985742	86.48846003	83.85545863
210518A00023	5/18/2021	1.17	5/18/2026	101.03089	99.66214907	98.31833837	96.99883404	95.7030345	94.43035761	93.18023982	91.95213551	90.74551619
210525A00004	5/25/2021	1.02	12/19/2025	100.57456	99.6065083	98.65697785	97.72544591	96.81140473	95.91436546	95.03385735	94.16942688	93.32063699
210526A00014	5/26/2021	1.01	12/19/2025	100.56478	99.59677714	98.64729745	97.71581561	96.80182385	95.90483338	95.02437343	94.15999051	93.31124757
210526A00017	5/26/2021	2.13	5/26/2033	110.58897	102.3680811	94.82505543	87.90040442	81.54014448	75.69526117	70.32122904	65.37758011	60.82751577

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
210526A00018	5/26/2021	1.11	5/26/2026	100.9613	99.57203751	98.20842219	96.86980867	95.55557017	94.26510042	92.99781279	91.75313952	90.53053099
210527A00019	5/27/2021	1	5/27/2026	100.91944	99.52603436	98.1584264	96.81596196	95.49800916	94.20395685	92.93321375	91.68520768	90.45938474
210527A00026	6/1/2021	2.78	6/1/2028	107.93825	104.4827108	101.1570011	97.95556105	94.87310033	91.90458209	89.04520953	86.29041308	83.63583838
210601A00002	6/1/2021	0.9	6/2/2025	100.19521	99.77300465	99.35435014	98.93919788	98.52750409	98.11922572	97.71432043	97.31274656	96.91446315
210603A00008	6/3/2021	1.74	6/3/2036	105.9619	100.3310375	95.12715201	90.31229236	85.85223946	81.7161124	77.87601684	74.30673268	70.98543661
210603A00015	6/7/2021	2.71	6/7/2028	107.73186	104.2636019	100.9262866	97.71428367	94.6222323	91.64502998	88.77781859	86.01597129	83.35508029
210608A00017	6/10/2021	2.67	6/8/2029	109.56956	105.084314	100.8097871	96.73499187	92.84956725	89.14374276	85.60830158	82.23454636	79.01426729
210609A00007	6/11/2021	2.6	6/11/2029	109.27258	104.7858378	100.5103536	96.43508168	92.54961542	88.84414229	85.30940698	81.93667687	78.7177098
210609A00013	6/11/2021	1.64	6/11/2025	100.53904	100.0912814	99.64751465	99.20768388	98.77173679	98.339622	97.911289	97.48668821	97.0657709
210610A00012	6/11/2021	1.9	6/10/2026	102.14107	100.7025883	99.29137693	97.90673085	96.54796602	95.21442139	93.905458	92.62045803	91.3588239
210610A00014	6/11/2021	2.03	6/10/2026	102.33037	100.8904499	99.47782526	98.09179006	96.73165962	95.39677229	94.0864885	92.80018982	91.53727813
210611A00006	6/11/2021	1.85	6/11/2031	107.27665	100.9505166	95.03868397	89.51192225	84.34320872	79.50754683	74.98180466	70.74456694	66.7759996
210611A00010	6/11/2021	1.02	6/11/2026	100.88673	99.41974299	97.98179839	96.57209736	95.18987324	93.83438674	92.50492474	91.20079913	89.92134566
210611A00011	6/11/2021	1.02	6/11/2026	100.88673	99.41974299	97.98179839	96.57209736	95.18987324	93.83438674	92.50492474	91.20079913	89.92134566
210611A00012	6/11/2021	1.02	6/11/2026	100.88673	99.41974299	97.98179839	96.57209736	95.18987324	93.83438674	92.50492474	91.20079913	89.92134566
210616A00006	2/11/2022	0.86	2/11/2025	100.04898	99.93264416	99.81659586	99.70082935	99.58534358	99.47013749	99.35521004	99.24056018	99.12618688
210616A00007	3/18/2022	0.9	3/18/2025	100.09802	99.88498949	99.67288159	99.46168786	99.25140232	99.04201907	98.83353223	98.62593598	98.41922456
210616A00008	5/2/2022	0.95	5/2/2025	100.17252	99.83546557	99.50067083	99.16811645	98.83778	98.50963936	98.1836727	97.85985848	97.53817543
210616A00009	2/11/2022	0.86	2/11/2025	100.04898	99.93264416	99.81659586	99.70082935	99.58534358	99.47013749	99.35521004	99.24056018	99.12618688
210616A00011	5/2/2022	0.95	5/2/2025	100.17252	99.83546557	99.50067083	99.16811645	98.83778	98.50963936	98.1836727	97.85985848	97.53817543
210616A00012	3/18/2022	0.9	3/18/2025	100.09802	99.88498949	99.67288159	99.46168786	99.25140232	99.04201907	98.83353223	98.62593598	98.41922456
210621A00008	6/21/2021	1.04	6/23/2025	100.28896	99.80899095	99.33360512	98.8627398	98.39633068	97.93431469	97.47662992	97.02321565	96.57401225
210623A00028	6/23/2021	1.22	6/23/2026	101.18171	99.71523219	98.27723527	96.86696129	95.48367998	94.12668622	92.79529899	91.4888603	90.20673427
210624A00004	6/24/2021	1.01	6/24/2025	100.27603	99.79335676	99.31531882	98.84185111	98.37288831	97.9083663	97.44822221	96.99239434	96.54082215
210624A00005	6/24/2021	1.22	6/24/2026	101.18408	99.71487025	98.27424488	96.86144218	95.47572801	94.11639353	92.78275417	91.4741486	90.18993766
210624A00022	6/24/2021	0.87	6/24/2025	100.24661	99.76356399	99.28515956	98.81133485	98.34202426	97.87716347	97.41668937	96.96054002	96.50865467
210624A00025	6/24/2021	1.43	6/24/2027	102.51782	100.0587534	97.67106964	95.35228701	93.10002867	90.91201449	88.78605651	86.72005459	84.71199229
210624A00026	6/24/2021	1.6	6/23/2028	103.93862	100.4933396	97.18041162	93.99405368	90.92877008	87.97933375	85.14077161	82.40835078	79.77756564
210629A00005	6/29/2021	1.25	6/29/2026	101.24119	99.75796086	98.30384528	96.87805915	95.47984856	94.10848585	92.76326849	91.44351797	90.14857876
210629A00009	6/29/2021	1.14	12/31/2025	100.71608	99.7148104	98.73332208	97.77103009	96.82737621	95.90182362	94.99385597	94.10297632	93.22870634
210629A00012	6/29/2021	1.14	12/29/2025	100.71206	99.71622329	98.73995868	97.7826908	96.8438699	95.92296726	95.01947418	94.13290103	93.26277639
210629A00014	6/29/2021	1.78	12/28/2029	106.08445	101.1500491	96.47402537	92.04153072	87.83864872	83.85232835	80.07032574	76.48115013	73.07401373
210629A00015	6/29/2021	1.89	6/27/2031	107.55455	101.1790063	95.22352383	89.65828388	84.45572882	79.59038084	75.03867489	70.77880597	66.79058926

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
210701A00007	7/1/2021	1.22	7/1/2026	101.20058	99.71232051	98.25335068	96.82288174	95.42015268	94.04442906	92.69500192	91.3711866	90.07232175
210706A00006	7/6/2021	1.15	7/6/2026	101.10503	99.60433692	98.13332499	96.69118615	95.27714301	93.8904456	92.53037023	91.19621827	89.8873151
210706A00014	7/6/2021	1.15	6/26/2026	101.0838	99.60994518	98.16486955	96.74780257	95.35800264	93.99475386	92.65736492	91.34516801	90.05751786
210706A00015	7/6/2021	1.06	12/31/2025	100.63516	99.63433465	98.6532797	97.69141518	96.74818296	95.82304639	94.91548922	94.02501465	93.15114445
210707A00002	7/7/2021	1.12	6/26/2026	101.03879	99.56528768	98.12055763	96.70383027	95.31436415	93.95144355	92.61437727	91.30249768	90.01515964
210707A00008	7/9/2021	2.44	7/7/2031	111.13571	104.6208001	98.53448654	92.84631609	87.52814966	82.55397612	77.89974096	73.54318958	69.46372389
210709A00002	7/9/2021	1.36	7/9/2029	104.14613	99.68916587	95.44715441	91.40863222	87.56280531	83.89950832	80.40916454	77.08274868	73.91175217
210709A00005	7/9/2021	1.69	7/9/2031	106.27088	99.90651241	93.96407329	88.41345228	83.22683748	78.37852621	73.84475491	69.60354341	65.63455258
210709A00006	7/13/2021	2.4	7/11/2031	110.8865	104.3694941	98.28196268	92.59334559	87.27540681	82.30204877	77.64913987	73.29435678	69.21704022
210712A00008	6/27/2022	1.05	6/27/2025	100.30044	99.80947388	99.32330315	98.84185392	98.36505767	97.89284725	97.42515675	96.96192153	96.5030782
210712A00010	6/27/2022	1.05	6/27/2025	100.30044	99.80947388	99.32330315	98.84185392	98.36505767	97.89284725	97.42515675	96.96192153	96.5030782
210714A00012	7/14/2021	1.12	7/14/2026	101.10119	99.54789531	98.02637231	96.5357059	95.075017	93.6434598	92.24022024	90.86451443	89.51558728
210714A00013	7/14/2021	1.12	7/14/2026	101.10119	99.54789531	98.02637231	96.5357059	95.075017	93.6434598	92.24022024	90.86451443	89.51558728
210714A00014	7/14/2021	1.12	7/14/2026	101.10119	99.54789531	98.02637231	96.5357059	95.075017	93.6434598	92.24022024	90.86451443	89.51558728
210714A00015	7/14/2021	1.11	7/14/2026	101.07296	99.53700792	98.03241581	96.55828494	95.1137479	93.69797013	92.31014837	90.94950916	89.61530741
210714A00020	7/14/2021	0.9	3/14/2025	100.09286	99.89087289	99.68971388	99.48937903	99.2898632	99.09116131	98.8932683	98.69617916	98.49988894
210719A00004	7/19/2021	1	4/20/2026	100.73893	99.44503182	98.17678203	96.93343162	95.71426185	94.51858191	93.34572745	92.19505936	91.06596254
210719A00009	7/19/2021	1.04	7/17/2026	100.95657	99.42807774	97.93013876	96.4619109	95.02257998	93.61136122	92.22749788	90.87025999	89.53894319
210720A00035	7/22/2021	2.27	7/21/2031	110.06399	103.5482638	97.46390793	91.78010738	86.46839926	81.50248435	76.85805196	72.51261983	68.44538771
210721A00009	7/21/2021	1.7	7/21/2031	106.34454	99.94833924	93.97787721	88.40265809	83.19451744	78.32743548	73.77736324	69.5220637	65.5409665
210722A00001	7/22/2021	1.1	7/22/2026	101.05981	99.51729794	98.00577137	96.52436572	95.07224923	93.64862042	92.25270673	90.88376321	89.54107124
210722A00008	7/21/2023	1.84	7/22/2030	106.78642	101.2995872	96.12810144	91.2522216	86.65354276	82.31489889	78.22027308	74.35471474	70.70426321
210722A00009	7/21/2023	1.96	7/22/2032	108.64535	101.259223	94.4290956	88.11021789	82.26166169	76.84597363	71.82886357	67.17892243	62.86736653
210729A00003	7/29/2021	1.11	7/29/2026	101.08936	99.5281508	97.99851769	96.49956888	95.03044816	93.59033089	92.17842257	90.79395738	89.43619697
210729A00004	7/29/2021	1.74	7/29/2031	106.61221	100.1877221	94.19186758	88.59386183	83.3652861	78.47989123	73.91342127	69.6434524	65.64924563
210729A00006	7/29/2021	1.87	11/30/2032	108.16638	100.4764555	93.39002819	86.85663456	80.83027092	75.26897705	70.1344623	65.39176793	61.00896204
210802A00002	8/2/2021	0.7	8/1/2025	100.19727	99.61042592	99.03042156	98.45714008	97.89046524	97.33028342	96.77648362	96.22895735	95.68759855
210803A00005	8/5/2021	2.06	8/4/2026	102.62892	101.0390802	99.48154945	97.95541389	96.45979018	94.99382791	93.556708	92.14764132	90.76586726
210804A00008	8/6/2021	2.28	8/4/2028	106.5048	102.9038672	99.44435629	96.11993439	92.9245891	89.85261075	86.89857525	84.05732803	81.32396901
210809A00010	8/9/2021	1.06	8/7/2026	101.0503	99.43804064	97.85959831	96.31396797	94.80018509	93.31732309	91.86449145	90.44083394	89.04552693
210809A00012	8/9/2021	1.06	8/7/2026	101.0503	99.43804064	97.85959831	96.31396797	94.80018509	93.31732309	91.86449145	90.44083394	89.04552693
210809A00013	8/9/2021	1.05	8/7/2026	101.02157	99.42793472	97.86766501	96.33976792	94.84329255	93.37732543	91.94098861	90.53343793	89.15386136
210809A00014	8/9/2021	1.06	8/7/2026	101.0503	99.43804064	97.85959831	96.31396797	94.80018509	93.31732309	91.86449145	90.44083394	89.04552693

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
210809A00015	8/9/2021	1.06	8/7/2026	101.0503	99.43804064	97.85959831	96.31396797	94.80018509	93.31732309	91.86449145	90.44083394	89.04552693
210817A00013	8/19/2021	2	8/19/2026	102.59966	100.970281	99.37452001	97.81140472	96.27999798	94.77939842	93.30873871	91.86718399	90.45393027
210818A00007	8/18/2021	0.81	8/18/2025	100.28188	99.64837049	99.02283667	98.4051329	97.79511273	97.19263336	96.59755552	96.00974336	95.4290643
210826A00008	8/26/2021	0.89	2/26/2025	100.07074	99.91292019	99.75560331	99.59878305	99.44245707	99.28662303	99.13127864	98.9764216	98.82204963
210826A00009	8/26/2021	1.18	8/26/2026	101.26278	99.6263713	98.0239953	96.45465874	94.91740429	93.4113116	91.93549548	90.48910418	89.07131785
210826A00013	8/26/2021	1.97	2/28/2033	109.11979	101.1692022	93.8589343	87.13403711	80.94454578	75.24500401	69.99403558	65.15395861	60.69043815
210907A00004	9/7/2021	2.01	9/7/2033	109.77934	101.3397387	93.61745033	86.54766558	80.07174755	74.13661474	68.69418823	63.70089643	59.11723128
210907A00006	9/7/2021	2.1	9/7/2034	111.25543	101.8719053	93.36503942	85.64807173	78.64325281	72.28086563	66.498358	61.2395728	56.45406441
210907A00007	9/7/2021	2.35	9/4/2037	115.67023	103.5123682	92.78520489	83.31131367	74.9361636	67.52506086	60.9605109	55.13994306	49.97374625
210907A00008	9/7/2021	2.42	9/7/2038	117.27136	104.1882819	92.74720593	82.73105948	73.95258536	66.25010629	59.48391242	53.53317483	48.29330629
210907A00009	9/7/2021	2.5	9/7/2039	119.32187	105.2942389	93.13266693	82.57564096	73.39967835	65.41361799	58.45379512	52.37995765	47.07180674
210907A00010	9/7/2021	2.58	9/7/2040	121.82042	106.8129348	93.91111068	82.80350023	73.22641921	64.9563971	57.80385431	51.6078012	46.23138931
210907A00011	9/7/2021	2.65	9/6/2041	124.60132	108.5856002	94.92988736	83.26720835	73.28972653	64.73893026	57.39749244	51.08250916	45.63987812
210907A00013	9/9/2021	2.14	9/9/2025	101.18208	100.4858269	99.79913813	99.12181849	98.45367707	97.79452813	97.14419091	96.50248949	95.8692526
210907A00014	9/9/2021	2.45	9/9/2026	103.46461	101.7711783	100.1134805	98.49045103	96.90106645	95.34434362	93.81933792	92.32514123	90.86088016
210907A00015	9/9/2021	2.21	9/9/2026	103.05489	101.3650651	99.71091404	98.09136758	96.50540395	94.95204177	93.43033802	91.93938616	90.4783143
210913A00014	9/13/2021	1.15	9/13/2028	101.39572	99.45068051	97.56448049	95.73485626	93.95964761	92.23679308	90.56432476	88.9403633	87.36311331
210913A00015	9/13/2021	1.08	9/14/2026	101.11386	99.4668435	97.85572591	96.27944906	94.73699596	93.22738825	91.74968434	90.30297769	88.88639516
210914A00012	9/14/2021	1.18	9/14/2027	102.24755	99.57145636	96.97829186	94.46495545	92.02848647	89.66605595	87.37495967	85.15261162	82.99653785
210914A00014	9/14/2021	0.97	9/14/2026	101.08394	99.39552496	97.74306162	96.1254641	94.54169406	92.9907546	91.47168824	89.98357485	88.52552984
210914A00015	9/14/2021	0.81	9/15/2025	100.31517	99.60522473	98.90529078	98.21515482	97.53461216	96.86346377	96.20151609	95.54858086	94.90447493
210914A00017	9/14/2021	1.32	9/14/2028	103.40886	99.74878733	96.23683519	92.86618154	89.63035813	86.52323274	83.53898934	80.67210973	77.91735628
210914A00018	9/14/2021	1.43	9/14/2029	104.58184	99.94207232	95.5332663	91.34270516	87.3584422	83.56925105	79.96457797	76.53449761	73.26967195
210915A00024	9/15/2021	1.1	9/15/2026	101.19191	99.48316474	97.81196009	96.17719097	94.57779465	93.01274849	91.48106815	89.98180568	88.51404793
210915A00025	9/15/2021	1.09	9/15/2026	101.15967	99.47182972	97.82098284	96.20604421	94.62596705	93.07974411	91.56640582	90.08501852	88.63468275
210915A00026	9/15/2021	1.1	9/15/2026	101.19191	99.48316474	97.81196009	96.17719097	94.57779465	93.01274849	91.48106815	89.98180568	88.51404793
210915A00027	9/15/2021	1.1	9/15/2026	101.19191	99.48316474	97.81196009	96.17719097	94.57779465	93.01274849	91.48106815	89.98180568	88.51404793
210916A00008	9/16/2021	1.48	9/15/2028	103.70973	100.0494019	96.53704827	93.1658562	89.929368	86.82146127	83.83632921	80.9684622	78.21263064
210916A00009	9/16/2021	2.25	9/16/2036	113.95905	102.7046045	92.68862269	83.76736079	75.81446915	68.71881057	62.38255845	56.71954117	51.65379987
210917A00004	9/17/2021	1.03	9/17/2025	100.41928	99.70422619	98.99931298	98.30432978	97.61906783	96.9433242	96.27690159	95.61960811	94.9712571
210917A00008	9/17/2021	1.55	9/15/2028	103.97077	100.3055856	96.78851669	93.41274729	90.1718146	87.0595913	84.07026587	81.19832417	78.43853232
210917A00012	9/17/2021	1.2	9/11/2026	101.33576	99.65566157	98.01116102	96.40119001	94.82472553	93.28078514	91.76842498	90.28673782	88.83485124
210920A00014	9/9/2022	1.28	9/9/2026	101.4672	99.79137673	98.15096919	96.5449192	94.97221179	93.4318721	91.92296342	90.44458526	88.9958716

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
210920A00015	9/9/2022	1.28	9/9/2026	101.4672	99.79137673	98.15096919	96.5449192	94.97221179	93.4318721	91.92296342	90.44458526	88.9958716
210921A00006	9/21/2021	1.43	9/21/2028	103.39962	99.8641648	96.47236239	93.2175794	90.0935301	87.09425208	84.21408774	81.44766695	78.78989081
210921A00009	9/21/2021	1.28	9/21/2028	103.14307	99.60886904	96.2184512	92.96517432	89.84274004	86.84517431	83.96680883	81.20226363	78.54643075
210924A00003	9/24/2021	2.37	9/24/2036	115.33364	103.9839693	93.88285772	84.88530125	76.86386255	69.70646235	63.31445697	57.60096531	52.4894116
210924A00004	9/24/2021	2.37	9/24/2036	115.33364	103.9839693	93.88285772	84.88530125	76.86386255	69.70646235	63.31445697	57.60096531	52.4894116
210924A00005	9/24/2021	2.37	9/24/2036	115.33364	103.9839693	93.88285772	84.88530125	76.86386255	69.70646235	63.31445697	57.60096531	52.4894116
210924A00011	9/24/2021	2.19	9/25/2034	112.14833	102.6795324	94.09821974	86.31622584	79.25458119	72.84250762	67.01652976	61.71968708	56.90083467
210928A00008	9/28/2021	1.35	9/28/2026	101.64332	99.91426093	98.22258349	96.56714336	94.94684167	93.3606244	91.80748006	90.28643749	88.7965638
210928A00009	9/28/2021	2.18	9/28/2033	111.28321	102.7284663	94.90352093	87.74212581	81.18437757	75.17607754	69.66816068	64.61618466	59.9798721
210928A00010	9/28/2021	1.12	9/26/2025	100.50087	99.76099493	99.03196375	98.31353909	97.60549089	96.90759571	96.21963648	95.54140229	94.87268814
210929A00011	3/16/2022	1.03	3/14/2025	100.11921	99.91718162	99.71598642	99.51561548	99.31606368	99.11732593	98.91939716	98.72227238	98.52594663
210929A00012	3/16/2022	1.03	3/14/2025	100.11921	99.91718162	99.71598642	99.51561548	99.31606368	99.11732593	98.91939716	98.72227238	98.52594663
211007A00006	10/7/2021	1.28	10/7/2026	101.55949	99.7891628	98.05888487	96.36750895	94.71393251	93.09709136	91.51595802	89.96954021	88.45687944
211014A00012	10/14/2021	1.46	10/14/2031	103.42218	99.960045	96.6671233	93.53350059	90.54992175	87.70774149	84.99887996	82.41578187	79.95137881
211015A00031	10/15/2021	1.22	10/15/2025	100.61894	99.82690595	99.04729644	98.27981626	97.52418394	96.78012671	96.04738011	95.32568766	94.61480063
211019A00009	10/19/2021	1.48	10/9/2026	101.90522	100.1445962	98.42257338	96.73799951	95.08976349	93.47679762	91.89807544	90.3526097	88.8394505
211019A00011	10/19/2021	1.48	10/16/2026	101.92582	100.1465299	98.40661447	96.70491397	95.04031495	93.41174581	91.81817478	90.2586081	88.73208824
211026A00012	10/26/2021	1.52	10/26/2026	102.0287	100.2220548	98.45590231	96.72908258	95.04047758	93.38900889	91.77363595	90.19335445	88.64719479
211026A00013	10/26/2021	1.52	10/26/2026	102.0287	100.2220548	98.45590231	96.72908258	95.04047758	93.38900889	91.77363595	90.19335445	88.64719479
211028A00012	10/28/2021	1.64	10/15/2027	103.37395	100.60475	97.92341555	95.32664388	92.81127961	90.37430565	88.01283622	85.72411012	83.50548447
211028A00013	10/28/2021	1.65	10/22/2027	103.42106	100.6328768	97.93368793	95.32015915	92.78910277	90.33746888	87.9623385	85.66091712	83.43052856
211028A00020	10/28/2021	2.05	1/28/2031	108.30835	102.2951521	96.65492239	91.3625995	86.39493105	81.7303352	77.34877222	73.23162654	69.36159846
211028A00021	10/28/2021	2.28	10/28/2033	112.21357	103.5470559	95.62507053	88.37961318	81.74922264	75.67831474	70.11659364	65.01852473	60.34286233
211110A00012	11/10/2021	1.44	11/10/2026	101.93833	100.0808984	98.26730365	96.49624372	94.76646073	93.07674254	91.4259208	89.81286902	88.23650078
211110A00013	11/10/2021	1.44	11/10/2026	101.93833	100.0808984	98.26730365	96.49624372	94.76646073	93.07674254	91.4259208	89.81286902	88.23650078
211110A00014	11/10/2021	1.44	11/10/2026	101.93833	100.0808984	98.26730365	96.49624372	94.76646073	93.07674254	91.4259208	89.81286902	88.23650078
211115A00032	11/15/2021	1.75	11/12/2027	103.76968	100.9206316	98.16415528	95.49676555	92.91512291	90.41603123	87.99643079	85.6533916	83.38410728
211119A00009	11/19/2021	1.68	11/19/2027	103.58886	100.7236075	97.95205342	95.27064549	92.67598346	90.16481398	87.7340234	85.380631	83.10178255
211123A00011	11/23/2021	1.69	11/23/2026	102.44452	100.5581803	98.71570491	96.91581089	95.15726508	93.43887808	91.75950236	90.11803049	88.51339351
211123A00012	11/23/2021	2.27	11/23/2033	112.19005	103.4606547	95.48675566	88.19886035	81.53419841	75.43604325	69.85310258	64.73897317	60.05165275
211129A00011	11/29/2021	1.53	11/20/2026	102.1284	100.2533125	98.42166554	96.63219689	94.88368971	93.17497017	91.50490559	89.87240274	88.27640617
211129A00012	11/29/2021	1.53	11/25/2026	102.14488	100.2560565	98.41127853	96.60925852	94.84875498	93.12857058	91.44755021	89.80457929	88.19858199
211206A00009	12/6/2021	1.43	12/5/2025	100.93627	100.0042328	99.08932257	98.19107206	97.30902961	96.44275975	95.59184252	94.75587272	93.93445931

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
211206A00010	12/6/2021	1.54	12/4/2026	102.19205	100.2786995	98.41050147	96.5861165	94.80425719	93.06368252	91.36319583	89.70164294	88.07791036
211206A00017	12/6/2021	1.56	12/4/2026	102.23093	100.3171966	98.44861839	96.62386051	94.84163532	93.10070161	91.39986252	89.73796371	88.11389149
211207A00011	12/7/2021	1.62	12/1/2026	102.33841	100.4314671	98.56933727	96.75069764	94.9742757	93.2388445	91.54322078	89.8862631	88.26687006
211207A00012	12/7/2021	1.62	12/4/2026	102.34759	100.4326877	98.56296912	96.73709253	94.95376971	93.21175888	91.50986261	89.84692602	88.2218349
211208A00012	12/8/2021	1.62	12/8/2026	102.36323	100.4294097	98.54276265	96.70183564	94.90522707	93.15158844	91.43962193	89.76807812	88.13575378
211208A00013	12/8/2021	1.63	12/8/2026	102.40339	100.453001	98.55028391	96.69376618	94.8820306	93.11371368	91.38750319	89.70213584	88.05639504
211209A00006	12/9/2021	1.61	12/8/2026	102.34027	100.4149558	98.53531173	96.69997677	94.9076418	93.15704513	91.44697049	89.776245	88.14373737
211209A00007	12/9/2021	1.61	12/8/2026	102.34027	100.4149558	98.53531173	96.69997677	94.9076418	93.15704513	91.44697049	89.776245	88.14373737
211210A00014	12/10/2021	1.54	12/10/2025	101.05521	100.1090155	99.18046453	98.26906507	97.37434534	96.49585069	95.63314289	94.78579935	93.95341246
211210A00015	12/10/2021	1.63	12/10/2026	102.38554	100.4545343	98.56944636	96.72891108	94.93160853	93.17626677	91.46165977	89.78660542	88.14996362
211210A00016	12/10/2021	1.76	12/10/2027	103.88579	100.9605608	98.13273238	95.39853977	92.75438554	90.19683083	87.72258736	85.32850997	83.01158951
211214A00015	12/14/2021	1.49	12/12/2025	101.0135	100.0620999	99.12854423	98.21233194	97.31298323	96.43003583	95.56304425	94.71157899	93.87522587
211217A00021	12/21/2021	2.44	12/18/2026	104.0163	102.0477493	100.1264364	98.25093307	96.41986809	94.63192066	92.88581821	91.18033425	89.51428641
211221A00023	12/21/2021	1.53	6/19/2026	101.63133	100.1722429	98.7412789	97.33770013	95.96079013	94.60985695	93.28423215	91.98326972	90.70634522
211221A00025	12/21/2021	1.59	12/21/2026	102.33984	100.3804481	98.46833212	96.60206141	94.78025765	93.00159339	91.26478982	89.56861468	87.91188016
211222A00003	12/22/2021	1.33	1/15/2025	100.0382	99.99659696	99.95504528	99.91354587	99.87209862	99.83070342	99.78936017	99.74806877	99.70682911
211222A00030	12/22/2021	1.33	1/15/2025	100.0382	99.99659696	99.95504528	99.91354587	99.87209862	99.83070342	99.78936017	99.74806877	99.70682911
211222A00031	12/22/2021	1.33	1/15/2025	100.0382	99.99659696	99.95504528	99.91354587	99.87209862	99.83070342	99.78936017	99.74806877	99.70682911
211222A00035	12/22/2021	2.15	12/22/2033	111.19505	102.4392088	94.44839128	87.15159995	80.48476731	74.39004788	68.81518536	63.71294701	59.0406178
211227A00005	12/27/2021	1.61	12/18/2026	102.37057	100.4187338	98.51380443	96.65436983	94.83906764	93.06658558	91.33565925	89.64507007	87.99364325
211227A00009	12/27/2021	1.6	12/23/2026	102.36576	100.400854	98.48348388	96.61220232	94.78561998	93.002399	91.26125071	89.56093342	87.90025042
220104A00006	1/4/2022	1.76	1/4/2029	104.95435	101.2974224	97.79624851	94.44326142	91.23130948	88.15362799	85.20381598	82.3758144	79.66388588
220106A00007	1/6/2022	2.42	1/6/2034	113.61742	104.7205805	96.60149894	89.1878426	82.41435687	76.22214242	70.55800661	65.37388415	60.6263191
220106A00008	1/6/2022	2.5	1/5/2035	115.37471	105.5100646	96.58939781	88.51687721	81.20687307	74.58282374	68.57623343	63.12578529	58.17655596
220106A00009	1/6/2022	2.57	1/4/2036	117.00618	106.1860259	96.48920761	87.79225104	79.9858718	72.97327792	66.66868416	60.99600975	55.88773585
220106A00010	1/6/2022	2.64	1/6/2037	118.62938	106.8549682	96.39749935	87.10123676	78.82965259	71.46296868	64.8960243	59.03642482	53.80293287
220106A00011	1/6/2022	2.7	1/6/2038	120.24787	107.532119	96.33808159	86.47337967	77.77094889	70.08559419	63.29102566	57.27730909	51.94867151
220106A00013	1/6/2022	2.75	1/6/2039	121.95328	108.2966701	96.37886149	85.96605303	76.85711979	68.87889513	61.88215363	55.73818867	50.33589422
220106A00018	1/10/2022	3.11	1/8/2032	116.32653	109.165211	102.5034805	96.30373314	90.53138238	85.15460423	80.14410314	75.4728989	71.1161324
220106A00019	1/10/2022	3.17	1/7/2033	118.52125	110.3372663	102.7937143	95.83681982	89.41759473	83.49138737	78.01747781	72.95871286	68.28117671
220111A00002	1/11/2022	1.75	1/16/2026	101.38697	100.338815	99.31224392	98.30659259	97.32122652	96.35553672	95.40893832	94.48086947	93.57079016
220111A00005	1/11/2022	1.54	1/10/2025	100.12642	100.0130258	99.89990101	99.78704442	99.674455	99.56213178	99.45007378	99.33828003	99.22674956
220112A00004	1/12/2022	1.55	1/12/2026	101.24725	100.20948	99.19288403	98.19681724	97.22066272	96.26382806	95.32574418	94.40586413	93.50366207

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
220112A00005	1/12/2022	1.55	1/12/2026	101.24725	100.20948	99.19288403	98.19681724	97.22066272	96.26382806	95.32574418	94.40586413	93.50366207
220114A00007	1/14/2022	1.7	1/27/2026	101.36971	100.2919258	99.2369478	98.20405841	97.19256981	96.20182247	95.23118376	94.2800465	93.34782774
220114A00009	1/14/2022	1.74	4/21/2026	101.71725	100.4140343	99.13634311	97.8834455	96.65463676	95.44923905	94.26660014	93.10609219	91.96711061
220114A00010	1/14/2022	1.86	1/13/2027	102.96408	100.9376846	98.96132779	97.03345357	95.15256335	93.31721578	91.52602411	89.77765367	88.07081951
220118A00009	1/18/2022	1.65	1/17/2025	100.05835	100.0111921	99.96409225	99.91705429	99.87007805	99.8231634	99.77631022	99.72951837	99.68278774
220121A00013	1/21/2022	1.78	11/3/2025	101.13993	100.2938536	99.46187759	98.64365252	97.83883974	97.04711167	96.2681513	95.50165176	94.74731598
220121A00014	1/21/2022	1.78	11/3/2025	101.13993	100.2938536	99.46187759	98.64365252	97.83883974	97.04711167	96.2681513	95.50165176	94.74731598
220124A00007	1/24/2022	1.88	1/22/2027	103.03991	100.9889318	98.98898357	97.03845924	95.13581588	93.27957026	91.46829606	89.70062115	87.97522518
220124A00008	1/24/2022	1.88	1/22/2027	103.03991	100.9889318	98.98898357	97.03845924	95.13581588	93.27957026	91.46829606	89.70062115	87.97522518
220125A00010	1/25/2022	1.89	1/25/2027	103.07236	101.0131093	99.00522036	97.04707302	95.13710938	93.27383211	91.45580151	89.68163282	87.94999373
220126A00002	1/26/2022	1.9	12/18/2026	102.94558	100.9879079	99.07725415	97.21220518	95.39139551	93.61350988	91.87728105	90.18148767	88.52495231
220126A00003	1/26/2022	1.9	12/18/2026	102.94558	100.9879079	99.07725415	97.21220518	95.39139551	93.61350988	91.87728105	90.18148767	88.52495231
220131A00003	1/31/2022	1.98	2/1/2027	103.29018	101.2098032	99.18161597	97.20395856	95.27523653	93.39391795	91.55853042	89.76765828	88.01993993
220131A00006	1/31/2022	1.83	2/1/2027	103.14255	101.060502	99.0307512	97.05163326	95.12154874	93.23896108	91.40239347	89.61042608	87.86169337
220201A00011	2/1/2022	1.86	4/20/2026	101.87013	100.568411	99.29247506	98.04156919	96.81497101	95.61198616	94.43194692	93.27421094	92.13815998
220203A00009	2/3/2022	1.99	2/2/2027	103.31642	101.2328367	99.20157029	97.22095652	95.28939525	93.40534914	91.56734071	89.77394947	88.02380926
220204A00004	2/4/2022	2.08	1/8/2027	103.39399	101.3763169	99.40823497	97.48821167	95.6147701	93.78648936	92.00200198	90.25999147	88.55919007
220204A00005	2/4/2022	1.83	1/10/2025	100.04045	100.0127031	99.98498259	99.95729316	99.9296347	99.90200716	99.87441049	99.84684462	99.81930951
220209A00010	2/9/2022	2.14	1/11/2027	103.53016	101.5031181	99.52601852	97.59731085	95.71550297	93.87915958	92.08689956	90.33739354	88.62936153
220209A00011	2/9/2022	2.14	1/11/2027	103.53016	101.5031181	99.52601852	97.59731085	95.71550297	93.87915958	92.08689956	90.33739354	88.62936153
220209A00012	2/9/2022	1.98	7/29/2025	100.89418	100.3137966	99.74006916	99.17288711	98.61213894	98.05771568	97.50951082	96.96742021	96.43134204
220209A00013	2/9/2022	1.98	7/29/2025	100.89418	100.3137966	99.74006916	99.17288711	98.61213894	98.05771568	97.50951082	96.96742021	96.43134204
220211A00010	2/11/2022	1.99	2/11/2025	100.29273	100.103954	99.91590857	99.72859036	99.5419951	99.3561185	99.17095633	98.9865044	98.80275852
220214A00010	2/14/2022	2.46	12/21/2029	109.45975	104.4598175	99.71951591	95.22402147	90.95942867	86.91269223	83.07156952	79.42456707	75.96089099
220214A00012	2/14/2022	2.47	12/28/2029	109.53576	104.515905	99.75762175	95.2459216	90.96674838	86.90691872	83.05406337	79.3965728	75.9235466
220216A00002	2/16/2022	2.09	2/14/2025	100.20606	100.081285	99.95683088	99.83269918	99.70888854	99.5853977	99.46222539	99.33937033	99.21683128
220216A00003	2/16/2022	2.49	12/14/2029	109.58267	104.5977537	99.87071887	95.38689527	91.13251904	87.09467464	83.26123816	79.62082486	76.16274036
220217A00011	2/17/2022	2.08	2/14/2025	100.20481	100.0800367	99.95558387	99.83145338	99.70764396	99.58415433	99.46098323	99.33812938	99.21559154
220217A00012	2/17/2022	2.28	2/16/2027	104.01178	101.8796113	99.80165669	97.77616375	95.80144926	93.87589742	91.99795653	90.16613591	88.37900298
220217A00013	2/17/2022	2.08	2/14/2025	100.20481	100.0800367	99.95558387	99.83145338	99.70764396	99.58415433	99.46098323	99.33812938	99.21559154
220217A00015	2/17/2022	2.28	2/16/2027	104.01178	101.8796113	99.80165669	97.77616375	95.80144926	93.87589742	91.99795653	90.16613591	88.37900298
220217A00016	2/17/2022	2.24	9/15/2026	103.13871	101.4317085	99.76100152	98.12549472	96.52413988	94.95593071	93.41990066	91.91512094	90.4406986
220217A00017	2/17/2022	2.27	1/29/2027	103.88532	101.8067796	99.7802184	97.80398444	95.87649522	93.99623005	92.1617271	90.37158062	88.62443833

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
220217A00018	2/17/2022	2.28	2/17/2027	104.01775	101.8825819	99.80175288	97.77350683	95.7961548	93.86807554	91.98771223	90.15356935	88.36420973
220217A00020	2/17/2022	2.08	2/13/2025	100.20029	100.0782866	99.95659085	99.83520389	99.71412449	99.59335145	99.47288358	99.35271968	99.23285858
220217A00027	2/16/2024	2.56	2/17/2032	112.62878	105.4908773	98.86013948	92.69779862	86.96824619	81.63875935	76.67925268	72.06205265	67.76169239
220218A00003	2/18/2022	2.16	9/4/2026	102.94345	101.2683017	99.6282967	98.02239776	96.44960503	94.90895784	93.39953273	91.92044167	90.4708303
220222A00018	2/22/2022	2.5	12/19/2031	112.01303	105.0496395	98.57158287	92.54246146	86.92878683	81.69973205	76.82690748	72.2841565	68.04736933
220224A00010	2/24/2022	2.04	3/10/2025	100.30608	100.1148382	99.92434213	99.73458339	99.54555766	99.35726064	99.16968806	98.98283567	98.79669927
220224A00018	2/24/2022	2.15	3/16/2026	102.06473	100.8533096	99.67054738	98.51543235	97.38700366	96.28434456	95.2065799	94.15287374	93.12242722
220224A00023	2/24/2022	2.15	3/16/2026	102.06473	100.8533096	99.67054738	98.51543235	97.38700366	96.28434456	95.2065799	94.15287374	93.12242722
220225A00014	2/25/2022	2.42	2/23/2029	107.98629	103.8140686	99.82690284	96.01557762	92.37138737	88.88610733	85.55196393	82.36160742	79.30808616
220225A00015	2/25/2022	2.26	2/25/2027	104.02208	101.8633616	99.76000582	97.71019994	95.71220886	93.76436782	91.86507892	90.01280784	88.20608074
220301A00013	3/1/2022	2.01	2/16/2027	103.43182	101.306003	99.23427166	97.21487722	95.24614001	93.32644766	91.4542518	89.62806495	87.84645758
220301A00014	3/1/2022	1.85	1/10/2025	100.04103	100.0132771	99.98555611	99.9578662	99.93020727	99.90257926	99.87498211	99.84741577	99.81988018
220301A00015	3/1/2022	2	1/4/2027	103.21398	101.2087557	99.2526669	97.34419495	95.48188315	93.66432968	91.89018511	90.15815007	88.46697298
220302A00010	3/2/2022	2.14	1/13/2027	103.53931	101.5068771	99.52460043	97.59092227	95.70434074	93.86341134	92.06674427	90.31300193	88.60089656
220302A00011	3/2/2022	2.14	1/13/2027	103.53931	101.5068771	99.52460043	97.59092227	95.70434074	93.86341134	92.06674427	90.31300193	88.60089656
220304A00004	3/4/2022	2.12	12/29/2028	106.50267	102.5132486	98.69577375	95.04193262	91.54386088	88.19411401	84.98564257	81.91176904	78.9661662
220308A00011	3/8/2022	2.07	1/10/2025	100.04735	100.019591	99.99186482	99.96416967	99.93650551	99.90887227	99.8812699	99.85369835	99.82615755
220308A00012	3/8/2022	2.51	3/8/2032	110.52861	104.5426484	98.9602649	93.75128358	88.88796146	84.34478278	80.09826793	76.12679977	72.41046566
220309A00010	3/9/2022	2.27	3/8/2027	104.09979	101.9102463	99.77743985	97.69949507	95.67461291	93.70106838	91.77720676	89.90144014	88.07224409
220310A00008	3/10/2022	2.22	3/10/2025	100.49218	100.2160529	99.94145658	99.66837718	99.3968021	99.12671885	98.85811505	98.59097849	98.32529709
220310A00009	3/10/2022	2.31	3/10/2027	104.18352	101.99022	99.85507477	97.77614507	95.75157163	93.77957121	91.85843287	89.98651438	88.16223889
220310A00010	3/10/2022	2.31	3/10/2027	104.18352	101.99022	99.85507477	97.77614507	95.75157163	93.77957121	91.85843287	89.98651438	88.16223889
220311A00013	3/15/2022	2.35	3/15/2027	104.31095	102.1005065	99.94771128	97.85064589	95.80746912	93.81641628	91.87579524	89.98398279	88.13942119
220314A00004	3/14/2022	2.44	3/12/2027	104.49526	102.2906742	100.1434156	98.05157568	96.01332965	94.02692812	92.09069338	90.20301579	88.36235041
220314A00005	3/14/2022	2.36	3/14/2025	100.38874	100.1863402	99.9847747	99.7840346	99.58411476	99.38501009	99.18671554	98.98922609	98.79253678
220314A00006	3/14/2022	2.36	3/14/2025	100.38874	100.1863402	99.9847747	99.7840346	99.58411476	99.38501009	99.18671554	98.98922609	98.79253678
220314A00007	3/14/2022	2.44	3/12/2027	104.49526	102.2906742	100.1434156	98.05157568	96.01332965	94.02692812	92.09069338	90.20301579	88.36235041
220314A00008	3/14/2022	2.38	7/28/2025	101.12187	100.5434722	99.97168128	99.40638257	98.84746597	98.29482384	97.74835096	97.20794447	96.67350374
220314A00009	3/14/2022	2.38	7/28/2025	101.12187	100.5434722	99.97168128	99.40638257	98.84746597	98.29482384	97.74835096	97.20794447	96.67350374
220315A00014	3/15/2022	2.78	3/15/2032	114.29599	107.0296095	100.2829977	94.01612179	88.19223655	82.77759907	77.74120816	73.05456773	68.69147179
220315A00015	3/15/2022	3.18	3/13/2037	125.15824	112.8480067	101.9206448	92.21130497	83.57566538	75.88727778	69.03526839	62.9223449	57.46306759
220315A00018	3/15/2022	2.43	3/15/2027	104.48874	102.276281	100.121516	98.022521	95.97745375	93.98454838	92.0421117	90.14851944	88.30221287
220315A00036	3/17/2022	2.63	3/16/2027	104.93896	102.7187541	100.5564688	98.45017367	96.39801742	94.39822586	92.44909782	90.54900151	88.69637102

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
220315A00037	3/17/2022	2.63	3/16/2027	104.93896	102.7187541	100.5564688	98.45017367	96.39801742	94.39822586	92.44909782	90.54900151	88.69637102
220317A00011	3/17/2022	2.48	3/17/2025	100.43007	100.2193322	100.0094888	99.80053833	99.59247508	99.38529331	99.17898734	98.97355156	98.7689804
220317A00023	5/3/2022	2.52	5/2/2025	100.70409	100.3659144	100.0300116	99.69635475	99.36492126	99.03568901	98.70863611	98.38374099	98.06098234
220317A00026	5/3/2022	2.59	5/3/2027	105.12771	102.7750827	100.4869193	98.26110181	96.09559744	93.98845116	91.93778244	89.94178193	87.99870837
220317A00027	5/3/2022	2.59	5/3/2027	105.12771	102.7750827	100.4869193	98.26110181	96.09559744	93.98845116	91.93778244	89.94178193	87.99870837
220317A00028	5/3/2022	2.59	5/3/2027	105.12771	102.7750827	100.4869193	98.26110181	96.09559744	93.98845116	91.93778244	89.94178193	87.99870837
220323A00016	6/2/2022	2.78	6/2/2025	100.99331	100.5690963	100.1484388	99.73129569	99.31762322	98.90737816	98.50051806	98.09700114	97.69678632
220323A00017	6/2/2022	2.78	6/2/2025	100.99331	100.5690963	100.1484388	99.73129569	99.31762322	98.90737816	98.50051806	98.09700114	97.69678632
220324A00007	3/24/2022	2.72	3/24/2025	100.52508	100.2948457	100.0656777	99.83756562	99.61050209	99.38447988	99.15949178	98.93553067	98.71258951
220324A00015	3/24/2022	2.79	3/3/2026	102.76543	101.58465	100.4309601	99.30343419	98.20118957	97.12338294	96.06920812	95.03789404	94.02870286
220325A00010	3/28/2022	2.78	3/21/2025	100.51939	100.29746	100.0765242	99.85657373	99.63760195	99.41960228	99.20256818	98.9864932	98.77137093
220325A00011	3/28/2022	2.79	4/25/2025	100.74988	100.4309208	100.113987	99.79905679	99.48611135	99.1751319	98.86609992	98.55899713	98.25380547
220325A00012	3/28/2022	2.85	3/23/2026	102.96164	101.7254961	100.5189945	99.34107936	98.1907433	97.06702575	95.96901031	94.89582225	93.84662613
220325A00015	3/28/2022	2.86	3/23/2027	105.49546	103.250301	101.064071	98.93478917	96.86055909	94.83956404	92.87006275	90.95038554	89.0789307
220325A00017	3/28/2022	2.86	3/23/2027	105.49546	103.250301	101.064071	98.93478917	96.86055909	94.83956404	92.87006275	90.95038554	89.0789307
220325A00018	3/28/2022	2.85	9/10/2026	104.1546	102.4523344	100.7860122	99.15456286	97.55695547	95.99220004	94.45934535	92.957477	91.48571561
220325A00019	3/28/2022	2.86	3/23/2027	105.49546	103.250301	101.064071	98.93478917	96.86055909	94.83956404	92.87006275	90.95038554	89.0789307
220325A00020	3/28/2022	2.86	3/23/2027	105.49546	103.250301	101.064071	98.93478917	96.86055909	94.83956404	92.87006275	90.95038554	89.0789307
220329A00007	3/29/2022	2.94	3/29/2029	110.35761	106.0449762	101.9266163	97.99268051	94.23387962	90.64144783	87.20710994	83.92305075	80.78188655
220329A00009	3/29/2022	2.94	3/29/2029	110.35761	106.0449762	101.9266163	97.99268051	94.23387962	90.64144783	87.20710994	83.92305075	80.78188655
220331A00010	3/31/2022	2.83	2/18/2026	102.7328	101.58745	100.4676032	99.37241701	98.30108324	97.25282862	96.22691299	95.2226276	94.23929336
220331A00012	3/31/2022	2.81	3/17/2025	100.4997	100.288856	100.0789139	99.86986513	99.66170383	99.45442431	99.24802091	99.04248801	98.83782004
220401A00009	4/1/2022	2.98	4/1/2027	105.82549	103.5524544	101.3395728	99.18481062	97.0862192	95.04193206	93.0501608	91.10919103	89.21737862
220404A00010	4/4/2022	2.93	4/2/2027	105.71886	103.444301	101.2300077	99.0739449	96.97416238	94.92879196	92.93604336	90.99420015	89.10161604
220404A00014	4/4/2022	2.94	4/5/2027	105.76214	103.4788095	101.2561745	99.09218891	96.9848955	94.93241846	92.93295947	90.9847937	89.08626615
220407A00014	4/7/2022	3.14	4/6/2029	109.6288	105.9212965	102.3744511	98.9802909	95.73128704	92.62032385	89.64067405	86.78597544	84.05020915
220407A00017	4/7/2022	3.16	4/6/2029	110.27356	106.337379	102.5753981	98.97888478	95.53958754	92.24971092	89.10188775	86.08915332	83.20492139
220408A00012	4/8/2022	3.12	6/29/2026	104.06224	102.5568513	101.0809595	99.63377368	98.21452983	96.8224904	95.4569434	94.11720119	92.80259946
220408A00013	4/8/2022	3.15	1/14/2027	105.62161	103.564639	101.5583647	99.60121187	97.69166191	95.82825427	94.00958378	92.23429811	90.50109538
220408A00014	4/8/2022	3.12	6/29/2026	104.06224	102.5568513	101.0809595	99.63377368	98.21452983	96.8224904	95.4569434	94.11720119	92.80259946
220411A00002	4/11/2022	3.18	4/9/2027	106.33941	104.0383333	101.7986465	99.61829307	97.49530253	95.42778531	93.4139288	91.45199357	89.54030973
220411A00008	4/11/2022	3.02	4/12/2027	106.16074	103.8528792	101.6082394	99.42473176	97.30034972	95.23316422	93.22132058	91.26303504	89.35659163
220412A00010	4/12/2022	3.09	3/15/2027	105.95547	103.7264208	101.5554046	99.44049066	97.3798269	95.37163822	93.41422249	91.50594684	89.64524426

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
220412A00016	4/12/2022	3.09	3/19/2027	105.98357	103.7435159	101.5620074	99.43708221	97.36686464	95.34955712	93.38343639	91.46684972	89.59821132
220412A00017	4/12/2022	3.09	3/19/2027	105.98357	103.7435159	101.5620074	99.43708221	97.36686464	95.34955712	93.38343639	91.46684972	89.59821132
220412A00018	4/12/2022	3.09	3/15/2027	105.95547	103.7264208	101.5554046	99.44049066	97.3798269	95.37163822	93.41422249	91.50594684	89.64524426
220418A00015	4/22/2022	3.03	7/28/2025	101.49868	100.9190395	100.3460175	99.77949764	99.21936977	98.6655261	98.1178613	97.57627235	97.04065853
220418A00016	4/22/2022	3.11	9/15/2026	104.63836	102.9180168	101.2342123	99.58584415	97.97185773	96.39124046	94.84301976	93.32626101	91.84006569
220419A00014	4/19/2022	3.06	4/18/2025	100.78519	100.4854974	100.187594	99.8914678	99.5971029	99.3044835	99.01359401	98.72441905	98.43694339
220419A00015	4/19/2022	3.14	4/17/2026	103.52728	102.2218497	100.9431092	99.69024669	98.46248319	97.25907137	96.07929374	94.92246121	93.78791164
220419A00016	4/19/2022	3.21	4/19/2027	106.48407	104.1536481	101.8860493	99.67919877	97.53110092	95.43983939	93.40357334	91.42053387	89.48902073
220420A00032	4/20/2022	3.26	10/16/2026	105.1462	103.3369251	101.5675838	99.83699841	98.14404053	96.48762404	94.86670326	93.28027097	91.72735673
220420A00033	4/20/2022	3.29	4/20/2027	106.67738	104.3419021	102.0694454	99.85792269	97.70533437	95.60976016	93.56935513	91.58234624	89.64702901
220420A00034	6/15/2022	3.3	6/15/2027	107.12402	104.6313996	102.210044	99.85751253	97.57145925	95.34963274	93.18987154	91.09009997	89.04832418
220420A00037	6/15/2022	3.3	6/15/2027	107.12402	104.6313996	102.210044	99.85751253	97.57145925	95.34963274	93.18987154	91.09009997	89.04832418
220420A00061	6/15/2022	3.3	6/15/2027	107.12402	104.6313996	102.210044	99.85751253	97.57145925	95.34963274	93.18987154	91.09009997	89.04832418
220421A00012	4/21/2022	3.31	4/21/2026	103.78669	102.4691322	101.1773519	99.91060459	98.66817895	97.44939067	96.25358135	95.08011718	93.92838783
220421A00013	4/21/2022	3.33	9/15/2026	105.01758	103.2938649	101.6067483	99.95512791	98.3379473	96.75419235	95.20288896	93.68310103	92.19392863
220421A00014	4/21/2022	3.24	5/30/2025	101.16536	100.7489694	100.3360017	99.92641477	99.52016734	99.1172187	98.7175288	98.32105827	97.92776834
220421A00016	4/21/2022	3.31	4/21/2026	103.78669	102.4691322	101.1773519	99.91060459	98.66817895	97.44939067	96.25358135	95.08011718	93.92838783
220422A00014	4/22/2022	3.36	9/29/2026	105.18859	103.4245946	101.6986759	100.0096688	98.35645424	96.73795852	95.15315141	93.60104377	92.08068545
220425A00026	4/25/2022	3.13	2/25/2026	103.12559	101.9588246	100.8184492	99.70357135	98.61334282	97.54695244	96.50362438	95.48261611	94.48321673
220425A00027	4/29/2022	3.15	8/20/2026	104.50399	102.8556719	101.2413601	99.66006289	98.11083167	96.59275414	95.1049525	93.64658186	92.21682861
220425A00028	4/29/2022	3.16	4/23/2027	106.39796	104.0574839	101.7803784	99.56455639	97.40801293	95.30882153	93.26513065	91.27516018	89.33719823
220426A00004	4/26/2022	3.41	4/26/2032	119.03365	111.4902215	104.4906167	97.99259956	91.95742253	86.34952319	81.13624722	76.28759678	71.77600191
220427A00011	4/29/2022	3.15	4/29/2027	106.41922	104.0618874	101.7687853	99.53781007	97.36694136	95.25423611	93.19782532	91.19591073	89.24676174
220428A00019	4/28/2022	3.27	4/28/2027	106.693	104.3351744	102.0415075	99.80989477	97.63831633	95.52483002	93.46756792	91.46473303	89.51459617
220429A00002	4/29/2022	3.63	4/29/2032	120.6498	113.0406206	105.9793987	99.42359444	93.3341783	87.67532795	82.41414946	77.52042412	72.96637837
220502A00025	5/2/2022	3.21	5/2/2025	100.9377	100.5990416	100.2626519	99.92851043	99.59659481	99.2668828	98.93935252	98.61398235	98.29075098
220502A00030	5/4/2022	3.24	6/20/2025	101.32778	100.8531612	100.3829925	99.91721431	99.45576528	98.99858511	98.54561463	98.09679576	97.65207149
220506A00016	5/6/2022	3.35	5/6/2027	106.94181	104.5594652	102.2424639	99.98865933	97.79598592	95.66245739	93.58616338	91.56526611	89.59799714
220509A00013	7/15/2022	3.37	7/15/2027	107.53001	104.9507211	102.4471585	100.0166498	97.65663134	95.36464623	93.13833915	90.97545138	88.87381619
220509A00014	7/15/2022	3.37	7/15/2027	107.53001	104.9507211	102.4471585	100.0166498	97.65663134	95.36464623	93.13833915	90.97545138	88.87381619
220509A00016	7/15/2022	3.37	7/15/2027	107.53001	104.9507211	102.4471585	100.0166498	97.65663134	95.36464623	93.13833915	90.97545138	88.87381619
220510A00015	5/13/2022	3.13	11/3/2025	102.28879	101.4373876	100.6001465	99.77671739	98.96676059	98.16994729	97.38595937	96.61448887	95.85523767
220510A00016	5/13/2022	3.23	5/5/2027	106.65073	104.2745469	101.9634914	99.71542656	97.52829522	95.4001194	93.32899658	91.31309641	89.35065757

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
220511A00002	5/11/2022	3.18	5/12/2025	101.00358	100.6372234	100.2735368	99.91248945	99.55405241	99.19819737	98.84489636	98.49412183	98.14584663
220511A00015	5/11/2022	3.29	5/11/2027	106.83689	104.4424597	102.1140556	99.84949286	97.64667384	95.50358212	93.41827873	91.38889876	89.41364803
220512A00013	5/12/2022	3.18	5/12/2027	106.58228	104.1882623	101.8603428	99.596335	97.39413668	95.25172699	93.16716283	91.13857538	89.1641668
220518A00009	5/18/2022	3.38	5/18/2028	109.89962	106.4477246	103.1238837	99.92267565	96.83893823	93.86775369	91.00443613	88.24451921	85.58374472
220519A00010	5/19/2022	3.15	11/19/2026	105.20781	103.3053627	101.4468114	99.63087859	97.85633683	96.1220021	94.42673185	92.76942324	91.14901158
220520A00006	5/20/2022	3.02	5/20/2027	106.31266	103.9418061	101.6382484	99.39967436	97.22386665	95.10869781	93.05212581	91.05219004	89.10700757
220526A00010	5/26/2022	3	5/26/2026	103.63518	102.2261329	100.8430755	99.48535058	98.15232231	96.84337577	95.557916	94.29536723	93.05517209
220526A00011	5/26/2022	3.29	5/24/2029	112.22999	107.7262602	103.4315449	99.33505478	95.4266141	91.69662115	88.136013	84.73623247	81.48919738
220527A00014	5/27/2022	2.99	5/27/2026	103.62797	102.2163076	100.8307291	99.47057139	98.13519564	96.82398378	95.53633791	94.27167945	93.02944832
220527A00015	5/27/2022	3.03	5/27/2027	106.32523	103.894377	101.5316948	99.23488936	97.00176077	94.83019551	92.71816269	90.66371032	88.66496167
220601A00024	6/1/2022	3.09	6/2/2025	101.12492	100.7003667	100.2793789	99.86190756	99.44790882	99.03733947	98.63015703	98.22631971	97.82578642
220601A00038	6/3/2022	3.69	5/28/2032	121.26109	113.5548536	106.408509	99.7781941	93.62369956	87.90815002	82.59771181	77.66132764	73.0704756
220602A00039	6/2/2022	3.11	6/2/2027	106.75987	104.3033706	101.9162308	99.59610505	97.34073944	95.14796937	93.01571553	90.94197995	88.92484233
220610A00068	6/10/2022	3.09	6/10/2025	100.77262	100.4892502	100.2078018	99.92825743	99.65059581	99.37479605	99.10083757	98.82870012	98.55836375
220615A00010	6/15/2022	3.86	6/15/2027	108.51021	106.0001963	103.5618377	101.1926742	98.89034895	96.65259965	94.47725453	92.36222796	90.30551653
220617A00030	6/17/2022	3.43	6/17/2025	100.85793	100.570723	100.2855054	100.0022525	99.72094191	99.44155168	99.16406007	98.88844574	98.61468769
220622A00006	6/22/2022	3.58	6/22/2027	107.87609	105.3546984	102.9058759	100.5271152	98.21601071	95.97025457	93.7876318	91.66601604	89.60336542
220623A00005	6/23/2022	3.45	6/23/2027	107.55986	105.0397097	102.5921929	100.2148005	97.90512205	95.66084471	93.47974906	91.35970456	89.2986654
220624A00003	6/24/2022	3.5	6/24/2027	107.69293	105.1683354	102.7165689	100.3351117	98.02154443	95.77354591	93.58888881	91.46543509	89.40113186
220624A00016	6/24/2022	3.34	6/24/2026	104.47373	102.9769177	101.5092006	100.0698066	98.6579872	97.27302008	95.91420754	94.58087563	93.27237313
220624A00033	6/24/2022	3.5	6/24/2027	107.69293	105.1683354	102.7165689	100.3351117	98.02154443	95.77354591	93.58888881	91.46543509	89.40113186
220624A00044	6/24/2022	3.43	6/24/2025	101.45095	100.9649614	100.4836322	100.0068959	99.5346869	99.06694082	98.60359454	98.14458611	97.68985475
220627A00055	6/27/2022	3.55	6/26/2026	104.68454	103.1825457	101.7098233	100.2655867	98.84908142	97.4595791	96.09637642	94.75879402	93.44617549
220628A00034	6/28/2022	3.61	6/28/2027	108.00196	105.4623903	102.9963667	100.6013332	98.27483667	96.01452429	93.81813862	91.68351315	89.60856805
220628A00044	8/15/2022	3.6	8/13/2027	108.35842	105.6903278	103.1021847	100.5911003	98.15430574	95.78915073	93.49309785	91.26371676	89.0986789
220628A00052	8/15/2022	3.6	8/13/2027	108.35842	105.6903278	103.1021847	100.5911003	98.15430574	95.78915073	93.49309785	91.26371676	89.0986789
220628A00053	8/15/2022	3.6	8/13/2027	108.35842	105.6903278	103.1021847	100.5911003	98.15430574	95.78915073	93.49309785	91.26371676	89.0986789
220629A00003	6/29/2022	3.59	6/29/2027	107.96019	105.4183858	102.9502746	100.5532915	98.22497599	95.9629682	93.76500404	91.62891074	89.55260254
220629A00034	6/29/2022	3.51	6/29/2027	104.01659	102.7091456	101.430693	100.1803478	98.95725824	97.76060545	96.589602	95.44349037	94.32154159
220630A00036	6/30/2022	3.42	6/30/2027	107.54083	105.0016037	102.5361115	100.1417817	97.81614941	95.55685076	93.36161795	91.22827474	89.15473212
220630A00044	6/30/2022	3.34	6/30/2025	101.45529	100.9527479	100.4551729	99.96249537	99.47464325	98.99154595	98.51313426	98.0393403	97.57009748
220630A00045	6/30/2022	3.39	6/30/2026	104.47792	102.9665003	101.484745	100.0318525	98.60705332	97.20960463	95.83878946	94.49391538	93.1743135
220630A00057	6/30/2022	3.34	6/30/2025	101.45529	100.9527479	100.4551729	99.96249537	99.47464325	98.99154595	98.51313426	98.0393403	97.57009748

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
220701A00024	7/1/2022	3.08	7/1/2025	101.33199	100.827059	100.3271526	99.8321964	99.34211713	98.856843	98.37630361	97.90042994	97.4291543
220701A00049	7/1/2022	3.19	7/1/2025	101.38753	100.8824355	100.3823678	99.8872514	99.3970131	98.91158107	98.4308849	97.95485554	97.4834253
220701A00050	7/1/2022	3.26	7/1/2027	107.14555	104.608688	102.1455794	99.75364958	97.43043056	95.17355543	92.98075367	90.84984654	88.77874273
220705A00011	7/5/2022	3.14	7/7/2025	101.40678	100.8851499	100.3688919	99.85792058	99.35215492	98.85151551	98.35592459	97.86530595	97.37958492
220706A00032	7/6/2022	3.15	7/6/2027	107.11068	104.556495	102.0769313	99.66936901	97.331298	95.06031163	92.85410191	90.71045473	88.62724542
220707A00041	7/7/2022	3.41	7/7/2025	101.54759	101.0255402	100.5088631	99.99747573	99.49129706	98.99024766	98.4942497	98.00322696	97.51710471
220711A00021	7/11/2022	3.27	7/11/2025	101.54823	101.0146647	100.4867179	99.96429914	99.44732157	98.93570032	98.42935225	97.92819593	97.43215162
220712A00016	7/15/2022	3.35	1/15/2026	103.06826	102.0133539	100.9800503	99.9676927	98.97564842	98.00330993	97.05009374	96.11543926	95.19880761
220715A00001	7/15/2022	3.44	7/15/2027	107.70906	105.1274465	102.6216189	100.1888956	97.82671155	95.53260834	93.30422924	91.13931414	89.035695
220715A00027	7/15/2022	3.44	7/15/2027	107.70906	105.1274465	102.6216189	100.1888956	97.82671155	95.53260834	93.30422924	91.13931414	89.035695
220715A00047	7/15/2022	3.44	7/15/2027	107.70906	105.1274465	102.6216189	100.1888956	97.82671155	95.53260834	93.30422924	91.13931414	89.035695
220719A00004	7/19/2022	3.46	7/19/2027	107.79186	105.198438	102.681362	100.2379244	97.86553275	95.56170273	93.32405324	91.15030123	89.03825698
220722A00036	7/22/2022	3.34	7/22/2025	100.95933	100.6281228	100.2996025	99.97373207	99.65047581	99.32979886	99.01166697	98.69604654	98.38290461
220722A00044	9/1/2022	3.23	9/1/2027	107.5204	104.8124433	102.1868665	99.64064295	97.17087604	94.77479584	92.44975243	90.19320981	88.0027401
220722A00049	9/15/2022	3.25	9/15/2025	102.00425	101.2883611	100.5825222	99.88652639	99.2001685	98.52324911	97.85557423	97.19695519	96.5472084
220722A00050	9/15/2022	3.25	9/15/2025	102.00425	101.2883611	100.5825222	99.88652639	99.2001685	98.52324911	97.85557423	97.19695519	96.5472084
220722A00051	9/15/2022	3.23	9/15/2027	107.62476	104.8767904	102.2133918	99.631412	97.12784126	94.69980335	92.34454865	90.0594475	87.84198401
220727A00004	7/27/2022	3.23	7/27/2027	107.25928	104.6513505	102.1206942	99.6645509	97.28027867	94.96534703	92.71733141	90.53390791	88.41284842
220727A00009	7/27/2022	3.31	7/28/2025	101.66099	101.0808224	100.50727	99.94022413	99.37957448	98.82521323	98.27703498	97.73493667	97.19881752
220727A00027	7/27/2022	3.23	7/27/2027	107.25928	104.6513505	102.1206942	99.6645509	97.28027867	94.96534703	92.71733141	90.53390791	88.41284842
220727A00035	10/24/2022	3.33	10/24/2029	113.42808	108.4856925	103.7910124	99.3303199	95.09072654	91.06011985	87.22711255	83.58099542	80.11169344
220727A00049	7/27/2022	3.31	7/25/2025	101.63735	101.0655124	100.5001126	99.9410414	99.38819279	98.84146323	98.30075142	97.7659583	97.23698697
220729A00035	8/3/2022	3.14	8/3/2027	107.07524	104.4509909	101.9049202	99.43421612	97.03619065	94.70826998	92.44798879	90.25298483	88.12099392
220729A00043	7/29/2022	3.04	7/29/2027	106.78056	104.1735554	101.6439565	99.18899	96.80600459	94.49246116	92.24592702	90.06407075	87.94465722
220729A00045	7/29/2022	3.03	7/29/2027	106.75459	104.1479343	101.6186686	99.16402775	96.78136073	94.46812863	92.22189898	90.04034057	87.92121847
220729A00047	7/29/2022	3.06	1/29/2027	105.54309	103.4467887	101.4028198	99.40952296	97.46530587	95.56863838	93.71804955	91.91212486	90.14950359
220801A00066	8/1/2022	2.93	7/30/2027	106.63622	104.0482672	101.5382056	99.10318605	96.74048449	94.44749535	92.22172559	90.06078895	87.96240049
220802A00009	8/2/2022	3	8/2/2027	106.70323	104.0865638	101.5478225	99.08420903	96.69304564	94.37176819	92.11792048	89.92914898	87.80319773
220804A00023	8/4/2022	3.19	8/4/2027	107.21287	104.5841322	102.0337484	99.55890205	97.15689696	94.82515168	92.56119366	90.36265382	88.22726153
220804A00037	8/4/2022	3.35	8/4/2025	101.74006	101.1403959	100.5477974	99.96214267	99.38331012	98.81118096	98.24563915	97.68657132	97.13386668
220808A00025	8/8/2022	3.25	8/6/2027	107.38423	104.7478753	102.1901991	99.70837214	97.29968306	94.96153592	92.69144452	90.48702695	88.34600041
220811A00021	8/11/2022	3.47	8/11/2025	101.87011	101.2507803	100.6389938	100.0346092	99.43749269	98.84751338	98.26454366	97.68845893	97.11913752
220812A00001	8/12/2022	3.17	8/12/2027	107.43264	104.7748966	102.1969134	99.69580446	97.26880547	94.91327066	92.6266669	90.40656804	88.25064956

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
220812A00002	8/12/2022	3.17	8/12/2027	107.43264	104.7748966	102.1969134	99.69580446	97.26880547	94.91327066	92.6266669	90.40656804	88.25064956
220816A00009	8/16/2022	3.33	8/16/2027	107.66888	105.0019288	102.4151347	99.90559204	97.47051715	95.10724615	92.81322888	90.58602313	88.42328929
220817A00036	10/14/2022	3.41	10/15/2027	108.34814	105.5084752	102.7583625	100.0944457	97.51351727	95.01251002	92.58849007	90.23864999	87.96030253
220817A00037	10/14/2022	3.41	10/15/2027	108.34814	105.5084752	102.7583625	100.0944457	97.51351727	95.01251002	92.58849007	90.23864999	87.96030253
220817A00038	10/14/2022	3.41	10/15/2027	108.34814	105.5084752	102.7583625	100.0944457	97.51351727	95.01251002	92.58849007	90.23864999	87.96030253
220817A00047	8/17/2022	3.29	8/17/2027	107.78732	105.1113878	102.5160254	99.9983069	97.55542943	95.18471109	92.88358463	90.64959173	88.48037755
220819A00034	8/19/2022	3.73	8/19/2032	122.07826	114.1242725	106.7630369	99.94691793	93.63235786	87.77950457	82.3518778	77.31606711	72.64145836
220823A00002	8/23/2022	3.38	8/23/2027	108.07323	105.3772852	102.7628478	100.2269422	97.76672041	95.37945799	93.06254757	90.81349305	88.62990396
220823A00009	8/23/2022	3.52	8/23/2027	108.22783	105.5345583	102.9226096	100.3890118	97.93092656	95.54563868	93.23054944	90.98317093	88.80112037
220823A00015	8/23/2022	3.78	8/30/2032	122.52766	114.5280155	107.1261582	100.2739086	93.9272253	88.04582479	82.59284198	77.53452295	72.83994691
220824A00011	8/24/2022	3.7	8/22/2025	102.11072	101.4603073	100.8181889	100.1842086	99.5582122	98.94004943	98.32957366	97.72664192	97.13111481
220825A00006	8/25/2022	3.56	8/25/2027	108.35071	105.650405	103.0317359	100.4917226	98.02751146	95.6363727	93.31569402	91.06297464	88.87581965
220825A00022	8/25/2022	3.68	8/25/2025	102.1244	101.4656795	100.8154649	100.1735909	99.53989741	98.91422868	98.29643279	97.68636168	97.08387095
220826A00033	8/26/2022	3.73	8/26/2025	102.16628	101.5046588	100.8516089	100.2069684	99.57057549	98.94227254	98.32190584	97.70932555	97.10438562
220829A00048	8/29/2022	3.75	2/25/2025	100.51418	100.3586091	100.2035243	100.0489222	99.89480031	99.74115653	99.58798861	99.43529435	99.28307154
220829A00057	8/29/2022	3.67	8/31/2026	105.46297	103.7768461	102.1258632	100.5089891	98.92523024	97.37363196	95.85327616	94.36327971	92.90279273
220830A00055	8/30/2022	3.7	8/30/2029	114.79682	109.971272	105.3804865	101.0117374	96.85306274	92.89321165	89.12159827	85.52825844	82.10380964
220830A00093	11/16/2022	3.69	11/16/2029	115.33642	110.2856902	105.4904946	100.9365612	96.61048556	92.49967499	88.59229572	84.87722327	81.34399644
220831A00079	8/31/2022	3.79	8/29/2025	102.23345	101.563317	100.9019699	100.2492381	99.60495407	98.9689545	98.34108027	97.72117634	97.10909156
220901A00033	9/1/2022	3.72	9/1/2027	108.83828	106.1124177	103.4693551	100.906049	98.41959019	96.00719654	93.66620654	91.394073	89.18835726
220901A00035	9/1/2022	3.82	9/1/2028	112.31259	108.5309608	104.8991549	101.4103706	98.05816142	94.83641108	91.73931406	88.76135796	85.89730677
220906A00046	9/6/2022	3.79	9/7/2027	109.0805	106.334699	103.6726971	101.0913982	98.58784286	96.15920176	93.80276897	91.51595555	89.29628359
220907A00010	9/7/2022	3.9	9/9/2032	124.1736	116.0572826	108.5491747	101.6000993	95.16511304	89.20312128	83.67652904	78.55092528	73.79479723
220907A00023	9/7/2022	3.76	9/8/2026	105.6914	103.9811107	102.3068083	100.6674233	99.06192711	97.48933153	95.94868694	94.43908037	92.95963371
220912A00044	11/15/2022	3.85	11/14/2025	103.00783	102.1229006	101.2532064	100.3983514	99.55795751	98.73165962	97.91910472	97.11995152	96.33386999
220912A00046	11/15/2022	3.85	11/14/2025	103.00783	102.1229006	101.2532064	100.3983514	99.55795751	98.73165962	97.91910472	97.11995152	96.33386999
220912A00050	11/15/2022	3.76	11/15/2027	109.59889	106.6567781	103.8098323	101.0544632	98.38723944	95.80487717	93.30423289	90.88229661	88.53618546
220912A00051	11/15/2022	3.76	11/15/2027	109.59889	106.6567781	103.8098323	101.0544632	98.38723944	95.80487717	93.30423289	90.88229661	88.53618546
220913A00017	9/13/2022	3.98	9/14/2026	106.12777	104.3969641	102.7028285	101.0442654	99.42021828	97.82967235	96.27165299	94.74522351	93.24948331
220913A00018	9/13/2022	3.91	9/13/2027	109.46114	106.693454	104.0106181	101.4094817	98.88703291	96.44039355	94.06681156	91.76365469	89.52840424
220915A00035	9/15/2022	4.2	3/17/2025	100.79296	100.5816989	100.3713411	100.161878	99.95330369	99.74561248	99.5387987	99.33285671	99.12778095
220915A00040	9/15/2022	4.16	9/15/2025	102.65527	101.9367958	101.2284048	100.529882	99.84102186	99.16162452	98.49149562	97.83044609	97.17829196
220916A00018	9/16/2022	4.07	9/16/2027	109.35798	106.7323934	104.187514	101.7203507	99.32804703	97.00787073	94.75720721	92.57355377	90.45451393

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
220916A00021	9/16/2022	4.17	9/16/2027	105.34122	103.8978745	102.4885131	101.1120507	99.76744698	98.45370336	97.16986057	95.914997	94.68822681
220916A00042	9/16/2022	4.07	9/16/2030	120.08775	114.0663714	108.3932177	103.0461778	98.0046649	93.24950408	88.76282745	84.52797798	80.52942078
220916A00043	9/16/2022	4.07	9/16/2031	122.79738	115.6961542	109.0671368	102.8761937	97.09184215	91.68502957	86.62893303	81.89877646	77.47166377
220916A00045	9/16/2022	4.1	9/16/2032	125.75551	117.5607381	109.9801797	102.9641154	96.46711432	90.44764244	84.86770786	79.69254094	74.89030465
220919A00033	9/19/2022	4	9/17/2027	109.74443	106.961704	104.2645486	101.6497701	99.11432167	96.6552916	94.26989669	91.95547527	89.70948099
220919A00036	9/19/2022	4.11	9/19/2029	116.34169	111.5700936	107.0323131	102.7155389	98.60773739	94.69759566	90.97447468	87.42836526	84.04984742
220920A00024	9/20/2022	4.25	9/19/2025	102.76173	102.0318307	101.3123203	100.6029814	99.90359928	99.21396489	98.53387515	97.86313255	97.20154503
220920A00025	9/20/2022	4.23	9/18/2026	106.6017	104.8555366	103.1465345	101.4735747	99.83558078	98.2315194	96.66039833	95.12126417	93.61320052
220920A00026	9/20/2022	4.1	9/20/2027	110.04729	107.2520176	104.542882	101.9166625	99.37028427	96.90080992	94.50543178	92.18146523	89.92634228
220921A00014	9/21/2022	4.08	9/21/2027	110.00224	107.2048003	104.4936403	101.8655303	99.31738791	96.84626837	94.4493572	92.12396339	89.86751294
220921A00069	9/21/2022	3.98	9/21/2027	109.95491	107.153116	104.4378367	101.8058366	99.25402133	96.77943511	94.37925295	92.05077392	89.79141471
220921A00074	9/21/2022	3.98	9/21/2027	109.95491	107.153116	104.4378367	101.8058366	99.25402133	96.77943511	94.37925295	92.05077392	89.79141471
220929A00041	9/29/2022	4.38	9/29/2027	110.91041	108.0779688	105.3333694	102.673302	100.0946085	97.59427335	95.16941524	92.81728034	90.53523549
220929A00043	9/29/2022	4.44	9/28/2029	118.54157	113.5478528	108.799478	104.2829863	99.98573221	95.89583327	92.00211947	88.29408609	84.76185009
220929A00063	9/29/2022	4.38	9/29/2027	110.91041	108.0779688	105.3333694	102.673302	100.0946085	97.59427335	95.16941524	92.81728034	90.53523549
221005A00041	10/5/2022	4.3	10/5/2027	110.74943	107.9028743	105.1450707	102.4726788	99.88251141	97.37152386	94.93680605	92.57557552	90.28517085
221006A00012	10/6/2022	4.37	10/6/2027	110.95441	108.1022617	105.3390961	102.6615652	100.0664753	97.5507749	95.11154744	92.7460039	90.45147639
221007A00003	10/7/2022	4.67	10/7/2025	103.2785	102.4968838	101.727129	100.9689712	100.2221492	99.4864097	98.76150691	98.04720228	97.34326421
221011A00036	10/11/2022	4.59	10/6/2026	107.43728	105.6337905	103.8695188	102.143282	100.4539443	98.80041524	97.18164695	95.59663221	94.04440245
221014A00026	10/14/2022	4.63	10/14/2027	111.76579	108.8804362	106.0856318	103.377987	100.7542631	98.21136316	95.74632505	93.35631442	91.03861829
221014A00027	10/14/2022	4.63	10/14/2027	111.76579	108.8804362	106.0856318	103.377987	100.7542631	98.21136316	95.74632505	93.35631442	91.03861829
221014A00032	10/14/2022	4.67	10/14/2027	111.21565	108.4875238	105.8451813	103.2854319	100.8052198	98.40161987	96.07183115	93.81317104	91.62306951
221014A00043	10/14/2022	4.49	10/14/2027	111.6069	108.7185774	105.9210167	103.2108217	100.5847422	98.03967074	95.57263501	93.18079116	90.86141726
221014A00050	10/14/2022	4.49	10/14/2027	111.6069	108.7185774	105.9210167	103.2108217	100.5847422	98.03967074	95.57263501	93.18079116	90.86141726
221018A00006	10/18/2022	4.55	10/18/2027	111.58386	108.6901848	105.8876455	103.1728403	100.5425136	97.9935514	95.52297404	93.1279296	90.80568746
221018A00007	10/18/2022	4.68	10/18/2027	106.38166	104.854867	103.3649948	101.9108444	100.4912667	99.10515896	97.75146251	96.42916066	95.13727667
221018A00030	10/18/2022	4.71	10/17/2025	103.42945	102.6196216	101.8225233	101.0378528	100.2653205	99.50464567	98.75555633	98.01778868	97.29108693
221018A00031	10/18/2022	4.71	10/17/2025	103.42945	102.6196216	101.8225233	101.0378528	100.2653205	99.50464567	98.75555633	98.01778868	97.29108693
221018A00047	10/18/2022	4.78	10/20/2025	103.52227	102.7037573	101.8982376	101.1054003	100.3249468	99.55658829	98.80004446	98.0550438	97.32132306
221018A00048	10/18/2022	4.71	10/19/2026	107.80507	105.9628919	104.1614381	102.399522	100.6760014	98.98977617	97.33978664	95.72501142	94.14446585
221018A00049	10/18/2022	4.59	10/18/2027	111.6966	108.8013234	105.9972209	103.2808897	100.6490731	98.09865573	95.62665701	93.23022392	90.90662483
221019A00008	10/19/2022	4.8	10/17/2025	103.5018	102.6916606	101.8942477	101.109266	100.3364258	99.57544653	98.82605597	98.08799032	97.36099371
221019A00009	10/19/2022	4.8	10/17/2025	103.5018	102.6916606	101.8942477	101.109266	100.3364258	99.57544653	98.82605597	98.08799032	97.36099371

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
221020A00046	10/20/2022	4.95	1/21/2025	100.26547	100.2070493	100.1487146	100.0904629	100.0322942	99.97420809	99.91620451	99.85828326	99.80044417
221025A00027	10/25/2022	4.57	10/25/2027	111.71529	108.8006444	105.9783352	103.244919	100.5971053	98.03174509	95.54582326	93.13645242	90.80086657
221027A00009	10/27/2022	4.68	10/27/2025	103.52436	102.6865204	101.8622802	101.0513111	100.2532942	99.46792037	98.69489059	97.93391504	97.18471296
221027A00050	10/27/2022	4.52	10/27/2027	111.59457	108.6761968	105.8504472	103.11387	100.4631665	97.89517916	95.40688415	92.99538533	90.65790794
221027A00056	4/25/2023	4.48	4/25/2030	120.69037	115.0625482	109.7397669	104.7038252	99.93770127	95.42547072	91.15222967	87.1040245	83.26778648
221027A00060	12/1/2022	4.46	12/1/2027	111.7957	108.776856	105.856764	103.0316559	100.2979274	97.65213136	95.09097003	92.61128765	90.21006351
221027A00061	12/15/2022	4.45	12/15/2027	111.90955	108.8511614	105.8940282	103.034238	100.2680509	97.59189248	95.00234499	92.49613994	90.07015051
221027A00062	12/15/2022	4.45	12/15/2027	111.90955	108.8511614	105.8940282	103.034238	100.2680509	97.59189248	95.00234499	92.49613994	90.07015051
221027A00063	12/15/2022	4.45	12/15/2027	111.90955	108.8511614	105.8940282	103.034238	100.2680509	97.59189248	95.00234499	92.49613994	90.07015051
221031A00004	10/31/2022	4.79	10/28/2025	103.62805	102.7869736	101.9595932	101.1455739	100.3445937	99.5563405	98.78051244	98.01681696	97.2649707
221031A00033	10/31/2022	4.74	10/31/2025	103.62253	102.7731916	101.9378114	101.116047	100.3075673	99.51205172	98.72918992	97.95868147	97.20023535
221031A00035	10/31/2022	4.67	10/30/2026	107.86142	105.9887993	104.1581513	102.3682897	100.6180666	98.9063735	97.23214038	95.59433346	93.99195405
221031A00036	10/31/2022	4.59	10/29/2027	111.81514	108.8881459	106.0541813	103.3097835	100.6516419	98.0765866	95.58158175	93.16371915	90.82021209
221031A00042	10/31/2022	4.73	10/30/2026	107.97229	106.098613	104.2669314	102.4760553	100.7248363	99.01216562	97.33697251	95.69822278	94.09491728
221031A00045	10/31/2022	4.79	10/31/2025	103.66467	102.8151331	101.9795613	101.1576076	100.3489407	99.55324003	98.77019525	97.99950585	97.24088079
221102A00012	11/2/2022	4.82	11/3/2025	103.727	102.8689227	102.0250904	101.1951468	100.3787504	99.57557114	98.78528947	98.00759608	97.24219149
221102A00026	11/2/2022	4.66	11/2/2027	112.0589	109.1173427	106.2695716	103.512096	100.841575	98.25480937	95.74873491	93.32041609	90.9670398
221107A00029	11/7/2022	4.83	11/9/2026	108.28078	106.3762928	104.5150551	102.6958253	100.9174098	99.17865626	97.47845239	95.81572406	94.18943377
221107A00030	11/7/2022	4.7	11/5/2027	112.20725	109.2551516	106.3974073	103.6304981	100.9510545	98.35585021	95.8417957	93.40593135	91.04542133
221107A00048	11/7/2022	4.96	9/8/2025	103.14017	102.4390769	101.7475458	101.0653827	100.3923976	99.72840601	99.07322804	98.42668873	97.78861771
221107A00053	11/7/2022	4.95	10/7/2025	103.49587	102.7133189	101.9426474	101.1835825	100.435863	99.69923545	98.97345384	98.25827947	97.55348059
221107A00056	11/7/2022	4.73	11/8/2027	112.3275	109.3652478	106.4979157	103.7219506	101.0339543	98.43067393	95.90899453	93.4659326	91.09862979
221108A00033	11/8/2022	4.7	11/8/2027	112.24121	109.2802151	106.4141025	103.6393273	100.9524926	98.35034618	95.82977406	93.38779356	91.02154712
221108A00036	11/8/2022	4.95	11/7/2025	103.88846	103.0186218	102.1634035	101.322441	100.4953794	99.68187538	98.88159698	98.09422295	97.3194424
221110A00024	11/10/2022	4.51	11/10/2025	103.54362	102.6671424	101.805549	100.9584628	100.1255191	99.30636507	98.50065988	97.70807365	96.9282873
221110A00025	11/10/2022	4.39	11/10/2026	107.4668	105.567375	103.7111651	101.896935	100.1234899	98.38967695	96.69438307	95.0365335	93.41509021
221110A00026	11/10/2022	4.29	11/10/2027	111.08241	108.1326207	105.2776548	102.5139578	99.83812736	97.24690655	94.73717701	92.30595223	89.95037117
221110A00038	11/10/2022	4.34	11/10/2027	111.22649	108.2746084	105.4176025	102.6519149	99.97414157	97.38102401	94.86944244	92.43640891	90.07906106
221110A00039	11/10/2022	4.34	11/10/2027	111.22649	108.2746084	105.4176025	102.6519149	99.97414157	97.38102401	94.86944244	92.43640891	90.07906106
221110A00064	1/17/2023	4.25	1/14/2028	111.60678	108.4717207	105.4428842	102.5160681	99.68725771	96.95262038	94.30849643	91.75139011	89.27796121
221110A00065	1/17/2023	4.25	1/14/2028	111.60678	108.4717207	105.4428842	102.5160681	99.68725771	96.95262038	94.30849643	91.75139011	89.27796121
221110A00075	11/10/2022	4.56	11/10/2025	103.58714	102.7104556	101.8486589	101.0013718	100.1682296	99.34887938	98.54298025	97.75020231	96.97022643
221110A00076	11/10/2022	4.45	11/10/2026	107.57949	105.6789742	103.8216981	102.0064215	100.2319494	98.49712832	96.80084462	95.1420231	93.5196252

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
221110A00084	11/10/2022	4.56	11/6/2025	103.54062	102.6751638	101.8242142	100.9874119	100.1644054	99.35485525	98.5584328	97.77482013	97.00370949
221110A00086	11/10/2022	4.34	11/8/2027	111.20582	108.2598223	105.4083431	102.6478482	99.97495192	97.38641318	94.8791284	92.45012502	90.09655517
221110A00108	11/10/2022	4.48	12/10/2025	103.85811	102.897521	101.9547602	101.0293342	100.1207671	99.22860049	98.35239245	97.4917168	96.64616241
221110A00110	11/10/2022	4.47	1/13/2026	104.22575	103.1698123	102.1353483	101.1217083	100.1282669	99.15442353	98.19960148	97.26324633	96.34482506
221114A00002	11/14/2022	4.37	11/15/2027	111.36501	108.3971513	105.5250884	102.7452112	100.0540685	97.44835771	94.92491704	92.48071911	90.11286429
221116A00027	11/16/2022	4.46	11/14/2025	103.54551	102.6580115	101.7857777	100.9284135	100.0855402	99.25679211	98.44181563	97.64026894	96.85182144
221117A00012	11/17/2022	4.54	11/14/2025	103.61602	102.72819	101.8556232	100.9979298	100.1547314	99.32566194	98.51036788	97.70850728	96.9197495
221117A00013	11/17/2022	4.54	11/14/2025	103.61602	102.72819	101.8556232	100.9979298	100.1547314	99.32566194	98.51036788	97.70850728	96.9197495
221117A00014	11/17/2022	4.54	11/14/2025	103.61602	102.72819	101.8556232	100.9979298	100.1547314	99.32566194	98.51036788	97.70850728	96.9197495
221117A00025	11/17/2022	4.28	11/17/2027	111.12476	108.15483	105.2809512	102.499504	99.80702161	97.20018674	94.67582387	92.23089265	89.86248129
221118A00018	11/18/2022	4.55	11/18/2025	103.67123	102.772119	101.8886518	101.0204259	100.1670487	99.32814088	98.50333607	97.69228015	96.89463078
221118A00019	11/18/2022	4.55	11/18/2025	103.67123	102.772119	101.8886518	101.0204259	100.1670487	99.32814088	98.50333607	97.69228015	96.89463078
221118A00023	11/18/2022	4.12	11/18/2027	110.91166	107.9365595	105.0579035	102.2720485	99.5755066	96.9649407	94.43715668	91.98909661	89.61783212
221118A00045	11/18/2022	4.57	11/18/2025	103.68908	102.7898829	101.9063305	101.0380203	100.1845599	99.34556983	98.52068377	97.70954754	96.9118188
221118A00046	11/18/2022	4.4	11/18/2026	107.57523	105.6524568	103.7738931	101.9382577	100.1443165	98.39087847	96.67679468	95.00095594	93.36229137
221118A00080	11/18/2022	4.61	11/18/2025	103.72478	102.8254108	101.9416877	101.0732091	100.2195822	99.38042774	98.55537916	97.74408232	96.94619484
221121A00047	11/21/2022	4.89	11/21/2033	135.10646	125.3976498	116.5038835	108.3514081	100.8735378	94.00993938	87.70599618	81.91223909	76.58383641
221121A00052	11/21/2022	4.35	11/22/2027	111.3796	108.3919728	105.501365	102.7041019	99.99666813	97.37570002	94.83797865	92.38042262	90.00008138
221121A00064	11/21/2022	4.34	11/22/2027	111.35046	108.3632557	105.473065	102.6762089	99.9691722	97.34859168	94.8112487	92.35406213	89.97408171
221122A00029	11/22/2022	4.31	11/22/2027	111.26302	108.2771046	105.3881651	102.5925298	99.88668442	97.26726667	94.73105882	92.27498064	89.8960827
221122A00040	11/22/2022	4.31	11/22/2027	111.26302	108.2771046	105.3881651	102.5925298	99.88668442	97.26726667	94.73105882	92.27498064	89.8960827
221123A00016	11/23/2022	4.58	11/23/2029	119.13661	114.1189596	109.3547741	104.8297721	100.5305545	96.44454466	92.55993356	88.86562911	85.35120871
221123A00034	11/23/2022	4.43	11/23/2026	107.68867	105.7508378	103.8578491	102.0083952	100.2012163	98.43509746	96.70886643	95.02139209	93.37158259
221123A00039	11/23/2022	4.29	11/23/2027	111.21492	108.2269193	105.3360505	102.5386345	99.83114824	97.21022133	94.67262832	92.21528171	89.83522524
221128A00034	11/28/2022	4.27	11/26/2027	111.18699	108.1910141	105.2926933	102.4883124	99.77432096	97.14732253	94.60406729	92.14144477	89.75647704
221129A00034	11/29/2022	4.38	12/1/2025	103.73867	102.8023494	101.8829703	100.9800747	100.0932216	99.22198584	98.36595717	97.52473951	96.69795048
221129A00035	11/29/2022	4.09	11/29/2027	110.93318	107.9269928	105.0191911	102.2060233	99.48389927	96.84938516	94.29919591	91.83018785	89.43935179
221129A00037	11/29/2022	4.56	11/26/2025	103.77316	102.8514955	101.9462474	101.056983	100.1832811	99.32473516	98.48095286	97.65155521	96.83617609
221129A00038	11/29/2022	4.56	11/26/2025	103.77316	102.8514955	101.9462474	101.056983	100.1832811	99.32473516	98.48095286	97.65155521	96.83617609
221129A00039	11/29/2022	4.56	11/26/2025	103.77316	102.8514955	101.9462474	101.056983	100.1832811	99.32473516	98.48095286	97.65155521	96.83617609
221129A00040	11/29/2022	4.56	11/26/2025	103.77316	102.8514955	101.9462474	101.056983	100.1832811	99.32473516	98.48095286	97.65155521	96.83617609
221129A00041	11/29/2022	4.56	11/28/2025	103.79641	102.8691112	101.9584246	101.0639087	100.185135	99.32169011	98.47317508	97.63920462	96.81940661
221129A00042	11/29/2022	4.56	11/28/2025	103.79641	102.8691112	101.9584246	101.0639087	100.185135	99.32169011	98.47317508	97.63920462	96.81940661

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
221129A00043	11/29/2022	4.59	12/1/2025	103.85899	102.9231092	102.0041441	101.1016365	100.2151466	99.34425033	98.48853836	97.64761563	96.82110069
221129A00044	11/29/2022	4.56	11/28/2025	103.79641	102.8691112	101.9584246	101.0639087	100.185135	99.32169011	98.47317508	97.63920462	96.81940661
221129A00045	11/29/2022	4.56	11/28/2025	103.79641	102.8691112	101.9584246	101.0639087	100.185135	99.32169011	98.47317508	97.63920462	96.81940661
221129A00046	11/29/2022	4.56	12/1/2025	103.83113	102.8953949	101.9765679	101.0741966	100.1878413	99.31707801	98.46149736	97.62070435	96.79431757
221129A00047	11/29/2022	4.56	12/1/2025	103.83113	102.8953949	101.9765679	101.0741966	100.1878413	99.31707801	98.46149736	97.62070435	96.79431757
221129A00048	11/29/2022	4.56	12/1/2025	103.83113	102.8953949	101.9765679	101.0741966	100.1878413	99.31707801	98.46149736	97.62070435	96.79431757
221129A00049	11/29/2022	4.56	12/1/2025	103.83113	102.8953949	101.9765679	101.0741966	100.1878413	99.31707801	98.46149736	97.62070435	96.79431757
221129A00050	11/29/2022	4.56	12/2/2025	103.84261	102.9040653	101.9825375	101.0775631	100.1886984	99.31551546	98.45760146	97.61455794	96.78600019
221129A00051	11/29/2022	4.56	12/2/2025	103.84261	102.9040653	101.9825375	101.0775631	100.1886984	99.31551546	98.45760146	97.61455794	96.78600019
221129A00052	11/29/2022	4.56	12/2/2025	103.84261	102.9040653	101.9825375	101.0775631	100.1886984	99.31551546	98.45760146	97.61455794	96.78600019
221129A00053	11/29/2022	4.56	12/2/2025	103.84261	102.9040653	101.9825375	101.0775631	100.1886984	99.31551546	98.45760146	97.61455794	96.78600019
221129A00054	11/29/2022	4.56	12/3/2025	103.85408	102.9127348	101.988506	101.0809282	100.1895539	99.3139514	98.45370421	97.60841042	96.77768206
221129A00055	11/29/2022	4.56	12/3/2025	103.85408	102.9127348	101.988506	101.0809282	100.1895539	99.3139514	98.45370421	97.60841042	96.77768206
221129A00056	11/29/2022	4.31	11/29/2027	111.33474	108.3282021	105.419901	102.6060901	99.88318918	97.24777392	94.69656812	92.22643641	89.8343774
221129A00059	11/29/2022	4.39	11/27/2026	107.65681	105.7081327	103.8047796	101.9454268	100.1287947	98.35364927	96.61880031	94.92309945	93.26543842
221129A00060	11/29/2022	4.39	11/27/2026	107.65681	105.7081327	103.8047796	101.9454268	100.1287947	98.35364927	96.61880031	94.92309945	93.26543842
221129A00061	11/29/2022	4.39	11/27/2026	107.65681	105.7081327	103.8047796	101.9454268	100.1287947	98.35364927	96.61880031	94.92309945	93.26543842
221129A00062	11/29/2022	4.39	11/27/2026	107.65681	105.7081327	103.8047796	101.9454268	100.1287947	98.35364927	96.61880031	94.92309945	93.26543842
221129A00064	11/29/2022	4.28	11/30/2027	111.25689	108.2487088	105.3389104	102.5237412	99.79961236	97.16309174	94.61089565	92.13988167	89.74704183
221129A00065	11/29/2022	4.28	11/30/2027	111.25689	108.2487088	105.3389104	102.5237412	99.79961236	97.16309174	94.61089565	92.13988167	89.74704183
221129A00066	11/29/2022	4.28	11/29/2027	111.24673	108.2414922	105.3344586	102.5218842	99.80018972	97.16595187	94.61589536	92.14688573	89.75592243
221129A00067	11/29/2022	4.28	11/29/2027	111.24673	108.2414922	105.3344586	102.5218842	99.80018972	97.16595187	94.61589536	92.14688573	89.75592243
221129A00068	11/29/2022	4.28	11/29/2027	111.24673	108.2414922	105.3344586	102.5218842	99.80018972	97.16595187	94.61589536	92.14688573	89.75592243
221129A00069	11/29/2022	4.28	11/26/2027	111.21624	108.2198376	105.3210966	102.5163058	99.80191439	97.17452558	94.63088928	92.16789469	89.78256362
221129A00070	11/29/2022	4.28	11/26/2027	111.21624	108.2198376	105.3210966	102.5163058	99.80191439	97.17452558	94.63088928	92.16789469	89.78256362
221129A00071	11/29/2022	4.28	11/26/2027	111.21624	108.2198376	105.3210966	102.5163058	99.80191439	97.17452558	94.63088928	92.16789469	89.78256362
221129A00072	11/29/2022	4.39	12/2/2026	107.71172	105.7487412	103.8317164	101.9592939	100.1301681	98.34308033	96.59681691	94.89020705	93.22212116
221129A00073	11/29/2022	4.39	12/2/2026	107.71172	105.7487412	103.8317164	101.9592939	100.1301681	98.34308033	96.59681691	94.89020705	93.22212116
221129A00075	11/29/2022	4.38	12/1/2026	107.68167	105.7216786	103.8075133	101.9378262	100.1113172	98.32673281	96.58286413	94.87854507	93.21265047
221129A00076	11/29/2022	4.38	12/1/2026	107.68167	105.7216786	103.8075133	101.9378262	100.1113172	98.32673281	96.58286413	94.87854507	93.21265047
221129A00077	11/29/2022	4.38	12/1/2026	107.68167	105.7216786	103.8075133	101.9378262	100.1113172	98.32673281	96.58286413	94.87854507	93.21265047
221129A00078	11/29/2022	4.38	12/1/2026	107.68167	105.7216786	103.8075133	101.9378262	100.1113172	98.32673281	96.58286413	94.87854507	93.21265047
221129A00083	11/29/2022	4.38	11/30/2026	107.67101	105.7138096	103.8023144	101.9351772	100.1111103	98.32884343	96.58719442	94.88499441	93.22112256

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
221129A00084	11/29/2022	4.38	11/30/2026	107.67101	105.7138096	103.8023144	101.9351772	100.111103	98.32884343	96.58719442	94.88499441	93.22112256
221129A00085	11/29/2022	4.38	11/30/2026	107.67101	105.7138096	103.8023144	101.9351772	100.111103	98.32884343	96.58719442	94.88499441	93.22112256
221129A00086	11/29/2022	4.38	11/30/2026	107.67101	105.7138096	103.8023144	101.9351772	100.111103	98.32884343	96.58719442	94.88499441	93.22112256
221130A00019	11/30/2022	4.63	11/26/2025	103.83719	102.9152035	102.0096425	101.120069	100.2460619	99.38721444	98.54313429	97.71344235	96.89777246
221130A00032	11/30/2022	4.37	11/30/2027	111.52116	108.5090778	105.59547	102.7765845	100.0488298	97.40877066	94.85312057	92.37873447	89.98260177
221130A00033	11/30/2022	4.37	11/30/2027	111.52116	108.5090778	105.59547	102.7765845	100.0488298	97.40877066	94.85312057	92.37873447	89.98260177
221130A00069	11/30/2022	4.15	11/30/2027	111.11946	108.1077145	105.1946028	102.3763577	99.64937754	97.01021761	94.45558254	91.98231889	89.58740827
221130A00075	11/30/2022	4.15	11/30/2027	111.11946	108.1077145	105.1946028	102.3763577	99.64937754	97.01021761	94.45558254	91.98231889	89.58740827
221130A00076	11/30/2022	4.15	11/30/2027	111.11946	108.1077145	105.1946028	102.3763577	99.64937754	97.01021761	94.45558254	91.98231889	89.58740827
221130A00078	11/30/2022	4.15	11/30/2027	111.11946	108.1077145	105.1946028	102.3763577	99.64937754	97.01021761	94.45558254	91.98231889	89.58740827
221130A00081	11/30/2022	4.15	11/30/2027	111.11946	108.1077145	105.1946028	102.3763577	99.64937754	97.01021761	94.45558254	91.98231889	89.58740827
221130A00085	11/30/2022	4.19	11/30/2027	110.99261	107.9883397	105.0823509	102.2708978	99.55039489	96.91741283	94.36867072	91.90102888	89.51148188
221130A00110	11/30/2022	4.15	11/30/2027	110.87516	107.8726202	104.9683244	102.158523	99.43963158	96.8082222	94.2610152	91.79487208	89.40678857
221201A00009	12/1/2022	4.22	12/1/2025	103.59005	102.6544812	101.7358395	100.8336718	99.94753765	99.07701192	98.2216845	97.38115954	96.55505484
221201A00011	12/1/2022	3.95	12/1/2027	110.54058	107.5347034	104.627427	101.814977	99.09374874	96.46029509	93.91131841	91.44366328	89.05430956
221201A00037	12/1/2022	4.26	12/1/2026	107.44936	105.4916694	103.5797665	101.7122989	99.88796758	98.10552027	96.3637492	94.66148933	92.99761654
221201A00043	12/1/2022	4.37	12/3/2029	110.45568	107.6765127	105.0029333	102.4300167	99.95309951	97.56776904	95.26984777	93.05537934	90.92061533
221201A00068	12/1/2022	4.21	12/1/2027	110.36845	107.5469058	104.8177038	102.1772617	99.62216077	97.14913484	94.75506239	92.43695938	90.1919723
221202A00018	12/2/2022	4.16	12/2/2027	110.9234	107.9147699	105.0047468	102.1895634	99.46561586	96.82945796	94.27779275	91.80746549	89.41545662
221202A00025	12/2/2022	4.06	12/2/2026	107.23041	105.269284	103.3541432	101.4836296	99.65643554	97.87130028	96.12700821	94.42238681	92.7563048
221205A00024	12/5/2022	4.13	12/3/2027	110.8445	107.8343493	104.9229504	102.1065276	99.38146857	96.74431888	94.19177412	91.72067245	89.32798766
221205A00048	12/5/2022	4.4	12/5/2025	103.7267	102.7805078	101.8516281	100.939586	100.0439259	99.16420875	98.30001105	97.45092416	96.61655367
221205A00088	12/5/2022	4.13	12/3/2027	110.8445	107.8343493	104.9229504	102.1065276	99.38146857	96.74431888	94.19177412	91.72067245	89.32798766
221206A00011	12/6/2022	4.29	12/7/2026	107.56993	105.5949089	103.6664407	101.7831427	99.94368352	98.14678023	96.3911959	94.67573772	92.99925515
221206A00025	12/6/2022	4.27	12/4/2026	107.4998	105.5335468	103.61346	101.7381734	99.906372	98.11678822	96.36819982	94.65942797	92.98933542
221206A00036	12/6/2022	4.13	12/6/2027	110.87257	107.8539309	104.9345801	102.1107091	99.37867689	96.73500177	94.17635382	91.69954718	89.30153303
221206A00039	12/6/2022	4.29	12/7/2026	107.56993	105.5949089	103.6664407	101.7831427	99.94368352	98.14678023	96.3911959	94.67573772	92.99925515
221207A00009	12/7/2022	4.38	12/8/2025	103.74083	102.7863316	101.849452	100.9297035	100.0266187	99.13974697	98.26865385	97.41292028	96.57214195
221207A00010	12/7/2022	4.08	12/7/2027	110.73415	107.7148753	104.7950164	101.9707529	99.23843559	96.59457559	94.03583594	91.55902427	89.16108568
221207A00012	12/7/2022	4.21	12/7/2026	107.41373	105.4402722	103.5133369	101.6315425	99.79355867	97.99810307	96.24393956	94.52987607	92.85476277
221207A00017	12/7/2022	3.86	12/7/2027	110.32882	107.3099413	104.3906272	101.5670537	98.83556142	96.1926517	93.63497858	91.15934123	88.76267678
221207A00032	12/7/2022	4.52	12/7/2032	128.97297	120.4639436	112.6056476	105.3443458	98.63101615	92.42091544	86.67318502	81.35049482	76.41872174
221207A00035	12/7/2022	4.31	1/7/2026	103.99549	102.9572598	101.9398253	100.9425617	99.96487262	99.00618498	98.06594793	97.14363171	96.23872672

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
221208A00001	12/8/2022	4.6	12/8/2033	132.71013	123.0586918	114.2236823	106.1307591	98.71274132	91.90888454	85.66423318	79.92904078	74.65825112
221208A00005	12/8/2022	4.88	12/8/2037	147.26286	132.9634551	120.3105505	109.1008629	99.15740822	90.32597026	82.47205636	75.47827452	69.24207137
221208A00006	12/8/2022	4.88	12/8/2037	147.26286	132.9634551	120.3105505	109.1008629	99.15740822	90.32597026	82.47205636	75.47827452	69.24207137
221208A00020	12/8/2022	4.11	12/8/2027	110.83211	107.8086955	104.8849009	102.0569017	99.3210379	96.67381055	94.11187322	91.63202459	89.23120129
221208A00050	12/8/2022	4.11	12/8/2027	110.83211	107.8086955	104.8849009	102.0569017	99.3210379	96.67381055	94.11187322	91.63202459	89.23120129
221208A00051	2/15/2023	4.27	2/13/2026	104.33375	103.192313	102.0759303	100.983785	99.91509268	98.86910262	97.84509586	96.84238352	95.86030528
221208A00052	2/15/2023	4.01	2/15/2028	111.1768	107.9589921	104.8526431	101.8532297	98.95644599	96.15818694	93.45453775	90.84176363	88.31630032
221208A00054	2/1/2023	4.02	2/1/2028	111.06961	107.8939025	104.8271367	101.8649423	99.00315084	96.2377861	93.5650539	90.98133253	88.48316379
221208A00061	12/8/2022	4.11	12/8/2027	110.83211	107.8086955	104.8849009	102.0569017	99.3210379	96.67381055	94.11187322	91.63202459	89.23120129
221208A00062	12/8/2022	4.24	12/8/2028	114.81752	110.7185206	106.7919131	103.0295222	99.42360495	95.96682449	92.65222667	89.47321794	86.42354477
221208A00110	12/8/2022	4.07	12/8/2027	110.71378	107.6921241	104.7700471	101.943723	99.2094936	96.56386102	94.00348015	91.5251509	89.12581107
221209A00035	12/9/2022	3.91	12/9/2027	110.49475	107.4680073	104.541248	101.7106196	98.97244158	96.3231954	93.75951632	91.27818584	88.87612445
221209A00037	12/9/2022	3.91	12/9/2027	110.49475	107.4680073	104.541248	101.7106196	98.97244158	96.3231954	93.75951632	91.27818584	88.87612445
221209A00070	12/9/2022	4.42	12/9/2037	125.65879	117.940042	110.8831304	104.4222244	98.49869126	93.06025017	88.06023313	83.45693723	79.21305607
221212A00011	12/12/2022	3.89	12/10/2027	110.44438	107.4157007	104.4871564	101.6548905	98.91521366	96.26459869	93.69967296	91.2172105	88.81412476
221212A00040	12/12/2022	4.45	12/12/2025	103.85184	102.8857894	101.9377707	101.0072829	100.0938419	99.19698175	98.316253	97.45122252	96.60147252
221212A00041	12/12/2022	4.15	12/10/2027	110.96926	107.9384204	105.0076017	102.1729578	99.43080826	96.77763431	94.21007117	91.72490018	89.31904164
221212A00063	12/12/2022	4.45	12/12/2025	103.85184	102.8857894	101.9377707	101.0072829	100.0938419	99.19698175	98.316253	97.45122252	96.60147252
221212A00071	12/12/2022	4.15	12/13/2027	110.99749	107.9581444	105.019364	102.1772653	99.42813869	96.76843798	94.19477258	91.70389956	89.2927164
221212A00117	6/12/2023	4.11	6/12/2026	105.37987	103.9112357	102.4705105	101.0569623	99.66988803	98.3086088	96.97246829	95.66083202	94.37308648
221212A00131	12/12/2023	3.77	12/11/2026	106.59056	104.6146263	102.6855576	100.8019521	98.96246251	97.16579041	95.41068445	93.69593814	92.02038795
221213A00004	12/13/2022	3.99	12/13/2027	110.52197	107.4897305	104.557882	101.7225439	98.98001225	96.32674632	93.75936064	91.27461725	88.86941838
221213A00017	12/13/2022	4.1	12/14/2026	107.26819	105.2773783	103.3339397	101.4364515	99.58354669	97.77390816	96.00626668	94.27939876	92.59212464
221213A00047	12/13/2022	3.8	12/13/2027	110.20336	107.1702044	104.237625	101.4017348	98.65881827	96.00532389	93.43785604	90.95316721	88.54815068
221213A00051	12/13/2022	4.02	12/13/2027	110.61113	107.5775581	104.6444098	101.8078042	99.06403596	96.4095635	93.84100038	91.35510768	88.94878676
221213A00056	12/13/2022	4.02	5/13/2026	105.0628	103.6763187	102.3148658	100.9778237	99.66459115	98.37458655	97.10724669	95.86202625	94.63839697
221213A00061	12/13/2022	4.15	12/11/2026	107.33669	105.3532575	103.4168283	101.5260031	99.6794304	97.87580823	96.11388152	94.39244024	92.71031749
221214A00003	12/14/2022	4.26	12/12/2025	103.66965	102.704539	101.7574488	100.8278772	99.91534087	99.01937373	98.13952677	97.27536702	96.42647696
221214A00020	12/14/2022	4.2	12/12/2025	103.61212	102.6473021	101.700505	100.7712228	99.85897211	98.96328699	98.08371848	97.21983371	96.3712152
221214A00022	12/14/2022	4.17	2/13/2026	104.22045	103.0796888	101.963978	100.8724943	99.80445366	98.75910562	97.73573143	96.73364246	95.75217861
221214A00031	12/14/2022	3.97	12/14/2027	110.47144	107.4372731	104.5036506	101.6666859	98.92266603	96.26804171	93.69941956	91.21355412	88.80734061
221214A00077	12/14/2022	3.84	12/14/2027	110.33118	107.2934129	104.356452	101.5163927	98.76950807	96.1122361	93.54117123	91.05305658	88.64477658
221214A00079	12/14/2022	3.84	12/14/2027	110.33118	107.2934129	104.356452	101.5163927	98.76950807	96.1122361	93.54117123	91.05305658	88.64477658

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
221214A00102	12/14/2022	4.33	12/15/2025	103.76927	102.7954075	101.8398777	100.902169	99.98178538	99.07824902	98.19109965	97.3198936	96.46420311
221215A00082	12/15/2022	4.27	12/15/2025	103.71124	102.7376777	101.7824459	100.8450313	99.9249379	99.02168812	98.13482167	97.26389497	96.40848034
221215A00115	12/15/2022	4	12/15/2027	110.56968	107.5313538	104.5937862	101.7530777	99.00550433	96.34750672	93.77568187	91.28677529	88.87767366
221216A00007	12/16/2022	4.27	12/16/2025	103.72191	102.7455425	101.7876125	100.8475992	99.92500262	99.01934109	98.13015066	97.25698417	96.39941055
221216A00008	12/16/2022	4.27	12/16/2025	103.72191	102.7455425	101.7876125	100.8475992	99.92500262	99.01934109	98.13015066	97.25698417	96.39941055
221216A00009	12/16/2022	4.27	12/16/2025	103.72191	102.7455425	101.7876125	100.8475992	99.92500262	99.01934109	98.13015066	97.25698417	96.39941055
221216A00010	12/16/2022	4.27	12/16/2025	103.72191	102.7455425	101.7876125	100.8475992	99.92500262	99.01934109	98.13015066	97.25698417	96.39941055
221216A00013	12/16/2022	4.04	12/16/2027	110.69788	107.6549489	104.7129958	101.8681141	99.11656853	96.45478929	93.87936341	91.38702703	88.97465798
221216A00023	12/16/2022	4.04	12/13/2027	110.67057	107.6361099	104.7020951	101.8646444	99.12005176	96.46477496	93.89542687	91.40876797	89.00169901
221216A00044	12/16/2022	4.43	4/16/2025	101.17372	100.8788259	100.5856638	100.2942186	100.0044751	99.71641831	99.43003345	99.1453059	98.8622212
221216A00045	12/16/2022	4.38	5/16/2025	101.48686	101.1083845	100.7327426	100.3599059	99.98984293	99.62252275	99.25791475	98.89598883	98.53671534
221216A00047	12/16/2022	4.34	6/16/2025	101.80652	101.3416263	100.8809875	100.4245501	99.97225662	99.52405063	99.07987672	98.63968048	98.2034085
221216A00048	12/16/2022	4.32	7/16/2025	102.11833	101.5697602	101.0270998	100.490255	99.95913258	99.43364104	98.91369097	98.3991948	97.89006681
221216A00049	12/16/2022	4.29	8/15/2025	102.41957	101.7873204	101.1628949	100.546151	99.93694735	99.33514592	98.7406121	98.15321451	97.57282494
221219A00043	12/19/2022	4.07	12/17/2027	110.79648	107.7493737	104.803465	101.9548294	99.19972104	96.53455968	93.95592278	91.4605374	89.04527283
221220A00025	12/20/2022	4.38	12/22/2025	103.89443	102.9006616	101.9259675	100.9697982	100.0316285	99.11095265	98.20728393	97.32015346	96.44910949
221221A00043	12/21/2022	4.26	12/19/2025	103.74413	102.7594014	101.7934254	100.845665	99.91560783	99.00276029	98.10664717	97.22681061	96.3628093
221221A00046	12/21/2022	4.33	12/19/2025	103.8126	102.8275194	101.8611881	100.9130772	99.98267394	99.06948487	98.17303461	97.29286519	96.42853525
221221A00048	12/21/2022	4.22	12/21/2026	107.57633	105.5635657	103.599114	101.6815154	99.80936316	97.9813026	96.1960287	94.45228389	92.74885602
221221A00049	12/21/2022	4.15	12/21/2027	111.07273	108.0107057	105.0506831	102.1887002	99.42096899	96.74386948	94.15394174	91.64787763	89.22251325
221221A00053	12/21/2022	4.15	12/21/2027	111.07273	108.0107057	105.0506831	102.1887002	99.42096899	96.74386948	94.15394174	91.64787763	89.22251325
221222A00012	12/22/2022	4.35	12/16/2025	103.79951	102.8227347	101.8644052	100.9239977	100.0010119	99.09496626	98.20539659	97.33185566	96.4739123
221222A00013	12/22/2022	4.34	12/23/2025	103.86582	102.8694596	101.8922694	100.9337018	99.99322745	99.07033682	98.16453934	97.27536256	96.40235134
221222A00024	12/22/2022	4.35	12/15/2025	103.78862	102.8146508	101.8590217	100.921215	100.0007345	99.09710266	98.20985898	97.33855981	96.48277737
221222A00026	12/22/2022	4.22	12/15/2026	107.51502	105.5190282	103.5705801	101.6682495	99.81066243	97.9964956	96.22447367	94.49336731	92.80199124
221222A00027	12/22/2022	4.16	12/15/2027	111.04608	108.0006187	105.0560945	102.2086014	99.45440979	96.78995499	94.21182876	91.71677161	89.30166543
221222A00035	12/30/2022	4.34	12/30/2025	103.94183	102.9257957	101.9296776	100.9528908	99.99487615	99.05509558	98.13303158	97.22818607	96.34007945
221222A00053	12/22/2022	4.18	12/22/2027	110.81377	107.8429059	104.9715536	102.1957849	99.51184698	96.91615787	94.40529756	91.97599956	89.625143
221223A00025	12/23/2022	4.25	12/23/2027	111.39148	108.3192551	105.3495088	102.478253	99.70167605	97.016136	94.41815213	91.90439666	89.47168721
221228A00044	12/28/2022	4.31	12/28/2027	111.62065	108.5314467	105.5457039	102.6593743	99.86859452	97.16967366	94.55908505	92.03345768	89.58956847
221228A00075	12/28/2022	4.09	12/28/2027	111.20839	108.1196132	105.1344563	102.2488644	99.45896306	96.76105115	94.15159239	91.62720678	89.1846628
221228A00129	12/28/2022	4.11	12/28/2027	111.10285	108.054738	105.1097753	102.2638575	99.51306602	96.85366203	94.28207693	91.79490345	89.38888733
221229A00075	12/29/2022	5.2	12/29/2037	151.41413	136.8065429	123.879839	112.4262075	102.2647899	93.23804485	85.20862144	78.05666737	71.67750813

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
221230A00059	12/30/2022	4.47	6/30/2025	102.063	101.5582048	101.0584004	100.5635167	100.0734812	99.58822292	99.10767231	98.63176107	98.16042223
221230A00086	12/30/2022	4.8	1/2/2025	100.03057	100.0250078	100.0194471	100.0138915	100.0083408	100.0027952	99.99725446	99.99171872	99.98618793
221230A00087	12/30/2022	4.56	1/2/2026	104.19748	103.1718355	102.1664444	101.1807137	100.2140701	99.26596238	98.3358604	97.42325404	96.52765234
221230A00088	12/30/2022	4.42	12/30/2026	108.07145	106.02933	104.0367749	102.0922651	100.1943415	98.34159976	96.53268751	94.7663022	93.04118886
221230A00109	12/30/2022	4.56	12/30/2025	104.16374	103.1465023	102.1491989	101.1712429	100.2120748	99.27115625	98.34796934	97.44201566	96.5528153
221230A00111	12/30/2022	4.42	12/30/2026	108.07145	106.02933	104.0367749	102.0922651	100.1943415	98.34159976	96.53268751	94.7663022	93.04118886
230103A00066	1/3/2023	4.19	7/15/2026	105.97041	104.4046307	102.8700285	101.3657446	99.8909503	98.44484661	97.02666307	95.63565646	94.27110957
230103A00068	1/3/2023	4.69	3/13/2025	100.84911	100.6488527	100.449401	100.2507544	100.052908	99.85585695	99.6595963	99.46412126	99.26942704
230103A00070	1/3/2023	4.53	10/15/2025	103.26175	102.4581745	101.6671431	100.8883657	100.1215585	99.3664464	98.62276294	97.89024951	97.1686553
230104A00004	1/4/2023	4.19	1/4/2028	111.32636	108.2226845	105.2235314	102.3247863	99.52252518	96.81300041	94.19263209	91.65799937	89.20583235
230104A00044	1/4/2023	4.2	1/4/2028	111.35668	108.2525451	105.2529414	102.3537572	99.5510677	96.84112518	94.22034934	91.68531897	89.23276387
230105A00020	1/5/2023	4.32	1/5/2028	111.73059	108.6180489	105.6103368	102.7033335	99.89310125	97.17587965	94.54807654	92.0062595	89.54714772
230106A00017	1/6/2023	4.23	1/6/2028	111.46724	108.3560016	105.3496557	102.4440706	99.63530322	96.91958804	94.29332831	91.75308735	89.29558038
230106A00019	1/6/2023	4.23	1/6/2028	111.46724	108.3560016	105.3496557	102.4440706	99.63530322	96.91958804	94.29332831	91.75308735	89.29558038
230106A00032	1/6/2023	4.28	1/6/2026	104.03682	102.999903	101.9837169	100.9876405	100.0110803	99.05346597	98.11424935	97.19290315	96.28892011
230109A00011	1/9/2023	4.61	1/6/2025	100.07479	100.0580943	100.0414186	100.0247598	100.0081179	99.99149262	99.97488414	99.95829236	99.94171726
230109A00042	1/9/2023	4.07	12/20/2027	110.82403	107.7684425	104.8145856	101.9585111	99.19644359	96.52477521	93.94005735	91.43899258	89.01842715
230109A00083	1/9/2023	4.79	1/11/2038	146.39748	132.0640201	119.3927885	108.1771788	98.2374916	89.41729439	81.58029084	74.60762584	68.39556386
230110A00006	1/10/2023	4.06	1/10/2028	110.98814	107.8734012	104.8640097	101.9558014	99.14480413	96.4272257	93.79944423	91.25799963	88.79958529
230110A00023	1/10/2023	4.3	1/12/2026	104.03728	102.9851315	101.954335	100.9442416	99.95423095	98.98370759	98.03209925	97.09885591	96.18344873
230110A00035	1/10/2023	4.08	1/10/2028	110.88513	107.8119936	104.8436691	101.97595	99.20482314	96.52646106	93.9372124	91.43359247	89.01227448
230110A00040	1/13/2023	4.07	12/13/2027	110.75973	107.7239375	104.788623	101.9499046	99.20407547	96.54759215	93.97706661	91.48925841	89.08106739
230110A00043	1/10/2023	3.84	1/10/2028	110.57015	107.4558957	104.4471554	101.5397522	98.72970275	96.01320413	93.38662463	90.84649492	88.38949975
230110A00047	1/10/2023	3.84	1/10/2028	110.57015	107.4558957	104.4471554	101.5397522	98.72970275	96.01320413	93.38662463	90.84649492	88.38949975
230110A00055	1/10/2023	4.06	1/10/2028	110.98814	107.8734012	104.8640097	101.9558014	99.14480413	96.4272257	93.79944423	91.25799963	88.79958529
230110A00070	1/10/2023	4.27	1/9/2026	103.97493	102.9313429	101.9087682	100.9065741	99.92415455	98.96092775	98.0163343	97.08983647	96.18091703
230110A00074	1/12/2023	4.65	1/10/2025	100.12146	100.0936364	100.0658488	100.0380922	100.0103667	99.98267214	99.95500856	99.92737586	99.89977399
230111A00004	1/11/2023	3.83	1/11/2028	110.54855	107.4319266	104.420963	101.5114794	98.69948396	95.98116577	93.35288572	90.81116749	88.35268931
230111A00013	1/11/2023	4.25	1/9/2026	103.9542	102.9107313	101.88827	100.8861876	99.90387827	98.94076016	97.99627395	97.06988191	96.16106685
230111A00019	1/11/2023	3.83	1/11/2028	110.54855	107.4319266	104.420963	101.5114794	98.69948396	95.98116577	93.35288572	90.81116749	88.35268931
230111A00039	1/11/2023	4.6	1/13/2025	100.15408	100.1179169	100.0818003	100.0457271	100.0096972	99.97371067	99.93776727	99.90186696	99.86600967
230111A00046	1/11/2023	4.28	1/13/2026	104.02675	102.9719232	101.9385577	100.9260007	99.93362715	98.96083699	98.00705368	97.07172317	96.15431279
230112A00004	1/12/2023	4	1/12/2028	110.82354	107.7059241	104.6939066	101.7833116	98.97015172	96.25062029	93.62108204	91.07806431	88.61824875

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230112A00014	1/12/2023	4.09	1/12/2027	107.53545	105.4637568	103.4429476	101.4714382	99.54770884	97.67029761	95.83779801	94.04885621	92.30216875
230112A00041	1/12/2023	4.2	1/12/2026	103.93281	102.8812529	101.8510316	100.8415053	99.85205403	98.88208226	97.93101796	96.9983113	96.08343362
230112A00042	1/12/2023	4.09	1/12/2027	107.53545	105.4637568	103.4429476	101.4714382	99.54770884	97.67029761	95.83779801	94.04885621	92.30216875
230112A00044	1/12/2023	4	1/12/2028	110.82354	107.7059241	104.6939066	101.7833116	98.97015172	96.25062029	93.62108204	91.07806431	88.61824875
230112A00059	3/1/2023	4.04	3/2/2026	104.23436	103.0470998	101.8869458	100.7529795	99.6443208	98.56012833	97.49959784	96.46195997	95.44647841
230112A00060	3/15/2023	4.01	3/13/2026	104.30311	103.0854536	101.896306	100.7346729	99.59960582	98.49019987	97.40559063	96.34495223	95.30749515
230112A00061	3/15/2023	4.01	3/13/2026	104.30311	103.0854536	101.896306	100.7346729	99.59960582	98.49019987	97.40559063	96.34495223	95.30749515
230112A00062	3/15/2023	3.83	3/15/2028	110.87121	107.5774642	104.4001665	101.3344939	98.37585525	95.51987922	92.76240192	90.09945567	87.52725829
230112A00063	3/15/2023	3.83	3/15/2028	110.87121	107.5774642	104.4001665	101.3344939	98.37585525	95.51987922	92.76240192	90.09945567	87.52725829
230112A00065	1/12/2023	4.09	1/12/2027	107.53545	105.4637568	103.4429476	101.4714382	99.54770884	97.67029761	95.83779801	94.04885621	92.30216875
230112A00066	1/12/2023	4	1/12/2028	110.82354	107.7059241	104.6939066	101.7833116	98.97015172	96.25062029	93.62108204	91.07806431	88.61824875
230113A00037	1/26/2024	3.43	1/30/2026	103.27266	102.1756591	101.1019662	100.0508446	99.02158778	98.01351854	97.02598721	96.05837053	95.11007021
230113A00055	1/13/2023	3.88	1/13/2028	110.46587	107.3510481	104.3418428	101.434076	98.62375592	95.90707197	93.28038535	90.74022019	88.28325519
230113A00057	1/13/2023	3.99	1/13/2028	110.08332	107.1706396	104.3559236	101.6352633	99.00492845	96.46136097	94.00116622	91.6211041	89.31808104
230113A00080	1/13/2023	4.18	1/13/2026	103.92201	102.867771	101.8349837	100.8229967	99.83118521	98.85894933	97.90571273	96.97092151	96.05404317
230117A00015	1/17/2023	4.52	1/17/2025	100.19566	100.1483823	100.1011662	100.0540122	100.00692	99.95988957	99.91292076	99.86601344	99.81916748
230117A00040	1/17/2023	4.07	1/19/2027	107.56364	105.4727374	103.4334861	101.4442712	99.50353827	97.60979287	95.7615975	93.95756911	92.19637652
230117A00048	1/17/2023	3.97	1/14/2028	110.75008	107.6281853	104.6121845	101.6978803	98.88126873	96.15852752	93.52600691	90.98022068	88.51783773
230117A00087	1/17/2023	3.93	1/18/2028	110.66357	107.5322076	104.507343	101.5847472	98.76038203	96.03039354	93.39110209	90.8389935	88.37071049
230118A00019	1/18/2023	3.59	1/18/2028	109.87319	106.7480481	103.7294263	100.8130878	97.99498779	95.27126601	92.63823711	90.09238168	87.63033765
230118A00020	1/18/2023	3.87	1/16/2026	103.70965	102.6471642	101.6064883	100.5869585	99.58793418	98.60880042	97.64896669	96.70786563	95.78495198
230118A00033	1/18/2023	3.81	1/18/2028	110.2951	107.1694179	104.1500927	101.2328961	98.41379477	95.68893914	93.0546539	90.50742898	88.04391109
230118A00039	1/18/2023	3.81	1/18/2028	110.2951	107.1694179	104.1500927	101.2328961	98.41379477	95.68893914	93.0546539	90.50742898	88.04391109
230118A00053	1/18/2023	3.87	1/16/2026	103.70965	102.6471642	101.6064883	100.5869585	99.58793418	98.60880042	97.64896669	96.70786563	95.78495198
230118A00056	1/18/2023	3.87	1/16/2026	103.70965	102.6471642	101.6064883	100.5869585	99.58793418	98.60880042	97.64896669	96.70786563	95.78495198
230118A00058	1/23/2023	4	2/17/2026	104.06529	102.914549	101.7893228	100.6887655	99.61207123	98.55846904	97.52722081	96.51761962	95.52898813
230118A00087	1/18/2023	4.02	1/16/2026	103.78336	102.7216919	101.6817984	100.6630136	99.66469854	98.68623998	97.72704885	96.78655925	95.86422726
230119A00034	1/19/2023	3.82	1/19/2028	110.33447	107.2054883	104.1830354	101.2628774	98.44097169	95.71346	93.07665882	90.5270504	88.06127423
230119A00075	1/19/2023	4.44	1/21/2025	100.2355	100.1771037	100.1187946	100.0605684	100.0024251	99.94436438	99.88638617	99.82849025	99.77067645
230119A00105	1/19/2023	3.9	1/19/2027	107.21159	105.1244056	103.0888047	101.1031684	99.16594436	97.27564005	95.43081988	93.6301026	91.87215881
230119A00108	1/19/2023	3.81	1/19/2028	110.30374	107.1752293	104.1532388	101.2335315	98.4120652	95.68498197	93.04859867	90.4993979	88.03401947
230119A00137	1/19/2023	3.9	1/19/2027	107.21159	105.1244056	103.0888047	101.1031684	99.16594436	97.27564005	95.43081988	93.6301026	91.87215881
230120A00021	1/20/2023	4.13	1/20/2026	103.93927	102.8657732	101.8145087	100.784793	99.77596751	98.78740015	97.8184843	96.86863731	95.93729937

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230120A00022	1/20/2023	3.9	1/20/2028	110.58923	107.4536101	104.424785	101.4985036	98.67071109	95.93753778	93.2952895	90.74043837	88.26961432
230120A00027	1/20/2023	4.13	1/20/2026	103.93927	102.8657732	101.8145087	100.784793	99.77596751	98.78740015	97.8184843	96.86863731	95.93729937
230120A00029	1/20/2023	3.9	1/20/2028	110.58923	107.4536101	104.424785	101.4985036	98.67071109	95.93753778	93.2952895	90.74043837	88.26961432
230120A00049	1/20/2023	4.53	1/16/2025	100.18498	100.1404787	100.0960373	100.051653	100.0073258	99.9630554	99.91884182	99.8746849	99.83058454
230120A00065	1/20/2023	4.52	1/21/2025	100.2402	100.1818011	100.1234879	100.0652577	100.0071104	99.94904575	99.89106356	99.83316366	99.77534589
230120A00071	1/20/2023	4.31	1/21/2025	100.23237	100.1739376	100.1155866	100.0573191	99.99913498	99.94103408	99.88301617	99.82508109	99.76722865
230120A00079	1/20/2023	3.68	1/20/2028	110.16693	107.0318401	104.0037148	101.0782887	98.25149545	95.5194546	92.87846189	90.32498003	87.85563015
230120A00099	1/20/2023	3.92	1/20/2026	103.80081	102.7268479	101.6751519	100.6450376	99.63584478	98.64694004	97.6777152	96.72758625	95.79599212
230120A00103	1/20/2023	3.92	1/20/2026	103.80081	102.7268479	101.6751519	100.6450376	99.63584478	98.64694004	97.6777152	96.72758625	95.79599212
230120A00114	1/20/2023	4.13	1/20/2026	103.93927	102.8657732	101.8145087	100.784793	99.77596751	98.78740015	97.8184843	96.86863731	95.93729937
230120A00117	1/20/2023	3.9	1/20/2028	110.58923	107.4536101	104.424785	101.4985036	98.67071109	95.93753778	93.2952895	90.74043837	88.26961432
230123A00051	1/23/2023	3.75	1/21/2028	110.39123	107.249968	104.215917	101.2848032	98.45254838	95.71526122	93.06922698	90.51089855	88.03688778
230123A00078	1/23/2023	4.41	6/23/2025	101.91577	101.4312356	100.9513169	100.4759497	100.0050694	99.53861245	99.07651673	98.61872113	98.1651657
230124A00004	1/24/2023	3.99	1/24/2028	110.90261	107.7513265	104.7076102	101.7671656	98.92589853	96.17990241	93.52544824	90.95897549	88.47708335
230124A00014	1/24/2023	4.23	1/26/2026	104.10728	103.0163728	101.9483944	100.9026244	99.87837451	98.87498445	97.89182088	96.92827583	95.9837655
230124A00015	1/24/2023	4.09	1/25/2027	107.66472	105.5565129	103.500645	101.4954663	99.53939204	97.63089881	95.76852198	93.95085274	92.17653558
230124A00022	1/24/2023	4.39	1/24/2025	100.27006	100.2032744	100.1365932	100.0700131	100.0035337	99.93715495	99.87087649	99.80469813	99.73861962
230124A00024	1/24/2023	4.23	1/23/2026	104.07661	102.9941096	101.9341903	100.8961531	99.8793246	98.88305869	97.90673525	96.94975896	96.01155794
230124A00025	1/24/2023	4.09	1/25/2027	107.66472	105.5565129	103.500645	101.4954663	99.53939204	97.63089881	95.76852198	93.95085274	92.17653558
230124A00035	1/24/2023	4.23	1/26/2026	104.10728	103.0163728	101.9483944	100.9026244	99.87837451	98.87498445	97.89182088	96.92827583	95.9837655
230124A00045	1/24/2023	3.99	1/24/2028	110.90261	107.7513265	104.7076102	101.7671656	98.92589853	96.17990241	93.52544824	90.95897549	88.47708335
230124A00046	1/24/2023	3.99	1/24/2028	110.90261	107.7513265	104.7076102	101.7671656	98.92589853	96.17990241	93.52544824	90.95897549	88.47708335
230124A00055	6/15/2023	4.13	6/15/2032	124.62559	116.7494831	109.4466618	102.6720374	96.38429481	90.54556135	85.12110317	80.07904995	75.39014507
230124A00056	3/28/2023	4.19	3/28/2033	127.22636	118.4849081	110.4359716	103.0204138	96.18446466	89.87920549	84.06010634	78.68660999	73.72175749
230124A00058	6/15/2023	4.21	6/15/2034	130.67046	120.6030695	111.4332949	103.0752655	95.45177849	88.49338092	82.13755418	76.3279885	71.01393645
230125A00010	1/25/2023	4.01	1/25/2027	107.49772	105.3912982	103.337175	101.3337066	99.37930903	97.47246002	95.61169578	93.79560838	92.02284315
230125A00021	1/25/2023	3.95	1/26/2026	103.89085	102.7999145	101.7319352	100.6861919	99.66199474	98.65868202	97.67561905	96.71219656	95.76782957
230125A00022	1/25/2023	3.8	1/25/2027	107.22971	105.1228805	103.0684359	101.0647238	99.11015625	97.20320701	95.34240858	93.52634955	91.75367194
230125A00023	1/25/2023	3.69	1/25/2028	110.24044	107.0906968	104.0487522	101.110297	98.27121954	95.52759687	92.87568484	90.3119088	87.8328548
230125A00031	1/25/2023	3.74	1/25/2028	109.6823	106.7464839	103.9103268	101.1698098	98.52110393	95.96055935	93.48469541	91.09019164	88.77387927
230126A00015	1/26/2023	4.08	1/26/2027	107.65376	105.5429641	103.484616	101.4770607	99.51870841	97.60803115	95.74355986	93.92388155	92.14763677
230126A00034	1/26/2023	4.56	1/24/2025	100.27628	100.209543	100.1429078	100.076373	100.0099384	99.94360366	99.87736867	99.81123317	99.74519693
230126A00036	1/26/2023	4.19	1/26/2026	104.06395	102.9732905	101.9055589	100.8600321	99.83602189	98.83286811	97.84993747	96.88662209	95.94233826

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230127A00012	1/27/2023	4	1/27/2028	110.96095	107.8006496	104.7484201	101.7999427	98.95109583	96.19794699	93.53674316	90.96390117	88.47599901
230127A00044	1/27/2023	4.25	1/27/2026	104.13922	103.0453881	101.9745987	100.9261286	99.89928432	98.89340101	97.90784076	96.94199134	95.99526492
230127A00045	1/27/2023	4.12	1/27/2027	107.74739	105.6328893	103.5709658	101.5599604	99.59827784	97.68438486	95.8168074	93.99412775	92.21498199
230127A00046	1/27/2023	4	1/27/2028	110.96095	107.8006496	104.7484201	101.7999427	98.95109583	96.19794699	93.53674316	90.96390117	88.47599901
230127A00048	1/27/2023	4	1/27/2028	110.96095	107.8006496	104.7484201	101.7999427	98.95109583	96.19794699	93.53674316	90.96390117	88.47599901
230127A00053	1/27/2023	4	1/27/2028	110.96095	107.8006496	104.7484201	101.7999427	98.95109583	96.19794699	93.53674316	90.96390117	88.47599901
230127A00056	1/27/2023	3.78	1/27/2028	110.53645	107.3766874	104.3251693	101.3775607	98.52972821	95.77772858	93.11779844	90.54634507	88.05993751
230127A00059	1/27/2023	4.41	1/27/2025	100.30454	100.2294167	100.1544107	100.0795246	100.004758	99.93011075	99.85558248	99.78117293	99.70688182
230127A00060	1/30/2023	4.25	2/3/2026	104.2105	103.0970994	102.0075521	100.9411007	99.8970157	98.87459786	97.87317701	96.89211033	95.93078102
230127A00073	1/27/2023	4.24	2/17/2026	104.33987	103.1874686	102.0605999	100.9584252	99.88013804	98.82496683	97.79217286	96.78104864	95.79091626
230127A00075	1/27/2023	4.23	7/28/2025	102.24072	101.6580671	101.082061	100.5125907	99.94954521	99.39281613	98.84229753	98.29788578	97.75947958
230127A00079	1/27/2023	4.23	7/28/2025	102.24072	101.6580671	101.082061	100.5125907	99.94954521	99.39281613	98.84229753	98.29788578	97.75947958
230127A00095	1/27/2023	4.59	1/27/2025	100.31226	100.2371904	100.1622359	100.0874006	100.0126841	99.93808627	99.8636067	99.78924515	99.71500135
230127A00096	1/27/2023	4.21	1/27/2026	104.09578	103.0021965	101.9316552	100.8834294	99.85682605	98.85118017	97.86585398	96.90023534	95.95373649
230130A00045	1/30/2023	4.02	1/28/2028	111.03207	107.8679542	104.8121026	101.8601835	99.00806543	96.25180669	93.58764556	91.01199074	88.52141255
230130A00086	1/30/2023	4.16	2/1/2027	107.88279	105.7530215	103.676429	101.6513273	99.6760944	97.74917213	95.86906263	94.03432578	92.24357639
230130A00087	1/30/2023	4.04	1/28/2028	111.09403	107.9289498	104.8721589	101.9193243	99.06631388	96.30918512	93.64417559	91.06769327	88.5763078
230130A00095	2/3/2023	4.25	5/26/2026	105.40362	103.981487	102.5855711	101.2152064	99.86975097	98.54858433	97.25110596	95.97673477	94.72490827
230130A00096	1/30/2023	4.67	1/30/2025	100.35291	100.2694941	100.1862191	100.1030834	100.0200865	99.93722828	99.85450829	99.77192622	99.68948174
230130A00127	1/30/2023	4.02	2/1/2028	111.06961	107.8939025	104.8271367	101.8649423	99.00315084	96.2377861	93.5650539	90.98133253	88.48316379
230131A00004	1/31/2023	3.76	1/31/2028	110.5094	107.3392235	104.277933	101.3211554	98.46472175	95.70465555	93.03716226	90.45861997	87.96557034
230131A00006	1/31/2023	4.23	2/2/2026	104.17839	103.0679023	101.9811511	100.9173808	99.87586726	98.85591647	97.85686306	96.87806881	95.91892124
230131A00009	1/31/2023	3.98	1/31/2028	110.93546	107.7647259	104.7027085	101.7450458	98.8875807	96.12634767	93.45756254	90.87761307	88.38304993
230131A00032	2/3/2023	4.17	7/30/2026	105.96932	104.3651072	102.7932726	101.2528997	99.74310988	98.26305681	96.81192529	95.38892959	93.99331218
230131A00034	2/3/2023	3.99	12/23/2027	110.61164	107.5511704	104.5928915	101.7328179	98.96714739	96.29224702	93.7046447	91.20102099	88.77820146
230131A00057	1/31/2023	4.1	1/29/2027	107.72547	105.605788	103.5389027	101.5231433	99.5569047	97.63864428	95.76687911	93.94018311	92.15718445
230131A00067	1/31/2023	4.02	2/2/2026	104.03537	102.9244066	101.8372205	100.7730502	99.73116975	98.71088357	97.7115247	96.73245344	95.77305592
230131A00071	1/31/2023	4.22	1/30/2026	104.13722	103.0351661	101.9565009	100.9004801	99.86639558	98.85356814	97.86134656	96.88910593	95.93624642
230131A00087	2/3/2023	4.26	1/5/2026	103.92333	102.8909686	101.8791773	100.887341	99.91487267	98.9612084	98.02580584	97.10814338	96.2077191
230131A00095	1/31/2023	4.22	1/30/2026	104.13722	103.0351661	101.9565009	100.9004801	99.86639558	98.85356814	97.86134656	96.88910593	95.93624642
230201A00003	2/1/2023	3.93	1/31/2028	110.78015	107.6118389	104.5521823	101.5968201	98.74159724	95.98255024	93.31589676	90.7380263	88.24549127
230201A00011	2/1/2023	3.93	2/1/2028	110.78981	107.618467	104.5559577	101.5979111	98.74016247	95.97873907	93.30985007	90.72987698	88.23536467
230201A00012	2/1/2023	4.08	2/1/2027	107.71426	105.5862979	103.5114817	101.4881211	99.51459503	97.58934629	95.71087797	93.87775082	92.08858056

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230201A00047	2/1/2023	4.42	2/3/2025	100.38337	100.2887923	100.1943947	100.1001796	100.0061465	99.91229492	99.81862426	99.725134	99.63182359
230201A00048	2/1/2023	4.42	2/3/2025	100.38337	100.2887923	100.1943947	100.1001796	100.0061465	99.91229492	99.81862426	99.725134	99.63182359
230202A00006	2/2/2023	3.92	2/2/2027	107.38767	105.2602481	103.1860209	101.1632996	99.19045992	97.265941	95.3882428	93.55592309	91.76759476
230202A00008	2/2/2023	3.81	2/2/2028	110.42606	107.2575283	104.197851	101.2426597	98.38778473	95.62924889	92.9632573	90.38618775	87.89458172
230202A00011	2/2/2023	3.92	2/2/2027	107.38767	105.2602481	103.1860209	101.1632996	99.19045992	97.265941	95.3882428	93.55592309	91.76759476
230202A00033	2/2/2023	4.26	2/3/2025	100.36827	100.273699	100.1793144	100.0851124	99.99109235	99.89725377	99.80359609	99.71011878	99.61682131
230202A00034	2/2/2024	3.41	2/2/2026	103.27421	102.1690323	101.0875163	100.0289036	98.99247203	97.97752948	96.98341235	96.00948412	95.055134
230202A00038	2/2/2023	3.84	2/2/2028	110.51941	107.3494198	104.2883213	101.3317451	98.47552022	95.71566844	93.04839369	90.4700727	87.97724591
230202A00041	2/2/2023	3.82	2/2/2028	110.45718	107.2881588	104.2280078	101.2723548	98.41702989	95.65805541	92.9916361	90.4141494	87.92213645
230202A00042	2/2/2023	3.82	2/2/2028	110.45718	107.2881588	104.2280078	101.2723548	98.41702989	95.65805541	92.9916361	90.4141494	87.92213645
230202A00045	2/2/2023	3.62	2/2/2028	110.0921	106.9226797	103.8623281	100.9066569	98.05148351	95.29281846	92.62685535	90.04996124	87.55866751
230202A00050	2/2/2023	3.82	2/2/2028	110.45718	107.2881588	104.2280078	101.2723548	98.41702989	95.65805541	92.9916361	90.4141494	87.92213645
230202A00061	2/2/2023	4.16	2/2/2026	104.1012	102.9911695	101.9048652	100.8415352	99.80045548	98.78093221	97.7823002	96.80392133	95.84518331
230202A00096	2/2/2023	3.81	2/2/2028	110.42606	107.2575283	104.197851	101.2426597	98.38778473	95.62924889	92.9632573	90.38618775	87.89458172
230203A00021	2/8/2023	4.21	6/17/2026	105.57915	104.0951342	102.6395697	101.2117051	99.81081765	98.43620942	97.08720602	95.76315575	94.46342854
230203A00025	2/3/2023	4.63	2/3/2025	100.39582	100.3013023	100.2069684	100.1128162	100.018845	99.92505438	99.83144378	99.73801267	99.64476054
230203A00026	2/3/2023	3.98	2/3/2028	110.96485	107.7850063	104.7144182	101.7486904	98.8836368	96.11526431	93.43976313	90.8534969	88.35299373
230203A00038	2/3/2023	4.1	2/3/2027	107.77836	105.6437439	103.5625358	101.5330348	99.55360852	97.62268862	95.73876784	93.90039714	92.10618293
230203A00039	2/3/2023	3.98	2/3/2028	110.96485	107.7850063	104.7144182	101.7486904	98.8836368	96.11526431	93.43976313	90.8534969	88.35299373
230203A00043	2/14/2023	4.31	2/13/2026	104.37908	103.2373626	102.1207113	101.0283013	99.95934829	98.91310142	97.88884163	96.88587994	95.90355595
230203A00045	2/14/2023	4.31	2/13/2026	104.37908	103.2373626	102.1207113	101.0283013	99.95934829	98.91310142	97.88884163	96.88587994	95.90355595
230203A00046	2/10/2023	4.65	2/10/2025	100.4793	100.365339	100.251644	100.1382185	100.0250614	99.91217174	99.79954858	99.68719094	99.57509783
230203A00048	2/10/2023	4.65	2/10/2025	100.4793	100.365339	100.251644	100.1382185	100.0250614	99.91217174	99.79954858	99.68719094	99.57509783
230203A00050	2/14/2023	4.64	2/14/2025	100.52468	100.3995859	100.2748205	100.1503781	100.0262574	99.9024571	99.77897598	99.65581275	99.53296615
230203A00051	2/14/2023	4.64	2/14/2025	100.52468	100.3995859	100.2748205	100.1503781	100.0262574	99.9024571	99.77897598	99.65581275	99.53296615
230203A00053	2/10/2023	4.32	2/10/2026	104.35965	103.2262535	102.117555	101.0327553	99.97108674	98.93181392	97.91423251	96.91766746	95.94147146
230203A00054	2/10/2023	4.32	2/10/2026	104.35965	103.2262535	102.117555	101.0327553	99.97108674	98.93181392	97.91423251	96.91766746	95.94147146
230203A00057	2/3/2023	4.34	2/3/2026	104.30999	103.1960019	102.1058774	101.0388573	99.99421192	98.9712419	97.96927681	96.98767365	96.02581544
230203A00058	2/3/2023	4.34	2/3/2026	104.30999	103.1960019	102.1058774	101.0388573	99.99421192	98.9712419	97.96927681	96.98767365	96.02581544
230203A00059	2/3/2023	4.67	2/3/2025	100.39959	100.3050754	100.2107382	100.1165827	100.0226083	99.92881443	99.83520059	99.74176624	99.64851088
230206A00008	2/6/2023	4.58	2/6/2025	100.43358	100.3306511	100.2279387	100.1254458	100.0231715	99.92111516	99.81927604	99.71765341	99.61624656
230206A00009	2/6/2023	4.58	2/6/2025	100.43358	100.3306511	100.2279387	100.1254458	100.0231715	99.92111516	99.81927604	99.71765341	99.61624656
230207A00025	2/7/2023	4.62	2/7/2025	100.44951	100.3437884	100.2383042	100.133052	100.028031	99.92324043	99.81867945	99.71434729	99.61024316

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230207A00046	2/7/2023	4.83	2/7/2025	100.46333	100.3576841	100.2522715	100.1470899	100.0421384	99.9374162	99.8329226	99.72865681	99.62461803
230208A00029	2/8/2023	4.27	2/8/2027	108.19469	106.0406417	103.9407166	101.8931854	99.89638502	97.94871793	96.04864938	94.19470422	92.38546418
230208A00036	2/8/2023	4.43	2/6/2026	104.44115	103.3181958	102.2194707	101.1441994	100.0916354	99.06106389	98.05179982	97.06318623	96.09459301
230208A00038	2/8/2023	4.27	2/8/2027	108.19469	106.0406417	103.9407166	101.8931854	99.89638502	97.94871793	96.04864938	94.19470422	92.38546418
230208A00039	2/8/2023	4.17	2/8/2028	111.60816	108.4037986	105.3098274	102.3217958	99.43546078	96.64677578	93.95188072	91.34709198	88.82889314
230208A00040	2/8/2023	4.26	2/8/2029	115.49587	111.2129528	107.1165163	103.1973992	99.44694076	95.85695228	92.41968897	89.12782312	85.97441917
230208A00041	2/8/2023	4.32	2/8/2030	119.16574	113.7912496	108.6984978	103.8711389	99.2938668	94.95234084	90.83311953	86.92359939	83.21195809
230208A00055	2/8/2023	4.22	2/6/2026	104.29689	103.1734562	102.074292	100.9986171	99.94568333	98.91477421	97.90520298	96.91631121	95.94746736
230208A00060	2/8/2023	4.06	2/8/2027	107.92247	105.7680031	103.6677511	101.619974	99.62300434	97.67524044	95.77514364	93.92123513	92.11209315
230209A00015	2/9/2023	4.8	2/5/2025	100.43602	100.3359315	100.2360536	100.1363817	100.0369151	99.93765321	99.83859529	99.73974073	99.64108888
230209A00023	2/9/2023	4.79	2/10/2025	100.49524	100.3812622	100.2675525	100.1541123	100.0409405	99.92803618	99.8153984	99.70302616	99.59091849
230209A00024	2/9/2023	4.4	2/5/2026	104.39727	103.2773014	102.1814453	101.1089263	100.0590036	99.03096753	98.02413791	97.03786247	96.07151546
230209A00025	2/9/2023	4.25	2/5/2027	108.11798	105.973731	103.8832097	101.844706	99.85657416	97.91723331	96.02516422	94.17890652	92.37705586
230209A00027	2/9/2023	4.12	2/7/2028	111.44158	108.2427223	105.1540138	102.1710138	99.28949083	96.50540976	93.81492101	91.21435089	88.70019234
230209A00037	2/9/2023	4.12	2/9/2028	111.46193	108.2569766	105.162528	102.174128	99.28752535	96.49866652	93.80368459	91.19888964	88.6807594
230209A00049	2/9/2023	4.17	2/9/2028	111.61848	108.4110581	105.3142126	102.3234771	99.43459842	96.64352098	93.94637595	91.3394716	88.81928388
230210A00035	2/10/2023	4.52	2/10/2026	104.58461	103.4498629	102.3398393	101.2537345	100.1907802	99.15024069	98.1314111	97.13361592	96.15620742
230210A00040	2/10/2023	4.29	8/10/2027	110.14776	107.4639595	104.8602396	102.3337094	99.8816044	97.5012785	95.19019768	92.94593456	90.76616305
230210A00043	2/10/2023	4.34	2/10/2027	108.3668	106.204896	104.0974093	102.0425942	100.0387749	98.08434225	96.17775041	94.31751369	92.50220382
230210A00045	2/10/2023	4.43	8/10/2026	106.50677	104.8683776	103.2634049	101.6908923	100.1499195	98.63960111	97.15908443	95.70754835	94.28420172
230210A00055	2/10/2023	4.02	2/10/2028	111.41959	108.2062074	105.1038427	102.108007	99.21442222	96.41900927	93.71787736	91.10731409	88.58377607
230210A00062	2/10/2023	4.13	2/10/2027	108.09406	105.9317378	103.8239208	101.7688569	99.76486603	97.81033481	95.90371339	94.04351239	92.22830003
230210A00065	2/10/2023	4.02	2/10/2028	111.41959	108.2062074	105.1038427	102.108007	99.21442222	96.41900927	93.71787736	91.10731409	88.58377607
230213A00020	2/15/2023	4.28	1/25/2028	111.80777	108.6397405	105.5797925	102.6236166	99.76709804	97.00631066	94.337507	91.75710895	89.26169899
230214A00031	2/14/2023	4.31	2/14/2028	112.11028	108.8806299	105.76264	102.7517882	99.84376581	97.03446504	94.31996821	91.69653758	89.1606059
230214A00042	2/14/2023	4.96	2/14/2025	100.56466	100.4395296	100.3147251	100.1902437	100.0660841	99.94224495	99.81872507	99.69552317	99.57263797
230214A00049	2/14/2023	4.38	2/14/2029	116.0565	111.7440369	107.6198619	103.6746921	99.89975751	96.28676818	92.827885	89.51569248	86.34317333
230214A00050	2/14/2023	4.31	2/14/2028	112.11028	108.8806299	105.76264	102.7517882	99.84376581	97.03446504	94.31996821	91.69653758	89.1606059
230215A00008	2/15/2023	4.49	2/16/2027	108.75886	106.5747019	104.4458082	102.3703979	100.3467583	98.37324546	96.44828043	94.57034642	92.73798564
230215A00019	2/15/2023	5.01	2/18/2025	100.62152	100.4852418	100.3493461	100.2138294	100.0786903	99.94392707	99.80953818	99.67552203	99.54187704
230215A00035	2/15/2023	4.47	2/17/2026	104.69548	103.5395247	102.4091977	101.3036482	100.2220667	99.16367867	98.12774249	97.11354803	96.12041482
230215A00045	2/15/2023	4.37	2/15/2028	112.30981	109.0741091	105.9503261	102.9339275	100.0205924	97.20620105	94.48682481	91.85871546	89.31829591
230216A00045	2/16/2023	4.43	5/16/2028	113.45096	109.944019	106.5664037	103.3126613	100.1775956	97.15625574	94.24392392	91.43610269	88.72850368

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230216A00046	2/16/2023	4.42	4/17/2028	113.11779	109.6963719	106.3985041	103.2190265	100.1530264	97.19582409	94.34296056	91.5901856	88.93344666
230217A00036	2/17/2023	4.44	2/17/2028	112.55222	109.3068776	106.1739071	103.1487531	100.2270714	97.40472081	94.67775233	92.0423987	89.49506488
230217A00052	2/17/2023	4.55	2/17/2027	108.89997	106.7112562	104.5779746	102.4983287	100.4705992	98.49313593	96.56435399	94.68273089	92.84680351
230221A00004	2/21/2023	4.47	2/18/2028	112.65794	109.4080115	106.2706816	103.2413784	100.3157464	97.48963376	94.75908156	92.12031314	89.56972464
230221A00007	2/21/2023	4.5	10/18/2027	111.44294	108.5512615	105.7506762	103.0377785	100.4093143	97.862171	95.39337034	93.0000617	90.67951574
230222A00024	2/22/2023	4.74	3/2/2026	105.06038	103.8679518	102.7027131	101.5637424	100.4501572	99.36111437	98.29580756	97.25346558	96.23335029
230223A00010	2/23/2023	4.68	10/3/2025	103.30008	102.5285667	101.7686043	101.0199374	100.2823152	99.55549413	98.83923806	98.13331749	97.43750957
230223A00012	2/23/2023	4.68	10/3/2025	103.30008	102.5285667	101.7686043	101.0199374	100.2823152	99.55549413	98.83923806	98.13331749	97.43750957
230223A00033	2/23/2023	4.5	2/23/2028	112.80868	109.5418045	106.3884883	103.3441027	100.4042404	97.5647012	94.82148064	92.1707595	89.60889395
230224A00014	2/24/2023	4.98	2/24/2025	100.70525	100.5521049	100.3994342	100.2472331	100.0954993	99.94423081	99.7934254	99.64308094	99.49319529
230224A00015	2/24/2023	4.86	3/17/2026	105.37921	104.1437113	102.9373432	101.7590847	100.6079594	99.48303572	98.38342454	97.30827643	96.25677971
230224A00018	2/24/2023	5.19	2/24/2025	100.72491	100.5718743	100.4193052	100.2672041	100.1155687	99.96439689	99.81368657	99.6634356	99.5136419
230224A00029	2/24/2023	4.87	2/24/2026	105.14304	103.9665378	102.8165005	101.6920366	100.5922987	99.51647596	98.46379313	97.43350796	96.42490972
230227A00060	2/27/2023	4.86	2/27/2026	105.16661	103.9817307	102.8236777	101.6915479	100.5844765	99.50163701	98.44223863	97.40552484	96.39077134
230228A00009	2/28/2023	4.69	2/27/2026	105.06246	103.8767959	102.7180036	101.5851781	100.4774525	99.3939981	98.33402223	97.29676652	96.28150497
230228A00010	2/28/2023	4.5	2/26/2027	109.08086	106.8596035	104.6951286	102.5855818	100.5291836	98.52422694	96.5690732	94.66214913	92.80194353
230301A00029	3/1/2023	4.59	3/1/2028	113.17338	109.8804819	106.7025482	103.6348748	100.6729793	97.81259104	95.0496396	92.38024381	89.80070175
230301A00036	3/1/2023	4.91	3/2/2026	105.26099	104.0673016	102.9008281	101.760642	100.6458604	99.55563955	98.48917278	97.44568837	96.42444774
230301A00047	3/1/2023	4.61	3/1/2028	113.03572	109.7883183	106.6553924	103.6321796	100.7141494	97.89698958	95.17659432	92.54905261	90.01063759
230302A00028	3/2/2023	5.02	3/2/2026	105.39079	104.1962927	103.0290201	101.8880476	100.7724918	99.68150878	98.61429145	97.57006782	96.54809904
230302A00047	3/2/2023	4.76	3/2/2028	112.81498	109.7305975	106.7532138	103.8784205	101.1020176	98.42000665	95.82857897	93.32410555	90.90312716
230303A00035	5/15/2023	4.65	5/15/2030	121.77861	116.0673176	110.6680426	105.5620339	100.7317591	96.16082267	91.8338864	87.73659608	83.85551356
230303A00036	5/15/2023	4.53	5/15/2028	113.78013	110.2703032	106.8897681	103.6330723	100.4950256	97.47068268	94.55533099	91.74447779	89.03383907
230303A00037	5/15/2023	4.81	5/15/2026	106.06432	104.6669868	103.2949379	101.9475405	100.6241858	99.3242849	98.04726743	96.79258125	95.55969161
230303A00038	4/14/2023	4.56	4/14/2028	113.54944	110.1292954	106.8323104	103.6533411	100.5874908	97.63009577	94.776713	92.02310811	89.36524422
230303A00041	4/14/2023	4.56	4/14/2028	113.54944	110.1292954	106.8323104	103.6533411	100.5874908	97.63009577	94.776713	92.02310811	89.36524422
230303A00057	3/3/2023	4.77	3/3/2027	109.54918	107.3120721	105.1323299	103.0080743	100.9375003	98.91887637	96.95054114	95.03089964	93.15842024
230303A00059	3/3/2023	4.56	3/3/2027	109.27044	107.0328902	104.8528008	102.728285	100.6575328	98.6388084	96.67044594	94.7508465	92.87847464
230306A00019	3/6/2023	5.26	3/6/2025	100.86932	100.6884086	100.5081514	100.3285484	100.1495958	99.97129013	99.79362778	99.61660526	99.44021905
230306A00040	3/6/2023	5.05	3/6/2025	100.84609	100.6650492	100.4846729	100.3049528	100.1258853	99.94746662	99.76969335	99.59256188	99.41606867
230307A00004	3/7/2023	4.67	3/7/2028	113.29006	110.0220716	106.869773	103.828357	100.8932471	98.06008615	95.32472376	92.68320536	90.13176149
230307A00020	3/7/2023	4.98	3/9/2026	105.42863	104.2147264	103.0289415	101.8703016	100.7378801	99.63079241	98.54819344	97.48927525	96.45326514
230307A00021	3/7/2023	4.63	3/7/2028	113.3659	110.0535775	106.8573606	103.7724718	100.7943658	97.91871305	95.14138808	92.45845822	89.86617329

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230307A00022	3/7/2023	4.77	3/8/2027	109.60744	107.3560936	105.1627577	103.0255145	100.9425295	98.9120433	96.93236812	95.00188429	93.11903677
230307A00026	3/7/2023	4.98	3/6/2026	105.39218	104.1867297	103.0090056	101.8580615	100.7329896	99.63292275	98.55703224	97.50452567	96.47464498
230307A00034	3/7/2023	4.41	3/7/2028	112.92974	109.6179702	106.4224853	103.3385001	100.3614563	97.48701203	94.71103044	92.02956821	89.43886526
230307A00039	3/7/2023	5.29	3/7/2025	100.88821	100.7045042	100.5214773	100.3391257	100.1574456	99.97643316	99.79608477	99.61639668	99.43736522
230307A00056	3/7/2023	5.08	3/7/2025	100.86461	100.6807769	100.4976291	100.3151587	100.1333619	99.95223486	99.77177392	99.59197531	99.41283532
230307A00057	3/7/2023	5.08	3/7/2025	100.86461	100.6807769	100.4976291	100.3151587	100.1333619	99.95223486	99.77177392	99.59197531	99.41283532
230307A00058	3/7/2023	5.29	3/7/2025	100.88821	100.7045042	100.5214773	100.3391257	100.1574456	99.97643316	99.79608477	99.61639668	99.43736522
230307A00114	3/7/2023	4.65	3/7/2028	113.42999	110.1166419	106.9194217	103.8335557	100.8544979	97.97791772	95.19968893	92.51587807	89.9227342
230308A00019	3/8/2023	5.05	3/9/2026	105.51258	104.2981492	103.1118402	101.9526844	100.8197553	99.71216793	98.62907701	97.56967441	96.53318724
230309A00002	3/9/2023	5.41	3/10/2025	100.95161	100.759521	100.5681721	100.377563	100.1876894	99.99854701	99.8101315	99.62243862	99.43546417
230309A00003	3/9/2023	5.06	3/9/2026	105.52458	104.3100668	103.1236828	101.9644534	100.8314517	99.723793	98.64063181	97.58116	96.54460468
230309A00004	3/9/2023	4.86	3/9/2027	109.81761	107.561188	105.3629479	103.2209668	101.1334026	99.09848929	97.11453259	95.17990669	93.29305074
230309A00005	3/9/2023	5.06	3/9/2026	105.52458	104.3100668	103.1236828	101.9644534	100.8314517	99.723793	98.64063181	97.58116	96.54460468
230309A00021	3/9/2023	5.41	3/10/2025	100.95161	100.759521	100.5681721	100.377563	100.1876894	99.99854701	99.8101315	99.62243862	99.43546417
230309A00027	3/9/2023	4.68	3/9/2028	113.54806	110.2273639	107.0231958	103.9307614	100.9454927	98.06303888	95.27925444	92.59018798	89.99207178
230309A00030	3/9/2023	5.01	3/9/2026	105.46461	104.2504791	103.0644695	101.9056085	100.7729694	99.66566763	98.58285783	97.52373203	96.48751747
230309A00031	3/9/2023	5.01	3/9/2026	105.46461	104.2504791	103.0644695	101.9056085	100.7729694	99.66566763	98.58285783	97.52373203	96.48751747
230309A00032	3/9/2023	4.82	3/9/2027	109.72938	107.4739467	105.2766775	103.1356474	101.0490151	99.01501497	97.03195339	95.09820501	93.21220948
230309A00033	3/9/2023	4.82	3/9/2027	109.72938	107.4739467	105.2766775	103.1356474	101.0490151	99.01501497	97.03195339	95.09820501	93.21220948
230309A00034	3/9/2023	4.64	3/9/2028	113.41966	110.1010231	106.8988682	103.8083945	100.8250357	97.94444266	95.16247159	92.47517268	89.87877972
230309A00035	3/9/2023	4.64	3/9/2028	113.41966	110.1010231	106.8988682	103.8083945	100.8250357	97.94444266	95.16247159	92.47517268	89.87877972
230309A00036	3/9/2023	4.46	3/9/2028	113.11139	109.7912357	106.5877995	103.4962695	100.5120644	97.63082113	94.84838267	92.16078697	89.56425633
230309A00038	3/9/2023	4.85	3/9/2026	105.37011	104.1551048	102.9682638	101.8086181	100.6752389	99.56723923	98.48377169	97.42402634	96.38722856
230309A00041	3/9/2023	4.85	3/9/2026	105.37011	104.1551048	102.9682638	101.8086181	100.6752389	99.56723923	98.48377169	97.42402634	96.38722856
230309A00057	3/9/2023	4.86	3/9/2027	109.81761	107.561188	105.3629479	103.2209668	101.1334026	99.09848929	97.11453259	95.17990669	93.29305074
230309A00068	4/10/2023	5.21	4/9/2025	101.31058	101.0348067	100.7605438	100.4877808	100.2165056	99.94670568	99.67836912	99.41148391	99.14603822
230309A00080	3/9/2023	4.68	3/9/2028	113.54806	110.2273639	107.0231958	103.9307614	100.9454927	98.06303888	95.27925444	92.59018798	89.99207178
230309A00091	3/9/2023	4.68	3/9/2028	113.54806	110.2273639	107.0231958	103.9307614	100.9454927	98.06303888	95.27925444	92.59018798	89.99207178
230309A00096	3/9/2023	4.68	3/9/2028	113.54806	110.2273639	107.0231958	103.9307614	100.9454927	98.06303888	95.27925444	92.59018798	89.99207178
230310A00017	3/10/2023	4.43	3/9/2029	116.50719	112.11877	107.9243439	103.9142247	100.0792681	96.41083753	92.90077279	89.54136063	86.32530768
230310A00024	3/10/2023	4.38	3/10/2028	112.59514	109.2870744	106.0953086	103.0150515	100.0417384	97.17102176	94.39875954	91.72100388	89.13399063
230310A00030	3/10/2023	4.38	3/10/2028	112.59514	109.2870744	106.0953086	103.0150515	100.0417384	97.17102176	94.39875954	91.72100388	89.13399063
230310A00037	3/10/2023	4.69	3/10/2026	105.09216	103.8776566	102.691365	101.5323053	100.3995457	99.29219673	98.2094085	97.15036876	96.11430075

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230310A00039	3/10/2023	4.33	3/10/2028	112.4345	109.1290159	105.9397708	102.8619686	99.89104666	97.02265974	94.25266783	91.57712508	88.99226921
230310A00047	6/9/2023	4.22	6/9/2028	112.97053	109.4061075	105.9755674	102.6731579	99.4934064	96.43110395	93.48129113	90.6392446	87.90046459
230310A00049	3/10/2023	4.7	3/10/2026	105.10418	103.8896015	102.7032346	101.5441009	100.4112685	99.30384783	98.22098903	97.1618798	96.12574335
230310A00054	9/8/2023	4.09	9/11/2028	113.40468	109.5750588	105.8979052	102.3662648	98.97354065	95.71347568	92.58013325	89.56787846	86.67136085
230310A00062	3/10/2023	4.38	4/10/2028	112.91222	109.51387	106.2376155	103.0783576	100.0312384	97.091633	94.25513596	91.51754983	88.87487373
230310A00069	3/10/2023	4.7	3/9/2026	105.0928	103.8810353	102.6973471	101.5407702	100.4103792	99.30529034	98.22465916	97.1676786	96.13357675
230310A00071	3/10/2023	4.38	3/10/2028	112.59514	109.2870744	106.0953086	103.0150515	100.0417384	97.17102176	94.39875954	91.72100388	89.13399063
230310A00073	3/10/2023	4.7	3/6/2026	105.05868	103.8553312	102.6796766	101.5307692	100.4077018	99.3096084	98.23566094	97.18506783	96.15707174
230310A00088	3/10/2023	5.03	3/10/2025	100.87882	100.6868268	100.4955741	100.3050609	100.1152829	99.92623579	99.73791532	99.55031722	99.36343727
230310A00089	3/10/2023	4.7	3/10/2026	105.10418	103.8896015	102.7032346	101.5441009	100.4112685	99.30384783	98.22098903	97.1618798	96.12574335
230310A00091	3/10/2023	4.53	3/10/2027	109.10068	106.8496022	104.656665	102.5199453	100.4375997	98.40786119	96.42903453	94.49949314	92.61767555
230310A00092	3/10/2023	4.38	3/10/2028	112.59514	109.2870744	106.0953086	103.0150515	100.0417384	97.17102176	94.39875954	91.72100388	89.13399063
230310A00114	3/10/2023	4.5	3/10/2027	109.03442	106.7840905	104.5918832	102.4558784	100.3742334	98.34518143	96.36702768	94.43814598	92.5569752
230310A00120	3/10/2023	4.33	3/10/2028	112.4345	109.1290159	105.9397708	102.8619686	99.89104666	97.02265974	94.25266783	91.57712508	88.99226921
230313A00032	3/13/2023	4.45	3/13/2025	100.80114	100.6009471	100.4015607	100.2029791	100.0051976	99.80821116	99.61201497	99.41660419	99.22197405
230313A00036	3/13/2023	4.06	3/13/2028	111.5948	108.2947503	105.1111044	102.0390518	99.07401146	96.21162113	93.44772521	90.77836349	88.19976058
230313A00048	3/13/2023	4.25	3/13/2026	104.59361	103.3740939	102.1831177	101.0196853	99.88284784	98.77169934	97.68537477	96.62304753	95.58392742
230313A00052	3/13/2023	4.17	3/15/2027	108.35558	106.0993768	103.9017679	101.7608047	99.67461933	97.6414216	95.65949469	93.72719168	91.842932
230313A00057	3/13/2023	4.06	3/13/2028	111.5948	108.2947503	105.1111044	102.0390518	99.07401146	96.21162113	93.44772521	90.77836349	88.19976058
230313A00061	3/13/2023	4.06	3/13/2028	111.5948	108.2947503	105.1111044	102.0390518	99.07401146	96.21162113	93.44772521	90.77836349	88.19976058
230313A00072	3/13/2023	4.06	3/13/2028	111.5948	108.2947503	105.1111044	102.0390518	99.07401146	96.21162113	93.44772521	90.77836349	88.19976058
230313A00078	3/13/2023	4.41	3/13/2026	104.78728	103.5665208	102.3743254	101.2096937	100.0716759	98.95936566	97.87189753	96.8084444	95.7682156
230313A00080	3/13/2023	4.59	3/14/2025	100.84066	100.6376362	100.4354498	100.2340907	100.0335538	99.83383393	99.63492606	99.43682517	99.23952627
230313A00090	3/13/2023	4.41	3/13/2026	104.78728	103.5665208	102.3743254	101.2096937	100.0716759	98.95936566	97.87189753	96.8084444	95.7682156
230313A00091	3/13/2023	4.15	3/13/2028	111.88471	108.579971	105.3917652	102.3152722	99.34590684	96.47930284	93.71130087	91.03793714	88.4554328
230313A00093	3/16/2023	4.65	3/17/2025	100.8879	100.6765041	100.4660118	100.2564146	100.0477065	99.83988204	99.63293539	99.42686097	99.22165318
230313A00095	3/16/2023	4.65	3/17/2025	100.8879	100.6765041	100.4660118	100.2564146	100.0477065	99.83988204	99.63293539	99.42686097	99.22165318
230313A00096	3/13/2023	4.36	3/14/2033	128.5005	119.7451637	111.6795544	104.245058	97.38835371	91.06090974	85.21852865	79.82093844	74.83142416
230313A00098	3/13/2023	4.41	3/13/2026	104.78728	103.5665208	102.3743254	101.2096937	100.0716759	98.95936566	97.87189753	96.8084444	95.7682156
230313A00099	3/13/2023	4.59	3/13/2025	100.82913	100.6288921	100.4294675	100.230848	100.0330287	99.83600453	99.63977074	99.44432248	99.24965496
230313A00102	3/13/2023	4.15	3/13/2028	111.88471	108.579971	105.3917652	102.3152722	99.34590684	96.47930284	93.71130087	91.03793714	88.4554328
230313A00104	3/13/2023	4.58	3/13/2025	100.82713	100.626896	100.4274742	100.2288574	100.0310407	99.83401929	99.63778819	99.4423426	99.24767775
230313A00109	3/13/2023	4.58	3/13/2025	100.82713	100.626896	100.4274742	100.2288574	100.0310407	99.83401929	99.63778819	99.4423426	99.24767775

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230313A00112	3/13/2023	4.15	3/13/2028	111.88471	108.579971	105.3917652	102.3152722	99.34590684	96.47930284	93.71130087	91.03793714	88.4554328
230313A00113	3/13/2023	4.58	3/13/2025	100.82713	100.626896	100.4274742	100.2288574	100.0310407	99.83401929	99.63778819	99.4423426	99.24767775
230313A00117	3/13/2023	4.59	3/13/2025	100.82913	100.6288921	100.4294675	100.230848	100.0330287	99.83600453	99.63977074	99.44432248	99.24965496
230313A00119	3/13/2023	4.41	3/13/2026	104.78728	103.5665208	102.3743254	101.2096937	100.0716759	98.95936566	97.87189753	96.8084444	95.7682156
230313A00121	3/13/2023	4.29	3/15/2027	108.62226	106.3630386	104.1624749	102.0186173	99.92959627	97.89361975	95.90896938	93.97399666	92.08711952
230313A00123	3/13/2023	4.22	9/15/2027	110.32545	107.5402996	104.8405919	102.223148	99.68493149	97.2230407	94.83470141	92.51726037	90.26817903
230313A00128	3/13/2023	4.18	12/15/2027	111.10563	108.0592768	105.113883	102.2655418	99.51052297	96.84526103	94.26634712	91.77052115	89.3546644
230313A00134	3/13/2023	4.16	4/14/2028	112.22597	108.8277663	105.552132	102.3939433	99.34832303	96.41062673	93.57642949	90.84151439	88.20186129
230313A00135	3/13/2023	4.17	6/15/2028	112.85577	109.2766475	105.8325987	102.5177903	99.32667596	96.25397819	93.29467335	90.44397819	87.69733695
230313A00149	3/13/2023	4.15	3/13/2028	111.88471	108.579971	105.3917652	102.3152722	99.34590684	96.47930284	93.71130087	91.03793714	88.4554328
230313A00152	3/13/2023	4.18	3/13/2028	111.98134	108.6750445	105.4853188	102.4073457	99.43653863	96.56853007	93.79915942	91.12446169	88.54065687
230313A00158	3/13/2023	4.41	3/13/2026	104.78728	103.5665208	102.3743254	101.2096937	100.0716759	98.95936566	97.87189753	96.8084444	95.7682156
230313A00159	3/13/2023	4.41	3/13/2026	104.78728	103.5665208	102.3743254	101.2096937	100.0716759	98.95936566	97.87189753	96.8084444	95.7682156
230313A00177	3/13/2023	4.41	3/13/2026	104.78728	103.5665208	102.3743254	101.2096937	100.0716759	98.95936566	97.87189753	96.8084444	95.7682156
230313A00179	3/13/2023	4.29	3/15/2027	108.62226	106.3630386	104.1624749	102.0186173	99.92959627	97.89361975	95.90896938	93.97399666	92.08711952
230313A00180	3/13/2023	4.15	3/13/2028	111.88471	108.579971	105.3917652	102.3152722	99.34590684	96.47930284	93.71130087	91.03793714	88.4554328
230313A00215	3/13/2023	4.13	3/13/2028	111.82028	108.5165886	105.3293961	102.2538899	99.28548564	96.41981801	93.6527285	90.98025411	88.39861675
230314A00003	3/14/2023	4.64	3/16/2026	105.09929	103.8683281	102.6663448	101.4923207	100.3452864	99.22431702	98.12852972	97.05708099	96.00916475
230314A00006	3/14/2023	4.92	1/13/2025	100.16589	100.1297205	100.0935939	100.0575109	100.0214711	99.98547467	99.94952141	99.91361125	99.87774412
230314A00011	3/14/2023	4.38	3/14/2028	112.63571	109.316131	106.1135743	103.0232055	100.0404188	97.16082815	94.38025575	91.69472017	89.10042583
230314A00014	3/14/2023	4.18	3/14/2028	111.80854	108.6087282	105.5223556	102.544715	99.67132656	96.89792333	94.22043928	91.63499874	89.13790613
230314A00015	3/14/2023	4.55	9/14/2026	107.10873	105.3692077	103.6665174	101.9995539	100.3672562	98.76860567	97.20262365	95.66836965	94.16493944
230314A00016	3/14/2023	4.38	3/14/2028	112.63571	109.316131	106.1135743	103.0232055	100.0404188	97.16082815	94.38025575	91.69472017	89.10042583
230314A00017	3/14/2023	4.39	1/18/2028	112.07606	108.9229014	105.8768026	102.9335096	100.0889666	97.33930209	94.68082018	92.10999081	89.62344154
230314A00019	3/14/2023	4.39	1/18/2028	112.07606	108.9229014	105.8768026	102.9335096	100.0889666	97.33930209	94.68082018	92.10999081	89.62344154
230314A00021	3/14/2023	4.41	10/13/2027	111.13784	108.2640983	105.4805247	102.783747	100.1705375	97.6378105	95.18261455	92.80212594	90.49364206
230314A00024	3/14/2023	4.41	10/13/2027	111.13784	108.2640983	105.4805247	102.783747	100.1705375	97.6378105	95.18261455	92.80212594	90.49364206
230314A00028	3/14/2023	4.43	7/14/2027	110.23065	107.6191263	105.0839791	102.6225192	100.2321665	97.91044813	95.65499308	93.4635276	91.3338703
230314A00030	3/14/2023	4.43	7/14/2027	110.23065	107.6191263	105.0839791	102.6225192	100.2321665	97.91044813	95.65499308	93.4635276	91.3338703
230314A00032	3/14/2023	4.45	4/14/2027	109.30414	106.9545107	104.6677035	102.4416276	100.2742797	98.16373733	96.10815518	94.10576103	92.15485248
230314A00034	3/14/2023	4.45	4/14/2027	109.30414	106.9545107	104.6677035	102.4416276	100.2742797	98.16373733	96.10815518	94.10576103	92.15485248
230314A00054	3/14/2023	4.46	3/15/2027	109.00005	106.7365595	104.5318099	102.3838519	100.2908136	98.25090047	96.26239185	94.32363705	92.43305185
230314A00067	3/14/2023	4.16	3/14/2028	112.19595	108.8769694	105.675198	102.5857869	99.60411681	96.72578959	93.94661572	91.26260302	88.66994592

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230314A00070	3/14/2023	4.25	3/12/2027	108.68519	106.4297745	104.2328122	102.092364	100.006571	97.97365091	95.99189468	94.05966247	92.17538033
230314A00073	3/14/2023	4.84	3/14/2025	100.89132	100.6882299	100.4859739	100.2845454	100.0839393	99.8841505	99.68517388	99.48700444	99.2896372
230314A00081	3/14/2023	4.16	3/14/2028	112.19595	108.8769694	105.675198	102.5857869	99.60411681	96.72578959	93.94661572	91.26260302	88.66994592
230315A00007	3/15/2023	4.2	3/16/2026	104.56306	103.3355537	102.136967	100.9662842	99.82253761	98.70480382	97.61220123	96.54388774	95.49905852
230315A00010	3/15/2023	4.2	3/13/2026	104.53309	103.3139605	102.1233652	100.9603077	99.82383909	98.71305362	97.62708641	96.56511101	95.52633736
230315A00012	3/15/2023	4.24	9/15/2025	102.7125	101.993801	101.2851857	100.5864407	99.89736061	99.21774544	98.5474008	97.88613759	97.23377183
230315A00013	3/15/2023	4.2	3/16/2026	104.56306	103.3355537	102.136967	100.9662842	99.82253761	98.70480382	97.61220123	96.54388774	95.49905852
230315A00016	3/15/2023	4.08	3/16/2027	108.16532	105.9085691	103.7104946	101.5691422	99.48263944	97.44919153	95.46707766	93.53464706	91.65031557
230315A00023	3/15/2023	4.2	3/16/2026	104.56306	103.3355537	102.136967	100.9662842	99.82253761	98.70480382	97.61220123	96.54388774	95.49905852
230315A00024	3/15/2023	4.03	3/15/2028	111.51654	108.2123474	105.0248834	101.949311	98.98102994	96.11566017	93.34902938	90.67716186	88.09626768
230315A00030	3/15/2023	4.03	3/15/2028	111.51654	108.2123474	105.0248834	101.949311	98.98102994	96.11566017	93.34902938	90.67716186	88.09626768
230315A00049	3/15/2023	4.28	3/14/2025	100.77783	100.5749	100.3727999	100.1715269	99.97107572	99.77144138	99.57261877	99.37460288	99.17738872
230315A00052	3/15/2023	4.07	3/14/2025	100.75164	100.548574	100.3463412	100.144938	99.94435902	99.74459928	99.54565363	99.347517	99.15018438
230315A00055	3/15/2023	4.2	3/11/2026	104.51311	103.299561	102.1142919	100.9563171	99.8247003	98.71854752	97.63700488	96.57925635	95.54452164
230315A00068	3/15/2023	4.2	3/16/2026	104.56306	103.3355537	102.136967	100.9662842	99.82253761	98.70480382	97.61220123	96.54388774	95.49905852
230315A00076	3/15/2023	4.28	3/14/2025	100.77783	100.5749	100.3727999	100.1715269	99.97107572	99.77144138	99.57261877	99.37460288	99.17738872
230315A00084	3/15/2023	4.08	3/24/2027	108.24329	105.9640506	103.7445137	101.5826771	99.47662021	97.42450274	95.42456108	93.47510411	91.5745096
230315A00086	3/15/2023	4.28	3/11/2025	100.74583	100.5512397	100.357418	100.1643571	99.97205243	99.7804995	99.58969384	99.39963101	99.21030661
230315A00097	3/15/2023	4.08	3/15/2027	108.15557	105.9016305	103.7062376	101.5674452	99.48338663	97.45227298	95.47238867	93.54208794	91.65979135
230315A00098	3/15/2023	4.08	3/15/2027	108.15557	105.9016305	103.7062376	101.5674452	99.48338663	97.45227298	95.47238867	93.54208794	91.65979135
230315A00112	3/15/2023	4.5	3/14/2025	100.82242	100.6194225	100.4172611	100.215927	100.015415	99.81571996	99.61683685	99.41876063	99.22148634
230315A00116	3/15/2023	4.36	3/16/2026	104.75805	103.5292898	102.329468	101.1575702	100.0126281	98.89371771	97.79995705	96.73050347	95.6845517
230315A00117	3/15/2023	4.17	3/15/2027	108.35558	106.0993768	103.9017679	101.7608047	99.67461933	97.6414216	95.65949469	93.72719168	91.842932
230315A00125	3/15/2023	4.11	3/15/2027	108.22224	105.967546	103.7714144	101.6318983	99.54713087	97.51532252	95.53475734	93.60378919	91.72083823
230315A00128	3/15/2023	4.43	3/14/2025	100.80823	100.6052562	100.4031144	100.2017997	100.001307	99.80163132	99.60276746	99.40471044	99.20745528
230315A00130	3/15/2023	4.43	3/14/2025	100.80823	100.6052562	100.4031144	100.2017997	100.001307	99.80163132	99.60276746	99.40471044	99.20745528
230315A00131	3/15/2023	4.13	3/15/2027	108.26669	106.0114896	103.8148655	101.6748671	99.58962702	97.55735555	95.57633646	93.64492335	91.76153615
230315A00133	3/15/2023	3.9	3/15/2028	111.36571	108.0574548	104.8662372	101.7872026	98.81573339	95.94743303	93.17811402	90.50378624	87.92064631
230316A00001	3/16/2023	3.81	3/16/2028	111.08375	107.7773574	104.58806	101.5109948	98.54153783	95.67528706	92.90804971	90.2358309	87.65482287
230316A00017	3/16/2023	3.81	3/16/2028	111.08375	107.7773574	104.58806	101.5109948	98.54153783	95.67528706	92.90804971	90.2358309	87.65482287
230316A00021	3/16/2023	4.2	3/16/2026	104.56306	103.3355537	102.136967	100.9662842	99.82253761	98.70480382	97.61220123	96.54388774	95.49905852
230316A00032	3/16/2023	4.39	3/16/2026	104.79461	103.5656154	102.365562	101.1934363	100.04827	98.92913907	97.83516126	96.76549392	95.71933167
230316A00039	3/16/2023	4.63	3/17/2025	100.88368	100.6722906	100.4618042	100.2522129	100.0435109	99.83569228	99.62875154	99.422683	99.21748108

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230316A00042	3/16/2023	4.42	3/14/2025	100.8062	100.6032325	100.4010934	100.1997815	99.99929162	99.79961866	99.60075755	99.40270327	99.20545084
230316A00046	3/16/2023	4.18	6/16/2026	105.52434	104.0435244	102.5910427	101.166154	99.76813973	98.39630566	97.04998114	95.72851797	94.43128946
230316A00047	3/16/2023	4.07	9/16/2027	109.92601	107.1435726	104.4466031	101.83192	99.29648264	96.83738535	94.45185043	92.13722138	89.89095665
230316A00048	3/16/2023	4.05	6/16/2028	112.44779	108.8729881	105.4332708	102.1227965	98.93601325	95.86763822	92.91264306	90.06624022	87.32387007
230316A00050	3/16/2023	4.2	3/16/2026	104.56306	103.3355537	102.136967	100.9662842	99.82253761	98.70480382	97.61220123	96.54388774	95.49905852
230316A00054	3/16/2023	4.62	3/17/2025	100.88157	100.6701838	100.4597004	100.2501121	100.041413	99.8335974	99.62665961	99.42059402	99.21539503
230316A00055	3/16/2023	4.03	3/16/2028	111.52572	108.2186815	105.0285481	101.9504756	98.97985347	96.11229193	93.34360976	90.66982285	88.08713345
230316A00060	3/16/2023	3.89	3/16/2027	107.92522	105.667572	103.4687031	101.326655	99.23954977	97.20558788	95.22304373	93.29026212	91.40565469
230316A00061	3/16/2023	4.31	9/16/2025	102.77326	102.0515726	101.3400435	100.6384617	99.94661933	99.26431425	98.59134983	97.92753486	97.27268332
230316A00067	3/16/2023	3.89	3/16/2027	107.92522	105.667572	103.4687031	101.326655	99.23954977	97.20558788	95.22304373	93.29026212	91.40565469
230316A00072	3/16/2023	4.1	3/16/2027	108.20982	105.9525665	103.7539984	101.6121625	99.52518595	97.49127381	95.50870497	93.57582838	91.69105963
230316A00076	3/16/2023	4.45	3/16/2026	104.86773	103.6382664	102.4377499	101.2651686	100.1195539	98.99998178	97.90556969	96.83547482	95.78889161
230316A00078	3/16/2023	4.34	3/16/2027	108.74384	106.4805359	104.2760441	102.1284056	100.0357441	97.99626124	96.00823266	94.07000419	92.17998838
230316A00082	3/16/2023	4.3	3/16/2028	112.39765	109.076489	105.8726084	102.7811493	99.7974889	96.91722551	94.13616656	91.45031703	88.85586873
230316A00113	3/16/2023	4.28	3/16/2026	104.75918	103.5288977	102.3276205	101.1543255	100.0080417	98.88784241	97.79284325	96.72219931	95.67510311
230317A00015	3/17/2023	4.13	3/17/2028	111.85811	108.5429862	105.3450832	102.2595445	99.2817444	96.40727932	93.63195477	90.9517742	88.3629281
230317A00016	3/17/2023	4.22	3/17/2027	108.48696	106.2238657	104.0196456	101.8723402	99.78006905	97.74102975	95.75349424	93.81580491	91.92637108
230317A00024	3/17/2023	4.54	3/17/2025	100.86469	100.6533295	100.4428701	100.2333056	100.0246303	99.81683837	99.6099242	99.40388215	99.19870664
230317A00025	3/17/2023	4.35	3/17/2026	104.75627	103.5247865	102.3223724	101.1480036	100.0007053	98.87954791	97.78364366	96.71214476	95.66424102
230317A00026	3/17/2023	4.22	3/17/2027	108.48696	106.2238657	104.0196456	101.8723402	99.78006905	97.74102975	95.75349424	93.81580491	91.92637108
230317A00031	5/18/2023	4.3	5/19/2025	101.48879	101.1020154	100.7182008	100.3373135	99.95931982	99.58418681	99.21188191	98.84237311	98.47562886
230317A00032	5/18/2023	4.27	5/19/2025	101.47722	101.0904707	100.7066828	100.3258219	99.94785459	99.57274776	99.20046892	98.83098603	98.46426754
230317A00047	3/17/2023	4.1	3/17/2028	111.76115	108.4475948	105.2512218	102.1671729	99.19082387	96.31777235	93.54382518	90.864987	88.27744948
230317A00048	3/17/2023	4.1	3/17/2028	111.76115	108.4475948	105.2512218	102.1671729	99.19082387	96.31777235	93.54382518	90.864987	88.27744948
230317A00049	3/17/2023	4.1	3/17/2028	111.76115	108.4475948	105.2512218	102.1671729	99.19082387	96.31777235	93.54382518	90.864987	88.27744948
230317A00050	3/17/2023	4.1	3/17/2028	111.76115	108.4475948	105.2512218	102.1671729	99.19082387	96.31777235	93.54382518	90.864987	88.27744948
230317A00051	3/17/2023	4.35	3/17/2026	104.75627	103.5247865	102.3223724	101.1480036	100.0007053	98.87954791	97.78364366	96.71214476	95.66424102
230320A00005	3/20/2023	4.37	3/20/2025	100.86157	100.6419074	100.4232121	100.2054806	99.98870636	99.77288313	99.55800456	99.3440644	99.13105645
230320A00006	3/20/2023	4.25	3/20/2026	104.6645	103.4254212	102.2157823	101.034544	99.88071314	98.75334227	97.65152728	96.57440484	95.52115019
230320A00033	3/20/2023	4.35	3/20/2026	104.78748	103.547597	102.3371726	101.1551618	100.0005708	98.87245204	97.76990098	96.69205401	95.63808606
230320A00092	3/20/2023	4.31	3/20/2026	104.73829	103.4987267	102.2886165	101.1069147	99.95262774	98.82480813	97.7225515	96.64499434	95.59131171
230321A00001	3/21/2023	4.48	3/23/2026	104.97963	103.7302916	102.5108196	101.3201478	100.1572629	99.0211987	97.91103347	96.82588722	95.76491949
230321A00002	3/21/2023	4.33	3/19/2027	108.75289	106.4813662	104.2690302	102.1139094	100.0141097	97.96781568	95.97328721	94.0288551	92.13291779

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230321A00009	3/21/2023	4.27	3/21/2028	112.34996	109.0160136	105.800209	102.6976379	99.70362707	96.81372782	94.02370365	91.32951853	88.72732592
230321A00025	3/21/2023	4.57	3/21/2025	100.9169	100.6943862	100.4728622	100.2523254	100.0327694	99.81418733	99.59657284	99.3799194	99.1642206
230321A00029	3/21/2023	4.57	3/21/2025	100.9169	100.6943862	100.4728622	100.2523254	100.0327694	99.81418733	99.59657284	99.3799194	99.1642206
230321A00052	3/21/2023	4.62	3/21/2025	100.92801	100.7054735	100.4839331	100.26338	100.0438075	99.82520926	99.60757855	99.39090896	99.17519406
230321A00053	3/21/2023	4.27	3/21/2028	112.34996	109.0160136	105.800209	102.6976379	99.70362707	96.81372782	94.02370365	91.32951853	88.72732592
230321A00074	3/21/2023	4.23	3/21/2028	112.22024	108.8884015	105.6746503	102.5740787	99.58201508	96.69401268	93.90583666	91.21345264	88.61301564
230322A00004	3/22/2023	4.3	3/22/2028	112.45717	109.118767	105.8987286	102.7921352	99.79430181	96.90076859	94.10728873	91.40981648	88.8044962
230322A00005	3/22/2023	4.42	3/22/2029	116.5933	112.167682	107.9390682	103.8975516	100.0337834	96.33893791	92.80468025	89.42313553	86.18686078
230322A00006	3/22/2023	4.53	3/22/2030	120.6447	115.1126627	109.8757462	104.9165174	100.2186703	95.76694802	91.54706912	87.54565961	83.75019016
230322A00007	3/22/2023	4.54	3/21/2031	123.86591	117.2390073	111.0229793	105.1899573	99.71411778	94.57151838	89.7399508	85.1988057	80.92894907
230322A00009	3/22/2023	4.59	3/22/2032	127.30022	119.5575667	112.3606375	105.6676785	99.44035669	93.6434606	88.24462965	83.21410855	78.52452397
230322A00015	3/22/2023	4.24	3/22/2028	112.26243	108.9271899	105.7102368	102.6066475	99.61173968	96.72105629	93.93035304	91.23558667	88.63290389
230322A00020	3/22/2023	4.2	3/22/2029	116.02081	111.5969873	107.3705008	103.3314101	99.47033722	95.77842966	92.24732775	88.86913392	85.63638429
230322A00029	3/22/2023	4.67	3/21/2025	100.93911	100.7165609	100.495004	100.2744345	100.0548457	99.83623118	99.61858427	99.40189852	99.18616751
230323A00027	3/23/2023	4.43	3/24/2025	100.91906	100.6882232	100.4584526	100.2297399	100.002078	99.7754594	99.54987703	99.32532372	99.10179241
230323A00028	3/23/2023	4.1	3/23/2028	111.37055	108.1636014	105.0709969	102.0879985	99.21009603	96.43299103	93.75258533	91.1649707	88.66641884
230323A00029	3/23/2023	4.39	3/24/2031	122.9591	116.3518448	110.1551784	104.3412062	98.88408094	93.75984141	88.94626434	84.42272898	80.17009299
230323A00030	3/23/2023	4.72	3/23/2037	143.35789	129.9700831	118.0559612	107.4416629	97.97484829	89.52192736	81.96565676	75.20305617	69.14360012
230323A00034	3/23/2023	4.23	3/23/2026	104.67012	103.4228077	102.2053249	101.0166097	99.85564943	98.72147892	97.61317716	96.52986498	95.47070272
230323A00048	3/23/2023	4.07	3/23/2028	111.71994	108.3908228	105.179937	102.0823551	99.09339244	96.20858981	93.42370115	90.7346817	88.13767694
230323A00051	3/23/2023	3.85	3/23/2028	111.27556	107.9471097	104.7370788	101.6405251	98.65275029	95.76928262	92.98586432	90.29843969	87.70314404
230323A00054	3/23/2023	3.95	3/23/2028	111.33012	108.007351	104.8026459	101.711082	98.72797998	95.84888611	93.06955948	90.38596025	87.79423866
230323A00056	3/23/2023	4	3/23/2027	108.054	105.7796218	103.5647768	101.407468	99.30578207	97.25788567	95.26202165	93.31650504	91.41971943
230323A00058	3/23/2023	3.96	9/23/2027	109.69181	106.8931018	104.180881	101.5519089	99.00308944	96.53146552	94.13421101	91.80862403	89.5521205
230323A00064	3/23/2023	4.25	3/21/2025	100.84584	100.6234273	100.4020085	100.1815765	99.9621249	99.74364698	99.52613625	99.30958623	99.0939905
230323A00065	3/23/2023	3.85	3/23/2028	111.27556	107.9471097	104.7370788	101.6405251	98.65275029	95.76928262	92.98586432	90.29843969	87.70314404
230323A00081	3/23/2023	3.85	3/23/2028	111.27556	107.9471097	104.7370788	101.6405251	98.65275029	95.76928262	92.98586432	90.29843969	87.70314404
230324A00001	3/24/2023	4.04	6/24/2026	105.39938	103.8973523	102.424476	100.9799783	99.56311003	98.17314786	96.80939324	95.47117136	94.1578301
230324A00006	3/24/2023	4.06	3/24/2026	104.46926	103.2205274	102.0017358	100.8118125	99.64973949	98.51454589	97.40530567	96.32113489	95.26118941
230324A00009	3/24/2023	4.19	3/24/2025	100.86376	100.6330123	100.4033263	100.1746979	99.94711995	99.72058508	99.49508612	99.27061593	99.04716744
230324A00021	3/24/2023	3.72	3/24/2028	110.15801	107.048495	104.0492818	101.1558157	98.36375507	95.66896138	93.06748886	90.55557424	88.12962728
230324A00023	3/24/2023	3.69	3/24/2028	110.76359	107.4407944	104.2363675	101.1453702	98.16310125	95.28508635	92.50706556	89.82498132	87.23496735
230324A00029	3/24/2023	4.01	3/24/2025	100.84082	100.6099072	100.3800625	100.1512785	99.92354774	99.696863	99.471217	99.24660255	99.02301254

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230324A00031	3/24/2023	4.01	3/24/2025	100.84082	100.6099072	100.3800625	100.1512785	99.92354774	99.696863	99.471217	99.24660255	99.02301254
230324A00032	3/24/2023	3.93	3/24/2028	111.27405	107.9495023	104.7431646	101.650111	98.66565278	95.78532741	93.00488579	90.32028044	87.72765447
230324A00036	3/24/2023	3.98	3/24/2027	108.01859	105.7419114	103.5248907	101.3655185	99.26187568	97.21212355	95.21449983	93.26731475	91.36894738
230324A00050	3/24/2023	4.13	3/24/2026	102.52728	101.8518586	101.1878335	100.5348884	99.89271503	99.26101764	98.63951166	98.02792339	97.42598948
230327A00045	3/27/2023	4.42	3/27/2025	100.94992	100.710714	100.4726511	100.2357184	99.99990796	99.76521168	99.53162172	99.29913024	99.06772949
230327A00046	3/27/2023	4.22	3/27/2026	104.69791	103.4394833	102.2114095	101.0125963	99.84200548	98.69864765	97.58157912	96.48989942	95.42274881
230327A00047	3/27/2023	4.08	3/27/2028	111.78969	108.4486152	105.2265108	102.1184071	99.11957705	96.22552215	93.43195956	90.73481012	88.13018715
230328A00011	3/28/2023	4.53	3/28/2025	100.98753	100.7454979	100.5046265	100.2649099	100.0263398	99.78890788	99.55260613	99.31742645	99.08336085
230328A00019	3/28/2023	4.12	3/27/2026	104.67397	103.4141478	102.1847339	100.984639	99.81282208	98.66829101	97.55009959	96.45734499	95.3891652
230328A00020	3/28/2023	3.98	3/28/2028	111.74481	108.3951417	105.1649846	102.0493392	99.04344861	96.14278631	93.34304326	90.6401157	88.0300939
230328A00024	3/28/2023	4.2	3/28/2028	112.19047	108.8401319	105.6091191	102.4924429	99.48536009	96.58335694	93.78213625	91.07760536	88.46586482
230328A00026	3/28/2023	4.34	3/28/2029	116.31185	111.8758422	107.6380139	103.588365	99.71746001	96.01639342	92.47675669	89.09060721	85.85043951
230328A00027	3/28/2023	4.22	3/28/2028	111.69653	108.4963211	105.4103416	102.4338688	99.56240222	96.79165087	94.11752284	91.53611475	89.04370203
230328A00028	3/28/2023	4.34	3/27/2026	105.13486	103.8128902	102.5150391	101.2406777	99.98920321	98.76003339	97.55260576	96.36637659	95.20082022
230328A00037	3/28/2023	4.21	3/28/2028	111.99868	108.7055474	105.5309174	102.4698721	99.51772577	96.67001165	93.92247033	91.27103908	88.71184164
230328A00045	3/28/2023	4.21	3/28/2028	111.99868	108.7055474	105.5309174	102.4698721	99.51772577	96.67001165	93.92247033	91.27103908	88.71184164
230328A00047	3/28/2023	4.21	3/28/2028	111.99868	108.7055474	105.5309174	102.4698721	99.51772577	96.67001165	93.92247033	91.27103908	88.71184164
230328A00051	3/28/2023	4.53	3/28/2033	127.07926	119.1623403	111.8510294	105.0944866	98.84642984	93.06470737	87.71090731	82.75000678	78.15005541
230328A00052	3/28/2023	4.53	3/28/2033	127.07926	119.1623403	111.8510294	105.0944866	98.84642984	93.06470737	87.71090731	82.75000678	78.15005541
230328A00098	3/28/2023	4.24	3/29/2027	108.65375	106.3562756	104.1192413	101.9406075	99.81842067	97.75080947	95.73598096	93.77221633	91.85786722
230328A00100	3/28/2023	4.19	3/28/2028	112.15785	108.8080436	105.5775502	102.4613795	99.45478906	96.55326545	93.75251194	91.04843627	88.43713942
230328A00111	3/28/2023	4.36	3/27/2026	104.87278	103.6132004	102.3839931	101.1840652	100.0123781	98.86794177	97.74981208	96.65708809	95.58890963
230328A00122	3/28/2023	4.58	3/28/2025	100.99961	100.7575533	100.5166626	100.2769267	100.0383374	99.80088642	99.56456564	99.32936699	99.0952825
230329A00020	3/29/2023	4.23	3/29/2028	112.29806	108.9432499	105.7079897	102.5872789	99.57636246	96.67071558	93.86603058	91.15820497	88.54333014
230329A00043	3/29/2023	4.36	3/27/2026	104.87278	103.6132004	102.3839931	101.1840652	100.0123781	98.86794177	97.74981208	96.65708809	95.58890963
230330A00011	3/30/2023	4.21	3/30/2028	112.24243	108.8858199	105.6489119	102.5266976	99.51441256	96.60752287	93.80171262	91.09287162	88.47708405
230330A00029	3/30/2023	4.6	4/1/2025	101.05063	100.7974124	100.5454586	100.2947633	100.0453169	99.79711008	99.55013374	99.30437872	99.05983599
230330A00061	3/30/2023	4.65	3/31/2025	101.05158	100.8011199	100.5518957	100.3039005	100.0571253	99.81156122	99.5671993	99.32403078	99.08204698
230330A00062	3/30/2023	4.42	3/30/2026	104.9795	103.7110079	102.4732876	101.2652275	100.0857695	98.933905	97.8086725	96.70915471	95.63447607
230330A00080	3/30/2023	4.44	3/31/2025	101.01918	100.7685566	100.5191746	100.2710248	100.0240983	99.77838601	99.53387901	99.29056846	99.04844563
230330A00083	3/30/2023	4.1	3/30/2027	108.53335	106.230836	103.9890277	101.8058725	99.6794042	97.60773985	95.58907537	93.62168149	91.70389994
230331A00014	3/31/2023	4.34	3/31/2026	104.88928	103.6186533	102.3789155	101.1689516	99.98769704	98.83413746	97.70730589	96.60627993	95.53017919
230331A00033	3/31/2023	4.34	3/31/2026	104.88928	103.6186533	102.3789155	101.1689516	99.98769704	98.83413746	97.70730589	96.60627993	95.53017919

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230331A00055	3/31/2023	4.5	3/31/2025	101.01411	100.7637096	100.5145474	100.266614	100.0199003	99.77439751	99.53009663	99.28698893	99.0450657
230331A00057	3/31/2023	4.08	3/31/2028	111.82695	108.4744391	105.2416273	102.1235016	99.11529308	96.21246401	93.41069503	90.70587285	88.09407886
230404A00002	4/4/2023	4.1	4/2/2027	108.37692	106.0716417	103.8272719	101.6417553	99.51312344	97.43949052	95.41904939	93.45006736	91.53088247
230404A00004	4/4/2023	4.45	4/4/2025	101.04612	100.7846242	100.5244839	100.2656907	100.0082342	99.75210391	99.49728965	99.24378125	98.99156865
230404A00019	4/4/2023	4.45	4/4/2025	101.04612	100.7846242	100.5244839	100.2656907	100.0082342	99.75210391	99.49728965	99.24378125	98.99156865
230404A00040	4/4/2023	4.28	4/4/2025	101.00177	100.7403441	100.4802789	100.2215606	99.9641786	99.70812258	99.45338228	99.19994755	98.94780834
230405A00008	4/5/2023	4.01	10/6/2025	102.7561	101.9794511	101.2145614	100.4611638	99.71900025	98.98782066	98.26738214	97.55744899	96.85779235
230405A00010	4/5/2023	3.96	4/6/2026	104.47701	103.1935796	101.9395596	100.7139429	99.51576371	98.34410022	97.19807155	96.07683578	94.97958772
230405A00012	4/5/2023	3.8	4/5/2028	110.95539	107.6032767	104.371433	101.2548255	98.24866183	95.348381	92.54964004	89.84830213	87.24042535
230405A00020	4/5/2023	4.17	4/4/2025	100.97307	100.7116923	100.4516757	100.1930058	99.93567204	99.67966407	99.42497163	99.17158457	98.91949284
230405A00021	4/5/2023	3.96	4/6/2026	104.47701	103.1935796	101.9395596	100.7139429	99.51576371	98.34410022	97.19807155	96.07683578	94.97958772
230405A00022	4/5/2023	3.8	4/5/2028	110.95539	107.6032767	104.371433	101.2548255	98.24866183	95.348381	92.54964004	89.84830213	87.24042535
230405A00037	4/5/2023	3.71	4/6/2026	104.26083	102.9772443	101.723114	100.4974228	99.29920315	98.12753108	96.98152396	95.86033815	94.76316687
230405A00044	4/5/2023	3.8	4/5/2028	110.95539	107.6032767	104.371433	101.2548255	98.24866183	95.348381	92.54964004	89.84830213	87.24042535
230405A00045	4/5/2023	4.15	5/5/2025	101.28685	100.9391787	100.593904	100.2509969	99.91043287	99.57218802	99.23623861	98.90256127	98.57113294
230405A00046	4/5/2023	3.82	10/5/2027	109.41366	106.5858558	103.8463533	101.1918308	98.61911489	96.12517399	93.7071107	91.36215472	89.08765634
230405A00049	4/5/2023	3.81	4/5/2028	110.98823	107.6355767	104.403207	101.2860873	98.279425	95.37865857	92.57944457	89.87764579	87.26931989
230405A00051	4/5/2023	4.17	4/7/2025	101.00411	100.7343982	100.466135	100.1993089	99.93390816	99.66992135	99.40733711	99.14614423	98.88633162
230406A00016	4/6/2023	3.89	4/6/2028	110.42014	107.311694	104.3138868	101.4221486	98.63211972	95.93964377	93.34075703	90.83167846	88.40880033
230406A00017	4/6/2023	3.99	4/7/2025	100.97726	100.707356	100.4389092	100.171903	99.90632595	99.64216639	99.37941293	99.11805429	98.8580793
230406A00023	4/6/2023	3.84	4/6/2028	111.09569	107.738487	104.5018059	101.3806048	98.37008216	95.46566774	92.66300957	89.95796206	87.34657468
230406A00026	4/6/2023	3.92	4/6/2027	108.00618	105.6940496	103.4432926	101.251851	99.11774978	97.03909565	95.01407331	93.04094134	91.11802856
230406A00029	4/6/2023	3.84	4/6/2028	111.09569	107.738487	104.5018059	101.3806048	98.37008216	95.46566774	92.66300957	89.95796206	87.34657468
230406A00038	4/6/2023	4.24	4/7/2025	101.02296	100.7532121	100.4849165	100.2180579	99.95262486	99.68860588	99.42598961	99.16476482	98.90492042
230406A00039	3/29/2024	3.43	3/31/2026	103.74258	102.479576	101.2473346	100.0447413	98.87073499	97.72430483	96.60448704	95.51036231	94.44105329
230406A00041	5/31/2024	3.25	5/29/2026	104.01183	102.5919759	101.1984435	99.83055876	98.48767504	97.16916683	95.87442908	94.60287634	93.35394197
230406A00042	4/6/2023	3.99	4/7/2025	100.97726	100.707356	100.4389092	100.171903	99.90632595	99.64216639	99.37941293	99.11805429	98.8580793
230406A00043	7/31/2024	3.2	7/31/2026	104.43077	102.836601	101.2746692	99.74406089	98.24389998	96.7733426	95.33157588	93.91781642	92.53130897
230406A00044	9/30/2024	3.16	9/30/2026	104.8441	103.0804625	101.3549565	99.66640646	98.01369015	96.39573123	94.81149685	93.25999546	91.74027468
230406A00045	4/29/2024	3.41	4/30/2027	107.03735	104.6698744	102.3669291	100.1264034	97.94626984	95.82457818	93.75945233	91.74908697	89.79174449
230406A00046	6/28/2024	3.35	6/30/2027	107.36467	104.8276912	102.3643942	99.97221117	97.64867869	95.39143427	93.19821146	91.06683534	88.99521816
230406A00047	8/30/2024	3.31	8/31/2027	107.72789	105.0198698	102.3941441	99.84769086	97.37761944	94.98116542	92.65568404	90.39864409	88.20762214
230406A00049	10/31/2024	3.29	10/29/2027	108.11187	105.2380391	102.4559477	99.76217952	97.15346372	94.62666882	92.17879585	89.80697197	87.50844447

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230406A00050	4/6/2023	3.67	4/6/2027	107.62253	105.3110934	103.0611106	100.8705144	98.73732508	96.65964497	94.63565466	92.66360885	90.74183274
230406A00052	4/6/2023	4.02	4/6/2026	104.55362	103.2696653	102.0151388	100.7890242	99.59035549	98.41821053	97.27170826	96.15000656	95.05230002
230406A00091	4/6/2023	3.99	4/7/2025	100.97726	100.707356	100.4389092	100.171903	99.90632595	99.64216639	99.37941293	99.11805429	98.8580793
230406A00105	4/6/2023	3.84	4/6/2028	111.09569	107.738487	104.5018059	101.3806048	98.37008216	95.46566774	92.66300957	89.95796206	87.34657468
230410A00011	4/10/2023	4.08	4/9/2027	108.4014	106.0763098	103.8131089	101.6097306	99.46418989	97.37458338	95.33908518	93.35594305	91.42347477
230410A00012	4/10/2023	3.98	4/10/2028	111.59313	108.2165741	104.9615337	101.8229245	98.79590856	95.87587954	93.05845016	90.33944021	87.71486535
230411A00028	4/11/2023	4.2	4/11/2025	101.07642	100.7952828	100.5157237	100.2377285	99.96128413	99.68637744	99.41299553	99.14112563	98.87075511
230411A00030	4/11/2023	4.2	4/11/2025	101.07642	100.7952828	100.5157237	100.2377285	99.96128413	99.68637744	99.41299553	99.14112563	98.87075511
230411A00054	4/11/2023	3.74	4/11/2028	111.08467	107.7070042	104.451209	101.3121843	98.28507164	95.36524509	92.54829882	89.83003492	87.20645228
230412A00002	4/12/2023	4.42	4/11/2025	101.11558	100.8346206	100.5552328	100.2774052	100.0011245	99.72637774	99.45315213	99.18143495	98.91121364
230412A00005	4/12/2023	4.16	4/10/2026	104.77894	103.4830937	102.2157415	100.975946	99.76280674	98.57546254	97.41308937	96.27489836	95.16013388
230412A00006	4/12/2023	4.04	4/12/2027	108.33939	106.0066481	103.7362044	101.5259836	99.37399403	97.27832505	95.23714302	93.24868756	91.31126801
230412A00007	4/12/2023	3.95	4/12/2028	111.51267	108.1318717	104.8729349	101.7307653	98.70051143	95.77755347	92.95749087	90.23613031	87.6094746
230412A00028	4/12/2023	3.69	4/12/2028	110.9282	107.5503288	104.2944589	101.1554779	98.12852217	95.20896089	92.39238306	89.67458574	87.05156283
230412A00031	4/12/2023	3.91	4/10/2026	104.56106	103.2650677	101.9976058	100.7577348	99.5445526	98.35719606	97.19483954	96.05669258	94.94199809
230412A00033	4/12/2023	4.04	4/12/2027	108.33939	106.0066481	103.7362044	101.5259836	99.37399403	97.27832505	95.23714302	93.24868756	91.31126801
230412A00038	4/12/2023	3.69	4/12/2028	110.9282	107.5503288	104.2944589	101.1554779	98.12852217	95.20896089	92.39238306	89.67458574	87.05156283
230412A00053	4/12/2023	4.2	4/12/2028	110.39752	107.5997095	104.8980875	102.2887291	99.76789586	97.33202319	94.97771092	92.70171484	90.50093865
230412A00059	4/12/2023	4.2	4/12/2028	110.39752	107.5997095	104.8980875	102.2887291	99.76789586	97.33202319	94.97771092	92.70171484	90.50093865
230413A00017	4/13/2023	3.88	4/13/2028	111.29049	107.9105855	104.6526351	101.5115417	98.48244969	95.5607353	92.74199375	90.02202755	87.39683535
230413A00018	4/13/2023	3.96	4/13/2027	108.1651	105.8316046	103.5605072	101.3497298	99.19727946	97.10124411	95.0597885	93.0711505	91.13363755
230413A00020	4/13/2023	3.88	4/13/2028	111.29049	107.9105855	104.6526351	101.5115417	98.48244969	95.5607353	92.74199375	90.02202755	87.39683535
230413A00021	4/13/2023	4.07	4/13/2026	104.69725	103.3941639	102.1188559	100.8704366	99.64805587	98.45089961	97.27818779	96.12917268	95.00313719
230413A00024	4/13/2023	4.41	4/14/2025	101.14581	100.856503	100.5688603	100.2828712	99.99852144	99.71579685	99.43468341	99.15516727	98.87723476
230413A00030	4/13/2023	4.33	4/14/2025	101.12272	100.8334526	100.5458518	100.2599045	99.97559637	99.69291318	99.41184097	99.13236589	98.85447426
230413A00031	4/13/2023	4.07	4/13/2026	104.69725	103.3941639	102.1188559	100.8704366	99.64805587	98.45089961	97.27818779	96.12917268	95.00313719
230413A00045	4/13/2023	4.33	4/11/2025	101.09035	100.8094355	100.5300926	100.2523095	99.97607328	99.70137081	99.42818929	99.156516	98.88633841
230413A00069	4/13/2023	4.33	4/14/2025	101.12272	100.8334526	100.5458518	100.2599045	99.97559637	99.69291318	99.41184097	99.13236589	98.85447426
230413A00082	4/13/2023	4.01	4/13/2027	108.28021	105.9453632	103.6729473	101.4608789	99.30716429	97.20989055	95.16722172	93.17739493	91.23871695
230417A00023	4/17/2023	3.86	4/7/2028	111.44433	108.0718815	104.8207013	101.6857039	98.66205461	95.7451517	92.93061313	90.21426461	87.59212829
230417A00034	4/17/2023	4.63	4/17/2025	101.24418	100.9463894	100.6503619	100.3560836	100.0635389	99.77271238	99.48358882	99.19615322	98.91039074
230417A00036	4/17/2023	4.63	4/17/2025	101.24418	100.9463894	100.6503619	100.3560836	100.0635389	99.77271238	99.48358882	99.19615322	98.91039074
230417A00037	4/17/2023	4.39	4/16/2026	105.14883	103.8348533	102.548	101.2874298	100.0523416	98.84196714	97.65556924	96.49244028	95.35190065

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230417A00042	4/17/2023	4.58	4/17/2025	101.22933	100.9315682	100.6355684	100.3413176	100.0488002	99.7580009	99.46890446	99.18149585	98.89576025
230417A00044	4/17/2023	4.32	4/17/2026	105.06961	103.7535841	102.464426	101.201323	99.96349139	98.75017894	97.56066357	96.39425176	95.25027712
230417A00045	4/17/2023	4.21	4/16/2027	108.77166	106.4226749	104.1366624	101.9115322	99.74527979	97.63598112	95.58178869	93.58092788	91.63169351
230417A00046	4/17/2023	4.13	4/17/2028	112.15589	108.7504621	105.4681484	102.3038087	99.25254476	96.30969083	93.4708012	90.73163839	88.08816209
230417A00085	4/17/2023	4.68	4/17/2026	103.01598	102.2983857	101.5932125	100.9001091	100.2187353	99.5487643	98.88988206	98.24178654	97.60418724
230418A00007	4/18/2023	4.61	4/18/2025	101.24981	100.9492366	100.6504631	100.3534707	100.0582433	99.76476524	99.47302084	99.18299468	98.89467152
230418A00035	4/18/2023	4.13	4/18/2028	106.49693	104.7458091	103.041967	101.3837394	99.76953137	98.19781626	96.66713219	95.17607877	93.72331405
230418A00057	4/18/2023	4.36	4/18/2025	101.19896	100.8982166	100.5992785	100.3021256	100.006742	99.71311168	99.42121896	99.13104835	98.84258453
230418A00059	4/18/2023	4.09	4/17/2026	104.8748	103.5584546	102.2690142	101.0056635	99.767617	98.5541209	97.36445166	96.19791435	95.05384126
230419A00016	4/19/2023	4.41	4/18/2025	101.21395	100.9131781	100.6142119	100.3170311	100.0216197	99.7279616	99.43604128	99.14584318	98.857352
230419A00024	4/19/2023	4.66	4/18/2025	101.26479	100.9641959	100.6653943	100.368374	100.0731188	99.77961304	99.48784106	99.19778744	98.90943695
230419A00030	4/19/2023	4.39	4/20/2026	105.19796	103.8732358	102.5746883	101.3015553	100.0531038	98.82862888	97.62745305	96.44892431	95.29241524
230419A00035	4/19/2023	4.16	4/19/2028	112.27502	108.86201	105.5725602	102.4015094	99.34394233	96.39517683	93.55075087	90.806411	88.15810129
230419A00072	4/19/2023	4.53	10/20/2025	103.3192	102.5015911	101.6969628	100.905007	100.1254254	99.35792914	98.60223825	97.85808136	97.12519537
230420A00003	4/20/2023	4.06	4/20/2026	104.87039	103.5462576	102.2483228	100.9758208	99.72801717	98.50420624	97.30370934	96.12587361	94.97007076
230420A00024	4/20/2023	4.31	4/20/2026	105.09273	103.7687354	102.4709029	101.1984727	99.9507122	98.72691686	97.52640938	96.34853812	95.19267594
230420A00056	4/20/2023	4.38	4/20/2033	128.9565	120.0834996	111.9167974	104.3958111	97.46547043	91.07568824	85.18088545	79.7395634	74.71391875
230420A00059	4/20/2023	4.72	4/20/2038	146.28498	131.69635	118.8305677	107.46971	97.42471477	88.53141287	80.64712441	73.64773625	67.42519046
230420A00060	4/20/2023	4.72	4/20/2038	146.28498	131.69635	118.8305677	107.46971	97.42471477	88.53141287	80.64712441	73.64773625	67.42519046
230420A00063	4/20/2023	4.65	4/20/2037	142.73471	129.3096216	117.3715804	106.7441717	97.27292431	88.82247066	81.27408927	74.52357429	68.47938773
230420A00067	4/20/2023	4.57	4/21/2025	101.27218	100.9632593	100.6562357	100.35109	100.0478048	99.746363	99.44674784	99.14894265	98.85293099
230420A00071	4/20/2023	4.31	4/20/2026	105.09273	103.7687354	102.4709029	101.1984727	99.9507122	98.72691686	97.52640938	96.34853812	95.19267594
230421A00006	4/21/2023	4.04	4/21/2028	111.8953	108.4830218	105.1945217	102.024629	98.96841961	96.02120173	93.17850399	90.43606356	87.78981521
230421A00015	4/21/2023	4.54	4/21/2025	101.26294	100.9540349	100.6470291	100.341901	100.0386334	99.7372091	99.43761135	99.13982349	98.84382907
230421A00020	4/21/2023	4.23	4/21/2026	104.99935	103.6733934	102.373357	101.098494	99.84808903	98.62145405	97.41792702	96.23687067	95.0776713
230421A00025	4/21/2023	4.04	4/21/2028	111.8953	108.4830218	105.1945217	102.024629	98.96841961	96.02120173	93.17850399	90.43606356	87.78981521
230421A00036	4/21/2023	4.48	4/21/2025	101.24445	100.9355863	100.628616	100.3235231	100.0202906	99.7189013	99.41933836	99.12158515	98.82562524
230421A00041	4/21/2023	4.22	4/21/2027	108.84661	106.4827552	104.1825968	101.9440375	99.76505968	97.64372549	95.57817277	93.56661174	91.60732157
230421A00043	4/21/2023	4.1	4/21/2028	112.09497	108.6793619	105.3876229	102.2145784	99.15530083	96.2050958	93.35948907	90.61421514	87.96520622
230421A00044	4/21/2023	4.13	10/21/2027	110.42864	107.543241	104.7490772	102.0427416	99.42097659	96.88066561	94.41882576	92.03260137	89.71925771
230421A00062	4/21/2023	4.33	4/21/2028	106.858	105.0653236	103.321401	101.6245103	99.97300181	98.3652963	96.79988174	95.27530972	93.79019237
230421A00064	4/21/2023	4.1	4/21/2028	112.09497	108.6793619	105.3876229	102.2145784	99.15530083	96.2050958	93.35948907	90.61421514	87.96520622
230424A00003	4/24/2023	4.15	4/26/2027	108.73481	106.3582772	104.0461331	101.796263	99.60663743	97.47530558	95.40039163	93.38009146	91.41266945

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230424A00005	4/24/2023	4.08	4/24/2028	112.05718	108.633813	105.3348804	102.1551872	99.08978394	96.13395427	93.28320232	90.53324134	87.87998269
230424A00010	4/24/2023	4.55	4/24/2025	101.30021	100.9829265	100.6676393	100.3543281	100.0429742	99.73355927	99.42606522	99.12047415	98.81676836
230424A00011	4/24/2023	4.55	4/24/2025	101.30021	100.9829265	100.6676393	100.3543281	100.0429742	99.73355927	99.42606522	99.12047415	98.81676836
230424A00012	4/24/2023	4.28	4/24/2026	105.10119	103.7667232	102.4574734	101.172755	99.91190421	98.67428099	97.45926841	96.26627145	95.09471602
230424A00026	4/24/2023	4.28	4/24/2026	105.10119	103.7667232	102.4574734	101.172755	99.91190421	98.67428099	97.45926841	96.26627145	95.09471602
230424A00064	4/24/2023	4.28	4/24/2026	105.10119	103.7667232	102.4574734	101.172755	99.91190421	98.67428099	97.45926841	96.26627145	95.09471602
230425A00006	4/25/2023	3.89	4/24/2026	104.6912	103.3579008	102.0498274	100.7662926	99.50663168	98.27020418	97.05639253	95.86460113	94.6942554
230425A00011	4/25/2023	4.3	9/25/2025	102.862	102.1151651	101.3791931	100.6538502	99.93890704	99.23414096	98.53933547	97.85428024	97.17877083
230425A00024	4/25/2023	4.48	4/25/2025	101.28926	100.9692334	100.6512312	100.3352378	100.0212341	99.70920131	99.39912092	99.09097458	98.78474421
230425A00029	4/25/2023	4.14	4/24/2026	104.9155	103.5823218	102.2743438	100.9908758	99.73125423	98.49483991	97.28101639	96.08918917	94.91878467
230425A00030	4/25/2023	4.01	4/26/2027	108.40751	106.0348633	103.7265238	101.4803782	99.29439942	97.16663885	95.09522289	93.07834953	91.11428518
230425A00031	4/25/2023	3.69	4/25/2028	111.04215	107.6260998	104.3346232	101.1625122	98.1048037	95.15676864	92.3138991	89.57189687	86.92666251
230425A00032	4/25/2023	3.95	4/25/2028	111.63273	108.213666	104.9190378	101.7436507	98.6825542	95.73103055	92.8845825	90.13892169	87.48995783
230425A00040	4/25/2023	3.89	4/24/2026	104.6912	103.3579008	102.0498274	100.7662926	99.50663168	98.27020418	97.05639253	95.86460113	94.6942554
230425A00045	4/25/2023	3.95	4/25/2028	111.63273	108.213666	104.9190378	101.7436507	98.6825542	95.73103055	92.8845825	90.13892169	87.48995783
230425A00047	4/25/2023	4.01	4/26/2027	108.40751	106.0348633	103.7265238	101.4803782	99.29439942	97.16663885	95.09522289	93.07834953	91.11428518
230425A00050	4/25/2023	4.14	4/24/2026	104.9155	103.5823218	102.2743438	100.9908758	99.73125423	98.49483991	97.28101639	96.08918917	94.91878467
230425A00052	4/25/2023	4.01	4/26/2027	108.40751	106.0348633	103.7265238	101.4803782	99.29439942	97.16663885	95.09522289	93.07834953	91.11428518
230425A00053	4/25/2023	4.14	4/24/2026	104.9155	103.5823218	102.2743438	100.9908758	99.73125423	98.49483991	97.28101639	96.08918917	94.91878467
230425A00104	4/25/2023	3.86	7/15/2026	105.45768	103.8960365	102.365501	100.865213	99.39434555	97.95210151	96.53771224	95.15043622	93.78955791
230425A00124	4/25/2023	4.42	4/25/2025	101.27011	100.9501217	100.6321574	100.3162018	100.0022356	99.69024027	99.38019709	99.07208781	98.76589432
230426A00003	4/26/2023	3.89	5/9/2028	111.55611	108.1001969	104.7713798	101.5643207	98.47393203	95.49536566	92.62400031	89.85542974	87.18545156
230426A00004	4/26/2023	3.89	5/9/2028	111.55611	108.1001969	104.7713798	101.5643207	98.47393203	95.49536566	92.62400031	89.85542974	87.18545156
230426A00005	4/26/2023	3.91	6/13/2028	111.93344	108.3759049	104.9525789	101.6576733	98.48568273	95.43136792	92.48974142	89.65605408	86.92578236
230426A00006	4/26/2023	3.91	6/13/2028	111.93344	108.3759049	104.9525789	101.6576733	98.48568273	95.43136792	92.48974142	89.65605408	86.92578236
230426A00007	4/26/2023	3.92	7/11/2028	112.21953	108.580196	105.0807721	101.7151085	98.47735751	95.36196048	92.36363173	89.47734345	86.69831167
230426A00008	4/26/2023	3.92	7/11/2028	112.21953	108.580196	105.0807721	101.7151085	98.47735751	95.36196048	92.36363173	89.47734345	86.69831167
230426A00009	4/26/2023	3.94	8/8/2028	112.54082	108.8200488	105.2446019	101.8079796	98.50401247	95.32684208	92.27090296	89.33090631	86.50182453
230426A00010	4/26/2023	3.94	8/8/2028	112.54082	108.8200488	105.2446019	101.8079796	98.50401247	95.32684208	92.27090296	89.33090631	86.50182453
230426A00011	4/26/2023	3.96	9/12/2028	112.93051	109.1068991	105.435712	101.9099816	98.52310716	95.26882844	92.14120603	89.13460272	86.24366606
230426A00012	4/26/2023	3.96	9/12/2028	112.93051	109.1068991	105.435712	101.9099816	98.52310716	95.26882844	92.14120603	89.13460272	86.24366606
230426A00013	4/26/2023	3.98	10/10/2028	113.26005	109.3531241	105.6046562	102.0073232	98.55418159	95.23864875	92.05448133	88.99575573	86.05684974
230426A00014	4/26/2023	3.98	10/10/2028	113.26005	109.3531241	105.6046562	102.0073232	98.55418159	95.23864875	92.05448133	88.99575573	86.05684974

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230426A00025	4/26/2023	3.62	4/26/2028	110.81669	107.401628	104.1112298	100.9402856	97.88382865	94.93712538	92.09566368	89.35514107	86.71145386
230426A00033	4/26/2023	3.88	4/26/2028	111.40806	107.9899642	104.6963979	101.5221616	98.46230056	95.51209289	92.66703705	89.92284042	87.27540849
230426A00036	4/26/2023	4.06	4/27/2026	104.8435	103.5030279	102.1870327	100.8948865	99.62597846	98.37971824	97.15553552	95.952879	94.77121561
230426A00037	4/26/2023	3.94	4/26/2027	108.24386	105.8731564	103.5667192	101.3224358	99.13828041	97.01230548	94.94263852	92.92747856	90.96509305
230426A00040	4/26/2023	3.9	4/26/2028	111.47489	108.0556753	104.7610206	101.5857253	98.52483347	95.57362232	92.72758934	89.98244101	87.33408195
230426A00043	4/26/2023	4.35	4/22/2025	101.21525	100.9036681	100.5940185	100.2862786	99.98043081	99.67645759	99.37434168	99.07406603	98.7756138
230426A00045	4/26/2023	4.34	4/25/2025	101.24458	100.9246394	100.6067258	100.2908204	99.97690439	99.66495887	99.35496533	99.04690544	98.74076112
230426A00046	4/26/2023	3.95	4/26/2028	111.64196	108.2199528	104.9225774	101.7446344	98.68116576	95.72744591	92.87897007	90.13144249	87.48076561
230426A00049	4/26/2023	4.13	4/27/2026	104.93693	103.5958007	102.2791617	100.9863826	99.71685227	98.46998007	97.24519539	96.04194667	94.85970057
230426A00057	4/26/2023	4.44	4/25/2025	101.2765	100.9564923	100.6385154	100.3225471	100.0085685	99.69656061	99.38650504	99.0783834	98.77217762
230426A00062	4/26/2023	4.13	4/27/2026	104.93693	103.5958007	102.2791617	100.9863826	99.71685227	98.46998007	97.24519539	96.04194667	94.85970057
230426A00064	6/15/2023	3.87	6/15/2028	111.81233	108.2513689	104.824967	101.5273159	98.35288699	95.29641941	92.35290562	89.51757772	86.78589467
230426A00065	6/15/2023	3.87	6/15/2028	111.81233	108.2513689	104.824967	101.5273159	98.35288699	95.29641941	92.35290562	89.51757772	86.78589467
230426A00142	4/26/2023	4.51	4/27/2026	102.90205	102.1835357	101.4773083	100.7830208	100.1003428	99.42895674	98.7685572	98.11885028	97.47955306
230427A00066	4/27/2023	4.07	4/27/2027	108.55773	106.1805101	103.8677708	101.6174032	99.42737613	97.29573737	95.22060936	93.20018606	91.23272983
230427A00069	4/27/2023	4.5	4/28/2025	101.32942	101.0009963	100.6747029	100.3505184	100.0284223	99.7083945	99.39041513	99.07446457	98.76052344
230427A00077	4/27/2023	4.14	10/27/2026	106.85129	104.9963806	103.1829315	101.4097554	99.67571081	97.97969636	96.32064924	94.69754349	93.10938844
230428A00010	4/28/2023	4.31	4/28/2025	101.29353	100.9648851	100.6383779	100.3139845	99.99168426	99.67145709	99.35328296	99.03714218	98.72301527
230428A00017	4/28/2023	4.17	4/28/2026	105.002	103.6578051	102.3378786	101.0416025	99.76838272	98.51764499	97.28883385	96.08141196	94.89485935
230428A00018	4/28/2023	3.99	4/28/2028	111.79431	108.3641576	105.0591034	101.8739238	98.80364286	95.84351786	92.98902696	90.23585771	87.57989627
230428A00026	4/28/2023	4.56	4/28/2025	101.34907	101.0206051	100.6942719	100.3700477	100.0479121	99.72784497	99.40982648	99.09383698	98.77985711
230428A00029	4/28/2023	4.23	4/28/2026	105.08224	103.7374881	102.4170075	101.1201867	99.84643129	98.59516682	97.36583757	96.15790597	94.9708518
230428A00050	4/28/2023	4.31	4/28/2028	106.66765	104.9166795	103.2129475	101.5547924	99.94062222	98.36891297	96.83820518	95.34710062	93.89425934
230428A00054	4/28/2023	4.62	3/13/2025	100.83512	100.6348803	100.4354476	100.23682	100.0389925	99.84196026	99.64571841	99.45026211	99.25558659
230428A00055	4/28/2023	4.61	4/28/2026	102.97501	102.2558041	101.5488584	100.8538305	100.170392	99.49822722	98.83703264	98.18651603	97.54639603
230501A00011	5/1/2023	4.09	4/26/2027	108.59454	106.2196713	103.9091577	101.6608838	99.47282114	97.34301984	95.26960502	93.25077349	91.28479048
230501A00012	5/1/2023	3.98	5/1/2028	111.78842	108.3500918	105.037438	101.8452107	98.76840782	95.8022612	92.94222439	90.18396123	87.52333502
230501A00013	5/1/2023	4.54	5/1/2025	101.37663	101.0398087	100.7052238	100.3728535	100.0426759	99.71466938	99.38881254	99.06508433	98.74346395
230501A00022	5/1/2023	4.54	5/1/2025	101.37663	101.0398087	100.7052238	100.3728535	100.0426759	99.71466938	99.38881254	99.06508433	98.74346395
230501A00038	5/1/2023	4.33	5/1/2025	101.33311	100.9960775	100.661288	100.328718	99.99834574	99.67014932	99.34410733	99.0201986	98.69840224
230501A00039	5/1/2023	4.33	5/1/2025	101.33311	100.9960775	100.661288	100.328718	99.99834574	99.67014932	99.34410733	99.0201986	98.69840224
230501A00041	5/1/2023	4.58	4/28/2025	101.35562	101.0271414	100.7007949	100.3765574	100.0544087	99.73432845	99.41629692	99.10029445	98.78630166
230502A00017	5/2/2023	4.26	5/4/2026	105.18801	103.8265626	102.4892928	101.1756069	99.88493313	98.61671798	97.37042516	96.14553507	94.94154418

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230502A00024	5/2/2023	4.38	5/2/2025	101.33383	100.9943442	100.6571288	100.3221657	99.98943256	99.65890706	99.33056729	99.00439162	98.68035868
230502A00038	5/2/2023	3.86	5/2/2028	111.39443	107.9600376	104.6513318	101.4630574	98.3902073	95.42800872	92.57191112	89.8175746	87.16085903
230502A00045	5/2/2023	4.38	5/2/2025	101.33383	100.9943442	100.6571288	100.3221657	99.98943256	99.65890706	99.33056729	99.00439162	98.68035868
230502A00047	5/2/2023	4.1	5/1/2026	104.94135	103.5896973	102.261922	100.9574422	99.67569618	98.41613987	97.17824612	95.96150408	94.76541859
230502A00052	5/2/2023	3.96	5/3/2027	108.35696	105.9656768	103.6396829	101.3768357	99.17507875	97.0324341	94.94699932	92.91694395	90.94050639
230502A00055	5/2/2023	4.08	5/4/2026	104.94428	103.5845713	102.2490033	100.9369904	99.64796183	98.38136463	97.1366633	95.91333895	94.71088873
230502A00058	5/2/2023	4.39	5/2/2025	101.33722	100.9977229	100.6605004	100.3255303	99.99279015	99.66225769	99.33391101	99.00772845	98.68368866
230502A00076	5/2/2023	3.95	5/3/2027	108.33339	105.9423878	103.61667	101.3540932	99.15260078	97.01021525	94.92503424	92.89522744	90.91903341
230502A00079	5/2/2023	3.6	5/2/2028	110.80014	107.3688165	104.0633225	100.878385	97.8089844	94.85033647	91.99787988	89.24726473	86.59434163
230502A00081	5/2/2023	3.96	5/3/2027	108.35696	105.9656768	103.6396829	101.3768357	99.17507875	97.0324341	94.94699932	92.91694395	90.94050639
230502A00086	5/2/2023	4.08	5/1/2026	104.91443	103.5629729	102.2353845	100.9310884	99.64952314	98.39014456	97.15242562	95.93585557	94.73993932
230502A00120	5/2/2023	4.38	5/2/2025	101.33383	100.9943442	100.6571288	100.3221657	99.98943256	99.65890706	99.33056729	99.00439162	98.68035868
230502A00122	5/2/2023	3.7	5/3/2027	107.93759	105.5473809	103.2225324	100.9609009	98.76042503	96.61912258	94.53508682	92.50648331	90.5315467
230503A00004	5/3/2023	3.94	5/3/2027	108.30981	105.9190988	103.5936571	101.3313506	99.13012282	96.9879964	94.90306915	92.87351093	90.89756043
230503A00012	5/3/2023	3.82	5/3/2028	111.26863	107.8336722	104.524533	101.3359484	98.26290205	95.30061275	92.44452201	89.69028251	87.03374721
230503A00014	5/3/2023	3.94	5/3/2027	108.30981	105.9190988	103.5936571	101.3313506	99.13012282	96.9879964	94.90306915	92.87351093	90.89756043
230503A00020	5/3/2023	3.84	5/3/2028	111.33584	107.8997533	104.5895136	101.3998583	98.32576985	95.36246621	92.50538786	89.75018658	87.09271444
230503A00022	5/3/2023	4.4	5/2/2025	101.34061	101.0011015	100.663872	100.3288949	99.99614774	99.66560833	99.33725472	99.01106528	98.68701864
230503A00025	5/3/2023	3.84	5/3/2028	111.33584	107.8997533	104.5895136	101.3998583	98.32576985	95.36246621	92.50538786	89.75018658	87.09271444
230503A00029	5/3/2023	4.08	5/4/2026	104.94428	103.5845713	102.2490033	100.9369904	99.64796183	98.38136463	97.1366633	95.91333895	94.71088873
230503A00030	5/3/2023	3.84	5/3/2028	111.33584	107.8997533	104.5895136	101.3998583	98.32576985	95.36246621	92.50538786	89.75018658	87.09271444
230503A00031	5/3/2023	4.4	5/2/2025	101.34061	101.0011015	100.663872	100.3288949	99.99614774	99.66560833	99.33725472	99.01106528	98.68701864
230503A00032	5/3/2023	4.08	5/1/2026	104.91443	103.5629729	102.2353845	100.9310884	99.64952314	98.39014456	97.15242562	95.93585557	94.73993932
230503A00034	5/3/2023	3.84	5/3/2028	111.33584	107.8997533	104.5895136	101.3998583	98.32576985	95.36246621	92.50538786	89.75018658	87.09271444
230503A00036	5/3/2023	4.15	5/2/2025	101.28317	100.9434785	100.606071	100.2709209	99.93800566	99.60730288	99.27879055	98.95244694	98.62825059
230503A00038	5/3/2023	4.15	5/2/2025	101.28317	100.9434785	100.606071	100.2709209	99.93800566	99.60730288	99.27879055	98.95244694	98.62825059
230503A00072	5/3/2023	3.83	5/4/2026	104.71533	103.3555111	102.0198615	100.707794	99.41873664	98.15213549	96.90745408	95.68417263	94.48178741
230504A00006	5/4/2023	3.79	12/6/2027	109.86861	106.8648836	103.9600796	101.1503978	98.43220873	95.80204196	93.25657834	90.79264234	88.40719507
230504A00007	5/4/2023	3.82	7/6/2027	108.60088	106.0319781	103.537913	101.116059	98.76390309	96.47903577	94.25914613	92.10201715	90.00552121
230504A00011	5/4/2023	3.7	5/4/2026	104.53921	103.1806415	101.8462228	100.5353655	99.24749796	97.98206703	96.73853669	95.51638767	94.31511674
230504A00019	5/4/2023	3.95	5/4/2026	104.76826	103.4097999	102.0754609	100.7646564	99.4768159	98.21138721	96.96783529	95.74564176	94.54430424
230504A00020	5/4/2023	3.83	5/4/2027	108.05942	105.669016	103.343965	101.0821212	98.88142332	96.73988971	94.65561401	92.62676219	90.65156926
230504A00021	5/4/2023	3.76	5/4/2028	111.07534	107.6409606	104.3324969	101.144681	98.07248857	95.11113078	92.25604219	89.50286898	86.8474581

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230504A00034	5/4/2023	3.95	5/4/2026	104.76826	103.4097999	102.0754609	100.7646564	99.47681589	98.21138721	96.96783529	95.74564176	94.54430424
230504A00041	5/4/2023	3.95	5/4/2026	104.76826	103.4097999	102.0754609	100.7646564	99.47681589	98.21138721	96.96783529	95.74564176	94.54430424
230504A00042	5/4/2023	3.83	5/4/2027	108.05942	105.669016	103.343965	101.0821212	98.88142332	96.73988971	94.65561401	92.62676219	90.65156926
230504A00043	5/4/2023	3.76	5/4/2028	111.07534	107.6409606	104.3324969	101.144681	98.07248857	95.11113078	92.25604219	89.50286898	86.8474581
230504A00046	5/4/2023	4.24	5/5/2025	101.31807	100.9703328	100.624992	100.2820191	99.94138961	99.60307962	99.26706541	98.93332359	98.6018311
230504A00049	5/4/2023	3.95	5/4/2026	104.76826	103.4097999	102.0754609	100.7646564	99.4768159	98.21138721	96.96783529	95.74564176	94.54430424
230504A00054	5/4/2023	3.95	5/4/2026	104.76826	103.4097999	102.0754609	100.7646564	99.4768159	98.21138721	96.96783529	95.74564176	94.54430424
230504A00055	5/4/2023	4.24	5/5/2025	101.31807	100.9703328	100.624992	100.2820191	99.94138961	99.60307962	99.26706541	98.93332359	98.6018311
230504A00057	5/4/2023	3.86	5/4/2026	104.6464	103.2888043	101.9553162	100.6453482	99.35833025	98.09371053	96.85095435	95.6295437	94.42897652
230504A00058	5/4/2023	3.69	5/4/2028	110.83991	107.4094917	104.1048858	100.9208233	97.85228364	94.89448146	92.04285468	89.29305271	86.64092557
230504A00059	5/4/2023	4.34	5/4/2026	102.93158	102.1751439	101.4316255	100.7006741	99.98194962	99.27512454	98.57988362	97.89592322	97.22295078
230504A00065	5/4/2023	4.11	5/5/2025	101.27297	100.9253324	100.5800871	100.2372092	99.89667433	99.55845842	99.22253781	98.88888913	98.55748931
230504A00069	5/4/2023	3.82	5/4/2026	104.59224	103.2350284	101.9019185	100.5923223	99.30566996	98.04140978	96.79900727	95.57794456	94.37771975
230504A00084	5/4/2023	3.5	5/4/2028	110.47963	107.048351	103.7431271	100.5586759	97.48996054	94.53218071	91.68076014	88.931335	86.27974293
230504A00085	5/4/2023	4.24	5/5/2025	101.31807	100.9703328	100.624992	100.2820191	99.94138961	99.60307962	99.26706541	98.93332359	98.6018311
230505A00001	5/5/2023	4.33	5/5/2025	101.34929	101.0014869	100.65608	100.3130412	99.97234634	99.63397123	99.29789221	98.96408591	98.63252926
230505A00002	5/5/2023	4.01	5/5/2026	104.85926	103.4974709	102.1599068	100.8459745	99.55510027	98.28672868	97.04032162	95.81535775	94.61133186
230505A00005	5/5/2023	3.99	5/5/2026	104.83212	103.4705285	102.1331542	100.8194085	99.52871778	98.26052666	97.0142971	95.78950787	94.58565382
230505A00013	5/5/2023	4.33	5/5/2025	101.34929	101.0014869	100.65608	100.3130412	99.97234634	99.63397123	99.29789221	98.96408591	98.63252926
230505A00014	5/5/2023	3.59	5/5/2028	110.79087	107.3516508	104.0388273	100.8470942	97.77139869	94.80692523	91.94908335	89.19349578	86.53598745
230505A00016	5/5/2023	3.85	5/5/2028	111.38664	107.9443323	104.6282747	101.433182	98.35401367	95.38596609	92.52445951	89.76512674	87.10380203
230505A00017	5/5/2023	4.01	5/5/2026	104.85926	103.4974709	102.1599068	100.8459745	99.55510027	98.28672868	97.04032162	95.81535775	94.61133186
230505A00022	5/5/2023	3.85	5/5/2028	111.38664	107.9443323	104.6282747	101.433182	98.35401367	95.38596609	92.52445951	89.76512674	87.10380203
230505A00027	5/5/2023	4.01	5/5/2026	104.85926	103.4974709	102.1599068	100.8459745	99.55510027	98.28672868	97.04032162	95.81535775	94.61133186
230505A00035	5/5/2023	3.9	5/5/2027	108.23369	105.8385107	103.5088712	101.2426162	99.03767706	96.89206441	94.80386497	92.771238	90.79241216
230505A00071	5/5/2023	3.85	5/5/2028	111.38664	107.9443323	104.6282747	101.433182	98.35401367	95.38596609	92.52445951	89.76512674	87.10380203
230508A00007	5/8/2023	3.92	5/8/2028	111.64864	108.1938435	104.8660009	101.6597778	98.57009644	95.59211768	92.72122877	89.95303137	87.28333051
230508A00012	5/8/2023	4.43	5/8/2025	101.41719	101.0609602	100.7072469	100.3560194	100.0072515	99.66091741	99.31699157	98.9754488	98.63626432
230508A00016	5/8/2023	4.14	5/8/2026	105.06598	103.6946766	102.3478888	101.0250184	99.72548153	98.44871334	97.19416661	95.9613113	94.74963385
230508A00017	5/8/2023	4.01	5/10/2027	108.54047	106.1281652	103.7821802	101.5003298	99.28051024	97.12069917	95.01895174	92.97339728	90.98223606
230508A00018	5/8/2023	3.92	5/8/2028	111.64864	108.1938435	104.8660009	101.6597778	98.57009644	95.59211768	92.72122877	89.95303137	87.28333051
230509A00009	5/9/2023	4.45	5/9/2025	101.43542	101.0763887	100.7199147	100.3659661	100.014516	99.66553791	99.31900567	98.97489353	98.63317609
230509A00010	5/9/2023	4.14	5/8/2026	105.06598	103.6946766	102.3478888	101.0250184	99.72548153	98.44871334	97.19416661	95.9613113	94.74963385

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230509A00036	5/9/2023	4.02	5/10/2027	108.56424	106.1516423	103.8053767	101.5232518	99.30316352	97.14308934	95.04108424	92.99527742	91.00386898
230509A00047	5/9/2023	4.43	5/9/2025	101.42826	101.0692445	100.712786	100.3588529	100.0074181	99.65845529	99.31193825	98.96784122	98.62613882
230509A00048	5/9/2023	4.43	5/9/2025	101.42826	101.0692445	100.712786	100.3588529	100.0074181	99.65845529	99.31193825	98.96784122	98.62613882
230509A00060	5/9/2023	3.92	5/9/2028	111.65742	108.1997944	104.869311	101.6606307	98.56866452	95.5885627	92.71570254	89.94567637	87.27428049
230509A00118	5/9/2023	4.12	5/8/2026	105.03868	103.6675707	102.320975	100.9982933	99.69894208	98.42235643	97.16798926	95.9353106	94.72380697
230510A00007	5/10/2023	4.39	5/9/2025	101.41394	101.0549562	100.6985287	100.3446264	99.99322235	99.64429006	99.2978034	98.9537366	98.61206427
230510A00009	5/10/2023	4.07	5/11/2026	105.00019	103.6213075	102.2672071	100.9372782	99.63092838	98.34758374	97.0866888	95.84770555	94.63011275
230510A00014	5/10/2023	4.07	5/11/2026	105.00019	103.6213075	102.2672071	100.9372782	99.63092838	98.34758374	97.0866888	95.84770555	94.63011275
230510A00018	11/10/2023	3.61	11/10/2026	106.00188	104.1165849	102.2742374	100.4736103	98.71351624	96.9928092	95.31038282	93.66516879	92.05613524
230510A00031	5/10/2023	4.14	5/9/2025	101.35316	100.9939899	100.6373765	100.2832937	99.93171443	99.5826121	99.23596047	98.89173364	98.54990612
230510A00037	5/10/2023	3.84	5/10/2028	111.39583	107.9399399	104.6112659	101.4044581	98.31442035	95.33629636	92.46545737	89.69749012	87.02818573
230510A00057	5/10/2023	3.98	5/11/2026	104.87659	103.4985959	102.1453695	100.8163	99.51079504	98.22828133	96.96820372	95.73002453	94.51322289
230510A00062	8/10/2023	3.78	8/10/2026	105.45087	103.8213662	102.2251202	100.66118	99.12862964	97.6265876	96.1542052	94.71066506	93.29517963
230511A00015	5/11/2023	4.25	5/12/2025	101.39553	101.0283033	100.6637527	100.3018457	99.9425537	99.58584813	99.23170105	98.88008485	98.53097235
230511A00023	5/11/2023	3.95	5/19/2026	104.91209	103.5123837	102.1381793	100.788841	99.46375136	98.16231275	96.88394685	95.62809375	94.3942113
230511A00029	5/11/2023	4.25	5/9/2025	101.36382	101.004947	100.6486281	100.2948338	99.94353715	99.59471175	99.24833143	98.90437043	98.56280336
230511A00032	5/11/2023	3.7	5/11/2026	104.60307	103.225272	101.8722681	100.5434438	99.2382058	97.95597993	96.69621012	95.45835788	94.24190154
230511A00034	5/11/2023	4	5/12/2025	101.33331	100.9658968	100.6011573	100.2390671	99.87959729	99.52271932	99.16840506	98.8166268	98.46735723
230511A00036	5/11/2023	3.79	5/19/2027	108.09663	105.6655	103.3018649	101.0034725	98.76816259	96.5938596	94.47856819	92.4203699	90.41741968
230511A00038	5/11/2023	3.95	5/11/2026	104.83539	103.457692	102.104757	100.7759739	99.4707506	98.18851387	96.92870869	95.69079753	94.4742596
230511A00039	5/11/2023	3.86	11/27/2026	106.63659	104.6979861	102.8045146	100.9548562	99.14773671	97.38192707	95.65624193	93.96953756	92.3207102
230511A00042	5/11/2023	3.72	5/11/2028	110.9985	107.5466537	104.2220317	101.019278	97.93329143	94.95921137	92.09240488	89.328455	86.66314948
230511A00043	5/11/2023	3.72	5/16/2028	111.03969	107.5737475	104.2360035	101.0210464	97.92371817	94.93910491	92.06252382	89.28951115	86.61581077
230511A00044	5/11/2023	3.79	5/11/2027	108.02645	105.6176542	103.2751942	100.9968746	98.78058906	96.62431257	94.52609794	92.48407233	90.49643397
230511A00046	5/11/2023	3.95	5/11/2026	104.83539	103.457692	102.104757	100.7759739	99.4707506	98.18851387	96.92870869	95.69079753	94.4742596
230511A00050	5/11/2023	3.98	5/11/2026	104.87659	103.4985959	102.1453695	100.8163	99.51079504	98.22828133	96.96820372	95.73002453	94.51322289
230511A00052	5/11/2023	4.25	5/12/2025	101.39553	101.0283033	100.6637527	100.3018457	99.9425537	99.58584813	99.23170105	98.88008485	98.53097235
230511A00068	5/11/2023	4.31	5/12/2025	101.41751	101.050233	100.6856339	100.3236788	99.96433881	99.60758556	99.25339103	98.90172763	98.55256818
230511A00069	5/11/2023	3.98	5/12/2026	104.88626	103.5055165	102.1496313	100.8179918	99.51000246	98.22508703	96.96268744	95.72226325	94.50329095
230511A00080	5/11/2023	3.49	5/11/2028	110.50086	107.0504489	103.7274461	100.5264831	97.44244444	94.47045604	91.60587259	88.84426556	86.1814119
230512A00007	5/12/2023	4.08	5/12/2025	101.36262	100.9951415	100.6303374	100.2681829	99.90864907	99.55170744	99.19732986	98.84548861	98.49615638
230512A00008	5/12/2023	3.75	5/12/2026	104.68104	103.2999935	101.9438453	100.6119739	99.3037826	98.01869395	96.7561488	95.51560567	94.29654006
230512A00009	5/12/2023	4.08	5/12/2025	101.36262	100.9951415	100.6303374	100.2681829	99.90864907	99.55170744	99.19732986	98.84548861	98.49615638

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230512A00010	5/12/2023	3.75	5/12/2026	104.68104	103.2999935	101.9438453	100.6119739	99.3037826	98.01869395	96.7561488	95.51560567	94.29654006
230512A00011	5/12/2023	3.78	5/12/2028	111.20985	107.7517445	104.4211501	101.2126984	98.12127381	95.14200185	92.27023676	89.50154943	86.83171615
230512A00022	5/12/2023	4.33	5/12/2025	101.42483	101.0575429	100.6929277	100.3309565	99.97160052	99.61483137	99.26062102	98.9089419	98.55976679
230512A00026	5/12/2023	4	5/12/2026	104.91378	103.5328402	102.17676	100.8449288	99.53675101	98.25165022	96.98906831	95.74846477	94.52931597
230512A00033	5/12/2023	3.75	5/12/2026	104.68104	103.2999935	101.9438453	100.6119739	99.3037826	98.01869395	96.7561488	95.51560567	94.29654006
230512A00037	5/12/2023	3.86	5/12/2027	108.20195	105.7883526	103.4412742	101.1585156	98.93796238	96.77758211	94.67542044	92.62959775	90.63830583
230512A00042	5/12/2023	4	5/12/2026	104.91378	103.5328402	102.17676	100.8449288	99.53675101	98.25165022	96.98906831	95.74846477	94.52931597
230515A00011	5/15/2023	4.11	5/15/2026	105.09525	103.7049399	102.3397945	100.9991837	99.68250199	98.38916338	97.11860057	95.87026423	94.64362234
230515A00031	5/15/2023	4.41	5/15/2025	101.48717	101.1114574	100.7385374	100.3683822	100.0009612	99.63624388	99.2742004	98.91480127	98.55801745
230515A00045	5/15/2023	4.08	5/15/2026	105.05371	103.6637093	102.2988598	100.9585398	99.64214411	98.34908674	97.07880056	95.83073636	94.60436223
230515A00072	5/15/2023	4.42	5/9/2025	101.42468	101.0656724	100.7092217	100.3552963	100.0038692	99.65491399	99.30840454	98.96431507	98.62262018
230515A00074	5/15/2023	4.11	5/15/2026	105.09525	103.7049399	102.3397945	100.9991837	99.68250199	98.38916338	97.11860057	95.87026423	94.64362234
230515A00078	5/15/2023	3.96	5/17/2027	108.48634	106.055847	103.6926635	101.3945497	99.15935615	96.98501676	94.86954551	92.81103268	90.80764143
230515A00080	5/15/2023	3.88	5/15/2028	111.5744	108.1020532	104.757963	101.5367198	98.43316859	95.44239773	92.55972657	89.78069317	87.10104295
230516A00009	5/16/2023	4.46	5/16/2025	101.51706	101.1385078	100.7627976	100.3898931	100.0197627	99.65237544	99.2877007	98.92570841	98.56636889
230516A00013	5/16/2023	4.11	5/15/2026	105.09525	103.7049399	102.3397945	100.9991837	99.68250199	98.38916338	97.11860057	95.87026423	94.64362234
230516A00035	5/16/2023	4.11	5/15/2026	105.09525	103.7049399	102.3397945	100.9991837	99.68250199	98.38916338	97.11860057	95.87026423	94.64362234
230516A00036	5/16/2023	4	5/17/2027	108.58216	106.1505068	103.7861836	101.4869546	99.25066936	97.07526124	94.95874355	92.89920588	90.8948108
230516A00037	5/16/2023	3.91	5/16/2028	111.68496	108.2080455	104.8596317	101.6342954	98.52686845	95.53242697	92.64627878	89.86395114	87.1811793
230516A00067	5/16/2023	4.44	5/16/2025	101.50951	101.130977	100.7552839	100.3823963	100.0122828	99.64491227	99.28025421	98.91827851	98.5589555
230516A00069	5/16/2023	4.1	5/15/2026	105.0814	103.6911964	102.3261496	100.9856357	99.66904936	98.3758045	97.1053339	95.85708827	94.63053564
230517A00014	5/17/2023	4.14	5/18/2026	105.16711	103.7682281	102.3947879	101.0461561	99.72171767	98.42087716	97.14305838	95.8877035	94.65427228
230517A00019	5/17/2023	4.7	1/17/2025	100.20427	100.1569865	100.1097632	100.0626019	100.0155024	99.96846473	99.92148867	99.87457411	99.82772092
230517A00020	5/17/2023	4.47	7/17/2025	102.2114	101.6597782	101.1141299	100.5743573	100.0403656	99.51206202	98.98935578	98.47215802	97.96038177
230517A00046	5/17/2023	4.53	5/16/2025	101.54347	101.1648657	100.7890958	100.416132	100.0459425	99.67849654	99.31376341	98.95171303	98.59231574
230517A00048	5/17/2023	4.17	5/15/2026	105.17831	103.7874011	102.4216639	101.0804714	99.76321775	98.46931665	97.19820058	95.94931998	94.72214256
230518A00015	5/18/2023	4.64	5/16/2025	101.58499	101.2062852	100.8304216	100.4573644	100.0870823	99.719544	99.3547191	98.99257745	98.63308937
230518A00017	5/18/2023	4.28	5/18/2026	105.36209	103.9617807	102.5869437	101.236939	99.91115055	98.60898246	97.32985791	96.07321849	94.83852341
230518A00019	5/18/2023	3.81	5/18/2028	111.64577	108.1570629	104.7976474	101.562054	98.44506969	95.44172886	92.54730006	89.75727366	87.06735031
230519A00011	5/19/2023	4.73	5/19/2025	101.65465	101.2674892	100.883293	100.502026	100.1236549	99.7481464	99.37546812	99.00558799	98.63847442
230519A00012	5/19/2023	4.53	12/19/2025	104.00826	103.0221425	102.054796	101.1056833	100.1742914	99.26012652	98.36271299	97.48159258	96.61632366
230519A00013	5/19/2023	4.39	5/19/2026	105.52608	104.1218891	102.7432783	101.3896083	100.0602596	98.75463265	97.47214724	96.21224166	94.97437198
230519A00026	5/19/2023	4.73	5/19/2025	101.65465	101.2674892	100.883293	100.502026	100.1236549	99.7481464	99.37546812	99.00558799	98.63847442

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230519A00027	5/19/2023	4.39	5/19/2026	105.52608	104.1218891	102.7432783	101.3896083	100.0602596	98.75463265	97.47214724	96.21224166	94.97437198
230519A00028	5/19/2023	4.73	5/19/2025	101.65465	101.2674892	100.883293	100.502026	100.1236549	99.7481464	99.37546812	99.00558799	98.63847442
230519A00029	5/19/2023	4.39	5/19/2026	105.52608	104.1218891	102.7432783	101.3896083	100.0602596	98.75463265	97.47214724	96.21224166	94.97437198
230519A00030	5/19/2023	4.27	5/19/2027	109.24916	106.8039939	104.4266217	102.1147862	99.86631865	97.67913481	95.55123135	93.48068199	91.46563418
230519A00038	5/19/2023	3.92	5/19/2028	112.02949	108.5315304	105.1632437	101.9191347	98.79397296	95.78277637	92.8807978	90.08351286	87.38660825
230519A00041	5/19/2023	3.92	5/19/2028	112.02949	108.5315304	105.1632437	101.9191347	98.79397296	95.78277637	92.8807978	90.08351286	87.38660825
230522A00026	5/22/2023	4.35	5/22/2026	105.50234	104.0902425	102.7040052	101.3429731	100.0065171	98.69402844	97.40491825	96.13861646	94.89457117
230522A00029	5/22/2023	4.67	5/22/2025	101.6667	101.2712105	100.87881	100.4894623	100.1031318	99.71978338	99.3393825	98.96189515	98.58728783
230522A00043	5/22/2023	4.17	5/16/2028	112.56796	109.0760322	105.7130177	102.4734784	99.35223201	96.34434135	93.44510135	90.65002691	87.95484149
230522A00046	5/22/2023	4.17	5/22/2028	112.62476	109.1156509	105.7366452	102.4822307	99.34715599	96.32641909	93.41525425	90.60911954	87.9036851
230522A00058	5/22/2023	4.7	5/19/2025	101.64308	101.2559445	100.8717749	100.4905345	100.1121896	99.73670736	99.36405513	98.9942009	98.6271131
230522A00093	5/22/2023	4.17	5/22/2028	112.62476	109.1156509	105.7366452	102.4822307	99.34715599	96.32641909	93.41525425	90.60911954	87.9036851
230523A00008	5/23/2023	4.44	5/26/2026	105.67242	104.2483008	102.8504305	101.4781444	100.1308001	98.80777603	97.50847083	96.23230263	94.97870817
230523A00024	5/23/2023	4.06	5/24/2027	108.99163	106.5320019	104.1410091	101.8163559	99.55583333	97.35731937	95.21877465	93.13823884	91.11382707
230523A00047	5/23/2023	4.77	5/23/2025	101.71811	101.3197319	100.9244844	100.5323318	100.1432378	99.75716656	99.37408288	98.99395207	98.61673997
230523A00048	5/23/2023	4.44	5/26/2026	105.67242	104.2483008	102.8504305	101.4781444	100.1308001	98.80777603	97.50847083	96.23230263	94.97870817
230523A00049	5/23/2023	4.31	5/24/2027	109.3962	106.9357241	104.5437984	102.218132	99.95652151	97.75684973	95.61708206	93.53526264	91.5095108
230523A00083	5/23/2023	4.21	5/23/2028	112.77084	109.2565268	105.8725841	102.6134812	99.47395285	96.44898423	93.5337974	90.72383898	88.01476832
230523A00085	5/23/2023	4.39	5/23/2029	117.07359	112.4664392	108.0716441	103.8782804	99.87604587	96.05521841	92.40661996	88.92158346	85.59192177
230523A00086	5/23/2023	4.42	5/23/2030	120.61037	114.9084667	109.5196837	104.4251134	99.60708975	95.04909685	90.73568835	86.65241286	82.78574495
230523A00088	5/23/2023	4.59	5/23/2033	130.95335	121.9114258	113.5944993	105.939905	98.89071729	92.39519893	86.4063032	80.88122622	75.78100395
230523A00089	5/23/2023	4.65	5/23/2034	134.56083	124.3779614	115.0932188	106.6214256	98.88593692	91.81774173	85.35466609	79.44066267	74.02517753
230523A00090	5/23/2023	4.71	5/23/2035	138.15488	126.820859	116.5752598	107.3058779	98.9126847	91.30644919	84.4075201	78.14475078	72.45454966
230523A00091	5/23/2023	4.77	5/23/2036	141.64258	129.1535569	117.9595872	107.9166426	98.89752152	90.78980005	83.49404232	76.92223596	70.9964232
230524A00009	5/24/2023	3.9	5/24/2028	112.00612	108.4950446	105.1146009	101.8592365	98.72366392	95.70284788	92.7919914	89.98652342	87.2820869
230524A00020	5/24/2023	4.44	5/23/2025	101.61896	101.2204464	100.8250754	100.4328052	100.0435993	99.65742177	99.27423727	98.89401094	98.5167085
230524A00021	5/24/2023	4.44	5/23/2025	101.61896	101.2204464	100.8250754	100.4328052	100.0435993	99.65742177	99.27423727	98.89401094	98.5167085
230524A00028	5/24/2023	4.36	5/26/2026	105.55924	104.1359582	102.7389107	101.3674337	100.0208847	98.69864269	97.40010668	96.12469511	94.87184505
230524A00037	5/24/2023	4.69	5/23/2025	101.68637	101.2880629	100.8928903	100.5008123	100.1117923	99.72579479	99.34278438	98.96272641	98.58558675
230524A00038	5/24/2023	4.36	5/26/2026	105.55924	104.1359582	102.7389107	101.3674337	100.0208847	98.69864269	97.40010668	96.12469511	94.87184505
230525A00004	5/25/2023	4.87	5/27/2025	101.80693	101.3972573	100.9908884	100.5877829	100.1879015	99.79120564	99.39765728	99.00721902	98.61985406
230525A00094	5/25/2023	4.31	5/25/2028	113.13206	109.6061532	106.2111751	102.9415666	99.79203365	96.75753428	93.83326518	91.01464902	88.29732263
230526A00013	5/26/2023	4.39	5/26/2026	105.71663	104.2903287	102.890348	101.5160163	100.1666889	98.84174208	97.54057254	96.26259647	95.0072488

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230526A00016	5/26/2023	4.46	5/26/2027	109.77965	107.3090565	104.9074048	102.5723865	100.3017817	98.09345757	95.9453646	93.85553278	91.82206798
230526A00026	5/26/2023	4.49	5/26/2027	109.85226	107.3807757	104.9782519	102.6423803	100.3709404	98.16179877	96.0129055	93.92229003	91.88805774
230526A00027	5/26/2023	4.49	5/26/2027	109.85226	107.3807757	104.9782519	102.6423803	100.3709404	98.16179877	96.0129055	93.92229003	91.88805774
230526A00028	5/26/2023	4.38	5/26/2028	113.38155	109.8486572	106.4470069	103.171023	100.0153959	96.97506913	94.04522555	91.22127485	88.49884162
230526A00029	5/26/2023	4.53	5/25/2029	117.71076	113.0842179	108.6709832	104.4600834	100.4411632	96.60445035	92.94072034	89.44126253	86.09784905
230526A00031	5/26/2023	4.54	5/24/2030	121.26655	115.5444447	110.1364456	105.0235901	100.188156	95.61357534	91.28435298	87.18599219	83.30492529
230526A00033	5/26/2023	4.63	5/27/2031	124.99505	118.1498162	111.7396625	105.734454	100.1062975	94.8293623	89.87971847	85.23518719	80.87520431
230526A00034	5/26/2023	4.66	5/26/2032	128.36919	120.4115709	113.0265194	106.1694231	99.79937179	93.87883511	88.37336676	83.25133635	78.48368569
230530A00027	5/30/2023	4.22	5/30/2028	112.87219	109.3371981	105.9339871	102.6569421	99.50071588	96.46021655	93.53059421	90.70722799	87.98571399
230530A00041	5/30/2023	4.93	5/27/2025	101.8314	101.4216712	101.015243	100.6120786	100.2121386	99.81538444	99.42177815	99.0312823	98.64386008
230530A00045	5/30/2023	4.56	5/29/2026	106.15691	104.6534004	103.1792677	101.7337271	100.316017	98.9254026	97.56117448	96.22264751	94.90915987
230530A00048	5/30/2023	4.45	5/29/2026	105.71946	104.2869059	102.8808867	101.500728	100.1457772	98.81540322	97.50899564	96.22596388	94.96573631
230530A00054	5/30/2023	4.56	5/29/2026	106.15691	104.6534004	103.1792677	101.7337271	100.316017	98.9254026	97.56117448	96.22264751	94.90915987
230530A00055	5/30/2023	4.56	5/29/2026	106.15691	104.6534004	103.1792677	101.7337271	100.316017	98.9254026	97.56117448	96.22264751	94.90915987
230530A00118	5/30/2023	4.4	5/28/2027	109.65532	107.1808341	104.7755481	102.4371392	100.1633748	97.95211012	95.80128441	93.7089169	91.67310331
230530A00166	5/30/2023	4.81	5/30/2025	101.81881	101.4007917	100.9862091	100.5750171	100.1671742	99.7626396	99.36137318	98.96333545	98.56848757
230530A00171	5/30/2023	4.43	5/29/2026	105.691	104.258657	102.852846	101.4728919	100.1181422	98.78796595	97.48175287	96.19891242	94.93887307
230531A00036	5/31/2023	4.79	5/30/2025	101.81048	101.3924882	100.9779262	100.5667547	100.1589321	99.75441768	99.35317134	98.95515358	98.56032554
230531A00037	5/31/2023	4.41	5/29/2026	105.66254	104.2304082	102.8248053	101.4450557	100.0905071	98.76052867	97.45451009	96.17186096	94.91200984
230531A00038	5/31/2023	4.01	5/28/2027	108.90919	106.4397464	104.0395013	101.7061259	99.43738489	97.23113093	95.08530086	92.99791177	90.96705741
230531A00042	5/31/2023	4.01	5/28/2027	108.90919	106.4397464	104.0395013	101.7061259	99.43738489	97.23113093	95.08530086	92.99791177	90.96705741
230531A00060	5/31/2023	4.44	2/27/2026	104.67448	103.4926591	102.3376165	101.20845	100.1042961	99.02432916	97.9677598	96.93383252	95.92182408
230531A00061	5/31/2023	4.42	4/1/2026	105.00246	103.7284785	102.4851652	101.2714171	100.0861855	98.92847075	97.79731962	96.69182248	95.61111088
230531A00062	5/31/2023	4.39	4/30/2026	105.3208	103.9691557	102.6413404	101.3367788	100.0549111	98.79519483	97.55710453	96.34013094	95.1437804
230531A00063	5/31/2023	4.37	5/29/2026	105.60562	104.1739105	102.7687238	101.3893834	100.0352371	98.70565413	97.40002454	96.11775804	94.85828336
230531A00088	5/31/2023	4.79	5/30/2025	101.81048	101.3924882	100.9779262	100.5667547	100.1589321	99.75441768	99.35317134	98.95515358	98.56032554
230531A00090	5/31/2023	4.41	6/1/2026	105.69542	104.254885	102.8411679	101.4535866	100.0914782	98.75420206	97.44113847	96.15168791	94.88527026
230531A00091	5/31/2023	4.26	6/1/2027	109.35618	106.8744791	104.4624897	102.1178603	99.83833271	97.62173794	95.46599232	93.36909347	91.32911663
230531A00099	5/31/2023	4.41	5/29/2026	105.66254	104.2304082	102.8248053	101.4450557	100.0905071	98.76052867	97.45451009	96.17186096	94.91200984
230601A00006	6/1/2023	4.77	6/2/2025	101.83812	101.4117678	100.98899	100.5697396	100.1539727	99.7416459	99.33271661	98.92714295	98.52488372
230601A00012	6/1/2023	4.72	6/2/2025	101.81689	101.3905951	100.9678706	100.5486732	100.1329589	99.7206844	99.3118071	98.90628512	98.50407725
230601A00025	6/1/2023	4.12	6/1/2028	112.54767	109.012772	105.6099077	102.3334357	99.17799002	96.13846155	93.2099843	90.38792244	87.6678582
230602A00012	6/2/2023	4.39	6/2/2026	105.67792	104.2347414	102.8184834	101.4284566	100.0639945	98.72445293	97.40920887	96.11765963	94.84922205

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230602A00020	6/2/2023	3.94	6/2/2028	112.2252	108.6858602	105.2790373	101.9990624	98.84053898	95.79832937	92.86754079	90.04351243	87.32180311
230602A00027	6/2/2023	4.2	6/2/2026	105.52182	104.0779296	102.6610005	101.2703438	99.90529157	98.565198	97.24943864	95.95740946	94.68852597
230602A00030	6/2/2023	4.2	6/2/2026	105.52182	104.0779296	102.6610005	101.2703438	99.90529157	98.565198	97.24943864	95.95740946	94.68852597
230602A00051	6/2/2023	4.33	6/2/2038	123.76316	116.4819689	109.820762	103.7174517	98.11682742	92.96973736	88.23237167	83.86563606	79.83460321
230605A00022	6/5/2023	4.39	6/4/2027	109.70494	107.2105767	104.7864848	102.4302838	100.1396905	97.91251205	95.74664225	93.64005727	91.59081208
230606A00008	6/6/2023	3.98	6/6/2028	112.40089	108.8473848	105.4273105	102.1349386	98.96481948	95.91176609	92.97083936	90.13733511	87.40677157
230606A00014	6/6/2023	4.35	6/7/2027	109.63877	107.1368792	104.7057052	102.3428458	100.0459958	97.81294159	95.64155721	93.52980027	91.47570811
230606A00015	6/6/2023	4.24	6/6/2028	113.01002	109.4532638	106.0297845	102.7338743	99.56009735	96.50327918	93.55849252	90.7210441	87.98646225
230606A00029	6/6/2023	4.45	6/5/2026	105.79783	104.3454314	102.9202766	101.5216617	100.1489089	98.80136276	97.47838981	96.17937725	94.90373225
230607A00001	6/7/2023	4.9	6/6/2025	101.94265	101.5049994	101.0711149	100.6409493	100.2144548	99.79158437	99.37229194	98.9565321	98.54426024
230607A00007	6/7/2023	4.24	6/7/2028	113.01994	109.4602243	106.0340031	102.7355487	99.55941276	96.50040887	93.55359874	90.71427874	87.97796753
230607A00020	6/7/2023	4.28	6/7/2028	112.86753	109.3811225	106.0264746	102.7978467	99.68978253	96.69709352	93.81484417	91.0383382	88.36310546
230607A00038	6/7/2023	4.58	6/5/2026	105.98533	104.5315247	103.1049819	101.7050028	100.3309087	98.98204386	97.65777398	96.35748576	95.08058583
230608A00003	6/8/2023	4.23	6/8/2028	112.99526	109.4331927	106.0048113	102.7043786	99.52643399	96.46577997	93.51746761	90.67678345	87.93923693
230608A00015	6/8/2023	4.81	6/9/2025	101.9397	101.4937772	101.0517656	100.6136167	100.1792799	99.74870553	99.32184459	98.89864909	98.47907181
230608A00049	6/8/2023	4.47	6/8/2026	105.8607	104.399508	102.9658708	101.5590767	100.1784363	98.82328321	97.49297353	96.18688446	94.90441363
230609A00016	6/9/2023	4.91	6/9/2025	101.9841	101.5380544	101.0959277	100.6576644	100.2232139	99.79252654	99.36555333	98.94224626	98.52255809
230609A00026	6/9/2023	4.11	6/9/2027	109.27277	106.7656464	104.3296512	101.9623609	99.66144894	97.42468181	95.24991471	93.13508746	91.07822056
230609A00027	6/9/2023	3.99	6/9/2028	112.46389	108.9009472	105.472082	102.1715296	98.99380208	95.93367598	92.98617843	90.1465736	87.41035011
230609A00034	6/9/2023	3.99	6/9/2028	112.46389	108.9009472	105.472082	102.1715296	98.99380208	95.93367598	92.98617843	90.1465736	87.41035011
230609A00036	6/9/2023	4.91	6/6/2025	101.94701	101.5093443	101.0754487	100.645272	100.2187665	99.79588517	99.37658188	98.96081125	98.54852865
230609A00038	6/9/2023	4.91	6/10/2025	101.99646	101.5476226	101.1027513	100.6617919	100.2246928	99.7914034	99.36187381	98.93605512	98.51389921
230609A00039	6/9/2023	4.73	12/10/2025	104.09645	103.1346388	102.1906697	101.2640509	100.3543064	99.46097718	98.58362116	97.72181182	96.87513775
230609A00040	6/9/2023	4.38	5/12/2027	109.44052	107.0119511	104.6502218	102.3531243	100.118535	97.94441249	95.8287939	93.76979133	91.76558862
230609A00041	6/9/2023	4.53	7/13/2026	106.34923	104.7879189	103.2576001	101.7574201	100.2865583	98.84422351	97.42965261	96.04210927	94.68088287
230609A00042	6/9/2023	4.46	11/25/2026	107.76882	105.8246215	103.9255223	102.0702078	100.257408	98.48589795	96.75449591	95.06206175	93.40749502
230609A00043	6/9/2023	4.32	9/29/2027	110.74443	107.9143024	105.1719646	102.5141056	99.93756916	97.43934116	95.01654193	92.66641912	90.386341
230609A00076	7/10/2023	4.19	7/10/2028	113.16817	109.5147103	106.0014589	102.622255	99.37124538	96.24286572	93.23182468	90.33308884	87.54186865
230612A00023	6/12/2023	4.32	6/12/2026	105.80563	104.3318135	102.8860259	101.4675335	100.0756296	98.70963155	97.36887969	96.05273626	94.7605846
230612A00024	6/12/2023	4.69	6/12/2025	101.95795	101.5032641	101.0526518	100.6060568	100.1634254	99.7247046	99.28984271	98.85878874	98.43149264
230613A00010	6/13/2023	4.9	6/13/2025	102.02899	101.5717835	101.1186878	100.6696503	100.2246165	99.78353277	99.34634661	98.9130063	98.48346108
230613A00015	6/13/2023	4.73	6/13/2033	117.45522	112.8909896	108.5885819	104.5300478	100.698819	97.07959492	93.65823663	90.42167001	87.35779792
230613A00019	6/13/2023	4.49	6/15/2026	105.96949	104.4880305	103.0348651	101.6092506	100.2104706	98.83783311	97.49066961	96.16833378	94.87020079

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230613A00021	6/13/2023	4.35	6/14/2027	109.71257	107.1902696	104.7397921	102.3586834	100.0445843	97.79523065	95.60844842	93.48214983	91.41432925
230613A00034	6/13/2023	4.56	6/12/2026	106.03762	104.5639739	103.1183209	101.6999292	100.3080938	98.94213318	97.6013891	96.28522503	94.99302546
230613A00055	6/13/2023	5.14	2/13/2025	100.57413	100.4517675	100.3297117	100.2079654	100.0865275	99.96539655	99.84457154	99.72405121	99.60383439
230613A00061	6/13/2023	4.56	6/15/2026	106.07239	104.5901386	103.1361983	101.7098221	100.3102934	98.93691989	97.58903253	96.26598478	94.96715148
230613A00091	6/13/2023	4.58	6/15/2026	106.10178	104.6193124	103.1651506	101.7385569	100.3388143	98.9652304	97.61713622	96.29388506	94.99485168
230614A00001	6/14/2023	4.55	6/12/2026	106.023	104.5494686	103.1039251	101.6856411	100.2939114	98.92805486	97.58741308	96.27134963	94.97924904
230614A00029	6/14/2023	4.55	6/15/2026	106.05769	104.5755518	103.1217221	101.6954548	100.296033	98.92276463	97.57498068	96.25203463	94.95330139
230614A00031	6/14/2023	4.94	6/16/2025	102.08453	101.6188747	101.1574892	100.7003099	100.2472794	99.79834125	99.35343988	98.91252089	98.47553079
230614A00038	6/14/2023	4.3	6/15/2026	105.80969	104.3275034	102.8736537	101.4473987	100.0480202	98.67482462	97.32714173	96.00432379	94.70574454
230614A00047	6/14/2023	4.94	6/16/2025	102.08453	101.6188747	101.1574892	100.7003099	100.2472794	99.79834125	99.35343988	98.91252089	98.47553079
230614A00048	6/14/2023	4.55	6/15/2026	106.05769	104.5755518	103.1217221	101.6954548	100.296033	98.92276463	97.57498068	96.25203463	94.95330139
230615A00023	6/15/2023	4.58	6/15/2026	106.10178	104.6193124	103.1651506	101.7385569	100.3388143	98.9652304	97.61713622	96.29388506	94.99485168
230615A00026	6/15/2023	4.84	6/15/2038	148.24852	133.3921414	120.3040861	108.7587296	98.56058971	89.54015103	81.55028286	74.4631683	68.1676688
230615A00033	6/15/2023	4.58	6/15/2026	106.10178	104.6193124	103.1651506	101.7385569	100.3388143	98.9652304	97.61713622	96.29388506	94.99485168
230615A00039	6/15/2023	4.16	6/15/2027	109.4574	106.9312321	104.4771857	102.0927836	99.77565186	97.52351236	95.33417801	93.20554859	91.13560675
230615A00044	6/15/2023	4.33	6/15/2026	105.85382	104.3712905	102.9171082	101.4905263	100.0908265	98.71731493	97.36932135	96.04619784	94.74731803
230615A00103	6/15/2023	4.99	6/16/2025	102.10769	101.6419787	101.180531	100.7232899	100.270198	99.8211988	99.37623682	98.93525759	98.49820765
230616A00012	6/16/2023	4.41	6/16/2026	105.98289	104.4965936	103.0387587	101.6086409	100.2055175	98.82869077	97.47748634	96.1512526	94.84935955
230616A00037	6/16/2023	4.48	6/16/2027	110.05581	107.5236216	105.0636703	102.6734767	100.3506637	98.09294983	95.8981449	93.76414574	91.68893213
230616A00038	6/16/2023	4.32	6/16/2028	113.38761	109.796451	106.3408273	103.014888	99.81306546	96.73006168	93.76083383	90.90058049	88.14472876
230616A00039	6/16/2023	5.07	6/16/2025	102.14476	101.6789452	101.2173978	100.7600579	100.3068677	99.85777088	99.4127119	98.97163631	98.53449062
230616A00040	6/16/2023	4.66	6/16/2026	106.23125	104.7449992	103.2871846	101.8570545	100.4538879	99.07698806	97.72568217	96.39931977	95.09727203
230616A00106	6/16/2023	4.61	6/16/2026	106.15761	104.6719289	103.2146698	101.7850857	100.3824558	99.00608364	97.65529665	96.32944458	95.02789885
230620A00035	6/20/2023	4.36	6/20/2030	120.52199	114.7453948	109.2902853	104.1369868	99.26713483	94.66357689	90.31028629	86.19228265	82.29555824
230620A00065	6/20/2023	4.56	6/18/2026	106.10715	104.6162963	103.1540651	101.7197023	100.3124796	98.93169356	97.57666449	96.24673568	94.94127227
230620A00089	6/20/2023	4.98	6/20/2025	102.15327	101.6763712	101.2039385	100.7359116	100.2722289	99.81282996	99.35765538	98.90664697	98.45974754
230620A00091	6/20/2023	4.56	6/22/2026	106.1535	104.651162	103.1778709	101.7328562	100.3153737	98.92470487	97.56015596	96.22105648	94.90675854
230621A00016	6/21/2023	4.55	6/22/2026	106.13861	104.6363849	103.1632073	101.7183042	100.3009313	98.91037037	97.54592748	96.20693229	94.89273691
230621A00022	6/21/2023	4.24	6/21/2028	113.15869	109.5575864	106.0929497	102.7588648	99.54970419	96.46011428	93.48500036	90.61951261	87.85903297
230621A00041	6/21/2023	4.24	6/21/2028	113.15869	109.5575864	106.0929497	102.7588648	99.54970419	96.46011428	93.48500036	90.61951261	87.85903297
230621A00045	6/21/2023	4.95	6/23/2025	102.17645	101.6911799	101.2105348	100.7344463	100.2628495	99.79568094	99.33287842	98.87438076	98.42012798
230621A00047	6/21/2023	4.44	6/21/2028	107.36761	105.5219872	103.7280191	101.983836	100.2876491	98.63774758	97.03249452	95.47032315	93.94973329
230621A00048	6/21/2023	4.55	6/22/2026	106.13861	104.6363849	103.1632073	101.7183042	100.3009313	98.91037037	97.54592748	96.20693229	94.89273691

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230622A00004	6/22/2023	4.23	6/22/2027	109.704	107.1551833	104.6796531	102.2748795	99.93843242	97.66798078	95.46128732	93.31620438	91.23066969
230622A00005	6/22/2023	4.05	6/22/2028	112.79716	109.1921576	105.7241158	102.3870789	99.17538812	96.08366042	93.10677379	90.23985286	87.47825572
230622A00019	6/22/2023	4.33	6/22/2028	112.77752	109.3572154	106.0660711	102.8984339	99.8489334	96.91246503	94.08417491	91.35944613	88.73388572
230622A00027	6/22/2023	4.49	6/22/2026	106.04925	104.547722	103.0752257	101.630992	100.2142773	98.82436333	97.46055663	96.1221871	94.80860713
230622A00028	6/22/2023	4.35	6/22/2027	109.7969	107.2512387	104.7786812	102.3767063	100.0428927	97.77491729	95.57055061	93.42765229	91.34416698
230622A00030	6/22/2023	4.17	6/22/2028	112.92379	109.324011	105.8607902	102.5282052	99.32061994	96.23267267	93.25926121	90.39552885	87.63685115
230622A00039	6/26/2023	4.49	6/26/2026	106.09482	104.5818142	103.0982635	101.6433855	100.2164206	98.81663566	97.44332259	96.09579754	94.77339973
230622A00045	6/22/2023	4.91	6/23/2025	102.15714	101.6719247	101.1913335	100.7152984	100.2437546	99.77663883	99.31388866	98.85544301	98.40124188
230622A00047	6/22/2023	4.49	6/22/2026	106.04925	104.547722	103.0752257	101.630992	100.2142773	98.82436333	97.46055663	96.1221871	94.80860713
230622A00049	6/22/2023	4.71	12/17/2025	104.16058	103.1791683	102.2163305	101.2715382	100.3442865	99.43408928	98.54047817	97.66300189	96.80122541
230622A00056	6/26/2023	4.49	6/26/2026	106.09482	104.5818142	103.0982635	101.6433855	100.2164206	98.81663566	97.44332259	96.09579754	94.77339973
230622A00083	6/22/2023	4.55	6/22/2026	106.13861	104.6363849	103.1632073	101.7183042	100.3009313	98.91037037	97.54592748	96.20693229	94.89273691
230622A00093	6/22/2023	4.55	6/22/2026	106.13861	104.6363849	103.1632073	101.7183042	100.3009313	98.91037037	97.54592748	96.20693229	94.89273691
230622A00095	6/22/2023	4.38	6/22/2027	109.87174	107.3251299	104.8516477	102.4487683	100.1140699	97.84522882	95.64001498	93.49628747	91.41199042
230622A00096	6/22/2023	4.21	6/22/2028	113.06368	109.4614532	105.9958541	102.6609572	99.45112389	96.36099014	93.3854516	90.51964949	87.75895739
230623A00002	6/23/2023	4.45	6/23/2026	106.00096	104.4970289	103.0222254	101.5757789	100.1569421	98.76499317	97.39923525	96.05899498	94.74362167
230623A00003	6/23/2023	4.29	6/23/2027	109.6576	107.1109131	104.6374477	102.2346765	99.90017179	97.63160418	95.4267383	93.28342828	91.19961358
230623A00004	6/23/2023	4.13	6/23/2028	112.79351	109.1932264	105.7296475	102.3968381	99.18915133	96.10121583	93.12792028	90.26439952	87.50602127
230623A00025	6/23/2023	4.45	6/23/2026	106.00096	104.4970289	103.0222254	101.5757789	100.1569421	98.76499317	97.39923525	96.05899498	94.74362167
230623A00026	6/23/2023	4.29	6/23/2027	109.6576	107.1109131	104.6374477	102.2346765	99.90017179	97.63160418	95.4267383	93.28342828	91.19961358
230623A00027	6/23/2023	4.13	6/23/2028	112.79351	109.1932264	105.7296475	102.3968381	99.18915133	96.10121583	93.12792028	90.26439952	87.50602127
230623A00031	6/23/2023	4.87	6/23/2025	102.13783	101.6526696	101.1721322	100.6961505	100.2246598	99.75759672	99.29489891	98.83650526	98.38235579
230623A00036	6/23/2023	4.45	6/23/2026	106.00096	104.4970289	103.0222254	101.5757789	100.1569421	98.76499317	97.39923525	96.05899498	94.74362167
230623A00037	6/23/2023	4.13	6/23/2028	112.79351	109.1932264	105.7296475	102.3968381	99.18915133	96.10121583	93.12792028	90.26439952	87.50602127
230623A00051	6/23/2023	4.18	6/23/2028	112.96851	109.3651609	105.8986047	102.562901	99.35239997	96.26172734	93.28576907	90.4196574	87.65875754
230623A00053	6/23/2023	4.4	6/23/2026	106.04782	104.5415212	103.0644305	101.6157696	100.1947885	98.80076304	97.43299391	96.09080556	94.77354516
230623A00056	6/23/2023	4.18	6/23/2028	112.96851	109.3651609	105.8986047	102.562901	99.35239997	96.26172734	93.28576907	90.4196574	87.65875754
230623A00057	6/23/2023	4.52	6/23/2026	106.10541	104.6006592	103.125058	101.6778276	100.2582202	98.86551375	97.49901095	96.15803814	94.8419443
230623A00058	6/23/2023	4.38	6/23/2027	109.88236	107.3328278	104.8565821	102.4510918	100.1139271	97.84275698	95.63534429	93.48954154	91.4032866
230626A00019	6/26/2023	4.91	6/20/2025	102.12006	101.6432535	101.1709119	100.7029755	100.2393827	99.78007298	99.32498708	98.87406675	98.42725482
230626A00020	6/26/2023	4.49	6/26/2026	106.09482	104.5818142	103.0982635	101.6433855	100.2164206	98.81663566	97.44332259	96.09579754	94.77339973
230626A00021	6/26/2023	4.49	6/26/2026	106.09482	104.5818142	103.0982635	101.6433855	100.2164206	98.81663566	97.44332259	96.09579754	94.77339973
230626A00022	6/26/2023	4.34	6/25/2027	109.80349	107.2493781	104.7688456	102.3593466	100.0184365	97.74377005	95.53309698	93.38425719	91.29517672

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230626A00023	6/26/2023	4.18	6/26/2028	112.99774	109.3855244	105.9107442	102.5674173	99.34985523	96.25264721	93.27064531	90.39895003	87.63289694
230626A00026	6/26/2023	4.84	6/26/2025	102.15984	101.6663125	101.1775649	100.6935251	100.2141252	99.73929863	99.26898008	98.80310552	98.34161208
230627A00004	6/27/2023	4.47	6/29/2026	106.09883	104.5774406	103.085828	101.6231933	100.188765	98.7817985	97.40157502	96.04740031	94.71860371
230627A00005	6/27/2023	4.3	6/28/2027	109.73458	107.1729762	104.6854067	102.2693022	99.92219528	97.64171912	95.42560303	93.27166771	91.17782097
230627A00006	6/27/2023	4.12	6/27/2028	112.79683	109.1853567	105.7114292	102.3690553	99.1525369	96.05645468	93.07565264	90.20522385	87.44049701
230627A00030	6/27/2023	4.17	6/27/2028	112.97237	109.3578183	105.8808953	102.5356096	99.31626006	96.21742453	93.23394422	90.36090958	87.59364675
230627A00035	6/27/2023	4.21	6/27/2028	113.11281	109.4957876	106.0164682	102.668853	99.44723859	96.34620041	93.36057749	90.48545816	87.71616655
230627A00036	6/27/2023	4.38	6/28/2027	109.93547	107.371305	104.8812374	102.46269	100.1131934	97.83037939	95.61197572	93.45580157	91.35976334
230627A00037	6/27/2023	4.56	6/26/2026	106.19985	104.6860151	103.201658	101.7459875	100.3182438	98.91769306	97.5436271	96.19536164	94.87223558
230627A00042	6/27/2023	5.16	1/27/2025	100.3551	100.2799914	100.2050003	100.1301284	100.0553755	99.98074111	99.90622513	99.83182722	99.75754713
230627A00043	6/27/2023	5.12	2/27/2025	100.75309	100.5916872	100.4308012	100.2704295	100.1105696	99.95121907	99.79237559	99.6340367	99.47620002
230627A00044	6/27/2023	5.08	3/27/2025	101.10747	100.8680198	100.6297077	100.3925268	100.1564689	99.92152613	99.68769056	99.45495437	99.22330979
230627A00046	6/27/2023	5.03	4/28/2025	101.50298	101.1742077	100.8475621	100.523027	100.200582	99.88020695	99.56188202	99.24558755	98.93130416
230627A00048	6/27/2023	4.99	5/27/2025	101.85588	101.4460851	101.0395976	100.6363742	100.2363756	99.83956323	99.44589902	99.05534558	98.6678661
230627A00049	6/27/2023	4.95	6/27/2025	102.22632	101.7298361	101.2381829	100.7512896	100.2690873	99.7915083	99.31848634	98.84995634	98.38585448
230627A00060	6/27/2023	4.89	6/27/2025	102.19669	101.7002921	101.2087232	100.7219137	100.2397945	99.76229813	99.28935819	98.82090965	98.35688869
230627A00065	6/27/2023	4.95	6/27/2025	102.22632	101.7298361	101.2381829	100.7512896	100.2690873	99.7915083	99.31848634	98.84995634	98.38585448
230627A00078	6/27/2023	4.95	6/27/2025	102.22632	101.7298361	101.2381829	100.7512896	100.2690873	99.7915083	99.31848634	98.84995634	98.38585448
230627A00087	6/27/2023	4.95	6/30/2025	102.26372	101.7588185	101.2589045	100.7639046	100.2737466	99.78835967	99.30767451	98.83162299	98.36013837
230627A00089	6/27/2023	4.56	6/30/2026	106.24619	104.7208554	103.2254262	101.7590963	100.32109	98.91065815	97.52707794	96.16965117	94.83770342
230627A00090	6/27/2023	4.21	6/27/2028	113.11281	109.4957876	106.0164682	102.668853	99.44723859	96.34620041	93.36057749	90.48545816	87.71616655
230627A00102	6/27/2023	4.95	6/27/2025	102.22632	101.7298361	101.2381829	100.7512896	100.2690873	99.7915083	99.31848634	98.84995634	98.38585448
230628A00015	6/28/2023	4.98	6/27/2025	102.24113	101.7446081	101.2529128	100.7659776	100.2837337	99.80611338	99.33305041	98.86447969	98.40033737
230628A00016	6/28/2023	4.58	6/26/2026	106.22985	104.7157867	103.2311992	101.7753024	100.3473361	98.9465666	97.57228552	96.22380852	94.90047439
230628A00017	6/28/2023	4.41	6/28/2027	110.0108	107.4456783	104.954674	102.5352104	100.1848177	97.90112699	95.68186547	93.52485177	91.42799173
230628A00018	6/28/2023	4.23	6/28/2028	113.19291	109.5716895	106.0884251	102.7370994	99.51199474	96.40767313	93.41896119	90.54093557	87.76890944
230628A00028	6/28/2023	4.58	6/24/2026	106.20657	104.6982531	103.2192011	101.7686341	100.3458002	98.94997316	97.58045179	96.23655869	94.91763929
230628A00038	6/28/2023	4.58	6/24/2026	106.20657	104.6982531	103.2192011	101.7686341	100.3458002	98.94997316	97.58045179	96.23655869	94.91763929
230628A00045	6/28/2023	4.18	6/28/2028	113.01723	109.3990961	105.9188318	102.5704224	99.34815302	96.24658878	93.26055901	90.38514299	87.61565645
230628A00059	6/28/2023	4.87	6/27/2025	102.18681	101.6904441	101.1989033	100.7121217	100.2300303	99.7525614	99.27964881	98.81122742	98.34723343
230628A00061	6/28/2023	4.47	6/26/2026	106.06482	104.5520426	103.0687222	101.6140706	100.1873283	98.78776211	97.41466416	96.06735066	94.74516092
230628A00063	6/28/2023	4.47	6/29/2026	106.09883	104.5774406	103.085828	101.6231933	100.188765	98.7817985	97.40157502	96.04740031	94.71860371
230628A00068	6/28/2023	4.29	6/28/2027	109.70947	107.1481851	104.6609279	102.2451288	99.89832051	97.61813659	95.40230645	93.24865097	91.15507818

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230629A00008	6/29/2023	4.34	6/29/2028	113.58958	109.958601	106.4659794	103.1056826	99.87197299	96.75939427	93.76275551	90.87711686	88.09777599
230629A00019	6/29/2023	4.51	6/24/2027	110.21799	107.6614165	105.1783826	102.7663451	100.4228637	98.14559747	95.93229973	93.78081398	91.68906952
230629A00025	6/29/2023	4.7	6/24/2026	106.38594	104.8762311	103.3958067	101.943891	100.5197314	99.12260101	97.75179813	96.40664477	95.08648578
230629A00037	6/29/2023	4.69	6/29/2026	106.43072	104.9067218	103.4125473	101.947395	100.5104922	99.10109316	97.71847795	96.36195128	95.03084143
230629A00041	6/29/2023	5.09	6/30/2025	102.33402	101.8289116	101.3287942	100.8335923	100.3432338	99.85764782	99.37676496	98.90051714	98.42883757
230629A00042	6/29/2023	4.69	6/29/2026	106.43072	104.9067218	103.4125473	101.947395	100.5104922	99.10109316	97.71847795	96.36195128	95.03084143
230629A00045	6/29/2023	4.69	6/29/2026	106.43072	104.9067218	103.4125473	101.947395	100.5104922	99.10109316	97.71847795	96.36195128	95.03084143
230629A00046	6/29/2023	4.51	6/29/2027	110.27288	107.7016304	105.2047294	102.7795916	100.4237372	98.13478775	95.91046145	93.74856835	91.64700622
230629A00070	6/29/2023	5.09	6/30/2025	102.33402	101.8289116	101.3287942	100.8335923	100.3432338	99.85764782	99.37676496	98.90051714	98.42883757
230629A00071	6/29/2023	4.41	6/29/2028	113.69349	110.0922037	106.6291684	103.2982746	100.0937176	97.00998175	94.04182502	91.18426317	88.43255573
230629A00072	6/29/2023	4.69	6/29/2026	106.43072	104.9067218	103.4125473	101.947395	100.5104922	99.10109316	97.71847795	96.36195128	95.03084143
230629A00076	6/29/2023	4.51	6/29/2027	110.27288	107.7016304	105.2047294	102.7795916	100.4237372	98.13478775	95.91046145	93.74856835	91.64700622
230629A00094	6/29/2023	4.41	6/29/2028	113.69349	110.0922037	106.6291684	103.2982746	100.0937176	97.00998175	94.04182502	91.18426317	88.43255573
230629A00097	6/29/2023	4.41	6/29/2028	113.69349	110.0922037	106.6291684	103.2982746	100.0937176	97.00998175	94.04182502	91.18426317	88.43255573
230629A00120	6/29/2023	5.03	6/27/2025	102.26582	101.7692282	101.2774625	100.7904575	100.3081443	99.83045519	99.35732387	98.88868526	98.42447553
230630A00003	6/30/2023	4.54	6/30/2027	110.35935	107.7842046	105.2835883	102.8549099	100.4956808	98.20351465	95.9761218	93.81130512	91.70695546
230630A00028	6/30/2023	4.42	6/30/2027	110.26623	107.6878724	105.1842335	102.7527104	100.3908057	98.09612457	95.86636949	93.69933577	91.59290717
230630A00030	6/30/2023	4.23	6/30/2028	113.50855	109.8686837	106.3678074	102.9998501	99.7590375	96.63987864	93.63715033	90.74588245	87.96134433
230630A00043	6/30/2023	4.6	6/30/2026	106.42993	104.901113	103.4022957	101.932671	100.4914597	99.07790997	97.69129587	96.33091648	94.99609476
230630A00046	6/30/2023	4.6	6/30/2026	106.42993	104.901113	103.4022957	101.932671	100.4914597	99.07790997	97.69129587	96.33091648	94.99609476
230630A00055	6/30/2023	4.35	6/30/2028	113.63495	110.0003778	106.504397	103.1409594	99.90431396	96.78899138	93.78978878	90.90175515	88.12017767
230630A00061	6/30/2023	5	7/11/2025	102.42709	101.8913658	101.3612629	100.8366959	100.3175782	99.80382502	99.29535316	98.79208131	98.29392975
230630A00062	6/30/2023	4.6	6/30/2026	106.42993	104.901113	103.4022957	101.932671	100.4914597	99.07790997	97.69129587	96.33091648	94.99609476
230630A00079	6/30/2023	4.65	6/30/2026	106.38221	104.8558058	103.3593247	101.8919612	100.4529389	99.04150842	97.65694629	96.29855393	94.9656565
230630A00080	6/30/2023	5.02	6/30/2025	102.29887	101.7938651	101.2938493	100.7987484	100.3084902	99.82300375	99.34221974	98.86607007	98.39448797
230630A00086	6/30/2023	4.72	6/30/2026	106.488	104.9607673	103.463468	101.9953006	100.5554881	99.14328086	97.757955	96.39881162	95.06517555
230630A00088	6/30/2023	4.54	6/30/2027	110.35935	107.7842046	105.2835883	102.8549099	100.4956808	98.20351465	95.9761218	93.81130512	91.70695546
230630A00094	6/30/2023	4.42	6/30/2027	110.26623	107.6878724	105.1842335	102.7527104	100.3908057	98.09612457	95.86636949	93.69933577	91.59290717
230703A00013	7/3/2023	4.34	7/3/2028	113.62987	109.987244	106.4837572	103.1133289	99.87017528	96.74879633	93.7439606	90.85069038	88.06424795
230703A00015	7/3/2023	4.34	7/3/2028	113.62987	109.987244	106.4837572	103.1133289	99.87017528	96.74879633	93.7439606	90.85069038	88.06424795
230703A00018	7/3/2023	4.61	7/3/2026	106.48064	104.9432938	103.4361978	101.9585366	100.5095207	99.08838823	97.69440414	96.32685864	94.98506624
230703A00019	7/3/2023	4.61	7/3/2026	106.48064	104.9432938	103.4361978	101.9585366	100.5095207	99.08838823	97.69440414	96.32685864	94.98506624
230703A00021	7/3/2023	4.99	7/3/2025	102.36246	101.848505	101.3397237	100.8360365	100.337367	99.84364037	99.35478327	98.8707238	98.39139148

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230703A00025	7/3/2023	4.73	7/3/2026	106.53902	105.0032618	103.4976948	102.0215011	100.5738937	99.15411285	97.76142563	96.39512426	95.05452518
230703A00028	7/3/2023	5.11	7/3/2025	102.38269	101.8691683	101.3608091	100.8575334	100.359265	99.86592939	99.37745353	98.89376574	98.4147958
230703A00029	7/3/2023	4.89	2/3/2026	104.91798	103.8004061	102.7067539	101.6362585	100.5881888	99.56184434	98.55655336	97.57167174	96.60658137
230703A00043	7/3/2023	4.53	7/6/2027	110.39933	107.8073651	105.290753	102.8468519	100.4731335	98.16717353	95.92664718	93.74932386	91.63306296
230705A00006	7/5/2023	4.26	7/5/2028	113.66456	110.0083178	106.4920707	103.109685	99.85532821	96.7234554	93.70879276	90.80632293	88.01127106
230705A00008	7/5/2023	4.63	7/6/2026	106.54681	105.0007981	103.4852979	101.9994782	100.5425389	99.11370828	97.71224188	96.33742094	94.9885515
230705A00019	7/5/2023	4.44	7/6/2027	110.38167	107.7854918	105.2648757	102.8171719	100.4398426	98.1304544	95.88667372	93.70626177	91.58707017
230705A00033	7/5/2023	5.12	7/7/2025	102.4394	101.9146788	101.3953473	100.881325	100.3725307	99.86888459	99.37030874	98.87672666	98.3880634
230705A00034	7/5/2023	4.75	7/6/2026	106.60548	105.0610695	103.5471094	102.0627676	100.6072466	99.17977691	97.77961613	96.40604757	95.05837922
230705A00035	7/5/2023	5.03	8/8/2025	102.79706	102.182783	101.5758717	100.9761936	100.3836196	99.79802381	99.21928311	98.64727741	98.08188938
230705A00040	7/5/2023	4.38	7/5/2028	113.79126	110.1403445	106.6290256	103.2511889	100.0010255	96.87301247	93.86189642	90.96267933	88.1706044
230705A00042	7/5/2023	4.42	7/5/2028	113.93257	110.2791574	106.765413	103.385219	100.132764	97.00252246	93.98923903	91.08791341	88.29378677
230705A00103	7/5/2023	4.56	7/6/2027	110.47532	107.8823814	105.3648167	102.919984	100.5453545	98.23850329	95.99710497	93.81892837	91.70183233
230705A00111	7/5/2023	4.9	1/6/2026	104.59158	103.5528043	102.5347591	101.5368243	100.5584071	99.598938	98.65786933	97.73467443	96.82884657
230706A00006	7/6/2023	4.59	7/6/2028	114.54385	110.8769138	107.350135	103.9573747	100.6928001	97.55086506	94.52629476	91.61407066	88.80941659
230706A00014	7/6/2023	4.99	7/6/2038	150.35216	135.3077126	122.056554	110.3693142	100.0473586	90.91851257	82.83340065	75.66230878	69.29249339
230706A00029	7/6/2023	5.53	1/6/2025	100.09116	100.074456	100.0577672	100.0410953	100.0244402	100.0078018	99.99118024	99.97457537	99.95798719
230706A00032	7/6/2023	5.53	1/6/2025	100.09116	100.074456	100.0577672	100.0410953	100.0244402	100.0078018	99.99118024	99.97457537	99.95798719
230706A00034	7/6/2023	5.18	7/7/2025	102.47069	101.9458767	101.426452	100.9123373	100.4034511	99.89971395	99.40104765	98.90737577	98.41862336
230707A00021	9/1/2023	4.61	8/30/2030	122.52378	116.4983229	110.8172325	105.4588607	100.403037	95.63096074	91.12510065	86.86910227	82.84770259
230707A00022	9/1/2023	4.61	8/30/2030	122.52378	116.4983229	110.8172325	105.4588607	100.403037	95.63096074	91.12510065	86.86910227	82.84770259
230707A00023	9/1/2023	4.61	8/30/2030	122.52378	116.4983229	110.8172325	105.4588607	100.403037	95.63096074	91.12510065	86.86910227	82.84770259
230707A00031	7/7/2023	4.84	7/7/2026	106.75526	105.2069493	103.689192	102.2011523	100.7420288	99.31104812	97.90746439	96.53055748	95.17963215
230707A00041	7/7/2023	4.44	7/7/2028	114.32246	110.6491126	107.1164633	103.7183419	100.4488824	97.30250773	94.27391442	91.35805696	88.55013398
230710A00013	7/10/2023	4.55	7/10/2029	118.26454	113.4980905	108.9569814	104.6293129	100.5038794	96.57012434	92.81809829	89.23842113	85.82224629
230710A00053	7/10/2023	4.98	7/10/2025	102.44648	101.9129429	101.3849803	100.8625088	100.3454429	99.83369884	99.3271944	98.82584918	98.3295844
230710A00066	7/10/2023	5	7/10/2025	102.41453	101.8815966	101.3542337	100.8323496	100.3158589	99.80467802	99.29872522	98.79792034	98.30218488
230711A00012	7/11/2023	5.07	7/11/2025	102.46438	101.9285349	101.3983191	100.8736401	100.3544113	99.84054768	99.33196627	98.82858566	98.33032614
230711A00013	7/11/2023	4.78	7/13/2026	106.73603	105.1716135	103.6382397	102.1350579	100.6612462	99.21601174	97.79859022	96.40824401	95.04426122
230711A00027	7/11/2023	5.07	7/11/2025	102.46438	101.9285349	101.3983191	100.8736401	100.3544113	99.84054768	99.33196627	98.82858566	98.33032614
230711A00038	7/11/2023	4.89	10/10/2025	103.48675	102.6959771	101.9173309	101.1505366	100.3953248	99.65143365	98.91860965	98.19660657	97.48518552
230711A00087	7/11/2023	5.04	6/16/2025	102.13086	101.6650827	101.2035728	100.7462699	100.2931166	99.84405635	99.39903375	98.95799429	98.52088451
230712A00002	7/12/2023	4.31	7/12/2028	113.61364	109.9468482	106.420861	103.0294851	99.76683725	96.62732486	93.60563013	90.69669475	87.89570576

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230712A00009	7/12/2023	4.89	6/16/2025	102.06136	101.5957706	101.1344473	100.6773299	100.2243609	99.7754837	99.33064295	98.88978419	98.45285393
230712A00014	7/12/2023	4.62	7/13/2026	106.48848	104.926049	103.3946303	101.8933697	100.4214459	98.97806728	97.56247015	96.17391778	94.81169908
230712A00015	7/12/2023	4.62	7/13/2026	106.48848	104.926049	103.3946303	101.8933697	100.4214459	98.97806728	97.56247015	96.17391778	94.81169908
230712A00016	7/12/2023	4.45	7/12/2027	110.26049	107.6540098	105.123649	102.6667273	100.2806777	97.96303952	95.71145358	93.52365699	91.3974787
230712A00017	7/12/2023	4.45	7/12/2027	110.26049	107.6540098	105.123649	102.6667273	100.2806777	97.96303952	95.71145358	93.52365699	91.3974787
230712A00018	7/12/2023	4.31	7/12/2028	113.61364	109.9468482	106.420861	103.0294851	99.76683725	96.62732486	93.60563013	90.69669475	87.89570576
230712A00019	7/12/2023	4.31	7/12/2028	113.61364	109.9468482	106.420861	103.0294851	99.76683725	96.62732486	93.60563013	90.69669475	87.89570576
230712A00020	7/12/2023	4.31	7/12/2028	113.61364	109.9468482	106.420861	103.0294851	99.76683725	96.62732486	93.60563013	90.69669475	87.89570576
230712A00021	7/12/2023	4.31	7/12/2028	113.61364	109.9468482	106.420861	103.0294851	99.76683725	96.62732486	93.60563013	90.69669475	87.89570576
230712A00034	1/12/2024	4.88	1/13/2025	100.16441	100.128245	100.0921197	100.0560379	100.0199994	99.98400417	99.94805214	99.91214322	99.87627731
230712A00035	1/12/2024	4.36	1/12/2026	104.09995	103.0474587	102.016317	101.0058833	100.0155371	99.04468279	98.09274802	97.15918267	96.2434578
230712A00039	7/12/2023	4.62	7/13/2026	106.48848	104.926049	103.3946303	101.8933697	100.4214459	98.97806728	97.56247015	96.17391778	94.81169908
230712A00040	7/12/2023	4.45	7/12/2027	110.26049	107.6540098	105.123649	102.6667273	100.2806777	97.96303952	95.71145358	93.52365699	91.3974787
230712A00041	7/12/2023	4.31	7/12/2028	113.61364	109.9468482	106.420861	103.0294851	99.76683725	96.62732486	93.60563013	90.69669475	87.89570576
230712A00046	7/12/2023	4.52	7/13/2026	106.33376	104.7725711	103.2423745	101.7423146	100.2715708	98.82935199	97.4148951	96.02746388	94.66634774
230712A00048	7/12/2023	4.95	7/14/2025	102.43775	101.8937052	101.3554623	100.8229273	100.2960096	99.77462025	99.25867245	98.74808104	98.24276265
230712A00051	7/12/2023	4.62	7/13/2026	106.48848	104.926049	103.3946303	101.8933697	100.4214459	98.97806728	97.56247015	96.17391778	94.81169908
230712A00056	7/12/2023	4.22	7/12/2028	113.29397	109.6328586	106.112386	102.7263692	99.4689305	96.33448292	93.31771372	90.41356954	87.61724214
230713A00014	7/13/2023	4.2	7/13/2028	113.23259	109.5698509	106.0479109	102.6605706	99.40194243	96.26642993	93.24871173	90.34372638	87.54665814
230713A00017	7/13/2023	5.11	1/14/2025	100.18565	100.1466927	100.1077829	100.0689211	100.030107	99.99134052	99.95262167	99.91395032	99.87532636
230713A00019	7/13/2023	4.51	7/13/2026	106.31828	104.7572233	103.2271489	101.727209	100.2565833	98.81448046	97.4001376	96.01281849	94.6518126
230713A00021	7/13/2023	4.44	7/13/2026	106.20998	104.6497889	103.1205698	101.6214704	100.1516707	98.71037975	97.29683507	95.91030077	94.55006666
230713A00023	7/13/2023	4.2	7/13/2028	113.23259	109.5698509	106.0479109	102.6605706	99.40194243	96.26642993	93.24871173	90.34372638	87.54665814
230713A00025	7/13/2023	4.82	7/14/2025	102.36743	101.8236024	101.2855751	100.7532542	100.2265489	99.7053704	99.18963186	98.67924814	98.17413592
230713A00026	7/13/2023	4.49	7/13/2026	106.28734	104.7265278	103.1966977	101.696998	100.2266082	98.7847374	97.37062259	95.98352772	94.62274233
230713A00031	7/13/2023	4.49	7/13/2026	106.28734	104.7265278	103.1966977	101.696998	100.2266082	98.7847374	97.37062259	95.98352772	94.62274233
230713A00058	7/13/2023	4.08	7/13/2028	113.10426	109.4361705	105.909287	102.5173863	99.2545569	96.11518001	93.09391343	90.18567619	87.38563422
230714A00019	7/14/2023	4.85	7/14/2025	102.38366	101.83978	101.3017029	100.7693326	100.2425783	99.72135114	99.2055643	98.69513265	98.18997285
230714A00020	7/14/2023	4.52	7/14/2026	106.34514	104.7811574	103.2482478	101.7455563	100.272259	98.82756126	97.41069694	96.0209268	94.65753743
230714A00022	7/14/2023	4.36	7/14/2027	110.0518	107.4425883	104.9097014	102.4504515	100.06226	97.74265537	95.48926816	93.29982594	91.17214864
230714A00023	7/14/2023	4.18	7/14/2028	113.17109	109.506737	105.9833329	102.5946726	99.33485837	96.19828434	93.1796205	90.27379733	87.47599156
230714A00026	7/14/2023	4.18	7/14/2028	113.17109	109.506737	105.9833329	102.5946726	99.33485837	96.19828434	93.1796205	90.27379733	87.47599156
230714A00030	7/14/2023	4.52	7/17/2026	106.37929	104.8069116	103.2658608	101.7552734	100.2743148	98.8221806	97.39809506	96.00130999	94.63110346

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230714A00034	7/14/2023	4.37	7/16/2027	110.09818	107.4829323	104.9442998	102.4795743	100.0861636	97.76158305	95.50345096	93.30948333	91.17748919
230714A00036	7/14/2023	4.37	7/12/2030	120.76064	114.9174025	109.4023771	104.1952963	99.27724812	94.63058119	90.23881378	86.08655043	82.15940475
230714A00042	7/14/2023	4.58	7/14/2026	106.43814	104.8734071	103.3397618	101.8363474	100.3623397	98.91694364	97.49939285	96.10894774	94.7448946
230717A00022	7/17/2023	4.59	7/17/2026	106.48837	104.9151066	103.3731886	101.8617491	100.3799532	98.92699594	97.50210132	96.10452077	94.73353197
230717A00061	7/17/2023	4.93	7/17/2025	102.46405	101.9116352	101.3652018	100.82465	100.2898851	99.76081424	99.2373465	98.71939297	98.20686662
230717A00088	7/17/2023	4.43	7/19/2027	110.28354	107.6577339	105.1090071	102.6346268	100.2319787	97.89855763	95.63196255	93.42989114	91.29013515
230718A00013	7/18/2023	4.54	7/17/2026	106.41046	104.8378245	103.2965259	101.7856951	100.3044972	98.85212784	97.42781113	96.03079878	94.66036875
230718A00014	7/18/2023	4.37	7/19/2027	110.12941	107.5056125	104.9588435	102.4863772	100.0856006	97.7540099	95.48920528	93.28888558	91.15084371
230718A00015	7/18/2023	4.19	7/18/2028	113.24516	109.5686317	106.0338417	102.6345289	99.36474931	96.2188544	93.19147404	90.27750131	87.47207803
230718A00016	7/18/2023	4.54	7/17/2026	106.41046	104.8378245	103.2965259	101.7856951	100.3044972	98.85212784	97.42781113	96.03079878	94.66036875
230718A00023	7/18/2023	4.54	7/20/2026	106.44477	104.8637345	103.3142889	101.7955575	100.3066953	98.84688745	97.41534878	96.01132193	94.63407628
230718A00038	7/18/2023	4.46	11/13/2026	107.63238	105.7229972	103.8572209	102.0338011	100.2515278	98.50923328	96.80579055	95.14011145	93.51114514
230718A00065	7/18/2023	4.3	7/18/2033	116.11967	111.5380873	107.2224895	103.1544427	99.31695197	95.69433503	92.27211166	89.03690263	85.97633799
230718A00070	7/18/2023	4.06	7/18/2028	113.08059	109.3993244	105.8601851	102.4568914	99.1834761	96.0342686	93.00387831	90.08717916	87.27929497
230718A00093	7/18/2023	4.06	7/18/2028	113.08059	109.3993244	105.8601851	102.4568914	99.1834761	96.0342686	93.00387831	90.08717916	87.27929497
230719A00006	7/19/2023	4.54	7/20/2026	106.44477	104.8637345	103.3142889	101.7955575	100.3066953	98.84688745	97.41534878	96.01132193	94.63407628
230719A00015	7/19/2023	4.37	7/19/2027	110.12941	107.5056125	104.9588435	102.4863772	100.0856006	97.7540099	95.48920528	93.28888558	91.15084372
230719A00027	7/19/2023	4.92	7/18/2025	102.4709	101.9157024	101.366544	100.8233256	100.2859508	99.75432535	99.22835719	98.70795607	98.1930337
230719A00034	7/19/2023	4.19	7/19/2028	113.25478	109.5753682	106.0378848	102.6360578	99.36393214	96.21584846	93.18642679	90.27055099	87.46335426
230719A00035	7/19/2023	4.92	7/18/2025	102.4709	101.9157024	101.366544	100.8233256	100.2859508	99.75432535	99.22835719	98.70795607	98.1930337
230719A00061	7/19/2023	5.18	1/21/2025	100.27898	100.2205541	100.1622079	100.1039448	100.0457646	99.98766701	99.92965199	99.87171932	99.81386882
230719A00091	11/13/2023	4.56	11/14/2025	103.63365	102.7457346	101.8730845	101.0153089	100.1720292	99.3428794	98.52750594	97.72556687	96.93673152
230719A00096	12/18/2023	4.46	12/19/2025	103.93978	102.9540244	101.9870332	101.0382712	100.1072253	99.19340194	98.29632556	97.415538	96.55059772
230719A00101	10/16/2023	4.65	10/17/2025	103.38121	102.5715956	101.7747071	100.990244	100.2179169	99.45744509	98.70855657	97.97098759	97.2444824
230720A00025	7/20/2023	5.18	1/21/2025	100.2835	100.2250245	100.1666299	100.1083189	100.0500914	99.99194712	99.93388591	99.87590759	99.81801196
230720A00037	7/20/2023	4.55	7/20/2026	106.58823	105.0038786	103.4512181	101.9293654	100.4374717	98.97471925	97.54031989	96.13351339	94.75356641
230720A00038	7/20/2023	4.55	7/20/2026	106.58823	105.0038786	103.4512181	101.9293654	100.4374717	98.97471925	97.54031989	96.13351339	94.75356641
230720A00039	7/20/2023	4.68	7/20/2026	106.66409	105.0812647	103.5300668	102.0096138	100.5190597	99.05758897	97.62441564	96.21878161	94.83995555
230721A00003	7/21/2023	4.67	7/21/2026	106.66022	105.0747149	103.5209201	101.9979507	100.504957	99.04112047	97.60565179	96.19778995	94.81680081
230721A00006	7/21/2023	4.32	7/21/2028	113.73895	110.0454611	106.4945169	103.0798172	99.79537553	96.63550349	93.59479359	90.6681039	87.85054336
230721A00028	7/21/2023	5.03	7/21/2025	102.56956	102.0057619	101.44818	100.8967155	100.3512676	99.81173812	99.27803083	98.75005162	98.22770841
230721A00029	7/21/2023	4.67	7/21/2026	106.66022	105.0747149	103.5209201	101.9979507	100.504957	99.04112047	97.60565179	96.19778995	94.81680081
230721A00031	7/21/2023	5.03	7/21/2025	102.56956	102.0057619	101.44818	100.8967155	100.3512676	99.81173812	99.27803083	98.75005162	98.22770841

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230721A00032	7/21/2023	5.03	7/21/2025	102.56956	102.0057619	101.44818	100.8967155	100.3512676	99.81173812	99.27803083	98.75005162	98.22770841
230721A00038	7/21/2023	4.67	7/21/2026	106.66022	105.0747149	103.5209201	101.9979507	100.504957	99.04112047	97.60565179	96.19778995	94.81680081
230721A00043	7/21/2023	4.98	7/21/2025	102.54155	101.9778354	101.4203422	100.8689656	100.323605	99.78416209	99.25054072	98.72264677	98.20038817
230724A00037	7/24/2023	4.29	7/24/2028	113.66134	109.9610765	106.403884	102.9834241	99.693678	96.52892696	93.48373544	90.55293532	87.73161112
230724A00063	7/24/2023	5.08	7/24/2025	102.63594	102.0636225	101.4977115	100.9380957	100.3846703	99.83733275	99.29598285	98.76052249	98.23085577
230724A00064	7/24/2023	4.53	7/19/2027	110.54041	107.9112695	105.3592798	102.8817096	100.4759422	98.1394705	95.86989135	93.66490041	91.52228754
230724A00065	7/24/2023	4.37	7/18/2028	113.88743	110.1994558	106.6535377	103.2434115	99.96312202	96.8070096	93.76969367	90.8460573	88.03123272
230724A00066	7/24/2023	4.71	8/18/2026	107.05726	105.3925409	103.7620398	102.1647622	100.5997564	99.06610698	97.5629332	96.0893871	94.64465205
230725A00004	7/25/2023	5.06	7/25/2025	102.63729	102.0622078	101.4935859	100.9313182	100.3752986	99.82542319	99.28159027	98.74370049	98.21165663
230725A00014	7/25/2023	5.32	1/27/2025	100.36713	100.2920058	100.2170044	100.1421222	100.067359	99.9927144	99.91818819	99.84378009	99.76948981
230725A00016	7/25/2023	4.75	7/31/2026	106.90592	105.2912411	103.7091649	102.1587666	100.6391603	99.14949296	97.68894269	96.2567175	94.85205385
230725A00018	7/25/2023	4.4	7/25/2028	114.06584	110.3556022	106.7888336	103.3591734	100.0605842	96.88732977	93.83395807	90.89528542	88.06638167
230725A00023	7/25/2023	4.57	4/9/2027	109.52405	107.1858748	104.9098719	102.6939577	100.5361397	98.43450677	96.38722588	94.39253777	92.44875352
230725A00028	7/25/2023	4.46	7/25/2030	121.36887	115.4737534	109.9112322	104.6606683	99.70281533	95.01971626	90.59460981	86.41184476	82.45680064
230725A00071	7/25/2023	4.4	7/25/2028	114.06584	110.3556022	106.7888336	103.3591734	100.0605842	96.88732977	93.83395807	90.89528542	88.06638167
230726A00011	7/26/2023	4.24	7/26/2028	113.80376	110.0877392	106.5157171	103.0813056	99.77843396	96.60133465	93.54452655	90.60279879	87.77119586
230726A00012	7/26/2023	4.24	7/26/2028	113.80376	110.0877392	106.5157171	103.0813056	99.77843396	96.60133465	93.54452655	90.60279879	87.77119586
230726A00023	7/26/2023	4.24	7/26/2028	113.80376	110.0877392	106.5157171	103.0813056	99.77843396	96.60133465	93.54452655	90.60279879	87.77119586
230726A00058	7/26/2023	4.99	7/28/2025	102.68141	102.0973063	101.5198592	100.9489595	100.3844962	99.82636077	99.27444704	98.72865128	98.18887202
230726A00060	7/26/2023	4.99	7/28/2025	102.68141	102.0973063	101.5198592	100.9489595	100.3844962	99.82636077	99.27444704	98.72865128	98.18887202
230727A00016	7/27/2023	4.51	7/27/2033	130.82256	121.6116702	113.1533238	105.3812614	98.23540797	91.66126527	85.60936708	80.03478964	74.8967122
230727A00020	7/27/2023	4.39	7/27/2028	114.05029	110.3348858	106.7633139	103.329195	100.0264694	96.84937988	93.79245507	90.85049314	88.01854702
230727A00033	7/27/2023	4.82	7/27/2026	107.25177	105.5824092	103.9475935	102.3463115	100.7775923	99.24050284	97.7341454	96.25765637	94.81020442
230727A00037	7/27/2023	4.82	7/27/2026	107.25177	105.5824092	103.9475935	102.3463115	100.7775923	99.24050284	97.7341454	96.25765637	94.81020442
230727A00063	7/27/2023	4.38	7/27/2028	114.31748	110.5894881	107.0059537	103.5604621	100.2469218	97.05954586	93.99283461	91.04155982	88.20074954
230727A00070	7/27/2023	4.75	7/27/2026	106.85786	105.2544487	103.683288	102.1434694	100.6341215	99.1544048	97.70351041	96.28065864	94.88509756
230727A00073	7/27/2023	4.81	7/27/2026	106.95301	105.3488159	103.776886	102.2363117	100.7262213	99.24577475	97.79416302	96.370606	94.97435147
230727A00075	7/27/2023	4.5	7/27/2028	114.4455	110.7229956	107.1445314	103.7037162	100.3944831	97.21106824	94.14799353	91.20005091	88.36228734
230728A00004	7/28/2023	4.77	7/28/2026	106.90164	105.2951581	103.7210118	102.1782959	100.6661352	99.18368672	97.7301382	96.30470678	94.90663754
230728A00005	7/28/2023	4.59	7/28/2027	110.79365	108.136684	105.5581747	103.0553273	100.6254617	98.26601083	95.97451525	93.74861751	91.58605737
230728A00006	7/28/2023	4.46	7/28/2028	114.31214	110.5893045	107.0106256	103.5697061	100.2604702	97.07714568	94.01424679	91.06655838	88.22912085
230728A00017	7/28/2023	5.15	7/22/2025	102.64978	102.0829571	101.522415	100.9680507	100.4197624	99.87745012	99.34101649	98.81036602	98.28540532
230731A00012	7/31/2023	4.5	7/31/2029	118.24439	113.4210479	108.828015	104.4530137	100.2844854	96.31154753	92.52395053	88.91203721	85.46670536

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230731A00036	7/31/2023	5.1	7/31/2025	102.73718	102.145156	101.5599619	100.9814824	100.4096024	99.84420936	99.28519333	98.73244681	98.18586473
230731A00037	7/31/2023	4.74	7/31/2026	106.88995	105.2754047	103.6934585	102.1431879	100.623707	99.13416296	97.67373387	96.24162782	94.8370813
230801A00001	8/1/2023	5.14	8/1/2025	102.77364	102.1787356	101.5907317	101.0095075	100.4349462	99.86693347	99.30535787	98.75011031	98.20108418
230801A00021	8/1/2023	4.49	8/1/2028	114.46176	110.7253091	107.1338524	103.6809381	100.360442	97.16654685	94.09372469	91.13672103	88.29053945
230801A00022	8/1/2023	4.65	8/2/2027	111.00508	108.3316999	105.7375327	103.2197456	100.7756221	98.40256106	96.0980706	93.85976289	91.68534901
230801A00024	8/1/2023	4.82	8/3/2026	107.05448	105.4304512	103.8393028	102.2801043	100.7519587	99.25400202	97.78540239	96.34535816	94.93309664
230801A00028	8/1/2023	5.14	8/1/2025	102.77364	102.1787356	101.5907317	101.0095075	100.4349462	99.86693347	99.30535787	98.75011031	98.20108418
230802A00017	8/2/2023	4.79	8/3/2026	107.00633	105.3826976	103.7919429	102.2331313	100.7053656	99.20778244	97.73954989	96.29986652	94.8879598
230802A00022	9/8/2023	4.41	9/8/2028	114.56326	110.7205374	107.0302997	103.4856037	100.0798687	96.80685232	93.66063104	90.63558152	87.72636357
230802A00023	10/16/2023	4.37	10/16/2028	114.80057	110.8481204	107.0562839	103.4176376	99.92514619	96.57213814	93.35228424	90.2595781	87.28831781
230803A00029	8/3/2023	5.24	2/3/2025	100.46079	100.3661455	100.2716809	100.1773989	100.0832991	99.98938085	99.89564366	99.80208698	99.70871027
230804A00030	8/4/2023	4.88	8/4/2027	106.16356	104.7554147	103.3796975	102.0353926	100.7215233	99.43715155	98.18137564	96.95332883	95.75217756
230807A00010	8/7/2023	4.4	8/7/2028	114.19837	110.4503006	106.8482352	103.3856506	100.0563584	96.8544814	93.77443624	90.81091666	87.95887809
230807A00018	8/7/2023	4.65	8/7/2026	106.82877	105.1957971	103.5960198	102.028496	100.4923152	98.98660079	97.51050871	96.06322591	94.64396888
230807A00023	8/7/2023	5.26	2/7/2025	100.5087	100.4030146	100.2975615	100.1923395	100.0873476	99.98258514	99.87805133	99.77374538	99.66966654
230807A00024	8/7/2023	5.03	8/7/2025	102.78443	102.1729551	101.5687771	100.9717667	100.3817968	99.79874301	99.222484	98.65290124	98.08987896
230807A00025	8/7/2023	4.69	8/7/2026	106.89342	105.2599028	103.6595937	102.0915476	100.5548535	99.04863461	97.57204675	96.12427661	94.70454043
230807A00033	8/7/2023	4.57	8/7/2026	106.8314	105.1961566	103.5941959	102.0245669	100.486356	98.97868366	97.50070331	96.05159926	94.63058557
230807A00087	11/7/2023	4.75	11/7/2025	103.71605	102.8470147	101.9925951	101.152422	100.3261406	99.51340777	98.71389171	97.92727135	97.15323596
230807A00093	2/7/2024	4.49	2/6/2026	104.50798	103.3846228	102.2855075	101.2098517	100.156909	99.12596439	98.11633254	97.12735647	96.15840591
230808A00008	8/8/2023	4.67	4/24/2026	105.61849	104.2804128	102.9676199	101.6794187	100.4151434	99.17415255	97.95582762	96.75957211	95.58481048
230808A00010	8/8/2023	4.95	8/8/2025	102.74825	102.1341368	101.527392	100.927879	100.3354686	99.75003507	99.17145529	98.59960918	98.03437943
230808A00014	8/8/2023	4.6	8/7/2026	106.74797	105.1156648	103.5165523	101.9496816	100.4141424	98.90905852	97.43358615	95.98691254	94.56825445
230808A00029	8/8/2023	4.6	8/7/2026	106.74797	105.1156648	103.5165523	101.9496816	100.4141424	98.90905852	97.43358615	95.98691254	94.56825445
230808A00054	8/8/2023	4.19	8/8/2028	113.75219	110.0015856	106.397438	102.933191	99.60262526	96.39983497	93.31920993	90.35541901	87.50339449
230808A00057	8/8/2023	4.19	8/8/2028	113.75219	110.0015856	106.397438	102.933191	99.60262526	96.39983497	93.31920993	90.35541901	87.50339449
230808A00060	8/8/2023	4.19	8/8/2028	113.75219	110.0015856	106.397438	102.933191	99.60262526	96.39983497	93.31920993	90.35541901	87.50339449
230809A00020	8/9/2023	4.51	11/9/2026	107.68066	105.7819623	103.9263957	102.1127311	100.3397776	98.60638595	96.91144646	95.25388767	93.63267462
230809A00026	8/9/2023	4.59	8/7/2026	106.7318	105.0996384	103.5006588	101.9339187	100.3985079	98.89355007	97.41820164	95.97164987	94.55311157
230809A00034	8/9/2023	4.59	8/10/2026	106.76668	105.1261034	103.5189826	101.9443599	100.401314	98.88895828	97.40643932	95.95293501	94.52765331
230810A00001	8/10/2023	4.22	8/10/2028	113.881	110.1225948	106.511096	103.039922	99.70282775	96.49388352	93.40745671	90.43819528	87.58101195
230810A00010	8/10/2023	4.62	8/10/2026	106.81541	105.174427	103.5669035	101.9918851	100.4484504	98.93571275	97.45281836	95.99894501	94.57330048
230810A00013	8/10/2023	4.34	8/10/2028	114.01109	110.2582416	106.6518649	103.1854112	99.8526608	96.64770757	93.56494112	90.59903012	87.74490671

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230810A00024	8/10/2023	4.34	8/7/2028	113.981	110.2368669	106.6386222	103.1797489	99.85406264	96.65569011	93.57905156	90.61884426	87.770027
230810A00025	8/10/2023	4.37	5/8/2028	113.16707	109.6866163	106.3338179	103.1033155	99.99000745	96.98903197	94.09575441	91.30575555	88.61482039
230810A00026	8/10/2023	4.4	1/10/2028	112.0247	108.8940816	105.8692119	102.9459148	100.1202054	97.38827889	94.74650158	92.19140193	89.71966235
230810A00046	8/10/2023	4.88	11/18/2025	103.96576	103.0652235	102.1803494	101.3107336	100.4559832	99.61571863	98.78957306	97.97719211	97.17823312
230810A00053	8/10/2023	4.82	1/20/2026	104.67532	103.5976292	102.5422334	101.5084455	100.4956056	99.50308021	98.53026146	97.57656539	96.64143096
230810A00057	8/10/2023	4.62	8/10/2026	106.81541	105.174427	103.5669035	101.9918851	100.4484504	98.93571275	97.45281836	95.99894501	94.57330048
230811A00017	8/11/2023	4.78	8/11/2026	107.08748	105.4414886	103.8290941	102.2493294	100.7012684	99.1840198	97.69672562	96.23855961	94.80872568
230811A00018	8/11/2023	5.1	8/11/2025	102.87824	102.2554045	101.6401413	101.0323101	100.4317763	99.83840869	99.25207932	98.67266315	98.10003812
230814A00028	8/14/2023	4.86	8/14/2026	107.25476	105.5992219	103.9775685	102.3888249	100.8320536	99.30635216	97.8108523	96.3447178	94.90714319
230814A00029	8/14/2023	4.71	2/12/2027	109.18077	107.0040117	104.8820998	102.813275	100.7958453	98.82818593	96.90873609	95.03599607	93.2085242
230815A00031	8/15/2023	5.14	8/13/2025	102.92884	102.3003104	101.6794875	101.0662296	100.4603986	99.86185985	99.27048197	98.68613662	98.10869856
230815A00037	8/15/2023	4.53	8/15/2028	114.75372	110.9737224	107.3415464	103.8505676	100.4944943	97.26735286	94.16346976	91.17745445	88.30418356
230815A00038	8/15/2023	4.57	8/16/2027	111.16975	108.4512373	105.8142005	103.2556841	100.7728609	98.36302547	96.02358791	93.75206793	91.54608944
230815A00084	8/15/2023	5.14	8/15/2025	102.9547	102.3205591	101.6942598	101.0756585	100.4646135	99.8609867	99.26464314	98.67545125	98.09328259
230816A00025	8/16/2023	4.62	4/16/2027	109.91041	107.5441961	105.2414156	102.9999585	100.8178046	98.69301483	96.62372757	94.60815454	92.64457753
230817A00036	8/17/2023	4.91	8/17/2026	107.37405	105.7093565	104.0788311	102.4814902	100.9163847	99.38260128	97.87926137	96.40551897	94.96055934
230817A00054	5/17/2024	4.5	5/15/2026	105.63516	104.2409375	102.8719458	101.5275539	100.2071544	98.91015966	97.63600067	96.38412657	95.15400379
230818A00005	8/18/2023	5.01	8/18/2025	102.96171	102.3186089	101.6835738	101.0564527	100.4370982	99.82536615	99.22111609	98.62421101	98.03451722
230818A00007	8/18/2023	4.73	8/18/2026	107.2248	105.5563502	103.9222252	102.3214292	100.7530067	99.21603872	97.70964101	96.23296234	94.78518297
230818A00024	8/18/2023	4.81	8/18/2026	107.22191	105.55579	103.923911	102.3252799	100.7589444	99.2239885	97.71953074	96.2447226	94.79874687
230818A00025	8/18/2023	4.68	8/18/2027	111.26293	108.5424651	105.9035501	103.3432259	100.8586615	98.44714775	96.10609125	93.8330085	91.62552041
230818A00064	8/18/2023	5.09	8/18/2025	102.9616	102.3191452	101.6847408	101.0582341	100.4394779	99.82832866	99.22464639	98.62829448	98.03913967
230818A00065	8/18/2023	4.82	8/18/2026	107.23837	105.5721149	103.9400981	102.3413317	100.7748632	99.23977665	97.73519049	96.26025615	94.81415635
230821A00004	8/21/2023	5.38	2/21/2025	100.71289	100.5681954	100.4239226	100.2800727	100.1366438	99.9936341	99.85104174	99.70886486	99.56710163
230821A00006	8/21/2023	4.66	8/21/2028	115.29293	111.4866494	107.829638	104.3151835	100.9369136	97.68877927	94.56503665	91.56022934	88.66917236
230821A00035	8/21/2023	5.36	2/21/2025	100.71001	100.5653111	100.4210414	100.2771946	100.1337689	99.99076231	99.84817307	99.7059993	99.56423918
230821A00074	8/21/2023	5.18	8/21/2025	103.05813	102.4070352	101.7642029	101.1294722	100.5026903	99.88370811	99.27238048	98.66856567	98.07212548
230821A00085	8/21/2023	5.04	2/23/2026	105.32859	104.1536923	103.0051537	101.8820906	100.7836605	99.70905761	98.65751124	97.6282835	96.62066775
230821A00087	8/21/2023	5.37	3/3/2025	100.84809	100.6754953	100.5034997	100.3320956	100.1612799	99.99104954	99.82140157	99.65233295	99.4838407
230823A00036	8/23/2023	4.87	8/24/2026	107.39507	105.7111655	104.0620728	102.4467725	100.8642893	99.31368551	97.79405913	96.30454207	94.84429864
230823A00066	8/23/2023	4.68	8/23/2027	111.31904	108.5841617	105.9315598	103.3582404	100.8613361	98.43810387	96.08591824	93.80226554	91.58473826
230824A00008	8/24/2023	4.69	8/24/2028	112.96464	109.7717126	106.6985631	103.7398742	100.8905986	98.14594606	95.50136825	92.95254472	90.49537002
230824A00019	2/20/2024	4.6	2/19/2027	109.03222	106.8360536	104.6955995	102.6090543	100.5746863	98.59083359	96.65590015	94.768353	92.92671906

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230824A00031	8/24/2023	4.49	8/24/2028	115.01231	111.1948674	107.5276364	104.0038425	100.6170544	97.36116853	94.23038997	91.21921478	88.32241362
230824A00043	8/24/2023	4.89	8/24/2026	107.42833	105.7441407	104.094767	102.4791907	100.8964364	99.34556619	97.82567803	96.33590368	94.87540733
230824A00061	8/24/2023	4.61	8/24/2028	115.14217	111.3304152	107.668433	104.1494749	100.7671358	97.5153367	94.38830543	91.3805595	88.4868896
230825A00005	8/25/2023	5.14	11/21/2025	104.23751	103.327364	102.4331881	101.5545619	100.6910814	99.84235668	99.00801106	98.18768057	97.38101346
230825A00009	8/25/2023	4.91	8/25/2026	107.47409	105.7867924	104.1344032	102.5159053	100.9303193	99.37670376	97.8541529	96.36179524	94.89879179
230825A00010	8/25/2023	4.62	8/25/2028	115.18965	111.374282	107.7089055	104.1867591	100.8014253	97.54681299	94.41713894	91.40691031	88.51090812
230825A00019	8/25/2023	5.41	2/25/2025	100.77227	100.616397	100.4610118	100.3061099	100.151689	99.99774702	99.84428163	99.69129064	99.53877187
230825A00037	8/25/2023	4.91	8/25/2026	107.47409	105.7867924	104.1344032	102.5159053	100.9303193	99.37670376	97.8541529	96.36179524	94.89879179
230825A00043	8/25/2023	4.89	8/25/2026	107.44078	105.753763	104.1016557	102.4834347	100.8981207	99.3447724	97.82248416	96.33038462	94.86763489
230825A00044	8/25/2023	5.2	8/25/2025	103.12342	102.4610338	101.807181	101.1617018	100.5244358	99.89522677	99.27392224	98.66037369	98.05443628
230825A00062	8/25/2023	5.21	8/25/2025	103.13	102.4675822	101.8137054	101.1682025	100.5309131	99.9016807	99.28035309	98.66678167	98.06082158
230828A00036	8/28/2023	4.8	8/28/2026	107.46444	105.7667021	104.1042324	102.4759976	100.881004	99.31829613	97.7869555	96.28609825	94.81487374
230828A00047	8/28/2023	4.92	8/28/2026	107.52834	105.8324128	104.1716753	102.5450991	100.9516935	99.39050593	97.86062054	96.36115604	94.89126419
230828A00055	8/28/2023	5.24	8/28/2025	103.18933	102.518388	101.8562014	101.2025947	100.5574017	99.9204604	99.29161311	98.67070602	98.05758922
230828A00056	8/28/2023	4.92	8/28/2026	107.52834	105.8324128	104.1716753	102.5450991	100.9516935	99.39050593	97.86062054	96.36115604	94.89126419
230829A00006	8/29/2023	5.21	8/29/2025	103.18248	102.508798	101.8439386	101.1877272	100.5399956	99.90058006	99.26932098	98.64606283	98.03065402
230830A00028	8/30/2023	4.45	8/30/2027	111.00349	108.2488837	105.5777116	102.9869093	100.4735505	98.03483679	95.6680906	93.3707493	91.14035924
230830A00029	8/30/2023	4.45	8/30/2027	111.00349	108.2488837	105.5777116	102.9869093	100.4735505	98.03483679	95.6680906	93.3707493	91.14035924
230830A00034	8/30/2023	4.44	8/30/2028	114.5802	110.7623173	107.09508	103.5716678	100.1856154	96.93078771	93.80136063	90.79180356	87.89686256
230830A00051	8/30/2023	4.45	8/30/2027	111.00349	108.2488837	105.5777116	102.9869093	100.4735505	98.03483679	95.6680906	93.3707493	91.14035924
230830A00055	8/30/2023	4.47	8/30/2028	114.03655	110.3864805	106.8802275	103.5112205	100.2732331	97.16036204	94.1670085	91.28785985	88.51787325
230830A00101	8/30/2023	5.06	8/31/2026	104.07862	103.1867806	102.3109934	101.4508103	100.6058033	99.77556098	98.95968688	98.15779924	97.36953013
230831A00001	8/31/2023	4.77	8/31/2026	107.31358	105.611351	103.9445582	102.312157	100.7131463	99.14656372	97.61148408	96.10701729	94.63230682
230831A00006	8/31/2023	4.61	8/31/2027	111.22073	108.4653059	105.7932801	103.2015937	100.6873228	98.24767087	95.87996237	93.58163651	91.35024141
230831A00007	8/31/2023	4.48	8/31/2028	114.73802	110.9144999	107.2418987	103.7133868	100.3224837	97.06304043	93.92921981	90.91547895	88.0165524
230831A00016	8/31/2023	4.65	8/31/2026	107.2492	105.5451544	103.8766224	102.2425562	100.6419515	99.07384328	97.53730348	96.03143951	94.55539235
230831A00041	8/31/2023	4.48	8/31/2028	114.73802	110.9144999	107.2418987	103.7133868	100.3224837	97.06304043	93.92921981	90.91547895	88.0165524
230831A00066	8/31/2023	4.77	8/31/2026	107.31358	105.611351	103.9445582	102.312157	100.7131463	99.14656372	97.61148408	96.10701729	94.63230682
230831A00069	8/31/2023	4.61	8/31/2027	111.22073	108.4653059	105.7932801	103.2015937	100.6873228	98.24767087	95.87996237	93.58163651	91.35024141
230831A00070	8/31/2023	4.48	8/31/2028	114.73802	110.9144999	107.2418987	103.7133868	100.3224837	97.06304043	93.92921981	90.91547895	88.0165524
230831A00079	8/30/2024	4.28	8/29/2031	123.47743	116.4256588	109.8385917	103.6829146	97.92787557	92.54507714	87.50828412	82.79324752	78.3775441
230901A00007	9/1/2023	4.55	9/1/2027	111.0706	108.3144151	105.6417338	103.049492	100.5347591	98.09473242	95.72673085	93.42818819	91.19664756
230901A00016	9/1/2023	4.6	8/3/2026	106.83239	105.2079851	103.6165113	102.0570323	100.5286488	99.03049502	97.56173718	96.12157192	94.70922491

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230901A00029	9/1/2023	5.04	3/3/2025	100.80529	100.6326121	100.4605286	100.2890385	100.1181386	99.94782598	99.77809751	99.60895019	99.44038099
230901A00037	9/1/2023	4.3	9/1/2028	114.3956	110.5674519	106.8907648	103.3586668	99.96464229	96.70250912	93.56639958	90.55074222	87.65024503
230901A00044	9/1/2023	4.55	9/1/2027	111.0706	108.3144151	105.6417338	103.049492	100.5347591	98.09473242	95.72673085	93.42818819	91.19664756
230905A00030	9/5/2023	4.55	9/5/2028	115.05025	111.2069339	107.5157455	103.9697734	100.5624663	97.28760917	94.13930344	91.11194889	88.20022658
230905A00033	9/5/2023	4.71	9/4/2026	107.40015	105.6835919	104.002978	102.357242	100.7453617	99.16635514	97.61927838	96.10322367	94.6173177
230905A00037	9/5/2023	5.16	3/5/2025	100.85261	100.6743326	100.4966956	100.3196937	100.1433236	99.96758177	99.7924648	99.61796934	99.44409203
230905A00038	9/5/2023	5.16	3/5/2025	100.85261	100.6743326	100.4966956	100.3196937	100.1433236	99.96758177	99.7924648	99.61796934	99.44409203
230906A00020	9/6/2023	5.19	9/8/2025	103.30026	102.5985421	101.9063981	101.2236279	100.5500416	99.88545445	99.22968654	98.58256282	97.94391282
230907A00012	9/7/2023	5.17	9/8/2025	103.28633	102.5846756	101.8925849	101.2098675	100.5363335	99.87179806	99.21608145	98.56900855	97.93040889
230907A00047	9/7/2023	5.08	9/5/2025	103.18523	102.4922275	101.8085642	101.1340501	100.4685023	99.81174246	99.1635971	98.52389724	97.89247832
230907A00050	9/7/2023	5.05	9/5/2025	103.21976	102.5259136	101.8414278	101.1661115	100.4997809	99.84225719	99.19336637	98.5529389	97.92080966
230907A00051	9/7/2023	4.79	9/8/2026	107.58653	105.8571332	104.1641137	102.5063924	100.8829291	99.29272456	97.73481856	96.20828802	94.71224506
230908A00009	9/8/2023	4.55	9/8/2028	114.7127	110.9524103	107.3419762	103.8745274	100.5435502	97.3428682	94.26662205	91.30925148	88.4654779
230908A00010	9/8/2023	4.73	9/9/2030	112.90255	109.7035323	106.6393502	103.7030983	100.8882756	98.18876037	95.59878573	93.11291626	90.72602686
230911A00001	9/11/2023	4.49	9/11/2028	115.20687	111.3355445	107.6182028	104.0478173	100.6177255	97.32160874	94.15347192	91.10762476	88.17866431
230911A00010	9/11/2023	4.9	9/11/2026	107.67276	105.9366321	104.2371138	102.5731152	100.943586	99.34751753	97.78394069	96.25192391	94.75057134
230911A00014	9/11/2023	4.61	9/11/2028	115.33819	111.4726731	107.76069	104.1952372	100.7696797	97.47772416	94.31339935	91.27103721	88.34525558
230911A00026	9/11/2023	5.08	9/11/2025	103.26215	102.5523161	101.8522736	101.1618252	100.4807741	99.80892897	99.14610369	98.49211708	97.84679278
230911A00030	9/11/2023	5.09	9/11/2025	103.2692	102.5593319	101.8592621	101.1687867	100.4877089	99.81583732	99.15298584	98.49897326	97.85362325
230912A00026	9/12/2023	4.84	9/14/2026	107.60781	105.8638579	104.1568152	102.4855778	100.8490825	99.24630859	97.67627539	96.1380405	94.63069783
230912A00036	9/12/2023	4.57	9/12/2028	115.20031	111.3345496	107.6224466	104.0569959	100.6315519	97.33981174	94.17579532	91.13382641	88.20851534
230912A00053	9/12/2023	4.74	9/7/2027	111.65121	108.8702916	106.1739885	103.5591824	101.0228891	98.56225527	96.17455195	93.85716816	91.60760475
230913A00013	9/13/2023	4.87	9/14/2026	107.65944	105.9150286	104.2075357	102.5358561	100.8989266	99.29572614	97.72527384	96.18662714	94.67887973
230913A00014	9/13/2023	5.34	3/13/2025	100.97904	100.778597	100.5789686	100.3801458	100.1821238	99.98489762	99.7884624	99.5928133	99.39794556
230913A00020	9/13/2023	5.37	3/17/2025	101.0398	100.8281925	100.6174849	100.407673	100.1987511	99.99071332	99.7835541	99.57726778	99.37184876
230913A00030	9/13/2023	5.16	9/15/2025	103.37066	102.6493613	101.9381658	101.2368662	100.5452563	99.86313597	99.19031034	98.52658993	97.87179037
230913A00031	9/13/2023	4.91	9/15/2026	107.74108	105.9931375	104.2822345	102.6072568	100.967136	99.36084685	97.7874041	96.24586117	94.73530794
230913A00032	9/13/2023	4.74	9/15/2027	111.74399	108.9393146	106.2205353	103.5844638	101.0280496	98.54837749	96.14266043	93.80823279	91.54254408
230913A00046	9/13/2023	4.91	9/14/2026	107.72828	105.9832563	104.275163	102.6028939	100.9653854	99.36161619	97.79060512	96.25140932	94.74312227
230913A00049	9/13/2023	4.74	9/13/2027	111.7208	108.9220642	106.2089062	103.5781523	101.0267687	98.55185571	96.15064093	93.82047243	91.5588126
230913A00050	9/13/2023	4.6	9/13/2028	115.32289	111.4520309	107.7351135	104.1651075	100.7353518	97.43952917	94.27164579	91.22601287	88.2972289
230914A00027	9/14/2023	4.76	1/8/2027	108.86288	106.78815	104.7641349	102.7892699	100.8620472	98.98101622	97.14478088	95.35199717	93.60137077
230914A00031	9/14/2023	5.08	9/15/2025	103.31343	102.5923561	101.8813849	101.1803074	100.4889176	99.80701505	99.13440516	98.47089842	97.8163105

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230914A00050	9/14/2023	4.67	9/14/2027	111.54163	108.7425478	106.0291417	103.3982318	100.8467779	98.37187438	95.97074326	93.64072741	91.37928438
230914A00051	9/14/2023	4.84	9/14/2026	107.60781	105.8638579	104.1568152	102.4855778	100.8490825	99.24630859	97.67627539	96.1380405	94.63069783
230914A00059	7/26/2024	4.39	7/24/2026	106.25389	104.6635733	103.105163	101.5777646	100.0805195	98.61260041	97.17321025	95.76158034	94.37696936
230914A00060	9/14/2023	5.28	3/14/2025	100.98049	100.7772749	100.5748963	100.3733457	100.1726179	99.97270767	99.77361003	99.57531995	99.37783244
230914A00069	7/26/2024	4.34	7/26/2027	110.12464	107.4818815	104.9171101	102.427547	100.0105319	97.66351622	95.38405811	93.16981681	91.01854788
230914A00070	7/26/2024	4.3	7/26/2028	113.71702	110.0103219	106.4470949	103.0209796	99.72593365	96.55621621	93.50637118	90.57121123	87.74580294
230914A00125	9/16/2024	4.46	9/16/2031	124.8196	117.6744077	111.0023369	104.7692824	98.9437783	93.49678277	88.40147816	83.63308912	79.16871632
230915A00026	9/15/2023	4.57	9/15/2028	115.23289	111.3580848	107.6375829	104.0643345	100.6316539	97.3332012	94.16296146	91.11522631	88.18457611
230915A00028	9/15/2023	4.57	9/15/2028	115.23289	111.3580848	107.6375829	104.0643345	100.6316539	97.3332012	94.16296146	91.11522631	88.18457611
230915A00030	9/15/2023	4.7	9/8/2027	111.55446	108.7720539	106.0743896	103.4583397	100.9209126	98.45924839	96.07061184	93.7523861	91.50206654
230915A00054	9/15/2023	4.88	9/15/2026	107.68937	105.9418855	104.2314342	102.5568999	100.9172147	99.31135341	97.73833103	96.19720117	94.6870539
230915A00055	9/15/2023	4.7	9/15/2027	111.63488	108.831698	106.1143858	103.4797472	100.9247328	98.4464285	96.0420482	93.70892722	91.444516
230915A00057	9/15/2023	4.75	6/15/2027	110.71325	108.1756055	105.7102241	103.3146277	100.9864415	98.72338635	96.52327392	94.38400281	92.30355437
230918A00008	9/18/2023	4.91	9/18/2026	107.77947	106.0227763	104.3034417	102.620336	100.9723777	99.35852868	97.77779174	96.22920897	94.71185951
230918A00010	9/18/2023	4.72	9/18/2029	119.76798	114.7735852	110.0229542	105.5027909	101.2006003	97.10463702	93.2038555	89.48786428	85.94688334
230918A00011	9/18/2023	4.91	9/18/2026	107.77947	106.0227763	104.3034417	102.620336	100.9723777	99.35852868	97.77779174	96.22920897	94.71185951
230918A00013	9/18/2023	4.74	9/18/2030	123.43719	117.3329147	111.5799231	106.1559631	101.040319	96.21369347	91.65810235	87.35677819	83.29408112
230918A00018	9/18/2023	5.01	3/18/2026	105.57466	104.3351521	103.1249291	101.9429576	100.7882546	99.65988207	98.55694462	97.47858719	96.42399267
230918A00023	9/18/2023	4.91	9/18/2026	107.77947	106.0227763	104.3034417	102.620336	100.9723777	99.35852868	97.77779174	96.22920897	94.71185951
230918A00027	9/18/2023	5.11	9/30/2025	103.52838	102.7649821	102.0128696	101.2717967	100.5415216	99.82180913	99.11243126	98.41316628	97.72379886
230918A00030	9/18/2023	5.01	9/17/2027	106.54046	105.0854131	103.6645863	102.2768915	100.9212813	99.59675042	98.30233314	97.03710164	95.80016413
230919A00010	9/19/2023	4.76	9/20/2027	111.8568	109.0365002	106.3029207	103.652828	101.0831295	98.59087033	96.17322622	93.82749658	91.55109807
230919A00029	9/19/2023	4.63	9/19/2028	115.50073	111.6096692	107.8738996	104.2863065	100.8401463	97.52902467	94.34687639	91.28794604	88.34677011
230919A00043	9/19/2023	4.62	9/19/2028	115.46333	111.5729665	107.8378743	104.2509388	100.8054171	97.49491548	94.31336951	91.25502438	88.31441721
230919A00044	9/19/2023	4.93	9/21/2026	107.85266	106.086901	104.3588238	102.6672865	101.0111937	99.38949424	97.80117892	96.24527821	94.72086035
230919A00047	9/19/2023	4.98	8/19/2026	107.51451	105.8431848	104.2062283	102.6026494	101.0314907	99.4918318	97.9827867	96.50350272	95.05315865
230919A00055	9/19/2023	4.65	9/19/2028	115.57553	111.6830747	107.9459501	104.3570419	100.9096048	97.59724304	94.41389014	91.35378935	88.41147591
230919A00082	9/19/2023	5.17	9/19/2025	103.43009	102.6975005	101.9753336	101.2633649	100.5613789	99.86916638	99.18652373	98.51325306	97.8491619
230920A00002	9/20/2023	4.47	10/2/2028	115.35913	111.4258038	107.6509811	104.0273354	100.5479281	97.2061831	93.9958653	90.91106051	87.94615681
230920A00025	9/20/2023	5.14	9/16/2025	103.36934	102.6452824	101.9314085	101.2275051	100.533364	99.84878252	99.17356376	98.50751614	97.85045328
230920A00026	9/20/2023	4.9	9/16/2026	107.73661	105.9859068	104.2723448	102.5948063	100.9522188	99.3435527	97.76781898	96.22406728	94.71138399
230921A00021	9/21/2023	4.62	9/21/2028	115.80343	111.8927094	108.1384055	104.5333352	101.0706916	97.74402131	94.54720409	91.47443287	88.52019584
230921A00028	9/21/2023	5.07	9/21/2026	108.0963	106.3283528	104.5981285	102.904483	101.2463197	99.62258657	98.03227335	96.47440954	94.94806246

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230921A00032	5/31/2024	5.03	5/30/2025	101.95238	101.5183365	101.0878676	100.6609305	100.2374818	99.81747907	99.40088033	98.98764445	98.57773088
230921A00033	6/7/2024	5.01	6/6/2025	102.03056	101.5765105	101.1263802	100.6801215	100.2376845	99.7990202	99.36408055	98.93281819	98.50518659
230921A00034	6/14/2024	4.98	6/13/2025	102.10332	101.6293275	101.1596121	100.6941194	100.2327924	99.77557525	99.32241317	98.87325229	98.42803967
230921A00035	6/21/2024	4.96	6/20/2025	102.17976	101.6857911	101.1964699	100.7117297	100.2315064	99.75573687	99.28435941	98.81731332	98.35453905
230921A00036	6/28/2024	4.94	6/27/2025	102.25543	101.7415092	101.2326046	100.7286464	100.2295629	99.73528365	99.24573961	98.76086304	98.28058747
230922A00020	9/22/2023	5.35	3/24/2025	101.13103	100.8998649	100.6697701	100.4407343	100.2127504	99.98581096	99.75990886	99.53503694	99.31118812
230922A00022	9/22/2023	4.99	9/22/2026	107.97009	106.2004726	104.4686586	102.7735033	101.1139063	99.48881178	97.89720602	96.33811527	94.81060376
230922A00025	9/22/2023	5.18	9/22/2025	103.47663	102.7355684	102.0051595	101.2851772	100.575399	99.87560873	99.18559614	98.50515693	97.83409247
230925A00003	9/25/2023	4.99	9/25/2026	108.00914	106.2307443	104.4904778	102.7871773	101.1197289	99.48706381	97.88815622	96.32202084	94.78771103
230925A00004	9/25/2023	4.74	9/25/2028	115.98006	112.063103	108.3029688	104.6924443	101.2246964	97.8932476	94.69195501	91.61499084	88.65682406
230925A00056	9/25/2023	5.19	9/25/2025	103.52334	102.7737923	102.0351357	101.3071358	100.5895626	99.88219296	99.18481	98.49720293	97.81916689
230925A00057	9/25/2023	5.19	9/30/2025	103.58894	102.8252825	102.0729197	101.3315993	100.6010791	99.88112414	99.17150622	98.47200364	97.78240099
230925A00080	9/25/2023	5.07	9/30/2025	103.55899	102.7946567	102.0416379	101.2996826	100.5685483	99.84799899	99.13780596	98.43774682	97.74760556
230925A00114	9/25/2023	5.09	3/25/2026	105.75971	104.4997838	103.2700629	102.0694705	100.8969784	99.75160606	98.63241838	97.53852269	96.4690666
230925A00121	9/25/2023	5.2	9/25/2025	103.53077	102.7811926	102.0425059	101.3144761	100.5968733	99.88947445	99.19206252	98.50442678	97.82636235
230926A00010	9/26/2023	4.74	9/26/2028	115.99138	112.0713838	108.3084296	104.6952882	101.2251127	97.89141312	94.68803475	91.60913891	88.64918442
230926A00020	9/26/2023	5.2	9/26/2025	103.54392	102.79152	102.0500928	101.3193993	100.5992073	99.88929125	99.18943196	98.49941649	97.8190379
230926A00021	9/26/2023	4.73	9/26/2028	115.95379	112.0344973	108.2722273	104.65975	101.1902192	97.85714564	94.65437531	91.57607019	88.61668973
230926A00048	9/26/2023	5.2	9/26/2025	103.54392	102.79152	102.0500928	101.3193993	100.5992073	99.88929125	99.18943196	98.49941649	97.8190379
230926A00076	9/26/2023	4.73	9/26/2028	115.95379	112.0344973	108.2722273	104.65975	101.1902192	97.85714564	94.65437531	91.57607019	88.61668973
230927A00020	9/27/2023	5.01	10/16/2026	108.3123	106.4735497	104.6752784	102.9162949	101.1954561	99.51166163	97.86385204	96.25100694	94.67214317
230927A00021	9/27/2023	4.96	1/29/2027	109.53013	107.3911144	105.3052789	103.2709447	101.286496	99.35037993	97.46110355	95.61723128	93.81738208
230927A00031	9/27/2023	5.4	3/28/2025	101.19763	100.9552613	100.7140539	100.4740024	100.2350987	99.99733447	99.76070158	99.52519198	99.29079766
230927A00032	9/27/2023	5.02	9/23/2026	108.03548	106.2624662	104.5273722	102.8290476	101.1663872	99.53833069	97.94386012	96.38199768	94.85180379
230927A00033	9/27/2023	4.78	9/25/2028	116.13032	112.2105441	108.4476767	104.8344997	101.3641766	98.03022716	94.8265057	91.74718179	88.7867219
230927A00034	9/27/2023	4.82	9/27/2028	116.30365	112.3749656	108.6037095	104.9826308	101.5048631	98.16389782	94.95356299	91.86800369	88.90166353
230928A00001	9/28/2023	4.91	9/28/2026	108.0519	106.2621455	104.510938	102.7970983	101.1194952	99.47704331	97.86870116	96.29346871	94.75038535
230928A00014	9/28/2023	4.9	9/28/2027	112.3369	109.4873722	106.7259999	104.0494657	101.4546055	98.93839743	96.49795437	94.13051653	91.83344488
230928A00016	9/28/2023	4.83	9/28/2028	116.35283	112.4203935	108.6456227	105.0212533	101.5404044	98.19655388	94.98351741	91.89542843	88.92671971
230928A00017	9/28/2023	4.83	9/28/2028	116.35283	112.4203935	108.6456227	105.0212533	101.5404044	98.19655388	94.98351741	91.89542843	88.92671971
230928A00033	9/28/2023	5.03	9/28/2026	108.11857	106.330753	104.581403	102.8693391	101.1934336	99.55260431	97.9458129	96.37206226	94.83039453
230928A00047	9/28/2023	5.21	9/29/2025	103.5909	102.8300066	102.080324	101.3416068	100.6136155	99.8961175	99.18888681	98.49170393	97.80435558
230928A00051	9/28/2023	5.04	9/28/2026	108.35204	106.5155183	104.7198882	102.963987	101.2466918	99.56691897	97.9236225	96.31579264	94.74245421

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
230928A00058	9/28/2023	5.04	9/28/2026	108.35204	106.5155183	104.7198882	102.963987	101.2466918	99.56691897	97.9236225	96.31579264	94.74245421
230928A00059	9/28/2023	4.84	9/28/2028	115.99302	112.1527279	108.4672349	104.9294348	101.5325877	98.27029756	95.13649292	92.12540851	89.23156824
230928A00060	9/28/2023	4.84	9/28/2028	115.99302	112.1527279	108.4672349	104.9294348	101.5325877	98.27029756	95.13649292	92.12540851	89.23156824
230928A00061	9/28/2023	4.84	9/28/2028	115.99302	112.1527279	108.4672349	104.9294348	101.5325877	98.27029756	95.13649292	92.12540851	89.23156824
230928A00064	9/28/2023	4.78	9/30/2027	112.26045	109.4012203	106.6307027	103.9455505	101.3425711	98.81871587	96.37107215	93.99685643	91.69340731
230929A00018	9/29/2023	5.14	9/29/2025	103.53811	102.7774359	102.0279706	101.2894685	100.5616901	99.84440281	99.13738068	98.44040425	97.75326027
230929A00031	9/29/2023	5.14	9/29/2025	103.53811	102.7774359	102.0279706	101.2894685	100.5616901	99.84440281	99.13738068	98.44040425	97.75326027
230929A00033	9/29/2023	4.92	9/29/2026	107.93783	106.1488527	104.3984101	102.6853256	101.0084674	99.36675022	97.75913219	96.18461316	94.64223236
230929A00046	9/29/2023	4.66	9/29/2027	111.91616	109.0645745	106.3014235	103.6233761	101.0272518	98.51001292	96.06875771	93.70071264	91.40322582
230929A00049	9/29/2023	4.87	9/30/2030	112.77086	109.7046632	106.765294	103.9463292	101.2417187	98.64576268	96.15308922	93.75863289	91.45761521
230929A00059	9/29/2023	5.14	9/29/2025	103.53811	102.7774359	102.0279706	101.2894685	100.5616901	99.84440281	99.13738068	98.44040425	97.75326027
230929A00061	9/29/2023	4.92	9/29/2026	107.93783	106.1488527	104.3984101	102.6853256	101.0084674	99.36675022	97.75913219	96.18461316	94.64223236
230929A00062	9/29/2023	4.78	9/29/2027	112.01696	109.1690783	106.4094016	103.734611	101.1415376	98.62715465	96.18857066	93.82302183	91.5278654
231002A00018	10/2/2023	4.87	10/1/2027	112.28944	109.4321976	106.663575	103.9802334	101.378988	98.8567971	96.41075467	94.03808286	91.73612546
231002A00042	10/2/2023	4.73	10/2/2028	116.34226	112.3903968	108.5975831	104.9564787	101.4601249	98.10192628	94.87562951	91.77530286	88.79531771
231003A00005	10/3/2023	4.84	10/3/2028	116.44729	112.4991903	108.7098677	105.0719989	101.5786447	98.2232272	94.99950921	91.90157374	88.92380563
231003A00011	10/3/2023	4.89	10/15/2027	112.50735	109.6087653	106.801143	104.0810823	101.4453318	98.89078261	96.41446051	94.01351949	91.68523515
231003A00036	10/3/2023	4.84	10/3/2028	116.44729	112.4991903	108.7098677	105.0719989	101.5786447	98.2232272	94.99950921	91.90157374	88.92380563
231004A00006	10/4/2023	4.88	10/4/2028	116.60974	112.6558338	108.861008	105.2179263	101.7196362	98.35954717	95.13140944	92.02929408	89.04757438
231004A00016	10/4/2023	5.36	4/4/2025	101.28355	101.0216529	100.7611104	100.5019167	100.2440611	99.98753339	99.73232323	99.47842046	99.22581503
231005A00003	10/5/2023	5.14	10/6/2025	103.63018	102.8498183	102.0812529	101.3242184	100.5784564	99.84371584	99.11975337	98.40633259	97.70322402
231005A00035	10/5/2023	4.98	10/5/2026	108.11953	106.3124925	104.5446831	102.8149107	101.122037	99.46496884	97.84265626	96.25409016	94.69830033
231005A00037	10/5/2023	4.88	10/5/2027	112.36348	109.4942717	106.7143542	104.0203701	101.4091155	98.87752995	96.42268793	94.04179231	91.73216756
231005A00039	10/5/2023	5.16	10/6/2025	103.64565	102.8652231	102.0965925	101.3394937	100.593668	99.85886443	99.13483959	98.42135708	97.71818741
231005A00040	10/5/2023	4.98	10/5/2026	108.11953	106.3124925	104.5446831	102.8149107	101.122037	99.46496884	97.84265626	96.25409016	94.69830033
231005A00054	10/5/2023	4.98	10/5/2026	108.11953	106.3124925	104.5446831	102.8149107	101.122037	99.46496884	97.84265626	96.25409016	94.69830033
231006A00009	10/6/2023	4.98	10/15/2027	112.76028	109.8581072	107.0469878	104.3235129	101.6844286	99.12662351	96.64712088	94.24307237	91.91175133
231006A00010	10/6/2023	4.93	10/16/2028	116.93623	112.9431621	109.111923	105.4350474	101.9054556	98.51643359	95.26161146	92.13494409	89.13069251
231006A00015	10/6/2023	5.38	4/7/2025	101.32989	101.059611	100.7907851	100.5233986	100.2574396	99.99289684	99.72975885	99.46801443	99.20765244
231006A00032	10/6/2023	5.08	10/6/2026	108.31028	106.4987784	104.7266419	102.9926839	101.2957648	99.63479013	98.00870846	96.41650896	94.85721963
231006A00033	10/6/2023	4.98	10/6/2027	112.65361	109.7776007	106.9911333	104.2908505	101.6735412	99.13613726	96.67570577	94.28944228	91.97466398
231010A00007	10/10/2023	4.83	10/12/2027	112.30442	109.416911	106.6198077	103.9097238	101.2834239	98.7378153	96.26994019	93.87696879	91.55619292
231010A00025	10/10/2023	4.66	10/10/2028	116.16527	112.1947482	108.3848885	104.7282692	101.2178553	97.8469771	94.60930865	91.49884812	88.50989895

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
231010A00026	10/10/2023	4.66	10/10/2028	116.16527	112.1947482	108.3848885	104.7282692	101.2178553	97.8469771	94.60930865	91.49884812	88.50989895
231010A00030	10/10/2023	4.88	10/15/2026	108.06479	106.2310651	104.4376643	102.6833983	100.9671255	99.28774733	97.64420619	96.03548376	94.46059902
231010A00031	10/10/2023	5.08	10/10/2025	103.63583	102.8444089	102.0651282	101.2977063	100.5418735	99.79736795	99.06393599	98.34133129	97.62931486
231010A00057	10/10/2023	4.66	10/10/2028	116.16527	112.1947482	108.3848885	104.7282692	101.2178553	97.8469771	94.60930865	91.49884812	88.50989895
231010A00068	10/10/2023	4.83	10/8/2027	112.25866	109.3827289	106.5965376	103.8967184	101.280055	98.74347391	96.28403662	93.89893283	91.58547377
231010A00075	10/10/2023	4.78	10/10/2028	116.29792	112.3334469	108.5291571	104.877659	101.3719464	98.00537693	94.77164991	91.66478717	88.6791143
231010A00076	10/10/2023	4.66	10/10/2028	116.16527	112.1947482	108.3848885	104.7282692	101.2178553	97.8469771	94.60930865	91.49884812	88.50989895
231010A00101	10/10/2023	4.78	10/10/2028	116.29792	112.3334469	108.5291571	104.877659	101.3719464	98.00537693	94.77164991	91.66478717	88.6791143
231010A00129	10/10/2023	4.93	10/13/2026	108.13021	106.3013179	104.5125394	102.7626843	101.0506112	99.37522255	97.73546218	96.13031344	94.55879734
231011A00004	10/11/2023	4.81	10/8/2027	112.20284	109.3276931	106.5422686	103.8431982	101.227266	98.69139916	96.23265964	93.84823767	91.53544497
231011A00016	10/11/2023	4.75	10/11/2028	116.19496	112.229699	108.4247738	104.7727871	101.2667252	97.89993755	94.66611626	91.55927571	88.57373439
231011A00028	10/11/2023	4.92	10/9/2026	108.0625	106.2451139	104.4673853	102.7281254	101.0261948	99.3604985	97.7299837	96.1336379	94.57048683
231011A00029	10/11/2023	4.81	10/8/2027	112.20284	109.3276931	106.5422686	103.8431982	101.227266	98.69139916	96.23265964	93.84823767	91.53544497
231011A00030	10/11/2023	4.75	10/11/2028	116.19496	112.229699	108.4247738	104.7727871	101.2667252	97.89993755	94.66611626	91.55927571	88.57373439
231012A00015	10/12/2023	5.33	4/11/2025	101.37069	101.0892697	100.8094288	100.5311499	100.2544198	99.97922557	99.70555426	99.4333932	99.16272982
231012A00016	10/12/2023	5.14	10/14/2025	103.73562	102.9327311	102.1423268	101.3641159	100.5978172	99.84315787	99.0998737	98.36770827	97.64641282
231012A00027	10/12/2023	4.78	10/16/2028	116.36418	112.3819902	108.5613054	104.8946697	101.3750156	97.99564017	94.75018452	91.63261392	88.63719928
231012A00039	10/12/2023	5.33	4/11/2025	101.37069	101.0892697	100.8094288	100.5311499	100.2544198	99.97922557	99.70555426	99.4333932	99.16272982
231013A00017	10/13/2023	5.13	10/14/2025	103.72766	102.9248091	102.1344391	101.3562621	100.5899969	99.83537078	99.09211944	98.35998649	97.63872319
231013A00020	10/13/2023	4.98	10/13/2026	108.22025	106.3905297	104.600932	102.8502726	101.1374098	99.46124577	97.8207238	96.21482692	94.64257577
231016A00016	10/16/2023	5.01	10/16/2026	108.3123	106.4735497	104.6752784	102.9162949	101.1954561	99.51166163	97.86385204	96.25100694	94.67214317
231016A00047	10/16/2023	4.98	2/10/2027	109.73095	107.5542132	105.4321938	103.3631363	101.3453566	99.37723753	97.45722544	95.58382729	93.75560767
231016A00049	10/16/2023	4.95	7/19/2027	111.61928	108.9761193	106.4104252	103.919457	101.5005889	99.15130458	96.86919229	94.65193934	92.49732757
231017A00008	10/17/2023	5.26	10/17/2025	103.87163	103.0598601	102.2608389	101.4742666	100.6998531	99.93731758	99.18638748	98.44679869	97.71829507
231017A00009	10/17/2023	5.42	4/17/2025	101.47879	101.1805632	100.8840999	100.5893875	100.2964106	100.0051538	99.71560183	99.42773966	99.14155243
231017A00017	10/17/2023	5.11	10/16/2026	108.49322	106.6527854	104.8528609	103.0922547	101.3698227	99.68446378	98.03511768	96.42076329	94.84041668
231017A00029	10/17/2023	4.99	10/17/2028	116.77801	112.8674331	109.1164133	105.5175491	102.0638208	98.74857028	95.56548028	92.50855507	89.57210249
231017A00032	10/17/2023	4.99	10/17/2028	116.77801	112.8674331	109.1164133	105.5175491	102.0638208	98.74857028	95.56548028	92.50855507	89.57210249
231017A00033	10/17/2023	4.99	10/17/2028	116.77801	112.8674331	109.1164133	105.5175491	102.0638208	98.74857028	95.56548028	92.50855507	89.57210249
231017A00034	10/17/2023	4.99	10/17/2028	116.77801	112.8674331	109.1164133	105.5175491	102.0638208	98.74857028	95.56548028	92.50855507	89.57210249
231017A00035	10/17/2023	4.99	10/17/2028	116.77801	112.8674331	109.1164133	105.5175491	102.0638208	98.74857028	95.56548028	92.50855507	89.57210249
231017A00036	10/17/2023	4.99	10/17/2028	116.77801	112.8674331	109.1164133	105.5175491	102.0638208	98.74857028	95.56548028	92.50855507	89.57210249
231017A00037	10/17/2023	4.99	10/17/2028	116.77801	112.8674331	109.1164133	105.5175491	102.0638208	98.74857028	95.56548028	92.50855507	89.57210249

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
231017A00039	10/17/2023	5.12	10/16/2026	108.7392	106.8475206	104.9990041	103.192403	101.426516	99.70018414	98.01228899	96.3617509	94.74752748
231017A00040	10/17/2023	5.12	10/16/2026	108.7392	106.8475206	104.9990041	103.192403	101.426516	99.70018414	98.01228899	96.3617509	94.74752748
231017A00041	10/17/2023	5.12	10/16/2026	108.7392	106.8475206	104.9990041	103.192403	101.426516	99.70018414	98.01228899	96.3617509	94.74752748
231017A00046	10/17/2023	5.26	10/17/2025	103.87163	103.0598601	102.2608389	101.4742666	100.6998531	99.93731758	99.18638748	98.44679869	97.71829507
231018A00026	10/18/2023	5.28	1/7/2026	104.99536	103.9516139	102.9287373	101.9261072	100.9431254	99.97921715	99.03382994	98.10643245	97.19651353
231019A00006	10/19/2023	5.29	10/20/2025	103.93653	103.1161764	102.3088382	101.5142026	100.7319706	99.96185297	99.20356912	98.45684718	97.72142355
231019A00007	10/19/2023	5.19	10/19/2026	108.67746	106.8271202	105.0176608	103.2478866	101.5166512	99.82285076	98.16542162	96.54333878	94.95561404
231019A00009	10/19/2023	5.14	10/19/2027	113.25907	110.3388427	107.5104925	104.7705889	102.1158538	99.54315135	97.04948075	94.63196955	92.28786722
231019A00031	1/22/2024	5.12	1/30/2026	105.12215	104.0143512	102.9300214	101.8684194	100.8288348	99.81058668	98.81302176	97.83551335	96.87745982
231019A00036	10/19/2023	5.27	10/20/2025	103.92028	103.1000031	102.2927362	101.4981711	100.7160089	99.94596024	99.18774462	98.44109019	97.70573333
231019A00041	10/19/2023	5.08	10/19/2028	117.54386	113.5309529	109.6808695	105.9860985	102.4395169	99.03436882	95.76424394	92.62305812	89.6050348
231019A00043	10/19/2023	5.19	10/19/2026	108.67746	106.8271202	105.0176608	103.2478866	101.5166512	99.82285076	98.16542162	96.54333878	94.95561404
231019A00044	10/19/2023	5.14	10/19/2027	113.25907	110.3388427	107.5104925	104.7705889	102.1158538	99.54315135	97.04948075	94.63196955	92.28786722
231020A00041	10/20/2023	5.19	10/20/2025	103.8553	103.0353099	102.2283283	101.4340452	100.652162	99.88238931	99.12444664	98.3780622	97.64297247
231020A00048	10/20/2023	5.08	10/20/2026	108.4904	106.6390837	104.828726	103.0581341	101.3261619	99.63170579	97.97370207	96.35112545	94.7629873
231020A00049	10/20/2023	5.03	10/20/2027	112.96071	110.0419877	107.2151983	104.4769166	101.8238629	99.25289967	96.76102406	94.34536152	92.00315935
231020A00051	10/20/2023	5.02	10/20/2028	117.32624	113.3147257	109.4661235	105.7729187	102.227983	98.82455451	95.55621763	92.41688281	89.40076824
231020A00061	10/20/2023	5.32	4/21/2025	101.50323	101.1938671	100.8864005	100.5808137	100.2770894	99.97521051	99.67516021	99.37692183	99.08047891
231020A00067	10/20/2023	5.32	4/15/2025	101.42203	101.1294418	100.8385598	100.5493649	100.2618426	99.97597815	99.69175718	99.40916545	99.12818887
231020A00069	10/20/2023	5.08	10/15/2026	108.42608	106.5889952	104.7922978	103.0347959	101.315346	99.63284796	97.98624271	96.37451038	94.79666849
231020A00070	10/20/2023	5.19	10/15/2025	103.78872	102.9828383	102.1895295	101.4084994	100.6394639	99.88214761	99.13628339	98.40161229	97.67788312
231023A00028	10/23/2023	5.33	4/23/2025	101.53343	101.2184641	100.9054591	100.5943994	100.2852668	99.97804325	99.67271118	99.36925306	99.06765161
231023A00029	10/23/2023	5.19	10/23/2025	103.89524	103.0667817	102.2515906	101.4493517	100.6597577	99.88251051	99.11732166	98.36391152	97.62200905
231023A00034	4/23/2024	4.95	4/23/2026	105.97605	104.6380972	103.3257075	102.0381686	100.7747963	99.53493187	98.31794054	97.12321052	95.95015197
231023A00048	10/23/2023	5.04	10/25/2027	113.049	110.1152907	107.2743689	104.522785	101.8572344	99.27455426	96.77171638	94.34582071	91.9940891
231024A00017	10/24/2023	4.97	10/25/2027	112.85037	109.9194923	107.0813426	104.3324645	101.6695556	99.08945502	96.58913656	94.16570203	91.81637511
231024A00029	10/24/2023	4.97	10/25/2027	112.85037	109.9194923	107.0813426	104.3324645	101.6695556	99.08945502	96.58913656	94.16570203	91.81637511
231024A00030	10/24/2023	4.96	10/24/2028	117.14289	113.1238422	109.2684729	105.5692212	102.0189214	98.61077564	95.33833289	92.19546949	89.17637058
231024A00039	10/24/2023	5.06	10/26/2026	108.53084	106.6627718	104.8363477	103.0503724	101.3036967	99.5952124	97.92385019	96.28857803	94.68839965
231024A00046	10/24/2023	4.96	10/24/2028	117.14289	113.1238422	109.2684729	105.5692212	102.0189214	98.61077564	95.33833289	92.19546949	89.17637058
231024A00076	10/24/2023	5.31	4/24/2025	101.54066	101.2229084	100.9071489	100.5933674	100.2815456	99.97166481	99.66370709	99.35765447	99.05348926
231024A00079	10/24/2023	5.18	10/24/2025	103.90032	103.069074	102.251182	101.4463268	100.6541979	99.87449454	99.10692546	98.35120841	97.60706987
231024A00082	10/24/2023	5.05	10/23/2026	108.47413	106.6147871	104.7967342	103.0187816	101.2797822	99.57862997	97.91425877	96.28564012	94.69178175

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
231025A00003	10/25/2023	5.07	10/24/2025	103.87597	103.0439375	102.225286	101.4196966	100.6268579	99.84646832	99.07823573	98.32187711	97.57711813
231025A00004	10/25/2023	5.07	10/24/2025	103.87597	103.0439375	102.225286	101.4196966	100.6268579	99.84646832	99.07823573	98.32187711	97.57711813
231025A00013	10/25/2023	5.08	10/26/2026	108.56757	106.69916	104.8723954	103.0860859	101.3390821	99.6302757	97.95859716	96.32301432	94.72253075
231025A00018	10/25/2023	5.19	10/27/2025	103.9485	103.1087309	102.282587	101.4697359	100.6698582	99.88264435	99.10779499	98.34501991	97.59403799
231025A00024	10/25/2023	5	10/25/2028	117.30794	113.2829831	109.42201	105.7174519	102.1621292	98.74923086	95.47229286	92.32517908	89.30206267
231025A00036	10/25/2023	5.08	10/21/2026	108.50326	106.6490987	104.8360077	103.0627968	101.3283197	99.63147194	97.97118883	96.34644399	94.7562475
231025A00068	10/25/2023	5.33	4/25/2025	101.56055	101.2399823	100.9214428	100.6049146	100.2903787	99.9778161	99.6672084	99.3585372	99.05178441
231027A00015	10/27/2023	5.08	2/23/2026	105.37502	104.199834	103.051014	101.9276738	100.8289708	99.75409923	98.70228821	97.67279976	96.66492714
231027A00019	10/27/2023	4.99	10/27/2026	108.41488	106.5451791	104.7172154	102.9297936	101.1817647	99.47202028	97.79949053	96.16314282	94.56198004
231027A00021	10/27/2023	5.13	10/30/2025	103.93804	103.0900176	102.2558825	101.4352946	100.6279253	99.83345663	99.05158086	98.28199986	97.52442489
231027A00028	10/27/2023	4.92	10/23/2028	116.97805	112.96491	109.1151363	105.4211833	101.875899	98.4724989	95.20454492	92.06592576	89.05083857
231027A00035	10/27/2023	4.99	10/30/2026	108.45271	106.5744722	104.7383114	102.9430394	101.1875053	99.47059814	97.79124507	96.14840983	94.54109127
231027A00036	10/27/2023	5.13	11/3/2025	103.99081	103.131512	102.2864707	101.455332	100.6377544	99.83340747	99.04197132	98.26313645	97.49660314
231027A00043	10/27/2023	4.99	10/27/2026	108.41488	106.5451791	104.7172154	102.9297936	101.1817647	99.47202028	97.79949053	96.16314282	94.56198004
231030A00007	10/30/2023	5.32	4/30/2025	101.62502	101.2904366	100.9580588	100.6278601	100.299819	99.97391458	99.650126	99.32843273	99.00881451
231030A00035	10/30/2023	4.85	10/30/2028	117.11738	113.0735085	109.1951672	105.4747057	101.9048636	98.47875235	95.18983386	92.03190106	88.99905934
231030A00061	10/30/2023	5.32	4/30/2025	101.62502	101.2904366	100.9580588	100.6278601	100.299819	99.97391458	99.650126	99.32843273	99.00881451
231031A00021	10/31/2023	5.18	10/30/2025	103.98004	103.1318221	102.2974967	101.4767206	100.6691652	99.87451272	99.09245512	98.32269432	97.56494153
231031A00022	10/31/2023	5.04	10/30/2026	108.5451	106.6659836	104.8289614	103.032844	101.2764801	99.55875824	97.87860518	96.23498427	94.62689396
231031A00033	10/31/2023	5.05	10/30/2026	108.56358	106.6842859	104.8470914	103.0508049	101.2942751	99.57639026	97.8960772	96.25229915	94.64405449
231031A00035	4/30/2024	5.25	4/30/2025	101.6017	101.267173	100.9348433	100.6046924	100.276699	99.95084199	99.62710058	99.30545424	98.98588273
231031A00040	4/30/2024	5.1	10/31/2025	103.9259	103.0751704	102.2384109	101.4152832	100.6054557	99.80860755	99.02442825	98.252617	97.49288253
231101A00016	11/1/2023	4.99	11/3/2025	103.94011	103.0801144	102.2344006	101.4026151	100.5844154	99.77946988	98.98745805	98.20806946	97.44100358
231102A00022	11/2/2023	4.91	11/10/2026	108.44342	106.5345684	104.669117	102.8458181	101.0634724	99.32092212	97.6170499	95.95077665	94.32106018
231102A00024	11/2/2023	4.78	11/2/2028	116.5523	112.5196901	108.6523716	104.9427006	101.3834229	97.96765545	94.68886551	91.54085098	88.51772196
231102A00025	11/2/2023	4.9	12/8/2026	108.77305	106.7832827	104.8404266	102.9430854	101.0899163	99.27962502	97.51096406	95.78273041	94.09376375
231102A00026	11/2/2023	4.9	1/12/2027	109.19728	107.1081644	105.0702742	103.082018	101.1418665	99.24834889	97.40004979	95.59560695	93.83370875
231102A00027	11/2/2023	4.89	2/9/2027	109.52596	107.3544584	105.237504	103.1733466	101.1603094	99.19678162	97.28121597	95.4121253	93.58807984
231102A00028	11/2/2023	4.88	3/9/2027	109.86173	107.6048086	105.4060831	103.2636265	101.1755964	99.14022645	97.1558222	95.22075753	93.33347137
231102A00029	11/2/2023	4.88	4/13/2027	110.28304	107.9247633	105.6294055	103.3948738	101.2191603	99.10033855	97.03655963	95.02604809	93.06709859
231102A00030	11/2/2023	4.87	5/11/2027	110.59589	108.1560744	105.7832534	103.4752191	101.2298459	99.04509035	96.91898743	94.84964726	92.83525161
231102A00031	11/2/2023	5.1	11/3/2025	103.96528	103.1061001	102.2611758	101.4301528	100.6126895	99.80845556	99.01713114	98.23840674	97.47198265
231102A00032	11/2/2023	4.91	11/2/2026	108.34251	106.4570007	104.6139045	102.8120207	101.050189	99.32728894	97.64223854	95.99399259	94.38154117

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
231102A00033	11/2/2023	4.83	11/2/2027	112.54504	109.5964762	106.7418709	103.9777253	101.3006934	98.70757066	96.19528824	93.76090582	91.40160581
231102A00039	11/2/2023	4.91	10/28/2026	108.28011	106.4089588	104.5796332	102.7909396	101.0417292	99.33089318	97.6573615	96.02010094	94.41811368
231102A00064	1/22/2024	5.01	1/22/2026	104.90276	103.8182663	102.7563154	101.7162063	100.6972686	99.69885932	98.72036133	97.76118195	96.82075187
231102A00070	2/15/2024	4.86	2/16/2027	109.55362	107.3607577	105.2233359	103.1395684	101.1077377	99.12619513	97.19335729	95.30770294	93.46777007
231103A00002	11/3/2023	4.67	11/29/2027	112.39085	109.3687208	106.4452097	103.6165611	100.8791827	98.22963855	95.66464119	93.18104458	90.77583701
231103A00005	11/3/2023	5.12	5/5/2025	101.62333	101.2749507	100.9289634	100.5853471	100.2440777	99.90513085	99.568483	99.2341107	98.90199087
231103A00007	11/3/2023	5.05	8/4/2025	102.75853	102.1554068	101.5593856	100.9703369	100.3881386	99.81267157	99.24381934	98.68146818	98.12550693
231103A00008	11/3/2023	4.97	11/3/2025	103.85465	102.9959821	102.1515647	101.3210429	100.5040749	99.70033065	98.90949037	98.13124465	97.3652939
231103A00029	11/3/2023	4.75	11/3/2026	108.05772	106.1721316	104.3290305	102.5272069	100.765497	99.04277717	97.35796238	95.71000448	94.09789081
231103A00034	11/3/2023	4.49	11/3/2028	115.77126	111.7420841	107.8785514	104.1729788	100.6180811	97.20694691	93.9330172	90.79006556	87.77217967
231106A00007	11/6/2023	4.78	11/5/2027	112.43668	109.481266	106.6202877	103.8502225	101.1676982	98.56948621	96.05249467	93.61376171	91.2504494
231106A00020	11/6/2023	5.02	11/6/2025	103.93591	103.0685983	102.2158225	101.3772153	100.5524249	99.74111135	98.94294568	98.15760957	97.38479489
231107A00008	11/7/2023	5.17	5/7/2025	101.66692	101.3129207	100.9613934	100.6123157	100.2656618	99.92140651	99.57952482	99.23999216	98.90278431
231107A00009	11/7/2023	5.03	11/7/2025	103.95743	103.0872646	102.2317268	101.3904486	100.5630749	99.74926242	98.94867909	98.16100359	97.38592498
231107A00011	11/7/2023	4.84	11/9/2026	108.29953	106.3948656	104.5334507	102.714047	100.9354608	99.19653971	97.49617133	95.83328145	94.20683249
231108A00011	11/8/2023	5.06	5/8/2025	101.66953	101.3124397	100.9578675	100.60579	100.2561809	99.90901403	99.56426382	99.22190495	98.88191247
231108A00015	11/8/2023	4.83	11/9/2026	108.28078	106.3762928	104.5150551	102.6958253	100.9174098	99.17865626	97.47845239	95.81572406	94.18943377
231108A00026	11/8/2023	5.04	11/7/2025	103.96605	103.095845	102.2402672	101.3989495	100.5715368	99.7576858	98.95706435	98.16935117	97.3942353
231108A00028	11/8/2023	4.83	11/9/2026	108.28078	106.3762928	104.5150551	102.6958253	100.9174098	99.17865626	97.47845239	95.81572406	94.18943377
231109A00014	5/17/2024	5.03	5/16/2025	101.77786	101.3840735	100.9932506	100.6053543	100.2203517	99.83821048	99.45889864	99.08238475	98.70863782
231109A00025	11/9/2023	4.75	11/9/2028	115.73818	111.8773802	108.1753122	104.6245271	101.2179704	97.94895513	94.81114122	91.79851529	88.90537212
231109A00026	11/9/2023	5.19	5/9/2025	101.70033	101.3407231	100.9836753	100.6291558	100.2771378	99.92759471	99.58050038	99.23582902	98.8935552
231113A00007	11/13/2023	4.86	11/13/2028	116.98751	112.9155063	109.0115344	105.2677657	101.6767776	98.23153012	94.925344	91.75188046	88.70512205
231113A00034	11/13/2023	5.16	11/13/2025	104.14923	103.2616098	102.3891904	101.5315837	100.688414	99.85931806	99.04394486	98.24195497	97.45302008
231113A00036	11/13/2023	5.3	5/15/2025	101.82059	101.4441215	101.0704529	100.6995533	100.3313918	99.96593798	99.60316191	99.24303408	98.88552543
231113A00038	11/13/2023	4.97	11/13/2026	108.59443	106.6757283	104.8008112	102.9684219	101.1773456	99.42641007	97.71448382	96.04047447	94.40332707
231114A00006	11/14/2024	4.67	11/14/2031	126.73391	119.364135	112.4917226	106.0802154	100.0960168	94.50814963	89.28803943	84.40931628	79.84763427
231114A00007	11/14/2024	4.89	11/14/2034	138.32719	127.4985885	117.6633462	108.7234695	100.5911584	93.18769943	86.44248118	80.29212122	74.67969075
231114A00027	11/14/2023	4.76	11/13/2026	108.19829	106.2834273	104.412274	102.583578	100.7961265	99.04874904	97.34031601	95.66973675	94.03595804
231114A00028	11/14/2023	4.68	11/15/2027	112.26254	109.2816033	106.396776	103.6044438	100.9011456	98.28356913	95.74854341	93.29303218	90.9141273
231114A00046	11/14/2023	4.62	11/14/2028	116.06475	112.0078321	108.1186236	104.3893041	100.8124565	97.38104649	94.08840059	90.92818582	87.89439055
231114A00072	11/14/2023	4.67	11/15/2027	112.23359	109.2530726	106.368657	103.5767266	100.8738206	98.25662682	95.72197482	93.26682854	90.88828011
231114A00074	11/14/2023	4.6	11/14/2028	115.9869	111.9314888	108.0437448	104.3158455	100.7403754	97.31030193	94.01895314	90.85999751	87.82742484

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
231115A00039	11/15/2023	4.85	11/16/2026	108.4054	106.4801359	104.5989845	102.7606769	100.9639846	99.20772211	97.49074556	95.81195058	94.17027089
231117A00001	11/17/2023	4.99	11/12/2025	103.98704	103.1029482	102.2339565	101.3796776	100.5397394	99.71378224	98.90145833	98.10243145	97.31637633
231117A00002	11/17/2023	4.76	11/12/2026	108.1861	106.2741424	104.4057788	102.5797541	100.7948605	99.04993216	97.34384408	95.67550987	94.04388036
231117A00003	11/17/2023	4.59	11/17/2028	115.98023	111.9165249	108.0211611	104.2862699	100.7043925	97.26845547	93.97174925	90.80790714	87.77088619
231121A00015	11/21/2023	4.75	11/30/2026	108.38629	106.4220044	104.5035522	102.62959	100.7988192	99.00998782	97.26188832	95.55335588	93.8832665
231122A00029	11/22/2023	5.05	11/24/2025	104.19538	103.2771482	102.3751723	101.4890204	100.6182781	99.76254502	98.92143495	98.09457464	97.2816035
231122A00032	11/22/2023	5.2	5/22/2025	101.87554	101.4795551	101.0866647	100.6968299	100.310015	99.92618491	99.54530508	99.16734145	98.7922605
231122A00035	11/22/2023	5.2	5/22/2025	101.87554	101.4795551	101.0866647	100.6968299	100.310015	99.92618491	99.54530508	99.16734145	98.7922605
231127A00024	11/27/2023	4.78	11/27/2026	108.40754	106.4514481	104.5408237	102.6743373	100.8507053	99.06869014	97.327098	95.62477707	93.96061579
231127A00025	11/27/2023	4.68	11/29/2027	112.42019	109.3976241	106.4736905	103.6446298	100.9068492	98.25691257	95.69153211	93.20756148	90.80198867
231127A00026	11/27/2023	4.61	11/27/2028	116.16629	112.0708497	108.1461353	104.3841163	100.7771828	97.31812067	94.00008931	90.81659991	87.76149572
231127A00065	11/27/2023	5.03	11/26/2025	104.20305	103.2792493	102.3719001	101.4805606	100.6048093	99.74423893	98.89845673	98.06708318	97.24975171
231128A00002	11/28/2023	4.41	11/30/2028	115.74557	111.6408723	107.7079386	103.9386614	100.3253603	96.86075598	93.53794692	90.35038785	87.29186942
231128A00003	11/28/2023	4.41	11/30/2028	115.74557	111.6408723	107.7079386	103.9386614	100.3253603	96.86075598	93.53794692	90.35038785	87.29186942
231128A00009	11/28/2023	4.73	12/14/2026	108.51041	106.5070557	104.5513149	102.6417603	100.777018	98.95576475	97.17672512	95.43866971	93.7404131
231129A00006	11/29/2023	4.25	11/29/2028	115.10469	111.015394	107.09724	103.3421567	99.74249288	96.29099701	92.98079357	89.80536179	86.7585155
231129A00039	11/29/2023	4.97	5/30/2025	101.8854	101.4672194	101.0524723	100.6411167	100.2331112	99.82841498	99.42698789	99.02879045	98.6337838
231129A00073	11/29/2023	4.81	5/29/2025	101.83982	101.424141	101.0118602	100.6029355	100.1973261	99.79499154	99.3958924	98.9999897	98.6072451
231130A00072	11/30/2023	4.83	12/1/2025	104.08182	103.1448236	102.224754	101.3211557	100.4335889	99.5616289	98.70486634	97.86290582	97.03536564
231130A00073	11/30/2023	4.61	11/30/2026	108.11564	106.1540388	104.238219	102.3668392	100.5386023	98.75225751	97.00659874	95.30046235	93.63272555
231130A00074	11/30/2023	4.45	11/30/2028	115.56889	111.4767314	107.5556203	103.7974955	100.1947159	96.74003909	93.42659806	90.24787987	87.19770556
231201A00024	12/1/2023	4.36	12/1/2028	115.22436	111.136258	107.2192193	103.465175	99.86647699	96.41587646	93.10650065	89.93183149	86.88568537
231201A00026	12/1/2023	4.51	12/1/2026	107.93335	105.9708552	104.0542389	102.1821475	100.3532793	98.56637972	96.82023863	95.11368878	93.4456039
231201A00034	12/1/2023	4.62	3/2/2026	104.91878	103.7272343	102.5628673	101.4247545	100.3120138	99.22380248	98.15931447	97.1177789	96.09845796
231204A00006	12/4/2023	4.86	8/4/2025	102.6447	102.0419644	101.4463258	100.8576564	100.2758343	99.70074026	99.13225803	98.57027383	98.01467655
231205A00025	12/5/2023	4.61	12/15/2025	104.11795	103.1411651	102.182778	101.2422718	100.3191484	99.41292819	98.52314916	97.64936588	96.79114898
231206A00012	12/6/2023	4.31	12/6/2028	115.07539	110.9767117	107.0501281	103.2874945	99.68109183	96.2236054	92.90810145	89.72800525	86.67708061
231206A00016	12/6/2023	4.74	6/6/2025	101.90787	101.4698954	101.0357011	100.6052336	100.1784448	99.75528763	99.33571574	98.91968359	98.50714637
231206A00044	12/8/2023	4.71	12/8/2025	104.05361	103.0975191	102.1590618	101.2377558	100.3331334	99.44474334	98.5721509	97.71493658	96.87269571
231206A00046	12/6/2023	4.39	12/6/2027	111.64031	108.6102612	105.6797863	102.8450648	100.1024467	97.44844163	94.87971154	92.39306265	89.98543853
231206A00047	12/6/2023	4.31	12/6/2028	115.07539	110.9767117	107.0501281	103.2874945	99.68109183	96.2236054	92.90810145	89.72800525	86.67708061
231206A00070	12/6/2023	4.58	12/8/2025	104.00669	103.0497558	102.1104962	101.1884199	100.2830576	99.39395719	98.5206825	97.662813	96.81994293
231207A00010	12/7/2023	4.38	12/7/2027	111.62082	108.5883624	105.6556451	102.8188396	100.0742863	97.41848636	94.84809338	92.35990583	89.95086002

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
231207A00011	12/7/2023	4.28	12/7/2028	114.96633	110.8670951	106.9401185	103.1772369	99.57071867	96.1132378	92.79784986	89.61797033	86.56735397
231207A00014	12/7/2023	4.7	12/8/2025	104.04414	103.0880892	102.1496797	101.2284209	100.323845	99.43550103	98.56295402	97.70578457	96.86358802
231207A00016	12/7/2023	4.47	12/7/2026	107.92138	105.9428417	104.0109244	102.124243	100.2814644	98.48130386	96.72252268	95.00392644	93.32436301
231207A00027	12/7/2023	4.15	12/7/2028	114.7863	110.6815031	106.7494606	102.9819805	99.37129965	95.91006224	92.59129632	89.40839163	86.35507893
231207A00034	12/7/2023	4.7	12/5/2025	104.00856	103.0609396	102.1306489	101.2172136	100.320178	99.43910258	98.57356343	97.72315158	96.88747229
231207A00035	12/7/2023	4.47	12/7/2026	107.92138	105.9428417	104.0109244	102.124243	100.2814644	98.48130386	96.72252268	95.00392644	93.32436301
231208A00019	3/15/2024	4.95	3/14/2025	100.97534	100.763502	100.5525381	100.3424388	100.1331987	99.92481249	99.71727485	99.51058052	99.30472431
231208A00020	3/15/2024	4.85	6/16/2025	102.04283	101.5772874	101.1160139	100.6589459	100.206026	99.75719766	99.31240541	98.87159483	98.43471245
231208A00021	3/15/2024	4.75	9/15/2025	103.07735	102.3572094	101.6471638	100.9470027	100.2565202	99.57551628	98.90379631	98.24117095	97.58745602
231208A00022	3/15/2024	4.69	12/15/2025	104.11746	103.1417867	102.184469	101.2449957	100.3228702	99.41761447	98.52876756	97.65588539	96.79853974
231208A00023	3/15/2024	4.61	3/16/2026	105.06273	103.8320025	102.6302509	101.4564546	100.3096444	99.18889567	98.0933255	97.02209054	95.97438478
231211A00057	12/11/2023	4.58	12/11/2029	119.92939	114.6983018	109.7337401	105.0206665	100.5449706	96.2934063	92.2535351	88.41367215	84.76283704
231212A00007	12/12/2023	5.16	2/5/2025	100.472	100.3718861	100.2719767	100.1722733	100.0727753	99.97348196	99.87439272	99.77550689	99.67682384
231212A00009	12/12/2023	5.01	6/12/2025	102.06641	101.611861	101.1613801	100.7149094	100.2723952	99.83378495	99.39902699	98.96807055	98.54086575
231212A00016	12/12/2023	4.59	12/7/2026	108.15568	106.1747969	104.2405802	102.3516432	100.5066517	98.70431962	96.94340719	95.22271891	93.54110158
231212A00018	12/12/2023	4.5	12/6/2027	111.96512	108.9302471	105.9950659	103.1557538	100.408657	97.75028157	95.17728596	92.68647304	90.27478316
231212A00067	12/12/2023	4.82	12/12/2025	104.20663	103.2387506	102.288924	101.3566517	100.4414493	99.54284999	98.6604041	97.79367796	96.94225335
231213A00019	12/13/2023	4.97	6/13/2025	102.06084	101.60355	101.15037	100.7012488	100.2561318	99.81496545	99.37769717	98.94427526	98.51464896
231213A00049	12/13/2023	4.14	12/13/2028	114.46736	110.361803	106.4295448	102.6623424	99.05238626	95.59227759	92.27500501	89.09392198	86.04272589
231214A00003	12/14/2023	4.7	6/16/2025	101.97333	101.5079753	101.0468885	100.590006	100.1372703	99.688625	99.24401462	98.80338473	98.36668188
231214A00036	12/14/2023	4.19	12/14/2026	107.44565	105.4530465	103.5078505	101.6086385	99.7540426	97.94274481	96.17347503	94.4450089	92.75616585
231214A00058	12/14/2023	4.69	6/13/2025	101.93344	101.4764841	101.0236411	100.5748548	100.1300705	99.68923472	99.25229492	98.81919941	98.38989744
231214A00074	12/14/2023	4.69	6/13/2025	101.93344	101.4764841	101.0236411	100.5748548	100.1300705	99.68923472	99.25229492	98.81919941	98.38989744
231214A00075	12/14/2023	4.49	12/15/2025	103.92403	102.9493538	101.9930294	101.0545364	100.1333787	99.22907811	98.34117428	97.46922328	96.61279717
231215A00004	12/15/2023	4.07	12/15/2028	114.20722	110.1014281	106.1692265	102.4023459	98.79295235	95.3336251	92.01733227	88.83740846	85.78753368
231215A00018	12/15/2023	4.19	12/15/2027	111.1354	108.0886059	105.1427773	102.294012	99.53857956	96.87291404	94.2936063	91.79739592	89.38116389
231218A00023	12/18/2023	4.76	6/18/2025	102.02501	101.5539954	101.0873423	100.6249932	100.1668886	99.71297011	99.26318029	98.81746285	98.37576249
231218A00027	12/18/2023	4.96	2/19/2025	100.62723	100.4881733	100.3495124	100.211245	100.0733694	99.93588398	99.79878696	99.66207673	99.52575161
231218A00046	12/18/2023	4.76	6/18/2025	102.02501	101.5539954	101.0873423	100.6249932	100.1668886	99.71297011	99.26318029	98.81746285	98.37576249
231218A00052	12/18/2023	4.54	12/18/2025	104.00663	103.023272	102.0585814	101.1120251	100.1830944	99.27129922	98.37616782	97.49724552	96.63409408
231218A00070	12/18/2023	4.6	6/18/2025	101.9876	101.516239	101.0492525	100.5865789	100.1281584	99.67393246	99.2238434	98.77783473	98.33585096
231219A00012	12/19/2023	4.54	12/19/2025	104.01804	103.0318736	102.0644764	101.1153136	100.1838723	99.26965861	98.37219691	97.49102895	96.62571308
231219A00013	12/19/2023	4.27	12/18/2026	107.64482	105.6394339	103.6819984	101.7710665	99.9052474	98.08320163	96.30363856	94.56531431	92.86702975

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
231219A00015	12/19/2023	4.17	12/20/2027	111.12315	108.0630624	105.1048185	102.244466	99.47822566	96.80248634	94.21379609	91.70885433	89.28450426
231219A00016	12/19/2023	4.27	12/18/2026	107.64482	105.6394339	103.6819984	101.7710665	99.9052474	98.08320163	96.30363856	94.56531431	92.86702975
231219A00017	12/19/2023	4.26	1/15/2027	107.91547	105.8316712	103.7991631	101.816344	99.88167737	97.99368529	96.15094608	94.35209153	92.59580454
231219A00018	12/19/2023	4.25	2/16/2027	108.24334	106.0648278	103.941466	101.8714766	99.85315011	97.88484567	95.96498734	94.09206112	92.26461196
231219A00019	12/19/2023	4.17	12/15/2027	111.07585	108.0299478	105.0849887	102.2370716	99.48246638	96.81760801	94.23908794	91.74364638	89.32816492
231219A00020	12/19/2023	4.16	2/1/2028	111.50486	108.3223579	105.2489708	102.2803242	99.41224386	96.64074814	93.96203764	91.37248562	88.86862908
231219A00021	12/19/2023	4.14	3/15/2028	111.87147	108.5615332	105.3684776	102.2874603	99.31387602	96.44333969	93.67167449	90.99490026	88.40922284
231219A00022	12/19/2023	4.13	4/14/2028	112.12671	108.7301516	105.4561186	102.2994884	99.25538545	96.31916655	93.48640823	90.75289487	88.11460757
231219A00023	12/19/2023	4.12	6/15/2028	112.68186	109.1057677	105.6646601	102.3527112	99.1643778	96.09438506	93.13771206	90.28957811	87.54542991
231219A00025	12/19/2023	4.06	12/15/2028	114.16745	110.062445	106.1310068	102.3648661	98.75618988	95.29755825	91.98194016	88.80267101	85.75343156
231219A00060	12/19/2023	4.22	6/21/2027	109.46243	106.9237736	104.4579758	102.0625206	99.73499725	97.47309262	95.27458662	93.13734785	91.0593295
231220A00015	12/20/2023	4.48	12/19/2025	103.95934	102.9734867	102.006394	101.0575318	100.1263871	99.21246611	98.3152934	97.43441074	96.56937656
231220A00028	12/20/2023	4.13	12/20/2027	111.00351	107.9452145	104.9887254	102.130084	99.36551283	96.69140189	94.10430059	91.60090963	89.17807342
231220A00030	12/20/2023	4.48	12/22/2025	103.99308	102.9987942	102.0235842	101.0669059	100.1282338	99.20706218	98.30290412	97.4152906	96.54376973
231220A00031	12/20/2023	4.23	12/21/2026	107.59624	105.5832734	103.6186227	101.7008289	99.82848523	98.00023686	96.21477865	94.47085298	92.76724757
231220A00032	12/20/2023	4.57	12/19/2025	104.04739	103.0610671	102.0935176	101.1442045	100.2126149	99.29825486	98.40064867	97.51933806	96.65388135
231221A00003	12/21/2023	4.39	12/22/2025	103.90429	102.9104748	101.9357292	100.979509	100.041289	99.12056361	98.21684595	97.32966718	96.45857551
231221A00006	12/21/2023	4.14	12/21/2026	107.41705	105.4059044	103.4430446	101.5270073	99.65638657	97.82982856	96.04602903	94.30373122	92.60172368
231221A00008	12/21/2023	3.99	12/21/2028	113.94136	109.8247108	105.8828412	102.1073924	98.49044637	95.02450412	91.70246144	88.51758589	85.46349532
231221A00014	12/21/2023	4.14	6/21/2027	109.26308	106.7269448	104.2636076	101.8705592	99.5453902	97.28578921	95.08953759	92.95450542	90.87864727
231221A00022	12/21/2023	4.01	12/21/2028	112.73097	108.997983	105.4203151	101.9905453	98.70165048	95.54698234	92.52024502	89.61547446	86.82701886
231221A00039	12/21/2023	3.99	12/21/2028	113.94136	109.8247108	105.8828412	102.1073924	98.49044637	95.02450412	91.70246144	88.51758589	85.46349532
231221A00086	12/21/2023	4.48	6/23/2025	101.98829	101.5030865	101.0225158	100.546508	100.0749982	99.6079227	99.14521905	98.68682591	98.2326831
231221A00103	12/21/2023	4.3	12/30/2025	103.98256	102.9651373	101.9676768	100.98959	100.0303161	99.08931535	98.16606886	97.26007703	96.3708589
231221A00104	12/21/2023	4.3	12/30/2025	103.98256	102.9651373	101.9676768	100.98959	100.0303161	99.08931535	98.16606886	97.26007703	96.3708589
231222A00004	12/22/2023	4	12/22/2028	113.99004	109.8697322	105.9244621	102.1458518	98.52596685	95.05729329	91.73271281	88.54547986	85.4892001
231222A00027	12/22/2023	4.84	2/21/2025	100.63493	100.4903182	100.3461304	100.2023653	100.0590211	99.91609582	99.77358769	99.63149485	99.48981546
231222A00039	12/22/2023	4.44	12/22/2025	103.95362	102.9595411	101.9845375	101.0280628	100.0895917	99.16861837	98.26465604	97.37723574	96.50590563
231226A00016	12/26/2023	3.92	12/26/2028	113.57762	109.5717082	105.7366697	102.0642164	98.54651356	95.17614909	91.946108	88.84974891	85.88078193
231226A00024	12/26/2023	4.03	12/26/2028	114.14523	110.0110619	106.0529418	102.2624157	98.63148472	95.15257508	91.81851287	88.62250083	85.55809651
231226A00027	12/26/2023	4.22	12/28/2026	107.64785	105.6154912	103.6323549	101.6969364	99.80779016	97.96352455	96.16279941	94.4043238	92.68685383
231226A00043	12/26/2023	4.46	12/26/2025	104.01811	103.0126808	102.026748	101.0597492	100.1111421	99.18040488	98.26703523	97.37054963	96.49048234
231226A00095	12/26/2023	4.22	12/28/2026	107.64785	105.6154912	103.6323549	101.6969364	99.80779016	97.96352455	96.16279941	94.4043238	92.68685383

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
231226A00098	12/26/2023	4.67	6/26/2025	102.07636	101.5830728	101.0945616	100.6107565	100.1315897	99.65699457	99.18690592	98.72125967	98.25999299
231227A00005	12/27/2023	4.17	12/28/2026	107.54733	105.5160085	103.5338861	101.5994619	99.71129085	97.86798191	96.0681954	94.31064089	92.59407495
231227A00013	12/27/2023	4.44	6/27/2025	102.0141	101.5177486	101.0262375	100.5394925	100.0574444	99.58002546	99.1071691	98.63881007	98.17488436
231227A00014	12/27/2023	4.29	12/26/2025	103.9287	102.9225957	101.9360264	100.9684235	100.0192431	99.08796195	98.17407663	97.27710234	96.39657219
231227A00023	12/27/2023	3.98	12/27/2028	113.95356	109.8205334	105.8636567	102.0744698	98.44496312	94.96755305	91.63505667	88.44066842	85.3779383
231227A00026	12/27/2023	4.6	6/27/2025	102.05348	101.5574959	101.0663347	100.57993	100.0982128	99.62111564	99.14857214	98.68051732	98.21688738
231227A00027	12/27/2023	4.42	12/26/2025	103.97821	102.97299	101.987268	101.0204774	100.0720755	99.14154085	98.22837112	97.33208283	96.45221032
231227A00030	12/27/2023	4.44	6/27/2025	102.0141	101.5177486	101.0262375	100.5394925	100.0574444	99.58002546	99.1071691	98.63881007	98.17488436
231227A00039	12/27/2023	4.6	6/27/2025	102.05348	101.5574959	101.0663347	100.57993	100.0982128	99.62111564	99.14857214	98.68051732	98.21688738
231228A00022	12/28/2023	4.61	6/27/2025	102.05842	101.5624199	101.0712447	100.584826	100.103095	99.625984	99.15342683	98.68535843	98.22171501
231228A00023	12/28/2023	4.4	12/26/2025	103.95825	102.9531445	101.9675281	101.0008414	100.0525422	99.12210884	98.20903906	97.31284943	96.4330743
231228A00024	12/28/2023	4.15	12/28/2026	107.50712	105.4762154	103.4944986	101.5604721	99.67269113	97.82976485	96.0303538	94.27316773	92.5569634
231228A00025	12/28/2023	4.05	12/28/2027	110.83724	107.7599083	104.7857357	101.9106877	99.1309102	96.44272161	93.84260401	91.32719483	88.89327907
231228A00026	12/28/2023	3.96	12/28/2028	113.882	109.7477118	105.7897584	101.9996625	98.36940116	94.89137806	91.55839872	88.36364689	85.30066263
231229A00017	12/29/2023	4.42	12/29/2025	104.01144	102.9977882	102.0039464	101.0293401	100.0734142	99.13563461	98.21548768	97.31247883	96.42613189
231229A00061	12/29/2023	4.74	4/29/2025	101.41994	101.0885568	100.759341	100.4322684	100.1073183	99.78446987	99.46370297	99.14499749	98.8283336
231229A00062	12/29/2023	4.74	4/29/2025	101.41994	101.0885568	100.759341	100.4322684	100.1073183	99.78446987	99.46370297	99.14499749	98.8283336
231229A00063	12/29/2023	4.74	4/29/2025	101.41994	101.0885568	100.759341	100.4322684	100.1073183	99.78446987	99.46370297	99.14499749	98.8283336
231229A00065	12/29/2023	4.6	7/29/2025	102.42027	101.8348307	101.2560939	100.6839434	100.1182672	99.55895569	99.00590186	98.45900103	97.91815088
231229A00066	12/29/2023	4.6	7/29/2025	102.42027	101.8348307	101.2560939	100.6839434	100.1182672	99.55895569	99.00590186	98.45900103	97.91815088
231229A00067	12/29/2023	4.6	7/29/2025	102.42027	101.8348307	101.2560939	100.6839434	100.1182672	99.55895569	99.00590186	98.45900103	97.91815088
231229A00068	12/29/2023	4.42	12/29/2025	104.01144	102.9977882	102.0039464	101.0293401	100.0734142	99.13563461	98.21548768	97.31247883	96.42613189
231229A00070	12/29/2023	4.42	12/29/2025	104.01144	102.9977882	102.0039464	101.0293401	100.0734142	99.13563461	98.21548768	97.31247883	96.42613189
231229A00071	12/29/2023	4.42	12/29/2025	104.01144	102.9977882	102.0039464	101.0293401	100.0734142	99.13563461	98.21548768	97.31247883	96.42613189
240102A00029	1/2/2024	4.66	7/2/2025	102.14136	101.6313071	101.1263522	100.6264199	100.1314354	99.64132561	99.15601863	98.6754441	98.19953297
240102A00055	1/2/2024	4.23	1/4/2027	107.74002	105.6878113	103.6856604	101.7320228	99.82541639	97.96441502	96.14764581	94.37378678	92.6415646
240103A00003	1/3/2024	4.71	7/3/2025	102.17851	101.6655934	101.157832	100.6551498	100.1574706	99.66472007	99.17682508	98.69371405	98.2153168
240103A00004	1/3/2024	4.48	1/5/2026	104.14888	103.1152881	102.1022748	101.1092334	100.1355765	99.18073972	98.24418043	97.32537664	96.42382609
240103A00005	1/3/2024	4.28	1/4/2027	107.8415	105.7882385	103.7850549	101.8304046	99.92280503	98.06082949	96.24310457	94.46830779	92.73516531
240103A00010	1/3/2024	4.84	1/18/2039	149.98007	134.4514079	120.8374622	108.8851321	98.37633287	89.12297104	80.9626641	73.75509184	67.37888238
240103A00011	1/3/2024	4.84	1/18/2039	149.98007	134.4514079	120.8374622	108.8851321	98.37633287	89.12297104	80.9626641	73.75509184	67.37888238
240103A00018	1/3/2024	4.28	1/4/2027	107.8415	105.7882385	103.7850549	101.8304046	99.92280503	98.06082949	96.24310457	94.46830779	92.73516531
240103A00023	3/29/2024	4.45	7/29/2025	102.3329	101.7477486	101.1692986	100.5974326	100.0320385	99.47300684	98.92023062	98.37360519	97.83302823

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240103A00025	1/3/2024	4.48	1/2/2026	104.11613	103.0909217	102.0859683	101.1006694	100.1344516	99.18676403	98.25707656	97.34487924	96.4496812
240103A00026	1/3/2024	4.28	1/4/2027	107.8415	105.7882385	103.7850549	101.8304046	99.92280503	98.06082949	96.24310457	94.46830779	92.73516531
240103A00032	3/29/2024	4.45	7/29/2025	102.3329	101.7477486	101.1692986	100.5974326	100.0320385	99.47300684	98.92023062	98.37360519	97.83302823
240103A00033	3/29/2024	4.45	7/29/2025	102.3329	101.7477486	101.1692986	100.5974326	100.0320385	99.47300684	98.92023062	98.37360519	97.83302823
240103A00034	3/29/2024	4.45	7/29/2025	102.3329	101.7477486	101.1692986	100.5974326	100.0320385	99.47300684	98.92023062	98.37360519	97.83302823
240103A00035	3/29/2024	4.45	7/29/2025	102.3329	101.7477486	101.1692986	100.5974326	100.0320385	99.47300684	98.92023062	98.37360519	97.83302823
240103A00039	6/28/2024	4.11	10/29/2025	103.07098	102.2296847	101.4021459	100.5880242	99.78699519	98.99874449	98.22296792	97.45937083	96.70766779
240103A00042	6/28/2024	4.11	10/29/2025	103.07098	102.2296847	101.4021459	100.5880242	99.78699519	98.99874449	98.22296792	97.45937083	96.70766779
240103A00043	6/28/2024	4.11	10/29/2025	103.07098	102.2296847	101.4021459	100.5880242	99.78699519	98.99874449	98.22296792	97.45937083	96.70766779
240103A00044	6/28/2024	4.11	10/29/2025	103.07098	102.2296847	101.4021459	100.5880242	99.78699519	98.99874449	98.22296792	97.45937083	96.70766779
240103A00045	6/28/2024	4.11	10/29/2025	103.07098	102.2296847	101.4021459	100.5880242	99.78699519	98.99874449	98.22296792	97.45937083	96.70766779
240103A00047	6/28/2024	4.05	1/29/2026	103.94145	102.8432834	101.7683705	100.7159769	99.68539986	98.67596534	97.68702695	96.71796438	95.76818216
240103A00049	6/28/2024	4.05	1/29/2026	103.94145	102.8432834	101.7683705	100.7159769	99.68539986	98.67596534	97.68702695	96.71796438	95.76818216
240103A00050	6/28/2024	4.05	1/29/2026	103.94145	102.8432834	101.7683705	100.7159769	99.68539986	98.67596534	97.68702695	96.71796438	95.76818216
240103A00051	6/28/2024	4.05	1/29/2026	103.94145	102.8432834	101.7683705	100.7159769	99.68539986	98.67596534	97.68702695	96.71796438	95.76818216
240103A00052	6/28/2024	4.05	1/29/2026	103.94145	102.8432834	101.7683705	100.7159769	99.68539986	98.67596534	97.68702695	96.71796438	95.76818216
240103A00054	6/28/2024	3.94	6/29/2026	105.29928	103.7841722	102.2987314	100.8421619	99.41369488	98.01258866	96.63812705	95.28961843	93.96639463
240103A00056	6/28/2024	3.94	6/29/2026	105.29928	103.7841722	102.2987314	100.8421619	99.41369488	98.01258866	96.63812705	95.28961843	93.96639463
240103A00057	6/28/2024	3.94	6/29/2026	105.29928	103.7841722	102.2987314	100.8421619	99.41369488	98.01258866	96.63812705	95.28961843	93.96639463
240103A00058	6/28/2024	3.94	6/29/2026	105.29928	103.7841722	102.2987314	100.8421619	99.41369488	98.01258866	96.63812705	95.28961843	93.96639463
240103A00059	6/28/2024	3.94	6/29/2026	105.29928	103.7841722	102.2987314	100.8421619	99.41369488	98.01258866	96.63812705	95.28961843	93.96639463
240104A00064	1/4/2024	5.04	1/3/2025	100.04478	100.0364275	100.0280852	100.0197507	100.0114239	100.0031049	99.99479345	99.98648973	99.97819366
240104A00068	1/4/2024	4.76	7/3/2025	102.20403	101.6910402	101.1832041	100.6804477	100.1826949	99.68987123	99.20190363	98.71872051	98.24025168
240105A00015	1/5/2024	4.99	1/6/2025	100.08155	100.0648524	100.0481713	100.0315071	100.0148597	99.99822904	99.98161514	99.96501795	99.94843745
240105A00017	1/5/2024	4.29	1/5/2027	107.87229	105.8160091	103.8099155	101.8524643	99.94216796	98.07759504	96.25736762	94.48015901	92.74469133
240105A00028	1/5/2024	4.76	7/7/2025	102.25165	101.7274917	101.208719	100.6952515	100.1870078	99.68390839	99.18587526	98.69283198	98.20470368
240108A00018	1/8/2024	4.94	1/8/2025	100.10522	100.0829609	100.0607229	100.0385085	100.0163177	99.99415053	99.97200689	99.94988674	99.92779006
240108A00020	1/8/2024	4.68	7/8/2025	102.22161	101.6947847	101.1734022	100.6573807	100.1466375	99.64109184	99.14066444	98.64527768	98.15485549
240108A00022	1/8/2024	4.46	1/8/2026	104.16097	103.1190899	102.0981264	101.0974518	100.1164648	99.15458754	98.21126465	97.28596211	96.37816623
240108A00023	1/8/2024	4.27	1/8/2027	107.86297	105.798673	103.7848846	101.8200466	99.90265699	98.03127064	96.20449668	94.42099612	92.67947952
240108A00033	1/8/2024	4.96	1/2/2025	100.10587	100.1000555	100.0942431	100.0884359	100.0826339	100.0768371	100.0710455	100.0652591	100.0594779
240108A00037	1/8/2024	4.69	7/8/2025	102.22686	101.7000119	101.1786138	100.6625767	100.151818	99.64625705	99.14581443	98.65041256	98.15997537
240108A00038	1/8/2024	4.13	1/8/2029	114.6653	110.4856131	106.485108	102.6551204	98.98745426	95.47435203	92.10846917	88.88284977	85.79090374

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240108A00040	1/8/2024	4.13	1/8/2029	114.6653	110.4856131	106.485108	102.6551204	98.98745426	95.47435203	92.10846917	88.88284977	85.79090374
240108A00041	1/9/2024	4.13	1/9/2029	114.67453	110.4919554	106.488773	102.6563089	98.98635291	95.4711347	92.10329775	88.87587499	85.78226604
240108A00047	1/11/2024	4.95	1/10/2025	100.13007	100.1022464	100.0744515	100.0466878	100.0189552	99.99125353	99.96358283	99.93594301	99.90833404
240108A00049	1/11/2024	4.95	1/10/2025	100.13007	100.1022464	100.0744515	100.0466878	100.0189552	99.99125353	99.96358283	99.93594301	99.90833404
240109A00006	1/9/2024	4.71	7/9/2025	102.24911	101.7194383	101.1952739	100.6765277	100.1631158	99.65495603	99.15196784	98.6540724	98.16119244
240109A00025	1/9/2024	4.47	1/9/2026	104.18219	103.1374588	102.1137508	101.1104391	100.1269174	99.16260359	98.21693785	97.28938213	96.37941888
240109A00030	1/9/2024	4.99	1/9/2025	100.1188	100.0937586	100.0687411	100.0437508	100.0187879	99.99385214	99.96894356	99.9440621	99.91920772
240109A00031	1/9/2024	4.73	7/9/2025	102.25965	101.7299478	101.2057518	100.6869742	100.1735311	99.66534038	99.16232148	98.66439554	98.1714853
240109A00042	1/9/2024	3.99	1/9/2029	114.44923	110.2617486	106.2541667	102.4177691	98.74431243	95.22599584	91.8554342	88.62563386	85.52996967
240109A00048	1/9/2024	4.12	1/9/2029	114.63408	110.4523187	106.4499253	102.6182257	98.94901042	95.43451022	92.06736944	88.84062185	85.74766787
240110A00001	1/10/2024	4.42	1/9/2026	104.13038	103.0859299	102.0625052	101.0594728	100.0762267	99.11218463	98.16678696	97.23949571	96.32979342
240110A00003	1/10/2024	4.78	1/10/2025	100.12734	100.0994963	100.0716831	100.0439013	100.0161508	99.98843154	99.96074347	99.93308652	99.90546064
240110A00010	1/10/2024	4.42	1/12/2026	104.16263	103.1097859	102.0782991	101.067525	100.0768432	99.105658	98.15339679	97.21950943	96.30346686
240110A00017	1/10/2024	4.94	1/6/2025	100.15479	100.1373379	100.1199031	100.1024859	100.0850863	100.0677043	100.0503397	100.0329926	100.0156629
240110A00021	1/10/2024	4.13	1/10/2028	111.20155	108.0835413	105.0709631	102.1596482	99.34562203	96.62508959	93.99442663	91.45017069	88.98901292
240110A00029	1/10/2024	4.5	7/10/2025	102.1921	101.6593307	101.1321355	100.6104258	100.094116	99.58312244	99.077363	98.57675734	98.08122676
240111A00016	1/11/2024	4.63	7/11/2025	102.23003	101.6949005	101.1653942	100.6414193	100.1228894	99.60971951	99.10182673	98.59912971	98.1015488
240111A00020	1/11/2024	4.93	1/13/2025	100.16626	100.1300893	100.0939625	100.0578791	100.0218391	99.9858423	99.94988873	99.91397826	99.87811082
240111A00021	1/11/2024	4.47	7/11/2025	102.18752	101.6520031	101.1221195	100.5977782	100.0788925	99.56537727	99.05714916	98.55412659	98.05622965
240111A00025	1/11/2024	4.19	1/11/2027	107.73039	105.6593601	103.6391424	101.6681598	99.74489614	97.8678933	96.03574802	94.24710964	92.50067763
240111A00028	1/11/2024	4.09	1/11/2029	114.53098	110.3458818	106.3405085	102.5061565	98.83459154	95.31802112	91.9490683	88.72074715	85.6264398
240111A00031	1/11/2024	4.19	1/11/2027	107.73039	105.6593601	103.6391424	101.6681598	99.74489614	97.8678933	96.03574802	94.24710964	92.50067763
240111A00053	1/11/2024	4.93	1/10/2025	100.1295	100.1016724	100.073878	100.0461148	100.0183826	99.99068143	99.96301121	99.93537187	99.90776337
240112A00014	1/12/2024	4.8	1/10/2025	100.19801	100.1689604	100.1399403	100.1109527	100.0819975	100.0530747	100.0241842	99.9953259	99.96649983
240112A00015	1/12/2024	4.78	1/17/2025	100.2081	100.1608106	100.1135841	100.0664195	100.0193168	99.97227592	99.92529663	99.87837885	99.83152244
240112A00021	1/12/2024	4.8	1/13/2025	100.16146	100.1252941	100.0891713	100.0530919	100.0170559	99.98106317	99.94511361	99.90920714	99.8733437
240112A00022	1/12/2024	4.24	1/12/2026	103.9746	102.9228043	101.892353	100.8825998	99.8929248	98.92273239	97.97145047	97.03852915	96.12343966
240112A00027	1/12/2024	4.79	1/15/2025	100.18483	100.1431066	100.1014313	100.0598084	100.0182378	99.97671939	99.9352531	99.89383882	99.85247643
240112A00033	1/12/2024	4.46	7/11/2025	102.13948	101.6046327	101.0754005	100.5516977	100.0334377	99.5205359	99.01290918	98.51047628	98.01315755
240112A00034	1/12/2024	4.46	7/11/2025	102.13948	101.6046327	101.0754005	100.5516977	100.0334377	99.5205359	99.01290918	98.51047628	98.01315755
240112A00036	1/12/2024	4.07	1/12/2027	107.49441	105.4231541	103.4027667	101.4316708	99.50834692	97.63133338	95.79922389	94.01066484	92.26435295
240112A00040	1/12/2024	4.24	1/12/2026	103.9746	102.9228043	101.892353	100.8825998	99.8929248	98.92273239	97.97145047	97.03852915	96.12343966
240112A00044	1/12/2024	4.24	1/12/2026	103.9746	102.9228043	101.892353	100.8825998	99.8929248	98.92273239	97.97145047	97.03852915	96.12343966

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240112A00047	1/12/2024	4.46	7/14/2025	102.1727	101.6294716	101.0920416	100.5603133	100.0341962	99.51360158	98.99844251	98.48863396	97.98409266
240112A00050	1/12/2024	4.3	7/11/2025	102.09695	101.5617135	101.0321042	100.5080354	99.98941997	99.47617304	98.96821126	98.46545308	97.9678186
240112A00052	1/12/2024	4.07	1/12/2027	107.49441	105.4231541	103.4027667	101.4316708	99.50834692	97.63133338	95.79922389	94.01066484	92.26435295
240116A00006	1/16/2024	4.5	7/16/2025	102.2167	101.6678172	101.1248524	100.5877057	100.0562835	99.53049454	99.01024926	98.49546009	97.9860413
240116A00008	1/16/2024	4.81	1/17/2025	100.20953	100.1622447	100.1150169	100.0678511	100.0207472	99.97370511	99.92672461	99.87980562	99.83294802
240116A00052	1/16/2024	4.65	1/16/2025	100.19383	100.1492925	100.1048101	100.0603853	100.0160179	99.97170784	99.92745495	99.88325914	99.83912027
240116A00083	1/16/2024	4.53	7/16/2025	102.23309	101.68416	101.1411445	100.6039475	100.0724753	99.54663679	99.0263423	98.51150431	98.00203705
240117A00021	1/17/2024	4.06	1/17/2029	114.80711	110.5906541	106.5560179	102.6943573	98.99730982	95.45696364	92.06583066	88.81682146	85.70322179
240117A00023	1/17/2024	4.13	1/19/2027	107.85746	105.7602147	103.714824	101.719661	99.77316387	97.87383124	96.02021895	94.21093761	92.44465002
240117A00024	1/17/2024	4.78	1/17/2025	100.21176	100.1644288	100.1171635	100.0699606	100.02282	99.97574165	99.92872534	99.88177096	99.83487838
240117A00054	1/17/2024	4.22	1/18/2028	111.55405	108.4089493	105.370698	102.4350539	99.59796792	96.85557502	94.20418523	91.64027441	89.16047572
240118A00004	1/18/2024	4.74	1/17/2025	100.20984	100.1625167	100.1152529	100.0680517	100.0209127	99.97383594	99.92682124	99.87986847	99.8329775
240118A00020	1/18/2024	4.25	2/18/2027	108.26613	106.0813824	103.9520447	101.8763279	99.85251108	97.87894213	95.95403472	94.07626499	92.24416858
240119A00003	1/19/2024	4.68	7/21/2025	102.37345	101.8102765	101.2533152	100.7024663	100.1576293	99.6187059	99.08560005	98.55821766	98.0364667
240119A00007	1/19/2024	4.23	1/19/2029	115.1741	110.9543117	106.916351	103.051374	99.35102035	95.80738058	92.41296867	89.16069713	86.0438535
240119A00008	1/19/2024	4.89	1/24/2025	100.29838	100.231621	100.164967	100.0984134	100.0319599	99.96560643	99.89935269	99.83319847	99.76714354
240119A00013	1/19/2024	4.88	1/31/2025	100.38253	100.296321	100.2102593	100.1243438	100.0385744	99.95295045	99.86747177	99.78213797	99.69694869
240119A00022	1/19/2024	4.9	1/30/2025	100.37208	100.2886476	100.2053562	100.122204	100.0391908	99.95631623	99.87357992	99.79098156	99.70852081
240119A00024	1/19/2024	4.49	1/20/2026	104.3233	103.2476111	102.1941912	101.1623509	100.1514308	99.16079844	98.1898463	97.23799109	96.30467238
240119A00028	1/19/2024	4.48	1/13/2026	104.23623	103.1802275	102.1457057	101.1320087	100.138511	99.1646123	98.20973558	97.27332649	96.35485202
240119A00029	1/19/2024	4.3	1/13/2027	107.97682	105.8977906	103.8698465	101.8913951	99.96090917	98.07691992	96.23801406	94.44283139	92.69006235
240119A00044	1/23/2024	4.23	1/23/2029	115.2121	110.9806843	106.9319616	103.0570342	99.3474854	95.7953532	92.39310296	89.13360207	86.01009616
240122A00002	1/22/2024	4.66	7/22/2025	102.37387	101.8079287	101.2482635	100.6947693	100.1473442	99.60588851	99.07030477	98.54049762	98.01637378
240122A00005	1/22/2024	4.45	1/22/2026	104.30229	103.221235	102.1626708	101.1258996	100.1102522	99.11508684	98.13978731	97.18376208	96.24644284
240122A00006	1/22/2024	4.25	1/22/2027	107.96756	105.8642542	103.8130188	101.8122179	99.86028006	97.95569432	96.09700775	94.28282261	92.51179384
240122A00014	1/22/2024	4.93	1/16/2025	100.27601	100.2294979	100.1830468	100.1366553	100.0903235	100.0440511	99.99783804	99.95168423	99.90558953
240122A00015	1/22/2024	4.93	1/16/2025	100.27601	100.2294979	100.1830468	100.1366553	100.0903235	100.0440511	99.99783804	99.95168423	99.90558953
240122A00016	1/22/2024	4.66	7/22/2025	102.37387	101.8079287	101.2482635	100.6947693	100.1473442	99.60588851	99.07030477	98.54049762	98.01637378
240122A00050	1/22/2024	4.25	1/22/2027	107.96756	105.8642542	103.8130188	101.8122179	99.86028006	97.95569432	96.09700775	94.28282261	92.51179384
240122A00081	1/22/2024	4.93	1/22/2025	100.27655	100.2153489	100.1542407	100.0932211	100.0322901	99.97144738	99.91069274	99.85002602	99.78944702
240123A00037	1/23/2024	4.2	1/17/2029	115.03308	110.8215835	106.7913942	102.9337086	99.24019762	95.70298065	92.31459863	89.06798912	85.95646303
240123A00057	1/23/2024	4.48	1/23/2026	104.34537	103.2613247	102.1998858	101.1603511	100.1420464	99.14432529	98.16656703	97.20817583	96.2685794
240125A00007	1/25/2024	4.27	1/25/2027	108.04046	105.9282459	103.8684525	101.8594258	99.8995788	97.98738609	96.12138092	94.30015255	92.52234355

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240125A00035	1/25/2024	4.89	1/24/2025	100.29838	100.231621	100.164967	100.0984134	100.0319599	99.96560643	99.89935269	99.83319847	99.76714354
240125A00040	1/25/2024	4.24	12/15/2026	107.55451	105.5581196	103.6092799	101.7065651	99.84860132	98.0340648	96.26168006	94.53021761	92.83849198
240125A00061	1/25/2024	4.64	7/25/2025	102.39731	101.8230009	101.2551523	100.6936518	100.1383932	99.5892728	99.04618895	98.50904236	97.97773591
240125A00068	1/25/2024	4.11	1/25/2028	111.53978	108.3698446	105.308228	102.3506011	99.4928356	96.73099239	94.06131194	91.4802048	88.98424282
240125A00069	1/25/2024	4.11	1/25/2028	111.53978	108.3698446	105.308228	102.3506011	99.4928356	96.73099239	94.06131194	91.4802048	88.98424282
240126A00004	1/26/2024	4.9	1/21/2025	100.33502	100.2739923	100.2130511	100.1521966	100.0914286	100.0307471	99.97015173	99.90964238	99.84921885
240126A00006	1/26/2024	4.89	1/31/2025	100.38339	100.2971811	100.2111186	100.1252024	100.0394322	99.95380755	99.86832814	99.78299361	99.69780359
240126A00007	1/26/2024	4.9	1/24/2025	100.37203	100.3022632	100.2326002	100.1630421	100.0935887	100.0242398	99.9549951	99.88585444	99.81681756
240126A00031	1/26/2024	4.31	1/26/2026	104.28102	103.1878319	102.1176285	101.0696935	100.0433361	99.03789415	98.05273202	97.0872398	96.14083179
240126A00032	1/26/2024	4.31	1/26/2026	104.28102	103.1878319	102.1176285	101.0696935	100.0433361	99.03789415	98.05273202	97.0872398	96.14083179
240129A00009	1/29/2024	4.72	1/29/2025	100.35163	100.2709248	100.1903497	100.1099078	100.0295988	99.94942238	99.86937819	99.78946591	99.70968523
240129A00049	1/29/2024	4.48	7/29/2025	102.39703	101.81109	101.2318664	100.6592424	100.0931056	99.53334611	98.97985646	98.43253168	97.89126909
240129A00054	1/29/2024	4.72	1/29/2025	100.35163	100.2709248	100.1903497	100.1099078	100.0295988	99.94942238	99.86937819	99.78946591	99.70968523
240129A00056	1/29/2024	4.72	1/29/2025	100.35163	100.2709248	100.1903497	100.1099078	100.0295988	99.94942238	99.86937819	99.78946591	99.70968523
240129A00066	1/29/2024	4.88	1/23/2025	100.35746	100.2906421	100.2239255	100.1573075	100.0907879	100.0243666	99.95804334	99.89181784	99.82568991
240130A00003	1/30/2024	4.62	7/30/2025	102.44343	101.8551474	101.2736306	100.6987605	100.1304235	99.56850866	99.01290757	98.46351419	97.92022483
240130A00005	1/30/2024	4.62	7/30/2025	102.44343	101.8551474	101.2736306	100.6987605	100.1304235	99.56850866	99.01290757	98.46351419	97.92022483
240130A00034	1/30/2024	4.43	10/30/2025	103.41744	102.570889	101.7382255	100.9191096	100.1132123	99.32021518	98.53981006	97.77169845	97.01559125
240130A00036	1/30/2024	4.94	1/30/2025	100.37541	100.2919787	100.2086844	100.1255294	100.0425133	99.95963587	99.87689673	99.79429553	99.71183196
240130A00044	1/30/2024	4.14	1/30/2029	114.9094	110.6651399	106.6048722	102.7195954	99.00080263	95.44044822	92.03092029	88.76501471	85.63591094
240130A00047	1/30/2024	4.01	1/30/2029	114.72227	110.4721758	106.4066119	102.5165447	98.79343198	95.22919519	91.81619184	88.5471893	85.41534048
240130A00051	1/30/2024	4.94	1/24/2025	100.37442	100.3046632	100.2350097	100.1654612	100.0960174	100.026678	99.95744285	99.88831171	99.81928433
240130A00057	1/30/2024	4.15	1/29/2027	108.00229	105.8763448	103.8033991	101.7817718	99.80985029	97.88608478	96.0089856	94.17712025	92.38911074
240130A00059	1/30/2024	4.33	1/30/2026	104.34558	103.2410128	102.1598972	101.1014903	100.0650811	99.04998848	98.0555588	97.08116511	96.12620555
240130A00068	1/30/2024	4.17	1/30/2029	115.03246	110.7856947	106.7229944	102.8353618	99.11428689	95.55172119	92.14005	88.87206656	85.74094777
240130A00070	1/30/2024	4.33	1/30/2026	104.34558	103.2410128	102.1598972	101.1014903	100.0650811	99.04998848	98.0555588	97.08116511	96.12620555
240130A00076	1/30/2024	4.94	1/30/2025	100.37541	100.2919787	100.2086844	100.1255294	100.0425133	99.95963587	99.87689673	99.79429553	99.71183196
240130A00089	1/30/2024	4.17	1/30/2029	115.03246	110.7856947	106.7229944	102.8353618	99.11428689	95.55172119	92.14005	88.87206656	85.74094777
240131A00013	1/31/2024	4.13	2/1/2027	107.81959	105.6905002	103.6145738	101.5901249	99.61553214	97.68923744	95.80974338	93.97561017	92.18545295
240131A00014	1/31/2024	4.04	1/31/2029	114.50815	110.2693805	106.2145486	102.3346552	98.62118913	95.06610142	91.66177716	88.40100967	85.27697626
240131A00015	1/31/2024	4.02	1/31/2029	107.67904	105.4885228	103.3737055	101.3313454	99.35836125	97.45182554	95.60895559	93.82710537	92.10375787
240131A00021	1/31/2024	4.8	1/27/2025	100.39895	100.3205658	100.2423029	100.1641644	100.08615	100.0082594	99.93049232	99.85284848	99.77532758
240131A00022	3/1/2024	4.13	3/1/2027	108.12826	105.9123866	103.7533159	101.649182	99.59820038	97.59865936	95.64891616	93.74739364	91.89257711

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240131A00033	1/31/2024	4.18	1/30/2026	104.18135	103.0777401	101.9975699	100.9400945	99.90460324	98.89041524	97.89687729	96.92336271	95.96926993
240131A00034	1/31/2024	4	1/29/2027	107.68725	105.5646855	103.4950513	101.4766699	99.5079304	97.58728496	95.71324561	93.8843815	92.09931626
240131A00036	1/31/2024	4.51	7/31/2025	102.39025	101.7993868	101.2153421	100.6380026	100.0672531	99.50298146	98.94507768	98.39343445	97.84794679
240131A00039	1/31/2024	4.22	7/31/2026	106.05957	104.4519126	102.8767244	101.333093	99.82013582	98.33700284	96.88287533	95.45696423	94.05850883
240131A00044	1/31/2024	4.8	1/27/2025	100.39895	100.3205658	100.2423029	100.1641644	100.08615	100.0082594	99.93049232	99.85284848	99.77532758
240131A00054	1/31/2024	4.8	1/31/2025	100.37564	100.2894406	100.2033848	100.1174753	100.0317116	99.94609361	99.8606208	99.77529285	99.69010941
240131A00059	1/31/2024	4.57	7/31/2025	102.42554	101.8345497	101.2503882	100.6729327	100.1020683	99.5376826	98.97966571	98.42791028	97.88231133
240131A00076	1/31/2024	4.35	1/30/2026	104.27948	103.176604	102.0971205	101.0402936	100.0054146	98.99180415	97.99881075	97.02580922	96.07219947
240131A00080	1/31/2024	4.16	1/29/2027	107.85138	105.7303457	103.6621382	101.6450829	99.67757386	97.7580677	95.88508081	94.05718647	92.27301219
240201A00003	2/1/2024	4.17	2/2/2026	104.20084	103.0889103	102.0007652	100.9356501	99.89283881	98.87163526	97.87137222	96.89140967	95.93113344
240201A00021	2/1/2024	4.81	2/3/2025	100.41281	100.3182811	100.2239326	100.1297657	100.0357798	99.9419746	99.84834941	99.75490374	99.66163706
240201A00023	2/1/2024	4.5	8/1/2025	102.39554	101.8019012	101.2151544	100.6351769	100.061852	99.49506562	98.93470636	98.38066528	97.83283591
240201A00027	2/1/2024	3.83	2/1/2029	114.00097	109.7599152	105.7033778	101.8223045	98.10814108	94.55279876	91.14862583	87.88838156	84.76521176
240201A00029	2/1/2024	4.52	8/1/2025	102.40735	101.8136773	101.2268912	100.6468747	100.0735112	99.50668649	98.94628922	98.39221043	97.84434367
240201A00038	2/1/2024	4.3	2/2/2026	104.25558	103.1446351	102.057437	100.9932264	99.95127905	98.93090073	97.93142593	96.95221628	95.99265918
240201A00040	2/1/2024	4.08	2/1/2030	117.8747	112.5537	107.511161	102.7309665	98.19802214	93.89818276	89.81818771	85.94560068	82.26875406
240201A00042	2/1/2024	4.24	2/1/2033	127.19418	118.6061458	110.687363	103.3815868	96.63759763	90.40872341	84.65241329	79.32985342	74.40562042
240201A00043	2/1/2024	4.27	2/1/2034	130.21385	120.5263163	111.6727503	103.5760005	96.16646194	89.38130019	83.16375994	77.46254685	72.23127552
240201A00051	2/1/2024	4.83	2/3/2025	100.4147	100.3201677	100.2258175	100.1316489	100.0376615	99.94385463	99.85022781	99.75678052	99.66351223
240201A00052	2/1/2024	4.5	8/1/2025	102.39554	101.8019012	101.2151544	100.6351769	100.061852	99.49506562	98.93470636	98.38066528	97.83283591
240201A00054	2/1/2024	4.83	2/3/2025	100.4147	100.3201677	100.2258175	100.1316489	100.0376615	99.94385463	99.85022781	99.75678052	99.66351223
240201A00056	2/1/2024	4.3	2/2/2026	104.25558	103.1446351	102.057437	100.9932264	99.95127905	98.93090073	97.93142593	96.95221628	95.99265918
240201A00057	2/1/2024	4.83	2/3/2025	100.4147	100.3201677	100.2258175	100.1316489	100.0376615	99.94385463	99.85022781	99.75678052	99.66351223
240201A00061	2/1/2024	4.5	8/1/2025	102.39554	101.8019012	101.2151544	100.6351769	100.061852	99.49506562	98.93470636	98.38066528	97.83283591
240201A00063	2/1/2024	4.81	2/3/2025	100.41281	100.3182811	100.2239326	100.1297657	100.0357798	99.9419746	99.84834941	99.75490374	99.66163706
240201A00064	2/1/2024	4.51	8/1/2025	102.40144	101.8077892	101.2210228	100.6410258	100.0676816	99.50087606	98.94049779	98.38643785	97.83858979
240201A00065	2/1/2024	4.33	2/2/2026	104.28866	103.1775206	102.090131	101.0257317	99.98359839	98.96303683	97.96338144	96.98399377	96.02426115
240201A00069	5/1/2024	4.44	4/30/2025	101.37606	101.0302967	100.6868173	100.3455959	100.0066104	99.66983898	99.33525997	99.0028521	98.67259436
240201A00072	8/1/2024	4.1	7/31/2025	102.14917	101.5591064	100.9758605	100.3993132	99.8293494	99.26585698	98.70872613	98.15784959	97.61312246
240202A00014	2/2/2024	4.51	8/1/2025	102.44876	101.854363	101.2668665	100.6861549	100.1121113	99.54462117	98.98357264	98.42885644	97.88036571
240202A00016	2/2/2024	4.25	2/2/2027	108.08379	105.9488729	103.8673	101.837379	99.85748134	97.9260422	96.04155767	94.20258179	92.40772389
240202A00017	2/2/2024	4.23	8/3/2026	106.23809	104.618636	103.032026	101.4773249	99.95363596	98.46009557	96.99587212	95.56016434	94.15219991
240202A00022	2/2/2024	4.96	2/3/2025	100.42697	100.3324302	100.2380694	100.1438902	100.0498922	99.95607479	99.86243744	99.76897962	99.67570083

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240202A00023	2/2/2024	4.96	2/3/2025	100.42697	100.3324302	100.2380694	100.1438902	100.0498922	99.95607479	99.86243744	99.76897962	99.67570083
240202A00025	2/2/2024	4.82	2/3/2025	100.42114	100.3265255	100.2320952	100.1378475	100.0437819	99.94989781	99.8561947	99.76267204	99.66932929
240202A00029	2/2/2024	4.15	2/2/2029	114.98026	110.7258639	106.65619	102.7621887	99.03530616	95.46745312	92.0509773	88.77863702	85.64357687
240202A00030	2/2/2024	4.32	2/3/2031	122.12232	115.6791602	109.6291641	103.9461056	98.60564627	93.58518969	88.86374804	84.42181911	80.24127355
240205A00020	2/5/2024	4.99	2/5/2025	100.45501	100.3549075	100.255013	100.1553245	100.0558413	99.95656283	99.85748838	99.75861731	99.659949
240205A00044	2/5/2024	4.99	2/5/2025	100.45501	100.3549075	100.255013	100.1553245	100.0558413	99.95656283	99.85748838	99.75861731	99.659949
240206A00017	2/6/2024	4.33	8/6/2027	110.21186	107.538071	104.9438217	102.4262502	99.98261941	97.61030881	95.30680862	93.06971417	90.89672084
240206A00026	2/6/2024	4.59	8/6/2025	102.55419	101.9456532	101.344355	100.7501679	100.162966	99.58262637	99.00902902	98.44205671	97.88159493
240207A00002	2/7/2024	4.81	2/7/2025	100.46955	100.3638195	100.2583174	100.1530474	100.0480085	99.94320012	99.83862135	99.73427144	99.63014959
240207A00006	2/7/2024	4.06	2/7/2029	115.00911	110.7294094	106.6363137	102.7206412	98.97371835	95.38734475	91.95376481	88.66564082	85.51602809
240207A00022	2/7/2024	4.25	2/7/2028	111.84788	108.6426442	105.5477248	102.5586729	99.67125182	96.88142127	94.18532675	91.57928982	89.0597989
240207A00025	2/8/2024	4.2	1/8/2029	114.94827	110.7628867	106.7568656	102.9215342	99.24868941	95.73056735	92.35981731	89.12947748	86.03295218
240207A00039	2/7/2024	4.55	8/7/2025	102.54152	101.9302658	101.3263203	100.7295505	100.1398288	99.55703058	98.98103428	98.41172103	97.84897477
240207A00040	2/7/2024	4.55	8/7/2025	102.54152	101.9302658	101.3263203	100.7295505	100.1398288	99.55703058	98.98103428	98.41172103	97.84897477
240208A00053	2/8/2024	4.58	2/9/2026	104.64112	103.5087765	102.401036	101.317106	100.2562234	99.21765756	98.20070841	97.20470489	96.22900354
240208A00055	2/8/2024	4.37	2/8/2027	108.40729	106.2509334	104.1487489	102.0990034	100.1000324	98.15023721	96.24808193	94.39209024	92.58084275
240209A00007	2/9/2024	4.5	12/9/2025	103.94236	102.9830022	102.0414177	101.1171104	100.2096072	99.31845203	98.44320526	97.58344292	96.73875599
240209A00019	2/9/2024	4.39	2/9/2027	108.46159	106.3016519	104.1960229	102.1429649	100.1408074	98.18794601	96.28283942	94.42400625	92.61002227
240209A00020	2/9/2024	4.58	2/9/2026	104.64112	103.5087765	102.401036	101.317106	100.2562234	99.21765756	98.20070841	97.20470489	96.22900354
240212A00029	2/12/2024	4.58	2/12/2026	104.67403	103.5332814	102.4174979	101.3258684	100.2576134	99.21198661	98.18827326	97.18578841	96.20387543
240213A00017	2/13/2024	4.26	2/13/2029	115.90035	111.5842563	107.4567857	103.5086379	99.73102132	96.11562606	92.65459422	89.34049284	86.16628829
240213A00022	2/13/2024	4.6	8/13/2026	106.81788	105.1687506	103.5533496	101.9707089	100.4198962	98.90001445	97.41020011	95.94962167	94.51747811
240214A00001	2/14/2024	4.79	11/10/2025	103.78733	102.9096962	102.0469644	101.1987533	100.3646979	99.54444518	98.73765395	97.94399414	97.16314642
240214A00007	2/14/2024	4.7	2/17/2026	104.86617	103.7105646	102.5805477	101.4752729	100.3939328	99.33575425	98.29999762	97.28595426	96.29294519
240214A00012	2/14/2024	5.1	2/14/2025	100.58215	100.4570049	100.3321833	100.2076849	100.0835082	99.95965213	99.8361153	99.71289648	99.5899944
240214A00019	2/15/2024	4.41	1/26/2029	115.97705	111.7219051	107.6505885	103.7541348	100.0240665	96.4523648	93.03144202	89.7541158	86.61358522
240215A00013	2/15/2024	4.82	8/15/2025	102.75324	102.1198104	101.4942165	100.8763145	100.2659627	99.66302311	99.06736086	98.47884447	97.89734559
240215A00026	2/15/2024	4.48	2/10/2027	108.66521	106.5000592	104.3893934	102.3314628	100.3245896	98.36716309	96.45763558	94.59451979	92.77638591
240215A00033	2/15/2024	4.35	2/16/2027	108.63496	106.4487257	104.317878	102.2406292	100.2152613	98.24012512	96.31363681	94.43427494	92.60057732
240215A00046	4/1/2024	4.49	4/1/2027	109.25182	106.9392331	104.6876246	102.4949369	100.3591976	98.27851788	96.25108744	94.27517103	92.34910437
240216A00012	2/16/2024	4.53	8/16/2027	110.84364	108.1342411	105.5059816	102.9559192	100.4812407	98.0792543	95.7473826	93.48315737	91.28421397
240220A00031	2/20/2024	4.68	2/20/2026	104.87701	103.7131233	102.5751822	101.4623286	100.3737379	99.30862157	98.26622472	97.24582469	96.24672919
240220A00073	2/20/2024	5.08	2/20/2025	100.65673	100.5148729	100.3734211	100.2323774	100.09174	99.95150718	99.81167711	99.67224806	99.53321829

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240221A00014	2/21/2024	4.53	2/22/2027	108.91778	106.7138622	104.5660168	102.4724238	100.4313347	98.4410716	96.50002374	94.60664399	92.75944595
240221A00015	2/21/2024	4.48	2/22/2028	112.73413	109.4713584	106.3219282	103.2812297	100.3448665	97.50864878	94.76858174	92.1208552	89.56183389
240221A00022	2/21/2024	4.97	2/21/2025	100.66538	100.5206175	100.3762794	100.2323657	100.0888746	99.94580404	99.80315227	99.66091739	99.51909756
240222A00030	2/22/2024	4.99	2/21/2025	100.66827	100.5235021	100.3791609	100.235244	100.0917497	99.94867606	99.80602117	99.66378318	99.52196024
240223A00004	2/23/2024	5	2/24/2025	100.7083	100.5551557	100.4024815	100.2502768	100.0985396	99.94726764	99.79645876	99.64611083	99.49622175
240223A00007	2/23/2024	4.81	8/22/2025	102.88304	102.2291602	101.5836191	100.9462581	100.3169222	99.69546005	99.08172432	98.47557123	97.87686057
240223A00020	2/23/2024	5.16	2/24/2025	100.72033	100.5672985	100.4147347	100.2626388	100.1110086	99.95984205	99.80913692	99.65889114	99.50910261
240223A00022	2/23/2024	5.22	1/23/2025	100.37846	100.31166	100.2449576	100.1783539	100.1118487	100.0454416	99.97913256	99.91292126	99.84680753
240226A00010	2/26/2024	4.53	7/15/2027	110.49701	107.8793145	105.3382161	102.8710088	100.4751034	98.14801842	95.88737489	93.69089139	91.55637927
240226A00025	2/26/2024	4.43	2/26/2027	108.92844	106.7088723	104.5460548	102.4381319	100.383325	98.3799281	96.42630338	94.52087846	92.66214298
240227A00009	2/27/2024	5.24	1/27/2025	100.43221	100.3537823	100.2754825	100.1973071	100.1192559	100.0413285	99.96352477	99.88584431	99.80828685
240227A00015	2/27/2024	5.18	2/27/2025	100.76275	100.6013371	100.4404394	100.2800561	100.1201846	99.96082263	99.80196764	99.64361728	99.48576916
240227A00020	2/27/2024	5.18	2/27/2025	100.76275	100.6013371	100.4404394	100.2800561	100.1201846	99.96082263	99.80196764	99.64361728	99.48576916
240227A00021	2/27/2024	4.97	8/27/2025	102.99717	102.3297116	101.6709284	101.0206505	100.3787137	99.74495789	99.11922734	98.50137005	97.89123789
240227A00025	2/27/2024	5.02	2/27/2025	100.75011	100.5885757	100.4275619	100.2670643	100.1070804	99.9476076	99.78864362	99.63018598	99.47223228
240228A00007	2/28/2024	5.17	2/27/2025	100.76114	100.5997288	100.4388331	100.2784517	100.1185821	99.95922203	99.80036896	99.64202051	99.4841743
240229A00026	2/29/2024	4.74	2/27/2026	105.026	103.841996	102.684803	101.5535199	100.4472821	99.36526334	98.30667325	97.2707556	96.25678641
240229A00027	2/29/2024	4.54	2/26/2027	108.9882	106.7714833	104.6113732	102.5060242	100.4536641	98.45259227	96.50117661	94.59784986	92.74110657
240301A00001	3/1/2024	5.03	6/2/2025	101.94849	101.5218656	101.0988108	100.6792851	100.2632445	99.85064571	99.44144607	99.03560369	98.63307735
240301A00022	3/1/2024	4.94	3/3/2025	100.78808	100.6154192	100.4433572	100.2718885	100.10101	99.93071862	99.76101139	99.59188525	99.42333717
240301A00023	3/1/2024	4.17	3/1/2029	115.6955	111.3356875	107.1682207	103.1835216	99.37254718	95.72675502	92.23807197	88.89886567	85.70191781
240301A00024	3/1/2024	4.17	3/1/2029	115.6955	111.3356875	107.1682207	103.1835216	99.37254718	95.72675502	92.23807197	88.89886567	85.70191781
240301A00025	3/1/2024	4.45	3/1/2027	108.82707	106.6034219	104.4367328	102.3251348	100.2668389	98.26012909	96.30335843	94.39494585	92.53337283
240301A00031	3/1/2024	5.1	3/3/2025	100.80161	100.6290791	100.4571414	100.285795	100.1150369	99.94486406	99.77527339	99.60626191	99.43782665
240305A00008	3/5/2024	4.84	9/5/2025	103.02018	102.3278087	101.6447711	100.9708768	100.3059429	99.64979126	99.0022484	98.36314546	97.73231795
240305A00010	3/5/2024	4.66	3/5/2026	104.99978	103.7995278	102.6268448	101.480783	100.3604419	99.26496107	98.19351821	97.14532693	96.11963487
240305A00011	3/5/2024	4.55	9/4/2026	106.99068	105.28011	103.6053272	101.9652741	100.3589335	98.78532831	97.24351924	95.73260294	94.25171033
240305A00035	3/5/2024	5.11	2/28/2025	100.83119	100.6596857	100.4887369	100.3183425	100.1484997	99.97920586	99.81045835	99.64225456	99.47459189
240306A00006	3/6/2024	4.65	9/5/2025	102.94459	102.2517993	101.5683577	100.8940755	100.2287693	99.57226042	98.9243749	98.28494338	97.65380092
240306A00010	3/6/2024	4.22	3/6/2029	115.59606	111.2348234	107.0662841	103.0808325	99.26939459	95.62339931	92.1347476	88.79578346	85.59926703
240306A00014	3/6/2024	5.09	3/6/2025	100.83865	100.6577707	100.4775527	100.2979887	100.119075	99.94080812	99.76318446	99.58620051	99.40985278
240306A00015	3/6/2024	4.93	3/6/2025	100.82443	100.6434203	100.4630716	100.2833791	100.104339	99.92594781	99.74820187	99.57109765	99.39463163
240306A00025	3/19/2024	5.07	3/19/2025	101.00223	100.7851262	100.568974	100.3537631	100.1394874	99.92614068	99.7137168	99.50220975	99.29161351

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240306A00026	3/19/2024	5.07	3/19/2025	101.00223	100.7851262	100.568974	100.3537631	100.1394874	99.92614068	99.7137168	99.50220975	99.29161351
240306A00027	3/19/2024	5.07	3/19/2025	101.00223	100.7851262	100.568974	100.3537631	100.1394874	99.92614068	99.7137168	99.50220975	99.29161351
240306A00028	3/19/2024	5.07	3/19/2025	101.00223	100.7851262	100.568974	100.3537631	100.1394874	99.92614068	99.7137168	99.50220975	99.29161351
240306A00029	3/19/2024	5.07	3/19/2025	101.00223	100.7851262	100.568974	100.3537631	100.1394874	99.92614068	99.7137168	99.50220975	99.29161351
240306A00030	3/19/2024	5.07	3/19/2025	101.00223	100.7851262	100.568974	100.3537631	100.1394874	99.92614068	99.7137168	99.50220975	99.29161351
240307A00022	3/7/2024	4.09	3/7/2029	115.41547	111.0451956	106.8684315	102.8755074	99.05729539	95.40517447	91.91099922	88.56707061	85.36610879
240308A00005	3/8/2024	4.03	3/8/2029	115.17207	110.8041787	106.6298524	102.6394167	98.82373473	95.17417731	91.68259163	88.34127202	85.14293263
240308A00008	3/8/2024	4.99	4/1/2025	101.14914	100.8957584	100.6436408	100.3927822	100.1431731	99.89480438	99.64766667	99.4017509	99.15704802
240308A00009	3/8/2024	4.74	9/8/2025	102.98705	102.2865449	101.5956002	100.9140177	100.2416077	99.57818576	98.92357208	98.27759178	97.64007457
240308A00011	3/8/2024	4.54	3/9/2026	104.90091	103.6903546	102.5078645	101.3524666	100.2232359	99.11928915	98.03978243	96.98390909	95.95089767
240308A00027	3/8/2024	4.23	3/8/2027	108.5993	106.3556919	104.1700192	102.0403644	99.96489251	97.94184411	95.96953152	94.04633515	92.17070015
240308A00031	3/8/2024	4.46	9/16/2026	106.97695	105.2330184	103.5261009	101.855087	100.2189076	98.6165361	97.04698658	95.50931167	94.00260059
240311A00006	3/11/2024	4.6	3/11/2026	104.99506	103.7784456	102.5901551	101.4292074	100.294665	99.1856325	98.10125495	97.04071511	96.00323159
240311A00009	3/11/2024	4.38	3/11/2027	108.77997	106.5297935	104.3378079	102.2020868	100.1207831	98.09212608	96.11441741	94.1860274	92.30539171
240311A00010	3/11/2024	5.07	3/11/2025	100.89935	100.7045546	100.5105281	100.3172631	100.1247549	99.93299899	99.74199098	99.5517264	99.36220084
240311A00011	3/11/2024	4.89	7/11/2025	102.36851	101.8329572	101.3030317	100.7786407	100.2596978	99.74611797	99.23781828	98.73471732	98.23673541
240311A00012	3/11/2024	4.8	9/11/2025	103.06494	102.3558756	101.6565958	100.9669026	100.2865995	99.6154952	98.9534037	98.30014393	97.65553965
240311A00014	3/11/2024	5.07	3/11/2025	100.89935	100.7045546	100.5105281	100.3172631	100.1247549	99.93299899	99.74199098	99.5517264	99.36220084
240312A00009	3/12/2024	4.68	3/12/2026	105.10277	103.8827323	102.6911588	101.5270599	100.3894913	99.27755182	98.19038053	97.12715482	96.08708816
240312A00013	3/12/2024	4.68	3/12/2026	105.10277	103.8827323	102.6911588	101.5270599	100.3894913	99.27755182	98.19038053	97.12715482	96.08708816
240312A00015	3/12/2024	4.13	3/12/2029	115.63033	111.2419623	107.0483837	103.0398342	99.2071027	95.5414911	92.03478267	88.67921228	85.4674388
240312A00019	3/12/2024	4.87	9/12/2025	103.12649	102.41442	101.7122222	101.0196875	100.336617	99.66281726	98.99809997	98.34228203	97.69518518
240312A00020	3/12/2024	4.82	11/3/2025	103.727	102.8689227	102.0250904	101.1951468	100.3787504	99.57557114	98.78528947	98.00759608	97.24219149
240312A00028	3/12/2024	4.87	9/12/2025	103.12649	102.41442	101.7122222	101.0196875	100.336617	99.66281726	98.99809997	98.34228203	97.69518518
240313A00007	3/13/2024	4.88	9/12/2025	103.13356	102.4214632	101.719238	101.0266761	100.3435787	99.66975232	99.00500863	98.34916454	97.7020418
240313A00023	3/13/2024	4.68	3/13/2026	105.11409	103.8912411	102.6969885	101.5303327	100.3903231	99.27605257	98.18665469	97.12130161	96.0792019
240314A00008	3/14/2024	4.55	3/10/2027	109.14485	106.8932766	104.6998529	102.5626565	100.4798439	98.4496477	96.47037242	94.54039125	92.65814245
240314A00009	3/14/2024	4.75	3/10/2026	105.16428	103.9493256	102.7625827	101.603079	100.4698825	99.36210335	98.27889167	97.21943498	96.18295636
240314A00012	3/14/2024	4.62	3/13/2026	105.13962	103.9151163	102.7192655	101.5510714	100.4095807	99.29388355	98.20311118	97.1364334	96.09305659
240314A00013	3/14/2024	4.62	3/13/2026	105.13962	103.9151163	102.7192655	101.5510714	100.4095807	99.29388355	98.20311118	97.1364334	96.09305659
240314A00026	3/14/2024	5.25	1/14/2025	100.25627	100.2157479	100.1752799	100.1348617	100.0944931	100.0541741	100.0139047	99.97368456	99.93351377
240314A00027	3/14/2024	5.15	3/14/2025	100.95414	100.7509661	100.5486238	100.3471093	100.1464174	99.94654305	99.74748117	99.54922673	99.35177476
240315A00015	3/15/2024	4.8	3/16/2026	105.29428	104.0620642	102.8588459	101.6836067	100.5353768	99.41323092	98.31628553	97.24369672	96.19465793

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240318A00014	3/18/2024	4.67	3/18/2026	105.25774	104.0187582	102.8090912	101.6277015	100.4736043	99.34585967	98.24357072	97.1658808	96.1119714
240318A00015	3/18/2024	4.47	2/20/2029	116.49625	112.1566515	108.0070731	104.0381191	100.2409127	96.60706451	93.12864322	89.7981475	86.60848022
240318A00020	3/18/2024	4.48	3/19/2029	115.23831	111.2394224	107.4146179	103.7552448	100.2531301	96.90055176	93.69021114	90.61520731	87.66901314
240319A00003	3/19/2024	4.65	3/19/2026	105.24469	104.0030581	102.7908596	101.6070593	100.4506659	99.32073377	98.21636028	97.13668361	96.0808803
240319A00004	3/19/2024	4.47	3/19/2027	109.2501	106.969267	104.7479045	102.5840256	100.4757259	98.42118027	96.41863918	94.46642461	92.56292655
240319A00007	3/19/2024	5.16	3/19/2025	101.02171	100.8045853	100.5884049	100.373166	100.1588622	99.94548752	99.73303579	99.52150097	99.31087707
240319A00011	3/19/2024	5.12	5/1/2025	101.5714	101.2341674	100.8991786	100.5664065	100.235829	99.90742446	99.58117162	99.25704934	98.93503682
240319A00012	3/19/2024	4.77	4/14/2026	105.61779	104.3058224	103.0214995	101.7639512	100.5323412	99.32586814	98.14376403	96.98529226	95.84974606
240319A00014	3/19/2024	4.44	3/19/2029	116.64839	112.2297793	108.0075318	103.9717847	100.1132349	96.42309852	92.89307942	89.51533847	86.28246574
240319A00021	3/19/2024	4.83	9/19/2025	103.24139	102.5088023	101.786645	101.0746994	100.3727493	99.6805851	98.9980026	98.32480343	97.66079465
240320A00010	3/20/2024	4.77	3/20/2036	141.15468	128.8612025	117.8258269	107.9103889	98.99268279	90.96453731	83.73013271	77.20452792	71.3123703
240321A00006	3/21/2024	4.88	9/22/2025	103.2562	102.5160304	101.7865068	101.067401	100.3584904	99.65955911	98.97039697	98.29079987	97.62056929
240321A00007	3/21/2024	4.7	3/23/2026	105.25199	104.0008775	102.7796549	101.5872613	100.4226827	99.2849521	98.17314703	97.08638679	96.02383025
240321A00019	3/21/2024	4.88	9/22/2025	103.2562	102.5160304	101.7865068	101.067401	100.3584904	99.65955911	98.97039697	98.29079987	97.62056929
240321A00025	3/21/2024	5.06	4/17/2025	101.37188	101.0738511	100.7775864	100.4830718	100.1902919	99.89923113	99.60987438	99.3222066	99.03621293
240321A00026	3/21/2024	5.03	5/19/2025	101.77036	101.3829361	100.9984735	100.6169418	100.2383072	99.86253681	99.48959804	99.11945883	98.7520876
240322A00007	3/22/2024	4.67	3/23/2026	105.21485	103.9639795	102.7429955	101.5508367	100.3864891	99.24898573	98.13740427	97.05086412	95.98852424
240322A00008	3/22/2024	4.65	4/22/2026	105.56596	104.233467	102.9267268	101.6450076	100.3876094	99.15385848	97.9431062	96.75472777	95.58812118
240322A00012	3/22/2024	4.92	3/21/2025	101.07276	100.8405295	100.60934	100.3791847	100.1500567	99.92194906	99.69485485	99.46876727	99.24367958
240322A00013	3/22/2024	4.18	3/22/2029	115.93585	111.5138178	107.2890664	103.2516545	99.39220642	95.70187187	92.17229323	88.7955749	85.56425491
240322A00014	3/22/2024	4.51	5/22/2026	105.84107	104.4246556	103.0342026	101.6690546	100.3285792	99.01216497	97.71921997	96.44917142	95.20146478
240322A00015	3/22/2024	4.65	11/21/2025	103.86858	102.9592273	102.065856	101.1880442	100.3253873	99.47749453	98.64398865	97.82450502	97.01869131
240322A00018	3/22/2024	4.34	3/22/2027	108.99158	106.7055364	104.4792826	102.310816	100.1982157	98.13964131	96.13332898	94.17758713	92.27079301
240322A00020	3/22/2024	4.92	3/21/2025	101.07276	100.8405295	100.60934	100.3791847	100.1500567	99.92194906	99.69485485	99.46876727	99.24367958
240322A00021	3/22/2024	4.93	3/21/2025	101.0751	100.8428506	100.6116388	100.3814613	100.1523113	99.92418165	99.69706557	99.47095622	99.24584684
240322A00022	3/22/2024	5.08	3/17/2025	101.04026	100.819592	100.5998678	100.3810795	100.1632209	99.94628618	99.73026927	99.51516431	99.30096546
240322A00029	3/22/2024	4.36	3/22/2027	109.03646	106.7498969	104.5231413	102.3541832	100.2411014	98.18205529	96.17528067	94.21908571	92.3118474
240322A00032	3/22/2024	4.67	3/23/2026	105.21485	103.9639795	102.7429955	101.5508367	100.3864891	99.24898573	98.13740427	97.05086412	95.98852424
240325A00023	3/25/2024	4.71	9/25/2025	103.22631	102.4771975	101.7389855	101.0114395	100.2943293	99.58743109	98.89052762	98.20340764	97.52586586
240325A00024	3/25/2024	4.71	9/25/2025	103.22631	102.4771975	101.7389855	101.0114395	100.2943293	99.58743109	98.89052762	98.20340764	97.52586586
240325A00027	4/1/2024	4.91	10/1/2025	103.38955	102.6239722	101.8697645	101.1266714	100.394448	99.67285697	98.9616677	98.2606562	97.5696049
240325A00028	4/1/2024	4.91	10/1/2025	103.38955	102.6239722	101.8697645	101.1266714	100.394448	99.67285697	98.9616677	98.2606562	97.5696049
240325A00040	3/25/2024	4.46	4/30/2027	109.50366	107.1067552	104.7750097	102.5062922	100.2985573	98.14983735	96.05823967	94.02194288	92.03919395

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240325A00060	3/25/2024	4.57	3/25/2026	105.21389	103.9559878	102.7283001	101.5297432	100.3592875	99.21595144	98.0987987	97.00693566	95.93950902
240326A00013	3/26/2024	4.91	9/26/2025	103.32762	102.5761151	101.8355689	101.1057475	100.3864187	99.67735701	98.97834355	98.28916548	97.60961598
240326A00027	3/26/2024	4.95	3/26/2025	101.0829	100.846064	100.6103424	100.3757309	100.1422214	99.90980636	99.67847795	99.44822853	99.21905053
240326A00042	3/26/2024	4.71	3/26/2026	105.29856	104.0389155	102.8095597	101.6094062	100.4374215	99.2926204	98.17406334	97.08085355	96.01213481
240327A00008	3/27/2024	4.72	10/1/2025	103.30622	102.5401901	101.7855453	101.042034	100.3094109	99.58743801	98.87588394	98.17452416	97.48314049
240327A00014	3/27/2024	4.88	9/24/2025	103.28073	102.5349329	101.7999445	101.0755265	100.3614517	99.65749944	98.96345514	98.27911038	97.6042625
240327A00016	3/27/2024	4.56	3/27/2026	105.22385	103.9604001	102.7274186	101.5238155	100.348548	99.2006226	98.07909147	96.9830503	95.91163571
240327A00025	3/27/2024	4.35	3/26/2027	109.0569	106.759229	104.5218779	102.3428146	100.2200935	98.15185103	96.13630147	94.17173268	92.25650247
240327A00028	3/27/2024	4.4	3/27/2028	112.83271	109.4745939	106.2358985	103.1116421	100.0970825	97.18770676	94.3792181	91.66752408	89.04872525
240328A00016	3/29/2024	4.98	3/28/2025	101.17476	100.922132	100.6707248	100.4205272	100.1715307	99.92372648	99.67710603	99.43166087	99.18738259
240328A00017	3/28/2024	4.6	3/30/2026	105.30779	104.0355391	102.7941652	101.5825494	100.3996294	99.24439292	98.11587497	97.01315483	95.93535374
240328A00018	3/28/2024	4.39	3/29/2027	109.17957	106.8723302	104.6258204	102.4379924	100.3068817	98.23060686	96.20736502	94.23542812	92.3131389
240328A00022	3/28/2024	4.3	3/28/2028	112.79009	109.4233069	106.1764899	103.0446255	100.0229415	97.10689689	94.29216853	91.57463929	88.9503866
240328A00023	3/28/2024	4.22	3/28/2029	116.16309	111.7198874	107.4754948	103.4198659	99.54352382	95.83752517	92.29342589	88.90325041	85.65946264
240328A00024	3/28/2024	5.14	3/24/2025	101.14328	100.9021928	100.6622209	100.4233558	100.1855897	99.94891516	99.71332455	99.47881041	99.24536534
240328A00026	3/28/2024	4.6	3/27/2026	105.27384	104.0100594	102.7767536	101.5728315	100.3972504	99.24901639	98.12718164	97.03084169	95.95913303
240328A00027	3/28/2024	4.39	3/29/2027	109.17957	106.8723302	104.6258204	102.4379924	100.3068817	98.23060686	96.20736502	94.23542812	92.3131389
240328A00031	3/28/2024	4.92	9/24/2025	103.31034	102.5644243	101.8293161	101.1047796	100.3905874	99.68651897	98.99235965	98.307901	97.63294037
240328A00039	3/28/2024	5.14	3/28/2025	101.13484	100.8925734	100.6514664	100.411515	100.172711	99.93504607	99.69851214	99.46310113	99.22880505
240328A00052	3/28/2024	4.34	3/28/2029	116.31185	111.8758422	107.6380139	103.588365	99.71746001	96.01639342	92.47675669	89.09060721	85.85043951
240328A00054	3/28/2024	5.2	2/27/2025	100.82878	100.6605904	100.492936	100.3258182	100.1592342	99.99318176	99.82765818	99.66266101	99.49818773
240328A00055	3/28/2024	5.2	2/27/2025	100.82878	100.6605904	100.492936	100.3258182	100.1592342	99.99318176	99.82765818	99.66266101	99.49818773
240328A00057	3/28/2024	5.2	2/27/2025	100.82878	100.6605904	100.492936	100.3258182	100.1592342	99.99318176	99.82765818	99.66266101	99.49818773
240328A00061	3/28/2024	4.35	3/28/2029	116.35442	111.9175131	107.6788134	103.6283214	99.75660039	96.05474392	92.51434233	89.12745201	85.88656655
240328A00063	3/28/2024	4.47	3/28/2030	120.38438	114.8427548	109.5976499	104.6315008	99.92788077	95.47142306	91.24774629	87.24338552	83.44572862
240328A00064	3/28/2024	4.48	3/28/2031	123.55026	116.9141137	110.6906669	104.8518488	99.37165345	94.22597505	89.39245846	84.85036263	80.58043532
240328A00065	7/16/2024	4.46	7/16/2032	127.31945	119.2617796	111.7944947	104.8707802	98.44778068	92.4862432	86.95019608	81.80665861	77.02537767
240401A00003	4/1/2024	4.81	10/1/2025	103.37462	102.6082978	101.8533693	101.1095773	100.3766765	99.65442863	98.94260246	98.24097334	97.54932306
240401A00004	4/1/2024	4.81	10/1/2025	103.37462	102.6082978	101.8533693	101.1095773	100.3766765	99.65442863	98.94260246	98.24097334	97.54932306
240401A00006	4/1/2024	4.32	4/2/2029	115.69679	111.4846261	107.4601016	103.6137762	99.93673867	96.42057068	93.05731686	89.83945701	86.75988007
240401A00009	4/1/2024	4.79	4/1/2026	105.46972	104.192629	102.9462553	101.7294982	100.5413077	99.38068262	98.24666847	97.13835431	96.05487047
240401A00016	4/1/2024	4.47	4/1/2027	109.39401	107.0760367	104.8192468	102.6215711	100.4810293	98.39572434	96.36383874	94.38363013	92.45342752
240401A00023	4/1/2024	5.17	4/1/2025	101.19461	100.9411488	100.6889556	100.4380217	100.1883376	99.93989405	99.69268187	99.4466919	99.20191512

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240401A00024	4/1/2024	4.97	10/1/2025	103.43513	102.6693623	101.9149658	101.1716857	100.4392773	99.71750326	99.00613279	98.30494194	97.6137131
240401A00027	4/1/2024	4.82	4/1/2026	105.50761	104.2302628	102.983641	101.76664	100.5782095	99.41734845	98.28310216	97.17455959	96.09085098
240402A00015	4/2/2024	4.61	11/15/2027	112.05987	109.0818883	106.1999433	103.4104235	100.7098701	98.094973	95.56256326	93.10960665	90.73319695
240402A00044	4/2/2024	4.83	4/2/2026	105.53374	104.2536116	103.0039762	101.7837439	100.5918803	99.42739951	98.28936073	97.17686603	96.08905785
240403A00002	4/3/2024	5.01	10/3/2025	103.49116	102.7196512	101.959682	101.2109937	100.473336	99.74646605	99.03014818	98.32415348	97.62825962
240403A00006	4/3/2024	4.71	4/3/2026	105.49799	104.2139058	102.9601304	101.7355948	100.5392783	99.37020726	98.22745274	97.11012765	96.01738454
240403A00008	4/3/2024	4.67	4/2/2027	109.67187	107.3516282	105.0926058	102.8927399	100.7500532	98.66265136	96.628719	94.64651549	92.71437125
240403A00010	4/3/2024	4.54	4/5/2027	109.59897	107.2673833	104.9975858	102.7875037	100.6351457	98.53860345	96.4960476	94.50572341	92.56594719
240403A00013	4/3/2024	4.58	4/17/2028	113.64849	110.2182532	106.9118038	103.7239743	100.6498439	97.68472519	94.82415193	92.06386681	89.39981057
240403A00018	4/3/2024	4.67	4/5/2027	109.70671	107.3776427	105.1102254	102.9023866	100.7521416	98.65758853	96.61690373	94.62833811	92.69021329
240403A00022	4/3/2024	4.53	4/3/2029	117.18228	112.7112096	108.4403456	104.3595676	100.4593291	96.73061998	93.16493285	89.75423199	86.49092416
240404A00004	4/4/2024	4.45	4/4/2029	116.85055	112.3837188	108.1171048	104.0405845	100.1446071	96.42015832	92.85872673	89.45227266	86.19319909
240404A00012	4/4/2024	4.46	4/4/2029	116.89331	112.4255719	108.1580789	104.0807082	100.183908	96.45866274	92.89646	89.48925909	86.22946203
240404A00014	4/4/2024	4.78	4/6/2026	105.5239	104.2334177	102.972476	101.7400546	100.5351847	99.35694107	98.20443994	97.07683643	95.97332254
240404A00015	4/4/2024	4.6	4/5/2027	109.5471	107.2198864	104.9542811	102.7482167	100.5997097	98.5068591	96.4678424	94.48091146	92.54438883
240404A00019	6/3/2024	4.55	6/1/2027	110.06287	107.5724303	105.1518978	102.79891	100.511203	98.28660275	96.12302032	94.01844844	91.97095761
240404A00020	6/3/2024	4.55	6/1/2027	110.06287	107.5724303	105.1518978	102.79891	100.511203	98.28660275	96.12302032	94.01844844	91.97095761
240404A00021	4/4/2024	4.57	4/1/2031	121.39975	115.5369213	110.026452	104.8447745	99.97002523	95.38191716	91.0616177	86.99163704	83.15572552
240404A00022	4/4/2024	4.78	4/6/2026	105.5239	104.2334177	102.972476	101.7400546	100.5351847	99.35694107	98.20443994	97.07683643	95.97332254
240404A00023	4/4/2024	4.51	4/24/2028	113.49167	110.044327	106.7220707	103.5196806	100.4321855	97.45484785	94.58315179	91.81279127	89.13965922
240404A00062	4/4/2024	5.13	4/4/2025	101.22354	100.9617445	100.7013037	100.4422112	100.1844565	99.92802923	99.67291914	99.41911605	99.1666099
240405A00004	4/5/2024	4.99	10/6/2025	103.51415	102.7342828	101.9662053	101.2096536	100.4643693	99.73010143	99.00660675	98.29364892	97.59099857
240405A00005	4/5/2024	4.81	4/6/2026	105.5622	104.2714606	103.0102656	101.7775953	100.5724806	99.39399622	98.2412583	97.11342182	96.0096787
240405A00006	4/5/2024	4.63	4/5/2027	109.61551	107.2874963	105.0211144	102.8142895	100.6650377	98.57145743	96.53172583	94.54409431	92.60688503
240405A00017	4/5/2024	4.5	4/5/2027	109.50769	107.1771537	104.9083937	102.6993275	100.5479645	98.45239705	96.41079622	94.42140789	92.48254892
240408A00015	4/8/2024	4.54	4/5/2029	117.2458	112.767757	108.4904478	104.4037278	100.4980219	96.76429262	93.19400634	89.77910225	86.5119631
240408A00018	4/8/2024	4.87	10/6/2025	103.48349	102.7029249	101.9341751	101.1769733	100.4310603	99.69618444	98.97210171	98.25857513	97.55537465
240408A00020	4/8/2024	4.86	4/8/2026	105.65319	104.3566309	103.0891444	101.8497528	100.6375199	99.45155066	98.29098974	97.1550187	96.04285427
240408A00025	4/8/2024	5.03	10/8/2025	103.57085	102.7852219	102.0115621	101.2495942	100.4990539	99.75968514	99.03123925	98.313475	97.60615822
240408A00026	4/8/2024	4.86	4/8/2026	105.65319	104.3566309	103.0891444	101.8497528	100.6375199	99.45155066	98.29098974	97.1550187	96.04285427
240409A00021	4/9/2024	4.83	4/9/2026	105.62823	104.3292246	103.0590589	101.8167656	100.6014249	99.41215765	98.24812273	97.10851535	95.99256491
240409A00035	4/9/2024	4.66	4/9/2027	109.73025	107.3896725	105.1113181	102.8931015	100.7330284	98.62918658	96.57974152	94.58293272	92.63707002
240410A00005	4/10/2024	5.14	4/10/2025	101.32671	101.0478957	100.7706302	100.4948996	100.2206911	99.94799202	99.67678977	99.40707197	99.13882634

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240410A00007	4/10/2024	4.64	4/10/2028	114.04771	110.6238022	107.3228969	104.1398489	101.0697629	98.10797795	95.25005473	92.49176357	89.82907303
240410A00008	4/10/2024	4.56	4/10/2029	117.75147	113.2380342	108.9276617	104.8100731	100.8755661	97.11498184	93.51967215	90.08146729	86.79264696
240412A00010	4/12/2024	5.26	4/11/2025	101.40865	101.1150777	100.8231488	100.5328535	100.2441778	99.95710817	99.67163119	99.38773352	99.105402
240412A00017	4/12/2024	4.84	4/10/2026	105.7593	104.4551753	103.1797223	101.9319961	100.7110907	99.51613923	98.3463126	97.20081692	96.07889182
240415A00018	4/15/2024	5.41	1/15/2025	100.27055	100.2272811	100.1840618	100.1408968	100.097786	100.0547294	100.0117269	99.96877821	99.9258834
240415A00019	4/15/2024	5.41	1/15/2025	100.27055	100.2272811	100.1840618	100.1408968	100.097786	100.0547294	100.0117269	99.96877821	99.9258834
240415A00020	4/15/2024	5.41	1/15/2025	100.27055	100.2272811	100.1840618	100.1408968	100.097786	100.0547294	100.0117269	99.96877821	99.9258834
240415A00060	4/15/2024	5.06	4/15/2026	106.00857	104.691318	103.4015202	102.1383228	100.9009049	99.68848005	98.50029359	97.33562162	96.19376922
240416A00017	4/16/2024	5.17	10/16/2025	103.78601	102.9773807	102.1814078	101.3977965	100.6262598	99.8665195	99.11830595	98.3813576	97.65542083
240416A00018	4/16/2024	5.04	4/16/2026	105.99662	104.6768339	103.3842655	102.1180774	100.8774658	99.66165976	98.46991971	97.30153553	96.15582528
240416A00019	4/16/2024	4.91	4/16/2027	110.38891	108.0209399	105.7163397	103.4730104	101.2889359	99.16218125	97.09088835	95.07327237	93.10761832
240416A00020	4/16/2024	4.85	4/17/2028	114.54405	111.0989278	107.7779971	104.5760737	101.4882233	98.50974581	95.63616237	92.86320387	90.18679966
240416A00030	4/16/2024	4.78	4/16/2027	110.28041	107.909855	105.6028175	103.3571923	101.1709567	99.04216933	96.96896589	94.94955583	92.9822187
240416A00050	4/16/2024	5.14	4/16/2025	101.40628	101.1106922	100.8168465	100.524724	100.2343095	99.94558786	99.65854421	99.37316383	99.08943217
240417A00015	4/17/2024	4.76	4/16/2027	110.23416	107.8641477	105.5576422	103.3125381	101.1268127	98.99852502	96.9258111	94.90688067	92.94001355
240417A00016	4/17/2024	4.63	4/17/2029	118.12869	113.5873221	109.2510184	105.1093875	101.1526207	97.3714575	93.7571518	90.3014405	86.99651407
240417A00017	4/17/2024	4.63	4/17/2029	118.12869	113.5873221	109.2510184	105.1093875	101.1526207	97.3714575	93.7571518	90.3014405	86.99651407
240418A00001	4/18/2024	5.15	4/18/2025	101.43579	101.1346092	100.8352272	100.5376325	100.2418088	99.94774045	99.65541159	99.36480675	99.07591059
240418A00004	4/18/2024	4.87	4/18/2031	126.1716	119.3963309	113.0445656	107.0873806	101.497983	96.2515396	91.32502264	86.69706997	82.34785596
240418A00012	4/18/2024	5.19	10/17/2025	103.81535	103.0038297	102.2050533	101.418723	100.644549	99.88225025	99.13155442	98.39219742	97.66392313
240418A00018	4/18/2024	5.31	4/18/2025	101.45963	101.1586672	100.8595007	100.5621171	100.2665003	99.97263441	99.68050392	99.39009335	99.10138745
240418A00019	4/18/2024	5.05	4/17/2026	106.02377	104.7011825	103.4055795	102.1361414	100.8920812	99.67264379	98.47710422	97.30476625	96.15496085
240419A00026	4/23/2024	5.07	4/1/2026	105.82333	104.5438779	103.2951883	102.0761542	100.8857245	99.72289701	98.58671624	97.47627029	96.39068854
240422A00038	4/22/2024	5.03	10/22/2025	103.81684	102.9906057	102.1775788	101.3774424	100.5898912	99.81462924	99.05136993	98.2998355	97.55975671
240422A00040	4/22/2024	4.85	10/22/2026	108.24617	106.3890016	104.5730806	102.7972089	101.0602367	99.36105618	97.69859945	96.07183667	94.47977447
240422A00041	4/22/2024	4.92	4/22/2026	106.03018	104.692784	103.3812466	102.0948397	100.8328596	99.59462921	98.37949652	97.18683366	96.01603559
240423A00024	4/23/2024	5.33	3/31/2025	101.27803	101.0169089	100.7570841	100.4985429	100.2412757	99.98527324	99.73052624	99.4770255	99.22476195
240423A00025	4/23/2024	5.28	6/30/2025	102.42942	101.924038	101.4236445	100.9281686	100.4375379	99.95168174	99.47053058	98.99401634	98.52207221
240423A00027	4/23/2024	4.93	3/31/2027	110.23789	107.9167354	105.6566548	103.4555879	101.311558	99.22267193	97.18711597	95.20315151	93.26911132
240423A00028	4/23/2024	5.08	3/31/2026	105.82177	104.544936	103.2991023	102.0831447	100.8959959	99.73663872	98.60410364	97.49746568	96.415842
240423A00032	4/23/2024	5.06	4/20/2026	106.07924	104.7484265	103.443891	102.1648718	100.910633	99.68046707	98.4736938	97.28965868	96.12773185
240423A00033	4/23/2024	5.15	4/23/2025	101.50223	101.1870429	100.873825	100.5625571	100.2532208	99.9457982	99.64027139	99.33662283	99.03483516
240423A00034	4/23/2024	4.92	4/19/2027	110.4489	108.0717663	105.7584436	103.5068272	101.3148931	99.1806978	97.10237429	95.07812853	93.10623602

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240424A00008	4/24/2024	5.29	4/24/2025	101.53434	101.2165931	100.900846	100.5870769	100.2752674	99.96539888	99.65745336	99.35141288	99.04725976
240424A00013	4/24/2024	5.13	4/24/2025	101.50919	101.1912105	100.8752365	100.5612453	100.2492182	99.93913686	99.63098297	99.32473853	99.02038578
240424A00014	4/24/2024	5.4	1/24/2025	100.39146	100.322245	100.2531325	100.1841242	100.1152197	100.0464188	99.97772137	99.90912713	99.84063584
240424A00030	4/24/2024	4.89	4/21/2027	110.40377	108.0215243	105.7033676	103.4471875	101.2509555	99.11272276	97.03061699	95.00283841	93.02765664
240425A00010	4/25/2024	4.83	4/26/2027	110.51894	108.117285	105.7806479	103.506894	101.2939732	99.13991476	97.04282405	95.00087879	93.01232601
240425A00021	4/25/2024	4.83	4/26/2027	110.51894	108.117285	105.7806479	103.506894	101.2939732	99.13991476	97.04282405	95.00087879	93.01232601
240425A00028	4/25/2024	4.9	4/25/2028	114.80455	111.3324288	107.9861886	104.7605776	101.6505967	98.65148156	95.75869049	92.96789244	90.27495624
240425A00029	4/25/2024	4.85	4/25/2029	118.79691	114.2291418	109.8681375	105.7034233	101.7251086	97.92385298	94.29083258	90.81770908	87.49660028
240425A00030	4/25/2024	4.85	4/25/2029	118.79691	114.2291418	109.8681375	105.7034233	101.7251086	97.92385298	94.29083258	90.81770908	87.49660028
240425A00032	4/25/2024	4.92	4/25/2030	123.03108	117.3417046	111.9597975	106.8670418	102.0463052	97.48155835	93.15779861	89.06097883	85.17794184
240425A00033	4/25/2024	4.96	4/27/2026	106.15352	104.8021508	103.4754728	102.1728507	100.8936675	99.63732716	98.40325361	97.19089016	95.99969857
240425A00034	4/25/2024	4.96	4/27/2026	106.15352	104.8021508	103.4754728	102.1728507	100.8936675	99.63732716	98.40325361	97.19089016	95.99969857
240426A00011	4/26/2024	5.17	10/27/2025	103.93186	103.0921736	102.2661044	101.4533271	100.6535223	99.86638067	99.09160266	98.32889815	97.57798603
240426A00012	4/26/2024	4.92	4/27/2026	106.10011	104.7491085	103.4227988	102.1205389	100.8417119	99.58572171	98.35199263	97.13996806	95.94910992
240426A00024	4/26/2024	4.79	4/26/2029	117.52469	113.2137815	109.0969153	105.1642257	101.4063995	97.8146449	94.38065914	91.09659901	87.95505287
240426A00025	4/26/2024	5.32	4/21/2025	101.55773	101.2352348	100.9147211	100.5961722	100.27957	99.96489664	99.65213448	99.34126607	99.03227419
240426A00026	4/26/2024	5.05	4/30/2026	106.20716	104.849263	103.5153029	102.2047003	100.9168922	99.6513337	98.40749656	97.18486902	95.98295498
240426A00027	4/26/2024	5.32	4/25/2025	101.61162	101.2773701	100.9452465	100.6152256	100.2872876	99.96141263	99.63758139	99.31577464	98.99597341
240426A00029	4/26/2024	5.19	10/27/2025	103.9485	103.1087309	102.282587	101.4697359	100.6698582	99.88264435	99.10779499	98.34501991	97.59403799
240426A00044	4/26/2024	4.78	4/26/2027	110.40193	108.0016709	105.6663953	103.3939743	101.1823584	99.02957796	96.93373894	94.89301989	92.90566854
240429A00006	4/29/2024	4.86	10/29/2026	108.35184	106.4745587	104.6393291	102.8449599	101.0902972	99.37422747	97.69567562	96.05360351	94.44700838
240429A00007	4/29/2024	5.04	10/29/2025	103.91687	103.0707985	102.2385525	101.4197948	100.614199	99.82144918	99.04123933	98.27327321	97.51726383
240429A00008	4/29/2024	4.93	4/29/2026	106.14149	104.7849496	103.4526343	102.143939	100.8582819	99.59509973	98.35384746	97.13399739	95.93503847
240429A00028	4/29/2024	5.32	4/29/2025	101.61148	101.2797107	100.9501029	100.6226402	100.2973018	99.97406712	99.65291579	99.33382772	99.01678309
240429A00045	4/29/2024	5.1	8/5/2025	102.8496	102.2428098	101.6432049	101.0506545	100.4650344	99.88622324	99.3141026	98.7485567	98.18947247
240429A00047	4/29/2024	5.46	1/6/2025	100.14462	100.1273584	100.1101139	100.0928868	100.075677	100.0584846	100.0413095	100.0241517	100.0070112
240429A00052	4/29/2024	4.91	5/3/2027	110.59622	108.1781326	105.8259058	103.5373812	101.3104855	99.14322519	97.03368256	94.9800125	92.98043932
240430A00016	4/30/2024	5.08	10/30/2025	103.9636	103.1145433	102.2794026	101.4578378	100.6495196	99.85412906	99.07135735	98.30090553	97.54248401
240430A00017	4/30/2024	5.08	10/30/2025	103.9636	103.1145433	102.2794026	101.4578378	100.6495196	99.85412906	99.07135735	98.30090553	97.54248401
240430A00030	4/30/2024	5.44	2/3/2025	100.53144	100.4333288	100.3354117	100.2376832	100.1401428	100.0427898	99.9456237	99.84864404	99.75185023
240430A00031	4/30/2024	5.36	5/1/2025	101.65199	101.3145917	100.9794358	100.6464973	100.3157543	99.98718518	99.66076847	99.33648314	99.01430835
240430A00034	4/30/2024	4.69	4/30/2029	118.53146	113.944446	109.5660295	105.3856171	101.3932079	97.57935724	93.93514245	90.45213165	87.12235419
240430A00035	4/30/2024	4.94	4/30/2027	110.63111	108.2207578	105.8758465	103.5942414	101.3738887	99.21281297	97.10911388	95.06096273	93.06659941

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240430A00038	4/30/2024	5.37	3/28/2025	101.24595	100.9937721	100.7428084	100.49305	100.244488	99.99711394	99.75091931	99.50589569	99.26203473
240430A00075	4/30/2024	5.2	4/30/2025	101.61188	101.2770305	100.9443873	100.6139283	100.2856323	99.95947791	99.63544436	99.313511	98.99365746
240501A00017	5/1/2024	5.13	5/1/2026	106.32745	104.9660052	103.6286034	102.3146596	101.0236075	99.75489871	98.50800202	97.28240259	96.07760143
240501A00054	5/6/2024	4.79	5/4/2029	118.63487	114.0454782	109.6649492	105.4826689	101.4886142	97.67331967	94.02784392	90.54373773	87.21301462
240502A00013	5/2/2024	4.68	5/2/2028	114.43159	110.9391238	107.5741453	104.3313319	101.2056073	98.19213327	95.28629664	92.48369791	89.78014014
240502A00017	5/2/2024	4.81	5/2/2028	114.58442	111.0963764	107.7354794	104.4964235	101.3741521	98.36384528	95.46090697	92.66095386	89.95980418
240502A00030	5/2/2024	4.75	5/2/2029	118.43946	113.8597587	109.4882927	105.3144917	101.3283719	97.52050471	93.88198264	90.40438818	87.07976431
240502A00048	5/2/2024	4.89	5/3/2027	110.54908	108.1315546	105.7798801	103.491896	101.2655296	99.09878749	96.98975239	94.93657948	92.93749336
240503A00007	5/3/2024	5.22	4/28/2025	101.61674	101.274341	100.9341624	100.5961876	100.260395	99.92676379	99.59527303	99.26590222	98.93863112
240503A00009	5/3/2024	4.61	5/3/2029	117.84032	113.2708489	108.9094268	104.7454788	100.7690215	96.97062694	93.34138873	89.87289077	86.55717775
240503A00016	5/3/2024	4.72	5/3/2028	114.29319	110.8073207	107.4486595	104.2118914	101.091953	98.08401813	95.18348522	92.38596565	89.68727286
240503A00021	5/3/2024	5.3	3/3/2025	100.89154	100.7124274	100.5339376	100.3560625	100.1787989	100.0021436	99.82609354	99.6506455	99.47579642
240503A00022	5/3/2024	5.22	5/5/2025	101.65802	101.3095664	100.9635056	100.6198162	100.278474	99.93945485	99.602735	99.26829105	98.93609994
240503A00023	5/3/2024	5.13	8/4/2025	102.80645	102.203172	101.6069898	101.0177813	100.4354247	99.85980054	99.29079253	98.72828686	98.17217236
240503A00024	5/3/2024	5.04	11/3/2025	103.91422	103.052764	102.2105861	101.3797944	100.5625597	99.75855176	98.96745079	98.18894731	97.42274169
240503A00029	10/21/2024	4.85	10/21/2025	103.5915	102.7699227	101.9614253	101.1656974	100.3824374	99.61135358	98.8521629	98.10459122	97.36837274
240503A00035	5/3/2024	4.92	5/1/2026	106.04485	104.6853987	103.3499596	102.0379454	100.7487906	99.48194788	98.23688674	97.01309318	95.81006901
240503A00047	5/3/2024	5.41	1/6/2025	100.14225	100.1250022	100.1077735	100.0905622	100.0733682	100.0561916	100.0390322	100.0218901	100.0047653
240503A00048	5/3/2024	5.35	2/3/2025	100.52125	100.4232487	100.325439	100.2278177	100.1303843	100.0331381	99.93607862	99.83920536	99.74251773
240503A00050	5/3/2024	5.3	3/3/2025	100.89154	100.7124274	100.5339376	100.3560625	100.1787989	100.0021436	99.82609354	99.6506455	99.47579642
240503A00051	5/3/2024	5.26	4/1/2025	101.27088	101.0073695	100.7451839	100.4843101	100.2247382	99.96645851	99.70946147	99.45373755	99.19927731
240503A00052	5/3/2024	5.22	5/1/2025	101.65633	101.3051268	100.9562591	100.6097061	100.2654448	99.92345257	99.58370715	99.24618645	98.91086869
240506A00011	5/6/2024	4.46	5/4/2029	117.56996	112.9928288	108.6245689	104.4545453	100.4727171	96.66960306	93.03624738	89.56418819	86.24542767
240506A00012	5/6/2024	5.04	11/6/2025	103.95309	103.0857042	102.232849	101.3941633	100.5692953	99.7579051	98.95966364	98.17425259	97.40136382
240506A00016	5/6/2024	5.23	5/6/2025	101.67478	101.3235253	100.9747052	100.6282957	100.2842717	99.94260853	99.60328192	99.26626785	98.93154266
240506A00020	5/6/2024	4.73	5/6/2027	110.20602	107.7844709	105.4291064	103.1377524	100.9083191	98.73879704	96.62725361	94.57182951	92.57073562
240506A00031	5/6/2024	5.08	5/6/2025	101.65046	101.2989387	100.9498608	100.6031991	100.2589284	99.9170239	99.57746123	99.24021626	98.9052652
240506A00040	5/6/2024	5.21	5/6/2025	101.66779	101.3165469	100.9677417	100.621347	100.2773377	99.93568925	99.59637724	99.25937769	98.92466695
240507A00017	5/7/2024	4.51	5/8/2028	113.92382	110.4235437	107.0516871	103.802859	100.6719237	97.65398708	94.74438413	91.93866669	89.23259238
240507A00019	5/7/2024	4.51	5/8/2028	113.92382	110.4235437	107.0516871	103.802859	100.6719237	97.65398708	94.74438413	91.93866669	89.23259238
240507A00020	5/7/2024	4.6	5/7/2027	110.10599	107.6789256	105.3183478	103.0220683	100.7879831	98.61406996	96.4983836	94.43905303	92.43427795
240507A00021	5/7/2024	4.77	5/7/2026	106.02507	104.6478382	103.2952071	101.9665748	100.6613557	99.37898293	98.11890771	96.88059829	95.66353952
240507A00034	5/7/2024	4.9	5/7/2026	106.09122	104.7152694	103.3638767	102.0364356	100.7323624	99.4510918	98.19207633	96.95478571	95.73870612

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240507A00042	5/7/2024	4.57	5/7/2029	117.70636	113.1289112	108.7603786	104.5901227	100.6080964	96.80481258	93.17131054	89.69912383	86.38025057
240507A00043	5/7/2024	4.9	5/7/2026	106.09122	104.7152694	103.3638767	102.0364356	100.7323624	99.4510918	98.19207633	96.95478571	95.73870612
240507A00048	5/7/2024	4.73	5/7/2027	110.21738	107.7929825	105.4349146	103.1409953	100.9091283	98.73729779	96.62356516	94.56606545	92.56300419
240507A00049	5/7/2024	4.64	5/8/2028	114.07812	110.5822799	107.214508	103.9694381	100.8419541	97.82718054	94.9204698	92.11739006	89.41371431
240507A00051	5/7/2024	4.57	5/7/2029	117.70636	113.1289112	108.7603786	104.5901227	100.6080964	96.80481258	93.17131054	89.69912383	86.38025057
240508A00005	5/8/2024	4.59	5/8/2031	125.1412	118.3219992	111.9336771	105.9465688	100.3332037	95.06813071	90.12775954	85.49021608	81.13520916
240508A00006	5/8/2024	4.92	5/8/2026	106.13073	104.7518046	103.3975283	102.0672958	100.76052	99.47663258	98.21508312	96.97533852	95.75688223
240509A00005	5/9/2024	4.62	5/9/2029	117.94505	113.3569681	108.97847	104.7988634	100.8080604	96.9965359	93.3552939	89.87583507	86.55012696
240509A00007	5/9/2024	5.22	5/8/2025	101.74743	101.3759855	101.0071711	100.6409554	100.277311	99.91621078	99.55762799	99.20153632	98.84790979
240509A00008	5/9/2024	4.6	5/10/2027	110.1397	107.7040696	105.3353683	103.0313817	100.7899861	98.60913991	96.48687996	94.42131808	92.41063775
240509A00009	5/9/2024	5.33	3/13/2025	101.03093	100.8228769	100.6156631	100.4092871	100.2037438	99.99902805	99.79513479	99.592059	99.3897957
240509A00010	5/9/2024	4.6	5/10/2027	110.1397	107.7040696	105.3353683	103.0313817	100.7899861	98.60913991	96.48687996	94.42131808	92.41063775
240509A00011	5/9/2024	5.37	2/12/2025	100.64437	100.5204185	100.3967755	100.2734397	100.1504099	100.0276848	99.90526337	99.78314441	99.66132676
240509A00022	5/9/2024	4.66	5/9/2028	114.15642	110.6565322	107.2849459	104.0362777	100.9053992	97.88742312	94.97769076	92.17176001	89.46539416
240509A00023	5/9/2024	4.6	5/9/2029	117.85762	113.2714414	108.8947781	104.7169454	100.7278579	96.91799292	93.27835671	89.80045214	86.47624884
240509A00039	5/9/2024	4.87	11/10/2025	103.92697	103.0477165	102.1834012	101.3336438	100.4980781	99.67635	98.86811712	98.0730483	97.29082317
240510A00015	5/10/2024	4.91	11/10/2025	103.9618	103.0823799	102.2179018	101.3679835	100.5322588	99.71037357	98.90198536	98.10676299	97.32438606
240510A00016	5/10/2024	4.91	11/10/2025	103.9618	103.0823799	102.2179018	101.3679835	100.5322588	99.71037357	98.90198536	98.10676299	97.32438606
240510A00020	5/10/2024	4.63	5/10/2027	110.21106	107.7745683	105.4050238	103.100212	100.8580086	98.67637147	96.55333702	94.48701658	92.47559316
240513A00020	5/13/2024	5.23	5/13/2025	101.76779	101.396979	101.0288816	100.6634722	100.3007212	99.94059956	99.58307866	99.22813021	98.87572638
240513A00022	5/13/2024	4.92	5/13/2026	106.19207	104.7992099	103.4314661	102.0882125	100.7688463	99.47278406	98.1994609	96.94832982	95.71886098
240513A00024	5/13/2024	4.74	5/13/2027	110.30938	107.8675907	105.4930122	103.1834207	100.9366794	98.75073435	96.62361066	94.55340904	92.53830237
240513A00025	5/13/2024	4.67	5/12/2028	114.2227	110.7135253	107.3332635	104.0764941	100.9380538	97.91302255	94.9967111	92.18464852	89.4725711
240513A00026	5/13/2024	4.6	5/14/2029	117.90831	113.3074145	108.917284	104.7271437	100.7268214	96.9067144	93.25775453	89.77137589	86.43948439
240513A00041	5/13/2024	5.06	11/13/2025	104.06136	103.1741608	102.3021553	101.4449576	100.6021919	99.77349533	98.95851681	98.15691704	97.36836779
240513A00045	5/17/2024	4.73	6/17/2027	110.68691	108.1440026	105.6736598	103.273393	100.9408124	98.67362442	96.46962723	94.32670663	92.2428319
240514A00049	5/14/2024	4.84	2/5/2026	104.97579	103.8510669	102.7505588	101.6734861	100.6191047	99.58670155	98.57559356	97.5851255	96.61466887
240514A00065	5/14/2024	4.59	5/14/2029	117.86447	113.2645212	108.8753137	104.6860656	100.6866061	96.86733363	93.21918122	89.73358407	86.40244914
240515A00002	5/15/2024	4.4	11/13/2028	115.52794	111.4753507	107.5905162	103.8656062	100.2931961	96.8662444	93.57807115	90.42233745	87.39302623
240515A00003	5/15/2024	4.36	5/15/2029	117.24047	112.6404926	108.2518338	104.0636591	100.0657493	96.24845826	92.60267824	89.11980665	85.7917157
240515A00014	5/15/2024	4.81	11/17/2025	103.96257	103.0638157	102.1806628	101.3127073	100.4595588	99.62083994	98.79618604	97.98524478	97.18767546
240515A00020	5/15/2024	5.45	1/15/2025	100.26533	100.222229	100.1791855	100.1361961	100.0932607	100.0503792	100.0075516	99.96477768	99.92205736
240515A00023	5/15/2024	4.51	5/15/2029	117.52357	112.9283331	108.5438249	104.3592623	100.3644672	96.5498316	92.90628306	89.42525176	86.09864028

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240515A00024	5/15/2024	4.59	5/15/2028	113.98373	110.4704493	107.0865502	103.8265818	100.6853508	97.65790899	94.73954063	91.92575022	89.21225102
240515A00026	5/15/2024	4.64	5/17/2027	110.11536	107.6650639	105.2825062	102.9654324	100.7116806	98.51917298	96.38591204	94.30997709	92.28952074
240515A00027	5/15/2024	4.5	5/19/2027	110.00045	107.5420393	105.1518162	102.8275042	100.5669203	98.36796713	96.22862838	94.14696563	92.12111466
240515A00034	5/15/2024	5.2	5/15/2025	101.78313	101.4067435	101.033159	100.6623431	100.2942648	99.9288937	99.56619995	99.20615399	98.84872678
240515A00035	5/15/2024	4.57	5/15/2028	113.91586	110.403734	107.0209562	103.7620787	100.6219091	97.59550022	94.67813742	91.86532608	89.15278037
240515A00036	5/17/2024	4.63	6/17/2027	110.43883	107.8990385	105.4317451	103.0344611	100.7047986	98.44046594	96.23926325	94.0990781	92.01788147
240515A00037	5/15/2024	4.5	5/15/2029	117.4797	112.8854138	108.5018297	104.3181604	100.3242291	96.51042899	92.86768883	89.38743989	86.06158582
240515A00038	5/15/2024	4.5	5/15/2029	117.4797	112.8854138	108.5018297	104.3181604	100.3242291	96.51042899	92.86768883	89.38743989	86.06158582
240515A00039	5/15/2024	4.57	5/15/2030	121.34873	115.6488486	110.2605356	105.1650566	100.3449002	95.7836904	91.46610763	87.37781531	83.50539192
240515A00041	7/1/2024	4.69	7/1/2027	110.74813	108.1653063	105.657258	103.2213813	100.855178	98.55625225	96.32230564	94.15113263	92.04061613
240515A00043	5/15/2024	5.2	5/15/2025	101.78313	101.4067435	101.033159	100.6623431	100.2942648	99.9288937	99.56619995	99.20615399	98.84872678
240515A00044	5/15/2024	4.97	11/14/2025	103.99504	103.1053994	102.2310423	101.3715802	100.5266339	99.6958373	98.87883623	98.07528841	97.28486282
240515A00048	7/1/2024	4.55	7/2/2029	118.1846	113.4417763	108.922345	104.6145556	100.5073381	96.59026065	92.85348929	89.28775035	85.88429565
240515A00050	7/1/2024	4.55	7/2/2029	118.1846	113.4417763	108.922345	104.6145556	100.5073381	96.59026065	92.85348929	89.28775035	85.88429565
240515A00052	7/1/2024	4.79	7/3/2034	136.20587	125.8377016	116.3921443	107.7808384	99.92436748	92.75130616	86.19737659	80.20469818	74.7211195
240515A00064	5/15/2024	5.45	1/15/2025	100.26533	100.222229	100.1791855	100.1361961	100.0932607	100.0503792	100.0075516	99.96477768	99.92205736
240515A00066	6/28/2024	4.8	6/29/2026	106.59666	105.0713624	103.5759069	102.1094958	100.6713558	99.26074048	97.87692942	96.51922676	95.1869603
240515A00067	6/28/2024	4.8	6/29/2026	106.59666	105.0713624	103.5759069	102.1094958	100.6713558	99.26074048	97.87692942	96.51922676	95.1869603
240515A00068	6/28/2024	4.8	6/29/2026	106.59666	105.0713624	103.5759069	102.1094958	100.6713558	99.26074048	97.87692942	96.51922676	95.1869603
240515A00089	5/15/2024	4.5	5/15/2029	117.4797	112.8854138	108.5018297	104.3181604	100.3242291	96.51042899	92.86768883	89.38743989	86.06158582
240516A00024	5/16/2024	5.29	4/16/2025	101.4768	101.169917	100.8648451	100.5615637	100.2600569	99.96030907	99.66230483	99.36602889	99.07146614
240516A00025	5/17/2024	4.55	10/16/2028	115.48703	111.5215266	107.717025	104.0660907	100.5616742	97.19709025	93.96599656	90.86237431	87.88050968
240516A00026	5/16/2024	5.21	5/20/2025	101.85302	101.4626325	101.0752516	100.6908434	100.3093739	99.93080917	99.55511608	99.18226187	98.81221433
240516A00030	5/16/2024	5	11/17/2025	104.06002	103.1617856	102.2791265	101.4116397	100.5589356	99.72063789	98.89638287	98.0858191	97.28860674
240516A00038	5/16/2024	4.9	5/18/2026	106.22554	104.818942	103.4379197	102.0818345	100.7500676	99.44202021	98.15711296	96.89478487	95.65449269
240517A00011	5/17/2024	4.61	5/17/2028	114.07294	110.5527001	107.1622733	103.8961819	100.7492082	97.71638156	94.79296489	91.97444279	89.25650979
240517A00017	5/17/2024	4.4	5/17/2029	117.43595	112.8262539	108.4285034	104.2318267	100.2259645	96.40123357	92.74849137	89.25910317	85.92491128
240517A00026	5/17/2024	4.68	5/17/2027	110.21118	107.7597237	105.3760264	103.0578373	100.8029938	98.60941747	96.47511007	94.39815029	92.37669011
240517A00033	5/17/2024	5.3	4/17/2025	101.49303	101.1832454	100.875299	100.5691764	100.2648612	99.96233742	99.66158915	99.36260072	99.06535663
240517A00034	5/17/2024	5.02	11/17/2025	104.07782	103.1794947	102.2967509	101.4291803	100.5763935	99.73801399	98.91367819	98.10303457	97.30574329
240517A00038	5/17/2024	5.43	1/22/2025	100.36057	100.2973303	100.2341859	100.1711331	100.1081718	100.0453017	99.98252261	99.91983438	99.85723679
240520A00010	5/20/2024	5.35	3/20/2025	101.1277	100.8995765	100.6724672	100.4463604	100.2212493	99.99712728	99.77398782	99.55182438	99.33063052
240520A00011	5/20/2024	5.25	5/20/2025	101.86856	101.4781359	101.0907189	100.706275	100.3247698	99.94616973	99.57044144	99.19755223	98.82746988

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
240520A00012	5/20/2024	5.18	7/21/2025	102.65361	102.0895413	101.5316935	100.9799651	100.4342555	99.89446621	99.36050117	98.83226618	98.30966914
240520A00016	5/20/2024	4.57	8/16/2027	111.16975	108.4512373	105.8142005	103.2556841	100.7728609	98.36302547	96.02358791	93.75206793	91.54608944
240520A00017	5/20/2024	4.94	4/15/2026	105.85239	104.5362025	103.2474555	101.985291	100.7488887	99.53746246	98.35025823	97.18655252	96.04565082
240520A00018	5/20/2024	4.84	10/15/2026	107.99253	106.1594791	104.3667376	102.6131188	100.8974815	99.2187272	97.57579888	95.96767843	94.39338512
240520A00020	5/20/2024	4.79	1/15/2027	109.00722	106.9119302	104.8681586	102.8742968	100.9288021	99.03019047	97.17703451	95.36796042	93.60164569
240520A00025	5/20/2024	4.75	4/15/2027	110.00743	107.6467459	105.3492021	103.1126975	100.9352216	98.81484445	96.74971329	94.73804862	92.77814079
240520A00027	5/20/2024	4.7	10/15/2027	111.9734	109.0823767	106.2821374	103.5692843	100.9405718	98.39289626	95.92328863	93.52890787	91.20703434
240520A00031	5/20/2024	4.96	9/19/2025	103.33586	102.6028942	101.8803611	101.1680433	100.465725	99.77319601	99.09025236	98.41669556	97.75233261
240520A00040	5/20/2024	4.89	11/20/2025	104.07209	103.1645086	102.2728254	101.3966217	100.5354961	99.68906095	98.85694199	98.03877749	97.23421783
240520A00041	5/20/2024	4.83	11/25/2026	108.47901	106.5278191	104.6218602	102.7598158	100.940412	99.16242051	97.42465629	95.72597592	94.06527584
240521A00005	5/21/2024	5.04	11/21/2025	104.14743	103.2377224	102.3439804	101.4657829	100.6027259	99.75441958	98.92048737	98.1005654	97.29430201
240521A00006	5/21/2024	4.9	5/21/2026	106.26217	104.8471972	103.4580856	102.0941827	100.7548603	99.43951022	98.14754423	96.87839279	95.63150451
240522A00012	5/22/2024	4.67	5/22/2028	114.33104	110.7927776	107.3854286	104.1034457	100.94155	97.89471334	94.95814476	92.12727827	89.39776095
240522A00027	5/22/2024	4.62	5/21/2027	110.31143	107.8437893	105.4446986	103.1118739	100.8431164	98.63631363	96.48943496	94.40052837	92.36771668
240522A00037	5/22/2024	5.11	5/22/2025	101.8717	101.47536	101.0821233	100.6919494	100.3048023	99.92064679	99.53944817	99.16117223	98.78578532
240522A00039	5/22/2024	4.76	5/24/2027	110.48289	108.0090981	105.6041494	103.2657397	100.9916574	98.77977722	96.62805689	94.53453309	92.49731797
240523A00021	5/23/2024	4.96	11/24/2025	104.18683	103.2676188	102.3646988	101.4776346	100.6060103	99.74942466	98.90749024	98.07983275	97.26609061
240523A00025	5/23/2024	4.96	11/18/2025	104.10905	103.2068204	102.3202994	101.4490761	100.5927561	99.75095876	98.92331596	98.10947216	97.30908359
240523A00027	5/23/2024	4.49	5/24/2029	117.90258	113.2635305	108.8384946	104.6164512	100.587006	96.74035079	93.06722688	89.55889186	86.20708804
240523A00033	5/24/2024	4.8	12/24/2027	113.05234	109.9523416	106.9556293	104.0581831	101.2561616	98.5458944	95.92387366	93.38674577	90.93130367
240523A00035	5/24/2024	4.78	11/24/2027	112.65589	109.6439112	106.7297656	103.9097422	101.1802924	98.53802136	95.97968024	93.50215933	91.10248118
240523A00037	5/24/2024	4.78	1/24/2028	113.34137	110.1522724	107.0717067	104.0953486	101.2190723	98.43894141	95.751198	93.15225396	90.63868197
240523A00043	5/24/2024	4.81	2/24/2028	113.80318	110.5175645	107.346099	104.2841325	101.3272343	98.47118187	95.71194945	93.04569768	90.46876362
240524A00001	5/24/2024	4.98	11/24/2025	104.20501	103.2857186	102.3827101	101.4955585	100.6238479	99.767177	98.92515835	98.09741764	97.28359325
240524A00011	5/24/2024	5.02	5/19/2026	106.4052	104.9945901	103.60967	102.2497978	100.9143509	99.60272704	98.31434326	97.04863525	95.80505659
240524A00020	5/24/2024	5.31	5/19/2025	101.92489	101.5216155	101.1214404	100.7243256	100.3302361	99.9391372	99.55099495	99.16577579	98.78344668
240524A00027	5/24/2024	4.82	6/30/2027	111.06399	108.4798548	105.9704576	103.5331919	101.1655637	98.86518062	96.62974776	94.45706271	92.34501129
970806A00017	8/1/1997	7.02	7/23/2026	105.51049	104.6520823	103.8088443	102.9803599	102.1662281	101.366063	100.5794929	99.80615986	99.0457186
970806A00018	8/1/1997	6.7	10/23/2026	106.04109	105.0524622	104.0822787	103.1300187	102.1951834	101.2772929	100.3758851	99.49051516	98.62075444
970806A00059	8/1/1997	8.25	9/22/2025	103.23463	102.8076389	102.38508	101.9668754	101.5529502	101.1432314	100.7376479	100.3361301	99.93861011
ADV1006436	5/28/2024	5.272	6/30/2025	102.42612	101.9207357	101.4203424	100.9248664	100.4342356	99.94837915	99.46722756	98.99071275	98.51876792
ADV1006437	5/28/2024	4.799	6/28/2027	110.98826	108.4106794	105.9074931	103.4761149	101.114067	98.81897274	96.58855171	94.42061542	92.31306279
ADV1006438	5/28/2024	4.644	5/29/2029	118.2557	113.6062669	109.1715294	104.9404212	100.9025013	97.04791812	93.36737308	89.85208682	86.49376745

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1006450	5/28/2024	5.047	5/28/2026	106.55708	105.1209708	103.7114138	102.3277302	100.9692679	99.63539632	98.32550556	97.03900537	95.77532449
ADV1006451	5/28/2024	5.204	11/28/2025	104.3897	103.4594171	102.5457849	101.6483604	100.7667144	99.90043287	99.04911592	98.21237759	97.38984509
ADV1006454	5/28/2024	5.333	5/28/2025	102.01006	101.5970896	101.187465	100.7811491	100.378102	99.97828426	99.58165718	99.18818262	98.79782306
ADV1006457	5/28/2024	5.436	1/28/2025	100.44136	100.3609442	100.2806597	100.200505	100.1204798	100.0405838	99.96081677	99.88117831	99.80166814
ADV1006464	5/28/2024	5.174	5/28/2025	101.97769	101.5644155	101.1544983	100.7478971	100.3445716	99.94448235	99.5475904	99.1538575	98.76324596
ADV1006474	5/28/2024	5.044	5/28/2026	106.55281	105.1167413	103.7072154	102.3235623	100.9651301	99.63128812	98.32142644	97.03495486	95.77130213
ADV1006478	5/28/2024	4.775	5/30/2028	114.77896	111.2111851	107.7760976	104.4680502	101.2816645	98.21181888	95.25363515	92.40246515	89.65387891
ADV1006508	5/29/2024	4.746	9/12/2028	115.85567	111.9777262	108.2538032	104.6768761	101.2402867	97.93771996	94.76318389	91.71099119	88.77574148
ADV1006512	5/29/2024	4.762	7/17/2028	115.27545	111.5654401	107.9980118	104.5668791	101.2660733	98.08992162	95.03303067	92.09027107	89.25676288
ADV1006529	5/29/2024	5.175	5/29/2025	101.99122	101.5751429	101.1624693	100.7531541	100.3471565	99.94443621	99.54495362	99.14866976	98.75554627
ADV1006532	5/29/2024	5.092	2/27/2026	105.43891	104.2523155	103.0925801	101.9587945	100.8500933	99.76564891	98.70467021	97.66639995	96.65011325
ADV1006538	5/29/2024	4.952	11/25/2026	108.71364	106.7601188	104.8518793	102.987596	101.165994	99.38584383	97.64595943	95.94519636	94.28245007
ADV1006544	5/29/2024	5.306	5/29/2025	102.01223	101.5964846	101.1841341	100.7751347	100.3694457	99.96702683	99.5678388	99.17184274	98.77900047
ADV1006559	5/29/2024	4.894	7/30/2027	111.60622	108.9331037	106.3389694	103.8209925	101.3764721	99.00282136	96.69756196	94.45831866	92.28281433
ADV1006562	5/29/2024	4.768	6/29/2029	119.13799	114.3820625	109.8495329	105.5286724	101.4084333	97.4784036	93.72876666	90.15026414	86.73416128
ADV1006570	5/29/2024	4.908	5/28/2027	110.88811	108.398436	105.978294	103.625348	101.3373559	99.11216387	96.94770221	94.84198178	92.79309014
ADV1006582	5/30/2024	5.037	5/29/2026	106.55501	105.11623	103.7040921	102.3179175	100.9570507	99.62085819	98.30872696	97.02006396	95.7542952
ADV1006583	5/30/2024	4.859	5/28/2027	110.76902	108.2808194	105.8621188	103.510583	101.223971	99.00012972	96.83699047	94.73256486	92.68494128
ADV1006589	5/30/2024	5.268	5/30/2025	102.00967	101.5911645	101.1760997	100.7644283	100.3561088	99.95110058	99.54936332	99.15085756	98.7555444
ADV1006595	5/30/2024	5.031	5/29/2026	106.54647	105.1077551	103.6956796	102.3095664	100.94876	99.61262681	98.30055395	97.01194836	95.74623608
ADV1006596	5/30/2024	4.859	5/28/2027	110.76902	108.2808194	105.8621188	103.510583	101.223971	99.00012972	96.83699047	94.73256486	92.68494128
ADV1006598	5/30/2024	4.783	5/30/2028	114.80599	111.2377504	107.8022095	104.4937218	101.3069084	98.23664729	95.27805976	92.42649726	89.67752943
ADV1006599	5/30/2024	4.695	5/30/2029	118.49136	113.8340208	109.3917982	105.1536004	101.108962	97.24800869	93.56142061	90.04039859	86.67663224
ADV1006606	5/30/2024	4.579	5/30/2029	116.59633	112.3873386	108.3693106	104.5323942	100.8672982	97.36526083	94.01801687	90.81776638	87.75714611
ADV1006633	5/31/2024	4.653	5/28/2027	110.47056	107.9818846	105.5628253	103.2110417	100.9242862	98.70039983	96.53730816	94.43301749	92.38561115
ADV1006634	5/31/2024	4.572	5/31/2028	114.38182	110.8108923	107.3731023	104.0627689	100.874485	97.80310232	94.84371739	91.99165867	89.24247425
ADV1006649	5/31/2024	5.135	5/30/2025	102.03162	101.5966498	101.1652672	100.7374286	100.3130905	99.89220995	99.47474499	99.06065418	98.64989678
ADV1006650	5/31/2024	4.854	5/29/2026	106.41038	104.9708132	103.5579343	102.171062	100.8095392	99.47273075	98.16002212	96.87081879	95.60454543
ADV1006651	5/31/2024	5.134	5/30/2025	102.0312	101.5962291	101.1648507	100.7370162	100.3126821	99.89180562	99.47434467	99.06025784	98.64950439
ADV1006652	5/31/2024	4.854	5/29/2026	106.41038	104.9708132	103.5579343	102.171062	100.8095392	99.47273075	98.16002212	96.87081879	95.60454543
ADV1006656	5/31/2024	4.99	5/29/2026	106.4879	105.0496243	103.6379862	102.2523042	100.8919232	99.55620959	98.2445506	96.95635327	95.69104377
ADV1006657	5/31/2024	4.811	5/28/2027	110.65235	108.1655909	105.7483039	103.3981526	101.1128967	98.89038403	96.72854663	94.62539686	92.57902381
ADV1006659	5/31/2024	4.732	5/31/2028	114.6416	111.0734605	107.638142	104.3299867	101.1436068	98.07387181	95.11589532	92.26502154	89.51681336

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1006680	6/3/2024	4.924	6/3/2026	106.46258	105.010753	103.5860523	102.1877791	100.8152605	99.46784621	98.14490732	96.84583552	95.57004226
ADV1006681	6/3/2024	4.731	6/3/2027	110.53314	108.0313499	105.5998976	103.2364059	100.9385924	98.70426512	96.53131859	94.41772952	92.36155329
ADV1006683	6/3/2024	4.637	6/5/2028	114.37597	110.7984823	107.3547196	104.0389632	100.8457675	97.76994801	94.80656785	91.95092417	89.19853593
ADV1006698	6/3/2024	5.407	1/3/2025	100.09326	100.0846799	100.0761068	100.0675416	100.0589843	100.0504349	100.0418934	100.0333598	100.0248341
ADV1006700	6/3/2024	5.362	3/3/2025	100.89564	100.717233	100.5394426	100.3622645	100.1856955	100.0097324	99.83437212	99.65961155	99.48544759
ADV1006703	6/3/2024	5.223	6/3/2025	102.0503	101.6206416	101.1946029	100.7721425	100.3532154	99.93777737	99.52578482	99.11719499	98.7119658
ADV1006721	6/4/2024	5.207	6/4/2025	102.05592	101.6234747	101.1947015	100.769554	100.3479863	99.92995331	99.51541059	99.10431448	98.69662206
ADV1006724	6/4/2024	4.536	6/4/2027	110.26996	107.7644142	105.3294938	102.9628021	100.6620427	98.42501008	96.24958603	94.13373527	92.07550182
ADV1006733	6/4/2024	5.194	6/4/2025	102.05031	101.6178834	101.1891244	100.7639911	100.3424375	99.92441851	99.50988969	99.09880741	98.69112873
ADV1006734	6/4/2024	4.987	12/4/2025	104.27121	103.3250039	102.3960385	101.4838482	100.587981	99.70800067	98.84348672	97.99403322	97.1592484
ADV1006742	6/4/2024	4.992	12/4/2025	104.2759	103.3296697	102.4006808	101.4884675	100.5925774	99.71257452	98.84803829	97.99856279	97.16375624
ADV1006757	6/5/2024	4.883	12/5/2025	104.26178	103.3117903	102.379186	101.4634884	100.5642401	99.6809998	98.81334214	97.96085661	97.12314706
ADV1006759	6/5/2024	4.502	6/5/2029	117.70175	113.0451602	108.6046325	104.3689774	100.3276433	96.47067671	92.7886856	89.27280454	85.91466255
ADV1006762	6/5/2024	5.197	6/5/2025	102.06476	101.6295243	101.1980065	100.7701623	100.3459448	99.92530797	99.50820652	99.09459592	98.68443236
ADV1006779	6/5/2024	5.052	6/5/2025	102.03656	101.6009849	101.1691437	100.7409841	100.3164588	99.89552176	99.4781274	99.06423104	98.65378872
ADV1006780	6/5/2024	4.435	6/1/2029	117.3644	112.7264379	108.3032574	104.0837572	100.05747	96.21452069	92.54558946	89.04187804	85.69507771
ADV1006781	6/5/2024	4.998	10/31/2025	103.84564	102.9952989	102.1589292	101.3361863	100.5267387	99.73026583	98.94645703	98.17501172	97.41563868
ADV1006791	6/6/2024	5.171	6/6/2025	102.06656	101.6285479	101.1943033	100.7637802	100.3369308	99.91370803	99.49406578	99.07795862	98.66534189
ADV1006792	6/6/2024	4.967	12/8/2025	104.30284	103.3454492	102.4057129	101.483145	100.5772772	99.68765824	98.81385274	97.95544094	97.1120178
ADV1006793	6/6/2024	4.835	6/8/2026	106.39567	104.9304161	103.4927898	102.0820747	100.6975794	99.33863608	98.00459887	96.69484338	95.40876563
ADV1006802	6/6/2024	4.287	6/6/2029	117.13524	112.4772171	108.0359022	103.8000522	99.75906244	95.90293065	92.22221971	88.70802274	85.35193057
ADV1006838	6/7/2024	4.941	1/7/2026	104.73443	103.6908901	102.6682417	101.6658627	100.6831537	99.71953856	98.77446372	97.84739669	96.93782527
ADV1006844	6/7/2024	4.772	6/7/2027	110.67927	108.1644407	105.7206134	103.3453758	101.0364142	98.79150689	96.60852043	94.48540499	92.42019081
ADV1006845	6/7/2024	4.686	6/7/2028	114.56652	110.9800894	107.5278942	104.2041832	101.0034825	97.92058103	94.95051708	92.08856451	89.33022042
ADV1006846	6/7/2024	4.579	6/7/2029	118.06439	113.3941775	108.9408207	104.6930735	100.640336	96.77261006	93.08046195	89.55498755	86.18777986
ADV1006860	6/10/2024	4.544	6/10/2030	121.91762	116.115424	110.6345047	105.4552976	100.5595268	95.93011736	91.55110995	87.40758282	83.48557888
ADV1006862	6/10/2024	4.698	6/12/2028	114.66319	111.0610422	107.5942231	104.2569065	101.0435538	97.94889372	94.96790803	92.09581778	89.32807067
ADV1006864	6/10/2024	4.684	6/10/2030	122.2056	116.4114922	110.9376163	105.7644969	100.8739418	96.24895245	91.87363991	87.73314674	83.81357489
ADV1006866	6/10/2024	4.751	6/10/2032	129.17581	121.1481673	113.7005184	106.7874627	100.3673866	94.40213108	88.85668789	83.69892422	78.89933256
ADV1006868	6/10/2024	4.737	6/10/2031	125.80532	118.8961266	112.4280801	106.3704728	100.6948909	95.37503323	90.38654393	85.70685891	81.31506525
ADV1006872	6/10/2024	4.778	6/10/2027	110.7285	108.2046406	105.7522652	103.3689368	101.0523186	98.80016723	96.61032835	94.4807326	92.40939171
ADV1006873	6/10/2024	4.612	6/4/2029	118.17959	113.5152479	109.0670667	104.823862	100.7750863	96.91078987	93.22158342	89.69860386	86.33348199
ADV1006874	6/11/2024	4.614	6/1/2029	118.15677	113.5013341	109.0612676	104.8254472	100.783382	96.92517408	93.24148242	89.7234883	86.36286359

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1006899	6/11/2024	5.276	5/12/2025	101.81411	101.4324757	101.0536277	100.6775341	100.304165	99.93349068	99.56548192	99.20010995	98.83734639
ADV1006901	6/11/2024	5.24	6/11/2025	102.16141	101.7093053	101.2612222	100.8171032	100.3768955	99.94054757	99.5080085	99.07922845	98.65415838
ADV1006912	6/11/2024	4.816	6/11/2026	106.52246	105.0459212	103.5974024	102.1761716	100.7815236	99.41277682	98.06927283	96.75037492	95.45546744
ADV1006931	6/12/2024	4.404	6/12/2029	117.33321	112.6651674	108.2147135	103.970533	99.92195505	96.05891658	92.37192451	88.85202046	85.49074792
ADV1006934	6/12/2024	4.933	12/12/2025	104.319	103.3504753	102.4000181	101.4671243	100.5513092	99.65210612	98.76906488	97.90175168	97.04974808
ADV1006935	6/12/2024	4.796	6/12/2026	106.38648	104.9101247	103.4618102	102.0408023	100.6463946	99.27790468	97.93467302	96.616062	95.32145503
ADV1006936	6/12/2024	4.561	6/14/2027	110.238	107.7090783	105.2521325	102.8646966	100.5444071	98.28899582	96.0962847	93.96418217	91.89067892
ADV1006937	6/12/2024	4.656	6/12/2026	106.30085	104.823206	103.3736582	101.9514697	100.5559321	99.18636122	97.84209563	96.52249605	95.22694429
ADV1006940	6/12/2024	5.018	10/1/2025	103.4757	102.7097705	101.9552105	101.2117682	100.4791988	99.75726477	99.04573558	98.34438715	97.65300186
ADV1006942	6/12/2024	4.955	11/28/2025	104.16394	103.2348103	102.3223213	101.4260249	100.5454923	99.68030969	98.83007755	97.99441024	97.17293524
ADV1006943	6/12/2024	5.018	10/1/2025	103.4757	102.7097705	101.9552105	101.2117682	100.4791988	99.75726477	99.04573558	98.34438715	97.65300186
ADV1006944	6/12/2024	5.018	10/1/2025	103.4757	102.7097705	101.9552105	101.2117682	100.4791988	99.75726477	99.04573558	98.34438715	97.65300186
ADV1006945	6/12/2024	5.018	10/1/2025	103.4757	102.7097705	101.9552105	101.2117682	100.4791988	99.75726477	99.04573558	98.34438715	97.65300186
ADV1006946	6/12/2024	5.143	6/12/2025	102.13073	101.6759426	101.2252198	100.7785091	100.3357571	99.89691101	99.46191917	99.03073078	98.60329594
ADV1006947	6/12/2024	5.018	10/1/2025	103.4757	102.7097705	101.9552105	101.2117682	100.4791988	99.75726477	99.04573558	98.34438715	97.65300186
ADV1006948	6/12/2024	4.955	11/28/2025	104.16394	103.2348103	102.3223213	101.4260249	100.5454923	99.68030969	98.83007755	97.99441024	97.17293524
ADV1006949	6/12/2024	4.955	11/28/2025	104.16394	103.2348103	102.3223213	101.4260249	100.5454923	99.68030969	98.83007755	97.99441024	97.17293524
ADV1006950	6/12/2024	4.952	11/28/2025	104.16117	103.2320611	102.3195857	101.4233027	100.5427833	99.67761378	98.82739457	97.99174003	97.17027764
ADV1006953	6/12/2024	4.55	6/14/2027	110.21079	107.682212	105.2255996	102.8384898	100.5185195	98.26342051	96.07101503	93.93921169	91.86600138
ADV1006954	6/12/2024	4.466	6/12/2028	113.85733	110.2691578	106.8159175	103.4918036	100.2912912	97.20912168	94.24028917	91.38002652	88.62379269
ADV1006955	6/12/2024	4.371	6/12/2029	117.18589	112.5211096	108.0738092	103.8326756	99.78704254	95.92685118	92.24261248	88.72537197	85.36667677
ADV1006956	6/12/2024	4.382	6/12/2029	117.235	112.5691289	108.1207773	103.8786281	99.83201338	95.97087298	92.28571649	88.76758813	85.40803382
ADV1006960	6/12/2024	4.668	6/12/2026	106.31841	104.8406325	103.3909528	101.9686347	100.5729699	99.20327375	97.85888503	96.53916434	95.24349346
ADV1006962	6/12/2024	4.822	6/12/2026	106.4245	104.9478592	103.4992596	102.0779714	100.6832882	99.31452742	97.97102937	96.65215635	95.35729165
ADV1006965	6/17/2024	4.601	7/1/2027	110.52686	107.9468761	105.4416081	103.0084478	100.644899	98.34856781	96.11715769	93.94846482	91.8403738
ADV1006966	6/12/2024	4.44	6/12/2029	117.49393	112.8223213	108.3684273	104.1209229	100.0691323	96.20298793	92.51299217	88.99018246	85.62609827
ADV1006967	6/12/2024	4.643	6/14/2027	110.44082	107.9093547	105.4499232	103.0600557	100.7373874	98.47964815	96.28465863	94.15032574	92.07463879
ADV1006968	6/12/2024	5.195	6/12/2025	102.15429	101.6994385	101.2486529	100.80188	100.359066	99.92015835	99.48510537	99.05385623	98.62636103
ADV1006980	6/13/2024	4.665	6/15/2026	106.35036	104.8639785	103.4060094	101.9757052	100.5723461	99.19523652	97.84370449	96.51710056	95.21479682
ADV1006988	6/13/2024	4.393	6/13/2029	117.29386	112.6238937	108.1717458	103.9260815	99.87621235	96.01205914	92.32411395	88.80340474	85.44146237
ADV1006989	6/13/2024	4.955	12/15/2025	104.3778	103.400711	102.4420014	101.5011554	100.5776759	99.67108425	98.78091928	97.90673642	97.04810707
ADV1006998	6/13/2024	5.149	6/13/2025	102.14647	101.6888681	101.235382	100.7859573	100.3405393	99.89907443	99.46151009	99.02779453	98.59787695
ADV1006999	6/13/2024	4.935	12/15/2025	104.35844	103.3814518	102.4228418	101.4820941	100.5587117	99.65221585	98.76214546	97.88805598	97.02951885

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1007000	6/13/2024	4.793	6/15/2026	106.41879	104.9338402	103.4772461	102.0482613	100.646168	99.27027256	97.91990494	96.59441744	95.29318386
ADV1007001	6/13/2024	4.268	6/13/2029	116.08939	111.6791049	107.4729871	103.4603602	99.63116456	95.97592058	92.48569138	89.15204888	85.96704205
ADV1007016	6/13/2024	4.324	6/13/2028	113.6668	110.0717745	106.6122466	103.2823736	100.0765967	96.98962594	94.01642573	91.15220131	88.39238576
ADV1007017	6/13/2024	4.543	8/4/2027	110.75154	108.0760779	105.4800324	102.9605555	100.5149191	98.14051136	95.83483025	93.5954785	91.4201583
ADV1007019	6/13/2024	4.42	6/14/2027	110.09426	107.5628655	105.1036109	102.7140231	100.3917306	98.13445763	95.94001904	93.80631651	91.73133434
ADV1007020	6/13/2024	4.251	2/2/2029	115.74749	111.4677332	107.373863	103.4567684	99.70783636	96.11892199	92.68232069	89.39074162	86.23728313
ADV1007052	6/14/2024	4.323	6/14/2029	116.99055	112.3245106	107.8763257	103.634643	99.58876451	95.72860273	92.04464212	88.52790393	85.16991302
ADV1007058	6/14/2024	5.144	6/16/2025	102.18299	101.7170011	101.2552804	100.7977686	100.3444082	99.89514259	99.4499164	99.00867509	98.57136515
ADV1007059	6/14/2024	5.015	6/16/2025	102.16032	101.6939592	101.2318717	100.7740022	100.3202927	99.87068655	99.42512811	98.98356264	98.54593643
ADV1007060	6/14/2024	4.361	5/21/2029	116.93011	112.3315517	107.9447516	103.7588282	99.76351831	95.94913551	92.30653512	88.82708101	85.50261477
ADV1007061	6/14/2024	4.959	12/15/2025	104.38144	103.4043286	102.4455933	101.5047221	100.5812178	99.67460188	98.784413	97.91020663	97.05155418
ADV1007063	6/14/2024	4.804	6/15/2026	106.43474	104.9496681	103.4929464	102.0638364	100.6616199	99.28560342	97.93511684	96.60951238	95.30816379
ADV1007066	6/14/2024	4.562	6/14/2027	110.24026	107.7113048	105.2543231	102.8668522	100.5465286	98.29108398	96.09834036	93.9662061	91.89267189
ADV1007068	6/18/2024	4.512	11/1/2027	111.62694	108.6944177	105.8553588	103.1062837	100.4438653	97.86491747	95.3663885	92.94535461	90.59901388
ADV1007075	6/14/2024	4.422	6/14/2027	110.09901	107.5675464	105.1082256	102.7185731	100.3962175	98.13888286	95.944384	93.81062255	91.7355828
ADV1007076	6/14/2024	4.562	6/14/2027	110.24026	107.7113048	105.2543231	102.8668522	100.5465286	98.29108398	96.09834036	93.9662061	91.89267189
ADV1007096	6/17/2024	4.852	6/17/2026	106.52946	105.0380788	103.5752696	102.1402844	100.732397	99.35090628	97.99513474	96.66442762	95.358152
ADV1007098	6/17/2024	4.614	6/17/2027	110.40205	107.8626709	105.3957826	102.9988949	100.6696201	98.40566679	96.20483524	94.06501324	91.98417199
ADV1007099	6/17/2024	4.522	6/20/2028	114.13632	110.5209126	107.0422406	103.6943868	100.47172	97.36888234	94.38077517	91.50254447	88.72956792
ADV1007100	6/17/2024	4.415	6/18/2029	117.44044	112.7532479	108.2852799	104.0250947	99.9619057	96.08554308	92.38641502	88.85547198	85.4841732
ADV1007107	6/17/2024	4.278	6/18/2029	117.2094	112.5160583	108.0426027	103.7775371	99.71002901	95.82986624	92.12741771	88.59359746	85.21983098
ADV1007114	6/17/2024	4.74	6/18/2029	115.17222	111.4611297	107.9108907	104.5133705	101.2609013	98.14624841	95.16258325	92.30345794	89.56278193
ADV1007146	6/18/2024	4.482	6/20/2028	113.99581	110.3828371	106.9065323	103.5609801	100.3405517	97.23989148	94.25390294	91.37773412	88.60676465
ADV1007153	6/20/2024	4.502	2/25/2028	112.83951	109.5663003	106.4070237	103.3570277	100.4118846	97.56737507	94.81947688	92.16435403	89.59834701
ADV1007157	6/18/2024	4.969	12/18/2025	104.42735	103.4417288	102.4748057	101.5260469	100.5949432	99.68100379	98.78375631	97.90274543	97.03753232
ADV1007159	6/18/2024	5.336	3/18/2025	101.09076	100.8693978	100.6489938	100.42954	100.2110302	99.99345827	99.77681813	99.56110372	99.34630903
ADV1007160	6/18/2024	4.638	1/19/2027	108.74201	106.6385957	104.5870828	102.5858463	100.633325	98.72801788	96.86848108	95.05332548	93.28121406
ADV1007162	6/18/2024	5.159	6/18/2025	102.21441	101.7428118	101.2755809	100.8126583	100.3539843	99.89950049	99.44914939	99.00287466	98.56062094
ADV1007163	6/18/2024	5.032	6/18/2025	102.19246	101.7204801	101.252875	100.7895872	100.3305569	99.8757255	99.42503531	98.97842974	98.53585326
ADV1007164	6/18/2024	5.032	6/18/2025	102.19246	101.7204801	101.252875	100.7895872	100.3305569	99.8757255	99.42503531	98.97842974	98.53585326
ADV1007166	6/18/2024	4.965	12/18/2025	104.42344	103.4378456	102.4709426	101.5222039	100.5911199	99.67719994	98.77997167	97.89897976	97.03378538
ADV1007167	6/18/2024	4.805	6/18/2026	106.47148	104.9777746	103.5127364	102.0756142	100.6656782	99.28222371	97.92456997	96.59205909	95.28405511
ADV1007168	6/18/2024	4.556	6/18/2027	110.26842	107.7279323	105.260058	102.8622968	100.5322542	98.26763272	96.06622682	93.92591878	91.84467463

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1007171	6/18/2024	5.265	4/18/2025	101.48858	101.1773599	100.8680058	100.5605	100.254826	99.95096724	99.64890763	99.34863108	99.05012177
ADV1007173	6/18/2024	4.389	6/20/2034	119.07932	113.649571	108.572446	103.8210212	99.37066256	95.19881227	91.28479844	87.60966386	84.15601124
ADV1007195	6/20/2024	5.331	3/20/2025	101.11627	100.8891836	100.6631067	100.4380276	100.2139398	99.99083658	99.76871144	99.54755789	99.3273695
ADV1007196	6/20/2024	5.165	6/20/2025	102.24336	101.7661334	101.2933822	100.8250395	100.3610435	99.90133366	99.44585073	98.99453639	98.54733344
ADV1007211	6/20/2024	4.562	9/27/2027	111.39376	108.5601931	105.8143045	103.1528007	100.5725357	98.07050479	95.64383698	93.28978792	91.00573327
ADV1007218	6/20/2024	4.777	8/20/2026	107.194	105.5226396	103.8856928	102.2821619	100.7110872	99.17154589	97.66265	96.18354482	94.73340734
ADV1007219	6/20/2024	4.682	12/21/2026	108.4983	106.4760873	104.502371	102.5756856	100.6946196	98.8578134	97.06395729	95.31178926	93.60009284
ADV1007220	6/20/2024	4.59	6/21/2027	110.38647	107.8360998	105.3588476	102.9521888	100.6137052	98.34107628	96.13207489	93.98456292	91.89648702
ADV1007227	6/20/2024	4.835	6/22/2026	106.56523	105.059644	103.5831619	102.1350104	100.7144438	99.32074225	97.95321059	96.61117705	95.29399245
ADV1007228	6/20/2024	4.588	6/21/2027	110.38148	107.8311782	105.3539875	102.947389	100.6089643	98.33639295	96.12744795	93.97999117	91.89196931
ADV1007230	6/20/2024	4.494	6/20/2028	114.03772	110.4240117	106.9469954	103.6007516	100.3796505	97.27833615	94.29171118	91.41492305	88.64335082
ADV1007258	6/21/2024	5.154	6/23/2025	102.27724	101.7916315	101.3106467	100.8342211	100.3622897	99.89478922	99.43165722	98.97283254	98.51825518
ADV1007267	6/21/2024	4.49	6/21/2028	114.03434	110.4178899	106.9383394	103.5897559	100.3664968	97.26319425	94.27473983	91.3962706	88.62315595
ADV1007273	6/21/2024	5.309	3/21/2025	101.12451	100.894599	100.6657187	100.4378603	100.2110167	99.98518125	99.76034707	99.53650748	99.31365583
ADV1007274	6/21/2024	5.144	6/23/2025	102.27241	101.7868133	101.3058422	100.82943	100.357512	99.89002483	99.42690603	98.96809448	98.51353015
ADV1007300	6/24/2024	5.141	6/24/2025	102.28326	101.7948574	101.3111362	100.8320247	100.3574571	99.8873689	99.42169669	98.96037837	98.50335296
ADV1007302	6/24/2024	5.252	4/24/2025	101.56303	101.2346402	100.9083235	100.5840566	100.2618201	99.94159514	99.62336276	99.3071044	98.9928017
ADV1007305	6/24/2024	5.316	3/24/2025	101.16592	100.9274116	100.6900024	100.4536882	100.2184613	99.98431431	99.75123965	99.51922997	99.28827793
ADV1007306	6/24/2024	5.14	6/24/2025	102.28277	101.794373	101.3106532	100.831543	100.3569768	99.8868899	99.42121903	98.95990203	98.50287794
ADV1007310	6/24/2024	5.207	5/27/2025	101.98298	101.5584213	101.1372926	100.7195565	100.3051724	99.89409992	99.48629953	99.08173229	98.68035985
ADV1007317	6/25/2024	4.989	12/26/2025	104.54674	103.538444	102.5496834	101.5798954	100.6285366	99.69508434	98.7790356	97.87990602	96.99722907
ADV1007326	6/25/2024	5.271	4/15/2025	101.44883	101.1466274	100.846183	100.5474858	100.2505204	99.95527185	99.66172507	99.36986534	99.07967805
ADV1007329	6/25/2024	4.377	6/25/2029	117.33624	112.6318118	108.148349	103.8742681	99.79865389	95.9112177	92.20225841	88.66262561	85.28368553
ADV1007332	6/25/2024	5.15	6/25/2025	102.29996	101.8087682	101.3223061	100.8405041	100.3632956	99.89061481	99.42239752	98.95858059	98.49910209
ADV1007335	6/25/2024	5.154	6/25/2025	102.30191	101.8107164	101.3242488	100.8424413	100.3652273	99.89254116	99.42431849	98.96049622	98.50101241
ADV1007336	6/25/2024	5.155	6/25/2025	102.3024	101.8112035	101.3247344	100.8429257	100.3657103	99.89302275	99.42479873	98.96097512	98.50148999
ADV1007342	6/25/2024	4.995	12/26/2025	104.55273	103.5443986	102.5556064	101.5857871	100.6343975	99.70091479	98.78483602	97.8856768	97.0029706
ADV1007349	6/25/2024	5.141	6/25/2025	102.29556	101.8043847	101.317935	100.8361454	100.3589491	99.88628052	99.41807534	98.95427043	98.49480387
ADV1007351	6/25/2024	4.983	12/26/2025	104.54076	103.5324893	102.5437605	101.5740037	100.6226757	99.68925389	98.77323519	97.87413524	96.99148755
ADV1007352	6/25/2024	4.827	6/25/2026	106.58898	105.0748628	103.5901712	102.1341157	100.7059391	99.30491012	97.93032281	96.58149516	95.25776819
ADV1007353	6/25/2024	4.575	6/25/2027	110.39249	107.8308782	105.3430163	102.926348	100.578424	98.29689437	96.07950436	93.9240896	91.82857197
ADV1007355	6/25/2024	5.31	3/25/2025	101.17774	100.9363797	100.6961425	100.457025	100.2190192	99.98211733	99.74631178	99.51159488	99.27795908
ADV1007356	6/25/2024	5.141	6/25/2025	102.29556	101.8043847	101.317935	100.8361454	100.3589491	99.88628052	99.41807534	98.95427043	98.49480387

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1007378	6/26/2024	4.529	6/26/2030	121.50067	115.6808862	110.1855117	104.9946484	100.0897264	95.45340446	91.06948258	86.92282092	82.99926513
ADV1007379	6/26/2024	4.573	6/26/2031	124.88415	117.9597765	111.4808797	105.416224	99.7369297	94.41627952	89.42954589	84.75383289	80.36793152
ADV1007380	6/26/2024	4.622	6/28/2032	128.37639	120.328235	112.8657494	105.9427726	99.51702428	93.54975765	88.00544633	82.85150118	78.058013
ADV1007385	6/26/2024	4.302	6/26/2029	117.3933	112.6734195	108.1756552	103.8883398	99.80048344	95.90172835	92.18230922	88.63301609	85.24515979
ADV1007401	6/27/2024	5.164	6/27/2025	102.33292	101.836088	101.3440919	100.8568583	100.3743183	99.89640404	99.42304934	98.95418905	98.48975931
ADV1007406	6/27/2024	4.515	6/27/2028	114.18446	110.5485902	107.0509557	103.6855365	100.4466106	97.32873592	94.32673463	91.43567893	88.65087749
ADV1007409	6/27/2024	5.168	6/27/2025	102.33489	101.8380583	101.3460566	100.8588173	100.3762717	99.89835194	99.42499173	98.95612598	98.49169082
ADV1007410	6/27/2024	4.998	12/29/2025	104.59376	103.5769445	102.5799849	101.602303	100.6433428	99.70256933	98.77946798	97.87354333	96.98431835
ADV1007413	6/27/2024	4.827	6/29/2026	106.63827	105.1126303	103.6168393	102.1500969	100.7116299	99.30069177	97.91656196	96.55854456	95.22596731
ADV1007414	6/27/2024	4.997	12/29/2025	104.59275	103.5759439	102.5789896	101.601313	100.642358	99.7015897	98.77849343	97.8725738	96.98335376
ADV1007421	7/1/2024	4.411	6/18/2029	117.42556	112.7388329	108.271315	104.0115643	99.94879488	96.07283754	92.3741012	88.843537	85.47260475
ADV1007425	6/27/2024	4.798	7/31/2026	106.98344	105.3681332	103.7854305	102.2344148	100.7142002	99.22393326	97.76279203	96.3299843	94.92474634
ADV1007426	6/27/2024	4.473	6/28/2027	110.37833	107.804135	105.3043676	102.8764435	100.5178804	98.22629729	95.99941006	93.83502647	91.73104208
ADV1007429	6/27/2024	4.826	6/29/2026	106.63676	105.1111334	103.615354	102.1486231	100.7101673	99.29924027	97.91512133	96.55711464	95.2245479
ADV1007432	6/27/2024	5.316	3/27/2025	101.20573	100.9586255	100.7127018	100.4679476	100.2243545	99.98191422	99.74061864	99.50045964	99.26142919
ADV1007433	6/27/2024	5.178	6/27/2025	102.33983	101.842984	101.3509681	100.8637149	100.3811553	99.90322168	99.42984773	98.96096832	98.4965196
ADV1007447	6/28/2024	4.576	6/28/2027	110.42826	107.8578087	105.3615874	102.9370208	100.5816356	98.29305969	96.06901699	93.9073231	91.80588095
ADV1007449	6/28/2024	4.391	6/28/2029	117.42828	112.713415	108.2203681	103.9374911	99.8538087	95.95897721	92.24324446	88.69741296	85.31280537
ADV1007452	6/28/2024	4.403	6/28/2029	117.48237	112.7662894	108.2720741	103.9880683	99.90329541	96.00740987	92.29065804	88.74384098	85.35827997
ADV1007460	6/28/2024	5.027	6/30/2025	102.34344	101.8378111	101.3371856	100.8414866	100.3506414	99.86457907	99.38322992	98.90652561	98.43439912
ADV1007484	6/28/2024	5.035	6/30/2025	102.34746	101.8418184	101.3411813	100.8454706	100.354614	99.86854026	99.38717979	98.91046424	98.43832657
ADV1007487	6/28/2024	5.085	9/30/2025	103.51015	102.7468165	101.9947711	101.2537645	100.5235547	99.80390675	99.09459257	98.39539048	97.70608513
ADV1007489	6/28/2024	4.799	8/14/2026	107.15565	105.5009409	103.8801005	102.2921541	100.7361645	99.21122974	97.716482	96.25108547	94.81423511
ADV1007493	6/28/2024	5.371	1/28/2025	100.42825	100.3482291	100.2683369	100.1885739	100.1089397	100.0294342	99.95005692	99.87080762	99.79168599
ADV1007515	7/1/2024	5.041	1/2/2026	104.69329	103.6649529	102.6569086	101.6685615	100.6993373	99.74868415	98.81607095	97.90098686	97.00294015
ADV1007518	7/1/2024	5.194	7/1/2025	102.4062	101.8981361	101.3951176	100.8970715	100.4039245	99.91560432	99.43204048	98.95316364	98.47890586
ADV1007520	7/1/2024	5.064	7/1/2025	102.38099	101.8725095	101.369089	100.8706512	100.3771225	99.88843044	99.40450423	98.9252743	98.45067247
ADV1007522	7/1/2024	4.894	7/1/2026	106.76986	105.2377326	103.7356656	102.2628454	100.8184907	99.4018476	98.01218836	96.64881029	95.3110346
ADV1007536	7/1/2024	5.393	1/2/2025	100.07241	100.0667173	100.0610261	100.0553399	100.0496589	100.043983	100.0383122	100.0326465	100.0269858
ADV1007539	7/1/2024	5.39	1/2/2025	100.07237	100.0666757	100.0609846	100.0552986	100.0496177	100.0439418	100.0382711	100.0326054	100.0269449
ADV1007540	7/1/2024	5.318	4/1/2025	101.2728	101.0113473	100.7512067	100.4923676	100.2348203	99.97855508	99.72356252	99.46983314	99.2173576
ADV1007541	7/1/2024	5.18	7/1/2025	102.39912	101.8910698	101.3880718	100.8900461	100.3969193	99.90861934	99.42507548	98.94621849	98.47198041
ADV1007543	7/1/2024	5.329	3/14/2025	101.03209	100.8227091	100.6141872	100.40652	100.1997019	99.9937279	99.78859262	99.5842909	99.38081758

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1007544	7/1/2024	5.286	4/18/2025	101.49217	101.1814626	100.8726214	100.5656254	100.2604581	99.95710312	99.65554425	99.3557655	99.05775106
ADV1007585	7/2/2024	4.518	7/2/2029	118.04599	113.306384	108.7900643	104.4852803	100.3809666	96.4666956	92.73263732	89.16952199	85.7686051
ADV1007586	7/2/2024	4.518	7/2/2029	118.04599	113.306384	108.7900643	104.4852803	100.3809666	96.4666956	92.73263732	89.16952199	85.7686051
ADV1007610	7/3/2024	4.582	7/6/2027	110.53687	107.9431973	105.4249088	102.9793683	100.6040463	98.29651757	96.05445615	93.87563047	91.75789895
ADV1007622	7/3/2024	4.58	7/6/2027	110.5318	107.9381937	105.4199687	102.9744903	100.5992291	98.29175976	96.04975648	93.8709877	91.75331186
ADV1007623	7/8/2024	4.946	1/8/2026	104.66842	103.6236966	102.5999265	101.5964854	100.612771	99.64820455	98.70222966	97.77431148	96.86393548
ADV1007642	7/5/2024	5.34	2/5/2025	100.53233	100.4294892	100.32686	100.2244426	100.1222363	100.0202404	99.91845423	99.81687718	99.71550857
ADV1007648	7/5/2024	4.367	7/5/2029	116.71498	112.1653644	107.8299549	103.697398	99.75700724	95.99871946	92.41305517	88.99108122	85.72437623
ADV1007651	7/5/2024	4.224	7/5/2029	117.13047	112.3917374	107.8771353	103.5748369	99.47370133	95.56323179	91.83353491	88.27528281	84.87967768
ADV1007656	7/5/2024	5.374	1/6/2025	100.1259	100.1088189	100.0917505	100.0746994	100.0576654	100.0406486	100.0236489	100.0066664	99.98970085
ADV1007657	7/5/2024	5.262	4/7/2025	101.33731	101.0587445	100.7816766	100.5060955	100.2319892	99.95934596	99.68815392	99.41840149	99.15007717
ADV1007658	7/5/2024	5.098	7/7/2025	102.43371	101.9089612	101.3896088	100.8755663	100.3667522	99.86308697	99.36449248	98.87089225	98.38221135
ADV1007660	7/5/2024	4.343	7/6/2029	117.29207	112.5584571	108.0484849	103.7503587	99.65297063	95.7458545	92.01914541	88.4635419	85.07027078
ADV1007673	7/5/2024	4.194	7/5/2029	116.99441	112.2587391	107.7470913	103.4476462	99.34926709	95.44146135	91.7143395	88.15857733	84.76538058
ADV1007693	7/8/2024	4.357	4/9/2029	116.50688	112.0333665	107.7610482	103.6797427	99.77984155	96.05227527	92.48847927	89.08036294	85.82028055
ADV1007695	7/8/2024	4.378	1/10/2029	115.69219	111.4864325	107.4609265	103.6069527	99.91626277	96.38105042	92.99392509	89.74788762	86.63630722
ADV1007696	7/8/2024	4.411	9/13/2028	114.6237	110.7658786	107.0616081	103.5038789	100.0860437	96.80179839	93.64516182	90.6104572	87.69229454
ADV1007702	7/8/2024	4.744	1/8/2026	104.54271	103.4974774	102.4732307	101.469345	100.4852164	99.52026465	98.57393217	97.64568277	96.73500071
ADV1007703	7/8/2024	4.366	7/8/2027	110.21985	107.620307	105.0965449	102.6459058	100.2658398	97.95390239	95.70774931	93.52513192	91.40389245
ADV1007706	7/8/2024	4.973	7/8/2025	102.42253	101.8945338	101.3720005	100.8548451	100.3429847	99.83633794	99.33482529	98.83836877	98.34689195
ADV1007707	7/8/2024	4.973	7/8/2025	102.42253	101.8945338	101.3720005	100.8548451	100.3429847	99.83633794	99.33482529	98.83836877	98.34689195
ADV1007720	7/9/2024	4.76	1/9/2026	104.57097	103.5228228	102.495778	101.4892025	100.5024877	99.53504886	98.58632392	97.65577267	96.74287547
ADV1007722	7/9/2024	4.984	7/9/2025	102.44082	101.9100039	101.3847047	100.8648406	100.3503274	99.84108251	99.33702508	98.83807589	98.34415734
ADV1007723	7/9/2024	4.593	7/9/2026	106.53027	104.9762179	103.4529268	101.9595519	100.4952828	99.05933821	97.65096439	96.26943386	94.91404439
ADV1007732	7/9/2024	4.894	1/9/2026	104.62646	103.5792151	102.5530338	101.5472844	100.5613598	99.59467684	98.64667501	97.71681545	96.80457985
ADV1007736	7/9/2024	4.517	7/9/2027	110.40335	107.8031706	105.2787497	102.8274237	100.4466444	98.1339688	95.88705423	93.70365346	91.58161012
ADV1007750	7/10/2024	5.273	4/10/2025	101.37932	101.0922392	100.8067521	100.5228465	100.2405089	99.95972648	99.68048623	99.40277541	99.1265814
ADV1007757	7/10/2024	4.96	7/10/2025	102.4406	101.9070085	101.3789998	100.8564832	100.3393731	99.8275857	99.32103881	98.819652	98.32334645
ADV1007760	7/10/2024	5.365	1/14/2025	100.23372	100.1938467	100.154022	100.1142464	100.0745196	100.0348416	99.99521238	99.95563172	99.91609958
ADV1007761	7/10/2024	4.57	7/10/2026	106.50643	104.9498539	103.4241147	101.9283681	100.4618003	99.02362698	97.61309121	96.22946274	94.8720366
ADV1007763	7/10/2024	5.37	1/10/2025	100.17927	100.1508055	100.122369	100.0939643	100.0655914	100.0372503	100.0089408	99.98066288	99.95241653
ADV1007764	7/10/2024	5.327	2/12/2025	100.62423	100.5014116	100.3788972	100.2566872	100.1347803	100.0131755	99.89187147	99.77086716	99.65016142
ADV1007765	7/10/2024	5.275	4/9/2025	101.36653	101.0823363	100.7997095	100.5186321	100.2390914	99.96107457	99.68456921	99.40956292	99.13604345

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1007766	7/10/2024	5.108	7/9/2025	102.49091	101.9417854	101.3983853	100.8606254	100.3284179	99.80167713	99.28031921	98.76426183	98.2534244
ADV1007770	7/10/2024	4.353	7/12/2027	110.22881	107.6182484	105.0840144	102.6234192	100.2338862	97.91294559	95.65822934	93.46746635	91.33847776
ADV1007771	7/10/2024	4.96	7/10/2025	102.4406	101.9070085	101.3789998	100.8564832	100.3393731	99.8275857	99.32103881	98.819652	98.32334645
ADV1007784	7/11/2024	5.301	1/15/2025	100.24397	100.2012625	100.1586094	100.1160099	100.073464	100.0309715	99.98853239	99.94614646	99.90381365
ADV1007786	7/11/2024	4.084	7/11/2029	116.54804	111.8060381	107.2891357	102.9854106	98.88364027	94.97325315	91.24428748	87.68735268	84.29359354
ADV1007787	7/11/2024	4.357	7/12/2027	110.02692	107.4234327	104.8959928	102.4419264	100.0586684	97.74376024	95.49484443	93.30965987	91.18603722
ADV1007788	7/11/2024	4.292	7/11/2028	113.54329	109.8804626	106.3582155	102.9703711	99.71105844	96.57469656	93.55597839	90.64985575	87.85152511
ADV1007789	7/11/2024	4.221	7/11/2029	116.78359	112.0478072	107.5364433	103.2376323	99.14019941	95.23361726	91.50796487	87.95388947	84.56257086
ADV1007791	7/11/2024	4.996	7/11/2025	102.42902	101.893225	101.3630536	100.8384191	100.3192349	99.80541616	99.29687971	98.79354418	98.29532983
ADV1007793	7/11/2024	4.233	5/9/2029	116.25681	111.705415	107.3623668	103.217032	99.25937141	95.47990673	91.86968609	88.4202523	85.12361304
ADV1007797	7/11/2024	4.612	6/30/2026	106.32856	104.8026016	103.3065574	101.8396216	100.4010179	98.9899974	97.60583678	96.24783771	94.91532559
ADV1007801	7/11/2024	4.829	11/28/2025	104.04789	103.119343	102.2074243	101.3116912	100.4317149	99.56708174	98.71739239	97.88226132	97.06131615
ADV1007810	7/12/2024	4.851	7/14/2025	102.43156	101.8869356	101.3481273	100.8150402	100.2875831	99.76566701	99.24920458	98.73811038	98.23230076
ADV1007814	7/12/2024	4.764	1/12/2026	104.52584	103.4709138	102.4373731	101.424575	100.4318984	99.45874679	98.50454693	97.56874798	96.65082025
ADV1007817	7/12/2024	4.381	7/9/2027	110.05681	107.4610904	104.9410255	102.4939581	100.1173428	97.80873969	95.56580878	93.3863055	91.26807603
ADV1007827	7/12/2024	4.093	7/12/2029	116.59798	111.8521355	107.3316573	103.0246121	98.91975887	95.00650929	91.27488585	87.71548346	84.31943347
ADV1007828	7/12/2024	4.233	7/12/2029	116.84723	112.1072972	107.5920677	103.2896562	99.18886896	95.2791614	91.55059654	87.99380677	84.59995821
ADV1007829	7/12/2024	4.234	7/12/2029	116.85178	112.1117403	107.5964119	103.2939048	99.19302521	95.28322843	91.55457733	87.99770419	84.60377498
ADV1007830	7/12/2024	4.234	7/12/2029	116.85178	112.1117403	107.5964119	103.2939048	99.19302521	95.28322843	91.55457733	87.99770419	84.60377498
ADV1007834	7/12/2024	4.965	7/14/2025	102.44989	101.9057408	101.3673908	100.8347501	100.3077281	99.78623581	99.27018636	98.75949458	98.25407709
ADV1007838	7/12/2024	5.308	1/13/2025	100.21708	100.1800807	100.1431253	100.1062144	100.0693478	100.0325254	99.99574729	99.95901323	99.92232319
ADV1007857	7/15/2024	4.945	7/15/2025	102.45102	101.9040929	101.3630284	100.827731	100.2981085	99.77407083	99.25552969	98.74239865	98.23459312
ADV1007865	7/15/2024	4.703	1/15/2026	104.49624	103.4332283	102.3919416	101.3717151	100.3719133	99.39192603	98.43116733	97.48907407	96.56510499
ADV1007874	7/15/2024	4.332	7/15/2027	109.99369	107.3824774	104.8477095	102.386691	99.996837	97.67567016	95.42081551	93.22999543	91.10102497
ADV1007889	7/15/2024	4.252	3/12/2027	108.6927	106.4371703	104.2400951	102.0995357	100.0136329	97.98060461	95.99874156	94.06640388	92.18201756
ADV1007906	7/16/2024	4.081	7/16/2029	116.57861	111.8222999	107.2922934	102.9765791	98.86384961	94.94345534	91.2053623	87.64011329	84.23879161
ADV1007913	7/16/2024	4.594	1/16/2026	104.47741	103.4105201	102.365509	101.3417068	100.3384712	99.35518591	98.39125894	97.44612155	96.51922714
ADV1007923	7/16/2024	4.075	7/16/2029	116.55122	111.7955315	107.2661234	102.950987	98.83881577	94.91896085	91.18138907	87.61664401	84.21580968
ADV1007924	7/16/2024	4.075	7/16/2029	116.55122	111.7955315	107.2661234	102.950987	98.83881577	94.91896085	91.18138907	87.61664401	84.21580968
ADV1007925	7/16/2024	4.545	7/16/2026	106.40987	104.8398945	103.3011695	101.7928318	100.3140504	98.86402376	97.44197936	96.04717181	94.67888186
ADV1007926	7/16/2024	4.942	7/16/2025	102.46157	101.9118445	101.3680436	100.8300678	100.2978235	99.77121927	99.25016547	98.73457444	98.22436034
ADV1007927	7/16/2024	4.54	7/16/2026	106.40209	104.8321766	103.2935134	101.7852365	100.3065147	98.85654676	97.43456004	96.03980921	94.67157503
ADV1007928	7/16/2024	4.295	1/18/2028	111.78725	108.6385277	105.5967477	102.6576635	99.81722282	97.07155787	94.41697593	91.84995022	89.36711138

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1007937	7/16/2024	5.265	1/16/2025	100.25438	100.2088641	100.1634041	100.1180026	100.0726593	100.0273743	99.98214735	99.93697837	99.89186724
ADV1007938	7/16/2024	4.927	7/16/2025	102.45336	101.9036632	101.359888	100.8219376	100.2897186	99.76313936	99.24211041	98.72654405	98.21635443
ADV1007939	7/16/2024	4.527	7/16/2026	106.38186	104.81211	103.2736075	101.7654885	100.2869219	98.83710656	97.41526981	96.02066644	94.65257727
ADV1007941	7/16/2024	4.12	7/17/2028	113.28811	109.6058448	106.0656209	102.6611692	99.38653026	96.23604024	93.20431495	90.28623411	87.47692695
ADV1007944	7/16/2024	4.512	7/16/2026	106.35852	104.7889562	103.2506392	101.7427024	100.2643149	98.81467556	97.39301186	95.99857862	94.63065677
ADV1007957	7/17/2024	4.221	7/19/2027	109.96211	107.3359184	104.7869357	102.3124201	99.90974976	97.57641281	95.3100015	93.10820736	90.96881633
ADV1007971	7/17/2024	4.949	7/17/2025	102.4776	101.9250612	101.3785071	100.8378364	100.302954	99.77376708	99.25018482	98.73211823	98.21948022
ADV1008000	7/23/2024	4.195	7/2/2029	116.58236	111.8754766	107.3907465	103.1164715	99.04163196	95.15584423	91.44931989	87.91282868	84.53766369
ADV1008001	7/18/2024	4.526	7/20/2026	106.42488	104.8439511	103.2946138	101.7759878	100.2872279	98.8275196	97.39607775	95.99214505	94.61499095
ADV1008005	7/18/2024	5.26	1/21/2025	100.32047	100.2607121	100.2010379	100.1414487	100.0819442	100.0225243	99.96318883	99.90393757	99.84477035
ADV1008006	7/18/2024	4.957	7/18/2025	102.49355	101.9382178	101.3889277	100.8455788	100.308075	99.77632195	99.25022753	98.72970147	98.21465545
ADV1008009	7/18/2024	4.713	1/20/2026	104.56329	103.486175	102.4313511	101.3981279	100.3858455	99.39387067	98.42159557	97.46843639	96.53383221
ADV1008011	7/18/2024	4.532	7/20/2026	106.43428	104.8532764	103.3038639	101.785164	100.2963315	98.83655192	97.40503992	96.00103826	94.62381634
ADV1008031	7/19/2024	4.252	7/19/2027	110.04107	107.4138486	104.8638549	102.3883507	99.98471382	97.65043151	95.38309546	93.18039657	91.04012021
ADV1008032	7/19/2024	4.839	7/21/2025	102.50967	101.9454357	101.3874358	100.8355658	100.2897247	99.74981397	99.21573696	98.68739927	98.16470849
ADV1008041	7/19/2024	4.968	7/21/2025	102.53705	101.9732784	101.4157283	100.8642958	100.3188803	99.77938346	99.24570904	98.71776293	98.19545303
ADV1008042	7/19/2024	4.77	1/20/2026	104.62412	103.5466573	102.4914913	101.4579309	100.4453161	99.45301351	98.48041525	97.52693737	96.59201887
ADV1008099	7/23/2024	4.563	7/23/2026	106.51695	104.9271403	103.3691916	101.84221	100.3453398	98.87775593	97.43866357	96.02729616	94.64291436
ADV1008100	7/23/2024	4.955	7/23/2025	102.55419	101.9848438	101.4218376	100.8650667	100.3144274	99.7698189	99.23114213	98.6983004	98.17119905
ADV1008102	7/23/2024	4.373	7/23/2027	110.18037	107.544992	104.9872099	102.5042626	100.0935097	97.75242135	95.47857332	93.26964145	91.12339697
ADV1008103	7/23/2024	4.746	1/23/2026	104.63302	103.5472688	102.4841495	101.4429596	100.4230242	99.42369611	98.44435422	97.48440208	96.54326684
ADV1008104	7/23/2024	4.563	7/23/2026	106.51695	104.9271403	103.3691916	101.84221	100.3453398	98.87775593	97.43866357	96.02729616	94.64291436
ADV1008109	7/23/2024	4.252	7/23/2029	115.96074	111.491259	107.2322893	103.1726285	99.30173584	95.60968939	92.08714596	88.72530408	85.51586936
ADV1008134	7/24/2024	4.357	7/24/2026	106.33171	104.7385477	103.1773817	101.6473124	100.147478	98.67704842	97.23522376	95.8212327	94.43433136
ADV1008145	7/24/2024	4.328	7/26/2027	110.09496	107.4525649	104.8881486	102.3989313	99.98225289	97.63556532	95.35642687	93.14249707	90.99153174
ADV1008146	7/24/2024	4.302	11/29/2027	111.31265	108.30644	105.3984549	102.5849504	99.86234647	97.22721925	94.67629281	92.20643209	89.81463598
ADV1008164	7/25/2024	4.773	10/24/2025	103.56608	102.7363005	101.9198631	101.1164463	100.3257401	99.54744382	98.78126662	98.02692648	97.28415014
ADV1008166	7/25/2024	4.782	7/25/2025	102.52512	101.9498045	101.3809592	100.8184792	100.2622579	99.71219119	99.16817698	98.63011564	98.09790963
ADV1008181	7/25/2024	4.945	6/26/2025	102.24027	101.7310526	101.2267877	100.7273988	100.2328154	99.74296855	99.25779043	98.77721458	98.30117577
ADV1008182	7/25/2024	4.912	7/25/2025	102.5536	101.9787541	101.410367	100.8483325	100.2925443	99.74289864	99.19929383	98.66163053	98.12981152
ADV1008183	7/25/2024	4.912	7/25/2025	102.5536	101.9787541	101.410367	100.8483325	100.2925443	99.74289864	99.19929383	98.66163053	98.12981152
ADV1008184	7/25/2024	4.912	7/25/2025	102.5536	101.9787541	101.410367	100.8483325	100.2925443	99.74289864	99.19929383	98.66163053	98.12981152
ADV1008185	7/25/2024	4.918	7/25/2025	102.55703	101.9821724	101.4137741	100.8517286	100.2959296	99.74627306	99.20265751	98.66498354	98.13315396

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1008186	7/25/2024	4.918	7/25/2025	102.55703	101.9821724	101.4137741	100.8517286	100.2959296	99.74627306	99.20265751	98.66498354	98.13315396
ADV1008192	7/25/2024	4.92	7/25/2025	102.55818	101.9833118	101.4149099	100.8528607	100.297058	99.74739786	99.20377873	98.66610121	98.13426811
ADV1008195	7/25/2024	4.41	7/26/2027	110.3066	107.6614326	105.0943053	102.6024381	100.1831691	97.83394845	95.5523326	93.33597947	91.18264328
ADV1008196	7/25/2024	4.232	7/26/2027	110.06034	107.413814	104.8454813	102.3525533	99.93235996	97.58234345	95.30005308	93.08313983	90.92935143
ADV1008198	7/25/2024	4.133	7/25/2029	116.89582	112.1078031	107.5484732	103.2056477	99.06785717	95.12430218	91.36481045	87.77979695	84.36022677
ADV1008199	7/25/2024	4.931	7/25/2025	102.56446	101.9895786	101.4211564	100.859087	100.3032643	99.7535843	99.20994547	98.67224841	98.14039591
ADV1008208	7/26/2024	4.678	1/26/2026	104.59344	103.4996896	102.4289115	101.380383	100.3534147	99.34734532	98.36154063	97.39539173	96.44831394
ADV1008214	7/26/2024	4.775	7/28/2025	102.5576	101.9738765	101.3968078	100.8262835	100.2621926	99.70442663	99.15287948	98.60744743	98.06802905
ADV1008216	7/26/2024	4.284	7/26/2029	116.17999	111.5925571	107.2216034	103.0555827	99.08362828	95.29551348	91.68160953	88.23284731	84.94068158
ADV1008218	7/26/2024	4.53	7/26/2033	130.98421	121.7692498	113.306812	105.5306651	98.38075533	91.80260187	85.74675271	80.16829556	75.02641875
ADV1008219	7/26/2024	4.588	7/26/2035	137.40344	125.9377939	115.5905409	106.2446348	97.79592393	90.15166685	83.22922591	76.95491649	71.26299273
ADV1008220	7/26/2024	4.464	7/26/2032	127.43181	119.3432992	111.8491355	104.9020577	98.45881279	92.47979368	86.92871364	81.77231147	76.9800843
ADV1008221	7/26/2024	4.2	7/26/2029	116.82112	112.0437701	107.4944158	103.1609125	99.03183294	95.09641693	91.34452881	87.76661772	84.35368064
ADV1008223	7/26/2024	4.252	7/26/2028	113.54548	109.8418329	106.2815705	102.8583344	99.56608544	96.39908587	93.3518824	90.41929042	87.59637911
ADV1008224	7/26/2024	4.252	7/26/2028	113.54548	109.8418329	106.2815705	102.8583344	99.56608544	96.39908587	93.3518824	90.41929042	87.59637911
ADV1008225	7/26/2024	4.588	7/26/2035	137.40344	125.9377939	115.5905409	106.2446348	97.79592393	90.15166685	83.22922591	76.95491649	71.26299273
ADV1008226	7/26/2024	4.2	7/26/2029	116.82112	112.0437701	107.4944158	103.1609125	99.03183294	95.09641693	91.34452881	87.76661772	84.35368064
ADV1008228	7/26/2024	4.498	7/26/2034	125.50438	117.9484938	110.9960911	104.5927756	98.68945938	93.24180879	88.20975445	83.55705463	79.25090559
ADV1008229	7/26/2024	4.903	7/28/2025	102.58534	102.0020995	101.4254998	100.8554315	100.2917839	99.73444889	99.18332068	98.63829592	98.0992735
ADV1008231	7/26/2024	4.099	11/26/2029	117.84307	112.6906368	107.7997669	103.1557839	98.7449069	94.55419424	90.57148823	86.78536374	83.18508035
ADV1008232	7/26/2024	4.673	1/26/2026	104.58802	103.4943035	102.4235563	101.3750582	100.3481199	99.34208007	98.35630454	97.39018438	96.44313493
ADV1008233	7/26/2024	4.475	7/27/2026	106.42256	104.8227012	103.2550296	101.7186377	100.2126557	98.7362459	97.28860091	95.86894259	94.47652054
ADV1008245	7/29/2024	4.292	7/29/2027	110.0314	107.3816938	104.8103618	102.3146013	99.89173205	97.53918729	95.25450766	93.0353361	90.87941279
ADV1008247	7/29/2024	4.465	7/29/2026	106.42875	104.8234423	103.2504845	101.7089709	100.1980247	98.71680122	97.26448695	95.84029761	94.44347706
ADV1008249	7/29/2024	4.664	1/29/2026	104.61211	103.5100223	102.4312449	101.3750437	100.3407145	99.32758185	98.33499818	97.36234187	96.40901622
ADV1008250	7/29/2024	4.466	7/29/2026	106.43035	104.8250206	103.2520499	101.7105236	100.1995649	98.71832921	97.26600289	95.84180171	94.44496952
ADV1008251	7/29/2024	4.752	7/29/2026	103.60738	102.7638923	101.935318	101.1212451	100.3212795	99.53504173	98.76216641	98.00230145	97.2551075
ADV1008257	7/29/2024	4.184	7/30/2029	116.78338	111.9960595	107.4376481	103.0959346	98.9594254	95.01729925	91.2593642	87.6760175	84.25820831
ADV1008260	7/29/2024	4.444	7/29/2032	127.30573	119.2138748	111.7172378	104.7684487	98.32415332	92.34465528	86.79358906	81.637624	76.84619598
ADV1008263	7/31/2024	4.308	5/25/2027	109.40157	106.9383169	104.5437665	102.2156144	99.95165004	97.74975003	95.6078736	93.52405909	91.49642033
ADV1008275	7/30/2024	4.123	7/31/2028	113.43169	109.7087197	106.1305012	102.6905913	99.38286906	96.20152046	93.14102106	90.19611979	87.36182376
ADV1008282	7/30/2024	5.22	1/31/2025	100.44756	100.3594141	100.2714135	100.1835626	100.0958609	100.008308	99.92090369	99.83364747	99.74653903
ADV1008283	11/1/2024	4.589	10/31/2025	103.50134	102.6525881	101.8177861	100.9965931	100.1886781	99.39372056	98.61141041	97.84144728	97.08354028

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1008284	7/30/2024	5.177	2/14/2025	100.62678	100.4986934	100.3709403	100.2435182	100.1164259	99.98966193	99.8632251	99.73711407	99.61132756
ADV1008287	7/30/2024	5.062	3/31/2025	101.18716	100.9300979	100.6743106	100.4197868	100.1665174	99.91449293	99.66370445	99.41414288	99.16579927
ADV1008320	7/31/2024	4.126	7/30/2027	109.82483	107.1705337	104.5949102	102.0951467	99.66854751	97.31253105	95.02462417	92.80245679	90.6437568
ADV1008323	7/31/2024	4.191	7/31/2028	113.37381	109.6596829	106.0897949	102.6577288	99.35739171	96.18299592	93.1290417	90.19030121	87.36180333
ADV1008348	8/1/2024	4.031	2/1/2029	114.48649	110.2452734	106.1882191	102.3063056	98.591007	95.03426049	91.62843838	88.36632221	85.24107833
ADV1008352	8/1/2024	4.511	2/2/2026	104.49418	103.381855	102.2932909	101.2277349	100.184462	99.16277778	98.16201609	97.18153811	96.22073079
ADV1008361	8/1/2024	4.307	8/3/2026	106.23672	104.6195287	103.0350952	101.4824933	99.96082899	98.46924161	97.00690217	95.57301191	94.16680092
ADV1008370	8/1/2024	4.912	5/1/2025	101.53156	101.1854883	100.8417197	100.500232	100.1610026	99.82400904	99.48922945	99.15664206	98.82622542
ADV1008371	11/15/2024	4.35	11/14/2025	103.45169	102.5645845	101.6927368	100.8357549	99.99326021	99.16488703	98.35028181	97.54910279	96.7610194
ADV1008374	8/1/2024	4.355	2/2/2026	104.41067	103.2975201	102.2081741	101.1418761	100.0978995	99.07554788	98.07415355	97.09307605	96.13170083
ADV1008382	8/2/2024	4.49	8/4/2025	102.42895	101.8269525	101.2320407	100.6440922	100.0629852	99.48860046	98.92082183	98.35953562	97.80463079
ADV1008387	8/2/2024	3.946	8/3/2026	105.78713	104.1714607	102.5885679	101.0375183	99.51741699	98.0274021	96.56664366	95.134342	93.72972633
ADV1008388	8/2/2024	4.208	2/2/2026	104.15968	103.0493135	101.9626852	100.8990362	99.85764242	98.83780993	97.83887337	96.86019454	95.90116099
ADV1008389	8/2/2024	3.794	8/2/2029	115.02021	110.265096	105.7382003	101.4273157	97.32095533	93.40830607	89.67918491	86.12399886	82.73370742
ADV1008391	8/2/2024	3.99	9/16/2026	106.17077	104.4340543	102.7342252	101.0701716	99.44082779	97.84517071	96.28221769	94.75102449	93.25068338
ADV1008393	8/2/2024	4.823	3/3/2025	100.78538	100.6090519	100.4333332	100.2582195	100.0837079	99.90979508	99.7364781	99.56375383	99.39161922
ADV1008394	8/2/2024	4.446	8/4/2025	102.40253	101.8006237	101.2058007	100.6179403	100.0369205	99.46262238	98.8949296	98.33372853	97.77890814
ADV1008396	8/2/2024	3.86	8/2/2028	112.20352	108.5051474	104.950778	101.5339981	98.24871338	95.08913544	92.04976431	89.1253724	86.31098931
ADV1008398	8/2/2024	3.791	8/2/2029	115.0064	110.2516021	105.7250105	101.4144195	97.30834268	93.39596731	89.6671108	86.11218054	82.72213641
ADV1008399	8/2/2024	4.399	8/4/2025	102.42228	101.8197003	101.2242283	100.6357341	100.0540953	99.47919257	98.91090915	98.34913103	97.79374681
ADV1008404	8/2/2024	3.886	8/2/2027	109.01832	106.3711795	103.8026599	101.3099409	98.89032389	96.54122486	94.26016846	92.04478272	89.89279395
ADV1008405	8/2/2024	4.049	8/3/2026	105.82225	104.2085088	102.6274623	101.0781877	99.55979269	98.07141813	96.61223656	95.18145066	93.77829192
ADV1008406	8/2/2024	4.505	8/4/2025	102.43796	101.8359281	101.2409861	100.6530076	100.0718708	99.49745663	98.92964873	98.36833349	97.81339987
ADV1008407	8/2/2024	3.891	8/2/2027	109.03136	106.3840501	103.8153625	101.3224793	98.90270184	96.55344587	94.27223599	92.05670012	89.90456448
ADV1008409	8/2/2024	4.031	8/3/2026	105.79334	104.179833	102.5990228	101.0499803	99.53181341	98.043663	96.58470175	95.15413243	93.75118664
ADV1008410	8/2/2024	3.883	8/2/2027	109.01049	106.3634571	103.7950383	101.3024178	98.88289711	96.53389225	94.25292794	92.03763228	89.88573164
ADV1008411	8/2/2024	3.804	8/2/2029	115.06624	110.310076	105.7821664	101.470303	97.3629975	93.44943527	89.71943196	86.16339325	82.77227746
ADV1008412	8/2/2024	4.943	2/3/2025	100.45848	100.3619562	100.2656136	100.1694566	100.0734847	99.97769714	99.88209357	99.78667339	99.69143607
ADV1008413	8/2/2024	4.029	8/3/2026	105.79013	104.1766468	102.5958629	101.0468462	99.5287046	98.0405791	96.58164232	95.15109708	93.74817495
ADV1008414	8/2/2024	4.946	2/3/2025	100.45879	100.362258	100.265914	100.1697556	100.0737822	99.97799324	99.88238823	99.78696662	99.69172787
ADV1008415	8/2/2024	4.033	8/3/2026	105.79655	104.1830192	102.6021828	101.0531145	99.53492222	98.04674691	96.58776117	95.15716779	93.75419834
ADV1008416	8/2/2024	3.874	8/2/2027	108.98702	106.34029	103.7721736	101.2798486	98.8606168	96.51189443	94.23120639	92.01618096	89.86454469
ADV1008417	8/2/2024	3.857	8/2/2028	112.19269	108.4945112	104.9403315	101.5237359	98.23863019	95.07922625	92.04002429	89.11579687	86.30157376

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1008418	8/2/2024	3.791	8/2/2029	115.0064	110.2516021	105.7250105	101.4144195	97.30834268	93.39596731	89.6671108	86.11218054	82.72213641
ADV1008419	8/2/2024	3.865	8/2/2027	108.96354	106.3171229	103.7493088	101.2572794	98.83833649	96.48989661	94.20948484	91.99472963	89.84335774
ADV1008420	8/2/2024	4.48	8/4/2025	102.42295	101.8209687	101.226077	100.6381486	100.0570614	99.48269636	98.91493724	98.35367037	97.79878473
ADV1008424	8/2/2024	3.748	8/2/2028	112.10037	108.39606	104.8361885	101.4143142	98.12431771	94.96038683	91.9169995	88.98890739	86.17112069
ADV1008425	8/2/2024	4.221	2/2/2026	104.17403	103.063581	101.9768696	100.9131388	99.87166438	98.85175245	97.85273758	96.87398156	95.91487191
ADV1008426	8/2/2024	3.679	8/2/2029	114.87952	110.1159026	105.5812686	101.2633592	97.15063492	93.23223406	89.49792853	85.93808359	82.54362004
ADV1008432	8/5/2024	3.693	8/5/2027	108.53975	105.8908131	103.3207659	100.8267743	98.40612323	96.05621331	93.77455481	91.55876229	89.40654949
ADV1008436	8/5/2024	5.06	1/15/2025	100.22636	100.1838468	100.1413917	100.0989901	100.0566418	100.0143466	99.97210457	99.92991548	99.88777926
ADV1008437	8/5/2024	4.732	5/5/2025	101.5167	101.1597274	100.8052213	100.4531517	100.1034934	99.75622186	99.41131253	99.06874134	98.72848456
ADV1008438	8/5/2024	4.458	8/12/2025	102.49727	101.8729862	101.2563294	100.6471593	100.0453397	99.45073798	98.86322447	98.28267269	97.70895915
ADV1008441	8/5/2024	3.734	8/6/2029	114.77431	110.0140016	105.4826652	101.1680321	97.05855545	93.14336685	89.4122327	85.85551355	82.46412624
ADV1008442	8/5/2024	3.826	8/7/2028	112.12321	108.4127446	104.8471905	101.4200719	98.1252389	94.95685094	91.90935969	88.97749242	86.15623668
ADV1008443	8/5/2024	3.838	9/7/2027	109.21474	106.4671225	103.8033462	101.220314	98.71506516	96.284769	93.92671839	91.63832327	89.41710458
ADV1008444	8/5/2024	3.836	10/5/2027	109.46253	106.6340672	103.8939195	101.2387668	98.66543541	96.17089331	93.75224265	91.40671273	89.13165342
ADV1008448	8/5/2024	3.892	8/5/2027	109.06045	106.4046237	103.8278494	101.3272829	98.90020453	96.54401033	94.25620625	92.0344027	89.87630937
ADV1008449	8/5/2024	3.821	8/6/2029	115.17571	110.4062112	105.8660132	101.5428261	97.42508978	93.50192325	89.76308093	86.19891196	82.80032239
ADV1008450	8/5/2024	3.892	8/5/2027	109.06045	106.4046237	103.8278494	101.3272829	98.90020453	96.54401033	94.25620625	92.0344027	89.87630937
ADV1008451	8/5/2024	4.008	8/5/2031	121.51256	114.589152	108.119384	102.0709429	96.41398862	91.12094992	86.16633983	81.52658766	77.17988529
ADV1008452	8/5/2024	3.976	8/5/2026	105.85494	104.2332853	102.6445888	101.0879133	99.56235625	98.06704874	96.60115415	95.16386644	93.75440879
ADV1008462	8/7/2024	3.893	8/2/2027	109.0357	106.3883183	103.8195637	101.3266139	98.90677032	96.55744877	94.27617379	92.06057333	89.90837358
ADV1008468	8/5/2024	4.047	8/5/2026	105.83855	104.2192593	102.632841	101.0783642	99.55492956	98.06167102	96.59775464	95.16237696	93.75476364
ADV1008469	8/5/2024	4.42	8/5/2025	102.44523	101.8397967	101.2415324	100.6503116	100.0660103	99.48850736	98.91768437	98.35342575	97.79561854
ADV1008471	8/5/2024	4.406	8/5/2025	102.43679	101.8313812	101.2331455	100.641953	100.0576799	99.48020478	98.90940943	98.34517822	97.78739819
ADV1008472	8/5/2024	3.867	8/5/2027	108.99503	106.3400747	103.7641455	101.264405	98.83813402	96.4827293	94.19569728	91.97464888	89.81729431
ADV1008476	8/5/2024	4.474	8/5/2025	102.42961	101.8248277	101.2272018	100.6366042	100.0529113	99.47600236	98.90575942	98.34206725	97.78481327
ADV1008490	8/6/2024	4.968	2/6/2025	100.49766	100.3926325	100.2878297	100.18325	100.0788926	99.97475692	99.87084212	99.76714751	99.66367236
ADV1008499	8/6/2024	5.015	2/6/2025	100.50279	100.3977423	100.2929149	100.1883107	100.0839289	99.97976876	99.87582962	99.77211072	99.66861133
ADV1008502	8/6/2024	4.121	8/6/2026	105.96816	104.345077	102.7549809	101.1969292	99.67001822	98.17337821	96.70617147	95.26759102	93.85685918
ADV1008503	10/4/2024	3.864	10/4/2027	109.5317	106.7049634	103.9664102	101.312718	98.74071702	96.24737899	93.82981006	91.48524358	89.21103344
ADV1008505	8/6/2024	4.334	2/6/2026	104.33914	103.2167674	102.1186197	101.0439178	99.99191568	98.9618985	97.95318134	96.96510743	95.99704681
ADV1008506	10/4/2024	3.867	10/4/2027	109.54004	106.7131902	103.9745228	101.3207191	98.74860918	96.25516478	93.83749194	91.4928239	89.21851451
ADV1008507	8/6/2024	5.011	2/6/2025	100.50236	100.3973074	100.2924821	100.18788	100.0835003	99.97934222	99.87540515	99.77168832	99.66819099
ADV1008508	8/6/2024	4.559	8/6/2025	102.49218	101.8844283	101.2838962	100.6904591	100.1039918	99.52437169	98.95147916	98.38519737	97.82541219

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1008509	8/6/2024	4.127	8/6/2026	105.97784	104.3546833	102.7645076	101.2063777	99.67938998	98.18267448	96.71539355	95.27674017	93.86593662
ADV1008510	8/6/2024	3.806	8/6/2029	115.49721	110.7085739	106.1503832	101.8102761	97.67662436	93.73848333	89.98554824	86.40811306	82.99703235
ADV1008511	8/6/2024	3.955	8/6/2027	109.23452	106.5736888	103.9920955	101.4868932	99.05535355	96.69486467	94.40292487	92.17713735	90.01520503
ADV1008512	8/6/2024	3.806	8/6/2029	115.49721	110.7085739	106.1503832	101.8102761	97.67662436	93.73848333	89.98554824	86.40811306	82.99703235
ADV1008517	8/6/2024	4.462	8/6/2025	102.48184	101.8735117	101.2724259	100.6784499	100.0914576	99.51132635	98.93793605	98.3711695	97.81091217
ADV1008522	8/6/2024	4.109	8/7/2026	105.95908	104.3333845	102.740757	101.1802565	99.6509759	98.1520419	96.68261366	95.2418812	93.82906396
ADV1008523	8/6/2024	3.939	8/6/2027	109.19261	106.5323347	103.9512834	101.4466107	99.01558891	96.65560632	94.36416162	92.13885837	89.97739979
ADV1008531	8/7/2024	4.353	2/9/2026	104.39115	103.2602757	102.1539837	101.0714811	100.0120054	98.97482642	97.9592445	96.96458906	95.99021705
ADV1008545	8/7/2024	4.577	8/7/2025	102.51425	101.9036589	101.3003585	100.7042188	100.1151127	99.53291603	98.95750747	98.38876859	97.82658369
ADV1008546	8/7/2024	4.17	8/7/2026	106.05755	104.4310144	102.837568	101.2762631	99.74619209	98.24648133	96.77628962	95.33480662	93.92125143
ADV1008547	8/7/2024	3.99	8/9/2027	109.35402	106.6834831	104.092646	101.5786314	99.13868918	96.7701867	94.4706028	92.23752234	90.06863092
ADV1008557	8/7/2024	4.096	8/7/2026	105.93787	104.3123391	102.7198775	101.15954	99.63041943	98.13164271	96.66236904	95.22178849	93.80912058
ADV1008570	8/8/2024	3.887	8/8/2029	115.88805	111.0850086	106.5132045	102.1602289	98.01440585	94.06474685	90.30090609	86.71313938	83.29226583
ADV1008575	8/8/2024	5.037	2/10/2025	100.55555	100.4391222	100.3229704	100.2070942	100.0914925	99.97616421	99.86110841	99.74632409	99.63181026
ADV1008577	8/8/2024	4.076	8/10/2026	106.06803	104.4310609	102.8275283	101.2564698	99.71696382	98.20812372	96.72909579	95.27905787	93.85721786
ADV1008595	8/9/2024	3.986	8/9/2027	109.34314	106.6727302	104.0820168	101.5681232	99.12829936	96.75991263	94.46044196	92.22747227	90.05868923
ADV1008596	8/9/2024	4.59	8/11/2025	102.56738	101.9455797	101.3313428	100.7245294	100.1250052	99.53263914	98.94730333	98.36887282	97.79722565
ADV1008597	8/9/2024	4.591	8/11/2025	102.568	101.9461971	101.331958	100.7251424	100.1256161	99.53324798	98.94791009	98.36947753	97.79782832
ADV1008598	8/9/2024	4.551	9/19/2025	102.98494	102.2541252	101.5337087	100.823473	100.123203	99.43268966	98.75172966	98.08012537	97.41768457
ADV1008611	8/12/2024	5.055	2/12/2025	100.58232	100.4602475	100.3384778	100.2170106	100.0958447	99.97497895	99.85441224	99.73414342	99.61417135
ADV1008612	8/12/2024	4.364	2/12/2026	104.43342	103.2940653	102.1796579	101.0893848	100.0224668	98.9781581	97.95574438	96.95454107	95.97389197
ADV1008616	8/12/2024	4.385	8/12/2026	103.36336	102.5222946	101.6962258	100.8847429	100.0874476	99.30395644	98.53390021	97.77692313	97.03268236
ADV1008617	8/12/2024	4.497	8/12/2025	102.56983	101.9446259	101.3270692	100.7170176	100.1143346	99.51888703	98.93054469	98.34918068	97.77467106
ADV1008618	8/12/2024	4.287	2/12/2026	104.43746	103.2967175	102.1809788	101.0894244	100.021273	98.97577659	97.95221887	96.94991342	95.96820225
ADV1008646	8/13/2024	3.838	8/13/2029	115.30908	110.5175839	105.9571656	101.6154073	97.48062438	93.54182099	89.7886456	86.21134955	82.8007486
ADV1008647	8/13/2024	3.885	8/13/2027	109.11323	106.43505	103.8370518	101.3163363	98.8701275	96.49576862	94.19071575	91.95253237	89.77888396
ADV1008648	8/15/2024	3.881	8/16/2027	109.12942	106.4429147	103.8370165	101.3088049	98.8554827	96.47437302	94.16291323	91.91864912	89.73922954
ADV1008666	8/14/2024	4.249	2/17/2026	104.35342	103.2008907	102.0738999	100.9716057	99.89320168	98.83791604	97.80501	96.79377598	95.80353598
ADV1008670	8/14/2024	4.054	8/14/2026	105.93967	104.2952214	102.6844603	101.1064156	99.56015477	98.04478062	96.55942967	95.10327045	93.67550201
ADV1008677	8/14/2024	4.411	8/14/2025	102.53837	101.9077583	101.2849221	100.6697223	100.0620186	99.46167447	98.8685563	98.2825339	97.70348018
ADV1008678	8/14/2024	4.496	8/14/2025	102.54156	101.9115606	101.289328	100.674716	100.0675848	99.46779822	98.87522318	98.28972987	97.71119161
ADV1008686	8/14/2024	3.893	8/16/2027	109.16136	106.4744298	103.8681209	101.3395078	98.88579319	96.50429982	94.19246482	91.94783371	89.76805511
ADV1008705	8/15/2024	5.059	2/18/2025	100.65871	100.5195837	100.3808438	100.2424913	100.1045247	99.9669422	99.82974231	99.69292336	99.55648374

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1008713	8/15/2024	3.965	8/15/2029	115.23515	110.6291003	106.2443995	102.0690778	98.09188413	94.3022384	90.69018689	87.24636161	83.96194229
ADV1008716	8/15/2024	4.461	12/18/2025	103.93278	102.9497688	101.985413	101.0391878	100.1105844	99.19911305	98.30430189	97.42569632	96.56285815
ADV1008717	8/15/2024	4.437	1/15/2026	104.21597	103.1545423	102.1148136	101.0961229	100.0978354	99.11934135	98.16005525	97.21941448	96.29687822
ADV1008720	8/15/2024	4.228	8/17/2026	106.25606	104.6008393	102.9796158	101.3914109	99.83527992	98.31031413	96.81563901	95.35041263	93.91382413
ADV1008743	8/16/2024	4.747	6/17/2025	102.03102	101.5502436	101.0739106	100.6019618	100.134337	99.67097667	99.21182273	98.75681796	98.30590622
ADV1008753	8/19/2024	5.169	1/16/2025	100.24148	100.1962022	100.1509801	100.1058161	100.0607101	100.0156619	99.9706716	99.92573893	99.88086381
ADV1008754	8/19/2024	5.074	2/13/2025	100.59594	100.4711293	100.3466313	100.2224494	100.0985822	99.97502852	99.85178719	99.72885696	99.60623662
ADV1008766	8/26/2024	4.144	8/26/2026	106.20921	104.5300794	102.8857553	101.2752178	99.69748899	98.15162893	96.63673347	95.15193262	93.69638892
ADV1008768	8/26/2024	3.971	8/26/2027	109.45822	106.7402371	104.104383	101.5476538	99.06717848	96.66021041	94.3241214	92.05639547	89.85462324
ADV1008771	8/19/2024	3.982	8/19/2027	109.42355	106.7249824	104.1075386	101.5682697	99.10435448	96.71309369	94.39190341	92.13830939	89.94994155
ADV1008800	8/20/2024	3.845	8/20/2029	115.39642	110.5839739	106.0043642	101.6450343	97.49417576	93.54067863	89.77408615	86.18455265	82.76280431
ADV1008819	8/20/2024	4.106	8/20/2026	106.08518	104.4233067	102.7956759	101.2012954	99.6392103	98.10850201	96.60828679	95.13771398	93.69596442
ADV1008823	8/21/2024	4.976	2/21/2025	100.6832	100.5356914	100.388618	100.2419762	100.0957642	99.94997992	99.80462158	99.65968728	99.51517514
ADV1008825	8/21/2024	4.509	8/21/2025	102.62656	101.9769644	101.3356156	100.7023558	100.0770322	99.45949606	98.84960222	98.24720918	97.65217891
ADV1008826	8/21/2024	4.509	8/21/2025	102.62656	101.9769644	101.3356156	100.7023558	100.0770322	99.45949606	98.84960222	98.24720918	97.65217891
ADV1008827	8/21/2024	4.231	2/23/2026	104.39148	103.2223159	102.0794182	100.9619089	99.86894791	98.79973162	97.7534913	96.72949107	95.72702622
ADV1008829	8/21/2024	4.056	8/21/2026	106.01271	104.3487492	102.7191155	101.1228074	99.55886645	98.02637094	96.52443408	95.05220233	93.60885383
ADV1008832	8/21/2024	3.867	8/23/2027	109.15427	106.4485053	103.8243455	101.2788154	98.80906805	96.41237988	94.08614418	91.82786533	89.63515313
ADV1008835	8/21/2024	4.973	2/21/2025	100.68275	100.5352432	100.388172	100.2415325	100.0953226	99.9495405	99.80418433	99.6592522	99.51474222
ADV1008837	8/21/2024	4.507	8/21/2025	102.62527	101.9756758	101.3343318	100.7010765	100.0757575	99.45822591	98.84833658	98.245948	97.65092215
ADV1008841	8/21/2024	4.884	3/21/2025	101.01389	100.7865206	100.5601704	100.3348306	100.1104944	99.88715524	99.66480628	99.44344092	99.22305258
ADV1008842	8/21/2024	4.074	8/21/2026	106.0425	104.3782883	102.7484039	101.1518495	99.58766659	98.05493336	96.55276288	95.0803015	93.63672727
ADV1008843	8/21/2024	4.244	2/23/2026	104.40658	103.2373176	102.0943282	100.9767288	99.88367895	98.81437519	97.76804871	96.74396361	95.74141515
ADV1008845	11/21/2024	4.228	8/21/2025	102.44486	101.7959236	101.1552301	100.5226196	99.89793953	99.28104117	98.67177949	98.07001305	97.47560389
ADV1008846	8/21/2024	4.493	8/21/2025	102.61621	101.966656	101.3253446	100.6921217	100.0668348	99.44933492	98.83947708	98.23711973	97.64212481
ADV1008855	8/22/2024	4.962	2/24/2025	100.71835	100.5623197	100.4067702	100.2516984	100.0971019	99.94297864	99.78932636	99.63614294	99.48342623
ADV1008861	8/22/2024	4.111	8/24/2026	106.13447	104.4613795	102.8229037	101.21803	99.64578844	98.10524622	96.59550619	95.11570496	93.6650113
ADV1008862	8/22/2024	3.953	8/23/2027	109.38331	106.6744513	104.0472743	101.4987962	99.02616799	96.62666394	94.29767538	92.03670476	89.84136005
ADV1008866	8/22/2024	4.983	2/21/2025	100.68403	100.536539	100.3894803	100.2428532	100.0966558	99.95088614	99.80554235	99.66062255	99.51612488
ADV1008867	8/22/2024	4.765	5/21/2025	101.7163	101.3139046	100.9146411	100.5184727	100.1253633	99.73527753	99.3481805	98.96403788	98.58281588
ADV1008875	8/22/2024	4.288	2/23/2026	104.45747	103.2878933	102.1445914	101.0266844	99.93333189	98.86373015	97.81711026	96.79273623	95.78990317
ADV1008895	8/23/2024	4.498	8/25/2025	102.66365	102.0029059	101.3506868	100.7068267	100.0711655	99.4435469	98.82381883	98.21183292	97.60744453
ADV1008903	8/23/2024	4.418	8/25/2025	102.66362	102.0022035	101.3493327	100.7048382	100.0685594	99.44033947	98.82002593	98.2074699	97.60252628

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1008905	8/23/2024	3.952	8/24/2026	106.00489	104.330591	102.690965	101.0850035	99.51173398	97.97022107	96.45956523	94.97890082	93.52739448
ADV1008907	8/26/2024	5.046	1/16/2025	100.23369	100.1884717	100.1433157	100.0982177	100.0531776	100.0081954	99.96327083	99.91840386	99.87359435
ADV1008938	8/26/2024	3.994	8/26/2026	105.95889	104.2819263	102.6397247	101.0312717	99.45559074	97.91174271	96.39882445	94.9159669	93.46233349
ADV1008945	8/26/2024	3.761	8/26/2027	109.11712	106.3989456	103.7630342	101.2063742	98.72608626	96.31941631	93.98372896	91.71650153	89.51531833
ADV1008946	8/26/2024	3.841	8/26/2027	109.1107	106.3974068	103.7661374	101.2138877	98.73778985	96.33510047	94.00319436	91.73955845	89.54178618
ADV1008967	8/26/2024	4.397	8/26/2025	102.66009	101.9959413	101.3403985	100.6932997	100.0544822	99.42378759	98.80106139	98.18615308	97.57891588
ADV1008970	8/26/2024	4.476	8/26/2025	102.65946	101.9959815	101.3410963	100.6946376	100.0564433	99.42635542	98.80422	98.18988697	97.58321003
ADV1008974	8/26/2024	4.187	2/26/2026	104.3689	103.1916792	102.041092	100.9162368	99.81625644	98.74033148	97.68767813	96.65754634	95.64921802
ADV1009003	8/26/2024	3.951	8/26/2026	106.02269	104.3428312	102.697836	101.0866814	99.50838728	97.9620113	96.44664714	94.96142276	93.50549873
ADV1009012	8/26/2024	4.489	8/26/2025	102.66804	102.0045323	101.3496157	100.7031258	100.0649006	99.43478209	98.81261631	98.19825321	97.59154647
ADV1009013	8/26/2024	4.034	8/26/2026	106.02564	104.3481005	102.7053328	101.096324	99.52009694	97.97571237	96.46226685	94.97889109	93.52474827
ADV1009014	8/26/2024	3.869	8/26/2027	109.18555	106.4712472	103.8389903	101.2857758	98.80873509	96.40512415	94.07231711	91.80780027	89.60916647
ADV1009023	8/26/2024	4.492	8/26/2025	102.67002	102.0065056	101.3515817	100.7050846	100.0668523	99.4367267	98.81455392	98.20018388	97.59347026
ADV1009026	8/26/2024	4.206	2/26/2026	104.39111	103.2137552	102.0630323	100.9380436	99.8379317	98.76187724	97.70909634	96.67883893	95.67038686
ADV1009074	8/27/2024	3.885	8/27/2027	109.23736	106.5196503	103.8841452	101.327833	98.84783744	96.44140723	94.10590978	91.838825	89.63773968
ADV1009082	8/27/2024	4.187	8/26/2033	128.31705	119.1306532	110.7032215	102.967302	95.86178993	89.33130313	83.32561719	77.79915977	72.71055672
ADV1009083	8/27/2024	4.027	8/27/2026	106.02403	104.3437998	102.6984353	101.0869162	99.50826178	97.96152913	96.44581152	94.96023648	93.50396422
ADV1009084	8/27/2024	3.811	8/27/2029	115.2929	110.4639325	105.8694049	101.496634	97.33369327	93.36936399	89.59308937	85.99493166	82.56553223
ADV1009085	8/27/2024	3.854	8/25/2028	112.37768	108.6138538	104.998515	101.5249582	98.1868194	94.97805884	91.89294232	88.92602384	86.07212921
ADV1009086	8/27/2024	3.817	8/1/2029	114.11741	109.6804242	105.4535826	101.4256475	97.58604851	93.92483903	90.43265536	87.1006793	83.9206031
ADV1009087	10/1/2024	3.806	10/1/2027	109.34519	106.5291807	103.8008099	101.1567728	98.59391473	96.10922285	93.69981883	91.36295152	89.09599031
ADV1009092	8/27/2024	4.029	8/27/2026	106.02737	104.3471139	102.7017211	101.0901741	99.51149224	97.96473267	96.44898861	94.96338759	93.50708978
ADV1009097	8/27/2024	3.831	8/28/2028	112.31914	108.5482699	104.926438	101.446898	98.10325169	94.88942743	91.7996615	88.82848038	85.97068422
ADV1009119	8/28/2024	5.04	1/28/2025	100.38606	100.3068522	100.2277735	100.1488226	100.0699994	99.99130339	99.91273438	99.83429204	99.75597606
ADV1009120	8/28/2024	4.918	2/26/2025	100.73483	100.5732592	100.4122017	100.2516528	100.09161	99.93207095	99.77303328	99.61449464	99.4564527
ADV1009121	8/28/2024	4.836	3/26/2025	101.0624	100.8210048	100.580747	100.3416204	100.103617	99.86672877	99.63094796	99.39626678	99.16267753
ADV1009134	8/28/2024	3.914	8/28/2026	105.98069	104.2957921	102.6459295	101.0300753	99.44724201	97.89648037	96.37687752	94.88755521	93.42766816
ADV1009135	8/28/2024	4.91	2/28/2025	100.75821	100.5909463	100.4242269	100.2580481	100.0924072	99.92730173	99.76272907	99.59868668	99.43517201
ADV1009139	8/28/2024	3.999	8/28/2026	105.98704	104.3044347	102.6567808	101.0430535	99.4622684	97.91347934	96.39577634	94.90828392	93.45015941
ADV1009152	8/29/2024	4.198	2/27/2026	104.39129	103.2112159	102.0578919	100.9304173	99.82792911	98.74960253	97.69464869	96.66231275	95.65187208
ADV1009154	8/29/2024	3.884	8/30/2027	109.26144	106.535313	103.8918169	101.3279254	98.84074034	96.42749015	94.08552298	91.81230066	89.60539296
ADV1009155	8/29/2024	3.862	8/29/2028	112.4416	108.6657748	105.0392459	101.5552527	98.20738281	94.98955151	91.89598264	88.92119108	86.05996616
ADV1009156	8/29/2024	3.808	8/29/2029	115.29443	110.4600283	105.8605553	101.483286	97.31625877	93.34822285	89.56859181	85.96740058	82.53526537

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1009168	8/29/2024	4.039	8/31/2026	106.08414	104.3926127	102.7363256	101.1142408	99.52536231	97.96873295	96.4434323	94.94857497	93.48330893
ADV1009169	8/29/2024	3.827	8/29/2029	115.38325	110.5467931	105.9453338	101.5661478	97.39727065	93.42744856	89.6460924	86.0432345	82.60948861
ADV1009198	8/30/2024	4.425	8/29/2025	102.71149	102.0388793	101.3750888	100.719948	100.0732886	99.43494649	98.80476174	98.18257862	97.56824527
ADV1009199	8/30/2024	4.049	8/31/2026	106.10078	104.4091073	102.7526768	101.1304512	99.54143465	97.98466973	96.45923602	94.96424806	93.49885373
ADV1009202	8/30/2024	3.898	8/30/2027	109.29884	106.5722019	103.9282093	101.3638327	98.87617403	96.46246111	94.12004179	91.8463776	89.63903798
ADV1009205	8/30/2024	4.755	4/30/2025	101.46023	101.1187084	100.7794357	100.4423933	100.1075595	99.77491256	99.44443123	99.11609445	98.78988146
ADV1009206	8/30/2024	4.054	8/31/2026	106.10919	104.4174462	102.7609438	101.1386477	99.54956177	97.99272874	96.46722809	94.97217435	93.50671536
ADV1009228	9/3/2024	3.768	9/3/2027	109.21221	106.4708963	103.8130518	101.2356016	98.73560513	96.31025115	93.95685039	91.67282951	89.45572519
ADV1009240	9/3/2024	3.792	9/4/2029	115.27197	110.4217455	105.8079272	101.4176762	97.2389215	93.26031189	89.47116849	85.86144123	82.42166812
ADV1009242	9/3/2024	5.004	2/3/2025	100.45754	100.3614049	100.2654508	100.1696815	100.0740965	99.97869521	99.88347712	99.78844169	99.69358838
ADV1009243	9/3/2024	4.931	3/3/2025	100.79782	100.6221364	100.4470573	100.2725811	100.0987047	99.92542505	99.75273898	99.58064346	99.40913546
ADV1009244	9/3/2024	3.868	9/3/2027	109.25967	106.5225693	103.8687108	101.2950272	98.79858935	96.37659629	94.02636875	91.74534279	89.53106391
ADV1009248	9/3/2024	3.937	12/16/2026	106.97068	104.9775462	103.0319746	101.1325361	99.27785436	97.46660378	95.69750682	93.96933215	92.28089261
ADV1009249	9/3/2024	3.843	12/15/2027	110.1071	107.0757657	104.1450104	101.3109455	98.5698525	95.91817733	93.35252208	90.86963718	88.46641398
ADV1009261	9/4/2024	4.365	9/4/2025	102.68763	101.9992653	101.3201482	100.6500899	99.9889097	99.33643179	98.692485	98.0569026	97.4295222
ADV1009270	9/4/2024	4.291	9/4/2025	102.69163	102.0025519	101.3227336	100.6519929	99.99014857	99.33702422	98.69244815	98.05625311	97.42827621
ADV1009271	9/4/2024	4.291	9/4/2025	102.69163	102.0025519	101.3227336	100.6519929	99.99014857	99.33702422	98.69244815	98.05625311	97.42827621
ADV1009291	9/5/2024	3.683	12/5/2028	112.5934	108.546308	104.6695837	100.9551497	97.39535822	93.98296213	90.71109165	87.57323288	84.5632074
ADV1009297	9/5/2024	3.631	9/5/2029	114.91993	110.0630014	105.4433685	101.0481191	96.8651149	92.88294257	89.09086616	85.47878297	82.03718251
ADV1009298	9/5/2024	3.617	9/5/2029	114.85408	109.9986823	105.3805293	100.9867078	96.80508149	92.82423936	89.03344748	85.4226051	81.98220358
ADV1009305	9/5/2024	3.995	3/5/2026	104.31007	103.1126981	101.9428794	100.7996698	99.68216803	98.58951304	97.52088182	96.47548742	95.45257696
ADV1009307	9/5/2024	3.699	9/5/2029	112.67944	108.5613906	104.6361382	100.8933687	97.32338136	93.91705083	90.66578938	87.56151203	84.596604
ADV1009308	9/5/2024	3.871	9/8/2026	105.88499	104.1729931	102.4970154	100.8559851	99.24887253	97.67468887	96.13248369	94.62134328	93.14038878
ADV1009312	9/5/2024	3.873	9/8/2026	105.8884	104.1763742	102.500367	100.8593077	99.25216676	97.67795516	96.13572253	94.62455513	93.14357412
ADV1009314	9/5/2024	3.781	1/5/2028	110.09901	107.0113817	104.0279602	101.1446379	98.3574972	95.66279709	93.05696399	90.53658333	88.09839141
ADV1009327	9/6/2024	4.029	3/6/2026	104.26403	103.0656726	101.894934	100.7508651	99.63256097	98.53915731	97.46982807	96.42378342	95.40026778
ADV1009332	9/6/2024	4.267	9/8/2025	102.66267	101.9633939	101.2736659	100.5932889	99.92207337	99.25983488	98.60639392	97.96157572	97.32521015
ADV1009336	9/6/2024	3.698	9/8/2026	105.72818	104.0151554	102.3382126	100.6962787	99.08832133	97.51334903	95.97040895	94.45858508	92.97699638
ADV1009337	9/6/2024	3.786	9/4/2026	105.70123	104.0019483	102.338254	100.7090901	99.11344502	97.55034692	96.01886154	94.51809041	93.04716915
ADV1009353	9/9/2024	3.541	9/10/2029	114.53404	109.6722468	105.0487167	100.6504437	96.46520785	92.4815213	88.68857996	85.07621887	81.63487061
ADV1009354	9/9/2024	3.541	9/10/2029	114.53404	109.6722468	105.0487167	100.6504437	96.46520785	92.4815213	88.68857996	85.07621887	81.63487061
ADV1009355	9/9/2024	3.541	9/10/2029	114.53404	109.6722468	105.0487167	100.6504437	96.46520785	92.4815213	88.68857996	85.07621887	81.63487061
ADV1009369	9/9/2024	4.827	3/10/2025	100.86325	100.6678776	100.4732616	100.2793994	100.0862867	99.89391883	99.70229159	99.51140061	99.32124157

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1009390	9/10/2024	3.564	9/10/2029	114.2454	109.4024924	104.7966739	100.4150193	96.24537978	92.27633357	88.4971382	84.89768604	81.46846304
ADV1009392	9/10/2024	4.128	10/10/2025	102.89281	102.1045436	101.3283779	100.5640383	99.81125561	99.06976866	98.3393242	97.61967646	96.91058697
ADV1009393	9/10/2024	4.128	10/10/2025	102.89281	102.1045436	101.3283779	100.5640383	99.81125561	99.06976866	98.3393242	97.61967646	96.91058697
ADV1009394	9/10/2024	3.563	9/10/2029	114.24069	109.397894	104.7921815	100.4106291	96.24108822	92.27213723	88.49303382	84.89367048	81.4645333
ADV1009395	9/10/2024	4.122	10/10/2025	102.8881	102.0998507	101.3237051	100.5593855	99.80662243	99.06515497	98.33472978	97.61510113	96.90603052
ADV1009397	9/10/2024	4.2	9/10/2025	102.63595	101.9312569	101.2362595	100.55076	99.87456427	99.20748346	98.54933388	97.89993671	97.25911789
ADV1009404	9/10/2024	3.947	3/10/2026	104.20271	102.993831	101.8130675	100.6594484	99.53204424	98.42996756	97.35237068	96.29844338	95.26741089
ADV1009405	9/10/2024	3.947	3/10/2026	104.20271	102.993831	101.8130675	100.6594484	99.53204424	98.42996756	97.35237068	96.29844338	95.26741089
ADV1009406	9/10/2024	3.947	3/10/2026	104.20271	102.993831	101.8130675	100.6594484	99.53204424	98.42996756	97.35237068	96.29844338	95.26741089
ADV1009407	9/10/2024	3.95	9/10/2026	106.03931	104.3203668	102.6376765	100.9901532	99.37675793	97.79649282	96.24839916	94.7315553	93.2450749
ADV1009409	9/10/2024	3.95	9/10/2026	106.03931	104.3203668	102.6376765	100.9901532	99.37675793	97.79649282	96.24839916	94.7315553	93.2450749
ADV1009418	9/11/2024	4.04	12/11/2025	103.45195	102.4906569	101.5472729	100.6212964	99.71224808	98.81966611	97.94310538	97.08213668	96.23634603
ADV1009420	9/11/2024	3.627	3/11/2027	107.1178	104.8863169	102.7126401	100.5948541	98.53112275	96.51968574	94.55885468	92.64700952	90.78259523
ADV1009421	9/11/2024	3.91	3/11/2026	104.16686	102.9554787	101.7723424	100.6164671	99.48691721	98.38279961	97.30326123	96.2474868	95.21469675
ADV1009423	9/11/2024	3.892	3/11/2026	104.24243	103.0290831	101.8440496	100.6863413	99.55501972	98.44918915	97.36799395	96.31061642	95.27627475
ADV1009445	9/12/2024	4.26	9/12/2025	102.69862	101.9881738	101.2875814	100.5966371	99.91514224	99.24290356	98.57973304	97.92544776	97.27986967
ADV1009446	9/12/2024	3.779	9/14/2026	105.78494	104.0571388	102.3659572	100.7102946	99.08909563	97.5013471	95.94607571	94.42234607	92.92925885
ADV1009447	9/12/2024	3.644	9/13/2027	108.73992	105.9821206	103.3089385	100.7172313	98.20399444	95.76635624	93.40157122	91.10701335	88.88016991
ADV1009462	9/12/2024	3.629	9/13/2027	108.69907	105.9418326	103.2691988	100.6780271	98.16531336	95.72818639	93.363901	91.06983153	88.8434656
ADV1009463	9/12/2024	3.626	9/12/2028	111.69064	107.8900572	104.2412141	100.7371749	97.37136289	94.13754127	91.0297928	88.0425015	85.17033525
ADV1009481	9/13/2024	4.073	9/13/2034	130.02006	119.7469422	110.411112	101.9209094	94.19412722	87.15699091	80.74325193	74.8933826	69.55386122
ADV1009482	9/13/2024	4.294	9/13/2039	144.37521	128.6146941	114.8878131	102.9142253	92.45394453	83.30132505	75.27997149	68.23842637	62.04651378
ADV1009483	9/13/2024	4.073	9/15/2025	102.65356	101.9343028	101.225144	100.5258747	99.83628868	99.1561854	98.48536988	97.82365243	97.17084852
ADV1009484	9/13/2024	4.986	1/13/2025	100.18879	100.1521641	100.1155821	100.0790441	100.0425501	100.0060998	99.96969327	99.93333039	99.89701109
ADV1009485	9/13/2024	4.158	9/15/2025	102.65721	101.9386832	101.2302335	100.5316532	99.84273674	99.16328412	98.493101	97.83199826	97.17979192
ADV1009486	9/13/2024	3.937	3/13/2026	104.21793	103.0007754	101.8121177	100.6509676	99.51637697	98.40744091	97.32329517	96.26311398	95.22610795
ADV1009487	9/13/2024	3.722	9/14/2026	105.6868	103.9598689	102.2695438	100.6147221	98.99434911	97.40741196	95.85293773	94.32999144	92.8376741
ADV1009492	9/13/2024	3.58	9/13/2029	114.34259	109.4891429	104.8736328	100.4830688	96.30524185	92.32867476	88.54257406	84.93678512	81.5017506
ADV1009493	9/13/2024	3.602	9/13/2028	111.60954	107.8076878	104.1577437	100.6527533	97.28612841	94.05162168	90.94330607	87.95555654	85.0830326
ADV1009494	9/13/2024	3.577	9/13/2027	108.55746	105.8021675	103.1314343	100.5421191	98.03121898	95.59586422	93.23331088	90.94093453	88.71622397
ADV1009495	9/13/2024	4.158	9/15/2025	102.65721	101.9386832	101.2302335	100.5316532	99.84273674	99.16328412	98.493101	97.83199826	97.17979192
ADV1009496	9/13/2024	3.583	9/13/2027	108.5738	105.8182827	103.1473302	100.5578007	98.04669141	95.61113216	93.24837897	90.95580726	88.7309057
ADV1009502	9/13/2024	3.563	9/13/2027	108.51934	105.7645654	103.0943438	100.5055284	97.99511665	95.56023902	93.19815201	90.90623149	88.68196661

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1009506	9/13/2024	3.587	6/14/2027	107.82891	105.3301852	102.9027651	100.5442108	98.25217842	96.02441816	93.85877006	91.75315977	89.70559462
ADV1009507	9/13/2024	3.566	9/13/2027	108.52751	105.772623	103.1022918	100.5133693	98.00285287	95.56787299	93.20568605	90.91366786	88.68930748
ADV1009508	9/13/2024	3.569	12/13/2027	109.27364	106.2600434	103.3463742	100.5287667	97.80353137	95.16714157	92.61622538	90.1475578	87.75805352
ADV1009539	9/16/2024	4.402	6/16/2025	101.85212	101.3773244	100.9068904	100.4407614	99.97887842	99.52118351	99.06761981	98.6181315	98.17266373
ADV1009545	9/16/2024	3.674	9/16/2026	105.62242	103.8905122	102.1953983	100.5359746	98.91117768	97.31998674	95.76142129	94.23453917	92.73843467
ADV1009546	9/16/2024	3.542	9/16/2027	108.48659	105.7239546	103.0463237	100.4505286	97.93354288	95.49247448	93.12455872	90.82715168	88.59772388
ADV1009547	9/16/2024	3.57	9/18/2028	111.53053	107.7163253	104.0550144	100.5395777	97.16336347	93.9200652	90.80370104	87.80859498	84.92935917
ADV1009550	9/16/2024	3.67	9/16/2026	105.61552	103.8836651	102.1886117	100.5292474	98.90450879	97.31337514	95.75486598	94.22803917	92.73198903
ADV1009552	9/16/2024	3.676	9/16/2026	105.62588	103.8939358	102.1987916	100.5393382	98.91451213	97.32329254	95.76469895	94.23778918	92.74165749
ADV1009554	9/16/2024	4.127	9/16/2025	102.64462	101.9233799	101.2122942	100.5111523	99.81974617	99.13787376	98.46533849	97.80194917	97.14751982
ADV1009561	9/17/2024	4.119	9/17/2025	102.64884	101.924832	101.2110557	100.5072982	99.81334893	99.12900372	98.45406377	97.78833582	97.13163187
ADV1009578	9/17/2024	4.818	2/13/2025	100.55701	100.4328195	100.3089466	100.1853881	100.0621429	99.93920957	99.81658703	99.69427404	99.57226937
ADV1009579	9/17/2024	3.902	3/24/2026	104.27568	103.0281979	101.8106346	100.6219195	99.46103485	98.32701056	97.21892101	96.13588274	95.07705207
ADV1009582	9/17/2024	4.388	6/17/2025	101.85628	101.3787121	100.9055579	100.4367588	99.97225466	99.51198665	99.05589691	98.60392865	98.15602611
ADV1009583	9/17/2024	4.14	9/17/2025	102.664	101.9399241	101.2260877	100.5222706	99.82826243	99.14385886	98.46886112	97.80307595	97.14631532
ADV1009587	9/17/2024	4.703	3/17/2025	100.91999	100.7050243	100.4909782	100.2778437	100.065615	99.85428615	99.64385146	99.43430516	99.22564156
ADV1009588	9/17/2024	4.061	9/17/2025	102.66467	101.9398456	101.2252763	100.5207468	99.8260462	99.14096947	98.46531725	97.79889568	97.14151618
ADV1009589	9/17/2024	3.82	3/17/2026	104.20985	102.9803292	101.7798837	100.607487	99.46216343	98.3429818	97.24905338	96.17952933	95.13359851
ADV1009590	9/17/2024	3.63	9/17/2026	105.69581	103.9580035	102.2572059	100.592297	98.96220535	97.36590212	95.80239948	94.27074827	92.77003611
ADV1009591	9/17/2024	3.571	9/17/2029	114.32919	109.4650357	104.8398303	100.4405018	96.25476547	92.27107488	88.47857281	84.86704607	81.42688351
ADV1009597	9/17/2024	4.391	6/17/2025	101.85769	101.3801113	100.9069467	100.4381372	99.97362285	99.5133447	99.05724492	98.60526671	98.15735431
ADV1009601	9/17/2024	4.143	9/17/2025	102.66616	101.9420801	101.2282351	100.5244095	99.83039293	99.14598102	98.47097503	97.80518168	97.14841296
ADV1009610	9/18/2024	4.149	9/18/2025	102.67998	101.953111	101.2365517	100.5300867	99.83350349	99.14659534	98.46916137	97.8010062	97.14193981
ADV1009613	9/18/2024	3.635	9/20/2027	108.77404	105.9963511	103.304381	100.6949256	98.16492292	95.71144754	93.33170351	91.02301743	88.78283209
ADV1009618	9/18/2024	4.736	3/18/2025	100.9388	100.7209825	100.5041061	100.2881648	100.0731523	99.85906276	99.64589004	99.43362823	99.22227143
ADV1009619	9/18/2024	4.172	9/18/2025	102.69664	101.9696995	101.253074	100.5465435	99.84989533	99.1629229	98.48542528	97.81720707	97.15807825
ADV1009620	9/18/2024	3.927	3/18/2026	104.25058	103.0195926	101.8177487	100.6440207	99.49742887	98.37703887	97.2819587	96.21133651	95.16435835
ADV1009621	9/18/2024	3.762	9/18/2026	105.79283	104.0538512	102.351909	100.6858807	99.05469345	97.45731734	95.89276341	94.36008143	92.85835803
ADV1009625	9/18/2024	3.596	9/18/2029	114.45422	109.5843782	104.9538493	100.5495323	96.35911939	92.37104234	88.57442399	84.95903268	81.51524017
ADV1009628	9/18/2024	3.804	3/18/2026	104.19872	102.9665504	101.7635841	100.5887867	99.441176	98.31981507	97.22380963	96.15230566	95.10448712
ADV1009629	9/18/2024	3.639	9/18/2026	105.72025	103.97946	102.27578	100.6080912	98.9753175	97.37642588	95.81042448	94.27636033	92.77331746
ADV1009631	9/18/2024	3.804	3/18/2026	104.19872	102.9665504	101.7635841	100.5887867	99.441176	98.31981507	97.22380963	96.15230566	95.10448712
ADV1009637	9/18/2024	4.054	9/18/2025	102.66909	101.9415081	101.2242581	100.5171227	99.81988869	99.13234872	98.45430129	97.78555045	97.1259056

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1009638	9/18/2024	3.651	9/18/2026	105.74106	104.0000782	102.2962154	100.6283471	98.9953971	97.39633231	95.83016078	94.29592946	92.7927223
ADV1009640	9/18/2024	4.045	9/18/2025	102.66257	101.9350149	101.2177908	100.5106811	99.81347252	99.12595773	98.44793524	97.77920909	97.1195887
ADV1009641	9/18/2024	3.641	9/18/2026	105.72372	103.9828963	102.2791859	100.6114672	98.9786641	97.37974362	95.81371387	94.27962186	92.7765516
ADV1009656	9/19/2024	4.077	9/19/2025	102.63788	101.9084267	101.1893581	100.4804573	99.78150931	99.09230526	98.4126421	97.74232236	97.08115402
ADV1009658	9/19/2024	3.859	3/19/2026	104.17635	102.943116	101.7391472	100.5634079	99.41491267	98.29272117	97.19593608	96.12370051	95.07519574
ADV1009662	9/19/2024	3.613	9/20/2027	108.71372	105.9368588	103.2457038	100.6370446	98.10781951	95.65510395	93.27610245	90.96814212	88.72866628
ADV1009663	9/19/2024	3.613	9/20/2027	108.71372	105.9368588	103.2457038	100.6370446	98.10781951	95.65510395	93.27610245	90.96814212	88.72866628
ADV1009675	9/19/2024	3.692	11/19/2026	106.24084	104.328278	102.4597938	100.6341145	98.85000749	97.1062837	95.40179574	93.73543617	92.1061358
ADV1009678	9/19/2024	3.707	10/19/2026	105.98382	104.1586314	102.3738538	100.6283061	98.9208547	97.25040793	95.61591399	94.01635923	92.45076637
ADV1009680	9/19/2024	4.076	9/19/2025	102.63716	101.9077027	101.188637	100.4797391	99.78079393	99.09159271	98.41193233	97.74161535	97.08044975
ADV1009688	9/19/2024	3.858	3/19/2026	104.17512	102.9418965	101.7379355	100.562204	99.41371633	98.29153229	97.19475454	96.1225262	95.07402855
ADV1009696	9/19/2024	4.827	1/21/2025	100.27836	100.2192269	100.160174	100.1012052	100.0423203	99.9835191	99.92480142	99.86616708	99.80761591
ADV1009713	9/20/2024	4.657	2/20/2025	100.61754	100.4736621	100.3301979	100.187148	100.0445106	99.902284	99.76046635	99.61905586	99.47805076
ADV1009728	9/20/2024	3.503	9/20/2027	108.6375	105.8567132	103.1618567	100.5497144	98.01721357	95.56141853	93.17952374	90.86884676	88.62682184
ADV1009744	9/23/2024	3.597	10/23/2029	115.11852	110.1256858	105.3827566	100.8758942	96.59209829	92.51915159	88.64556876	84.96054874	81.45393042
ADV1009746	9/23/2024	4.057	9/23/2025	102.66292	101.9223517	101.192487	100.4730926	99.76394403	99.06482328	98.37551844	97.69582357	97.02553846
ADV1009747	9/23/2024	4.77	1/23/2025	100.29795	100.2332175	100.1685768	100.1040318	100.0395821	99.97522758	99.91096803	99.84680324	99.78273298
ADV1009752	9/23/2024	3.597	9/23/2027	108.69489	105.9099761	103.2112269	100.5954104	98.05944092	95.60037075	93.21538298	90.90178459	88.65699997
ADV1009762	9/23/2024	4.22	7/16/2025	102.07749	101.5175048	100.9635729	100.4156006	99.87349218	99.33715367	98.80649327	98.28142107	97.76184908
ADV1009763	9/23/2024	4.131	8/20/2025	102.37163	101.7257325	101.0880025	100.4582859	99.836432	99.22229396	98.61572852	98.01659597	97.42476004
ADV1009764	9/23/2024	4.064	9/19/2025	102.62807	101.8986617	101.1796422	100.4707898	99.77188966	99.08273282	98.40311624	97.73284251	97.07171959
ADV1009770	9/23/2024	3.596	9/23/2027	108.69214	105.907264	103.208552	100.592772	98.05683802	95.59780258	93.21284876	90.89928354	88.65453135
ADV1009789	9/24/2024	3.584	9/24/2027	108.6674	105.8800947	103.179104	100.5611853	98.02324485	95.56232743	93.17560919	90.86039058	88.61408984
ADV1009790	9/27/2024	4.708	1/23/2025	100.29288	100.2281864	100.1635924	100.0990939	100.0346908	99.97038269	99.90616951	99.84205101	99.77802699
ADV1009791	9/27/2024	4.625	2/18/2025	100.58832	100.4502499	100.3125615	100.1752577	100.0383367	99.90179709	99.76563711	99.62985518	99.49444971
ADV1009792	9/24/2024	4.101	8/25/2025	102.40239	101.7426071	101.0913407	100.4484246	99.8136988	99.1870073	98.56819805	97.95712282	97.35363709
ADV1009793	9/24/2024	3.611	3/24/2027	107.19055	104.9233106	102.7155277	100.5652027	98.47042186	96.42935184	94.44023554	92.50138813	90.61119347
ADV1009795	9/24/2024	4.726	1/15/2025	100.19957	100.1574009	100.1152811	100.0732143	100.0312003	99.98923905	99.9473305	99.9054745	99.86367096
ADV1009796	9/24/2024	3.931	9/24/2025	102.63864	101.8946453	101.1614542	100.4388296	99.726544	99.02437639	98.33211202	97.6495422	96.97646406
ADV1009799	9/24/2024	4.608	2/24/2025	100.65564	100.50053	100.3458986	100.191742	100.0380579	99.88484416	99.7320987	99.57981932	99.42800389
ADV1009800	9/24/2024	4.43	4/24/2025	101.2796	100.9569566	100.6363461	100.3177497	100.0011482	99.6865229	99.37385541	99.06312743	98.75432091
ADV1009801	9/24/2024	4.252	6/24/2025	101.86468	101.3678712	100.8758371	100.3885109	99.90582524	99.427714	98.95411242	98.48495691	98.02018508
ADV1009802	9/24/2024	4.015	9/24/2025	102.64161	101.8983866	101.1659382	100.4440349	99.73244975	99.03096253	98.33935912	97.65743144	96.98497723

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1009803	9/24/2024	4.522	3/24/2025	100.95883	100.724352	100.4909542	100.2586328	100.0273804	99.79718958	99.56805301	99.33996342	99.11291361
ADV1009804	9/24/2024	4.022	9/24/2025	102.6468	101.9035496	101.1710802	100.4491561	99.73755034	99.03604271	98.34441909	97.6624714	96.98999738
ADV1009805	9/24/2024	3.791	3/24/2026	104.13666	102.8900729	101.6733851	100.4855315	99.32549502	98.19230567	97.08503823	96.00280958	94.94477635
ADV1009808	9/24/2024	4.703	1/24/2025	100.305	100.2374632	100.1700307	100.1026999	100.0354704	99.96834205	99.90131461	99.83438784	99.76756153
ADV1009809	9/24/2024	4.519	3/24/2025	100.95813	100.723652	100.4902576	100.2579396	100.0266906	99.79650319	99.56737	99.33928377	99.11223731
ADV1009813	9/24/2024	3.936	9/24/2025	102.64234	101.8983344	101.1651283	100.4424888	99.73018843	99.02800622	98.33572739	97.65314326	96.98005096
ADV1009833	9/25/2024	4.031	9/25/2025	102.66283	101.9167863	101.1815956	100.4570262	99.74284896	99.03884122	98.34478666	97.66047506	96.9857021
ADV1009834	9/25/2024	3.664	9/25/2026	105.68757	103.9301209	102.2104153	100.5273015	98.87967605	97.26648019	95.68669762	94.13935238	92.62350671
ADV1009835	9/25/2024	3.941	9/25/2025	102.65541	101.9086065	101.1726873	100.4474109	99.73254738	99.02787341	98.33317203	97.64823238	96.97284953
ADV1009836	9/25/2024	3.705	3/25/2026	104.13831	102.887454	101.6666907	100.4749439	99.31118713	98.17444169	97.06377422	95.97829392	94.91715014
ADV1009839	9/25/2024	3.939	9/25/2025	102.65392	101.9071256	101.1712125	100.4459421	99.73108447	99.02641638	98.33172081	97.64678692	96.97140976
ADV1009840	9/25/2024	3.701	3/25/2026	104.13333	102.8825092	101.6617781	100.470063	99.30633731	98.1696225	97.05898516	95.97353452	94.91241993
ADV1009841	9/25/2024	3.577	9/25/2026	105.67727	103.9174024	102.1953748	100.5100283	98.86025567	97.24499473	95.66322594	94.11397025	92.59628698
ADV1009842	9/25/2024	3.585	9/25/2026	105.69129	103.9312976	102.2091456	100.5236768	98.87378416	97.25840532	95.67652071	94.12715122	92.60935613
ADV1009845	9/25/2024	4.533	3/25/2025	100.97256	100.7352535	100.4990523	100.263952	100.0299447	99.79702284	99.56517884	99.33440521	99.10469451
ADV1009849	9/25/2024	4.448	4/25/2025	101.29627	100.9707728	100.6473471	100.325969	100.0066192	99.68927844	99.3739279	99.06054882	98.74912275
ADV1009853	9/25/2024	3.941	9/25/2025	102.65541	101.9086065	101.1726873	100.4474109	99.73254738	99.02787341	98.33317203	97.64823238	96.97284953
ADV1009855	9/25/2024	4.534	3/25/2025	100.9728	100.7354895	100.4992873	100.2641857	100.0301773	99.79725429	99.56540915	99.33463439	99.10492256
ADV1009857	9/25/2024	3.597	9/25/2026	105.71232	103.9521405	102.2298017	100.5441496	98.89407689	97.2785212	95.69646287	94.14692268	92.62895985
ADV1009867	9/26/2024	3.668	9/26/2029	114.85523	109.9539103	105.2943011	100.8631178	96.64788504	92.63688068	88.81908553	85.18413713	81.72228658
ADV1009868	9/26/2024	3.558	9/27/2027	108.84765	106.0444781	103.3284111	100.6961644	98.14460544	95.67074227	93.27171651	90.94479613	88.68736876
ADV1009872	9/26/2024	3.719	9/28/2026	105.81243	104.0455291	102.3167012	100.6247852	98.96866359	97.34726439	95.75955881	94.20455901	92.68131608
ADV1009875	9/26/2024	3.644	9/27/2027	108.85785	106.0595806	103.3481609	100.7203183	98.17293235	95.7030229	93.30774254	90.98436958	88.73030148
ADV1009876	9/26/2024	3.64	9/28/2026	105.81627	104.0468041	102.3155108	100.6212219	98.96281598	97.3392176	95.74939459	94.19235594	92.66714971
ADV1009880	9/26/2024	3.727	9/28/2026	105.82651	104.0594794	102.3305261	100.6384869	98.98224439	97.36072641	95.77290414	94.21778971	92.69443412
ADV1009882	9/26/2024	3.658	9/1/2027	108.5604	105.8679057	103.2583087	100.7284961	98.27549894	95.89648174	93.58873493	91.3496683	89.17680475
ADV1009896	9/26/2024	3.656	9/27/2027	108.89098	106.092252	103.3803816	100.7520989	98.20428309	95.7339537	93.338263	91.01448902	88.76002892
ADV1009897	9/26/2024	3.687	9/26/2028	112.03365	108.1878798	104.4969415	100.9536943	97.55137104	94.28355788	91.14417298	88.1274472	85.22790584
ADV1009908	9/27/2024	3.634	9/27/2027	108.83024	106.0323545	103.3213103	100.6938345	98.14680674	95.67724724	93.28230882	90.95927005	88.70552861
ADV1009916	9/27/2024	3.624	9/27/2029	114.65375	109.7544225	105.0968881	100.667854	96.45483286	92.44609158	88.63060125	84.99799061	81.53850291
ADV1009921	9/27/2024	3.546	9/27/2028	111.82511	107.9721527	104.2746547	100.7254345	97.31768543	94.04495657	90.90113163	87.88040937	84.97728517
ADV1009927	9/27/2024	4.059	9/26/2025	102.69363	101.9447053	101.2067133	100.4794199	99.76259365	99.05600945	98.35944873	97.67269911	96.99555415
ADV1009930	9/27/2024	3.605	9/27/2027	108.75016	105.9533987	103.2434437	100.6170314	98.07104245	95.60249781	93.20855103	90.8864814	88.6336873

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1009933	9/27/2024	3.522	9/27/2027	108.74814	105.9463553	103.2316432	100.6007198	98.0504532	95.57785257	93.18006046	90.85434569	88.59809678
ADV1009935	9/27/2024	3.525	9/27/2027	108.75643	105.9545322	103.2397072	100.6086735	98.05829922	95.58559338	93.18769846	90.86188323	88.60553611
ADV1009937	9/27/2024	3.522	9/27/2027	108.74814	105.9463553	103.2316432	100.6007198	98.0504532	95.57785257	93.18006046	90.85434569	88.59809678
ADV1009938	9/27/2024	3.676	9/29/2028	112.01756	108.1637847	104.4654604	100.9154009	97.50680006	94.23320721	91.08850665	88.06689769	85.16287633
ADV1009939	9/27/2024	3.676	9/22/2028	111.95863	108.1253525	104.446036	100.913594	97.52131391	94.26283238	91.13211446	88.12343467	85.23135893
ADV1009941	9/27/2024	3.675	9/15/2028	111.89596	108.0832541	104.4230179	100.9082701	97.53239112	94.28910404	91.1724543	88.17679111	85.2967499
ADV1009942	9/27/2024	3.674	9/8/2028	111.83332	108.0411597	104.3999929	100.9029355	97.54346049	94.31537648	91.21280865	88.23018034	85.36219593
ADV1009943	9/27/2024	4.023	9/29/2025	102.69645	101.9392657	101.1932522	100.4581661	99.7337684	99.01982712	98.31611694	97.62241896	96.9385205
ADV1009957	9/30/2024	4.527	3/31/2025	101.03813	100.7839111	100.5309486	100.2792357	100.0287633	99.77952213	99.53150329	99.2846978	99.03909683
ADV1009958	9/30/2024	4.053	9/30/2025	102.72832	101.9682634	101.2194567	100.4816553	99.75461771	99.03810958	98.33190329	97.63577776	96.94951816
ADV1009963	9/30/2024	4.529	3/31/2025	101.03864	100.7844158	100.5314508	100.2797355	100.0292606	99.78001695	99.53199566	99.28518774	99.03958433
ADV1009965	9/30/2024	4.056	9/30/2025	102.73059	101.9705246	101.2217086	100.4838979	99.75685111	99.04033389	98.3341186	97.63798416	96.95171574
ADV1009970	9/30/2024	3.7	11/3/2028	112.39184	108.4365379	104.6443285	101.0076382	97.51928792	94.1724666	90.96071051	87.87788372	84.91815984
ADV1009971	9/30/2024	3.7	11/10/2028	112.45016	108.4744134	104.6633493	101.0092856	97.50494199	94.14341309	90.91814735	87.82292699	84.85184933
ADV1009973	9/30/2024	3.7	11/17/2028	112.50846	108.5122553	104.6823271	101.0108878	97.49055497	94.11432807	90.87556699	87.76797146	84.78556191
ADV1009975	9/30/2024	3.7	11/17/2028	112.50846	108.5122553	104.6823271	101.0108878	97.49055497	94.11432807	90.87556699	87.76797146	84.78556191
ADV1009984	9/30/2024	4.102	9/30/2025	102.76541	102.0051974	101.2562375	100.5182844	99.79109669	99.07444002	98.36808671	97.67181563	96.98541197
ADV1009987	9/30/2024	3.6	9/30/2027	108.98919	106.1757138	103.4498613	100.8083229	98.24793938	95.76569403	93.35870514	91.02421874	88.75960187
ADV1009989	9/30/2024	3.6	9/30/2027	108.98919	106.1757138	103.4498613	100.8083229	98.24793938	95.76569403	93.35870514	91.02421874	88.75960187
ADV1010009	10/1/2024	3.613	10/1/2026	105.80079	104.0232518	102.2842064	100.5824732	98.91692155	97.28646703	95.6900688	94.12672745	92.59548289
ADV1010014	10/1/2024	3.62	10/2/2028	111.83471	107.9763196	104.2739034	100.7202454	97.3085103	94.03221978	90.88523168	87.86172004	84.95615683
ADV1010015	10/1/2024	4.777	1/2/2025	100.04388	100.0382712	100.0326651	100.0270641	100.0214681	100.0158771	100.0102911	100.0047101	99.99913409
ADV1010017	10/1/2024	3.694	10/1/2026	105.80058	104.0255868	102.2889919	100.5896164	98.92633357	97.29806245	95.70376562	94.14244684	92.61314909
ADV1010020	10/1/2024	4.045	10/1/2025	102.73776	101.9749267	101.2234331	100.4830256	99.75346009	99.03449958	98.32591392	97.6274796	96.93897949
ADV1010021	10/1/2024	3.817	4/1/2026	104.24599	102.9770718	101.7387372	100.529883	99.34946298	98.19647985	97.06998254	95.96906357	94.89285653
ADV1010022	10/1/2024	4.732	1/16/2025	100.21027	100.1653237	100.1204324	100.0755987	100.0308227	99.98610413	99.94144292	99.89683895	99.85229211
ADV1010023	10/1/2024	3.703	10/1/2026	105.8165	104.0413643	102.304627	100.6051118	98.94169168	97.31328577	95.71885652	94.15740767	92.62798208
ADV1010032	10/30/2024	3.564	10/29/2027	108.89258	106.0075317	103.2144978	100.5100486	97.89090473	95.35392685	92.8961082	90.51456852	88.20654798
ADV1010033	10/30/2024	3.564	10/29/2027	108.89258	106.0075317	103.2144978	100.5100486	97.89090473	95.35392685	92.8961082	90.51456852	88.20654798
ADV1010034	10/1/2024	4.786	1/2/2025	100.04397	100.0383583	100.0327521	100.0271509	100.0215548	100.0159637	100.0103775	100.0047964	99.99922031
ADV1010040	10/2/2024	3.63	10/18/2027	108.99563	106.1387801	103.3721865	100.6924715	98.09640689	95.58090492	93.1430112	90.77989802	88.48885808
ADV1010043	10/1/2024	4.786	1/2/2025	100.04397	100.0383583	100.0327521	100.0271509	100.0215548	100.0159637	100.0103775	100.0047964	99.99922031
ADV1010081	10/3/2024	4.114	10/10/2025	102.88314	102.0949684	101.3188943	100.5546447	99.8019505	99.0605506	98.33019177	97.61062829	96.90162171

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1010084	10/3/2024	3.638	10/4/2027	109.13277	106.3065382	103.5686157	100.9156763	98.34454148	95.8521751	93.43567573	91.09226965	88.81930416
ADV1010086	10/3/2024	3.641	10/3/2029	115.18615	110.2456126	105.5498272	101.0852978	96.83934855	92.80007049	88.95627085	85.29742558	81.81363548
ADV1010107	10/3/2024	3.82	10/5/2026	106.06089	104.2727479	102.5234809	100.8119124	99.1369133	97.49739964	95.89233016	94.32070417	92.78155956
ADV1010108	10/3/2024	3.82	10/5/2026	106.06089	104.2727479	102.5234809	100.8119124	99.1369133	97.49739964	95.89233016	94.32070417	92.78155956
ADV1010117	10/4/2024	4.813	1/3/2025	100.05572	100.0473031	100.0388959	100.0304965	100.0221048	100.0137209	100.0053447	99.99697627	99.98861556
ADV1010118	10/4/2024	4.004	10/5/2026	106.38788	104.5967276	102.8445009	101.1300265	99.45217402	97.809858	96.20203581	94.62770545	93.08590353
ADV1010124	10/4/2024	3.91	10/4/2027	109.65963	106.8311068	104.0908026	101.4354009	98.8617302	96.36676122	93.94759884	91.60147522	89.32574316
ADV1010127	10/4/2024	4.326	10/6/2025	103.00544	102.2277025	101.4617369	100.7072753	99.96405962	99.23183935	98.51037145	97.79942	97.09875593
ADV1010129	10/4/2024	3.951	10/5/2026	106.43841	104.6442126	102.8890561	101.1717545	99.49117307	97.84622276	96.23585725	94.65907107	93.11489758
ADV1010130	10/4/2024	3.864	10/4/2028	113.08962	109.19374	105.4555036	101.8676155	98.42316397	95.11559814	91.93870659	88.88659755	85.95368034
ADV1010146	10/7/2024	3.988	10/7/2027	109.90377	107.0636971	104.3124101	101.6465739	99.06300117	96.55864644	94.13059836	91.77607289	89.49240669
ADV1010149	10/7/2024	4.086	10/8/2026	106.56404	104.7631565	103.0015665	101.2780871	99.59158627	97.94097616	96.32521126	94.74328615	93.19423358
ADV1010154	10/7/2024	4.744	1/21/2025	100.26931	100.2103296	100.1514311	100.0926165	100.0338855	99.97523804	99.91667388	99.85819283	99.79979474
ADV1010155	10/7/2024	4.622	4/7/2025	101.14188	100.8678577	100.5953106	100.3242261	100.0545925	99.78639791	99.51963091	99.25428002	98.99033393
ADV1010157	10/7/2024	4.119	7/10/2026	105.68697	104.1390691	102.6218149	101.1343699	99.67592626	98.24570493	96.8429543	95.46694907	94.11698907
ADV1010172	10/8/2024	4.484	10/8/2036	139.43842	126.7091461	115.3413109	105.1790239	96.08512757	87.93885238	80.63377659	74.07604994	68.18284541
ADV1010179	10/8/2024	3.997	10/8/2027	109.93785	107.0945848	104.340282	101.6715978	99.08533995	96.578458	94.14803563	91.79128381	89.50553422
ADV1010188	10/8/2024	4.34	9/2/2025	102.64854	101.9658404	101.2922327	100.6275362	99.97157478	99.3241769	98.68517555	98.05440803	97.43171579
ADV1010189	10/8/2024	4.412	6/30/2025	102.00611	101.4922923	100.9835676	100.4798636	99.9811064	99.48722353	98.99814393	98.51379792	98.03411716
ADV1010198	10/9/2024	4.789	1/9/2025	100.12679	100.1015504	100.0763351	100.0511472	100.0259869	100.0008539	99.97574838	99.95067017	99.92561925
ADV1010199	10/9/2024	4.245	10/9/2025	103.03688	102.2499061	101.4749854	100.7118393	99.96020059	99.21980991	98.49041571	97.7717739	97.06364757
ADV1010202	10/9/2024	4.567	4/9/2025	101.14934	100.8697704	100.5917399	100.3152337	100.040239	99.76674356	99.49473495	99.22420104	98.95512978
ADV1010211	10/9/2024	4.122	8/14/2026	106.05188	104.4065174	102.7948553	101.2159256	99.66879523	98.15256669	96.66637606	95.20939149	93.78081165
ADV1010214	10/9/2024	4.281	10/9/2025	103.06507	102.277976	101.5029352	100.7396703	99.98791406	99.24740709	98.51789782	97.79914214	97.09090313
ADV1010218	10/9/2024	4	10/9/2029	116.54344	111.5670426	106.8371457	102.34017	98.06335738	93.99471949	90.12298676	86.43756125	82.92847275
ADV1010223	10/10/2024	4.254	10/10/2025	103.05468	102.2648718	101.4872016	100.7213891	99.9671641	99.22426459	98.4924364	97.77143292	97.06101484
ADV1010225	10/10/2024	4.003	10/10/2029	115.82127	111.0648131	106.5432572	102.2436612	98.1538635	94.26243256	90.55861907	87.03231182	83.67399665
ADV1010231	10/10/2024	4.783	1/10/2025	100.13846	100.1104169	100.0824018	100.054418	100.0264655	99.99854424	99.9706542	99.94279529	99.91496745
ADV1010237	10/10/2024	4.788	1/13/2025	100.17484	100.138365	100.1019364	100.0655515	100.0292104	99.9929129	99.95665896	99.92044849	99.88428141
ADV1010238	10/10/2024	4.797	1/10/2025	100.1389	100.1108566	100.0828405	100.0548557	100.0269023	99.99898003	99.971089	99.9432291	99.91540029
ADV1010250	10/11/2024	3.987	10/13/2026	106.5819	104.7647038	102.9874547	101.2489677	99.54810506	97.88377241	96.25491683	94.66052481	93.09962043
ADV1010251	10/11/2024	4.561	4/11/2025	101.17009	100.8849154	100.6013371	100.3193455	100.0389273	99.76006926	99.48275828	99.20698142	98.93272592
ADV1010259	10/11/2024	3.99	4/11/2029	114.94903	110.5031331	106.2578196	102.2029276	98.32886511	94.62657784	91.08751558	87.70360127	84.46720198

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1010263	10/11/2024	4.777	1/14/2025	100.18623	100.1469495	100.1077219	100.0685426	100.0294114	99.9903282	99.95129303	99.91230574	99.87336623
ADV1010264	10/11/2024	4.777	1/14/2025	100.18623	100.1469495	100.1077219	100.0685426	100.0294114	99.9903282	99.95129303	99.91230574	99.87336623
ADV1010279	10/11/2024	4.218	10/14/2025	103.0692	102.2683093	101.4798934	100.7036659	99.93934505	99.186658	98.44534006	97.71513457	96.99579253
ADV1010330	10/15/2024	3.881	10/15/2027	109.90702	107.0400417	104.2634127	101.5737498	98.96781601	96.44251626	93.99488998	91.62210431	89.32144772
ADV1010335	10/15/2024	4.22	10/15/2025	103.08126	102.2775536	101.4864083	100.7075349	99.94064887	99.18547456	98.44174464	97.70919987	96.98758884
ADV1010339	10/16/2024	3.955	1/18/2028	110.74301	107.6103992	104.5843193	101.6605382	98.83501676	96.10389997	93.4635073	90.91032364	88.44099085
ADV1010340	10/15/2024	4.219	10/15/2025	103.08046	102.2767577	101.4856159	100.7067459	99.93986325	99.1846923	98.4409657	97.70842423	96.98681645
ADV1010351	10/16/2024	4.52	4/16/2025	101.21397	100.9148059	100.6174029	100.3217452	100.0278177	99.73560487	99.44509181	99.1562636	98.86910552
ADV1010352	10/16/2024	4.269	10/16/2025	103.06701	102.2614705	101.4685513	100.6879612	99.91941374	99.1626312	98.41734447	97.68329256	96.96022235
ADV1010353	10/16/2024	4.117	4/16/2026	104.79557	103.4839668	102.199436	100.9411403	99.70828044	98.50008963	97.31583227	96.15480213	95.01632098
ADV1010355	10/16/2024	4.769	1/15/2025	100.19683	100.1547728	100.1127683	100.0708167	100.0289178	99.98707148	99.9452777	99.90353634	99.86184729
ADV1010368	10/17/2024	4.776	1/15/2025	100.19693	100.1548781	100.1128784	100.0709315	100.0290373	99.9871958	99.94540677	99.90367015	99.86198584
ADV1010369	10/17/2024	4.772	1/17/2025	100.22081	100.1731365	100.12553	100.0779859	100.0305043	99.98308488	99.9357276	99.88843232	99.84119892
ADV1010398	10/18/2024	4.245	11/24/2025	103.46546	102.5507841	101.6523182	100.7696332	99.90231568	99.04996622	98.21219928	97.38864245	96.57893591
ADV1010402	10/18/2024	4.299	10/20/2025	103.1335	102.3166558	101.5127872	100.7215833	99.94274595	99.17598642	98.42102484	97.67758995	96.94541877
ADV1010403	10/18/2024	4.038	10/19/2026	106.58555	104.7547331	102.9644303	101.2134592	99.5006833	97.82500823	96.18537959	94.5807812	93.01023335
ADV1010404	10/18/2024	4.141	4/20/2026	104.87233	103.5498076	102.25342	100.9824032	99.73602538	98.51358338	97.31440087	96.13782721	94.98323619
ADV1010409	10/18/2024	4.756	1/17/2025	100.21978	100.1721215	100.1245231	100.0769871	100.0295136	99.98210229	99.93475311	99.88746591	99.84024058
ADV1010411	10/18/2024	4.757	1/17/2025	100.21983	100.1721719	100.1245734	100.0770373	100.0295637	99.98215224	99.93480294	99.88751562	99.84029018
ADV1010445	10/21/2024	4.121	4/21/2026	104.96433	103.6368938	102.3354216	101.0591681	99.80741625	98.5794766	97.37468565	96.19240476	95.03201896
ADV1010446	10/21/2024	4.363	9/22/2025	102.87828	102.1395888	101.4115296	100.693874	99.98639954	99.28889052	98.60113707	97.92293524	97.25408674
ADV1010447	10/21/2024	4.411	7/21/2025	102.2247	101.6619369	101.1053831	100.554939	100.0105041	99.47198022	98.9392712	98.41228303	97.89092369
ADV1010448	10/21/2024	4.483	5/21/2025	101.59357	101.194907	100.7993442	100.4068478	100.0173819	99.63091172	99.24740255	98.86682042	98.48913182
ADV1010449	10/21/2024	3.958	10/21/2027	110.17831	107.291185	104.4954849	101.7877918	99.16483778	96.62349622	94.16077498	91.77380966	89.45985724
ADV1010450	10/21/2024	4.021	10/21/2026	106.72313	104.8829452	103.0836271	101.3239868	99.60288229	97.91921359	96.27192037	94.65998039	93.08240776
ADV1010451	10/21/2024	4.34	10/21/2025	103.17778	102.3579845	101.5512502	100.7572663	99.97573189	99.2063553	98.44885393	97.70295391	96.96838975
ADV1010455	10/21/2024	4.042	10/21/2027	110.1817	107.299781	104.5090124	101.8059907	99.18746118	96.6503096	94.19155559	91.80834581	89.49794775
ADV1010462	10/22/2024	4.761	1/23/2025	100.29116	100.2266685	100.1622738	100.0979743	100.0337698	99.9696601	99.90564502	99.84172432	99.77789781
ADV1010470	10/22/2024	4.234	3/30/2026	104.74736	103.4804144	102.2442113	101.0376425	99.8596503	98.70922699	97.58541172	96.48728786	95.41398049
ADV1010471	10/22/2024	4.618	3/31/2025	101.0569	100.8032629	100.5508846	100.299753	100.0498589	99.80119332	99.55374721	99.30751165	99.06247781
ADV1010479	10/22/2024	4.632	3/20/2025	100.9326	100.7101578	100.4886995	100.2682187	100.0487089	99.83016357	99.61257634	99.39594084	99.1802508
ADV1010487	10/23/2024	4.191	7/23/2026	105.93098	104.3459732	102.7927337	101.270379	99.7780555	98.31494046	96.880241	95.47319261	94.09305786
ADV1010488	10/23/2024	4.143	10/23/2026	106.81718	104.9733734	103.1705713	101.4075872	99.68328166	97.99655664	96.34635316	94.73164986	93.15146127

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1010507	10/23/2024	4.276	10/23/2025	103.21254	102.3861967	101.5731179	100.7729849	99.98549005	99.210335	98.44723094	97.69589798	96.95606484
ADV1010522	10/25/2024	4.07	10/15/2027	110.20367	107.3377038	104.5619185	101.8729375	99.26753397	96.742622	94.29524984	91.92259288	89.62194736
ADV1010530	10/25/2024	4.072	10/25/2027	110.30285	107.4083852	104.605763	101.8915622	99.26250763	96.71546467	94.24743228	91.85553646	89.53702413
ADV1010536	10/25/2024	4.738	1/27/2025	100.33671	100.2610051	100.1854221	100.1099593	100.0346163	99.95939283	99.88428869	99.80930356	99.73443717
ADV1010540	10/25/2024	4.738	1/27/2025	100.33671	100.2610051	100.1854221	100.1099593	100.0346163	99.95939283	99.88428869	99.80930356	99.73443717
ADV1010541	10/25/2024	4.141	10/25/2029	109.03367	106.505863	104.0688788	101.7186576	99.45135533	97.2633267	95.15111404	93.11143609	91.14117785
ADV1010542	10/25/2024	4.738	1/27/2025	100.33671	100.2610051	100.1854221	100.1099593	100.0346163	99.95939283	99.88428869	99.80930356	99.73443717
ADV1010543	10/25/2024	4.153	10/26/2026	106.86564	105.0132806	103.2022663	101.4314143	99.6995838	98.00567417	96.34862354	94.72740703	93.14103525
ADV1010544	10/25/2024	4.675	2/25/2025	100.67153	100.5141686	100.3572964	100.2009128	100.0450153	99.88960187	99.73467014	99.58021791	99.42624295
ADV1010545	10/25/2024	4.521	5/27/2025	101.67554	101.2598254	100.847478	100.4384527	100.0327093	99.63020853	99.23091163	98.83478045	98.44177746
ADV1010553	10/28/2024	4.792	1/28/2025	100.35236	100.2738629	100.1954945	100.1172527	100.0391374	99.96114821	99.88328486	99.80554704	99.72793445
ADV1010556	10/28/2024	4.796	1/28/2025	100.35268	100.2741845	100.1958153	100.1175728	100.0394567	99.96146668	99.88360254	99.80586394	99.72825057
ADV1010557	10/28/2024	4.796	1/28/2025	100.35268	100.2741845	100.1958153	100.1175728	100.0394567	99.96146668	99.88360254	99.80586394	99.72825057
ADV1010586	10/29/2024	4.219	10/29/2026	107.01797	105.1560536	103.3358511	101.556175	99.81588215	98.11386898	96.44907008	94.82045656	93.22703455
ADV1010587	10/29/2024	4.204	10/29/2027	110.71594	107.8047156	104.9861333	102.256748	99.61326101	97.05251383	94.57148165	92.16726679	89.83709268
ADV1010594	10/29/2024	4.246	10/1/2029	115.77135	111.3332608	107.1079716	103.0839636	99.25040351	95.59710009	92.1144628	88.79346325	85.62559933
ADV1010598	10/29/2024	4.188	10/29/2031	114.25681	110.1843539	106.3220358	102.6569446	99.1770618	95.87119463	92.72891371	89.7404958	86.89687125
ADV1010603	10/30/2024	4.18	10/30/2029	117.58248	112.5244721	107.7193564	103.1531514	98.81271488	94.68569378	90.76047262	87.02612589	83.47237366
ADV1010604	10/30/2024	4.127	10/30/2026	107.00906	105.1418072	103.3164823	101.5318979	99.78690585	98.08039824	96.41130501	94.77859268	93.18126283
ADV1010613	10/30/2024	4.207	10/30/2028	114.31183	110.3306142	106.5127267	102.8506093	99.33709467	95.96538231	92.72901778	89.6218733	86.63812954
ADV1010614	10/30/2024	4.641	3/26/2025	101.0029	100.7636758	100.5255816	100.2886084	100.0527483	99.81799327	99.58433572	99.35176789	99.12028215
ADV1010618	10/30/2024	4.761	1/30/2025	100.37343	100.289334	100.2053834	100.1215731	100.0379029	99.95437246	99.87098137	99.78772931	99.70461596
ADV1010619	10/30/2024	4.585	4/30/2025	101.39119	101.0526119	100.7162702	100.3821397	100.0501986	99.72042547	99.39279924	99.06729904	98.74390428
ADV1010630	10/31/2024	4.42	10/31/2025	103.35286	102.504766	101.6706118	100.8500593	100.0427777	99.24844653	98.46675586	97.69740544	96.94010451
ADV1010632	10/31/2024	4.195	10/31/2029	117.29817	112.4320935	107.8088083	103.4147908	99.23734634	95.26455061	91.4851987	87.88875804	84.46532458
ADV1010636	10/31/2024	4.765	1/31/2025	100.38556	100.2986704	100.2119252	100.1253274	100.0388768	99.95257288	99.86641537	99.78040388	99.69453805
ADV1010643	10/31/2024	4.363	1/30/2026	104.29371	103.1907477	102.1111825	101.0542749	100.0193165	99.00562776	98.01255717	97.03947955	96.08579477
ADV1010651	10/31/2024	4.321	10/31/2025	103.33698	102.4880383	101.6530654	100.831721	100.0236733	99.2286011	98.44619339	97.67614913	96.91817674
ADV1010652	10/31/2024	4.766	1/31/2025	100.38565	100.2987589	100.2120135	100.1254156	100.0389647	99.95266058	99.86650285	99.78049114	99.6946251
ADV1010655	10/31/2024	4.239	10/30/2026	107.06503	105.1999712	103.3767483	101.5941738	99.85110376	98.14643345	96.47909624	94.84806185	93.25233485
ADV1010656	11/1/2024	4.228	11/1/2029	117.83799	112.7684873	107.952636	103.3764012	99.02659409	94.89081781	90.95741601	87.21542492	83.65452881
ADV1010662	10/31/2024	4.602	4/30/2025	101.3967	101.058137	100.7218091	100.3876923	100.0557647	99.72600512	99.3983923	99.07290543	98.74952391
ADV1010663	10/31/2024	4.483	7/31/2025	102.37438	101.7835634	101.1995714	100.622284	100.0515863	99.48736594	98.92951307	98.37792033	97.83248275

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1010672	11/1/2024	4.729	1/31/2025	100.38216	100.2952826	100.2085565	100.1219779	100.0355463	99.94926147	99.86312297	99.77713046	99.69128358
ADV1010673	11/1/2024	4.513	6/2/2025	101.7385	101.306015	100.8771662	100.451907	100.0301928	99.61197921	99.19722296	98.78588132	98.37791229
ADV1010677	11/1/2024	4.73	1/31/2025	100.38225	100.2953711	100.2086448	100.122066	100.0356342	99.94934914	99.86321042	99.77721769	99.6913706
ADV1010678	11/1/2024	4.73	1/31/2025	100.38225	100.2953711	100.2086448	100.122066	100.0356342	99.94934914	99.86321042	99.77721769	99.6913706
ADV1010689	11/1/2024	4.324	11/3/2025	103.37883	102.5214512	101.6783203	100.8490879	100.0334119	99.23096153	98.44141669	97.66446748	96.89981389
ADV1010704	11/4/2024	4.171	12/15/2026	107.58461	105.5849237	103.6329165	101.7271582	99.86626974	98.04892268	96.2738369	94.53977856	92.84555801
ADV1010711	11/8/2024	4.255	6/15/2027	109.4924	106.9700854	104.5196918	102.1387558	99.82491229	97.57589163	95.38951463	93.26368863	91.19640343
ADV1010714	11/4/2024	4.664	2/4/2025	100.4225	100.3244412	100.2265818	100.1289176	100.0314483	99.93417298	99.83709125	99.74020246	99.64350602
ADV1010745	11/6/2024	4.675	2/6/2025	100.4466	100.3429545	100.2395258	100.1363173	100.0333283	99.93055801	99.82800573	99.72567074	99.62355235
ADV1010761	11/7/2024	4.317	11/9/2026	107.32343	105.4281588	103.5759631	101.7656064	99.99589946	98.26569466	96.57388402	94.91939757	93.30120186
ADV1010762	11/7/2024	4.69	2/6/2025	100.44797	100.3443337	100.2409145	100.1377153	100.0347357	99.93197471	99.82943174	99.72710605	99.62499694
ADV1010774	11/7/2024	4.321	11/9/2026	107.33093	105.4355922	103.5833256	101.7728993	100.003124	98.27285217	96.58097568	94.92642457	93.30816536
ADV1010775	11/7/2024	4.274	11/8/2027	111.02065	108.0773443	105.2284969	102.4705705	99.80018129	97.21409019	94.70919547	92.28252634	89.93123662
ADV1010794	11/8/2024	4.27	11/8/2027	111.00894	108.0657969	105.217105	102.4593305	99.78908958	97.20314332	94.69839011	92.27185923	89.92070463
ADV1010801	11/8/2024	4.385	4/9/2026	105.06101	103.7658231	102.499399	101.2607773	100.0490403	98.86331106	97.70275043	96.56655556	95.45395772
ADV1010810	11/8/2024	4.736	1/8/2025	100.10691	100.0845638	100.0622422	100.0399444	100.0176703	99.99541987	99.97319308	99.95098987	99.92881021
ADV1010815	11/13/2024	4.286	10/1/2029	117.8403	112.8548709	108.1149667	103.6070954	99.31858173	95.23751646	91.35270497	87.65362027	84.13035914
ADV1010835	11/12/2024	4.668	2/12/2025	100.51479	100.3943675	100.2742486	100.1544281	100.0349049	99.9156777	99.79674553	99.6781072	99.55976159
ADV1010841	11/12/2024	4.678	2/12/2025	100.516	100.3955798	100.2754579	100.1556344	100.0361081	99.91687799	99.79794281	99.67930148	99.56095289
ADV1010843	11/12/2024	4.678	2/12/2025	100.516	100.3955798	100.2754579	100.1556344	100.0361081	99.91687799	99.79794281	99.67930148	99.56095289
ADV1010844	11/12/2024	4.678	2/12/2025	100.516	100.3955798	100.2754579	100.1556344	100.0361081	99.91687799	99.79794281	99.67930148	99.56095289
ADV1010846	11/12/2024	4.567	6/12/2025	101.87332	101.4127093	100.9562374	100.503844	100.0554748	99.61107599	99.17059501	98.73398011	98.30118046
ADV1010847	11/12/2024	4.682	2/12/2025	100.51649	100.3960648	100.2759417	100.1561169	100.0365895	99.9173581	99.79842172	99.6797792	99.56142941
ADV1010859	11/12/2024	4.402	11/12/2027	111.42973	108.4692901	105.6041464	102.8307184	100.1455819	97.54545903	95.02721172	92.58783477	90.2244495
ADV1010863	11/12/2024	4.714	1/13/2025	100.16488	100.1285664	100.0923002	100.0560776	100.0198986	99.98376298	99.94767073	99.91162177	99.87561599
ADV1010902	11/14/2024	4.54	5/14/2025	101.53216	101.1544818	100.7796018	100.4074886	100.0381114	99.67144019	99.30744505	98.94609669	98.58736621
ADV1010904	11/14/2024	4.652	2/14/2025	100.53573	100.4097243	100.2840489	100.1586992	100.0336738	99.90897144	99.78459091	99.66053089	99.5367901
ADV1010905	11/14/2024	4.541	5/14/2025	101.53253	101.1548534	100.7799716	100.4078566	100.0384776	99.67180458	99.30780765	98.94645751	98.58772527
ADV1010907	11/14/2024	4.497	7/14/2025	102.19843	101.6464601	101.1004063	100.560169	100.0256554	99.49677485	98.97343863	98.45555977	97.94305316
ADV1010910	11/14/2024	4.622	3/14/2025	100.85622	100.6513792	100.4473755	100.2442078	100.041871	99.84035986	99.63966932	99.43979427	99.24072968
ADV1010912	11/14/2024	4.371	11/14/2025	103.54118	102.65267	101.7794509	100.921133	100.0773367	99.24769487	98.43185301	97.62946821	96.8402089
ADV1010920	11/14/2024	4.723	1/14/2025	100.17669	100.1375945	100.0985452	100.0595439	100.0205906	99.98168509	99.94282737	99.9040173	99.86525481
ADV1010926	11/15/2024	4.595	5/15/2025	101.56402	101.1834343	100.8056934	100.4307609	100.0586054	99.68919591	99.32250216	98.95849411	98.59714224

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1010930	11/15/2024	4.665	2/14/2025	100.53717	100.411182	100.2855186	100.1601808	100.0351673	99.91047683	99.78610814	99.66205993	99.53833092
ADV1010938	11/15/2024	4.609	4/15/2025	101.22308	100.9277487	100.6341351	100.342229	100.0520153	99.7634794	99.47660659	99.19138247	98.90779276
ADV1010939	11/15/2024	4.383	11/15/2027	111.4058	108.4373199	105.5646431	102.7841669	100.0924397	97.48615834	94.96216054	92.51741844	90.14903197
ADV1010947	11/15/2024	4.391	10/20/2026	107.23944	105.3998173	103.6009313	101.8415987	100.1206797	98.43707624	96.78973017	95.17762155	93.59976684
ADV1010982	11/18/2024	4.362	11/18/2025	103.57709	102.6773865	101.79336	100.9246016	100.0707175	99.23132746	98.40606401	97.5945721	96.79650848
ADV1010987	11/18/2024	4.675	1/17/2025	100.20917	100.1617103	100.1143109	100.0669737	100.0196986	99.97248548	99.92533422	99.8782447	99.83121678
ADV1011003	11/19/2024	4.354	11/19/2025	103.58123	102.6787436	101.7920317	100.9206798	100.0642908	99.22248084	98.39487944	97.58112842	96.78088158
ADV1011011	11/19/2024	4.532	8/19/2025	102.61894	101.9748997	101.338963	100.7109809	100.0908046	99.47828884	98.87329198	98.2756759	97.68530583
ADV1011013	11/19/2024	4.412	5/19/2026	105.55876	104.1542832	102.7753903	101.4214422	100.0918192	98.78592172	97.50316949	96.2430007	95.00487133
ADV1011015	11/19/2024	4.448	11/19/2025	103.59352	102.6919683	101.8061605	100.9356823	100.0801376	99.23914381	98.41233143	97.59934328	96.79983412
ADV1011018	11/19/2024	4.357	11/19/2026	107.50658	105.5816419	103.701026	101.8634432	100.0676546	98.31246484	96.5967208	94.9193093	93.27915568
ADV1011019	11/19/2024	4.313	11/19/2027	111.24295	108.2656646	105.3848306	102.5967988	99.89808294	97.2853469	94.75539769	92.30517837	89.93176149
ADV1011024	11/19/2024	4.647	2/19/2025	100.59224	100.4522673	100.3126955	100.1735202	100.0347396	99.8963522	99.75835619	99.6207499	99.48353167
ADV1011028	11/19/2024	4.686	1/21/2025	100.25668	100.1980283	100.1394648	100.0809848	100.0225879	99.96427403	99.90604301	99.84789464	99.78982874
ADV1011040	11/20/2024	4.303	11/20/2026	107.57074	105.6395347	103.7528921	101.9095213	100.1081736	98.34764452	96.62677208	94.9444347	93.29954974
ADV1011064	11/21/2024	4.64	2/21/2025	100.61407	100.4685189	100.3233925	100.178692	100.0344156	99.89056128	99.74712725	99.60411165	99.46151262
ADV1011065	11/21/2024	4.679	1/21/2025	100.25583	100.1972032	100.1386555	100.0801913	100.0218102	99.96351204	99.90529673	99.84716406	99.78911384
ADV1011069	11/21/2024	4.64	2/21/2025	100.61407	100.4685189	100.3233925	100.178692	100.0344156	99.89056128	99.74712725	99.60411165	99.46151262
ADV1011071	11/21/2024	4.492	11/4/2025	103.46135	102.6017519	101.7564761	100.9251637	100.1074704	99.3030631	98.51161941	97.73282738	96.966385
ADV1011077	11/21/2024	4.823	12/15/2042	145.66382	131.6176154	119.3929326	108.7231255	99.38346709	91.18422054	83.96490191	77.58952224	71.94263581
ADV1011092	11/22/2024	4.417	12/30/2025	104.10243	103.0843629	102.0862627	101.1075445	100.147647	99.20603051	98.2821759	97.37558343	96.48577197
ADV1011094	11/22/2024	4.581	5/22/2025	101.63766	101.2375016	100.8404793	100.4465552	100.0556929	99.66785685	99.28301189	98.90112345	98.5221575
ADV1011101	11/22/2024	4.419	11/24/2025	103.6966	102.7797651	101.8791877	100.9944375	100.1250993	99.2707724	98.43106985	97.6056179	96.79405547
ADV1011108	11/25/2024	4.464	10/26/2026	107.43693	105.5791712	103.7628593	101.9868079	100.2498732	98.55095204	96.88898005	95.26292991	93.6718099
ADV1011109	11/25/2024	4.439	1/25/2027	108.39403	106.2780278	104.2145149	102.2018409	100.2384167	98.32271503	96.45326723	94.62866071	92.8475363
ADV1011110	11/25/2024	4.414	5/25/2027	109.65864	107.1922068	104.7945449	102.4633471	100.1964011	97.99158143	95.84684565	93.76023032	91.72984761
ADV1011134	11/25/2024	4.596	5/22/2025	101.64303	101.2429907	100.8460878	100.4522821	100.0615373	99.67381787	99.28908861	98.90731499	98.52846298
ADV1011135	11/25/2024	4.533	10/24/2025	103.36843	102.5395465	101.7239893	100.9214428	100.1315972	99.35415197	98.58881646	97.83530881	97.09335594
ADV1011162	11/25/2024	4.483	11/25/2025	103.69213	102.7735879	101.8713674	100.9850338	100.1141695	99.25837168	98.41725113	97.59043212	96.77755159
ADV1011163	11/25/2024	4.303	11/24/2027	111.26386	108.2723203	105.3781079	102.5775306	99.86705545	97.24330284	94.7030386	92.24316699	89.86072402
ADV1011201	11/26/2024	4.656	3/19/2025	100.91926	100.7006015	100.4829032	100.2661547	100.0503497	99.83548201	99.62154547	99.40853397	99.19644145
ADV1011207	11/26/2024	4.677	2/26/2025	100.67703	100.5175015	100.358473	100.1999466	100.04192	99.88439077	99.72735661	99.57081519	99.41476421
ADV1011226	11/27/2024	4.741	1/3/2025	100.0432	100.0348435	100.0264969	100.018158	100.0098268	100.0015033	99.99318746	99.98487933	99.97657886

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1011229	11/27/2024	4.673	2/27/2025	100.6879	100.5255718	100.3637681	100.2024823	100.0417117	99.88145407	99.72170685	99.56246767	99.40373411
ADV1011238	11/27/2024	4.257	11/29/2027	111.18004	108.1757788	105.2696939	102.4580435	99.7372492	97.10388845	94.55468674	92.08651032	89.69635937
ADV1011256	11/29/2024	4.722	1/7/2025	100.09018	100.070681	100.051205	100.0317491	100.0123134	99.99289785	99.97350235	99.9541269	99.93477147
ADV1011258	11/29/2024	4.722	1/7/2025	100.09018	100.070681	100.051205	100.0317491	100.0123134	99.99289785	99.97350235	99.9541269	99.93477147
ADV1011260	11/29/2024	4.722	1/7/2025	100.09018	100.070681	100.051205	100.0317491	100.0123134	99.99289785	99.97350235	99.9541269	99.93477147
ADV1011264	11/29/2024	4.653	2/28/2025	100.69589	100.5308025	100.3662517	100.2022344	100.0387481	99.87579018	99.71335818	99.55144955	99.39006179
ADV1011268	11/29/2024	4.567	5/29/2025	101.71077	101.2910451	100.8747586	100.4618671	100.0523291	99.64610404	99.24315185	98.84343314	98.44690915
ADV1011272	11/29/2024	4.655	2/28/2025	100.69622	100.531132	100.3665803	100.2025622	100.0390751	99.87611641	99.7136836	99.55177416	99.39038559
ADV1011274	11/29/2024	4.275	11/30/2026	107.46841	105.5132195	103.6036887	101.7384772	99.91629136	98.1358837	96.39605119	94.69563327	93.03351006
ADV1011275	11/29/2024	4.209	11/29/2027	111.03883	108.036651	105.1325966	102.3229275	99.60406677	96.97259349	94.42523459	91.95885773	89.57046444
230719A00081	12/16/2024	3.6	12/18/2026	106.31634	104.3244455	102.3802353	100.4822745	98.62917956	96.81961789	95.05230543	93.32600467	91.63952262
240104A00070	12/13/2024	3.83	3/5/2027	107.50937	105.2896389	103.1270556	101.0197424	98.96589558	96.96378533	95.011752	93.10820262	91.25160759
240111A00046	12/13/2024	3.68	3/19/2027	107.30123	105.0462027	102.8500263	100.7107339	98.6264409	96.59534143	94.61570412	92.68586841	90.80424102
240501A00018	12/23/2024	4.83	12/23/2026	108.81467	106.7838659	104.8018729	102.8672147	100.978467	99.13425808	97.3332669	95.57422049	93.85589196
ADV1007285	12/24/2024	4.775	12/24/2025	104.30973	103.3082031	102.3259822	101.3625167	100.4172721	99.48973425	98.57940794	97.68581647	96.80850058
ADV1011891	12/30/2024	4.345	8/12/2026	106.39079	104.7479699	103.1387265	101.5620944	100.0171467	98.50299162	97.01877049	95.56365652	94.13685315
ADV1011892	12/30/2024	4.341	10/14/2026	107.08049	105.2586157	103.4767842	101.7338105	100.0285581	98.35993332	96.72688389	95.12839656	93.56349547
ADV1011775	12/23/2024	4.471	3/24/2025	100.92969	100.6978256	100.4670371	100.237313	100.0086459	99.78102854	99.55445366	99.32891405	99.1044026
ADV1011380	12/5/2024	4.386	11/5/2025	103.38493	102.5229316	101.6753391	100.8417964	100.0219558	99.21548096	98.42204658	97.64133777	96.87304974
ADV1011361	12/4/2024	4.68	1/6/2025	100.07646	100.0597592	100.0430783	100.0264141	100.0097668	99.99313631	99.97652253	99.95992545	99.94334507
ADV1011985	12/31/2024	4.528	3/31/2025	101.02069	100.7693432	100.5192412	100.2703746	100.0227344	99.77631161	99.53109729	99.28708261	99.04425882
ADV1011715	12/19/2024	4.5	2/19/2025	100.56565	100.4262457	100.2872429	100.1486351	100.0104204	99.8725972	99.73516383	99.5981186	99.46145984
ADV1011882	12/30/2024	4.383	12/31/2029	119.56335	114.2733948	109.2562471	104.4963318	99.97904658	95.69069429	91.61842261	87.75016728	84.07459978
ADV1011933	12/30/2024	4.452	3/31/2025	101.0019	100.7505697	100.5004841	100.2516338	100.0040099	99.75760326	99.51240503	99.26840635	99.02559848
ADV1011395	12/5/2024	4.683	1/6/2025	100.0763	100.0596027	100.0429238	100.0262619	100.0096167	99.99298824	99.97637656	99.95978159	99.94320331
ADV1011835	12/26/2024	4.555	1/27/2025	100.30984	100.234756	100.1597944	100.0849519	100.0102283	99.93562324	99.86113652	99.78676783	99.71251691
ADV1011918	12/30/2024	4.454	3/31/2025	101.0024	100.751068	100.5009811	100.2521296	100.0045044	99.75809658	99.51289712	99.26889722	99.02608814
ADV1011975	12/31/2024	4.549	3/3/2025	100.7066	100.5338267	100.3616446	100.1900556	100.0190564	99.84864399	99.67881541	99.50956762	99.34089762
ADV1011964	12/31/2024	4.347	7/14/2027	110.01859	107.4098027	104.8773356	102.4184961	100.0307059	97.71149385	95.45849067	93.2694242	91.14211462
ADV1011676	12/18/2024	4.508	1/21/2025	100.2401	100.1816809	100.1233465	100.0650952	100.0069267	99.94884088	99.89083759	99.83291663	99.77507782
ADV1011539	12/13/2024	4.486	12/13/2030	122.70851	116.3887244	110.4465493	104.8573033	99.5980441	94.64743795	89.98563903	85.59417822	81.45586083
ADV1011709	12/19/2024	4.519	1/17/2025	100.19521	100.1479399	100.1007357	100.0535935	100.0065131	99.9594945	99.91253747	99.86564192	99.81880772
ADV1011605	12/16/2024	4.468	4/16/2025	101.18708	100.8902102	100.5950848	100.3016915	100.0100151	99.72004022	99.43175211	99.14513593	98.8601771

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1011616	12/17/2024	4.511	1/17/2025	100.19523	100.1479521	100.1007364	100.0535827	100.0064909	99.95946082	99.91249237	99.86558541	99.81873981
ADV1011949	12/31/2024	4.588	1/7/2025	100.08073	100.0613123	100.0419181	100.022544	100.00319	99.98385598	99.96454198	99.94524794	99.92597384
ADV1011476	12/11/2024	4.603	1/13/2025	100.1546	100.1184335	100.0823076	100.0462252	100.010186	99.9741902	99.93823756	99.90232802	99.8664615
ADV1011332	12/3/2024	4.719	1/3/2025	100.04169	100.0333465	100.0250065	100.0166743	100.0083498	100.000033	99.99172392	99.98342248	99.9751287
ADV1011574	12/16/2024	4.523	1/15/2025	100.17332	100.1316024	100.0899418	100.0483336	100.0067777	99.96527404	99.92382244	99.88242282	99.84107508
ADV1011943	12/31/2024	4.559	1/29/2025	100.33201	100.2514017	100.1709262	100.090583	100.0103719	99.93029246	99.85034446	99.77052755	99.69084142
ADV1011426	12/9/2024	4.583	2/10/2025	100.47608	100.3616935	100.2475799	100.1337371	100.0201638	99.90685931	99.79382247	99.68105234	99.56854794
ADV1011296	12/2/2024	4.743	1/2/2025	100.03018	100.0246162	100.0190559	100.0135005	100.0079501	100.0024047	99.99686426	99.99132879	99.98579828
ADV1011886	12/30/2024	4.362	4/15/2026	105.1003	103.7892583	102.5055685	101.2483743	100.016858	98.81023585	97.627756	96.46869719	95.332367
ADV1011978	12/31/2024	4.565	1/31/2025	100.35541	100.2692295	100.183191	100.0972988	100.0115524	99.92595167	99.84049608	99.75518533	99.67001905
ADV1011514	12/12/2024	4.239	12/13/2027	111.26543	108.2220573	105.2793498	102.4334212	99.68055863	97.01721281	94.43999015	91.94564486	89.53107166
ADV1011845	12/26/2024	4.563	1/16/2025	100.18441	100.139969	100.0955824	100.0512529	100.0069804	99.96276466	99.91860565	99.87450323	99.8304573
ADV1011751	12/20/2024	4.411	6/20/2025	101.88343	101.4025644	100.9262204	100.4543361	99.98684869	99.52369707	99.06482102	98.61016146	98.15966042
ADV1011438	12/9/2024	4.636	1/10/2025	100.12126	100.0934406	100.0656497	100.0378899	100.0101612	99.98246343	99.95479663	99.92716072	99.89955563
ADV1011830	12/26/2024	4.56	1/27/2025	100.31021	100.2351317	100.1601697	100.0853269	100.0106029	99.93599758	99.86151053	99.78714151	99.71289026
ADV1011538	12/13/2024	4.486	12/13/2030	122.70851	116.3887244	110.4465493	104.8573033	99.5980441	94.64743795	89.98563903	85.59417822	81.45586083
ADV1011696	12/19/2024	4.515	1/21/2025	100.24031	100.1818977	100.1235702	100.0653258	100.0071642	99.94908524	99.89108881	99.8331747	99.77534273
ADV1011651	12/18/2024	4.508	1/21/2025	100.2401	100.1816809	100.1233465	100.0650952	100.0069267	99.94884088	99.89083759	99.83291663	99.77507782
ADV1011301	12/2/2024	4.651	3/3/2025	100.73001	100.5565639	100.3837118	100.2114549	100.0397902	99.86871464	99.69822512	99.52831865	99.35899222
ADV1011337	12/3/2024	4.612	4/3/2025	101.08182	100.8210668	100.5616505	100.3035643	100.0467979	99.79134113	99.53718412	99.28431689	99.03272963
ADV1011719	12/19/2024	4.524	1/9/2025	100.10464	100.0796411	100.0546648	100.0297159	100.0047941	99.97989952	99.95503207	99.93019169	99.90537833
ADV1011926	12/30/2024	4.262	12/30/2026	107.91834	105.8746899	103.8807001	101.9348491	100.0356737	98.18176514	96.37176731	94.60437392	92.87832653
ADV1011967	12/31/2024	4.57	1/21/2025	100.24109	100.182762	100.12452	100.066361	100.0082847	99.95029099	99.89237963	99.83455047	99.77680334
ADV1011572	12/16/2024	4.36	12/16/2025	103.81215	102.8352495	101.8767934	100.9362619	100.0131548	99.10699035	98.21730425	97.34364921	96.48559398
ADV1011486	12/11/2024	4.591	1/10/2025	100.11955	100.0917392	100.0639564	100.0362048	100.0084842	99.98079458	99.95313592	99.92550812	99.89791115
ADV1011547	12/13/2024	4.554	1/13/2025	100.15238	100.1162201	100.0801049	100.0440332	100.0080048	99.97201959	99.93607761	99.90017872	99.86432285
ADV1011998	12/31/2024	4.502	4/30/2025	101.35177	101.0159037	100.6822488	100.3507872	100.0214976	99.69435869	99.36934951	99.04644937	98.72563786
ADV1011826	12/26/2024	4.565	1/27/2025	100.31059	100.2355074	100.1605451	100.0857019	100.0109776	99.93637191	99.86188453	99.78751519	99.71326361
ADV1011953	12/31/2024	4.577	9/13/2030	122.46168	116.3988889	110.68468	105.2970093	100.2153475	95.4205682	90.89484451	86.62155326	82.58518736
ADV1011816	12/24/2024	4.54	1/14/2025	100.161	100.122115	100.0832731	100.0444791	100.0057327	99.96703383	99.92838252	99.88977862	99.85122203
ADV1011916	12/30/2024	4.291	12/30/2027	111.83502	108.7312993	105.7317976	102.8324295	100.0292931	97.31866122	94.69697312	92.16082558	89.70696515
ADV1011440	12/9/2024	4.258	12/9/2025	103.71646	102.7582229	101.8177414	100.8945237	99.988097	99.09800552	98.22380986	97.36508626	96.52142595
ADV1011606	12/16/2024	4.463	5/16/2025	101.51982	101.1380809	100.7592107	100.3831777	100.0099499	99.63949595	99.27178484	98.90678611	98.54446972

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1011554	12/13/2024	4.48	3/13/2025	100.81036	100.609152	100.4087557	100.2091697	100.0103889	99.81240847	99.61522347	99.41882903	99.22322035
ADV1011548	12/13/2024	4.554	1/13/2025	100.15238	100.1162201	100.0801049	100.0440332	100.0080048	99.97201959	99.93607761	99.90017872	99.86432285
ADV1011541	12/13/2024	4.554	1/13/2025	100.15238	100.1162201	100.0801049	100.0440332	100.0080048	99.97201959	99.93607761	99.90017872	99.86432285
ADV1011779	12/23/2024	4.504	1/23/2025	100.26144	100.1974847	100.1336256	100.0698609	100.0061905	99.94261413	99.87913156	99.81574259	99.75244701
ADV1011559	12/13/2024	4.553	1/13/2025	100.15234	100.1161832	100.0800681	100.0439963	100.007968	99.97198283	99.93604088	99.90014202	99.86428618
ADV1011673	12/18/2024	4.503	1/3/2025	100.03655	100.0282199	100.0198971	100.011582	100.0032746	99.99497487	99.98668282	99.97839843	99.97012168
ADV1011962	12/31/2024	4.589	1/7/2025	100.08075	100.0613318	100.0419375	100.0225634	100.0032094	99.9838754	99.9645614	99.94526736	99.92599325
ADV1011893	12/30/2024	4.341	10/14/2026	107.08049	105.2586157	103.4767842	101.7338105	100.0285581	98.35993332	96.72688389	95.12839656	93.56349547
ADV1011540	12/13/2024	4.487	12/20/2030	122.77094	116.4305388	110.4700702	104.8646281	99.59106633	94.6278666	89.95501582	85.55389333	81.40716714
ADV1011908	12/30/2024	4.492	1/6/2025	100.0678	100.0511579	100.0345338	100.0179263	100.0013357	99.98476171	99.96820444	99.95166384	99.93513986
ADV1011557	12/13/2024	4.372	2/13/2026	104.45286	103.3106486	102.1935068	101.1006149	100.0311884	98.98447613	97.95975877	96.95634713	95.97358056
ADV1011741	12/20/2024	4.503	1/3/2025	100.03614	100.0278128	100.019492	100.011179	100.0028737	99.99457605	99.98628607	99.97800375	99.96972907
ADV1011662	12/18/2024	4.497	1/3/2025	100.0365	100.0281664	100.0198436	100.0115285	100.0032211	99.99492144	99.98662941	99.97834504	99.97006832
ADV1011905	12/30/2024	4.357	11/14/2025	103.45491	102.5678489	101.6960399	100.8390952	99.9966365	99.16829798	98.35372623	97.5525795	96.76452731
ADV1011854	12/27/2024	4.49	3/27/2025	100.96702	100.726823	100.4877755	100.2498648	100.0130828	99.77742134	99.54287259	99.30942863	99.07708167
ADV1011313	12/2/2024	4.377	12/2/2025	103.75284	102.8137156	101.8916296	100.9861251	100.0967573	99.22309719	98.36473076	97.52125854	96.69229488
ADV1011942	12/31/2024	4.588	1/7/2025	100.08073	100.0613123	100.0419181	100.022544	100.00319	99.98385598	99.96454198	99.94524794	99.92597384
ADV1011546	12/13/2024	4.49	2/21/2025	100.58783	100.4427303	100.2980525	100.1537992	100.0099686	99.86655893	99.7235682	99.58099459	99.43883628
ADV1011700	12/19/2024	4.431	5/19/2025	101.54034	101.1502835	100.7632238	100.3791241	99.99795051	99.61966957	99.24424834	98.87165439	98.50185577
ADV1011480	12/11/2024	4.599	1/3/2025	100.03887	100.0305315	100.0222009	100.0138781	100.0055629	99.9972554	99.9889556	99.98066347	99.97237898
ADV1011690	12/19/2024	4.532	1/6/2025	100.07073	100.0540633	100.037416	100.0207854	100.0041717	99.98757468	99.97099437	99.95443075	99.93788378
ADV1011906	12/30/2024	4.43	12/29/2028	115.77799	111.6030985	107.6059492	103.7780068	100.1111883	96.59784081	93.23071605	90.00294686	86.90802499
ADV1011615	12/17/2024	4.507	1/7/2025	100.08201	100.0625622	100.0431344	100.0237266	100.004339	99.98497146	99.96562394	99.94629642	99.92698887
ADV1011738	12/20/2024	4.492	2/20/2025	100.57554	100.4333619	100.2915937	100.1502349	100.0092838	99.86873864	99.72859755	99.58885883	99.4495207
ADV1011422	12/9/2024	4.637	1/9/2025	100.10963	100.0845909	100.0595809	100.0345982	100.0096428	99.98471463	99.95981359	99.93493966	99.9100928
ADV1011571	12/16/2024	4.316	12/16/2026	107.71797	105.7171867	103.7641131	101.8573165	99.99541679	98.17708422	96.40103757	94.66604187	92.97090647
ADV1011484	12/11/2024	4.596	1/3/2025	100.03884	100.0305038	100.0221732	100.0138504	100.0055352	99.99722776	99.98892797	99.98063585	99.97235138
ADV1011705	12/19/2024	4.516	1/2/2025	100.02513	100.0195779	100.0140304	100.0084879	100.0029504	99.99741786	99.99189027	99.98636764	99.98084995
ADV1011298	12/2/2024	4.743	1/2/2025	100.03018	100.0246162	100.0190559	100.0135005	100.0079501	100.0024047	99.99686426	99.99132879	99.98579828
ADV1011769	12/23/2024	4.506	1/23/2025	100.26157	100.197613	100.1337538	100.0699891	100.0063185	99.94274205	99.87925936	99.81587028	99.7525746
ADV1011622	12/17/2024	4.511	1/16/2025	100.18392	100.1394249	100.0949897	100.0506117	100.0062907	99.96202662	99.91781928	99.87366859	99.82957445
ADV1011866	12/27/2024	4.559	1/17/2025	100.19548	100.1482562	100.1010981	100.054002	100.0069676	99.95999497	99.91308383	99.86623412	99.81944569
ADV1011409	12/6/2024	4.673	1/6/2025	100.07591	100.0592147	100.0425382	100.0258785	100.0092356	99.99260945	99.97600006	99.95940739	99.9428314

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1011490	12/11/2024	4.548	2/11/2025	100.48302	100.3658759	100.2490133	100.1324345	100.0161385	99.90012418	99.78439048	99.66893637	99.5537608
ADV1011406	12/6/2024	4.567	3/6/2025	100.74902	100.5672702	100.3861794	100.2057466	100.0259684	99.84684095	99.66836087	99.49052454	99.31332845
ADV1011504	12/12/2024	4.244	12/12/2025	103.73481	102.7682212	101.8196955	100.88873	99.97483966	99.07755701	98.19643158	97.33102905	96.4809306
ADV1011859	12/27/2024	4.54	1/27/2025	100.30851	100.2334359	100.1584846	100.0836525	100.0089393	99.93434462	99.85986824	99.78550988	99.71126927
ADV1011862	12/27/2024	4.32	6/29/2026	105.99612	104.4734914	102.9806998	101.5169396	100.0814371	98.6734457	97.29224482	95.93713842	94.60745418
ADV1011901	12/30/2024	4.402	7/15/2025	102.14993	101.5984644	101.0529387	100.5132531	99.97931407	99.45103013	98.9283117	98.41107109	97.89922243
ADV1011591	12/16/2024	4.307	12/16/2025	103.83867	102.8605288	101.9008673	100.9591688	100.0349315	99.12767212	98.23692523	97.36224216	96.50319042
ADV1011742	12/20/2024	4.513	1/10/2025	100.11548	100.0876994	100.0599497	100.032231	100.0045434	99.97688668	99.94926089	99.92166594	99.89410177
ADV1011855	12/27/2024	4.489	3/28/2025	100.97801	100.7350066	100.4931717	100.2524981	100.0129775	99.77460162	99.53736226	99.30125131	99.06626074
ADV1011829	12/26/2024	4.56	1/27/2025	100.31021	100.2351317	100.1601697	100.0853269	100.0106029	99.93599758	99.86151053	99.78714151	99.71289026
ADV1011292	12/2/2024	4.237	12/4/2028	114.77364	110.6863912	106.7706008	103.0181645	99.42139976	95.9730263	92.66614227	89.49420281	86.45099964
ADV1011752	12/20/2024	4.477	3/20/2025	100.88684	100.6661351	100.4464105	100.2276558	100.0098645	99.79303009	99.57714629	99.36220678	99.14820532
ADV1011879	12/30/2024	4.493	1/29/2025	100.3269	100.2462814	100.1658001	100.0854512	100.0052343	99.9251492	99.84519549	99.76537289	99.68568108
ADV1011746	12/20/2024	4.509	1/3/2025	100.03619	100.0278657	100.019545	100.011232	100.0029266	99.99462895	99.98633895	99.97805661	99.96978191
ADV1011692	12/19/2024	4.489	3/19/2025	100.87843	100.6605056	100.4435351	100.2275113	100.0124278	99.79827848	99.5850572	99.37275786	99.16137443
ADV1011950	12/31/2024	4.554	1/9/2025	100.10294	100.0779727	100.0530339	100.0281222	100.0032378	99.97838043	99.95355019	99.92874699	99.90397077
ADV1011649	12/18/2024	4.509	1/21/2025	100.24016	100.1817398	100.1234053	100.0651539	100.0069854	99.94889951	99.89089616	99.83297515	99.77513628
ADV1011695	12/19/2024	4.53	1/9/2025	100.1048	100.0797942	100.0548179	100.0298688	100.004947	99.98005233	99.95518479	99.93034432	99.90553088
ADV1011737	12/20/2024	4.492	1/2/2025	100.02478	100.019228	100.0136812	100.0081395	100.0026027	99.99707089	99.99154405	99.98602215	99.9805052
ADV1011806	12/24/2024	4.483	3/24/2025	100.93226	100.7004236	100.4696566	100.2399539	100.0113081	99.783712	99.55715822	99.33163961	99.10714907
ADV1011711	12/19/2024	4.443	5/8/2025	101.42304	101.0641271	100.7077497	100.3538835	100.0025019	99.6535786	99.30708788	98.96300427	98.62130268
ADV1011765	12/23/2024	4.503	1/23/2025	100.26137	100.1974205	100.1335615	100.0697969	100.0061265	99.94255018	99.87906766	99.81567874	99.75238322
ADV1011421	12/9/2024	4.623	1/16/2025	100.19063	100.1460868	100.1016021	100.0571745	100.012804	99.96849051	99.92423381	99.88003383	99.83589046
ADV1011411	12/6/2024	4.254	12/8/2025	103.70239	102.7469997	101.8092576	100.8886798	99.98479755	99.09715895	98.22532831	97.36888541	96.52742484
ADV1011370	12/4/2024	4.685	1/3/2025	100.04115	100.0328084	100.0244697	100.0161389	100.0078157	99.9995002	99.99119241	99.98289229	99.97459982
ADV1011393	12/18/2024	4.187	12/20/2027	111.17588	108.1149614	105.155909	102.2947677	99.52775763	96.85126698	94.26184316	91.75618497	89.33113504
ADV1011971	12/31/2024	4.561	1/21/2025	100.24056	100.1822374	100.1239958	100.0658371	100.0077611	99.94976765	99.89185659	99.83402774	99.7762809
ADV1011921	12/30/2024	4.496	1/31/2025	100.34968	100.2634845	100.1774404	100.0915425	100.0057906	99.92018427	99.83472311	99.74940679	99.66423497
ADV1011911	12/30/2024	4.504	1/22/2025	100.24873	100.1876199	100.1265949	100.0656585	100.0048105	99.94405061	99.88337872	99.82279463	99.76229813
ADV1011923	12/30/2024	4.478	2/28/2025	100.66094	100.496559	100.3327073	100.1693868	100.0065951	99.84432948	99.68258757	99.52136679	99.36066467
ADV1011973	12/31/2024	4.565	1/31/2025	100.35541	100.2692295	100.183191	100.0972988	100.0115524	99.92595167	99.84049608	99.75518533	99.67001905
ADV1011602	12/16/2024	4.491	2/18/2025	100.55378	100.4171281	100.2808614	100.1449752	100.009468	99.87433811	99.73958398	99.605204	99.47119658
ADV1011469	12/10/2024	4.624	1/10/2025	100.12071	100.0928902	100.0651032	100.0373472	100.0096223	99.98192843	99.95426546	99.92663338	99.89903212

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1011811	12/24/2024	4.561	1/9/2025	100.10456	100.0795697	100.0546087	100.029675	100.0047685	99.97988906	99.95503678	99.93021156	99.90541335
ADV1011510	12/12/2024	4.592	1/13/2025	100.15399	100.1178243	100.0817033	100.0456258	100.0095917	99.97360075	99.93765303	99.90174841	99.86588681
ADV1011468	12/10/2024	4.626	1/10/2025	100.12077	100.0929476	100.0651605	100.0374045	100.0096796	99.98198563	99.95432262	99.92669049	99.89908918
ADV1011308	12/2/2024	4.652	3/3/2025	100.73019	100.5567368	100.3838843	100.211627	100.0399618	99.86888583	99.69839589	99.52848899	99.35916214
ADV1011675	12/18/2024	4.419	6/18/2025	101.86563	101.3903251	100.9194393	100.4529127	99.99068461	99.53269593	99.0788884	98.62920489	98.18358928
ADV1011743	12/20/2024	4.473	3/28/2025	100.97548	100.7322753	100.4902421	100.2493712	100.0096542	99.77108279	99.5336489	99.29734433	99.06216107
ADV1011420	12/9/2024	4.66	1/2/2025	100.02813	100.0225679	100.0170129	100.011463	100.005918	100.000378	99.99484292	99.98931284	99.98378771
ADV1011691	12/19/2024	4.532	1/6/2025	100.07073	100.0540633	100.037416	100.0207854	100.0041717	99.98757468	99.97099437	99.95443075	99.93788378
ADV1011753	12/20/2024	4.503	1/21/2025	100.2394	100.1809975	100.1226779	100.0644413	100.0062876	99.94821655	99.89022798	99.83232172	99.77449759
ADV1011410	12/6/2024	4.676	1/2/2025	100.02887	100.0233084	100.0177512	100.012199	100.0066519	100.0011096	99.99557238	99.9900401	99.98451276
ADV1011404	12/6/2024	4.674	1/6/2025	100.07593	100.0592325	100.0425559	100.0258962	100.0092533	99.99262718	99.97601778	99.95942509	99.94284908
ADV1011858	12/27/2024	4.506	3/5/2025	100.72256	100.5441127	100.3662995	100.1891214	100.012575	99.83665687	99.66136362	99.48669189	99.31263835
ADV1011747	12/20/2024	4.478	3/20/2025	100.88706	100.6663542	100.4466291	100.2278739	100.010082	99.79324709	99.57736275	99.36242272	99.14842072
ADV1011944	12/31/2024	4.555	1/15/2025	100.17159	100.129958	100.0883751	100.0468445	100.005366	99.96393972	99.92256539	99.88124295	99.83997229
ADV1011437	12/9/2024	4.636	1/10/2025	100.12126	100.0934406	100.0656497	100.0378899	100.0101612	99.98246343	99.95479663	99.92716072	99.89955563
ADV1011954	12/31/2024	4.577	9/13/2030	122.46168	116.3988889	110.68468	105.2970093	100.2153475	95.4205682	90.89484451	86.62155326	82.58518736
ADV1011590	12/16/2024	4.524	1/16/2025	100.18471	100.1402082	100.0957671	100.051383	100.007056	99.96278588	99.91857252	99.87441583	99.8303157
ADV1011853	12/27/2024	4.544	1/27/2025	100.30881	100.2337362	100.1587847	100.0839524	100.0092389	99.93464395	99.86016732	99.7858087	99.71156784
ADV1011660	12/18/2024	4.462	3/18/2025	100.8616	100.6464762	100.4322809	100.2190091	100.0066546	99.79521169	99.58467426	99.37503647	99.1662925
ADV1011787	12/23/2024	4.514	1/13/2025	100.14887	100.112754	100.0766852	100.0406597	100.0046775	99.96873854	99.93284268	99.89698986	99.86118
ADV1011423	12/9/2024	4.266	12/9/2025	103.72408	102.7657997	101.8252795	100.9020237	99.99555939	99.10543075	98.23119839	97.37243856	96.52874247
ADV1011734	12/20/2024	4.498	1/21/2025	100.23911	100.1807037	100.1223844	100.0641481	100.0059946	99.94792378	99.88993547	99.83202947	99.77420559
ADV1011894	12/30/2024	4.492	1/29/2025	100.32681	100.2462009	100.1657197	100.0853708	100.005154	99.92506896	99.84511532	99.76529278	99.68560104
ADV1011402	12/6/2024	4.634	1/23/2025	100.27331	100.2092143	100.1452089	100.0812982	100.0174819	99.95375979	99.89013176	99.82659754	99.76315694
ADV1011947	12/31/2024	4.566	1/31/2025	100.3555	100.2693155	100.1832769	100.0973846	100.0116382	99.92603738	99.84058172	99.75527089	99.67010454
ADV1011677	12/18/2024	4.494	1/21/2025	100.23927	100.1808571	100.1225234	100.0642729	100.0061051	99.9480201	99.89001757	99.83209737	99.77425932
ADV1011900	12/30/2024	4.495	1/30/2025	100.33832	100.2549208	100.1716583	100.088535	100.0055507	99.92270484	99.83999727	99.75742759	99.67499548
ADV1011401	12/6/2024	4.675	1/10/2025	100.12302	100.0951848	100.0673821	100.0396106	100.0118702	99.98416072	99.95648223	99.92883464	99.90121789
ADV1011479	12/11/2024	4.52	3/11/2025	100.79613	100.600471	100.4055809	100.2114569	100.0180944	99.82548883	99.6336357	99.44253054	99.2521689
ADV1011478	12/11/2024	4.231	12/11/2025	103.71155	102.7478351	101.8020802	100.8737854	99.96246968	99.06766945	98.188938	97.32584458	96.47797374
ADV1011720	12/19/2024	4.513	1/2/2025	100.02511	100.0195596	100.0140121	100.0084696	100.0029321	99.99739959	99.99187201	99.98634938	99.9808317
ADV1011739	12/20/2024	4.365	12/21/2026	107.86699	105.8512169	103.8838135	101.9633196	100.0883269	98.25747914	96.46946985	94.72304003	93.01697614
ADV1011617	12/17/2024	4.511	1/17/2025	100.19523	100.1479521	100.1007364	100.0535827	100.0064909	99.95946082	99.91249237	99.86558541	99.81873981

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1011710	12/19/2024	4.508	1/30/2025	100.34161	100.258097	100.1747193	100.0914811	100.0083819	99.92542151	99.84259953	99.75991564	99.6773695
ADV1011553	12/13/2024	4.502	2/13/2025	100.4997	100.3769905	100.2545978	100.1325158	100.0107433	99.88927894	99.76812167	99.64727025	99.52672347
ADV1011419	12/9/2024	4.66	1/2/2025	100.02813	100.0225679	100.0170129	100.011463	100.005918	100.000378	99.99484292	99.98931284	99.98378771
ADV1011786	12/23/2024	4.47	3/24/2025	100.92946	100.6975955	100.4668075	100.237084	100.0084175	99.78080075	99.55422643	99.32868739	99.10417649
ADV1011418	12/9/2024	4.66	1/2/2025	100.02813	100.0225679	100.0170129	100.011463	100.005918	100.000378	99.99484292	99.98931284	99.98378771
ADV1011699	12/19/2024	4.507	1/30/2025	100.34153	100.2580133	100.1746357	100.0913975	100.0082985	99.92533816	99.84251627	99.75983248	99.67728644
ADV1011578	12/16/2024	4.522	1/16/2025	100.18462	100.1401181	100.095677	100.0512931	100.0069661	99.96269604	99.91848276	99.87432615	99.83022608
ADV1011635	12/17/2024	4.398	8/18/2025	102.52296	101.8820104	101.2490972	100.6240691	100.006779	99.39708368	98.79484321	98.19992116	97.61218442
ADV1011652	12/18/2024	4.462	3/18/2025	100.8616	100.6464762	100.4322809	100.2190091	100.0066546	99.79521169	99.58467426	99.37503647	99.1662925
ADV1011808	12/24/2024	4.482	3/25/2025	100.94325	100.7085971	100.4750428	100.242577	100.011192	99.78088026	99.55163431	99.32344673	99.09631018
ADV1011899	12/30/2024	4.454	3/31/2025	101.0024	100.751068	100.5009811	100.2521296	100.0045044	99.75809658	99.51289712	99.26889722	99.02608814
ADV1011912	12/30/2024	4.477	3/3/2025	100.69441	100.5216304	100.3494484	100.1778592	100.00686	99.83644752	99.66661889	99.49737103	99.32870098
ADV1011843	12/26/2024	4.606	1/2/2025	100.02421	100.0186657	100.013123	100.0075853	100.0020525	99.99652472	99.99100188	99.98548399	99.97997104
ADV1011903	12/30/2024	4.364	9/15/2025	102.8014	102.0823515	101.373384	100.6742903	99.98486486	99.30490763	98.63422419	97.97262539	97.31992718
ADV1011368	12/4/2024	4.502	6/4/2025	101.75022	101.3138125	100.8811214	100.4521023	100.0267088	99.60489489	99.18661562	98.77182668	98.36048452
ADV1011888	12/30/2024	4.348	7/15/2026	106.08965	104.5250183	102.9915021	101.4882477	100.0144286	98.56924816	97.15193791	95.76175662	94.39798894
ADV1011777	12/23/2024	4.503	1/23/2025	100.26137	100.1974205	100.1335615	100.0697969	100.0061265	99.94255018	99.87906766	99.81567874	99.75238322
ADV1011648	12/18/2024	4.507	1/22/2025	100.25134	100.1901345	100.129018	100.0679902	100.0070509	99.94619985	99.88543696	99.82476199	99.76417474
ADV1011889	12/30/2024	4.348	7/15/2026	106.08965	104.5250183	102.9915021	101.4882477	100.0144286	98.56924816	97.15193791	95.76175662	94.39798894
ADV1011674	12/18/2024	4.509	1/8/2025	100.09316	100.0709302	100.0487281	100.0265496	100.0043947	99.98226337	99.96015553	99.93807115	99.91601019
ADV1011805	12/24/2024	4.5	2/24/2025	100.62081	100.4675008	100.3146642	100.1622967	100.0103964	99.85896102	99.70798843	99.55747651	99.40742316
ADV1011966	12/31/2024	4.347	7/14/2027	110.01859	107.4098027	104.8773356	102.4184961	100.0307059	97.71149385	95.45849067	93.2694242	91.14211462
ADV1011392	12/18/2024	4.187	12/20/2027	111.17588	108.1149614	105.155909	102.2947677	99.52775763	96.85126698	94.26184316	91.75618497	89.33113504
ADV1011831	12/26/2024	4.609	1/2/2025	100.02423	100.0186831	100.0131403	100.0076026	100.0020699	99.99654205	99.99101921	99.98550131	99.97998836
ADV1011884	12/30/2024	4.361	5/13/2026	105.42148	104.0341816	102.6718993	101.3340136	100.0199243	98.72905038	97.46082944	96.21471677	94.99018477
ADV1011706	12/19/2024	4.512	1/21/2025	100.24013	100.1817213	100.123394	100.0651497	100.0069882	99.94890947	99.89091319	99.83299924	99.77516743
ADV1011687	12/19/2024	4.514	1/29/2025	100.3308	100.2500739	100.1694806	100.0890199	100.0086914	99.92849483	99.84842986	99.76849618	99.68869347
ADV1011543	12/13/2024	4.555	1/13/2025	100.15242	100.116257	100.0801418	100.04407	100.0080415	99.97205635	99.93611434	99.90021542	99.86435952
ADV1011961	12/31/2024	4.565	1/14/2025	100.16054	100.1216887	100.0828807	100.0441204	100.0054077	99.96674258	99.92812492	99.88955463	99.85103162
ADV1011749	12/20/2024	4.385	12/22/2025	103.90133	102.9074758	101.932695	100.9764408	100.038188	99.11743079	98.21368236	97.32647376	96.4553532
ADV1011972	12/31/2024	4.588	1/7/2025	100.08073	100.0613123	100.0419181	100.022544	100.00319	99.98385598	99.96454198	99.94524794	99.92597384
ADV1011909	12/30/2024	4.492	1/6/2025	100.0678	100.0511579	100.0345338	100.0179263	100.0013357	99.98476171	99.96820444	99.95166384	99.93513986
ADV1011629	12/17/2024	4.514	1/3/2025	100.03685	100.0285221	100.0201982	100.011882	100.0035735	99.99527272	99.9869796	99.97869413	99.97041631

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1011828	12/26/2024	4.597	1/9/2025	100.10505	100.0800711	100.0551161	100.0301883	100.0052877	99.98041426	99.95556792	99.93074863	99.90595634
ADV1011507	12/12/2024	4.597	1/13/2025	100.15417	100.118009	100.0818878	100.0458102	100.0097758	99.97378476	99.93783688	99.90193211	99.86607035
ADV1011713	12/19/2024	4.499	2/19/2025	100.56551	100.4261066	100.2871041	100.1484965	100.010282	99.87245906	99.73502592	99.59798093	99.4613224
ADV1011948	12/31/2024	4.566	1/31/2025	100.3555	100.2693155	100.1832769	100.0973846	100.0116382	99.92603738	99.84058172	99.75527089	99.67010454
ADV1011564	12/16/2024	4.528	1/15/2025	100.17353	100.1318139	100.0901531	100.0485448	100.0069887	99.96548485	99.92403307	99.88263328	99.84128537
ADV1011792	12/23/2024	4.47	3/24/2025	100.92946	100.6975955	100.4668075	100.237084	100.0084175	99.78080075	99.55422643	99.32868739	99.10417649
ADV1011575	12/16/2024	4.523	1/15/2025	100.17332	100.1316024	100.0899418	100.0483336	100.0067777	99.96527404	99.92382244	99.88242282	99.84107508
ADV1011735	12/20/2024	4.469	6/18/2025	101.88873	101.4134169	100.9425291	100.4760003	100.0137702	99.55577954	99.10197002	98.65228452	98.20666695
ADV1011386	12/5/2024	4.692	1/3/2025	100.04101	100.0326631	100.0243255	100.0159957	100.0076736	99.9993591	99.99105234	99.98275324	99.97446181
ADV1011825	12/26/2024	4.565	1/27/2025	100.31059	100.2355074	100.1605451	100.0857019	100.0109776	99.93637191	99.86188453	99.78751519	99.71326361
ADV1011920	12/30/2024	4.273	6/30/2026	105.93561	104.4106768	102.9156779	101.4498043	100.0122787	98.60235097	97.21929693	95.86241737	94.53103682
ADV1011712	12/19/2024	4.406	12/11/2025	103.80059	102.8375243	101.8923817	100.9646687	100.0539057	99.15963037	98.28139711	97.41877632	96.57135359
ADV1011970	12/31/2024	4.35	8/10/2027	110.30551	107.6196124	105.0138442	102.4853122	100.0312505	97.64901162	95.33606016	93.08996749	90.9084063
ADV1011501	12/12/2024	4.595	1/13/2025	100.1541	100.1179351	100.081814	100.0457364	100.0097022	99.97371116	99.93776334	99.90185863	99.86599693
ADV1011297	12/2/2024	4.743	1/2/2025	100.03018	100.0246162	100.0190559	100.0135005	100.0079501	100.0024047	99.99686426	99.99132879	99.98579828
ADV1011359	12/4/2024	4.679	1/7/2025	100.08822	100.0687363	100.0492738	100.0298314	100.0104092	99.99100704	99.97162498	99.95226296	99.93292093
ADV1011723	12/19/2024	4.509	1/30/2025	100.3417	100.2581808	100.174803	100.0915646	100.0084654	99.92550487	99.84268279	99.7599988	99.67745257
ADV1011809	12/24/2024	4.483	3/27/2025	100.96592	100.7256399	100.4865083	100.2485138	100.0116483	99.77590392	99.54127256	99.3077464	99.07531763
ADV1011773	12/23/2024	4.508	1/22/2025	100.25039	100.1892245	100.1281461	100.0671562	100.0062548	99.94544171	99.88471664	99.82407944	99.76352991
ADV1011604	12/16/2024	4.477	3/17/2025	100.854	100.6416217	100.4301536	100.2195861	100.0099134	99.80112983	99.59322962	99.38620709	99.18005663
ADV1011701	12/19/2024	4.416	6/20/2025	101.88598	101.4050424	100.9286296	100.4566769	99.98912185	99.52590321	99.06696074	98.61223539	98.16166915
ADV1011924	12/30/2024	4.511	1/13/2025	100.14733	100.1112521	100.0752149	100.039221	100.0032704	99.96736291	99.93149852	99.89567713	99.85989866
ADV1011974	12/31/2024	4.248	12/31/2026	107.90042	105.8542539	103.857877	101.9097592	100.0084317	98.15248071	96.34054488	94.57131327	92.84352288
ADV1011382	12/5/2024	4.47	7/7/2025	102.10267	101.572225	101.0472529	100.5276711	100.0133971	99.50434974	99.0004496	98.50161889	98.00778137
ADV1011772	12/23/2024	4.508	1/22/2025	100.25039	100.1892245	100.1281461	100.0671562	100.0062548	99.94544171	99.88471664	99.82407944	99.76352991
ADV1011952	12/31/2024	4.532	3/25/2025	100.95356	100.7190878	100.4857079	100.2534155	100.0222033	99.79206341	99.56298857	99.3349713	99.10800428
ADV1011945	12/31/2024	4.56	1/31/2025	100.35498	100.2687995	100.1827613	100.0968695	100.0111235	99.92552311	99.84006789	99.75475751	99.6695916
ADV1011525	12/12/2024	4.592	1/13/2025	100.15399	100.1178243	100.0817033	100.0456258	100.0095917	99.97360075	99.93765303	99.90174841	99.86588681
ADV1011600	12/16/2024	4.467	4/16/2025	101.18679	100.8899165	100.5947921	100.3013998	100.0097243	99.71975039	99.43146323	99.144848	98.85989011
ADV1011885	12/30/2024	4.356	5/13/2026	105.41459	104.0273368	102.6651035	101.3272659	100.0132239	98.72239653	97.45422136	96.20815372	94.98366602
ADV1011498	12/12/2024	4.326	12/12/2025	103.73645	102.7709448	101.8234631	100.8935062	99.98059018	99.08424906	98.2040336	97.3395107	96.49026268
ADV1011969	12/31/2024	4.35	8/10/2027	110.30551	107.6196124	105.0138442	102.4853122	100.0312505	97.64901162	95.33606016	93.08996749	90.9084063
ADV1011556	12/13/2024	4.48	3/13/2025	100.81036	100.609152	100.4087557	100.2091697	100.0103889	99.81240847	99.61522347	99.41882903	99.22322035

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1011780	12/23/2024	4.504	1/23/2025	100.26144	100.1974847	100.1336256	100.0698609	100.0061905	99.94261413	99.87913156	99.81574259	99.75244701
ADV1011482	12/11/2024	4.594	1/10/2025	100.11964	100.0918251	100.0640423	100.0362906	100.0085699	99.98088027	99.95322154	99.92559367	99.89799663
ADV1011748	12/20/2024	4.476	3/20/2025	100.88662	100.6659159	100.4461919	100.2274377	100.0096469	99.79281309	99.57692982	99.36199085	99.14798991
ADV1011890	12/30/2024	4.345	8/12/2026	106.39079	104.7479699	103.1387265	101.5620944	100.0171467	98.50299162	97.01877049	95.56365652	94.13685315
ADV1011857	12/27/2024	4.53	2/13/2025	100.50034	100.3778485	100.255664	100.1337895	100.012224	99.89096622	99.77001496	99.64936901	99.5290272
ADV1011362	12/4/2024	4.689	1/3/2025	100.04119	100.0328466	100.0245079	100.016177	100.0078538	99.99953831	99.99123048	99.98293033	99.97463784
ADV1011927	12/30/2024	4.291	12/30/2027	111.83502	108.7312993	105.7317976	102.8324295	100.0292931	97.31866122	94.69697312	92.16082558	89.70696515
ADV1011544	12/13/2024	4.552	1/17/2025	100.19801	100.1507068	100.1034657	100.0562866	100.0091694	99.96211399	99.91512023	99.86818799	99.82131714
ADV1011788	12/23/2024	4.532	1/6/2025	100.06991	100.0532498	100.0366109	100.0199887	100.0033833	99.98679461	99.97022264	99.95366734	99.93712868
ADV1011766	12/23/2024	4.503	1/22/2025	100.25008	100.1889175	100.1278393	100.0668497	100.0059486	99.94513571	99.88441089	99.82377394	99.76322466
ADV1011558	12/13/2024	4.548	1/3/2025	100.03799	100.0296493	100.021321	100.0130005	100.0046877	99.99638262	99.98808518	99.9797954	99.97151327
ADV1011693	12/19/2024	4.532	1/6/2025	100.07073	100.0540633	100.037416	100.0207854	100.0041717	99.98757468	99.97099437	99.95443075	99.93788378
ADV1011873	12/27/2024	4.617	1/3/2025	100.03568	100.0273583	100.0190447	100.0107388	100.0024405	99.99414994	99.98586703	99.97759176	99.96932413
ADV1011868	12/27/2024	4.326	6/29/2026	106.00517	104.4824784	102.9896169	101.5257878	100.0902177	98.68215985	97.30089361	95.94572294	94.61597548
ADV1011955	12/31/2024	4.579	9/20/2030	122.53547	116.4510267	110.7174134	105.3123806	100.215211	95.40660782	90.86858915	86.58439097	82.53837808
ADV1011823	12/26/2024	4.553	1/27/2025	100.30969	100.2346058	100.1596443	100.0848019	100.0100784	99.93547351	99.86098692	99.78661836	99.71236757
ADV1011439	12/9/2024	4.261	12/9/2025	103.71932	102.7610642	101.8205682	100.8973362	99.99089539	99.10078998	98.22658056	97.36784337	96.52416964
ADV1011979	12/31/2024	4.341	12/31/2025	103.9537	102.9348465	101.9360177	100.956622	99.99609605	99.05389768	98.12950548	97.22241765	96.33215107
ADV1011783	12/23/2024	4.506	1/23/2025	100.26157	100.197613	100.1337538	100.0699891	100.0063185	99.94274205	99.87925936	99.81587028	99.7525746
ADV1011864	12/27/2024	4.489	3/27/2025	100.96678	100.7265848	100.4875379	100.2496278	100.0128463	99.77718548	99.5426373	99.30919392	99.07684753
ADV1011865	12/27/2024	4.479	4/28/2025	101.32249	100.9921365	100.663927	100.3378436	100.0138658	99.69197321	99.37214579	99.05436375	98.73860752
ADV1011513	12/12/2024	4.263	12/14/2026	107.59305	105.5989246	103.6522355	101.7515589	99.895526	98.08281811	96.31216434	94.58233958	92.89216256
ADV1011293	12/2/2024	4.744	1/2/2025	100.03019	100.0246231	100.0190627	100.0135073	100.007957	100.0024116	99.99687111	99.99133563	99.98580512
ADV1011702	12/19/2024	4.404	7/21/2025	102.22078	101.6580242	101.1014829	100.5510512	100.0066287	99.46811698	98.9354201	98.40844396	97.88709657
ADV1011461	12/10/2024	4.574	2/10/2025	100.47484	100.3604745	100.2463772	100.1325504	100.0189933	99.90570479	99.79268397	99.67992981	99.56744136
ADV1011427	12/9/2024	4.641	1/7/2025	100.08638	100.066913	100.0474636	100.0280344	100.0086254	99.98923636	99.96986744	99.95051853	99.93118961
ADV1011984	12/31/2024	4.547	3/3/2025	100.70626	100.5334831	100.3613016	100.1897131	100.0187145	99.84830274	99.67847474	99.50922753	99.34055811
ADV1011537	12/13/2024	4.483	12/6/2030	122.63433	116.3355505	110.4120422	104.8393514	99.59473982	94.65705864	90.00662961	85.6251355	81.49551928
ADV1011883	12/30/2024	4.456	3/28/2025	100.96947	100.7265745	100.4848483	100.244283	100.0048701	99.76660138	99.5294687	99.29346391	99.058579
ADV1011861	12/27/2024	4.558	1/17/2025	100.19543	100.1482088	100.1010508	100.0539547	100.0069204	99.95994771	99.91303661	99.86618691	99.81939851
ADV1011902	12/30/2024	4.382	8/15/2025	102.47769	101.8452287	101.2205959	100.6036466	99.99423919	99.39223574	98.79750157	98.2099053	97.62931869
ADV1011417	12/9/2024	4.583	2/10/2025	100.47608	100.3616935	100.2475799	100.1337371	100.0201638	99.90685931	99.79382247	99.68105234	99.56854794
ADV1011963	12/31/2024	4.568	1/31/2025	100.35567	100.2694875	100.1834488	100.0975563	100.0118098	99.9262088	99.84075299	99.75544202	99.67027552

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1011430	12/9/2024	4.385	9/9/2025	102.75522	102.0528147	101.360035	100.6766838	100.0025692	99.33750459	98.68130819	98.03380319	97.39481743
ADV1011793	12/23/2024	4.422	6/23/2025	101.92107	101.4318064	100.9472231	100.4672517	99.99182635	99.52088281	99.05435787	98.59218955	98.134317
ADV1011767	12/23/2024	4.504	1/23/2025	100.26144	100.1974847	100.1336256	100.0698609	100.0061905	99.94261413	99.87913156	99.81574259	99.75244701
ADV1011630	12/17/2024	4.515	1/17/2025	100.19542	100.1481433	100.1009274	100.0537736	100.0066816	99.95965138	99.91268276	99.86577564	99.81892989
ADV1011724	12/19/2024	4.519	1/17/2025	100.19521	100.1479399	100.1007357	100.0535935	100.0065131	99.9594945	99.91253747	99.86564192	99.81880772
ADV1011576	12/16/2024	4.522	1/16/2025	100.18462	100.1401181	100.095677	100.0512931	100.0069661	99.96269604	99.91848276	99.87432615	99.83022608
ADV1011593	12/16/2024	4.524	1/16/2025	100.18471	100.1402082	100.0957671	100.051383	100.007056	99.96278588	99.91857252	99.87441583	99.8303157
ADV1011366	12/4/2024	4.683	1/3/2025	100.04114	100.0327892	100.0244507	100.0161198	100.0077966	99.99948115	99.99117337	99.98287326	99.97458081
ADV1011403	12/6/2024	4.678	1/6/2025	100.076	100.0593036	100.042627	100.0259673	100.0093243	99.99269809	99.97608863	99.95949588	99.94291982
ADV1011827	12/26/2024	4.565	1/27/2025	100.31059	100.2355074	100.1605451	100.0857019	100.0109776	99.93637191	99.86188453	99.78751519	99.71326361
ADV1011516	12/12/2024	4.594	1/13/2025	100.15406	100.1178982	100.0817771	100.0456996	100.0096653	99.97367435	99.93772657	99.90182189	99.86596023
ADV1011714	12/19/2024	4.391	12/10/2026	107.80119	105.8157637	103.8773032	101.9844135	100.1357463	98.33000226	96.56592886	94.84231855	93.15800669
ADV1011956	12/31/2024	4.579	9/20/2030	122.53547	116.4510267	110.7174134	105.3123806	100.215211	95.40660782	90.86858915	86.58439097	82.53837808
ADV1011583	12/16/2024	4.309	12/16/2025	103.84062	102.8624607	101.9027892	100.9610808	100.0368337	99.12956468	98.23880826	97.36411578	96.50505476
ADV1011552	12/13/2024	4.549	1/13/2025	100.15219	100.1160357	100.0799207	100.043849	100.0078208	99.97183578	99.93589395	99.89999522	99.86413949
ADV1011856	12/27/2024	4.51	2/28/2025	100.66678	100.5023198	100.3383983	100.1750083	100.0121472	99.84981247	99.68800166	99.52671221	99.36594163
ADV1011968	12/31/2024	4.35	8/10/2027	110.30551	107.6196124	105.0138442	102.4853122	100.0312505	97.64901162	95.33606016	93.08996749	90.9084063
ADV1011632	12/17/2024	4.513	1/7/2025	100.08213	100.0626826	100.0432547	100.0238469	100.0044592	99.98509158	99.965744	99.94641641	99.92710879
ADV1011703	12/19/2024	4.505	1/30/2025	100.34136	100.2578458	100.1744684	100.0912304	100.0081316	99.92517145	99.84234976	99.75966615	99.6771203
ADV1011589	12/16/2024	4.475	3/17/2025	100.85357	100.6411997	100.4297326	100.2191661	100.0094945	99.80071198	99.5928128	99.38579131	99.17964188
ADV1011982	12/31/2024	4.568	1/8/2025	100.09181	100.0696235	100.0474572	100.0253144	100.0031952	99.9810995	99.95902727	99.93697847	99.91495305
ADV1011555	12/13/2024	4.369	1/13/2026	104.1235	103.0680811	102.0341267	101.0209901	100.0280462	99.05469455	98.10035836	97.16448338	96.24653667
ADV1011946	12/31/2024	4.566	1/31/2025	100.3555	100.2693155	100.1832769	100.0973846	100.0116382	99.92603738	99.84058172	99.75527089	99.67010454
ADV1011897	12/30/2024	4.494	1/30/2025	100.33824	100.2548375	100.1715751	100.0884519	100.0054676	99.92262185	99.83991435	99.75734474	99.6749127
ADV1011586	12/16/2024	4.476	3/14/2025	100.82018	100.6162394	100.4131328	100.2108585	100.0094115	99.80878654	99.60897855	99.40998247	99.21179328
ADV1011915	12/30/2024	4.496	1/13/2025	100.14679	100.1107101	100.0746731	100.0386794	100.002729	99.9668217	99.93095752	99.89513634	99.85935808
ADV1011846	12/26/2024	4.554	1/27/2025	100.30976	100.2346809	100.1597193	100.0848769	100.0101533	99.93554837	99.86106172	99.7866931	99.71244224
ADV1011542	12/13/2024	4.554	1/13/2025	100.15238	100.1162201	100.0801049	100.0440332	100.0080048	99.97201959	99.93607761	99.90017872	99.86432285
ADV1011778	12/23/2024	4.47	3/21/2025	100.89591	100.6724809	100.4500546	100.2286213	100.0081743	99.78870691	99.5702126	99.35268484	99.13611717
ADV1011379	12/5/2024	4.599	3/5/2025	100.74349	100.5645071	100.3861674	100.2084647	100.0313955	99.85495651	99.67914422	99.50395529	99.32938638
ADV1011456	12/10/2024	4.62	1/10/2025	100.12059	100.0927754	100.0649885	100.0372326	100.0095078	99.98181401	99.95415114	99.92651915	99.89891798
ADV1011904	12/30/2024	4.357	10/15/2025	103.12382	102.3208338	101.5303903	100.7521943	99.98596224	99.23141922	98.48829873	97.75634233	97.03529932
ADV1011887	12/30/2024	4.362	4/15/2026	105.1003	103.7892583	102.5055685	101.2483743	100.016858	98.81023585	97.627756	96.46869719	95.332367

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1011462	12/10/2024	4.627	1/8/2025	100.09752	100.0752729	100.0530465	100.0308438	100.0086647	99.98650909	99.96437706	99.94226852	99.92018342
ADV1011483	12/11/2024	4.521	3/11/2025	100.79633	100.6006657	100.4057751	100.2116506	100.0182876	99.82568157	99.63382796	99.44272233	99.25236023
ADV1011321	12/2/2024	4.457	9/3/2025	102.74047	102.0546711	101.3780462	100.7104087	100.0515804	99.40138743	98.7596608	98.12623569	97.50095161
ADV1011579	12/16/2024	4.512	1/3/2025	100.03704	100.0287081	100.0203832	100.012066	100.0037565	99.99545463	99.98716048	99.97887398	99.97059513
ADV1011315	12/2/2024	4.739	1/2/2025	100.03015	100.0245887	100.0190284	100.0134731	100.0079227	100.0023773	99.99683688	99.99130143	99.98577094
130416A00025	4/16/2013	2.27	4/18/2028	100.16452	100.0533965	99.47711322	98.19554429	96.66334375	95.11274068	93.59744403	92.1215827	90.68394404
150202A00006	2/2/2015	1.92	2/3/2025	100.13439	100.0483247	99.9611579	99.87267389	99.78431271	99.69610924	99.60806298	99.52017357	99.43244059
151223A00007	12/23/2015	3.76	12/23/2030	100.24699	100.1999955	99.88966729	98.32678196	95.32956749	91.50972985	87.44801643	83.49415324	79.75370697
161012A00020	10/11/2016	2.96	10/14/2031	100.22392	99.9346077	98.46293342	95.36318498	91.22673692	86.75032775	82.35743219	78.20984952	74.32214168
170515A00052	5/15/2017	3.78	5/15/2042	100.00307	99.92520605	98.87267911	95.6622743	90.8837561	85.35674574	79.77151001	74.53312957	69.77570599
170519A00006	5/19/2017	3	5/19/2032	100.22736	100.1155635	99.48341814	97.56669704	94.79102905	91.72851221	88.69645859	85.79779336	83.04114369
170705A00037	7/5/2017	2.85	7/6/2032	104.88031	102.5096876	99.93747556	97.08487741	93.98175884	90.79528359	87.68988074	84.73373034	81.92933217
170802A00074	8/2/2017	2.92	8/2/2027	99.9939	99.99123463	99.81743281	98.6644265	96.87389654	94.90748855	92.95840066	91.06223556	89.21903141
170809A00042	8/9/2017	2.35	8/9/2027	100.1714	100.0767166	99.67956938	98.66313652	97.4169874	96.15106268	94.90991413	93.69634951	92.50959456
171004A00022	10/4/2017	2.74	10/4/2027	100.20498	100.1184327	99.73235391	98.40516652	96.47071383	94.37805547	92.31210698	90.30554191	88.35799122
171005A00047	10/5/2017	3.29	10/5/2032	100.25232	100.108599	99.22912399	96.76443279	93.12864554	89.00167035	84.86123269	80.92691983	77.24084869
180105A00005	1/5/2018	3.07	1/5/2028	100.23339	100.1472368	100.0221413	99.34998876	98.10069714	96.67351449	95.24496105	93.84944253	92.48804352
180105A00006	1/5/2018	3.07	1/5/2028	100.23339	100.1472368	100.0221413	99.34998876	98.10069714	96.67351449	95.24496105	93.84944253	92.48804352
180130A00087	1/30/2018	2.92	1/31/2028	100.22047	100.1343352	99.96745714	99.18077546	97.87937524	96.44238944	95.01488347	93.62129574	92.26183644
180302A00003	3/2/2018	3.89	3/2/2033	100.30397	100.2129037	99.80636786	97.92930804	94.48538114	90.11385762	85.43670061	80.88455415	76.62550437
180315A00030	3/15/2018	3.76	3/15/2033	101.0748	100.6119568	99.6267117	97.35359172	93.68035933	89.23044517	84.59809423	80.1428528	75.98679215
180504A00024	5/4/2018	3.62	5/4/2028	100.00247	99.99969992	99.97369415	99.30819394	97.41451323	94.89181627	92.21024574	89.58358258	87.04854949
180627A00005	6/27/2018	3.63	6/30/2033	100.28159	100.1954027	99.94756159	98.61067794	96.01274461	92.76985088	89.37660776	86.09326667	82.98425792
180703A00033	7/3/2018	3.4	7/3/2028	100.25513	100.1690338	100.0602255	99.49983365	98.19808828	96.5970527	94.9607131	93.36162369	91.80608438
190111A00040	1/11/2019	3.74	1/11/2034	100.28999	100.1745073	99.56935764	97.43855946	93.91346178	89.68241024	85.3042249	81.10675014	77.19666128
190116A00015	1/16/2019	3.61	1/17/2034	100.27321	100.1870948	99.82941642	98.18942039	95.32546126	91.86377167	88.29965268	84.87179756	81.63722959
190204A00054	2/4/2019	3.98	2/6/2034	100.27634	100.2023554	99.69153541	97.57233288	93.85104436	89.19588575	84.24909008	79.45049206	74.98391696
190222A00023	2/22/2019	3.66	2/22/2034	103.39977	101.7621169	99.5090096	96.25595443	91.89756774	86.87434123	81.73490409	76.84533721	72.32499291
190301A00015	3/1/2019	3.86	3/1/2034	103.68819	102.1405231	100.0306834	96.94464115	92.70638634	87.69019084	82.45785063	77.4276739	72.765949
190409A00016	4/9/2019	2.91	4/9/2029	100.21961	100.1186955	99.59130064	97.87238563	95.31374808	92.47371319	89.64840008	86.92759445	84.31775705
190409A00017	4/9/2019	3.01	4/9/2029	100.22822	100.1291507	99.6208923	97.85696323	95.12929697	92.03797154	88.93928639	85.95514914	83.09765832
190430A00020	4/30/2019	3.41	4/28/2034	103.23118	101.345643	98.73874669	95.02104373	90.25243788	84.96482112	79.6890345	74.72814684	70.15653032
190520A00018	5/20/2019	3.7	5/20/2044	99.996161	99.81840092	98.03782629	94.11416625	88.73837629	82.76934746	76.8738922	71.4211809	66.51586639

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
190530A00044	5/30/2019	2.85	5/30/2034	100.21445	99.98420915	98.72100455	96.01763294	92.50587329	88.78294335	85.16163438	81.74120587	78.52511069
190807A00041	8/7/2019	2.27	8/7/2034	100.11293	99.35976092	97.10708829	93.7240899	89.90447782	86.10664583	82.49964773	79.11190502	75.93167665
190807A00044	8/7/2019	2.27	8/7/2034	100.11293	99.35976092	97.10708829	93.7240899	89.90447782	86.10664583	82.49964773	79.11190502	75.93167665
190827A00044	8/27/2019	1.9	8/27/2029	100.13267	99.81491074	98.55586673	96.63199031	94.52656236	92.4442083	90.42831296	88.48071565	86.59866224
190930A00079	9/30/2019	2.04	10/1/2029	100.14472	99.90057743	98.75858353	96.87147875	94.74517582	92.6260194	90.57275635	88.58992857	86.67478544
190930A00083	9/30/2019	2.04	10/1/2029	100.14472	99.90057743	98.75858353	96.87147875	94.74517582	92.6260194	90.57275635	88.58992857	86.67478544
191007A00012	10/7/2019	2	10/5/2029	100.13462	99.81249334	98.53137196	96.5602556	94.39429197	92.25002875	90.17545759	88.17302812	86.23979019
191007A00013	10/7/2019	2	10/5/2029	100.13462	99.81249334	98.53137196	96.5602556	94.39429197	92.25002876	90.17545759	88.17302812	86.2397902
191028A00015	10/28/2019	2.49	10/27/2034	100.15928	99.63414537	97.68158284	94.44636598	90.64092335	86.78272245	83.09744373	79.63543833	76.38838485
191031A00036	10/31/2019	2.9	10/31/2039	100.14026	99.29535175	96.6924364	92.47720709	87.45724802	82.32190583	77.45543363	72.9823473	68.89451625
191031A00037	10/31/2019	2.59	10/30/2034	100.16393	99.6643368	97.75028511	94.5468862	90.75551027	86.90393034	83.22145459	79.76127098	76.51560199
191220A00029	12/20/2019	2.57	12/19/2031	100.18369	99.964021	98.78034616	96.45105033	93.58876985	90.64011001	87.78687973	85.06474953	82.47005169
200108A00009	1/8/2020	2.4	1/8/2035	100.1199	99.37348306	97.15848442	93.78370768	89.93183329	86.08289848	82.4311689	79.01584848	75.82511733
200108A00040	1/8/2020	2.52	1/8/2030	100.17938	99.86622381	98.36677613	95.59409552	92.18688836	88.66458093	85.25341266	82.00323495	78.91031047
200110A00012	1/10/2020	2.57	1/10/2035	100.15561	99.59883976	97.59120201	94.2889658	90.41647779	86.49265903	82.7482344	79.2348686	75.94385112
200115A00023	1/15/2020	2.16	1/15/2030	100.1484	99.89616678	98.71245421	96.73428253	94.48698133	92.24185643	90.06875826	87.97419355	85.95504819
200115A00025	1/15/2020	2.1	1/15/2025	100.06331	100.0209295	99.95906649	99.84772844	99.73550985	99.62357575	99.51192463	99.40055565	99.28946773
200306A00021	3/6/2020	1.16	3/6/2030	99.941134	98.63052146	96.53880058	94.18227879	91.84294589	89.58433689	87.41034753	85.31741817	83.30182236
200309A00013	3/9/2020	1.1	3/8/2030	99.889775	98.52192087	96.39547831	94.03264206	91.69550505	89.4403665	87.26980549	85.18018283	83.1677763
200316A00030	3/16/2020	1.35	3/15/2030	100.14029	99.07602515	97.15415453	94.8386923	92.48919563	90.21183398	88.01919318	85.90840612	83.8757177
200316A00032	3/16/2020	1.35	3/15/2030	100.14029	99.07602515	97.15415453	94.8386923	92.48919563	90.21183398	88.01919318	85.90840612	83.8757177
200318A00015	3/18/2020	1.69	3/18/2030	99.987375	99.47701605	97.7931603	95.51381461	93.10733062	90.7544974	88.48917465	86.31082435	84.21540851
200326A00035	3/26/2020	1.68	3/26/2030	100.2938	99.4333795	97.7116092	95.46481042	93.11931543	90.83093071	88.62604258	86.50335156	84.45913035
200423A00008	4/23/2020	1.59	4/23/2030	100.01678	98.3617928	95.40758898	91.68043257	87.79976836	84.04665367	80.48236977	77.10402573	73.90103773
200423A00009	4/23/2020	1.59	4/23/2030	100.01678	98.3617928	95.40758898	91.68043257	87.79976836	84.04665367	80.48236977	77.10402573	73.90103773
200423A00010	4/23/2020	1.59	4/23/2030	100.01678	98.3617928	95.40758898	91.68043257	87.79976836	84.04665367	80.48236977	77.10402573	73.90103773
200430A00021	4/30/2020	1.2	4/30/2030	99.963627	98.6692446	96.57104865	94.18589172	91.81230658	89.52060026	87.31584087	85.19440126	83.15240497
200505A00010	5/5/2020	0.89	5/6/2030	99.780575	98.19496708	95.93592468	93.49263851	91.09441769	88.78493721	86.56455008	84.42919641	82.37487115
200512A00023	5/12/2020	1.78	5/11/2035	99.355208	96.73388675	92.54391862	87.49054823	82.30413089	77.37746591	72.82197103	68.63314604	64.77964977
200609A00003	6/9/2020	1.66	6/8/2035	98.745457	95.55957479	90.79976458	85.22044012	79.58821886	74.28637226	69.41865621	64.97159423	60.90669195
200612A00001	6/12/2020	0.75	6/12/2030	99.612748	97.86086258	95.50949922	93.02548291	90.60288512	88.27294523	86.03412909	83.88215111	81.8128729
201022A00008	10/22/2020	1.02	10/22/2035	98.621628	95.51905898	91.45772054	87.12357529	82.93757706	79.0172497	75.36568729	71.96331306	68.78997127
201029A00008	10/29/2020	0.92	10/29/2030	99.774147	97.90219718	95.45950037	92.85178807	90.30225059	87.85361844	85.50536987	83.25264299	81.09068321

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
201030A00025	10/30/2020	2.02	10/28/2050	97.841826	93.42938071	87.12155998	79.84002932	72.56302182	65.90133431	60.05881315	54.99282738	50.59023653
201116A00019	11/16/2020	1.32	11/15/2030	99.712359	97.23509309	93.73086024	89.73669018	85.75055072	81.95088563	78.36050191	74.96920843	71.76467909
201118A00015	11/18/2020	1.66	11/18/2036	99.354435	94.48691189	88.67654432	82.33996794	76.05826991	70.21377883	64.91462542	60.13584053	55.82349258
201118A00017	11/18/2020	1.66	11/18/2036	99.354435	94.48691189	88.67654432	82.33996794	76.05826991	70.21377883	64.91462542	60.13584053	55.82349258
201118A00018	11/18/2020	1.85	11/18/2036	99.885519	95.13765439	89.45260314	83.1831591	76.90922449	71.0381387	65.70375728	60.89063246	56.54602583
201202A00016	12/2/2020	1.32	12/3/2035	99.176577	96.25525067	92.32350551	87.98575083	83.73191111	79.73310591	76.00895869	72.54167567	69.31036899
201202A00017	12/2/2020	1.32	12/3/2035	99.176577	96.25525067	92.32350551	87.98575083	83.73191111	79.73310591	76.00895869	72.54167567	69.31036899
201229A00003	12/29/2020	1.28	12/30/2030	99.616678	97.01255495	93.40913983	89.34565692	85.30925307	81.46871049	77.84351672	74.42258914	71.19306863
201230A00018	12/30/2020	1.52	12/28/2035	99.198054	94.33817638	88.60687381	82.42765672	76.34510639	70.68943606	65.5418465	60.87458467	56.63984598
210108A00007	1/8/2021	1.65	1/8/2036	98.756638	95.16449636	90.16564801	84.39451592	78.60047926	73.16956319	68.20353629	63.68473125	59.5702717
210225A00010	2/25/2021	2.02	2/25/2041	99.723573	96.50998196	91.93678886	86.49966241	80.92146967	75.6550444	70.84369403	66.4814851	62.52340747
210405A00013	4/5/2021	1.82	4/7/2036	100.49363	97.84510263	94.24185153	89.9760449	85.60047853	81.42214364	77.52343085	73.89919776	70.52772751
210622A00004	6/22/2021	2.42	6/20/2036	101.03104	97.95608827	93.66547214	88.30311572	82.48019974	76.79126044	71.51581742	66.71252303	62.34870184
210623A00024	6/23/2021	1.56	6/23/2026	99.990262	99.75677207	98.717188	97.36002142	95.97556498	94.61490911	93.27990276	91.96990582	90.68428074
210910A00009	9/10/2021	1.77	9/10/2036	100.83051	97.87031736	94.07108717	89.67152719	85.17002043	80.87509596	76.87544748	73.16620331	69.72380976
210924A00016	9/24/2021	1.91	9/24/2036	101.2039	98.35115835	94.67010083	90.34479358	85.84926919	81.52920744	77.49790409	73.75840742	70.28793654
211019A00005	10/19/2021	2.49	10/20/2036	101.78603	98.55619118	94.21485872	88.84081799	82.96048716	77.159063	71.76048085	66.84937237	62.39718737
211110A00017	11/10/2021	2.01	11/10/2036	101.60922	98.69534127	95.00134753	90.67340894	86.13772088	81.75934595	77.6701125	73.87942143	70.36455248
211116A00012	11/16/2021	2.22	12/18/2034	102.33471	99.79422536	96.66471921	92.96599625	89.01445234	85.13713613	81.47169171	78.03646467	74.81737672
211124A00008	11/24/2021	2.62	11/22/2041	102.38765	99.23324593	95.0772925	89.94478405	84.30764252	78.7278194	73.53802349	68.82812633	64.5707056
211215A00020	12/15/2021	1.85	12/15/2031	102.05546	99.81445762	97.21672871	94.31010967	91.31234543	88.39527296	85.60950114	82.95524968	80.42529401
211227A00012	12/27/2021	2.39	12/29/2036	103.97115	98.94298484	93.2950586	87.13804931	80.78868064	74.65605474	68.99887633	63.88255065	59.26859445
220217A00024	2/17/2022	2.43	2/17/2027	100.47047	100.1771214	99.51588982	98.20748312	96.59090342	94.93984279	93.32363878	91.74714009	90.20916375
220617A00069	6/17/2022	4.06	6/17/2027	102.0628	101.4858614	100.8907637	100.1638596	99.03032891	97.37995095	95.49777653	93.61698121	91.78502631
220831A00108	8/31/2022	4.07	8/31/2027	103.00954	102.1430348	101.2474208	100.1970709	98.75120462	96.82698101	94.68158332	92.54588006	90.4694503
221212A00004	12/12/2022	4.36	12/10/2032	110.10043	107.3700996	104.6242366	101.8067269	98.86108728	95.76550336	92.55402093	89.35432035	86.29108629
221214A00057	12/14/2022	4.65	12/14/2027	104.58826	103.4519495	102.3079001	101.0759641	99.56967551	97.57901419	95.15928778	92.62229567	90.14709263
221222A00137	12/22/2022	5.4	12/22/2037	113.76652	110.5461323	107.2185559	103.7043001	99.88878906	95.68960712	91.09616269	86.26763364	81.57378642
230804A00039	8/4/2023	5.02	8/4/2028	107.45237	105.79232	104.1386652	102.4541887	100.6580652	98.64947656	96.36522502	93.89677173	91.44589341
240403A00012	4/3/2024	4.82	4/3/2029	109.32329	107.0970418	104.8824888	102.6382663	100.298484	97.79892155	95.11647387	92.33856294	89.62228517
ADV1007645	7/5/2024	4.781	7/5/2029	109.68051	107.3551581	105.0402817	102.6935185	100.2507913	97.65172659	94.87411976	91.99886796	89.18660721
ADV1007841	7/12/2024	0	7/12/2029	96.830554	93.18448093	89.19469621	85.30486486	81.59513918	78.06311125	74.69961668	71.49581041	68.44335409
ADV1007842	7/12/2024	0	7/12/2029	96.830554	93.18448093	89.19469621	85.30486486	81.59513918	78.06311125	74.69961668	71.49581041	68.44335409

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1007970	7/17/2024	0	7/17/2029	96.822049	93.16180779	89.16016507	85.26022571	81.54146987	78.00127385	74.63039689	71.41993222	68.36148479
ADV1008036	7/19/2024	0	7/19/2029	96.818751	93.15273687	89.14635659	85.24237896	81.5200146	77.97655507	74.60272914	71.38960543	68.32876622
ADV1008090	7/23/2024	0	7/23/2029	96.811896	93.13459152	89.11874633	85.20670068	81.47712538	77.92714523	74.54742819	71.32899379	68.26337903
ADV1008152	7/24/2024	0	7/24/2029	96.810199	93.13005441	89.11184515	85.19778429	81.46640752	77.91479853	74.53361014	71.31384961	68.24704263
ADV1008200	7/25/2024	0	7/25/2029	96.808501	93.12551696	89.10494452	85.18886916	81.45569144	77.90245415	74.51979497	71.29870893	68.23071038
ADV1008212	7/26/2024	0	7/26/2029	96.806882	93.12097918	89.09804444	85.17995529	81.44497713	77.89011207	74.50598267	71.28357173	68.21438229
ADV1008308	7/31/2024	0	7/31/2029	96.797664	93.09811849	89.06353136	85.13540392	81.39143221	77.82843626	74.4369643	71.20793809	68.13280412
ADV1008367	8/1/2024	0	8/1/2029	96.759547	93.08342795	89.05519418	85.12635454	81.38064893	77.81602432	74.42308273	71.19273387	68.11641247
ADV1008427	8/2/2024	0	8/2/2029	96.757971	93.07886533	89.04824416	85.11737856	81.3698683	77.80361473	74.40920408	71.17753318	68.100025
ADV1008515	8/6/2024	0	8/6/2029	96.751057	93.06060943	89.02045053	85.0814877	81.32676388	77.75399977	74.35371859	71.11676571	68.03451711
ADV1008530	8/7/2024	0	8/7/2029	96.749356	93.05604426	89.01350379	85.07251824	81.31599228	77.74160188	74.3398545	71.10158266	68.01815062
ADV1008591	8/9/2024	0	8/9/2029	96.74607	93.04691336	88.99961237	85.05458322	81.29445451	77.71681311	74.31213503	71.07122714	67.9854302
ADV1008654	8/13/2024	0	8/13/2029	96.739123	93.02864873	88.97183768	85.01872878	81.25140062	77.66726364	74.256731	71.01055837	67.92003962
ADV1008769	8/19/2024	0	8/20/2029	96.727069	92.99667612	88.92325783	84.95603359	81.17612569	77.58064197	74.15988576	70.90452352	67.80576712
ADV1008780	8/19/2024	0	8/20/2029	96.727069	92.99667612	88.92325783	84.95603359	81.17612569	77.58064197	74.15988576	70.90452352	67.80576712
ADV1008881	8/22/2024	0	8/22/2029	96.723697	92.9875385	88.90938384	84.93813238	81.15463477	77.55591392	74.1322418	70.87425949	67.77315543
ADV1008893	8/23/2024	0	8/23/2029	96.722099	92.98296926	88.90244783	84.92918373	81.14389201	77.54355339	74.11842417	70.85913274	67.75685585
ADV1008894	8/23/2024	0	8/23/2029	96.722099	92.98296926	88.90244783	84.92918373	81.14389201	77.54355339	74.11842417	70.85913274	67.75685585
ADV1008939	8/26/2024	0	8/27/2029	96.715035	92.96469069	88.8747104	84.8934021	81.10093897	77.49413457	74.06318263	70.79866086	67.69169922
ADV1008940	8/26/2024	0	8/27/2029	96.715035	92.96469069	88.8747104	84.8934021	81.10093897	77.49413457	74.06318263	70.79866086	67.69169922
ADV1009099	8/27/2024	0	8/27/2029	96.715098	92.96469076	88.8747104	84.8934021	81.10093897	77.49413457	74.06318263	70.79866086	67.69169922
ADV1009133	8/28/2024	0	8/28/2029	96.713376	92.96012121	88.86777788	84.88445993	81.09020521	77.48178569	74.04937948	70.78355165	67.67542049
ADV1009166	8/29/2024	0	8/29/2029	96.71158	92.95553718	88.86084404	84.87551894	81.07947324	77.46943914	74.03557923	70.76844596	67.65914592
ADV1009167	8/29/2024	0	8/29/2029	96.71158	92.95553718	88.86084404	84.87551894	81.07947324	77.46943914	74.03557923	70.76844596	67.65914592
ADV1009212	8/30/2024	0	8/30/2029	96.7097	92.95094229	88.8539097	84.86657922	81.06874307	77.45709491	74.02178187	70.75334377	67.64287551
ADV1009568	9/17/2024	0	9/17/2029	96.642923	92.8590034	88.72770078	84.70485425	80.87432776	77.23326493	73.77158269	70.47956978	67.34809099
ADV1009810	9/24/2024	0	9/24/2029	96.63122	92.8272918	88.67924113	84.64208476	80.79884566	77.14638017	73.67448639	70.37335534	67.23376193
ADV1009878	9/26/2024	0	9/26/2029	96.627871	92.81823296	88.66540218	84.62416254	80.77729574	77.12157719	73.64677097	70.34304031	67.20113443
ADV1010064	10/2/2024	0	10/2/2029	96.581555	92.78023423	88.62193952	84.57000591	80.71254061	77.04728838	73.56399231	70.25273462	67.10418846
ADV1010067	10/2/2024	0	10/2/2029	96.581555	92.78023423	88.62193952	84.57000591	80.71254061	77.04728838	73.56399231	70.25273462	67.10418846
ADV1010068	10/2/2024	0	10/2/2029	96.581555	92.78023423	88.62193952	84.57000591	80.71254061	77.04728838	73.56399231	70.25273462	67.10418846
ADV1010126	10/4/2024	4.138	10/4/2029	109.31213	106.7072128	104.1024397	101.4489576	98.68630134	95.78785622	92.78928837	89.80568658	86.93555669
ADV1010140	10/7/2024	0	10/9/2029	96.567997	92.74663967	88.57185247	84.50619111	80.63673292	76.96087366	73.46824238	70.14882871	66.99321912

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1010151	10/7/2024	0	10/9/2029	96.567997	92.74663967	88.57185247	84.50619111	80.63673292	76.96087366	73.46824238	70.14882871	66.99321912
ADV1010158	10/7/2024	0	10/9/2029	96.567997	92.74663967	88.57185247	84.50619111	80.63673292	76.96087366	73.46824238	70.14882871	66.99321912
ADV1010203	10/9/2024	0	10/9/2029	96.568223	92.74664067	88.57185247	84.50619111	80.63673292	76.96087366	73.46824238	70.14882871	66.99321912
ADV1010205	10/9/2024	0	10/9/2029	96.568223	92.74664067	88.57185247	84.50619111	80.63673292	76.96087366	73.46824238	70.14882871	66.99321912
ADV1010208	10/9/2024	0	10/9/2029	96.568223	92.74664067	88.57185247	84.50619111	80.63673292	76.96087366	73.46824238	70.14882871	66.99321912
ADV1010209	10/9/2024	0	10/9/2029	96.568223	92.74664067	88.57185247	84.50619111	80.63673292	76.96087366	73.46824238	70.14882871	66.99321912
ADV1010210	10/9/2024	0	10/9/2029	96.568223	92.74664068	88.57185247	84.50619111	80.63673292	76.96087366	73.46824238	70.14882871	66.99321912
ADV1010261	10/11/2024	0	10/11/2029	96.564725	92.73703575	88.55754693	84.48797048	80.61509025	76.93620492	73.4409111	70.11917206	66.96154951
ADV1010356	10/16/2024	0	10/16/2029	96.554829	92.71301878	88.52179269	84.4424425	80.56101597	76.87457422	73.3726331	70.04509017	66.88244523
ADV1010407	10/18/2024	0	10/18/2029	96.551207	92.70341311	88.50749479	84.42424073	80.53939921	76.84993839	73.34534197	70.01548128	66.8508314
ADV1010414	10/18/2024	0	10/18/2029	96.551207	92.70341311	88.50749479	84.42424073	80.53939921	76.84993839	73.34534197	70.01548128	66.8508314
ADV1010416	10/18/2024	0	10/18/2029	96.551207	92.70341311	88.50749479	84.42424073	80.53939921	76.84993839	73.34534197	70.01548128	66.8508314
ADV1010510	10/24/2024	0	10/24/2029	96.539449	92.67459046	88.46461412	84.36966769	80.4745933	76.7760872	73.26353727	69.92673639	66.75608535
ADV1010633	10/31/2024	5.44	10/29/2049	120.89922	115.7528033	110.4753408	105.0225334	99.31400823	93.28815044	86.95162088	80.49464706	74.36125207
211124A00005	11/26/2021	4.74	11/26/2025	100.03999	100.0372982	100.0325279	100.0257677	100.017104	100.0066188	99.99439089	99.98049465	99.9650014
211124A00006	11/26/2021	4.79	11/25/2026	100.01923	100.0364951	100.0399954	100.03056	100.0089697	99.97596076	99.93222847	99.87842837	99.81517964
220608A00012	6/8/2022	5.12	6/8/2029	100.81779	100.8502843	100.8513795	100.8238909	100.7704081	100.6933112	100.5947882	100.4768498	100.3413449
220913A00024	9/13/2022	4.82	5/12/2025	100.08542	100.0821688	100.0782679	100.0737303	100.0685665	100.0627869	100.0564022	100.0494221	100.0418566
220929A00039	9/29/2022	5.16	9/28/2029	100.96429	100.9966494	100.9944198	100.9608054	100.8987491	100.8109522	100.699894	100.5678497	100.4169076
221017A00025	10/17/2022	4.77	1/6/2025	100.01492	100.011988	100.0090653	100.0061525	100.0032496	100.0003565	99.9974732	99.99459973	99.99173606
221115A00039	11/15/2022	4.94	11/16/2026	100.30179	100.3161789	100.3171509	100.3055066	100.2819981	100.2473353	100.2021885	100.1471907	100.0829398
221216A00018	12/16/2022	4.94	12/16/2026	100.3118	100.3272335	100.3281744	100.3155266	100.2901372	100.2528039	100.2042784	100.1452683	100.0764409
230215A00013	2/15/2023	4.82	8/21/2025	100.10117	100.0976642	100.092771	100.0865327	100.0789924	100.0701914	100.06017	100.0489667	100.0366191
230215A00017	2/15/2023	4.8	3/27/2025	100.06111	100.0577076	100.0540339	100.0500878	100.0458721	100.0413898	100.036644	100.0316372	100.0263726
230307A00025	3/7/2023	4.94	3/7/2028	100.25574	100.2847322	100.2904423	100.2745567	100.2386523	100.1842021	100.1125833	100.0250822	99.92290173
230313A00111	3/13/2023	5.09	2/13/2026	100.39289	100.390774	100.3884012	100.3857516	100.3828035	100.379537	100.3759349	100.3719816	100.3676635
230313A00120	3/13/2023	5.09	4/13/2026	100.4143	100.4166977	100.4166005	100.4140991	100.4092796	100.4022244	100.3930134	100.3817227	100.3684259
230313A00124	3/13/2023	5.09	5/13/2026	100.44899	100.4553138	100.4534341	100.4437871	100.4267875	100.4028278	100.3722802	100.3354968	100.2928113
230410A00022	4/10/2023	5.05	4/10/2028	100.59958	100.6250621	100.6270237	100.6071965	100.567196	100.50853	100.4326061	100.3407381	100.234153
230511A00058	5/11/2023	5.01	5/11/2028	100.46023	100.4886468	100.4933607	100.4761826	100.4387962	100.3827676	100.3095547	100.2205137	100.1169073
230816A00019	8/16/2023	4.99	8/16/2028	100.36268	100.3979695	100.407354	100.3928193	100.3562178	100.2992743	100.2235951	100.1306757	100.0219094
230914A00009	9/14/2023	4.91	9/14/2028	100.06106	100.1030946	100.1179626	100.1077738	100.0744925	100.0199456	99.94583359	99.85373801	99.74513081
230922A00036	9/22/2023	4.88	9/22/2028	99.947042	99.99139787	100.0082399	99.99971377	99.96781499	99.91439916	99.8411926	99.74980056	99.6417165

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
231025A00027	10/25/2023	4.91	10/25/2028	100.04419	100.095054	100.1230261	100.1300123	100.117777	100.0879507	100.0420415	99.98144335	99.90744565
231106A00009	11/6/2023	4.88	10/15/2026	100.18009	100.1951216	100.1978798	100.1889986	100.1690852	100.1387158	100.098438	100.0487721	99.99021243
231115A00005	11/15/2023	4.87	11/16/2026	100.16934	100.18513	100.187476	100.1771796	100.1549938	100.1216289	100.0777562	100.0240091	99.96098613
231215A00007	12/15/2023	4.86	12/1/2026	100.15517	100.1713141	100.1735368	100.1626851	100.139561	100.10492	100.0594744	100.0038955	99.93881671
240111A00009	1/11/2024	4.61	1/13/2025	100.01353	100.0107554	100.0079869	100.0052255	100.0024712	99.99972396	99.99698371	99.99425052	99.99152435
240112A00007	1/12/2024	4.63	1/13/2025	100.01425	100.0114767	100.0087076	100.0059456	100.0031906	100.0004428	99.9977019	99.9949681	99.99224131
240112A00017	1/12/2024	4.93	1/12/2029	100.07918	100.1257037	100.1414391	100.1290539	100.0910076	100.0295669	99.94682059	99.84469363	99.72496038
240116A00030	1/16/2024	4.81	1/15/2027	100.04334	100.0642804	100.0699936	100.0614033	100.0393823	100.0047531	99.95829123	99.90072775	99.83275239
240215A00011	2/15/2024	4.79	2/16/2027	99.999051	100.0188919	100.0233638	100.0133645	99.98974241	99.95329914	99.90479269	99.8449392	99.77441614
240227A00010	2/27/2024	4.58	2/27/2025	100.01126	100.0086947	100.0060076	100.0031977	100.0002659	99.99721326	99.99404093	99.99074972	99.9873407
240314A00006	3/14/2024	4.89	3/14/2029	99.883327	99.93231586	99.95003272	99.93914952	99.90213275	99.84125964	99.75863329	99.65619535	99.53573902
240315A00011	3/15/2024	4.77	3/15/2027	99.949955	99.96998225	99.97437524	99.96403765	99.93982386	99.90254162	99.85295535	99.79178781	99.71972322
240327A00032	3/27/2024	4.75	3/26/2027	99.89707	99.91893434	99.92496798	99.9160785	99.89312441	99.85691783	99.80822774	99.74778159	99.67626843
240328A00053	3/28/2024	4.88	3/28/2029	99.826043	99.87794341	99.89826031	99.88968298	99.85469544	99.79559162	99.7144906	99.61334915	99.49397487
240415A00006	4/15/2024	4.74	4/15/2027	99.862493	99.88507775	99.89174463	99.88344874	99.86109086	99.82552076	99.7775408	99.71790794	99.64733718
240417A00013	4/17/2024	5.07	4/17/2031	99.741977	99.82365838	99.85786413	99.84989167	99.8045056	99.72599101	99.61820186	99.4846031	99.32831001
240423A00053	4/23/2024	4.41	4/23/2025	100.00309	100.0002998	99.99727681	99.99402429	99.99054581	99.98684469	99.98292456	99.97878856	99.97444003
240515A00015	5/15/2024	4.73	5/17/2027	99.815502	99.84009245	99.84857716	99.84197651	99.82124984	99.7872991	99.74097316	99.68307023	99.61434182
ADV1006428	5/28/2024	4.742	5/28/2027	99.834617	99.86009366	99.86932514	99.86334247	99.84311516	99.80955453	99.76351806	99.70581196	99.63719507
ADV1006699	6/3/2024	4.761	6/3/2027	99.876561	99.901802	99.91072946	99.90438077	99.88373092	99.84969637	99.8031394	99.74487065	99.67565312
ADV1006738	6/4/2024	4.438	6/4/2025	100.00137	99.9986698	99.99563681	99.99228123	99.9886096	99.98462813	99.98034326	99.97576086	99.97088692
ADV1006870	6/10/2024	4.777	6/10/2027	99.912055	99.93696941	99.94551771	99.93874372	99.91762845	99.88309379	99.83600697	99.7771831	99.70738927
ADV1007038	6/14/2024	4.784	6/14/2027	99.927322	99.95211999	99.96052616	99.9535873	99.93228672	99.89754843	99.85024161	99.79118316	99.72114183
ADV1007043	6/14/2024	4.844	6/14/2029	99.585553	99.64641731	99.67484854	99.67371333	99.64564724	99.59307344	99.51822067	99.42313821	99.3097112
ADV1007203	6/20/2024	4.783	6/21/2027	99.921474	99.94653357	99.95512644	99.94830584	99.92706166	99.89232394	99.84496735	99.78581384	99.71563673
ADV1007514	7/1/2024	4.885	7/1/2027	99.946972	99.97205836	99.98053791	99.9734742	99.95186609	99.91665198	99.86871429	99.80888214	99.73793553
ADV1007965	7/17/2024	4.792	7/19/2027	99.928176	99.95460388	99.96387036	99.95705004	99.93515506	99.89913826	99.84989743	99.78827788	99.71507634
ADV1008702	8/15/2024	4.823	8/16/2027	99.993238	100.0205527	100.0297462	100.0219504	99.99823256	99.9595983	99.90699633	99.84132077	99.76341519
ADV1008824	8/21/2024	4.823	8/23/2027	99.989686	100.017541	100.0270027	100.0192225	99.99528628	99.95621709	99.90298008	99.83648486	99.75758957
ADV1009264	9/4/2024	4.84	9/7/2027	100.02974	100.0575879	100.0664957	100.0576585	100.032202	99.99118703	99.93561403	99.86642552	99.78451052
ADV1010016	10/1/2024	4.908	10/1/2026	100.06948	100.0851357	100.0886799	100.0806988	100.0617523	100.0323734	99.99307103	99.94432972	99.88661196
ADV1010293	10/15/2024	4.857	10/15/2027	100.06469	100.0979168	100.115135	100.1174354	100.1058402	100.0813081	100.044739	99.996977	99.9388148
ADV1010616	10/30/2024	4.828	10/30/2026	100.08681	100.1073526	100.1176788	100.1184065	100.1101215	100.0933755	100.0686896	100.0365549	99.99743508

	Parallel-Shift Sensitivity Analysis											
12/31/2024				Price								
REFERENCE	SETTLEMENT	Rate	MATURITY	-400	-300	-200	-100	Base	100	200	300	400
ADV1010836	11/12/2024	4.868	11/12/2027	100.08489	100.1188398	100.1359904	100.1375776	100.1247541	100.0985945	100.0601019	100.0102115	99.94979646
ADV1010941	11/15/2024	4.873	11/15/2027	100.09866	100.1323787	100.1492224	100.1504349	100.1371769	100.1105302	100.0715045	100.0210413	99.96001917
ADV1011265	11/29/2024	4.572	12/1/2025	100.04006	100.0381601	100.0355071	100.0321304	100.0280598	100.0233233	100.0179479	100.0119593	100.0053818
ADV1011500	12/12/2024	4.846	12/13/2027	100.00791	100.043865	100.0621003	100.063945	100.0506398	100.0233404	99.98312392	99.93099357	99.86788466
ADV1009630	9/18/2024	4.985	9/18/2029	100.28536	100.1934422	100.177952	100.1210114	100.0484596	99.95101665	99.83742692	99.70193895	99.54294827
ADV1010025	10/1/2024	5.086	10/1/2029	100.12155	100.0675724	100.0944733	100.0830393	100.0569343	100.0085491	99.93756856	99.84142155	99.72049646
ADV1010137	10/7/2024	4.989	10/9/2029	100.18623	100.0991768	100.1307129	100.0915662	100.0395256	99.96366608	99.87906025	99.77067465	99.63761934
ADV1010509	10/24/2024	5.006	10/24/2029	100.41097	100.2930169	100.2605926	100.1850736	100.0954099	99.98443197	99.85513453	99.70163824	99.52387642
ADV1010723	11/5/2024	5.066	11/5/2029	100.2235	100.1855941	100.1673856	100.151072	100.1333328	100.1118237	100.0930766	100.0445162	99.9290669
ADV1010727	11/5/2024	4.875	8/5/2026	100.16896	100.1155862	100.1049273	100.0887855	100.0718218	100.0548703	100.0409418	100.0213498	99.97080443
ADV1010729	11/5/2024	4.865	5/5/2026	100.16593	100.1095812	100.101483	100.0853521	100.0683993	100.0514586	100.0375619	100.0196735	99.97238997
ADV1010935	11/15/2024	5.019	5/15/2029	100.37487	100.2995005	100.2454192	100.1934205	100.1407177	100.0861004	100.0336901	99.94628679	99.79398342
ADV1010936	11/15/2024	4.945	2/15/2028	100.35142	100.2723516	100.2190102	100.1670893	100.1146238	100.062245	100.0132565	99.93707745	99.79444634
ADV1010937	11/15/2024	4.925	11/15/2027	100.34477	100.2636826	100.2115726	100.1596761	100.1072363	100.0549328	100.0059253	99.93724783	99.80456306
ADV1010971	11/18/2024	4.891	2/16/2027	100.33515	100.2512167	100.2002262	100.1483315	100.095882	100.0436086	99.99457827	99.93799638	99.82232064
ADV1011039	11/20/2024	5.026	11/20/2029	100.40674	100.2972085	100.2654883	100.2026309	100.126996	100.0370379	99.92214159	99.77667627	99.60726476
ADV1011270	11/29/2024	5.006	11/20/2029	100.39994	100.2521061	100.2419608	100.165152	100.0733713	99.95989176	99.83903835	99.69571635	99.52837057
ADV1011569	12/16/2024	5.011	12/14/2029	100.36507	100.2018588	100.2032487	100.1450157	100.0665637	99.96893443	99.86102506	99.73081484	99.57679661
ADV1011770	12/23/2024	4.981	6/21/2029	100.44569	100.2853442	100.2833384	100.2112506	100.1249174	100.0213846	99.90316332	99.76412448	99.60269901
ADV1011573	12/16/2024	4.999	9/14/2029	100.36163	100.2215525	100.2389725	100.1785794	100.1091872	100.0237962	99.91986891	99.79355721	99.64370958