

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2019

Security:			3-5/8% 30-Year TIPS	3-7/8% 30-Year TIPS	3-3/8% 30-1/2-Year TIPS	2-3/8% 20-1/2-Year TIPS
Description:			TIPS of April 2028	TIPS of April 2029	TIPS of April 2032	TIPS of January 2025
CUSIP Number:			912810FD5	912810FH6	912810FQ6	912810FR4
Dated Date:			April 15, 1998	April 15, 1999	October 15, 2001	July 15, 2004
Original Issue Date:			April 15, 1998	April 15, 1999	October 15, 2001	July 30, 2004
Additional Issue Date(s):			July 15, 1998	October 15, 1999 October 16, 2000		January 31, 2005 July 29, 2005
Maturity Date:			April 15, 2028	April 15, 2029	April 15, 2032	January 15, 2025
Ref CPI on Dated Date:			161.74000	164.39333	177.50000	188.49677
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2019	252.77600	1.56285	1.53763	1.42409	1.34101	
May 2 2019	252.82200	1.56314	1.53791	1.42435	1.34125	
May 3 2019	252.86800	1.56342	1.53819	1.42461	1.34150	
May 4 2019	252.91400	1.56371	1.53847	1.42487	1.34174	
May 5 2019	252.96000	1.56399	1.53875	1.42513	1.34199	
May 6 2019	253.00600	1.56428	1.53903	1.42539	1.34223	
May 7 2019	253.05200	1.56456	1.53931	1.42565	1.34247	
May 8 2019	253.09800	1.56484	1.53959	1.42590	1.34272	
May 9 2019	253.14400	1.56513	1.53987	1.42616	1.34296	
May 10 2019	253.19000	1.56541	1.54015	1.42642	1.34321	
May 11 2019	253.23600	1.56570	1.54043	1.42668	1.34345	
May 12 2019	253.28200	1.56598	1.54071	1.42694	1.34369	
May 13 2019	253.32800	1.56627	1.54099	1.42720	1.34394	
May 14 2019	253.37400	1.56655	1.54127	1.42746	1.34418	
May 15 2019	253.42000	1.56684	1.54155	1.42772	1.34443	
May 16 2019	253.46600	1.56712	1.54183	1.42798	1.34467	
May 17 2019	253.51200	1.56740	1.54211	1.42824	1.34491	
May 18 2019	253.55800	1.56769	1.54239	1.42850	1.34516	
May 19 2019	253.60400	1.56797	1.54267	1.42875	1.34540	
May 20 2019	253.65000	1.56826	1.54295	1.42901	1.34565	
May 21 2019	253.69600	1.56854	1.54323	1.42927	1.34589	
May 22 2019	253.74200	1.56883	1.54351	1.42953	1.34613	
May 23 2019	253.78800	1.56911	1.54379	1.42979	1.34638	
May 24 2019	253.83400	1.56940	1.54407	1.43005	1.34662	
May 25 2019	253.88000	1.56968	1.54434	1.43031	1.34687	
May 26 2019	253.92600	1.56996	1.54462	1.43057	1.34711	
May 27 2019	253.97200	1.57025	1.54490	1.43083	1.34735	
May 28 2019	254.01800	1.57053	1.54518	1.43109	1.34760	
May 29 2019	254.06400	1.57082	1.54546	1.43135	1.34784	
May 30 2019	254.11000	1.57110	1.54574	1.43161	1.34809	
May 31 2019	254.15600	1.57139	1.54602	1.43186	1.34833	
CPI-U (NSA) for:			January 2019 251.712	February 2019 252.776	March 2019 254.202	

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2019

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			2% 20-Year TIPS TIPS of January 2026 912810FS2 January 15, 2006 January 31, 2006 July 31, 2006	2-3/8% 20-Year TIPS TIPS of January 2027 912810PS1 January 15, 2007 January 31, 2007 July 31, 2007	1-3/4% 20-Year TIPS TIPS of January 2028 912810PV4 January 15, 2008 January 31, 2008 July 31, 2008	2-1/2% 20-Year TIPS TIPS of January 2029 912810PZ5 January 15, 2009 January 30, 2009 July 31, 2009
Maturity Date: Ref CPI on Dated Date:			January 15, 2026 198.47742	January 15, 2027 201.66452	January 15, 2028 209.49645	January 15, 2029 214.69971
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2019	252.77600	1.27358	1.25345	1.20659	1.17735	
May 2 2019	252.82200	1.27381	1.25368	1.20681	1.17756	
May 3 2019	252.86800	1.27404	1.25390	1.20703	1.17778	
May 4 2019	252.91400	1.27427	1.25413	1.20725	1.17799	
May 5 2019	252.96000	1.27450	1.25436	1.20747	1.17820	
May 6 2019	253.00600	1.27473	1.25459	1.20769	1.17842	
May 7 2019	253.05200	1.27497	1.25482	1.20791	1.17863	
May 8 2019	253.09800	1.27520	1.25504	1.20813	1.17885	
May 9 2019	253.14400	1.27543	1.25527	1.20835	1.17906	
May 10 2019	253.19000	1.27566	1.25550	1.20856	1.17927	
May 11 2019	253.23600	1.27589	1.25573	1.20878	1.17949	
May 12 2019	253.28200	1.27613	1.25596	1.20900	1.17970	
May 13 2019	253.32800	1.27636	1.25619	1.20922	1.17992	
May 14 2019	253.37400	1.27659	1.25641	1.20944	1.18013	
May 15 2019	253.42000	1.27682	1.25664	1.20966	1.18035	
May 16 2019	253.46600	1.27705	1.25687	1.20988	1.18056	
May 17 2019	253.51200	1.27728	1.25710	1.21010	1.18077	
May 18 2019	253.55800	1.27752	1.25733	1.21032	1.18099	
May 19 2019	253.60400	1.27775	1.25755	1.21054	1.18120	
May 20 2019	253.65000	1.27798	1.25778	1.21076	1.18142	
May 21 2019	253.69600	1.27821	1.25801	1.21098	1.18163	
May 22 2019	253.74200	1.27844	1.25824	1.21120	1.18185	
May 23 2019	253.78800	1.27867	1.25847	1.21142	1.18206	
May 24 2019	253.83400	1.27891	1.25869	1.21164	1.18227	
May 25 2019	253.88000	1.27914	1.25892	1.21186	1.18249	
May 26 2019	253.92600	1.27937	1.25915	1.21208	1.18270	
May 27 2019	253.97200	1.27960	1.25938	1.21230	1.18292	
May 28 2019	254.01800	1.27983	1.25961	1.21252	1.18313	
May 29 2019	254.06400	1.28007	1.25983	1.21274	1.18335	
May 30 2019	254.11000	1.28030	1.26006	1.21296	1.18356	
May 31 2019	254.15600	1.28053	1.26029	1.21318	1.18377	
CPI-U (NSA) for:			January 2019 251.712	February 2019 252.776	March 2019 254.202	

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Date			Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May	1	2019	252.77600	1.18386	1.16893	1.16950	1.15907	
May	2	2019	252.82200	1.18408	1.16914	1.16972	1.15928	
May	3	2019	252.86800	1.18429	1.16935	1.16993	1.15949	
May	4	2019	252.91400	1.18451	1.16957	1.17014	1.15970	
May	5	2019	252.96000	1.18472	1.16978	1.17036	1.15991	
May	6	2019	253.00600	1.18494	1.16999	1.17057	1.16012	
May	7	2019	253.05200	1.18515	1.17020	1.17078	1.16033	
May	8	2019	253.09800	1.18537	1.17042	1.17099	1.16055	
May	9	2019	253.14400	1.18559	1.17063	1.17121	1.16076	
May	10	2019	253.19000	1.18580	1.17084	1.17142	1.16097	
May	11	2019	253.23600	1.18602	1.17105	1.17163	1.16118	
May	12	2019	253.28200	1.18623	1.17127	1.17185	1.16139	
May	13	2019	253.32800	1.18645	1.17148	1.17206	1.16160	
May	14	2019	253.37400	1.18666	1.17169	1.17227	1.16181	
May	15	2019	253.42000	1.18688	1.17191	1.17248	1.16202	
May	16	2019	253.46600	1.18709	1.17212	1.17270	1.16223	
May	17	2019	253.51200	1.18731	1.17233	1.17291	1.16244	
May	18	2019	253.55800	1.18752	1.17254	1.17312	1.16266	
May	19	2019	253.60400	1.18774	1.17276	1.17333	1.16287	
May	20	2019	253.65000	1.18795	1.17297	1.17355	1.16308	
May	21	2019	253.69600	1.18817	1.17318	1.17376	1.16329	
May	22	2019	253.74200	1.18839	1.17339	1.17397	1.16350	
May	23	2019	253.78800	1.18860	1.17361	1.17419	1.16371	
May	24	2019	253.83400	1.18882	1.17382	1.17440	1.16392	
May	25	2019	253.88000	1.18903	1.17403	1.17461	1.16413	
May	26	2019	253.92600	1.18925	1.17425	1.17482	1.16434	
May	27	2019	253.97200	1.18946	1.17446	1.17504	1.16455	
May	28	2019	254.01800	1.18968	1.17467	1.17525	1.16476	
May	29	2019	254.06400	1.18989	1.17488	1.17546	1.16498	
May	30	2019	254.11000	1.19011	1.17510	1.17568	1.16519	
May	31	2019	254.15600	1.19032	1.17531	1.17589	1.16540	
CPI-U (NSA) for:			January 2019	251.712	February 2019	252.776	March 2019	254.202

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May 2019

Date			Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May	1	2019	252.77600	1.15553	1.15428	1.12154	1.11682	
May	2	2019	252.82200	1.15574	1.15449	1.12174	1.11703	
May	3	2019	252.86800	1.15595	1.15470	1.12194	1.11723	
May	4	2019	252.91400	1.15616	1.15491	1.12215	1.11743	
May	5	2019	252.96000	1.15638	1.15512	1.12235	1.11764	
May	6	2019	253.00600	1.15659	1.15533	1.12256	1.11784	
May	7	2019	253.05200	1.15680	1.15554	1.12276	1.11804	
May	8	2019	253.09800	1.15701	1.15575	1.12296	1.11825	
May	9	2019	253.14400	1.15722	1.15596	1.12317	1.11845	
May	10	2019	253.19000	1.15743	1.15617	1.12337	1.11865	
May	11	2019	253.23600	1.15764	1.15638	1.12358	1.11886	
May	12	2019	253.28200	1.15785	1.15659	1.12378	1.11906	
May	13	2019	253.32800	1.15806	1.15680	1.12398	1.11926	
May	14	2019	253.37400	1.15827	1.15701	1.12419	1.11947	
May	15	2019	253.42000	1.15848	1.15722	1.12439	1.11967	
May	16	2019	253.46600	1.15869	1.15743	1.12460	1.11987	
May	17	2019	253.51200	1.15890	1.15764	1.12480	1.12008	
May	18	2019	253.55800	1.15911	1.15785	1.12501	1.12028	
May	19	2019	253.60400	1.15932	1.15806	1.12521	1.12048	
May	20	2019	253.65000	1.15953	1.15827	1.12541	1.12069	
May	21	2019	253.69600	1.15974	1.15848	1.12562	1.12089	
May	22	2019	253.74200	1.15995	1.15869	1.12582	1.12109	
May	23	2019	253.78800	1.16016	1.15890	1.12603	1.12129	
May	24	2019	253.83400	1.16037	1.15911	1.12623	1.12150	
May	25	2019	253.88000	1.16058	1.15932	1.12643	1.12170	
May	26	2019	253.92600	1.16079	1.15953	1.12664	1.12190	
May	27	2019	253.97200	1.16100	1.15974	1.12684	1.12211	
May	28	2019	254.01800	1.16121	1.15995	1.12705	1.12231	
May	29	2019	254.06400	1.16142	1.16016	1.12725	1.12251	
May	30	2019	254.11000	1.16163	1.16037	1.12745	1.12272	
May	31	2019	254.15600	1.16184	1.16058	1.12766	1.12292	
CPI-U (NSA) for:			January 2019	251.712	February 2019	252.776	March 2019	254.202

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2019

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-3/4% 30-Year TIPS TIPS of February 2042 912810QV3 February 15, 2012 February 29, 2012 June 29, 2012 October 31, 2012	0-1/8% 10-Year TIPS Series D-2022 912828TE0 July 15, 2012 July 31, 2012 September 28, 2012 November 30, 2012	0-1/8% 10-Year TIPS Series A-2023 912828UH1 January 15, 2013 January 31, 2013 March 28, 2013 May 31, 2013	0-5/8% 30-Year TIPS TIPS of February 2043 912810RA8 February 15, 2013 February 28, 2013 June 28, 2013 October 31, 2013
Maturity Date: Ref CPI on Dated Date:			February 15, 2042 225.96062	July 15, 2022 229.96306	January 15, 2023 230.82203	February 15, 2043 229.91100
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2019	252.77600	1.11867	1.09920	1.09511	1.09945	
May 2 2019	252.82200	1.11888	1.09940	1.09531	1.09965	
May 3 2019	252.86800	1.11908	1.09960	1.09551	1.09985	
May 4 2019	252.91400	1.11928	1.09980	1.09571	1.10005	
May 5 2019	252.96000	1.11949	1.10000	1.09591	1.10025	
May 6 2019	253.00600	1.11969	1.10020	1.09611	1.10045	
May 7 2019	253.05200	1.11989	1.10040	1.09631	1.10065	
May 8 2019	253.09800	1.12010	1.10060	1.09651	1.10085	
May 9 2019	253.14400	1.12030	1.10080	1.09671	1.10105	
May 10 2019	253.19000	1.12050	1.10100	1.09691	1.10125	
May 11 2019	253.23600	1.12071	1.10120	1.09710	1.10145	
May 12 2019	253.28200	1.12091	1.10140	1.09730	1.10165	
May 13 2019	253.32800	1.12112	1.10160	1.09750	1.10185	
May 14 2019	253.37400	1.12132	1.10180	1.09770	1.10205	
May 15 2019	253.42000	1.12152	1.10200	1.09790	1.10225	
May 16 2019	253.46600	1.12173	1.10220	1.09810	1.10245	
May 17 2019	253.51200	1.12193	1.10240	1.09830	1.10265	
May 18 2019	253.55800	1.12213	1.10260	1.09850	1.10285	
May 19 2019	253.60400	1.12234	1.10280	1.09870	1.10305	
May 20 2019	253.65000	1.12254	1.10300	1.09890	1.10325	
May 21 2019	253.69600	1.12274	1.10320	1.09910	1.10345	
May 22 2019	253.74200	1.12295	1.10340	1.09930	1.10365	
May 23 2019	253.78800	1.12315	1.10360	1.09950	1.10385	
May 24 2019	253.83400	1.12336	1.10380	1.09970	1.10405	
May 25 2019	253.88000	1.12356	1.10400	1.09990	1.10425	
May 26 2019	253.92600	1.12376	1.10420	1.10009	1.10445	
May 27 2019	253.97200	1.12397	1.10440	1.10029	1.10465	
May 28 2019	254.01800	1.12417	1.10460	1.10049	1.10485	
May 29 2019	254.06400	1.12437	1.10480	1.10069	1.10505	
May 30 2019	254.11000	1.12458	1.10500	1.10089	1.10525	
May 31 2019	254.15600	1.12478	1.10520	1.10109	1.10545	
CPI-U (NSA) for:	January 2019	251.712	February 2019	252.776	March 2019	254.202

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May 2019

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-3/8% 10-Year TIPS Series D-2023 912828VM9 July 15, 2013 July 31, 2013 September 30, 2013 November 29, 2013	0-5/8% 10-Year TIPS Series A-2024 912828B25 January 15, 2014 January 31, 2014 March 31, 2014 May 30, 2014	1-3/8% 30-Year TIPS TIPS of February 2044 912810RF7 February 15, 2014 February 28, 2014 June 30, 2014 October 31, 2014	0-1/8% 10-Year TIPS Series D-2024 912828WU0 July 15, 2014 July 31, 2014 September 30, 2014 November 28, 2014
Maturity Date: Ref CPI on Dated Date:			July 15, 2023 232.71797	January 15, 2024 233.33058	February 15, 2044 233.05900	July 15, 2024 237.44594
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2019	252.77600	1.08619	1.08334	1.08460	1.06456	
May 2 2019	252.82200	1.08639	1.08354	1.08480	1.06476	
May 3 2019	252.86800	1.08659	1.08373	1.08500	1.06495	
May 4 2019	252.91400	1.08678	1.08393	1.08519	1.06514	
May 5 2019	252.96000	1.08698	1.08413	1.08539	1.06534	
May 6 2019	253.00600	1.08718	1.08432	1.08559	1.06553	
May 7 2019	253.05200	1.08738	1.08452	1.08579	1.06572	
May 8 2019	253.09800	1.08757	1.08472	1.08598	1.06592	
May 9 2019	253.14400	1.08777	1.08492	1.08618	1.06611	
May 10 2019	253.19000	1.08797	1.08511	1.08638	1.06631	
May 11 2019	253.23600	1.08817	1.08531	1.08657	1.06650	
May 12 2019	253.28200	1.08836	1.08551	1.08677	1.06669	
May 13 2019	253.32800	1.08856	1.08570	1.08697	1.06689	
May 14 2019	253.37400	1.08876	1.08590	1.08717	1.06708	
May 15 2019	253.42000	1.08896	1.08610	1.08736	1.06727	
May 16 2019	253.46600	1.08916	1.08630	1.08756	1.06747	
May 17 2019	253.51200	1.08935	1.08649	1.08776	1.06766	
May 18 2019	253.55800	1.08955	1.08669	1.08796	1.06786	
May 19 2019	253.60400	1.08975	1.08689	1.08815	1.06805	
May 20 2019	253.65000	1.08995	1.08708	1.08835	1.06824	
May 21 2019	253.69600	1.09014	1.08728	1.08855	1.06844	
May 22 2019	253.74200	1.09034	1.08748	1.08875	1.06863	
May 23 2019	253.78800	1.09054	1.08768	1.08894	1.06882	
May 24 2019	253.83400	1.09074	1.08787	1.08914	1.06902	
May 25 2019	253.88000	1.09093	1.08807	1.08934	1.06921	
May 26 2019	253.92600	1.09113	1.08827	1.08954	1.06941	
May 27 2019	253.97200	1.09133	1.08846	1.08973	1.06960	
May 28 2019	254.01800	1.09153	1.08866	1.08993	1.06979	
May 29 2019	254.06400	1.09172	1.08886	1.09013	1.06999	
May 30 2019	254.11000	1.09192	1.08906	1.09032	1.07018	
May 31 2019	254.15600	1.09212	1.08925	1.09052	1.07037	
CPI-U (NSA) for:	January 2019	251.712	February 2019	252.776	March 2019	254.202

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May 2019

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-1/4% 10-Year TIPS Series A-2025 912828H45 January 15, 2015 January 30, 2015 March 31, 2015 May 29, 2015	0-3/4% 30-Year TIPS TIPS of February 2045 912810RL4 February 15, 2015 February 27, 2015 June 30, 2015 October 30, 2015	0-1/8% 5-Year TIPS Series X-2020 912828K33 April 15, 2015 April 30, 2015 August 31, 2015 December 31, 2015	0-3/8% 10-Year TIPS Series D-2025 912828XL9 July 15, 2015 July 31, 2015 September 30, 2015 November 30, 2015
Maturity Date: Ref CPI on Dated Date:			January 15, 2025 236.85403	February 15, 2045 235.48150	April 15, 2020 234.18067	July 15, 2025 237.14365
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2019	252.77600	1.06722	1.07344	1.07941	1.06592	
May 2 2019	252.82200	1.06742	1.07364	1.07960	1.06611	
May 3 2019	252.86800	1.06761	1.07383	1.07980	1.06631	
May 4 2019	252.91400	1.06781	1.07403	1.08000	1.06650	
May 5 2019	252.96000	1.06800	1.07422	1.08019	1.06670	
May 6 2019	253.00600	1.06819	1.07442	1.08039	1.06689	
May 7 2019	253.05200	1.06839	1.07462	1.08058	1.06708	
May 8 2019	253.09800	1.06858	1.07481	1.08078	1.06728	
May 9 2019	253.14400	1.06878	1.07501	1.08098	1.06747	
May 10 2019	253.19000	1.06897	1.07520	1.08117	1.06767	
May 11 2019	253.23600	1.06916	1.07540	1.08137	1.06786	
May 12 2019	253.28200	1.06936	1.07559	1.08157	1.06805	
May 13 2019	253.32800	1.06955	1.07579	1.08176	1.06825	
May 14 2019	253.37400	1.06975	1.07598	1.08196	1.06844	
May 15 2019	253.42000	1.06994	1.07618	1.08216	1.06863	
May 16 2019	253.46600	1.07014	1.07637	1.08235	1.06883	
May 17 2019	253.51200	1.07033	1.07657	1.08255	1.06902	
May 18 2019	253.55800	1.07052	1.07676	1.08275	1.06922	
May 19 2019	253.60400	1.07072	1.07696	1.08294	1.06941	
May 20 2019	253.65000	1.07091	1.07715	1.08314	1.06960	
May 21 2019	253.69600	1.07111	1.07735	1.08333	1.06980	
May 22 2019	253.74200	1.07130	1.07755	1.08353	1.06999	
May 23 2019	253.78800	1.07150	1.07774	1.08373	1.07019	
May 24 2019	253.83400	1.07169	1.07794	1.08392	1.07038	
May 25 2019	253.88000	1.07188	1.07813	1.08412	1.07057	
May 26 2019	253.92600	1.07208	1.07833	1.08432	1.07077	
May 27 2019	253.97200	1.07227	1.07852	1.08451	1.07096	
May 28 2019	254.01800	1.07247	1.07872	1.08471	1.07116	
May 29 2019	254.06400	1.07266	1.07891	1.08491	1.07135	
May 30 2019	254.11000	1.07285	1.07911	1.08510	1.07154	
May 31 2019	254.15600	1.07305	1.07930	1.08530	1.07174	
CPI-U (NSA) for:	January 2019	251.712	February 2019	252.776	March 2019	254.202

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2019

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-5/8% 10-Year TIPS Series A-2026 912828N71 January 15, 2016 January 29, 2016 March 31, 2016 May 31, 2016	1% 30-Year TIPS TIPS of February 2046 912810RR1 February 15, 2016 February 29, 2016 June 30, 2016 October 31, 2016	0-1/8% 5-Year TIPS Series X-2021 912828Q60 April 15, 2016 April 29, 2016 August 31, 2016 December 30, 2016	0-1/8% 10-Year TIPS Series D-2026 912828S50 July 15, 2016 July 29, 2016 September 30, 2016 November 30, 2016
Maturity Date: Ref CPI on Dated Date:			January 15, 2026 237.61129	February 15, 2046 236.94448	April 15, 2021 237.00700	July 15, 2026 239.70132
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2019	252.77600	1.06382	1.06682	1.06653	1.05455	
May 2 2019	252.82200	1.06402	1.06701	1.06673	1.05474	
May 3 2019	252.86800	1.06421	1.06720	1.06692	1.05493	
May 4 2019	252.91400	1.06440	1.06740	1.06712	1.05512	
May 5 2019	252.96000	1.06460	1.06759	1.06731	1.05531	
May 6 2019	253.00600	1.06479	1.06779	1.06750	1.05551	
May 7 2019	253.05200	1.06498	1.06798	1.06770	1.05570	
May 8 2019	253.09800	1.06518	1.06817	1.06789	1.05589	
May 9 2019	253.14400	1.06537	1.06837	1.06809	1.05608	
May 10 2019	253.19000	1.06556	1.06856	1.06828	1.05627	
May 11 2019	253.23600	1.06576	1.06876	1.06847	1.05646	
May 12 2019	253.28200	1.06595	1.06895	1.06867	1.05666	
May 13 2019	253.32800	1.06614	1.06914	1.06886	1.05685	
May 14 2019	253.37400	1.06634	1.06934	1.06906	1.05704	
May 15 2019	253.42000	1.06653	1.06953	1.06925	1.05723	
May 16 2019	253.46600	1.06673	1.06973	1.06945	1.05742	
May 17 2019	253.51200	1.06692	1.06992	1.06964	1.05762	
May 18 2019	253.55800	1.06711	1.07012	1.06983	1.05781	
May 19 2019	253.60400	1.06731	1.07031	1.07003	1.05800	
May 20 2019	253.65000	1.06750	1.07050	1.07022	1.05819	
May 21 2019	253.69600	1.06769	1.07070	1.07042	1.05838	
May 22 2019	253.74200	1.06789	1.07089	1.07061	1.05858	
May 23 2019	253.78800	1.06808	1.07109	1.07080	1.05877	
May 24 2019	253.83400	1.06827	1.07128	1.07100	1.05896	
May 25 2019	253.88000	1.06847	1.07147	1.07119	1.05915	
May 26 2019	253.92600	1.06866	1.07167	1.07139	1.05934	
May 27 2019	253.97200	1.06885	1.07186	1.07158	1.05954	
May 28 2019	254.01800	1.06905	1.07206	1.07177	1.05973	
May 29 2019	254.06400	1.06924	1.07225	1.07197	1.05992	
May 30 2019	254.11000	1.06944	1.07245	1.07216	1.06011	
May 31 2019	254.15600	1.06963	1.07264	1.07236	1.06030	
CPI-U (NSA) for:	January 2019	251.712	February 2019	252.776	March 2019	254.202

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2019

Date			Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May	1	2019	252.77600	1.04644	1.04716	1.03939	1.03335	
May	2	2019	252.82200	1.04663	1.04735	1.03958	1.03354	
May	3	2019	252.86800	1.04682	1.04754	1.03977	1.03372	
May	4	2019	252.91400	1.04701	1.04773	1.03996	1.03391	
May	5	2019	252.96000	1.04720	1.04792	1.04015	1.03410	
May	6	2019	253.00600	1.04739	1.04811	1.04034	1.03429	
May	7	2019	253.05200	1.04758	1.04830	1.04053	1.03448	
May	8	2019	253.09800	1.04777	1.04849	1.04072	1.03466	
May	9	2019	253.14400	1.04796	1.04868	1.04091	1.03485	
May	10	2019	253.19000	1.04815	1.04887	1.04110	1.03504	
May	11	2019	253.23600	1.04834	1.04906	1.04129	1.03523	
May	12	2019	253.28200	1.04853	1.04925	1.04147	1.03542	
May	13	2019	253.32800	1.04872	1.04944	1.04166	1.03560	
May	14	2019	253.37400	1.04891	1.04963	1.04185	1.03579	
May	15	2019	253.42000	1.04910	1.04983	1.04204	1.03598	
May	16	2019	253.46600	1.04929	1.05002	1.04223	1.03617	
May	17	2019	253.51200	1.04948	1.05021	1.04242	1.03636	
May	18	2019	253.55800	1.04967	1.05040	1.04261	1.03655	
May	19	2019	253.60400	1.04986	1.05059	1.04280	1.03673	
May	20	2019	253.65000	1.05005	1.05078	1.04299	1.03692	
May	21	2019	253.69600	1.05024	1.05097	1.04318	1.03711	
May	22	2019	253.74200	1.05043	1.05116	1.04337	1.03730	
May	23	2019	253.78800	1.05062	1.05135	1.04356	1.03749	
May	24	2019	253.83400	1.05081	1.05154	1.04374	1.03767	
May	25	2019	253.88000	1.05101	1.05173	1.04393	1.03786	
May	26	2019	253.92600	1.05120	1.05192	1.04412	1.03805	
May	27	2019	253.97200	1.05139	1.05211	1.04431	1.03824	
May	28	2019	254.01800	1.05158	1.05230	1.04450	1.03843	
May	29	2019	254.06400	1.05177	1.05249	1.04469	1.03861	
May	30	2019	254.11000	1.05196	1.05268	1.04488	1.03880	
May	31	2019	254.15600	1.05215	1.05287	1.04507	1.03899	
CPI-U (NSA) for:			January 2019	251.712	February 2019	252.776	March 2019	254.202

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2019

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-1/2% 10-Year TIPS Series A-2028 9128283R9 January 15, 2018 January 31, 2018 March 29, 2018 May 31, 2018	1% 30-Year TIPS TIPS of February 2048 912810SB5 February 15, 2018 February 28, 2018 June 29, 2018 October 31, 2018	0-5/8% 5-Year TIPS Series X-2023 9128284H0 April 15, 2018 April 30, 2018 August 31, 2018 December 31, 2018	0-3/4% 10-Year TIPS Series D-2028 912828Y38 July 15, 2018 July 31, 2018 September 28, 2018 November 30, 2018
Maturity Date: Ref CPI on Dated Date:			January 15, 2028 246.66571	February 15, 2048 246.59650	April 15, 2023 248.39153	July 15, 2028 251.01658
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2019	252.77600	1.02477	1.02506	1.01765	1.00701	
May 2 2019	252.82200	1.02496	1.02525	1.01784	1.00719	
May 3 2019	252.86800	1.02514	1.02543	1.01802	1.00738	
May 4 2019	252.91400	1.02533	1.02562	1.01821	1.00756	
May 5 2019	252.96000	1.02552	1.02581	1.01839	1.00774	
May 6 2019	253.00600	1.02570	1.02599	1.01858	1.00793	
May 7 2019	253.05200	1.02589	1.02618	1.01876	1.00811	
May 8 2019	253.09800	1.02608	1.02636	1.01895	1.00829	
May 9 2019	253.14400	1.02626	1.02655	1.01913	1.00848	
May 10 2019	253.19000	1.02645	1.02674	1.01932	1.00866	
May 11 2019	253.23600	1.02664	1.02692	1.01950	1.00884	
May 12 2019	253.28200	1.02682	1.02711	1.01969	1.00902	
May 13 2019	253.32800	1.02701	1.02730	1.01987	1.00921	
May 14 2019	253.37400	1.02720	1.02748	1.02006	1.00939	
May 15 2019	253.42000	1.02738	1.02767	1.02024	1.00957	
May 16 2019	253.46600	1.02757	1.02786	1.02043	1.00976	
May 17 2019	253.51200	1.02776	1.02804	1.02061	1.00994	
May 18 2019	253.55800	1.02794	1.02823	1.02080	1.01012	
May 19 2019	253.60400	1.02813	1.02842	1.02098	1.01031	
May 20 2019	253.65000	1.02831	1.02860	1.02117	1.01049	
May 21 2019	253.69600	1.02850	1.02879	1.02136	1.01067	
May 22 2019	253.74200	1.02869	1.02898	1.02154	1.01086	
May 23 2019	253.78800	1.02887	1.02916	1.02173	1.01104	
May 24 2019	253.83400	1.02906	1.02935	1.02191	1.01122	
May 25 2019	253.88000	1.02925	1.02954	1.02210	1.01141	
May 26 2019	253.92600	1.02943	1.02972	1.02228	1.01159	
May 27 2019	253.97200	1.02962	1.02991	1.02247	1.01177	
May 28 2019	254.01800	1.02981	1.03010	1.02265	1.01196	
May 29 2019	254.06400	1.02999	1.03028	1.02284	1.01214	
May 30 2019	254.11000	1.03018	1.03047	1.02302	1.01232	
May 31 2019	254.15600	1.03037	1.03066	1.02321	1.01251	
CPI-U (NSA) for:			January 2019 251.712	February 2019 252.776	March 2019 254.202	

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2019

Security:			0-7/8% 10-Year TIPS	1% 30-Year TIPS		
Description:			Series A-2029	TIPS of February 2049		
CUSIP Number:			9128285W6	912810SG4		
Dated Date:			January 15, 2019	February 15, 2019		
Original Issue Date:			January 31, 2019	February 28, 2019		
Additional Issue Date(s):			March 29, 2019			
Maturity Date:			January 15, 2029	February 15, 2049		
Ref CPI on Dated Date:			252.50248	251.63550		
Date			Ref CPI	Index Ratio	Index Ratio	
May	1	2019	252.77600	1.00108	1.00453	
May	2	2019	252.82200	1.00127	1.00472	
May	3	2019	252.86800	1.00145	1.00490	
May	4	2019	252.91400	1.00163	1.00508	
May	5	2019	252.96000	1.00181	1.00526	
May	6	2019	253.00600	1.00199	1.00545	
May	7	2019	253.05200	1.00218	1.00563	
May	8	2019	253.09800	1.00236	1.00581	
May	9	2019	253.14400	1.00254	1.00599	
May	10	2019	253.19000	1.00272	1.00618	
May	11	2019	253.23600	1.00291	1.00636	
May	12	2019	253.28200	1.00309	1.00654	
May	13	2019	253.32800	1.00327	1.00673	
May	14	2019	253.37400	1.00345	1.00691	
May	15	2019	253.42000	1.00363	1.00709	
May	16	2019	253.46600	1.00382	1.00727	
May	17	2019	253.51200	1.00400	1.00746	
May	18	2019	253.55800	1.00418	1.00764	
May	19	2019	253.60400	1.00436	1.00782	
May	20	2019	253.65000	1.00454	1.00801	
May	21	2019	253.69600	1.00473	1.00819	
May	22	2019	253.74200	1.00491	1.00837	
May	23	2019	253.78800	1.00509	1.00855	
May	24	2019	253.83400	1.00527	1.00874	
May	25	2019	253.88000	1.00546	1.00892	
May	26	2019	253.92600	1.00564	1.00910	
May	27	2019	253.97200	1.00582	1.00929	
May	28	2019	254.01800	1.00600	1.00947	
May	29	2019	254.06400	1.00618	1.00965	
May	30	2019	254.11000	1.00637	1.00983	
May	31	2019	254.15600	1.00655	1.01002	
CPI-U (NSA) for:			January 2019	251.712	February 2019	252.776
					March 2019	254.202