

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
October 2018

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	
October 1 2018	252.00600	1.55809	1.53295	1.41975	1.33692	
October 2 2018	252.01052	1.55812	1.53297	1.41978	1.33695	
October 3 2018	252.01503	1.55815	1.53300	1.41980	1.33697	
October 4 2018	252.01955	1.55818	1.53303	1.41983	1.33700	
October 5 2018	252.02406	1.55820	1.53306	1.41985	1.33702	
October 6 2018	252.02858	1.55823	1.53308	1.41988	1.33704	
October 7 2018	252.03310	1.55826	1.53311	1.41990	1.33707	
October 8 2018	252.03761	1.55829	1.53314	1.41993	1.33709	
October 9 2018	252.04213	1.55832	1.53317	1.41996	1.33712	
October 10 2018	252.04665	1.55834	1.53319	1.41998	1.33714	
October 11 2018	252.05116	1.55837	1.53322	1.42001	1.33716	
October 12 2018	252.05568	1.55840	1.53325	1.42003	1.33719	
October 13 2018	252.06019	1.55843	1.53328	1.42006	1.33721	
October 14 2018	252.06471	1.55846	1.53330	1.42008	1.33724	
October 15 2018	252.06923	1.55848	1.53333	1.42011	1.33726	
October 16 2018	252.07374	1.55851	1.53336	1.42013	1.33728	
October 17 2018	252.07826	1.55854	1.53338	1.42016	1.33731	
October 18 2018	252.08277	1.55857	1.53341	1.42018	1.33733	
October 19 2018	252.08729	1.55860	1.53344	1.42021	1.33736	
October 20 2018	252.09181	1.55862	1.53347	1.42024	1.33738	
October 21 2018	252.09632	1.55865	1.53349	1.42026	1.33740	
October 22 2018	252.10084	1.55868	1.53352	1.42029	1.33743	
October 23 2018	252.10535	1.55871	1.53355	1.42031	1.33745	
October 24 2018	252.10987	1.55874	1.53358	1.42034	1.33748	
October 25 2018	252.11439	1.55876	1.53360	1.42036	1.33750	
October 26 2018	252.11890	1.55879	1.53363	1.42039	1.33752	
October 27 2018	252.12342	1.55882	1.53366	1.42041	1.33755	
October 28 2018	252.12794	1.55885	1.53369	1.42044	1.33757	
October 29 2018	252.13245	1.55888	1.53371	1.42046	1.33760	
October 30 2018	252.13697	1.55890	1.53374	1.42049	1.33762	
October 31 2018	252.14148	1.55893	1.53377	1.42052	1.33764	
CPI-U (NSA) for:			June 2018 251.989	July 2018 252.006	August 2018 252.146	

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
October 2018

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	2-1/8% 10-Year TIPS Series A-2019 912828JX9 January 15, 2009 January 15, 2009 April 15, 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, 2019 214.69971		
Date			Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
October	1	2018	252.00600	1.26970	1.24963	1.20291	1.17376	
October	2	2018	252.01052	1.26972	1.24965	1.20293	1.17378	
October	3	2018	252.01503	1.26974	1.24967	1.20296	1.17380	
October	4	2018	252.01955	1.26976	1.24970	1.20298	1.17382	
October	5	2018	252.02406	1.26979	1.24972	1.20300	1.17384	
October	6	2018	252.02858	1.26981	1.24974	1.20302	1.17387	
October	7	2018	252.03310	1.26983	1.24976	1.20304	1.17389	
October	8	2018	252.03761	1.26986	1.24979	1.20306	1.17391	
October	9	2018	252.04213	1.26988	1.24981	1.20309	1.17393	
October	10	2018	252.04665	1.26990	1.24983	1.20311	1.17395	
October	11	2018	252.05116	1.26992	1.24985	1.20313	1.17397	
October	12	2018	252.05568	1.26995	1.24988	1.20315	1.17399	
October	13	2018	252.06019	1.26997	1.24990	1.20317	1.17401	
October	14	2018	252.06471	1.26999	1.24992	1.20319	1.17403	
October	15	2018	252.06923	1.27001	1.24994	1.20321	1.17405	
October	16	2018	252.07374	1.27004	1.24997	1.20324	1.17408	
October	17	2018	252.07826	1.27006	1.24999	1.20326	1.17410	
October	18	2018	252.08277	1.27008	1.25001	1.20328	1.17412	
October	19	2018	252.08729	1.27011	1.25003	1.20330	1.17414	
October	20	2018	252.09181	1.27013	1.25006	1.20332	1.17416	
October	21	2018	252.09632	1.27015	1.25008	1.20334	1.17418	
October	22	2018	252.10084	1.27017	1.25010	1.20337	1.17420	
October	23	2018	252.10535	1.27020	1.25012	1.20339	1.17422	
October	24	2018	252.10987	1.27022	1.25014	1.20341	1.17424	
October	25	2018	252.11439	1.27024	1.25017	1.20343	1.17427	
October	26	2018	252.11890	1.27026	1.25019	1.20345	1.17429	
October	27	2018	252.12342	1.27029	1.25021	1.20347	1.17431	
October	28	2018	252.12794	1.27031	1.25023	1.20350	1.17433	
October	29	2018	252.13245	1.27033	1.25026	1.20352	1.17435	
October	30	2018	252.13697	1.27036	1.25028	1.20354	1.17437	
October	31	2018	252.14148	1.27038	1.25030	1.20356	1.17439	
CPI-U (NSA) for:			June 2018	251.989	July 2018	252.006	August 2018	252.146

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
October 2018

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			2-1/2% 20-Year TIPS TIPS of January 2029 912810PZ5 January 15, 2009 January 30, 2009 July 31, 2009	1-7/8% 10-Year TIPS Series D-2019 912828LA6 July 15, 2009 July 15, 2009 October 15, 2009	1-3/8% 10-Year TIPS Series A-2020 912828MF4 January 15, 2010 January 15, 2010 April 15, 2010	2-1/8% 30-Year TIPS TIPS of February 2040 912810QF8 February 15, 2010 February 26, 2010 August 31, 2010
Maturity Date: Ref CPI on Dated Date:			January 15, 2029 214.69971	July 15, 2019 213.51819	January 15, 2020 216.24610	February 15, 2040 216.13950
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
October 1 2018	252.00600	1.17376	1.18026	1.16537	1.16594	
October 2 2018	252.01052	1.17378	1.18028	1.16539	1.16596	
October 3 2018	252.01503	1.17380	1.18030	1.16541	1.16598	
October 4 2018	252.01955	1.17382	1.18032	1.16543	1.16600	
October 5 2018	252.02406	1.17384	1.18034	1.16545	1.16602	
October 6 2018	252.02858	1.17387	1.18036	1.16547	1.16605	
October 7 2018	252.03310	1.17389	1.18038	1.16549	1.16607	
October 8 2018	252.03761	1.17391	1.18040	1.16551	1.16609	
October 9 2018	252.04213	1.17393	1.18042	1.16553	1.16611	
October 10 2018	252.04665	1.17395	1.18045	1.16555	1.16613	
October 11 2018	252.05116	1.17397	1.18047	1.16558	1.16615	
October 12 2018	252.05568	1.17399	1.18049	1.16560	1.16617	
October 13 2018	252.06019	1.17401	1.18051	1.16562	1.16619	
October 14 2018	252.06471	1.17403	1.18053	1.16564	1.16621	
October 15 2018	252.06923	1.17405	1.18055	1.16566	1.16623	
October 16 2018	252.07374	1.17408	1.18057	1.16568	1.16625	
October 17 2018	252.07826	1.17410	1.18059	1.16570	1.16628	
October 18 2018	252.08277	1.17412	1.18061	1.16572	1.16630	
October 19 2018	252.08729	1.17414	1.18064	1.16574	1.16632	
October 20 2018	252.09181	1.17416	1.18066	1.16576	1.16634	
October 21 2018	252.09632	1.17418	1.18068	1.16578	1.16636	
October 22 2018	252.10084	1.17420	1.18070	1.16581	1.16638	
October 23 2018	252.10535	1.17422	1.18072	1.16583	1.16640	
October 24 2018	252.10987	1.17424	1.18074	1.16585	1.16642	
October 25 2018	252.11439	1.17427	1.18076	1.16587	1.16644	
October 26 2018	252.11890	1.17429	1.18078	1.16589	1.16646	
October 27 2018	252.12342	1.17431	1.18081	1.16591	1.16648	
October 28 2018	252.12794	1.17433	1.18083	1.16593	1.16651	
October 29 2018	252.13245	1.17435	1.18085	1.16595	1.16653	
October 30 2018	252.13697	1.17437	1.18087	1.16597	1.16655	
October 31 2018	252.14148	1.17439	1.18089	1.16599	1.16657	
CPI-U (NSA) for:	June 2018	251.989	July 2018	252.006	August 2018	252.146

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
October 2018

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			1-1/4% 10-Year TIPS Series D-2020 912828NM8 July 15, 2010 July 15, 2010 September 15, 2010 November 15, 2010	1-1/8% 10-Year TIPS Series A-2021 912828PP9 January 15, 2011 January 31, 2011 March 31, 2011 May 31, 2011	2-1/8% 30-Year TIPS TIPS of February 2041 912810QP6 February 15, 2011 February 28, 2011 June 30, 2011 October 31, 2011	0-5/8% 10-Year TIPS Series D-2021 912828QV5 July 15, 2011 July 29, 2011 September 30, 2011 November 30, 2011
Maturity Date: Ref CPI on Dated Date:			July 15, 2020 218.08532	January 15, 2021 218.75255	February 15, 2041 218.99100	July 15, 2021 225.38381
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
October 1 2018	252.00600	1.15554	1.15201	1.15076	1.11812	
October 2 2018	252.01052	1.15556	1.15203	1.15078	1.11814	
October 3 2018	252.01503	1.15558	1.15206	1.15080	1.11816	
October 4 2018	252.01955	1.15560	1.15208	1.15082	1.11818	
October 5 2018	252.02406	1.15562	1.15210	1.15084	1.11820	
October 6 2018	252.02858	1.15564	1.15212	1.15086	1.11822	
October 7 2018	252.03310	1.15566	1.15214	1.15088	1.11824	
October 8 2018	252.03761	1.15568	1.15216	1.15090	1.11826	
October 9 2018	252.04213	1.15570	1.15218	1.15092	1.11828	
October 10 2018	252.04665	1.15572	1.15220	1.15095	1.11830	
October 11 2018	252.05116	1.15575	1.15222	1.15097	1.11832	
October 12 2018	252.05568	1.15577	1.15224	1.15099	1.11834	
October 13 2018	252.06019	1.15579	1.15226	1.15101	1.11836	
October 14 2018	252.06471	1.15581	1.15228	1.15103	1.11838	
October 15 2018	252.06923	1.15583	1.15230	1.15105	1.11840	
October 16 2018	252.07374	1.15585	1.15232	1.15107	1.11842	
October 17 2018	252.07826	1.15587	1.15234	1.15109	1.11844	
October 18 2018	252.08277	1.15589	1.15236	1.15111	1.11846	
October 19 2018	252.08729	1.15591	1.15239	1.15113	1.11848	
October 20 2018	252.09181	1.15593	1.15241	1.15115	1.11850	
October 21 2018	252.09632	1.15595	1.15243	1.15117	1.11852	
October 22 2018	252.10084	1.15597	1.15245	1.15119	1.11854	
October 23 2018	252.10535	1.15599	1.15247	1.15121	1.11856	
October 24 2018	252.10987	1.15601	1.15249	1.15123	1.11858	
October 25 2018	252.11439	1.15604	1.15251	1.15125	1.11860	
October 26 2018	252.11890	1.15606	1.15253	1.15128	1.11862	
October 27 2018	252.12342	1.15608	1.15255	1.15130	1.11864	
October 28 2018	252.12794	1.15610	1.15257	1.15132	1.11866	
October 29 2018	252.13245	1.15612	1.15259	1.15134	1.11868	
October 30 2018	252.13697	1.15614	1.15261	1.15136	1.11870	
October 31 2018	252.14148	1.15616	1.15263	1.15138	1.11872	
CPI-U (NSA) for:	June 2018	251.989	July 2018	252.006	August 2018	252.146

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
October 2018

Date			Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
October	1	2018	252.00600	1.11342	1.11527	1.09585	1.09178	
October	2	2018	252.01052	1.11344	1.11529	1.09587	1.09180	
October	3	2018	252.01503	1.11346	1.11531	1.09589	1.09182	
October	4	2018	252.01955	1.11348	1.11533	1.09591	1.09183	
October	5	2018	252.02406	1.11350	1.11535	1.09593	1.09185	
October	6	2018	252.02858	1.11352	1.11537	1.09595	1.09187	
October	7	2018	252.03310	1.11354	1.11539	1.09597	1.09189	
October	8	2018	252.03761	1.11356	1.11541	1.09599	1.09191	
October	9	2018	252.04213	1.11358	1.11543	1.09601	1.09193	
October	10	2018	252.04665	1.11360	1.11545	1.09603	1.09195	
October	11	2018	252.05116	1.11362	1.11546	1.09605	1.09197	
October	12	2018	252.05568	1.11364	1.11548	1.09607	1.09199	
October	13	2018	252.06019	1.11366	1.11550	1.09609	1.09201	
October	14	2018	252.06471	1.11368	1.11552	1.09611	1.09203	
October	15	2018	252.06923	1.11370	1.11554	1.09613	1.09205	
October	16	2018	252.07374	1.11372	1.11556	1.09615	1.09207	
October	17	2018	252.07826	1.11374	1.11558	1.09617	1.09209	
October	18	2018	252.08277	1.11376	1.11560	1.09619	1.09211	
October	19	2018	252.08729	1.11378	1.11562	1.09621	1.09213	
October	20	2018	252.09181	1.11380	1.11564	1.09623	1.09215	
October	21	2018	252.09632	1.11382	1.11566	1.09625	1.09217	
October	22	2018	252.10084	1.11384	1.11568	1.09627	1.09219	
October	23	2018	252.10535	1.11386	1.11570	1.09629	1.09221	
October	24	2018	252.10987	1.11388	1.11572	1.09631	1.09223	
October	25	2018	252.11439	1.11390	1.11574	1.09633	1.09225	
October	26	2018	252.11890	1.11392	1.11576	1.09635	1.09227	
October	27	2018	252.12342	1.11394	1.11578	1.09636	1.09228	
October	28	2018	252.12794	1.11396	1.11580	1.09638	1.09230	
October	29	2018	252.13245	1.11398	1.11582	1.09640	1.09232	
October	30	2018	252.13697	1.11400	1.11584	1.09642	1.09234	
October	31	2018	252.14148	1.11402	1.11586	1.09644	1.09236	
CPI-U (NSA) for:			June 2018	251.989	July 2018	252.006	August 2018	252.146

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
October 2018

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-5/8% 30-Year TIPS TIPS of February 2043 912810RA8 February 15, 2013 February 28, 2013 June 28, 2013 October 31, 2013	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
Maturity Date: Ref CPI on Dated Date:			February 15, 2043 229.91100	July 15, 2023 232.71797	January 15, 2024 233.33058	February 15, 2044 233.05900
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
October 1 2018	252.00600	1.09610	1.08288	1.08004	1.08130	
October 2 2018	252.01052	1.09612	1.08290	1.08006	1.08132	
October 3 2018	252.01503	1.09614	1.08292	1.08008	1.08134	
October 4 2018	252.01955	1.09616	1.08294	1.08010	1.08136	
October 5 2018	252.02406	1.09618	1.08296	1.08012	1.08137	
October 6 2018	252.02858	1.09620	1.08298	1.08014	1.08139	
October 7 2018	252.03310	1.09622	1.08300	1.08015	1.08141	
October 8 2018	252.03761	1.09624	1.08302	1.08017	1.08143	
October 9 2018	252.04213	1.09626	1.08304	1.08019	1.08145	
October 10 2018	252.04665	1.09628	1.08306	1.08021	1.08147	
October 11 2018	252.05116	1.09630	1.08308	1.08023	1.08149	
October 12 2018	252.05568	1.09632	1.08310	1.08025	1.08151	
October 13 2018	252.06019	1.09634	1.08311	1.08027	1.08153	
October 14 2018	252.06471	1.09636	1.08313	1.08029	1.08155	
October 15 2018	252.06923	1.09638	1.08315	1.08031	1.08157	
October 16 2018	252.07374	1.09640	1.08317	1.08033	1.08159	
October 17 2018	252.07826	1.09642	1.08319	1.08035	1.08161	
October 18 2018	252.08277	1.09644	1.08321	1.08037	1.08163	
October 19 2018	252.08729	1.09646	1.08323	1.08039	1.08165	
October 20 2018	252.09181	1.09648	1.08325	1.08041	1.08167	
October 21 2018	252.09632	1.09650	1.08327	1.08043	1.08168	
October 22 2018	252.10084	1.09651	1.08329	1.08044	1.08170	
October 23 2018	252.10535	1.09653	1.08331	1.08046	1.08172	
October 24 2018	252.10987	1.09655	1.08333	1.08048	1.08174	
October 25 2018	252.11439	1.09657	1.08335	1.08050	1.08176	
October 26 2018	252.11890	1.09659	1.08337	1.08052	1.08178	
October 27 2018	252.12342	1.09661	1.08339	1.08054	1.08180	
October 28 2018	252.12794	1.09663	1.08341	1.08056	1.08182	
October 29 2018	252.13245	1.09665	1.08342	1.08058	1.08184	
October 30 2018	252.13697	1.09667	1.08344	1.08060	1.08186	
October 31 2018	252.14148	1.09669	1.08346	1.08062	1.08188	
CPI-U (NSA) for:	June 2018	251.989	July 2018	252.006	August 2018	252.146

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
October 2018

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-1/8% 5-Year TIPS Series X-2019 912828C99 April 15, 2014 April 30, 2014 August 29, 2014 December 31, 2014	0-1/8% 10-Year TIPS Series D-2024 912828WU0 July 15, 2014 July 31, 2014 September 30, 2014 November 28, 2014	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
Maturity Date: Ref CPI on Dated Date:			April 15, 2019 234.31967	July 15, 2024 237.44594	January 15, 2025 236.85403	February 15, 2045 235.48150
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
October 1 2018	252.00600	1.07548	1.06132	1.06397	1.07017	
October 2 2018	252.01052	1.07550	1.06134	1.06399	1.07019	
October 3 2018	252.01503	1.07552	1.06136	1.06401	1.07021	
October 4 2018	252.01955	1.07554	1.06138	1.06403	1.07023	
October 5 2018	252.02406	1.07556	1.06140	1.06405	1.07025	
October 6 2018	252.02858	1.07558	1.06141	1.06407	1.07027	
October 7 2018	252.03310	1.07560	1.06143	1.06409	1.07029	
October 8 2018	252.03761	1.07561	1.06145	1.06411	1.07031	
October 9 2018	252.04213	1.07563	1.06147	1.06412	1.07033	
October 10 2018	252.04665	1.07565	1.06149	1.06414	1.07035	
October 11 2018	252.05116	1.07567	1.06151	1.06416	1.07037	
October 12 2018	252.05568	1.07569	1.06153	1.06418	1.07038	
October 13 2018	252.06019	1.07571	1.06155	1.06420	1.07040	
October 14 2018	252.06471	1.07573	1.06157	1.06422	1.07042	
October 15 2018	252.06923	1.07575	1.06159	1.06424	1.07044	
October 16 2018	252.07374	1.07577	1.06160	1.06426	1.07046	
October 17 2018	252.07826	1.07579	1.06162	1.06428	1.07048	
October 18 2018	252.08277	1.07581	1.06164	1.06430	1.07050	
October 19 2018	252.08729	1.07583	1.06166	1.06431	1.07052	
October 20 2018	252.09181	1.07585	1.06168	1.06433	1.07054	
October 21 2018	252.09632	1.07586	1.06170	1.06435	1.07056	
October 22 2018	252.10084	1.07588	1.06172	1.06437	1.07058	
October 23 2018	252.10535	1.07590	1.06174	1.06439	1.07060	
October 24 2018	252.10987	1.07592	1.06176	1.06441	1.07061	
October 25 2018	252.11439	1.07594	1.06178	1.06443	1.07063	
October 26 2018	252.11890	1.07596	1.06179	1.06445	1.07065	
October 27 2018	252.12342	1.07598	1.06181	1.06447	1.07067	
October 28 2018	252.12794	1.07600	1.06183	1.06449	1.07069	
October 29 2018	252.13245	1.07602	1.06185	1.06451	1.07071	
October 30 2018	252.13697	1.07604	1.06187	1.06452	1.07073	
October 31 2018	252.14148	1.07606	1.06189	1.06454	1.07075	
CPI-U (NSA) for:	June 2018	251.989	July 2018	252.006	August 2018	252.146

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
October 2018

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	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
Maturity Date: Ref CPI on Dated Date:			April 15, 2020 234.18067	July 15, 2025 237.14365	January 15, 2026 237.61129	February 15, 2046 236.94448
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
October 1 2018	252.00600	1.07612	1.06267	1.06058	1.06357	
October 2 2018	252.01052	1.07614	1.06269	1.06060	1.06358	
October 3 2018	252.01503	1.07616	1.06271	1.06062	1.06360	
October 4 2018	252.01955	1.07618	1.06273	1.06064	1.06362	
October 5 2018	252.02406	1.07619	1.06275	1.06066	1.06364	
October 6 2018	252.02858	1.07621	1.06277	1.06068	1.06366	
October 7 2018	252.03310	1.07623	1.06279	1.06069	1.06368	
October 8 2018	252.03761	1.07625	1.06281	1.06071	1.06370	
October 9 2018	252.04213	1.07627	1.06282	1.06073	1.06372	
October 10 2018	252.04665	1.07629	1.06284	1.06075	1.06374	
October 11 2018	252.05116	1.07631	1.06286	1.06077	1.06376	
October 12 2018	252.05568	1.07633	1.06288	1.06079	1.06378	
October 13 2018	252.06019	1.07635	1.06290	1.06081	1.06379	
October 14 2018	252.06471	1.07637	1.06292	1.06083	1.06381	
October 15 2018	252.06923	1.07639	1.06294	1.06085	1.06383	
October 16 2018	252.07374	1.07641	1.06296	1.06087	1.06385	
October 17 2018	252.07826	1.07643	1.06298	1.06089	1.06387	
October 18 2018	252.08277	1.07645	1.06300	1.06090	1.06389	
October 19 2018	252.08729	1.07646	1.06302	1.06092	1.06391	
October 20 2018	252.09181	1.07648	1.06303	1.06094	1.06393	
October 21 2018	252.09632	1.07650	1.06305	1.06096	1.06395	
October 22 2018	252.10084	1.07652	1.06307	1.06098	1.06397	
October 23 2018	252.10535	1.07654	1.06309	1.06100	1.06398	
October 24 2018	252.10987	1.07656	1.06311	1.06102	1.06400	
October 25 2018	252.11439	1.07658	1.06313	1.06104	1.06402	
October 26 2018	252.11890	1.07660	1.06315	1.06106	1.06404	
October 27 2018	252.12342	1.07662	1.06317	1.06108	1.06406	
October 28 2018	252.12794	1.07664	1.06319	1.06109	1.06408	
October 29 2018	252.13245	1.07666	1.06321	1.06111	1.06410	
October 30 2018	252.13697	1.07668	1.06322	1.06113	1.06412	
October 31 2018	252.14148	1.07670	1.06324	1.06115	1.06414	
CPI-U (NSA) for:	June 2018	251.989	July 2018	252.006	August 2018	252.146

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
October 2018

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	0-3/8% 10-Year TIPS Series A-2027 912828V49 January 15, 2017 January 31, 2017 March 31, 2017 May 31, 2017	0-7/8% 30-Year TIPS TIPS of February 2047 912810RW0 February 15, 2017 February 28, 2017 June 30, 2017 October 31, 2017
Maturity Date: Ref CPI on Dated Date:			April 15, 2021 237.00700	July 15, 2026 239.70132	January 15, 2027 241.55919	February 15, 2047 241.39250
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
October 1 2018	252.00600	1.06329	1.05133	1.04325	1.04397	
October 2 2018	252.01052	1.06330	1.05135	1.04327	1.04399	
October 3 2018	252.01503	1.06332	1.05137	1.04328	1.04401	
October 4 2018	252.01955	1.06334	1.05139	1.04330	1.04402	
October 5 2018	252.02406	1.06336	1.05141	1.04332	1.04404	
October 6 2018	252.02858	1.06338	1.05143	1.04334	1.04406	
October 7 2018	252.03310	1.06340	1.05145	1.04336	1.04408	
October 8 2018	252.03761	1.06342	1.05147	1.04338	1.04410	
October 9 2018	252.04213	1.06344	1.05148	1.04340	1.04412	
October 10 2018	252.04665	1.06346	1.05150	1.04342	1.04414	
October 11 2018	252.05116	1.06348	1.05152	1.04343	1.04415	
October 12 2018	252.05568	1.06349	1.05154	1.04345	1.04417	
October 13 2018	252.06019	1.06351	1.05156	1.04347	1.04419	
October 14 2018	252.06471	1.06353	1.05158	1.04349	1.04421	
October 15 2018	252.06923	1.06355	1.05160	1.04351	1.04423	
October 16 2018	252.07374	1.06357	1.05162	1.04353	1.04425	
October 17 2018	252.07826	1.06359	1.05163	1.04355	1.04427	
October 18 2018	252.08277	1.06361	1.05165	1.04357	1.04429	
October 19 2018	252.08729	1.06363	1.05167	1.04358	1.04430	
October 20 2018	252.09181	1.06365	1.05169	1.04360	1.04432	
October 21 2018	252.09632	1.06367	1.05171	1.04362	1.04434	
October 22 2018	252.10084	1.06369	1.05173	1.04364	1.04436	
October 23 2018	252.10535	1.06370	1.05175	1.04366	1.04438	
October 24 2018	252.10987	1.06372	1.05177	1.04368	1.04440	
October 25 2018	252.11439	1.06374	1.05179	1.04370	1.04442	
October 26 2018	252.11890	1.06376	1.05180	1.04371	1.04444	
October 27 2018	252.12342	1.06378	1.05182	1.04373	1.04445	
October 28 2018	252.12794	1.06380	1.05184	1.04375	1.04447	
October 29 2018	252.13245	1.06382	1.05186	1.04377	1.04449	
October 30 2018	252.13697	1.06384	1.05188	1.04379	1.04451	
October 31 2018	252.14148	1.06386	1.05190	1.04381	1.04453	
CPI-U (NSA) for:	June 2018	251.989	July 2018	252.006	August 2018	252.146

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
October 2018

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-1/8% 5-Year TIPS Series X-2022 912828X39 April 15, 2017 April 28, 2017 August 31, 2017 December 29, 2017	0-3/8% 10-Year TIPS Series D-2027 9128282L3 July 15, 2017 July 31, 2017 September 29, 2017 November 30, 2017	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
Maturity Date: Ref CPI on Dated Date:			April 15, 2022 243.19553	July 15, 2027 244.61839	January 15, 2028 246.66571	February 15, 2048 246.59650
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
October 1 2018	252.00600	1.03623	1.03020	1.02165	1.02194	
October 2 2018	252.01052	1.03625	1.03022	1.02167	1.02195	
October 3 2018	252.01503	1.03627	1.03024	1.02169	1.02197	
October 4 2018	252.01955	1.03628	1.03026	1.02170	1.02199	
October 5 2018	252.02406	1.03630	1.03027	1.02172	1.02201	
October 6 2018	252.02858	1.03632	1.03029	1.02174	1.02203	
October 7 2018	252.03310	1.03634	1.03031	1.02176	1.02205	
October 8 2018	252.03761	1.03636	1.03033	1.02178	1.02206	
October 9 2018	252.04213	1.03638	1.03035	1.02180	1.02208	
October 10 2018	252.04665	1.03640	1.03037	1.02181	1.02210	
October 11 2018	252.05116	1.03641	1.03039	1.02183	1.02212	
October 12 2018	252.05568	1.03643	1.03040	1.02185	1.02214	
October 13 2018	252.06019	1.03645	1.03042	1.02187	1.02216	
October 14 2018	252.06471	1.03647	1.03044	1.02189	1.02217	
October 15 2018	252.06923	1.03649	1.03046	1.02191	1.02219	
October 16 2018	252.07374	1.03651	1.03048	1.02192	1.02221	
October 17 2018	252.07826	1.03653	1.03050	1.02194	1.02223	
October 18 2018	252.08277	1.03654	1.03051	1.02196	1.02225	
October 19 2018	252.08729	1.03656	1.03053	1.02198	1.02227	
October 20 2018	252.09181	1.03658	1.03055	1.02200	1.02228	
October 21 2018	252.09632	1.03660	1.03057	1.02202	1.02230	
October 22 2018	252.10084	1.03662	1.03059	1.02203	1.02232	
October 23 2018	252.10535	1.03664	1.03061	1.02205	1.02234	
October 24 2018	252.10987	1.03666	1.03063	1.02207	1.02236	
October 25 2018	252.11439	1.03667	1.03064	1.02209	1.02238	
October 26 2018	252.11890	1.03669	1.03066	1.02211	1.02239	
October 27 2018	252.12342	1.03671	1.03068	1.02213	1.02241	
October 28 2018	252.12794	1.03673	1.03070	1.02214	1.02243	
October 29 2018	252.13245	1.03675	1.03072	1.02216	1.02245	
October 30 2018	252.13697	1.03677	1.03074	1.02218	1.02247	
October 31 2018	252.14148	1.03679	1.03075	1.02220	1.02249	
CPI-U (NSA) for:	June 2018	251.989	July 2018	252.006	August 2018	252.146

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
October 2018

Security:			0-5/8% 5-Year TIPS	0-3/4% 10-Year TIPS		
Description:			Series X-2023	Series D-2028		
CUSIP Number:			9128284H0	912828Y38		
Dated Date:			April 15, 2018	July 15, 2018		
Original Issue Date:			April 30, 2018	July 31, 2018		
Additional Issue Date(s):			August 31, 2018			
Maturity Date:			April 15, 2023	July 15, 2028		
Ref CPI on Dated Date:			248.39153	251.01658		
Date			Ref CPI	Index Ratio	Index Ratio	
October	1	2018	252.00600	1.01455	1.00394	
October	2	2018	252.01052	1.01457	1.00396	
October	3	2018	252.01503	1.01459	1.00398	
October	4	2018	252.01955	1.01461	1.00400	
October	5	2018	252.02406	1.01462	1.00401	
October	6	2018	252.02858	1.01464	1.00403	
October	7	2018	252.03310	1.01466	1.00405	
October	8	2018	252.03761	1.01468	1.00407	
October	9	2018	252.04213	1.01470	1.00409	
October	10	2018	252.04665	1.01472	1.00410	
October	11	2018	252.05116	1.01473	1.00412	
October	12	2018	252.05568	1.01475	1.00414	
October	13	2018	252.06019	1.01477	1.00416	
October	14	2018	252.06471	1.01479	1.00418	
October	15	2018	252.06923	1.01481	1.00419	
October	16	2018	252.07374	1.01482	1.00421	
October	17	2018	252.07826	1.01484	1.00423	
October	18	2018	252.08277	1.01486	1.00425	
October	19	2018	252.08729	1.01488	1.00427	
October	20	2018	252.09181	1.01490	1.00428	
October	21	2018	252.09632	1.01492	1.00430	
October	22	2018	252.10084	1.01493	1.00432	
October	23	2018	252.10535	1.01495	1.00434	
October	24	2018	252.10987	1.01497	1.00436	
October	25	2018	252.11439	1.01499	1.00437	
October	26	2018	252.11890	1.01501	1.00439	
October	27	2018	252.12342	1.01502	1.00441	
October	28	2018	252.12794	1.01504	1.00443	
October	29	2018	252.13245	1.01506	1.00445	
October	30	2018	252.13697	1.01508	1.00446	
October	31	2018	252.14148	1.01510	1.00448	
CPI-U (NSA) for:			June 2018	251.989	July 2018	252.006
					August 2018	252.146