

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
June 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	October 15, 2001	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
June	1	2019	254.20200	1.57167	1.54630	1.43212	1.34857
June	2	2019	254.24687	1.57195	1.54658	1.43238	1.34881
June	3	2019	254.29173	1.57223	1.54685	1.43263	1.34905
June	4	2019	254.33660	1.57250	1.54712	1.43288	1.34929
June	5	2019	254.38147	1.57278	1.54740	1.43314	1.34953
June	6	2019	254.42633	1.57306	1.54767	1.43339	1.34976
June	7	2019	254.47120	1.57333	1.54794	1.43364	1.35000
June	8	2019	254.51607	1.57361	1.54821	1.43389	1.35024
June	9	2019	254.56093	1.57389	1.54849	1.43415	1.35048
June	10	2019	254.60580	1.57417	1.54876	1.43440	1.35072
June	11	2019	254.65067	1.57444	1.54903	1.43465	1.35096
June	12	2019	254.69553	1.57472	1.54931	1.43490	1.35119
June	13	2019	254.74040	1.57500	1.54958	1.43516	1.35143
June	14	2019	254.78527	1.57528	1.54985	1.43541	1.35167
June	15	2019	254.83013	1.57555	1.55012	1.43566	1.35191
June	16	2019	254.87500	1.57583	1.55040	1.43592	1.35215
June	17	2019	254.91987	1.57611	1.55067	1.43617	1.35238
June	18	2019	254.96473	1.57639	1.55094	1.43642	1.35262
June	19	2019	255.00960	1.57666	1.55122	1.43667	1.35286
June	20	2019	255.05447	1.57694	1.55149	1.43693	1.35310
June	21	2019	255.09933	1.57722	1.55176	1.43718	1.35334
June	22	2019	255.14420	1.57750	1.55203	1.43743	1.35357
June	23	2019	255.18907	1.57777	1.55231	1.43768	1.35381
June	24	2019	255.23393	1.57805	1.55258	1.43794	1.35405
June	25	2019	255.27880	1.57833	1.55285	1.43819	1.35429
June	26	2019	255.32367	1.57861	1.55313	1.43844	1.35453
June	27	2019	255.36853	1.57888	1.55340	1.43870	1.35476
June	28	2019	255.41340	1.57916	1.55367	1.43895	1.35500
June	29	2019	255.45827	1.57944	1.55395	1.43920	1.35524
June	30	2019	255.50313	1.57972	1.55422	1.43945	1.35548
CPI-U (NSA) for:			February 2019 252.776	March 2019 254.202	April 2019 255.548		

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
June 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
June	1	2019	254.20200	1.28076	1.26052	1.21340	1.18399
June	2	2019	254.24687	1.28099	1.26074	1.21361	1.18420
June	3	2019	254.29173	1.28121	1.26096	1.21382	1.18441
June	4	2019	254.33660	1.28144	1.26119	1.21404	1.18462
June	5	2019	254.38147	1.28166	1.26141	1.21425	1.18482
June	6	2019	254.42633	1.28189	1.26163	1.21447	1.18503
June	7	2019	254.47120	1.28212	1.26185	1.21468	1.18524
June	8	2019	254.51607	1.28234	1.26208	1.21489	1.18545
June	9	2019	254.56093	1.28257	1.26230	1.21511	1.18566
June	10	2019	254.60580	1.28279	1.26252	1.21532	1.18587
June	11	2019	254.65067	1.28302	1.26274	1.21554	1.18608
June	12	2019	254.69553	1.28325	1.26297	1.21575	1.18629
June	13	2019	254.74040	1.28347	1.26319	1.21597	1.18650
June	14	2019	254.78527	1.28370	1.26341	1.21618	1.18671
June	15	2019	254.83013	1.28393	1.26363	1.21639	1.18691
June	16	2019	254.87500	1.28415	1.26386	1.21661	1.18712
June	17	2019	254.91987	1.28438	1.26408	1.21682	1.18733
June	18	2019	254.96473	1.28460	1.26430	1.21704	1.18754
June	19	2019	255.00960	1.28483	1.26452	1.21725	1.18775
June	20	2019	255.05447	1.28506	1.26475	1.21746	1.18796
June	21	2019	255.09933	1.28528	1.26497	1.21768	1.18817
June	22	2019	255.14420	1.28551	1.26519	1.21789	1.18838
June	23	2019	255.18907	1.28573	1.26541	1.21811	1.18859
June	24	2019	255.23393	1.28596	1.26564	1.21832	1.18879
June	25	2019	255.27880	1.28619	1.26586	1.21854	1.18900
June	26	2019	255.32367	1.28641	1.26608	1.21875	1.18921
June	27	2019	255.36853	1.28664	1.26630	1.21896	1.18942
June	28	2019	255.41340	1.28686	1.26653	1.21918	1.18963
June	29	2019	255.45827	1.28709	1.26675	1.21939	1.18984
June	30	2019	255.50313	1.28732	1.26697	1.21961	1.19005
CPI-U (NSA) for:			February 2019 252.776	March 2019 254.202	April 2019 255.548		

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Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	1-1/4% 10-Year TIPS Series D-2020 912828NM8 July 15, 2010 July 15, 2010 September 15, 2010 November 15, 2010
Maturity Date: Ref CPI on Dated Date:			July 15, 2019 213.51819	January 15, 2020 216.24610	February 15, 2040 216.13950	July 15, 2020 218.08532
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
June 1 2019	254.20200	1.19054	1.17552	1.17610	1.16561	
June 2 2019	254.24687	1.19075	1.17573	1.17631	1.16581	
June 3 2019	254.29173	1.19096	1.17594	1.17652	1.16602	
June 4 2019	254.33660	1.19117	1.17614	1.17672	1.16623	
June 5 2019	254.38147	1.19138	1.17635	1.17693	1.16643	
June 6 2019	254.42633	1.19159	1.17656	1.17714	1.16664	
June 7 2019	254.47120	1.19180	1.17677	1.17735	1.16684	
June 8 2019	254.51607	1.19201	1.17697	1.17755	1.16705	
June 9 2019	254.56093	1.19222	1.17718	1.17776	1.16725	
June 10 2019	254.60580	1.19243	1.17739	1.17797	1.16746	
June 11 2019	254.65067	1.19264	1.17760	1.17818	1.16767	
June 12 2019	254.69553	1.19285	1.17780	1.17838	1.16787	
June 13 2019	254.74040	1.19306	1.17801	1.17859	1.16808	
June 14 2019	254.78527	1.19327	1.17822	1.17880	1.16828	
June 15 2019	254.83013	1.19348	1.17843	1.17901	1.16849	
June 16 2019	254.87500	1.19369	1.17863	1.17922	1.16869	
June 17 2019	254.91987	1.19390	1.17884	1.17942	1.16890	
June 18 2019	254.96473	1.19411	1.17905	1.17963	1.16911	
June 19 2019	255.00960	1.19432	1.17926	1.17984	1.16931	
June 20 2019	255.05447	1.19453	1.17946	1.18005	1.16952	
June 21 2019	255.09933	1.19474	1.17967	1.18025	1.16972	
June 22 2019	255.14420	1.19495	1.17988	1.18046	1.16993	
June 23 2019	255.18907	1.19516	1.18009	1.18067	1.17013	
June 24 2019	255.23393	1.19537	1.18029	1.18088	1.17034	
June 25 2019	255.27880	1.19558	1.18050	1.18108	1.17055	
June 26 2019	255.32367	1.19579	1.18071	1.18129	1.17075	
June 27 2019	255.36853	1.19600	1.18092	1.18150	1.17096	
June 28 2019	255.41340	1.19621	1.18112	1.18171	1.17116	
June 29 2019	255.45827	1.19642	1.18133	1.18191	1.17137	
June 30 2019	255.50313	1.19663	1.18154	1.18212	1.17157	
CPI-U (NSA) for:			February 2019 252.776	March 2019 254.202	April 2019 255.548	

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Date			Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
June	1	2019	254.20200	1.16205	1.16079	1.12786	1.12312	
June	2	2019	254.24687	1.16226	1.16099	1.12806	1.12332	
June	3	2019	254.29173	1.16246	1.16120	1.12826	1.12352	
June	4	2019	254.33660	1.16267	1.16140	1.12846	1.12372	
June	5	2019	254.38147	1.16287	1.16161	1.12866	1.12392	
June	6	2019	254.42633	1.16308	1.16181	1.12886	1.12412	
June	7	2019	254.47120	1.16328	1.16202	1.12906	1.12431	
June	8	2019	254.51607	1.16349	1.16222	1.12926	1.12451	
June	9	2019	254.56093	1.16369	1.16243	1.12946	1.12471	
June	10	2019	254.60580	1.16390	1.16263	1.12965	1.12491	
June	11	2019	254.65067	1.16410	1.16284	1.12985	1.12511	
June	12	2019	254.69553	1.16431	1.16304	1.13005	1.12530	
June	13	2019	254.74040	1.16451	1.16325	1.13025	1.12550	
June	14	2019	254.78527	1.16472	1.16345	1.13045	1.12570	
June	15	2019	254.83013	1.16492	1.16366	1.13065	1.12590	
June	16	2019	254.87500	1.16513	1.16386	1.13085	1.12610	
June	17	2019	254.91987	1.16533	1.16407	1.13105	1.12630	
June	18	2019	254.96473	1.16554	1.16427	1.13125	1.12649	
June	19	2019	255.00960	1.16574	1.16448	1.13145	1.12669	
June	20	2019	255.05447	1.16595	1.16468	1.13165	1.12689	
June	21	2019	255.09933	1.16615	1.16488	1.13184	1.12709	
June	22	2019	255.14420	1.16636	1.16509	1.13204	1.12729	
June	23	2019	255.18907	1.16657	1.16529	1.13224	1.12749	
June	24	2019	255.23393	1.16677	1.16550	1.13244	1.12768	
June	25	2019	255.27880	1.16698	1.16570	1.13264	1.12788	
June	26	2019	255.32367	1.16718	1.16591	1.13284	1.12808	
June	27	2019	255.36853	1.16739	1.16611	1.13304	1.12828	
June	28	2019	255.41340	1.16759	1.16632	1.13324	1.12848	
June	29	2019	255.45827	1.16780	1.16652	1.13344	1.12867	
June	30	2019	255.50313	1.16800	1.16673	1.13364	1.12887	
CPI-U (NSA) for:			February 2019	252.776	March 2019	254.202	April 2019	255.548

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
June 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	
June 1 2019	254.20200	1.12498	1.10540	1.10129	1.10565	
June 2 2019	254.24687	1.12518	1.10560	1.10148	1.10585	
June 3 2019	254.29173	1.12538	1.10579	1.10168	1.10604	
June 4 2019	254.33660	1.12558	1.10599	1.10187	1.10624	
June 5 2019	254.38147	1.12578	1.10618	1.10207	1.10643	
June 6 2019	254.42633	1.12598	1.10638	1.10226	1.10663	
June 7 2019	254.47120	1.12617	1.10657	1.10246	1.10682	
June 8 2019	254.51607	1.12637	1.10677	1.10265	1.10702	
June 9 2019	254.56093	1.12657	1.10696	1.10285	1.10722	
June 10 2019	254.60580	1.12677	1.10716	1.10304	1.10741	
June 11 2019	254.65067	1.12697	1.10735	1.10323	1.10761	
June 12 2019	254.69553	1.12717	1.10755	1.10343	1.10780	
June 13 2019	254.74040	1.12737	1.10774	1.10362	1.10800	
June 14 2019	254.78527	1.12756	1.10794	1.10382	1.10819	
June 15 2019	254.83013	1.12776	1.10814	1.10401	1.10839	
June 16 2019	254.87500	1.12796	1.10833	1.10421	1.10858	
June 17 2019	254.91987	1.12816	1.10853	1.10440	1.10878	
June 18 2019	254.96473	1.12836	1.10872	1.10459	1.10897	
June 19 2019	255.00960	1.12856	1.10892	1.10479	1.10917	
June 20 2019	255.05447	1.12876	1.10911	1.10498	1.10936	
June 21 2019	255.09933	1.12895	1.10931	1.10518	1.10956	
June 22 2019	255.14420	1.12915	1.10950	1.10537	1.10975	
June 23 2019	255.18907	1.12935	1.10970	1.10557	1.10995	
June 24 2019	255.23393	1.12955	1.10989	1.10576	1.11014	
June 25 2019	255.27880	1.12975	1.11009	1.10596	1.11034	
June 26 2019	255.32367	1.12995	1.11028	1.10615	1.11053	
June 27 2019	255.36853	1.13015	1.11048	1.10634	1.11073	
June 28 2019	255.41340	1.13034	1.11067	1.10654	1.11092	
June 29 2019	255.45827	1.13054	1.11087	1.10673	1.11112	
June 30 2019	255.50313	1.13074	1.11106	1.10693	1.11131	
CPI-U (NSA) for:	February 2019	252.776	March 2019	254.202	April 2019	255.548

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Ref CPI and Index Ratios for
June 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	
June 1 2019	254.20200	1.09232	1.08945	1.09072	1.07057	
June 2 2019	254.24687	1.09251	1.08964	1.09091	1.07076	
June 3 2019	254.29173	1.09270	1.08983	1.09110	1.07095	
June 4 2019	254.33660	1.09290	1.09003	1.09130	1.07113	
June 5 2019	254.38147	1.09309	1.09022	1.09149	1.07132	
June 6 2019	254.42633	1.09328	1.09041	1.09168	1.07151	
June 7 2019	254.47120	1.09347	1.09060	1.09187	1.07170	
June 8 2019	254.51607	1.09367	1.09080	1.09207	1.07189	
June 9 2019	254.56093	1.09386	1.09099	1.09226	1.07208	
June 10 2019	254.60580	1.09405	1.09118	1.09245	1.07227	
June 11 2019	254.65067	1.09425	1.09137	1.09264	1.07246	
June 12 2019	254.69553	1.09444	1.09157	1.09284	1.07265	
June 13 2019	254.74040	1.09463	1.09176	1.09303	1.07284	
June 14 2019	254.78527	1.09482	1.09195	1.09322	1.07302	
June 15 2019	254.83013	1.09502	1.09214	1.09341	1.07321	
June 16 2019	254.87500	1.09521	1.09233	1.09361	1.07340	
June 17 2019	254.91987	1.09540	1.09253	1.09380	1.07359	
June 18 2019	254.96473	1.09560	1.09272	1.09399	1.07378	
June 19 2019	255.00960	1.09579	1.09291	1.09418	1.07397	
June 20 2019	255.05447	1.09598	1.09310	1.09438	1.07416	
June 21 2019	255.09933	1.09617	1.09330	1.09457	1.07435	
June 22 2019	255.14420	1.09637	1.09349	1.09476	1.07454	
June 23 2019	255.18907	1.09656	1.09368	1.09495	1.07472	
June 24 2019	255.23393	1.09675	1.09387	1.09515	1.07491	
June 25 2019	255.27880	1.09694	1.09406	1.09534	1.07510	
June 26 2019	255.32367	1.09714	1.09426	1.09553	1.07529	
June 27 2019	255.36853	1.09733	1.09445	1.09572	1.07548	
June 28 2019	255.41340	1.09752	1.09464	1.09592	1.07567	
June 29 2019	255.45827	1.09772	1.09483	1.09611	1.07586	
June 30 2019	255.50313	1.09791	1.09503	1.09630	1.07605	
CPI-U (NSA) for:	February 2019	252.776	March 2019	254.202	April 2019	255.548

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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	
June 1 2019	254.20200	1.07324	1.07950	1.08550	1.07193	
June 2 2019	254.24687	1.07343	1.07969	1.08569	1.07212	
June 3 2019	254.29173	1.07362	1.07988	1.08588	1.07231	
June 4 2019	254.33660	1.07381	1.08007	1.08607	1.07250	
June 5 2019	254.38147	1.07400	1.08026	1.08626	1.07269	
June 6 2019	254.42633	1.07419	1.08045	1.08645	1.07288	
June 7 2019	254.47120	1.07438	1.08064	1.08664	1.07307	
June 8 2019	254.51607	1.07457	1.08083	1.08684	1.07326	
June 9 2019	254.56093	1.07476	1.08102	1.08703	1.07345	
June 10 2019	254.60580	1.07495	1.08121	1.08722	1.07364	
June 11 2019	254.65067	1.07514	1.08140	1.08741	1.07382	
June 12 2019	254.69553	1.07533	1.08159	1.08760	1.07401	
June 13 2019	254.74040	1.07552	1.08179	1.08779	1.07420	
June 14 2019	254.78527	1.07571	1.08198	1.08799	1.07439	
June 15 2019	254.83013	1.07590	1.08217	1.08818	1.07458	
June 16 2019	254.87500	1.07608	1.08236	1.08837	1.07477	
June 17 2019	254.91987	1.07627	1.08255	1.08856	1.07496	
June 18 2019	254.96473	1.07646	1.08274	1.08875	1.07515	
June 19 2019	255.00960	1.07665	1.08293	1.08894	1.07534	
June 20 2019	255.05447	1.07684	1.08312	1.08914	1.07553	
June 21 2019	255.09933	1.07703	1.08331	1.08933	1.07572	
June 22 2019	255.14420	1.07722	1.08350	1.08952	1.07591	
June 23 2019	255.18907	1.07741	1.08369	1.08971	1.07609	
June 24 2019	255.23393	1.07760	1.08388	1.08990	1.07628	
June 25 2019	255.27880	1.07779	1.08407	1.09009	1.07647	
June 26 2019	255.32367	1.07798	1.08426	1.09028	1.07666	
June 27 2019	255.36853	1.07817	1.08445	1.09048	1.07685	
June 28 2019	255.41340	1.07836	1.08464	1.09067	1.07704	
June 29 2019	255.45827	1.07855	1.08483	1.09086	1.07723	
June 30 2019	255.50313	1.07874	1.08502	1.09105	1.07742	
CPI-U (NSA) for:			February 2019 252.776	March 2019 254.202	April 2019 255.548	

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
June 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	
June 1 2019	254.20200	1.06982	1.07283	1.07255	1.06049	
June 2 2019	254.24687	1.07001	1.07302	1.07274	1.06068	
June 3 2019	254.29173	1.07020	1.07321	1.07293	1.06087	
June 4 2019	254.33660	1.07039	1.07340	1.07312	1.06106	
June 5 2019	254.38147	1.07058	1.07359	1.07331	1.06124	
June 6 2019	254.42633	1.07077	1.07378	1.07350	1.06143	
June 7 2019	254.47120	1.07096	1.07397	1.07369	1.06162	
June 8 2019	254.51607	1.07114	1.07416	1.07388	1.06181	
June 9 2019	254.56093	1.07133	1.07435	1.07407	1.06199	
June 10 2019	254.60580	1.07152	1.07454	1.07425	1.06218	
June 11 2019	254.65067	1.07171	1.07473	1.07444	1.06237	
June 12 2019	254.69553	1.07190	1.07492	1.07463	1.06255	
June 13 2019	254.74040	1.07209	1.07511	1.07482	1.06274	
June 14 2019	254.78527	1.07228	1.07530	1.07501	1.06293	
June 15 2019	254.83013	1.07247	1.07548	1.07520	1.06312	
June 16 2019	254.87500	1.07266	1.07567	1.07539	1.06330	
June 17 2019	254.91987	1.07284	1.07586	1.07558	1.06349	
June 18 2019	254.96473	1.07303	1.07605	1.07577	1.06368	
June 19 2019	255.00960	1.07322	1.07624	1.07596	1.06386	
June 20 2019	255.05447	1.07341	1.07643	1.07615	1.06405	
June 21 2019	255.09933	1.07360	1.07662	1.07634	1.06424	
June 22 2019	255.14420	1.07379	1.07681	1.07653	1.06443	
June 23 2019	255.18907	1.07398	1.07700	1.07672	1.06461	
June 24 2019	255.23393	1.07417	1.07719	1.07690	1.06480	
June 25 2019	255.27880	1.07435	1.07738	1.07709	1.06499	
June 26 2019	255.32367	1.07454	1.07757	1.07728	1.06517	
June 27 2019	255.36853	1.07473	1.07776	1.07747	1.06536	
June 28 2019	255.41340	1.07492	1.07795	1.07766	1.06555	
June 29 2019	255.45827	1.07511	1.07814	1.07785	1.06574	
June 30 2019	255.50313	1.07530	1.07832	1.07804	1.06592	
CPI-U (NSA) for:	February 2019	252.776	March 2019	254.202	April 2019	255.548

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

Date			Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
June	1	2019	254.20200	1.05234	1.05307	1.04526	1.03918	
June	2	2019	254.24687	1.05252	1.05325	1.04544	1.03936	
June	3	2019	254.29173	1.05271	1.05344	1.04563	1.03954	
June	4	2019	254.33660	1.05290	1.05362	1.04581	1.03973	
June	5	2019	254.38147	1.05308	1.05381	1.04600	1.03991	
June	6	2019	254.42633	1.05327	1.05399	1.04618	1.04009	
June	7	2019	254.47120	1.05345	1.05418	1.04636	1.04028	
June	8	2019	254.51607	1.05364	1.05437	1.04655	1.04046	
June	9	2019	254.56093	1.05382	1.05455	1.04673	1.04065	
June	10	2019	254.60580	1.05401	1.05474	1.04692	1.04083	
June	11	2019	254.65067	1.05420	1.05492	1.04710	1.04101	
June	12	2019	254.69553	1.05438	1.05511	1.04729	1.04120	
June	13	2019	254.74040	1.05457	1.05530	1.04747	1.04138	
June	14	2019	254.78527	1.05475	1.05548	1.04766	1.04156	
June	15	2019	254.83013	1.05494	1.05567	1.04784	1.04175	
June	16	2019	254.87500	1.05512	1.05585	1.04803	1.04193	
June	17	2019	254.91987	1.05531	1.05604	1.04821	1.04211	
June	18	2019	254.96473	1.05550	1.05622	1.04839	1.04230	
June	19	2019	255.00960	1.05568	1.05641	1.04858	1.04248	
June	20	2019	255.05447	1.05587	1.05660	1.04876	1.04266	
June	21	2019	255.09933	1.05605	1.05678	1.04895	1.04285	
June	22	2019	255.14420	1.05624	1.05697	1.04913	1.04303	
June	23	2019	255.18907	1.05642	1.05715	1.04932	1.04321	
June	24	2019	255.23393	1.05661	1.05734	1.04950	1.04340	
June	25	2019	255.27880	1.05680	1.05753	1.04969	1.04358	
June	26	2019	255.32367	1.05698	1.05771	1.04987	1.04376	
June	27	2019	255.36853	1.05717	1.05790	1.05005	1.04395	
June	28	2019	255.41340	1.05735	1.05808	1.05024	1.04413	
June	29	2019	255.45827	1.05754	1.05827	1.05042	1.04431	
June	30	2019	255.50313	1.05772	1.05846	1.05061	1.04450	
CPI-U (NSA) for:			February 2019	252.776	March 2019	254.202	April 2019	255.548

Security:	0-3/8% 10-Year TIPS	0-7/8% 30-Year TIPS	0-1/8% 5-Year TIPS	0-3/8% 10-Year TIPS
Description:	Series A-2027	TIPS of February 2047	Series X-2022	Series D-2027
CUSIP Number:	912828V49	912810RW0	912828X39	912828L3
Dated Date:	January 15, 2017	February 15, 2017	April 15, 2017	July 15, 2017
Original Issue Date:	January 31, 2017	February 28, 2017	April 28, 2017	July 31, 2017
Additional Issue Date(s):	March 31, 2017 May 31, 2017	June 30, 2017 October 31, 2017	August 31, 2017 December 29, 2017	September 29, 2017 November 30, 2017
Maturity Date:	January 15, 2027	February 15, 2047	April 15, 2022	July 15, 2027
Ref CPI on Dated Date:	241.55919	241.39250	243.19553	244.61839

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
June 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	
June 1 2019	254.20200	1.03055	1.03084	1.02339	1.01269	
June 2 2019	254.24687	1.03073	1.03102	1.02357	1.01287	
June 3 2019	254.29173	1.03092	1.03121	1.02375	1.01305	
June 4 2019	254.33660	1.03110	1.03139	1.02393	1.01323	
June 5 2019	254.38147	1.03128	1.03157	1.02411	1.01341	
June 6 2019	254.42633	1.03146	1.03175	1.02430	1.01358	
June 7 2019	254.47120	1.03164	1.03193	1.02448	1.01376	
June 8 2019	254.51607	1.03183	1.03212	1.02466	1.01394	
June 9 2019	254.56093	1.03201	1.03230	1.02484	1.01412	
June 10 2019	254.60580	1.03219	1.03248	1.02502	1.01430	
June 11 2019	254.65067	1.03237	1.03266	1.02520	1.01448	
June 12 2019	254.69553	1.03255	1.03284	1.02538	1.01466	
June 13 2019	254.74040	1.03274	1.03303	1.02556	1.01483	
June 14 2019	254.78527	1.03292	1.03321	1.02574	1.01501	
June 15 2019	254.83013	1.03310	1.03339	1.02592	1.01519	
June 16 2019	254.87500	1.03328	1.03357	1.02610	1.01537	
June 17 2019	254.91987	1.03346	1.03375	1.02628	1.01555	
June 18 2019	254.96473	1.03364	1.03393	1.02646	1.01573	
June 19 2019	255.00960	1.03383	1.03412	1.02664	1.01591	
June 20 2019	255.05447	1.03401	1.03430	1.02682	1.01609	
June 21 2019	255.09933	1.03419	1.03448	1.02700	1.01626	
June 22 2019	255.14420	1.03437	1.03466	1.02719	1.01644	
June 23 2019	255.18907	1.03455	1.03484	1.02737	1.01662	
June 24 2019	255.23393	1.03474	1.03503	1.02755	1.01680	
June 25 2019	255.27880	1.03492	1.03521	1.02773	1.01698	
June 26 2019	255.32367	1.03510	1.03539	1.02791	1.01716	
June 27 2019	255.36853	1.03528	1.03557	1.02809	1.01734	
June 28 2019	255.41340	1.03546	1.03575	1.02827	1.01752	
June 29 2019	255.45827	1.03565	1.03594	1.02845	1.01769	
June 30 2019	255.50313	1.03583	1.03612	1.02863	1.01787	
CPI-U (NSA) for:	February 2019	252.776	March 2019	254.202	April 2019	255.548

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)

Ref CPI and Index Ratios for

June 2019

			0-7/8% 10-Year TIPS Series A-2029 9128285W6 January 15, 2019 January 31, 2019 March 29, 2019	1% 30-Year TIPS TIPS of February 2049 912810SG4 February 15, 2019 February 28, 2019	0-1/2% 5-Year TIPS Series X-2024 9128286N5 April 15, 2019 April 30, 2019	
			January 15, 2029 252.50248	February 15, 2049 251.63550	April 15, 2024 252.20853	
Date			Ref CPI	Index Ratio	Index Ratio	Index Ratio
June	1	2019	254.20200	1.00673	1.01020	1.00790
June	2	2019	254.24687	1.00691	1.01038	1.00808
June	3	2019	254.29173	1.00709	1.01056	1.00826
June	4	2019	254.33660	1.00726	1.01073	1.00844
June	5	2019	254.38147	1.00744	1.01091	1.00862
June	6	2019	254.42633	1.00762	1.01109	1.00879
June	7	2019	254.47120	1.00780	1.01127	1.00897
June	8	2019	254.51607	1.00797	1.01145	1.00915
June	9	2019	254.56093	1.00815	1.01163	1.00933
June	10	2019	254.60580	1.00833	1.01180	1.00951
June	11	2019	254.65067	1.00851	1.01198	1.00968
June	12	2019	254.69553	1.00869	1.01216	1.00986
June	13	2019	254.74040	1.00886	1.01234	1.01004
June	14	2019	254.78527	1.00904	1.01252	1.01022
June	15	2019	254.83013	1.00922	1.01270	1.01039
June	16	2019	254.87500	1.00940	1.01287	1.01057
June	17	2019	254.91987	1.00957	1.01305	1.01075
June	18	2019	254.96473	1.00975	1.01323	1.01093
June	19	2019	255.00960	1.00993	1.01341	1.01111
June	20	2019	255.05447	1.01011	1.01359	1.01128
June	21	2019	255.09933	1.01028	1.01377	1.01146
June	22	2019	255.14420	1.01046	1.01394	1.01164
June	23	2019	255.18907	1.01064	1.01412	1.01182
June	24	2019	255.23393	1.01082	1.01430	1.01200
June	25	2019	255.27880	1.01100	1.01448	1.01217
June	26	2019	255.32367	1.01117	1.01466	1.01235
June	27	2019	255.36853	1.01135	1.01484	1.01253
June	28	2019	255.41340	1.01153	1.01501	1.01271
June	29	2019	255.45827	1.01171	1.01519	1.01289
June	30	2019	255.50313	1.01188	1.01537	1.01306
CPI-U (NSA) for:			February 2019 252.776	March 2019 254.202	April 2019 255.548	