

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

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	
July 1 2020	256.38900	1.58519	1.55961	1.44445	1.36018	
July 2 2020	256.38916	1.58519	1.55961	1.44445	1.36018	
July 3 2020	256.38932	1.58519	1.55961	1.44445	1.36018	
July 4 2020	256.38948	1.58520	1.55961	1.44445	1.36018	
July 5 2020	256.38965	1.58520	1.55961	1.44445	1.36018	
July 6 2020	256.38981	1.58520	1.55961	1.44445	1.36018	
July 7 2020	256.38997	1.58520	1.55961	1.44445	1.36018	
July 8 2020	256.39013	1.58520	1.55961	1.44445	1.36018	
July 9 2020	256.39029	1.58520	1.55961	1.44445	1.36018	
July 10 2020	256.39045	1.58520	1.55962	1.44445	1.36018	
July 11 2020	256.39061	1.58520	1.55962	1.44445	1.36019	
July 12 2020	256.39077	1.58520	1.55962	1.44446	1.36019	
July 13 2020	256.39094	1.58520	1.55962	1.44446	1.36019	
July 14 2020	256.39110	1.58521	1.55962	1.44446	1.36019	
July 15 2020	256.39126	1.58521	1.55962	1.44446	1.36019	
July 16 2020	256.39142	1.58521	1.55962	1.44446	1.36019	
July 17 2020	256.39158	1.58521	1.55962	1.44446	1.36019	
July 18 2020	256.39174	1.58521	1.55962	1.44446	1.36019	
July 19 2020	256.39190	1.58521	1.55962	1.44446	1.36019	
July 20 2020	256.39206	1.58521	1.55963	1.44446	1.36019	
July 21 2020	256.39223	1.58521	1.55963	1.44446	1.36019	
July 22 2020	256.39239	1.58521	1.55963	1.44446	1.36020	
July 23 2020	256.39255	1.58521	1.55963	1.44447	1.36020	
July 24 2020	256.39271	1.58522	1.55963	1.44447	1.36020	
July 25 2020	256.39287	1.58522	1.55963	1.44447	1.36020	
July 26 2020	256.39303	1.58522	1.55963	1.44447	1.36020	
July 27 2020	256.39319	1.58522	1.55963	1.44447	1.36020	
July 28 2020	256.39335	1.58522	1.55963	1.44447	1.36020	
July 29 2020	256.39352	1.58522	1.55963	1.44447	1.36020	
July 30 2020	256.39368	1.58522	1.55964	1.44447	1.36020	
July 31 2020	256.39384	1.58522	1.55964	1.44447	1.36020	
CPI-U (NSA) for:			March 2020 258.115	April 2020 256.389	May 2020 256.394	

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

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	
July 1 2020	256.38900	1.29178	1.27136	1.22383	1.19417	
July 2 2020	256.38916	1.29178	1.27136	1.22384	1.19418	
July 3 2020	256.38932	1.29178	1.27137	1.22384	1.19418	
July 4 2020	256.38948	1.29178	1.27137	1.22384	1.19418	
July 5 2020	256.38965	1.29178	1.27137	1.22384	1.19418	
July 6 2020	256.38981	1.29178	1.27137	1.22384	1.19418	
July 7 2020	256.38997	1.29178	1.27137	1.22384	1.19418	
July 8 2020	256.39013	1.29178	1.27137	1.22384	1.19418	
July 9 2020	256.39029	1.29179	1.27137	1.22384	1.19418	
July 10 2020	256.39045	1.29179	1.27137	1.22384	1.19418	
July 11 2020	256.39061	1.29179	1.27137	1.22384	1.19418	
July 12 2020	256.39077	1.29179	1.27137	1.22384	1.19418	
July 13 2020	256.39094	1.29179	1.27137	1.22384	1.19418	
July 14 2020	256.39110	1.29179	1.27137	1.22384	1.19418	
July 15 2020	256.39126	1.29179	1.27138	1.22385	1.19419	
July 16 2020	256.39142	1.29179	1.27138	1.22385	1.19419	
July 17 2020	256.39158	1.29179	1.27138	1.22385	1.19419	
July 18 2020	256.39174	1.29179	1.27138	1.22385	1.19419	
July 19 2020	256.39190	1.29179	1.27138	1.22385	1.19419	
July 20 2020	256.39206	1.29179	1.27138	1.22385	1.19419	
July 21 2020	256.39223	1.29180	1.27138	1.22385	1.19419	
July 22 2020	256.39239	1.29180	1.27138	1.22385	1.19419	
July 23 2020	256.39255	1.29180	1.27138	1.22385	1.19419	
July 24 2020	256.39271	1.29180	1.27138	1.22385	1.19419	
July 25 2020	256.39287	1.29180	1.27138	1.22385	1.19419	
July 26 2020	256.39303	1.29180	1.27138	1.22385	1.19419	
July 27 2020	256.39319	1.29180	1.27138	1.22385	1.19419	
July 28 2020	256.39335	1.29180	1.27139	1.22386	1.19420	
July 29 2020	256.39352	1.29180	1.27139	1.22386	1.19420	
July 30 2020	256.39368	1.29180	1.27139	1.22386	1.19420	
July 31 2020	256.39384	1.29180	1.27139	1.22386	1.19420	
CPI-U (NSA) for:	March 2020	258.115	April 2020	256.389	May 2020	256.394

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

Date			Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July	1	2020	256.38900	1.18622	1.17564	1.17205	1.17077	
July	2	2020	256.38916	1.18622	1.17564	1.17205	1.17077	
July	3	2020	256.38932	1.18622	1.17564	1.17205	1.17078	
July	4	2020	256.38948	1.18622	1.17564	1.17205	1.17078	
July	5	2020	256.38965	1.18622	1.17564	1.17205	1.17078	
July	6	2020	256.38981	1.18622	1.17564	1.17205	1.17078	
July	7	2020	256.38997	1.18622	1.17564	1.17205	1.17078	
July	8	2020	256.39013	1.18623	1.17564	1.17206	1.17078	
July	9	2020	256.39029	1.18623	1.17564	1.17206	1.17078	
July	10	2020	256.39045	1.18623	1.17564	1.17206	1.17078	
July	11	2020	256.39061	1.18623	1.17564	1.17206	1.17078	
July	12	2020	256.39077	1.18623	1.17564	1.17206	1.17078	
July	13	2020	256.39094	1.18623	1.17565	1.17206	1.17078	
July	14	2020	256.39110	1.18623	1.17565	1.17206	1.17078	
July	15	2020	256.39126	1.18623	1.17565	1.17206	1.17078	
July	16	2020	256.39142	1.18623		1.17206	1.17079	
July	17	2020	256.39158	1.18623		1.17206	1.17079	
July	18	2020	256.39174	1.18623		1.17206	1.17079	
July	19	2020	256.39190	1.18623		1.17206	1.17079	
July	20	2020	256.39206	1.18623		1.17206	1.17079	
July	21	2020	256.39223	1.18623		1.17207	1.17079	
July	22	2020	256.39239	1.18624		1.17207	1.17079	
July	23	2020	256.39255	1.18624		1.17207	1.17079	
July	24	2020	256.39271	1.18624		1.17207	1.17079	
July	25	2020	256.39287	1.18624		1.17207	1.17079	
July	26	2020	256.39303	1.18624		1.17207	1.17079	
July	27	2020	256.39319	1.18624		1.17207	1.17079	
July	28	2020	256.39335	1.18624		1.17207	1.17079	
July	29	2020	256.39352	1.18624		1.17207	1.17079	
July	30	2020	256.39368	1.18624		1.17207	1.17080	
July	31	2020	256.39384	1.18624		1.17207	1.17080	
CPI-U (NSA) for:			March 2020	258.115	April 2020	256.389	May 2020	256.394

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-5/8% 10-Year TIPS Series D-2021 912828QV5 July 15, 2011 July 29, 2011 September 30, 2011 November 30, 2011	0-1/8% 10-Year TIPS Series A-2022 912828SA9 January 15, 2012 January 31, 2012 March 30, 2012 May 31, 2012	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
Maturity Date: Ref CPI on Dated Date:			July 15, 2021 225.38381	January 15, 2022 226.33474	February 15, 2042 225.96062	July 15, 2022 229.96306
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2020	256.38900	1.13757	1.13279	1.13466	1.11491	
July 2 2020	256.38916	1.13757	1.13279	1.13466	1.11491	
July 3 2020	256.38932	1.13757	1.13279	1.13466	1.11492	
July 4 2020	256.38948	1.13757	1.13279	1.13466	1.11492	
July 5 2020	256.38965	1.13757	1.13279	1.13467	1.11492	
July 6 2020	256.38981	1.13757	1.13279	1.13467	1.11492	
July 7 2020	256.38997	1.13757	1.13279	1.13467	1.11492	
July 8 2020	256.39013	1.13757	1.13279	1.13467	1.11492	
July 9 2020	256.39029	1.13757	1.13279	1.13467	1.11492	
July 10 2020	256.39045	1.13757	1.13279	1.13467	1.11492	
July 11 2020	256.39061	1.13757	1.13279	1.13467	1.11492	
July 12 2020	256.39077	1.13757	1.13279	1.13467	1.11492	
July 13 2020	256.39094	1.13757	1.13280	1.13467	1.11492	
July 14 2020	256.39110	1.13758	1.13280	1.13467	1.11492	
July 15 2020	256.39126	1.13758	1.13280	1.13467	1.11492	
July 16 2020	256.39142	1.13758	1.13280	1.13467	1.11492	
July 17 2020	256.39158	1.13758	1.13280	1.13467	1.11493	
July 18 2020	256.39174	1.13758	1.13280	1.13467	1.11493	
July 19 2020	256.39190	1.13758	1.13280	1.13468	1.11493	
July 20 2020	256.39206	1.13758	1.13280	1.13468	1.11493	
July 21 2020	256.39223	1.13758	1.13280	1.13468	1.11493	
July 22 2020	256.39239	1.13758	1.13280	1.13468	1.11493	
July 23 2020	256.39255	1.13758	1.13280	1.13468	1.11493	
July 24 2020	256.39271	1.13758	1.13280	1.13468	1.11493	
July 25 2020	256.39287	1.13758	1.13280	1.13468	1.11493	
July 26 2020	256.39303	1.13758	1.13280	1.13468	1.11493	
July 27 2020	256.39319	1.13758	1.13281	1.13468	1.11493	
July 28 2020	256.39335	1.13759	1.13281	1.13468	1.11493	
July 29 2020	256.39352	1.13759	1.13281	1.13468	1.11493	
July 30 2020	256.39368	1.13759	1.13281	1.13468	1.11493	
July 31 2020	256.39384	1.13759	1.13281	1.13468	1.11493	
CPI-U (NSA) for:	March 2020	258.115	April 2020	256.389	May 2020	256.394

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	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
Maturity Date: Ref CPI on Dated Date:			January 15, 2023 230.82203	February 15, 2043 229.91100	July 15, 2023 232.71797	January 15, 2024 233.33058
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2020	256.38900	1.11076	1.11517	1.10172	1.09882	
July 2 2020	256.38916	1.11077	1.11517	1.10172	1.09882	
July 3 2020	256.38932	1.11077	1.11517	1.10172	1.09882	
July 4 2020	256.38948	1.11077	1.11517	1.10172	1.09883	
July 5 2020	256.38965	1.11077	1.11517	1.10172	1.09883	
July 6 2020	256.38981	1.11077	1.11517	1.10172	1.09883	
July 7 2020	256.38997	1.11077	1.11517	1.10172	1.09883	
July 8 2020	256.39013	1.11077	1.11517	1.10172	1.09883	
July 9 2020	256.39029	1.11077	1.11517	1.10172	1.09883	
July 10 2020	256.39045	1.11077	1.11517	1.10172	1.09883	
July 11 2020	256.39061	1.11077	1.11517	1.10172	1.09883	
July 12 2020	256.39077	1.11077	1.11517	1.10172	1.09883	
July 13 2020	256.39094	1.11077	1.11517	1.10172	1.09883	
July 14 2020	256.39110	1.11077	1.11518	1.10172	1.09883	
July 15 2020	256.39126	1.11077	1.11518	1.10173	1.09883	
July 16 2020	256.39142	1.11078	1.11518	1.10173	1.09883	
July 17 2020	256.39158	1.11078	1.11518	1.10173	1.09883	
July 18 2020	256.39174	1.11078	1.11518	1.10173	1.09883	
July 19 2020	256.39190	1.11078	1.11518	1.10173	1.09884	
July 20 2020	256.39206	1.11078	1.11518	1.10173	1.09884	
July 21 2020	256.39223	1.11078	1.11518	1.10173	1.09884	
July 22 2020	256.39239	1.11078	1.11518	1.10173	1.09884	
July 23 2020	256.39255	1.11078	1.11518	1.10173	1.09884	
July 24 2020	256.39271	1.11078	1.11518	1.10173	1.09884	
July 25 2020	256.39287	1.11078	1.11518	1.10173	1.09884	
July 26 2020	256.39303	1.11078	1.11518	1.10173	1.09884	
July 27 2020	256.39319	1.11078	1.11518	1.10173	1.09884	
July 28 2020	256.39335	1.11078	1.11519	1.10173	1.09884	
July 29 2020	256.39352	1.11078	1.11519	1.10173	1.09884	
July 30 2020	256.39368	1.11079	1.11519	1.10174	1.09884	
July 31 2020	256.39384	1.11079	1.11519	1.10174	1.09884	
CPI-U (NSA) for:	March 2020	258.115	April 2020	256.389	May 2020	256.394

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	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:			February 15, 2044 233.05900	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	
July 1 2020	256.38900	1.10010	1.07978	1.08248	1.08879	
July 2 2020	256.38916	1.10010	1.07978	1.08248	1.08879	
July 3 2020	256.38932	1.10010	1.07978	1.08248	1.08879	
July 4 2020	256.38948	1.10011	1.07978	1.08248	1.08879	
July 5 2020	256.38965	1.10011	1.07978	1.08248	1.08879	
July 6 2020	256.38981	1.10011	1.07978	1.08248	1.08879	
July 7 2020	256.38997	1.10011	1.07978	1.08248	1.08879	
July 8 2020	256.39013	1.10011	1.07978	1.08248	1.08879	
July 9 2020	256.39029	1.10011	1.07978	1.08248	1.08879	
July 10 2020	256.39045	1.10011	1.07978	1.08248	1.08879	
July 11 2020	256.39061	1.10011	1.07979	1.08248	1.08879	
July 12 2020	256.39077	1.10011	1.07979	1.08248	1.08879	
July 13 2020	256.39094	1.10011	1.07979	1.08249	1.08879	
July 14 2020	256.39110	1.10011	1.07979	1.08249	1.08880	
July 15 2020	256.39126	1.10011	1.07979	1.08249	1.08880	
July 16 2020	256.39142	1.10011	1.07979	1.08249	1.08880	
July 17 2020	256.39158	1.10011	1.07979	1.08249	1.08880	
July 18 2020	256.39174	1.10012	1.07979	1.08249	1.08880	
July 19 2020	256.39190	1.10012	1.07979	1.08249	1.08880	
July 20 2020	256.39206	1.10012	1.07979	1.08249	1.08880	
July 21 2020	256.39223	1.10012	1.07979	1.08249	1.08880	
July 22 2020	256.39239	1.10012	1.07979	1.08249	1.08880	
July 23 2020	256.39255	1.10012	1.07979	1.08249	1.08880	
July 24 2020	256.39271	1.10012	1.07979	1.08249	1.08880	
July 25 2020	256.39287	1.10012	1.07979	1.08249	1.08880	
July 26 2020	256.39303	1.10012	1.07980	1.08249	1.08880	
July 27 2020	256.39319	1.10012	1.07980	1.08249	1.08880	
July 28 2020	256.39335	1.10012	1.07980	1.08250	1.08880	
July 29 2020	256.39352	1.10012	1.07980	1.08250	1.08881	
July 30 2020	256.39368	1.10012	1.07980	1.08250	1.08881	
July 31 2020	256.39384	1.10012	1.07980	1.08250	1.08881	
CPI-U (NSA) for:	March 2020	258.115	April 2020	256.389	May 2020	256.394

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	0-1/8% 5-Year TIPS Series X-2021 912828Q60 April 15, 2016 April 29, 2016 August 31, 2016 December 30, 2016
Maturity Date: Ref CPI on Dated Date:			July 15, 2025 237.14365	January 15, 2026 237.61129	February 15, 2046 236.94448	April 15, 2021 237.00700
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2020	256.38900	1.08115	1.07903	1.08206	1.08178	
July 2 2020	256.38916	1.08116	1.07903	1.08206	1.08178	
July 3 2020	256.38932	1.08116	1.07903	1.08206	1.08178	
July 4 2020	256.38948	1.08116	1.07903	1.08207	1.08178	
July 5 2020	256.38965	1.08116	1.07903	1.08207	1.08178	
July 6 2020	256.38981	1.08116	1.07903	1.08207	1.08178	
July 7 2020	256.38997	1.08116	1.07903	1.08207	1.08178	
July 8 2020	256.39013	1.08116	1.07903	1.08207	1.08178	
July 9 2020	256.39029	1.08116	1.07903	1.08207	1.08178	
July 10 2020	256.39045	1.08116	1.07903	1.08207	1.08178	
July 11 2020	256.39061	1.08116	1.07903	1.08207	1.08178	
July 12 2020	256.39077	1.08116	1.07903	1.08207	1.08179	
July 13 2020	256.39094	1.08116	1.07904	1.08207	1.08179	
July 14 2020	256.39110	1.08116	1.07904	1.08207	1.08179	
July 15 2020	256.39126	1.08116	1.07904	1.08207	1.08179	
July 16 2020	256.39142	1.08117	1.07904	1.08207	1.08179	
July 17 2020	256.39158	1.08117	1.07904	1.08207	1.08179	
July 18 2020	256.39174	1.08117	1.07904	1.08208	1.08179	
July 19 2020	256.39190	1.08117	1.07904	1.08208	1.08179	
July 20 2020	256.39206	1.08117	1.07904	1.08208	1.08179	
July 21 2020	256.39223	1.08117	1.07904	1.08208	1.08179	
July 22 2020	256.39239	1.08117	1.07904	1.08208	1.08179	
July 23 2020	256.39255	1.08117	1.07904	1.08208	1.08179	
July 24 2020	256.39271	1.08117	1.07904	1.08208	1.08179	
July 25 2020	256.39287	1.08117	1.07904	1.08208	1.08179	
July 26 2020	256.39303	1.08117	1.07904	1.08208	1.08180	
July 27 2020	256.39319	1.08117	1.07904	1.08208	1.08180	
July 28 2020	256.39335	1.08117	1.07905	1.08208	1.08180	
July 29 2020	256.39352	1.08117	1.07905	1.08208	1.08180	
July 30 2020	256.39368	1.08117	1.07905	1.08208	1.08180	
July 31 2020	256.39384	1.08118	1.07905	1.08208	1.08180	
CPI-U (NSA) for:	March 2020	258.115	April 2020	256.389	May 2020	256.394

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

Date			Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July	1	2020	256.38900	1.06962	1.06139	1.06212	1.05425	
July	2	2020	256.38916	1.06962	1.06139	1.06213	1.05425	
July	3	2020	256.38932	1.06962	1.06139	1.06213	1.05425	
July	4	2020	256.38948	1.06962	1.06139	1.06213	1.05425	
July	5	2020	256.38965	1.06962	1.06139	1.06213	1.05425	
July	6	2020	256.38981	1.06962	1.06140	1.06213	1.05425	
July	7	2020	256.38997	1.06962	1.06140	1.06213	1.05425	
July	8	2020	256.39013	1.06962	1.06140	1.06213	1.05426	
July	9	2020	256.39029	1.06962	1.06140	1.06213	1.05426	
July	10	2020	256.39045	1.06962	1.06140	1.06213	1.05426	
July	11	2020	256.39061	1.06963	1.06140	1.06213	1.05426	
July	12	2020	256.39077	1.06963	1.06140	1.06213	1.05426	
July	13	2020	256.39094	1.06963	1.06140	1.06213	1.05426	
July	14	2020	256.39110	1.06963	1.06140	1.06213	1.05426	
July	15	2020	256.39126	1.06963	1.06140	1.06213	1.05426	
July	16	2020	256.39142	1.06963	1.06140	1.06213	1.05426	
July	17	2020	256.39158	1.06963	1.06140	1.06214	1.05426	
July	18	2020	256.39174	1.06963	1.06140	1.06214	1.05426	
July	19	2020	256.39190	1.06963	1.06140	1.06214	1.05426	
July	20	2020	256.39206	1.06963	1.06140	1.06214	1.05426	
July	21	2020	256.39223	1.06963	1.06141	1.06214	1.05426	
July	22	2020	256.39239	1.06963	1.06141	1.06214	1.05426	
July	23	2020	256.39255	1.06963	1.06141	1.06214	1.05427	
July	24	2020	256.39271	1.06963	1.06141	1.06214	1.05427	
July	25	2020	256.39287	1.06963	1.06141	1.06214	1.05427	
July	26	2020	256.39303	1.06964	1.06141	1.06214	1.05427	
July	27	2020	256.39319	1.06964	1.06141	1.06214	1.05427	
July	28	2020	256.39335	1.06964	1.06141	1.06214	1.05427	
July	29	2020	256.39352	1.06964	1.06141	1.06214	1.05427	
July	30	2020	256.39368	1.06964	1.06141	1.06214	1.05427	
July	31	2020	256.39384	1.06964	1.06141	1.06215	1.05427	
CPI-U (NSA) for:			March 2020	258.115	April 2020	256.389	May 2020	256.394

Security:	0-1/8% 10-Year TIPS	0-3/8% 10-Year TIPS	0-7/8% 30-Year TIPS	0-1/8% 5-Year TIPS
Description:	Series D-2026	Series A-2027	TIPS of February 2047	Series X-2022
CUSIP Number:	912828S50	912828V49	912810RW0	912828X39
Dated Date:	July 15, 2016	January 15, 2017	February 15, 2017	April 15, 2017
Original Issue Date:	July 29, 2016	January 31, 2017	February 28, 2017	April 28, 2017
Additional Issue Date(s):	September 30, 2016 November 30, 2016	March 31, 2017 May 31, 2017	June 30, 2017 October 31, 2017	August 31, 2017 December 29, 2017
Maturity Date:	July 15, 2026	January 15, 2027	February 15, 2047	April 15, 2022
Ref CPI on Dated Date:	239.70132	241.55919	241.39250	243.19553

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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 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
Maturity Date: Ref CPI on Dated Date:			July 15, 2027 244.61839	January 15, 2028 246.66571	February 15, 2048 246.59650	April 15, 2023 248.39153
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2020	256.38900	1.04812	1.03942	1.03971	1.03220	
July 2 2020	256.38916	1.04812	1.03942	1.03971	1.03220	
July 3 2020	256.38932	1.04812	1.03942	1.03971	1.03220	
July 4 2020	256.38948	1.04812	1.03942	1.03971	1.03220	
July 5 2020	256.38965	1.04812	1.03942	1.03971	1.03220	
July 6 2020	256.38981	1.04812	1.03942	1.03971	1.03220	
July 7 2020	256.38997	1.04812	1.03942	1.03971	1.03220	
July 8 2020	256.39013	1.04812	1.03942	1.03972	1.03220	
July 9 2020	256.39029	1.04812	1.03942	1.03972	1.03220	
July 10 2020	256.39045	1.04812	1.03942	1.03972	1.03220	
July 11 2020	256.39061	1.04812	1.03943	1.03972	1.03220	
July 12 2020	256.39077	1.04813	1.03943	1.03972	1.03220	
July 13 2020	256.39094	1.04813	1.03943	1.03972	1.03220	
July 14 2020	256.39110	1.04813	1.03943	1.03972	1.03221	
July 15 2020	256.39126	1.04813	1.03943	1.03972	1.03221	
July 16 2020	256.39142	1.04813	1.03943	1.03972	1.03221	
July 17 2020	256.39158	1.04813	1.03943	1.03972	1.03221	
July 18 2020	256.39174	1.04813	1.03943	1.03972	1.03221	
July 19 2020	256.39190	1.04813	1.03943	1.03972	1.03221	
July 20 2020	256.39206	1.04813	1.03943	1.03972	1.03221	
July 21 2020	256.39223	1.04813	1.03943	1.03972	1.03221	
July 22 2020	256.39239	1.04813	1.03943	1.03972	1.03221	
July 23 2020	256.39255	1.04813	1.03943	1.03973	1.03221	
July 24 2020	256.39271	1.04813	1.03943	1.03973	1.03221	
July 25 2020	256.39287	1.04813	1.03943	1.03973	1.03221	
July 26 2020	256.39303	1.04813	1.03944	1.03973	1.03221	
July 27 2020	256.39319	1.04814	1.03944	1.03973	1.03221	
July 28 2020	256.39335	1.04814	1.03944	1.03973	1.03221	
July 29 2020	256.39352	1.04814	1.03944	1.03973	1.03222	
July 30 2020	256.39368	1.04814	1.03944	1.03973	1.03222	
July 31 2020	256.39384	1.04814	1.03944	1.03973	1.03222	
CPI-U (NSA) for:	March 2020	258.115	April 2020	256.389	May 2020	256.394

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-3/4% 10-Year TIPS Series D-2028 912828Y38 July 15, 2018 July 31, 2018 September 28, 2018 November 30, 2018	0-7/8% 10-Year TIPS Series A-2029 9128285W6 January 15, 2019 January 31, 2019 March 29, 2019 May 31, 2019	1% 30-Year TIPS TIPS of February 2049 912810SG4 February 15, 2019 February 28, 2019 August 30, 2019	0-1/2% 5-Year TIPS Series X-2024 9128286N5 April 15, 2019 April 30, 2019 June 28, 2019
Maturity Date: Ref CPI on Dated Date:			July 15, 2028 251.01658	January 15, 2029 252.50248	February 15, 2049 251.63550	April 15, 2024 252.20853
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2020	256.38900	1.02140	1.01539	1.01889	1.01658	
July 2 2020	256.38916	1.02140	1.01539	1.01889	1.01658	
July 3 2020	256.38932	1.02140	1.01539	1.01889	1.01658	
July 4 2020	256.38948	1.02140	1.01539	1.01889	1.01658	
July 5 2020	256.38965	1.02141	1.01539	1.01889	1.01658	
July 6 2020	256.38981	1.02141	1.01540	1.01889	1.01658	
July 7 2020	256.38997	1.02141	1.01540	1.01889	1.01658	
July 8 2020	256.39013	1.02141	1.01540	1.01889	1.01658	
July 9 2020	256.39029	1.02141	1.01540	1.01890	1.01658	
July 10 2020	256.39045	1.02141	1.01540	1.01890	1.01658	
July 11 2020	256.39061	1.02141	1.01540	1.01890	1.01658	
July 12 2020	256.39077	1.02141	1.01540	1.01890	1.01658	
July 13 2020	256.39094	1.02141	1.01540	1.01890	1.01658	
July 14 2020	256.39110	1.02141	1.01540	1.01890	1.01658	
July 15 2020	256.39126	1.02141	1.01540	1.01890	1.01658	
July 16 2020	256.39142	1.02141	1.01540	1.01890	1.01659	
July 17 2020	256.39158	1.02141	1.01540	1.01890	1.01659	
July 18 2020	256.39174	1.02141	1.01540	1.01890	1.01659	
July 19 2020	256.39190	1.02141	1.01540	1.01890	1.01659	
July 20 2020	256.39206	1.02141	1.01540	1.01890	1.01659	
July 21 2020	256.39223	1.02142	1.01540	1.01890	1.01659	
July 22 2020	256.39239	1.02142	1.01541	1.01890	1.01659	
July 23 2020	256.39255	1.02142	1.01541	1.01890	1.01659	
July 24 2020	256.39271	1.02142	1.01541	1.01891	1.01659	
July 25 2020	256.39287	1.02142	1.01541	1.01891	1.01659	
July 26 2020	256.39303	1.02142	1.01541	1.01891	1.01659	
July 27 2020	256.39319	1.02142	1.01541	1.01891	1.01659	
July 28 2020	256.39335	1.02142	1.01541	1.01891	1.01659	
July 29 2020	256.39352	1.02142	1.01541	1.01891	1.01659	
July 30 2020	256.39368	1.02142	1.01541	1.01891	1.01659	
July 31 2020	256.39384	1.02142	1.01541	1.01891	1.01659	
CPI-U (NSA) for:	March 2020	258.115	April 2020	256.389	May 2020	256.394

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-1/4% 10-Year TIPS Series D-2029 9128287D6 July 15, 2019 July 31, 2019 September 30, 2019 November 29, 2019	0-1/8% 5-Year TIPS Series AE-2024 912828YL8 October 15, 2019 October 31, 2019 December 31, 2019	0-1/8% 10-Year TIPS Series A-2030 912828Z37 January 15, 2020 January 31, 2020 March 31, 2020 May 29, 2020	0-1/4% 30-Year TIPS TIPS of February 2050 912810SM1 February 15, 2020 February 28, 2020
Maturity Date: Ref CPI on Dated Date:			July 15, 2029 255.79368	October 15, 2024 256.56513	January 15, 2030 257.28368	February 15, 2050 257.09503
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2020	256.38900	1.00233	0.99931	0.99652	0.99725	
July 2 2020	256.38916	1.00233	0.99931	0.99652	0.99725	
July 3 2020	256.38932	1.00233	0.99931	0.99652	0.99726	
July 4 2020	256.38948	1.00233	0.99932	0.99652	0.99726	
July 5 2020	256.38965	1.00233	0.99932	0.99653	0.99726	
July 6 2020	256.38981	1.00233	0.99932	0.99653	0.99726	
July 7 2020	256.38997	1.00233	0.99932	0.99653	0.99726	
July 8 2020	256.39013	1.00233	0.99932	0.99653	0.99726	
July 9 2020	256.39029	1.00233	0.99932	0.99653	0.99726	
July 10 2020	256.39045	1.00233	0.99932	0.99653	0.99726	
July 11 2020	256.39061	1.00233	0.99932	0.99653	0.99726	
July 12 2020	256.39077	1.00233	0.99932	0.99653	0.99726	
July 13 2020	256.39094	1.00233	0.99932	0.99653	0.99726	
July 14 2020	256.39110	1.00234	0.99932	0.99653	0.99726	
July 15 2020	256.39126	1.00234	0.99932	0.99653	0.99726	
July 16 2020	256.39142	1.00234	0.99932	0.99653	0.99726	
July 17 2020	256.39158	1.00234	0.99932	0.99653	0.99726	
July 18 2020	256.39174	1.00234	0.99932	0.99653	0.99726	
July 19 2020	256.39190	1.00234	0.99932	0.99653	0.99727	
July 20 2020	256.39206	1.00234	0.99933	0.99653	0.99727	
July 21 2020	256.39223	1.00234	0.99933	0.99654	0.99727	
July 22 2020	256.39239	1.00234	0.99933	0.99654	0.99727	
July 23 2020	256.39255	1.00234	0.99933	0.99654	0.99727	
July 24 2020	256.39271	1.00234	0.99933	0.99654	0.99727	
July 25 2020	256.39287	1.00234	0.99933	0.99654	0.99727	
July 26 2020	256.39303	1.00234	0.99933	0.99654	0.99727	
July 27 2020	256.39319	1.00234	0.99933	0.99654	0.99727	
July 28 2020	256.39335	1.00234	0.99933	0.99654	0.99727	
July 29 2020	256.39352	1.00235	0.99933	0.99654	0.99727	
July 30 2020	256.39368	1.00235	0.99933	0.99654	0.99727	
July 31 2020	256.39384	1.00235	0.99933	0.99654	0.99727	
CPI-U (NSA) for:	March 2020	258.115	April 2020	256.389	May 2020	256.394

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2020

Security:			0-1/8% 5-Year TIPS					
Description:			Series X-2025					
CUSIP Number:			912828ZJ2					
Dated Date:			April 15, 2020					
Original Issue Date:			April 30, 2020					
Additional Issue Date(s):								
Maturity Date:			April 15, 2025					
Ref CPI on Dated Date:			258.30093					
Date			Ref CPI	Index Ratio				
July	1	2020	256.38900	0.99260				
July	2	2020	256.38916	0.99260				
July	3	2020	256.38932	0.99260				
July	4	2020	256.38948	0.99260				
July	5	2020	256.38965	0.99260				
July	6	2020	256.38981	0.99260				
July	7	2020	256.38997	0.99260				
July	8	2020	256.39013	0.99260				
July	9	2020	256.39029	0.99260				
July	10	2020	256.39045	0.99260				
July	11	2020	256.39061	0.99260				
July	12	2020	256.39077	0.99260				
July	13	2020	256.39094	0.99261				
July	14	2020	256.39110	0.99261				
July	15	2020	256.39126	0.99261				
July	16	2020	256.39142	0.99261				
July	17	2020	256.39158	0.99261				
July	18	2020	256.39174	0.99261				
July	19	2020	256.39190	0.99261				
July	20	2020	256.39206	0.99261				
July	21	2020	256.39223	0.99261				
July	22	2020	256.39239	0.99261				
July	23	2020	256.39255	0.99261				
July	24	2020	256.39271	0.99261				
July	25	2020	256.39287	0.99261				
July	26	2020	256.39303	0.99261				
July	27	2020	256.39319	0.99261				
July	28	2020	256.39335	0.99261				
July	29	2020	256.39352	0.99262				
July	30	2020	256.39368	0.99262				
July	31	2020	256.39384	0.99262				
CPI-U (NSA) for:			March 2020	258.115	April 2020	256.389	May 2020	256.394