

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2024

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	
July 1 2024	313.54800	1.93859	1.90730	1.76647	1.66341	
July 2 2024	313.56481	1.93870	1.90741	1.76656	1.66350	
July 3 2024	313.58161	1.93880	1.90751	1.76666	1.66359	
July 4 2024	313.59842	1.93890	1.90761	1.76675	1.66368	
July 5 2024	313.61523	1.93901	1.90771	1.76685	1.66377	
July 6 2024	313.63203	1.93911	1.90781	1.76694	1.66386	
July 7 2024	313.64884	1.93922	1.90792	1.76704	1.66395	
July 8 2024	313.66565	1.93932	1.90802	1.76713	1.66404	
July 9 2024	313.68245	1.93942	1.90812	1.76723	1.66413	
July 10 2024	313.69926	1.93953	1.90822	1.76732	1.66422	
July 11 2024	313.71606	1.93963	1.90833	1.76741	1.66430	
July 12 2024	313.73287	1.93974	1.90843	1.76751	1.66439	
July 13 2024	313.74968	1.93984	1.90853	1.76760	1.66448	
July 14 2024	313.76648	1.93994	1.90863	1.76770	1.66457	
July 15 2024	313.78329	1.94005	1.90873	1.76779	1.66466	
July 16 2024	313.80010	1.94015	1.90884	1.76789	1.66475	
July 17 2024	313.81690	1.94026	1.90894	1.76798	1.66484	
July 18 2024	313.83371	1.94036	1.90904	1.76808	1.66493	
July 19 2024	313.85052	1.94046	1.90914	1.76817	1.66502	
July 20 2024	313.86732	1.94057	1.90925	1.76827	1.66511	
July 21 2024	313.88413	1.94067	1.90935	1.76836	1.66520	
July 22 2024	313.90094	1.94077	1.90945	1.76846	1.66529	
July 23 2024	313.91774	1.94088	1.90955	1.76855	1.66537	
July 24 2024	313.93455	1.94098	1.90966	1.76865	1.66546	
July 25 2024	313.95135	1.94109	1.90976	1.76874	1.66555	
July 26 2024	313.96816	1.94119	1.90986	1.76883	1.66564	
July 27 2024	313.98497	1.94129	1.90996	1.76893	1.66573	
July 28 2024	314.00177	1.94140	1.91006	1.76902	1.66582	
July 29 2024	314.01858	1.94150	1.91017	1.76912	1.66591	
July 30 2024	314.03539	1.94161	1.91027	1.76921	1.66600	
July 31 2024	314.05219	1.94171	1.91037	1.76931	1.66609	
CPI-U (NSA) for:			March 2024 312.332	April 2024 313.548	May 2024 314.069	

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2024

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 2024	313.54800	1.57977	1.55480	1.49667	1.46040	
July 2 2024	313.56481	1.57985	1.55488	1.49675	1.46048	
July 3 2024	313.58161	1.57994	1.55497	1.49683	1.46056	
July 4 2024	313.59842	1.58002	1.55505	1.49692	1.46064	
July 5 2024	313.61523	1.58011	1.55513	1.49700	1.46072	
July 6 2024	313.63203	1.58019	1.55522	1.49708	1.46079	
July 7 2024	313.64884	1.58027	1.55530	1.49716	1.46087	
July 8 2024	313.66565	1.58036	1.55538	1.49724	1.46095	
July 9 2024	313.68245	1.58044	1.55547	1.49732	1.46103	
July 10 2024	313.69926	1.58053	1.55555	1.49740	1.46111	
July 11 2024	313.71606	1.58061	1.55563	1.49748	1.46119	
July 12 2024	313.73287	1.58070	1.55572	1.49756	1.46126	
July 13 2024	313.74968	1.58078	1.55580	1.49764	1.46134	
July 14 2024	313.76648	1.58087	1.55588	1.49772	1.46142	
July 15 2024	313.78329	1.58095	1.55597	1.49780	1.46150	
July 16 2024	313.80010	1.58104	1.55605	1.49788	1.46158	
July 17 2024	313.81690	1.58112	1.55613	1.49796	1.46165	
July 18 2024	313.83371	1.58121	1.55622	1.49804	1.46173	
July 19 2024	313.85052	1.58129	1.55630	1.49812	1.46181	
July 20 2024	313.86732	1.58138	1.55638	1.49820	1.46189	
July 21 2024	313.88413	1.58146	1.55647	1.49828	1.46197	
July 22 2024	313.90094	1.58154	1.55655	1.49836	1.46205	
July 23 2024	313.91774	1.58163	1.55663	1.49844	1.46212	
July 24 2024	313.93455	1.58171	1.55672	1.49852	1.46220	
July 25 2024	313.95135	1.58180	1.55680	1.49860	1.46228	
July 26 2024	313.96816	1.58188	1.55688	1.49868	1.46236	
July 27 2024	313.98497	1.58197	1.55697	1.49876	1.46244	
July 28 2024	314.00177	1.58205	1.55705	1.49884	1.46252	
July 29 2024	314.01858	1.58214	1.55713	1.49892	1.46259	
July 30 2024	314.03539	1.58222	1.55722	1.49900	1.46267	
July 31 2024	314.05219	1.58231	1.55730	1.49908	1.46275	
CPI-U (NSA) for:	March 2024	312.332	April 2024	313.548	May 2024	314.069

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2024

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			2-1/8% 30-Year TIPS TIPS of February 2040 912810QF8 February 15, 2010 February 26, 2010 August 31, 2010	2-1/8% 30-Year TIPS TIPS of February 2041 912810QP6 February 15, 2011 February 28, 2011 June 30, 2011 October 31, 2011	0-3/4% 30-Year TIPS TIPS of February 2042 912810QV3 February 15, 2012 February 29, 2012 June 29, 2012 October 31, 2012	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, 2040 216.13950	February 15, 2041 218.99100	February 15, 2042 225.96062	February 15, 2043 229.91100
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2024	313.54800	1.45067	1.43178	1.38762	1.36378	
July 2 2024	313.56481	1.45075	1.43186	1.38770	1.36385	
July 3 2024	313.58161	1.45083	1.43194	1.38777	1.36393	
July 4 2024	313.59842	1.45091	1.43202	1.38785	1.36400	
July 5 2024	313.61523	1.45099	1.43209	1.38792	1.36407	
July 6 2024	313.63203	1.45106	1.43217	1.38799	1.36415	
July 7 2024	313.64884	1.45114	1.43225	1.38807	1.36422	
July 8 2024	313.66565	1.45122	1.43232	1.38814	1.36429	
July 9 2024	313.68245	1.45130	1.43240	1.38822	1.36436	
July 10 2024	313.69926	1.45137	1.43248	1.38829	1.36444	
July 11 2024	313.71606	1.45145	1.43255	1.38837	1.36451	
July 12 2024	313.73287	1.45153	1.43263	1.38844	1.36458	
July 13 2024	313.74968	1.45161	1.43271	1.38851	1.36466	
July 14 2024	313.76648	1.45169	1.43278	1.38859	1.36473	
July 15 2024	313.78329	1.45176	1.43286	1.38866	1.36480	
July 16 2024	313.80010	1.45184	1.43294	1.38874	1.36488	
July 17 2024	313.81690	1.45192	1.43301	1.38881	1.36495	
July 18 2024	313.83371	1.45200	1.43309	1.38889	1.36502	
July 19 2024	313.85052	1.45207	1.43317	1.38896	1.36510	
July 20 2024	313.86732	1.45215	1.43324	1.38904	1.36517	
July 21 2024	313.88413	1.45223	1.43332	1.38911	1.36524	
July 22 2024	313.90094	1.45231	1.43340	1.38918	1.36532	
July 23 2024	313.91774	1.45238	1.43347	1.38926	1.36539	
July 24 2024	313.93455	1.45246	1.43355	1.38933	1.36546	
July 25 2024	313.95135	1.45254	1.43363	1.38941	1.36553	
July 26 2024	313.96816	1.45262	1.43370	1.38948	1.36561	
July 27 2024	313.98497	1.45270	1.43378	1.38956	1.36568	
July 28 2024	314.00177	1.45277	1.43386	1.38963	1.36575	
July 29 2024	314.01858	1.45285	1.43393	1.38970	1.36583	
July 30 2024	314.03539	1.45293	1.43401	1.38978	1.36590	
July 31 2024	314.05219	1.45301	1.43409	1.38985	1.36597	
CPI-U (NSA) for:	March 2024	312.332	April 2024	313.548	May 2024	314.069

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2024

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 2024	313.54800	1.34536	1.32050	1.32380	1.33152			
July 2 2024	313.56481	1.34543	1.32057	1.32387	1.33159			
July 3 2024	313.58161	1.34550	1.32064	1.32394	1.33166			
July 4 2024	313.59842	1.34558	1.32072	1.32402	1.33173			
July 5 2024	313.61523	1.34565	1.32079	1.32409	1.33180			
July 6 2024	313.63203	1.34572	1.32086	1.32416	1.33188			
July 7 2024	313.64884	1.34579	1.32093	1.32423	1.33195			
July 8 2024	313.66565	1.34586	1.32100	1.32430	1.33202			
July 9 2024	313.68245	1.34594	1.32107	1.32437	1.33209			
July 10 2024	313.69926	1.34601	1.32114	1.32444	1.33216			
July 11 2024	313.71606	1.34608	1.32121	1.32451	1.33223			
July 12 2024	313.73287	1.34615	1.32128	1.32458	1.33230			
July 13 2024	313.74968	1.34622	1.32135	1.32465	1.33238			
July 14 2024	313.76648	1.34630	1.32142	1.32473	1.33245			
July 15 2024	313.78329	1.34637	1.32149	1.32480	1.33252			
July 16 2024	313.80010	1.34644		1.32487	1.33259			
July 17 2024	313.81690	1.34651		1.32494	1.33266			
July 18 2024	313.83371	1.34658		1.32501	1.33273			
July 19 2024	313.85052	1.34666		1.32508	1.33280			
July 20 2024	313.86732	1.34673		1.32515	1.33287			
July 21 2024	313.88413	1.34680		1.32522	1.33295			
July 22 2024	313.90094	1.34687		1.32529	1.33302			
July 23 2024	313.91774	1.34695		1.32536	1.33309			
July 24 2024	313.93455	1.34702		1.32543	1.33316			
July 25 2024	313.95135	1.34709		1.32551	1.33323			
July 26 2024	313.96816	1.34716		1.32558	1.33330			
July 27 2024	313.98497	1.34723		1.32565	1.33337			
July 28 2024	314.00177	1.34731		1.32572	1.33345			
July 29 2024	314.01858	1.34738		1.32579	1.33352			
July 30 2024	314.03539	1.34745		1.32586	1.33359			
July 31 2024	314.05219	1.34752		1.32593	1.33366			
CPI-U (NSA) for:			March 2024	312.332	April 2024	313.548	May 2024	314.069

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
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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% 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:			July 15, 2025 237.14365	January 15, 2026 237.61129	February 15, 2046 236.94448	July 15, 2026 239.70132
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2024	313.54800	1.32219	1.31958	1.32330	1.30808	
July 2 2024	313.56481	1.32226	1.31965	1.32337	1.30815	
July 3 2024	313.58161	1.32233	1.31973	1.32344	1.30822	
July 4 2024	313.59842	1.32240	1.31980	1.32351	1.30829	
July 5 2024	313.61523	1.32247	1.31987	1.32358	1.30836	
July 6 2024	313.63203	1.32254	1.31994	1.32365	1.30843	
July 7 2024	313.64884	1.32261	1.32001	1.32372	1.30850	
July 8 2024	313.66565	1.32268	1.32008	1.32379	1.30857	
July 9 2024	313.68245	1.32275	1.32015	1.32386	1.30864	
July 10 2024	313.69926	1.32282	1.32022	1.32394	1.30871	
July 11 2024	313.71606	1.32289	1.32029	1.32401	1.30878	
July 12 2024	313.73287	1.32297	1.32036	1.32408	1.30885	
July 13 2024	313.74968	1.32304	1.32043	1.32415	1.30892	
July 14 2024	313.76648	1.32311	1.32050	1.32422	1.30899	
July 15 2024	313.78329	1.32318	1.32057	1.32429	1.30906	
July 16 2024	313.80010	1.32325	1.32064	1.32436	1.30913	
July 17 2024	313.81690	1.32332	1.32072	1.32443	1.30920	
July 18 2024	313.83371	1.32339	1.32079	1.32450	1.30927	
July 19 2024	313.85052	1.32346	1.32086	1.32457	1.30934	
July 20 2024	313.86732	1.32353	1.32093	1.32464	1.30941	
July 21 2024	313.88413	1.32360	1.32100	1.32472	1.30948	
July 22 2024	313.90094	1.32367	1.32107	1.32479	1.30955	
July 23 2024	313.91774	1.32375	1.32114	1.32486	1.30962	
July 24 2024	313.93455	1.32382	1.32121	1.32493	1.30969	
July 25 2024	313.95135	1.32389	1.32128	1.32500	1.30976	
July 26 2024	313.96816	1.32396	1.32135	1.32507	1.30983	
July 27 2024	313.98497	1.32403	1.32142	1.32514	1.30990	
July 28 2024	314.00177	1.32410	1.32149	1.32521	1.30997	
July 29 2024	314.01858	1.32417	1.32156	1.32528	1.31004	
July 30 2024	314.03539	1.32424	1.32163	1.32535	1.31011	
July 31 2024	314.05219	1.32431	1.32171	1.32543	1.31018	
CPI-U (NSA) for:	March 2024	312.332	April 2024	313.548	May 2024	314.069

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
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Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	0-3/8% 10-Year TIPS Series D-2027 912828L3 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
Maturity Date: Ref CPI on Dated Date:			January 15, 2027 241.55919	February 15, 2047 241.39250	July 15, 2027 244.61839	January 15, 2028 246.66571
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2024	313.54800	1.29802	1.29891	1.28178	1.27115	
July 2 2024	313.56481	1.29809	1.29898	1.28185	1.27121	
July 3 2024	313.58161	1.29816	1.29905	1.28192	1.27128	
July 4 2024	313.59842	1.29823	1.29912	1.28199	1.27135	
July 5 2024	313.61523	1.29830	1.29919	1.28206	1.27142	
July 6 2024	313.63203	1.29837	1.29926	1.28213	1.27149	
July 7 2024	313.64884	1.29843	1.29933	1.28220	1.27155	
July 8 2024	313.66565	1.29850	1.29940	1.28227	1.27162	
July 9 2024	313.68245	1.29857	1.29947	1.28233	1.27169	
July 10 2024	313.69926	1.29864	1.29954	1.28240	1.27176	
July 11 2024	313.71606	1.29871	1.29961	1.28247	1.27183	
July 12 2024	313.73287	1.29878	1.29968	1.28254	1.27189	
July 13 2024	313.74968	1.29885	1.29975	1.28261	1.27196	
July 14 2024	313.76648	1.29892	1.29982	1.28268	1.27203	
July 15 2024	313.78329	1.29899	1.29989	1.28275	1.27210	
July 16 2024	313.80010	1.29906	1.29996	1.28281	1.27217	
July 17 2024	313.81690	1.29913	1.30003	1.28288	1.27224	
July 18 2024	313.83371	1.29920	1.30010	1.28295	1.27230	
July 19 2024	313.85052	1.29927	1.30017	1.28302	1.27237	
July 20 2024	313.86732	1.29934	1.30024	1.28309	1.27244	
July 21 2024	313.88413	1.29941	1.30031	1.28316	1.27251	
July 22 2024	313.90094	1.29948	1.30038	1.28323	1.27258	
July 23 2024	313.91774	1.29955	1.30045	1.28330	1.27264	
July 24 2024	313.93455	1.29962	1.30051	1.28336	1.27271	
July 25 2024	313.95135	1.29969	1.30058	1.28343	1.27278	
July 26 2024	313.96816	1.29976	1.30065	1.28350	1.27285	
July 27 2024	313.98497	1.29983	1.30072	1.28357	1.27292	
July 28 2024	314.00177	1.29990	1.30079	1.28364	1.27299	
July 29 2024	314.01858	1.29997	1.30086	1.28371	1.27305	
July 30 2024	314.03539	1.30003	1.30093	1.28378	1.27312	
July 31 2024	314.05219	1.30010	1.30100	1.28385	1.27319	
CPI-U (NSA) for:	March 2024	312.332	April 2024	313.548	May 2024	314.069

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2024

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			1% 30-Year TIPS TIPS of February 2048 912810SB5 February 15, 2018 February 28, 2018 June 29, 2018 October 31, 2018	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
Maturity Date: Ref CPI on Dated Date:			February 15, 2048 246.59650	July 15, 2028 251.01658	January 15, 2029 252.50248	February 15, 2049 251.63550
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2024	313.54800	1.27150	1.24911	1.24176	1.24604	
July 2 2024	313.56481	1.27157	1.24918	1.24183	1.24611	
July 3 2024	313.58161	1.27164	1.24925	1.24190	1.24617	
July 4 2024	313.59842	1.27171	1.24931	1.24196	1.24624	
July 5 2024	313.61523	1.27177	1.24938	1.24203	1.24631	
July 6 2024	313.63203	1.27184	1.24945	1.24209	1.24637	
July 7 2024	313.64884	1.27191	1.24951	1.24216	1.24644	
July 8 2024	313.66565	1.27198	1.24958	1.24223	1.24651	
July 9 2024	313.68245	1.27205	1.24965	1.24229	1.24657	
July 10 2024	313.69926	1.27212	1.24972	1.24236	1.24664	
July 11 2024	313.71606	1.27218	1.24978	1.24243	1.24671	
July 12 2024	313.73287	1.27225	1.24985	1.24249	1.24678	
July 13 2024	313.74968	1.27232	1.24992	1.24256	1.24684	
July 14 2024	313.76648	1.27239	1.24998	1.24263	1.24691	
July 15 2024	313.78329	1.27246	1.25005	1.24269	1.24698	
July 16 2024	313.80010	1.27252	1.25012	1.24276	1.24704	
July 17 2024	313.81690	1.27259	1.25018	1.24283	1.24711	
July 18 2024	313.83371	1.27266	1.25025	1.24289	1.24718	
July 19 2024	313.85052	1.27273	1.25032	1.24296	1.24724	
July 20 2024	313.86732	1.27280	1.25038	1.24303	1.24731	
July 21 2024	313.88413	1.27287	1.25045	1.24309	1.24738	
July 22 2024	313.90094	1.27293	1.25052	1.24316	1.24744	
July 23 2024	313.91774	1.27300	1.25059	1.24323	1.24751	
July 24 2024	313.93455	1.27307	1.25065	1.24329	1.24758	
July 25 2024	313.95135	1.27314	1.25072	1.24336	1.24764	
July 26 2024	313.96816	1.27321	1.25079	1.24343	1.24771	
July 27 2024	313.98497	1.27327	1.25085	1.24349	1.24778	
July 28 2024	314.00177	1.27334	1.25092	1.24356	1.24784	
July 29 2024	314.01858	1.27341	1.25099	1.24363	1.24791	
July 30 2024	314.03539	1.27348	1.25105	1.24369	1.24798	
July 31 2024	314.05219	1.27355	1.25112	1.24376	1.24804	
CPI-U (NSA) for:	March 2024	312.332	April 2024	313.548	May 2024	314.069

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Ref CPI and Index Ratios for
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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 August 31, 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 2024	313.54800	1.22578	1.22210	1.21869	1.21958	
July 2 2024	313.56481	1.22585	1.22216	1.21875	1.21965	
July 3 2024	313.58161	1.22592	1.22223	1.21882	1.21971	
July 4 2024	313.59842	1.22598	1.22230	1.21888	1.21978	
July 5 2024	313.61523	1.22605	1.22236	1.21895	1.21984	
July 6 2024	313.63203	1.22611	1.22243	1.21901	1.21991	
July 7 2024	313.64884	1.22618	1.22249	1.21908	1.21997	
July 8 2024	313.66565	1.22624	1.22256	1.21914	1.22004	
July 9 2024	313.68245	1.22631	1.22262	1.21921	1.22010	
July 10 2024	313.69926	1.22638	1.22269	1.21927	1.22017	
July 11 2024	313.71606	1.22644	1.22275	1.21934	1.22023	
July 12 2024	313.73287	1.22651	1.22282	1.21940	1.22030	
July 13 2024	313.74968	1.22657	1.22289	1.21947	1.22036	
July 14 2024	313.76648	1.22664	1.22295	1.21954	1.22043	
July 15 2024	313.78329	1.22670	1.22302	1.21960	1.22050	
July 16 2024	313.80010	1.22677	1.22308	1.21967	1.22056	
July 17 2024	313.81690	1.22684	1.22315	1.21973	1.22063	
July 18 2024	313.83371	1.22690	1.22321	1.21980	1.22069	
July 19 2024	313.85052	1.22697	1.22328	1.21986	1.22076	
July 20 2024	313.86732	1.22703	1.22334	1.21993	1.22082	
July 21 2024	313.88413	1.22710	1.22341	1.21999	1.22089	
July 22 2024	313.90094	1.22716	1.22347	1.22006	1.22095	
July 23 2024	313.91774	1.22723	1.22354	1.22012	1.22102	
July 24 2024	313.93455	1.22730	1.22361	1.22019	1.22108	
July 25 2024	313.95135	1.22736	1.22367	1.22025	1.22115	
July 26 2024	313.96816	1.22743	1.22374	1.22032	1.22121	
July 27 2024	313.98497	1.22749	1.22380	1.22038	1.22128	
July 28 2024	314.00177	1.22756	1.22387	1.22045	1.22135	
July 29 2024	314.01858	1.22762	1.22393	1.22051	1.22141	
July 30 2024	314.03539	1.22769	1.22400	1.22058	1.22148	
July 31 2024	314.05219	1.22776	1.22406	1.22065	1.22154	
CPI-U (NSA) for:	March 2024	312.332	April 2024	313.548	May 2024	314.069

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
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Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-1/8% 5-Year TIPS Series X-2025 912828ZJ2 April 15, 2020 April 30, 2020 June 30, 2020 July 13, 2020	0-1/8% 10-Year TIPS Series D-2030 912828ZZ6 July 15, 2020 July 31, 2020 September 30, 2020 November 30, 2020	0-1/8% 5-Year TIPS Series AE-2025 91282CAQ4 October 15, 2020 October 30, 2020 December 31, 2020	0-1/8% 10-Year TIPS Series A-2031 91282CBF7 January 15, 2021 January 29, 2021 March 31, 2021 May 28, 2021
Maturity Date: Ref CPI on Dated Date:			April 15, 2025 258.30093	July 15, 2030 256.39126	October 15, 2025 259.46997	January 15, 2031 260.31619
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2024	313.54800	1.21389	1.22293	1.20842	1.20449	
July 2 2024	313.56481	1.21395	1.22299	1.20848	1.20455	
July 3 2024	313.58161	1.21402	1.22306	1.20855	1.20462	
July 4 2024	313.59842	1.21408	1.22312	1.20861	1.20468	
July 5 2024	313.61523	1.21415	1.22319	1.20868	1.20475	
July 6 2024	313.63203	1.21421	1.22326	1.20874	1.20481	
July 7 2024	313.64884	1.21428	1.22332	1.20881	1.20488	
July 8 2024	313.66565	1.21434	1.22339	1.20887	1.20494	
July 9 2024	313.68245	1.21441	1.22345	1.20894	1.20501	
July 10 2024	313.69926	1.21447	1.22352	1.20900	1.20507	
July 11 2024	313.71606	1.21454	1.22358	1.20907	1.20513	
July 12 2024	313.73287	1.21460	1.22365	1.20913	1.20520	
July 13 2024	313.74968	1.21467	1.22371	1.20919	1.20526	
July 14 2024	313.76648	1.21473	1.22378	1.20926	1.20533	
July 15 2024	313.78329	1.21480	1.22385	1.20932	1.20539	
July 16 2024	313.80010	1.21486	1.22391	1.20939	1.20546	
July 17 2024	313.81690	1.21493	1.22398	1.20945	1.20552	
July 18 2024	313.83371	1.21499	1.22404	1.20952	1.20559	
July 19 2024	313.85052	1.21506	1.22411	1.20958	1.20565	
July 20 2024	313.86732	1.21512	1.22417	1.20965	1.20572	
July 21 2024	313.88413	1.21519	1.22424	1.20971	1.20578	
July 22 2024	313.90094	1.21525	1.22430	1.20978	1.20584	
July 23 2024	313.91774	1.21532	1.22437	1.20984	1.20591	
July 24 2024	313.93455	1.21538	1.22444	1.20991	1.20597	
July 25 2024	313.95135	1.21545	1.22450	1.20997	1.20604	
July 26 2024	313.96816	1.21551	1.22457	1.21004	1.20610	
July 27 2024	313.98497	1.21558	1.22463	1.21010	1.20617	
July 28 2024	314.00177	1.21564	1.22470	1.21017	1.20623	
July 29 2024	314.01858	1.21571	1.22476	1.21023	1.20630	
July 30 2024	314.03539	1.21577	1.22483	1.21030	1.20636	
July 31 2024	314.05219	1.21584	1.22489	1.21036	1.20643	
CPI-U (NSA) for:	March 2024	312.332	April 2024	313.548	May 2024	314.069

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2024

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-1/8% 30-Year TIPS TIPS of February 2051 912810SV1 February 15, 2021 February 26, 2021 August 31, 2021	0-1/8% 5-Year TIPS Series X-2026 91282CCA7 April 15, 2021 April 30, 2021 June 30, 2021	0-1/8% 10-Year TIPS Series D-2031 91282CCM1 July 15, 2021 July 30, 2021 September 30, 2021 November 30, 2021	0-1/8% 5-Year TIPS Series AE-2026 91282CDC2 October 15, 2021 October 29, 2021 December 31, 2021
Maturity Date: Ref CPI on Dated Date:			February 15, 2051 260.35150	April 15, 2026 262.25027	July 15, 2031 268.02090	October 15, 2026 273.25771
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2024	313.54800	1.20433	1.19561	1.16986	1.14744	
July 2 2024	313.56481	1.20439	1.19567	1.16993	1.14751	
July 3 2024	313.58161	1.20445	1.19573	1.16999	1.14757	
July 4 2024	313.59842	1.20452	1.19580	1.17005	1.14763	
July 5 2024	313.61523	1.20458	1.19586	1.17011	1.14769	
July 6 2024	313.63203	1.20465	1.19593	1.17018	1.14775	
July 7 2024	313.64884	1.20471	1.19599	1.17024	1.14781	
July 8 2024	313.66565	1.20478	1.19605	1.17030	1.14787	
July 9 2024	313.68245	1.20484	1.19612	1.17037	1.14794	
July 10 2024	313.69926	1.20491	1.19618	1.17043	1.14800	
July 11 2024	313.71606	1.20497	1.19625	1.17049	1.14806	
July 12 2024	313.73287	1.20504	1.19631	1.17055	1.14812	
July 13 2024	313.74968	1.20510	1.19638	1.17062	1.14818	
July 14 2024	313.76648	1.20516	1.19644	1.17068	1.14824	
July 15 2024	313.78329	1.20523	1.19650	1.17074	1.14831	
July 16 2024	313.80010	1.20529	1.19657	1.17080	1.14837	
July 17 2024	313.81690	1.20536	1.19663	1.17087	1.14843	
July 18 2024	313.83371	1.20542	1.19670	1.17093	1.14849	
July 19 2024	313.85052	1.20549	1.19676	1.17099	1.14855	
July 20 2024	313.86732	1.20555	1.19682	1.17106	1.14861	
July 21 2024	313.88413	1.20562	1.19689	1.17112	1.14867	
July 22 2024	313.90094	1.20568	1.19695	1.17118	1.14874	
July 23 2024	313.91774	1.20575	1.19702	1.17124	1.14880	
July 24 2024	313.93455	1.20581	1.19708	1.17131	1.14886	
July 25 2024	313.95135	1.20587	1.19714	1.17137	1.14892	
July 26 2024	313.96816	1.20594	1.19721	1.17143	1.14898	
July 27 2024	313.98497	1.20600	1.19727	1.17149	1.14904	
July 28 2024	314.00177	1.20607	1.19734	1.17156	1.14910	
July 29 2024	314.01858	1.20613	1.19740	1.17162	1.14917	
July 30 2024	314.03539	1.20620	1.19746	1.17168	1.14923	
July 31 2024	314.05219	1.20626	1.19753	1.17175	1.14929	
CPI-U (NSA) for:			March 2024 312.332	April 2024 313.548	May 2024 314.069	

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
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Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-1/8% 10-Year TIPS Series A-2032 91282CDX6 January 15, 2022 January 31, 2022 March 31, 2022 May 31, 2022	0-1/8% 30-Year TIPS TIPS of February 2052 912810TE8 February 15, 2022 February 28, 2022 August 31, 2022	0-1/8% 5-Year TIPS Series X-2027 91282CEJ6 April 15, 2022 April 29, 2022 June 30, 2022	0-5/8% 10-Year TIPS Series D-2032 91282CEZ0 July 15, 2022 July 29, 2022 September 30, 2022 November 30, 2022
Maturity Date: Ref CPI on Dated Date:			January 15, 2032 277.20274	February 15, 2052 278.37500	April 15, 2027 282.34640	July 15, 2032 290.54829
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2024	313.54800	1.13111	1.12635	1.11051	1.07916	
July 2 2024	313.56481	1.13118	1.12641	1.11057	1.07922	
July 3 2024	313.58161	1.13124	1.12647	1.11063	1.07928	
July 4 2024	313.59842	1.13130	1.12653	1.11069	1.07933	
July 5 2024	313.61523	1.13136	1.12659	1.11075	1.07939	
July 6 2024	313.63203	1.13142	1.12665	1.11081	1.07945	
July 7 2024	313.64884	1.13148	1.12671	1.11087	1.07951	
July 8 2024	313.66565	1.13154	1.12677	1.11092	1.07956	
July 9 2024	313.68245	1.13160	1.12683	1.11098	1.07962	
July 10 2024	313.69926	1.13166	1.12689	1.11104	1.07968	
July 11 2024	313.71606	1.13172	1.12695	1.11110	1.07974	
July 12 2024	313.73287	1.13178	1.12702	1.11116	1.07980	
July 13 2024	313.74968	1.13184	1.12708	1.11122	1.07985	
July 14 2024	313.76648	1.13190	1.12714	1.11128	1.07991	
July 15 2024	313.78329	1.13196	1.12720	1.11134	1.07997	
July 16 2024	313.80010	1.13202	1.12726	1.11140	1.08003	
July 17 2024	313.81690	1.13208	1.12732	1.11146	1.08009	
July 18 2024	313.83371	1.13215	1.12738	1.11152	1.08014	
July 19 2024	313.85052	1.13221	1.12744	1.11158	1.08020	
July 20 2024	313.86732	1.13227	1.12750	1.11164	1.08026	
July 21 2024	313.88413	1.13233	1.12756	1.11170	1.08032	
July 22 2024	313.90094	1.13239	1.12762	1.11176	1.08037	
July 23 2024	313.91774	1.13245	1.12768	1.11182	1.08043	
July 24 2024	313.93455	1.13251	1.12774	1.11188	1.08049	
July 25 2024	313.95135	1.13257	1.12780	1.11194	1.08055	
July 26 2024	313.96816	1.13263	1.12786	1.11200	1.08061	
July 27 2024	313.98497	1.13269	1.12792	1.11206	1.08066	
July 28 2024	314.00177	1.13275	1.12798	1.11212	1.08072	
July 29 2024	314.01858	1.13281	1.12804	1.11217	1.08078	
July 30 2024	314.03539	1.13287	1.12810	1.11223	1.08084	
July 31 2024	314.05219	1.13293	1.12816	1.11229	1.08089	
CPI-U (NSA) for:			March 2024 312.332	April 2024 313.548	May 2024 314.069	

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
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Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			1-5/8% 5-Year TIPS Series AE-2027 91282CFR7 October 15, 2022 October 31, 2022 December 30, 2022	1-1/8% 10-Year TIPS Series A-2033 91282CGK1 January 15, 2023 January 31, 2023 March 31, 2023 May 31, 2023	1-1/2% 30-Year TIPS TIPS of February 2053 912810TP3 February 15, 2023 February 28, 2023 August 31, 2023	1-1/4% 5-Year TIPS Series X-2028 91282CGW5 April 15, 2023 April 28, 2023 June 30, 2023
Maturity Date: Ref CPI on Dated Date:			October 15, 2027 296.22858	January 15, 2033 297.87606	February 15, 2053 297.25400	April 15, 2028 299.94933
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2024	313.54800	1.05847	1.05261	1.05482	1.04534	
July 2 2024	313.56481	1.05852	1.05267	1.05487	1.04539	
July 3 2024	313.58161	1.05858	1.05273	1.05493	1.04545	
July 4 2024	313.59842	1.05864	1.05278	1.05498	1.04550	
July 5 2024	313.61523	1.05869	1.05284	1.05504	1.04556	
July 6 2024	313.63203	1.05875	1.05289	1.05510	1.04562	
July 7 2024	313.64884	1.05881	1.05295	1.05515	1.04567	
July 8 2024	313.66565	1.05886	1.05301	1.05521	1.04573	
July 9 2024	313.68245	1.05892	1.05306	1.05527	1.04578	
July 10 2024	313.69926	1.05898	1.05312	1.05532	1.04584	
July 11 2024	313.71606	1.05903	1.05318	1.05538	1.04590	
July 12 2024	313.73287	1.05909	1.05323	1.05544	1.04595	
July 13 2024	313.74968	1.05915	1.05329	1.05549	1.04601	
July 14 2024	313.76648	1.05920	1.05335	1.05555	1.04606	
July 15 2024	313.78329	1.05926	1.05340	1.05561	1.04612	
July 16 2024	313.80010	1.05932	1.05346	1.05566	1.04618	
July 17 2024	313.81690	1.05937	1.05352	1.05572	1.04623	
July 18 2024	313.83371	1.05943	1.05357	1.05578	1.04629	
July 19 2024	313.85052	1.05949	1.05363	1.05583	1.04635	
July 20 2024	313.86732	1.05954	1.05368	1.05589	1.04640	
July 21 2024	313.88413	1.05960	1.05374	1.05595	1.04646	
July 22 2024	313.90094	1.05966	1.05380	1.05600	1.04651	
July 23 2024	313.91774	1.05971	1.05385	1.05606	1.04657	
July 24 2024	313.93455	1.05977	1.05391	1.05612	1.04663	
July 25 2024	313.95135	1.05983	1.05397	1.05617	1.04668	
July 26 2024	313.96816	1.05988	1.05402	1.05623	1.04674	
July 27 2024	313.98497	1.05994	1.05408	1.05629	1.04679	
July 28 2024	314.00177	1.06000	1.05414	1.05634	1.04685	
July 29 2024	314.01858	1.06005	1.05419	1.05640	1.04691	
July 30 2024	314.03539	1.06011	1.05425	1.05645	1.04696	
July 31 2024	314.05219	1.06017	1.05430	1.05651	1.04702	
CPI-U (NSA) for:	March 2024	312.332	April 2024	313.548	May 2024	314.069

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
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Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			1-3/8% 10-Year TIPS Series D-2033 91282CHP9 July 15, 2023 July 31, 2023 September 29, 2023 November 30, 2023	2-3/8% 5-Year TIPS Series AE-2028 91282CJH5 October 15, 2023 October 31, 2023 December 29, 2023	1-3/4% 10-Year TIPS Series A-2034 91282CJY8 January 15, 2024 January 31, 2024 March 28, 2024 May 31, 2024	2-1/8% 30-Year TIPS TIPS of February 2054 912810TY4 February 15, 2024 February 29, 2024
Maturity Date: Ref CPI on Dated Date:			July 15, 2033 303.70803	October 15, 2028 306.29390	January 15, 2034 307.39100	February 15, 2054 306.90376
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
July 1 2024	313.54800	1.03240	1.02368	1.02003	1.02165	
July 2 2024	313.56481	1.03245	1.02374	1.02008	1.02170	
July 3 2024	313.58161	1.03251	1.02379	1.02014	1.02176	
July 4 2024	313.59842	1.03257	1.02385	1.02019	1.02181	
July 5 2024	313.61523	1.03262	1.02390	1.02025	1.02187	
July 6 2024	313.63203	1.03268	1.02396	1.02030	1.02192	
July 7 2024	313.64884	1.03273	1.02401	1.02036	1.02198	
July 8 2024	313.66565	1.03279	1.02407	1.02041	1.02203	
July 9 2024	313.68245	1.03284	1.02412	1.02047	1.02209	
July 10 2024	313.69926	1.03290	1.02418	1.02052	1.02214	
July 11 2024	313.71606	1.03295	1.02423	1.02058	1.02220	
July 12 2024	313.73287	1.03301	1.02429	1.02063	1.02225	
July 13 2024	313.74968	1.03306	1.02434	1.02069	1.02231	
July 14 2024	313.76648	1.03312	1.02440	1.02074	1.02236	
July 15 2024	313.78329	1.03317	1.02445	1.02080	1.02242	
July 16 2024	313.80010	1.03323	1.02451	1.02085	1.02247	
July 17 2024	313.81690	1.03328	1.02456	1.02090	1.02253	
July 18 2024	313.83371	1.03334	1.02462	1.02096	1.02258	
July 19 2024	313.85052	1.03340	1.02467	1.02101	1.02263	
July 20 2024	313.86732	1.03345	1.02473	1.02107	1.02269	
July 21 2024	313.88413	1.03351	1.02478	1.02112	1.02274	
July 22 2024	313.90094	1.03356	1.02484	1.02118	1.02280	
July 23 2024	313.91774	1.03362	1.02489	1.02123	1.02285	
July 24 2024	313.93455	1.03367	1.02495	1.02129	1.02291	
July 25 2024	313.95135	1.03373	1.02500	1.02134	1.02296	
July 26 2024	313.96816	1.03378	1.02506	1.02140	1.02302	
July 27 2024	313.98497	1.03384	1.02511	1.02145	1.02307	
July 28 2024	314.00177	1.03389	1.02516	1.02151	1.02313	
July 29 2024	314.01858	1.03395	1.02522	1.02156	1.02318	
July 30 2024	314.03539	1.03400	1.02527	1.02162	1.02324	
July 31 2024	314.05219	1.03406	1.02533	1.02167	1.02329	
CPI-U (NSA) for:	March 2024	312.332	April 2024	313.548	May 2024	314.069

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
July 2024

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s): Maturity Date: Ref CPI on Dated Date:			2-1/8% 5-Year TIPS Series X-2029 91282CKL4 April 15, 2024 April 30, 2024 April 15, 2029 309.30787					
Date			Ref CPI		Index Ratio			
July	1	2024	313.54800	1.01371				
July	2	2024	313.56481	1.01376				
July	3	2024	313.58161	1.01382				
July	4	2024	313.59842	1.01387				
July	5	2024	313.61523	1.01393				
July	6	2024	313.63203	1.01398				
July	7	2024	313.64884	1.01403				
July	8	2024	313.66565	1.01409				
July	9	2024	313.68245	1.01414				
July	10	2024	313.69926	1.01420				
July	11	2024	313.71606	1.01425				
July	12	2024	313.73287	1.01431				
July	13	2024	313.74968	1.01436				
July	14	2024	313.76648	1.01441				
July	15	2024	313.78329	1.01447				
July	16	2024	313.80010	1.01452				
July	17	2024	313.81690	1.01458				
July	18	2024	313.83371	1.01463				
July	19	2024	313.85052	1.01469				
July	20	2024	313.86732	1.01474				
July	21	2024	313.88413	1.01480				
July	22	2024	313.90094	1.01485				
July	23	2024	313.91774	1.01490				
July	24	2024	313.93455	1.01496				
July	25	2024	313.95135	1.01501				
July	26	2024	313.96816	1.01507				
July	27	2024	313.98497	1.01512				
July	28	2024	314.00177	1.01518				
July	29	2024	314.01858	1.01523				
July	30	2024	314.03539	1.01528				
July	31	2024	314.05219	1.01534				
CPI-U (NSA) for:			March 2024	312.332	April 2024	313.548	May 2024	314.069