

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2023

Security:			3-5/8% 30-Year TIPS	3-7/8% 30-Year TIPS	3-3/8% 30-1/2-Year TIPS	2-3/8% 20-1/2-Year TIPS
Description:			TIPS of April 2028	TIPS of April 2029	TIPS of April 2032	TIPS of January 2025
CUSIP Number:			912810FD5	912810FH6	912810FQ6	912810FR4
Dated Date:			April 15, 1998	April 15, 1999	October 15, 2001	July 15, 2004
Original Issue Date:			April 15, 1998	April 15, 1999	October 15, 2001	July 30, 2004
Additional Issue Date(s):			July 15, 1998	October 15, 1999 October 16, 2000		January 31, 2005 July 29, 2005
Maturity Date:			April 15, 2028	April 15, 2029	April 15, 2032	January 15, 2025
Ref CPI on Dated Date:			161.74000	164.39333	177.50000	188.49677
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2023	300.84000	1.86002	1.83000	1.69487	1.59600	
May 2 2023	300.87213	1.86022	1.83020	1.69505	1.59617	
May 3 2023	300.90426	1.86042	1.83039	1.69524	1.59634	
May 4 2023	300.93639	1.86062	1.83059	1.69542	1.59651	
May 5 2023	300.96852	1.86082	1.83078	1.69560	1.59668	
May 6 2023	301.00065	1.86102	1.83098	1.69578	1.59685	
May 7 2023	301.03277	1.86121	1.83117	1.69596	1.59702	
May 8 2023	301.06490	1.86141	1.83137	1.69614	1.59719	
May 9 2023	301.09703	1.86161	1.83156	1.69632	1.59736	
May 10 2023	301.12916	1.86181	1.83176	1.69650	1.59753	
May 11 2023	301.16129	1.86201	1.83196	1.69668	1.59770	
May 12 2023	301.19342	1.86221	1.83215	1.69686	1.59787	
May 13 2023	301.22555	1.86241	1.83235	1.69705	1.59804	
May 14 2023	301.25768	1.86260	1.83254	1.69723	1.59821	
May 15 2023	301.28981	1.86280	1.83274	1.69741	1.59838	
May 16 2023	301.32194	1.86300	1.83293	1.69759	1.59855	
May 17 2023	301.35406	1.86320	1.83313	1.69777	1.59872	
May 18 2023	301.38619	1.86340	1.83332	1.69795	1.59889	
May 19 2023	301.41832	1.86360	1.83352	1.69813	1.59906	
May 20 2023	301.45045	1.86380	1.83371	1.69831	1.59923	
May 21 2023	301.48258	1.86400	1.83391	1.69849	1.59940	
May 22 2023	301.51471	1.86419	1.83411	1.69867	1.59957	
May 23 2023	301.54684	1.86439	1.83430	1.69886	1.59975	
May 24 2023	301.57897	1.86459	1.83450	1.69904	1.59992	
May 25 2023	301.61110	1.86479	1.83469	1.69922	1.60009	
May 26 2023	301.64323	1.86499	1.83489	1.69940	1.60026	
May 27 2023	301.67535	1.86519	1.83508	1.69958	1.60043	
May 28 2023	301.70748	1.86539	1.83528	1.69976	1.60060	
May 29 2023	301.73961	1.86558	1.83547	1.69994	1.60077	
May 30 2023	301.77174	1.86578	1.83567	1.70012	1.60094	
May 31 2023	301.80387	1.86598	1.83586	1.70030	1.60111	
CPI-U (NSA) for:			January 2023 299.170	February 2023 300.840	March 2023 301.836	

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
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May 2023

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			2% 20-Year TIPS TIPS of January 2026 912810FS2 January 15, 2006 January 31, 2006 July 31, 2006	2-3/8% 20-Year TIPS TIPS of January 2027 912810PS1 January 15, 2007 January 31, 2007 July 31, 2007	1-3/4% 20-Year TIPS TIPS of January 2028 912810PV4 January 15, 2008 January 31, 2008 July 31, 2008	2-1/2% 20-Year TIPS TIPS of January 2029 912810PZ5 January 15, 2009 January 30, 2009 July 31, 2009	
Maturity Date: Ref CPI on Dated Date:			January 15, 2026 198.47742	January 15, 2027 201.66452	January 15, 2028 209.49645	January 15, 2029 214.69971	
Date			Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio
May	1	2023	300.84000	1.51574	1.49178	1.43601	1.40121
May	2	2023	300.87213	1.51590	1.49194	1.43617	1.40136
May	3	2023	300.90426	1.51606	1.49210	1.43632	1.40151
May	4	2023	300.93639	1.51622	1.49226	1.43647	1.40166
May	5	2023	300.96852	1.51639	1.49242	1.43663	1.40181
May	6	2023	301.00065	1.51655	1.49258	1.43678	1.40196
May	7	2023	301.03277	1.51671	1.49274	1.43693	1.40211
May	8	2023	301.06490	1.51687	1.49290	1.43709	1.40226
May	9	2023	301.09703	1.51703	1.49306	1.43724	1.40241
May	10	2023	301.12916	1.51720	1.49322	1.43740	1.40256
May	11	2023	301.16129	1.51736	1.49338	1.43755	1.40271
May	12	2023	301.19342	1.51752	1.49354	1.43770	1.40286
May	13	2023	301.22555	1.51768	1.49370	1.43786	1.40301
May	14	2023	301.25768	1.51784	1.49386	1.43801	1.40316
May	15	2023	301.28981	1.51801	1.49401	1.43816	1.40331
May	16	2023	301.32194	1.51817	1.49417	1.43832	1.40346
May	17	2023	301.35406	1.51833	1.49433	1.43847	1.40361
May	18	2023	301.38619	1.51849	1.49449	1.43862	1.40376
May	19	2023	301.41832	1.51865	1.49465	1.43878	1.40391
May	20	2023	301.45045	1.51881	1.49481	1.43893	1.40406
May	21	2023	301.48258	1.51898	1.49497	1.43908	1.40421
May	22	2023	301.51471	1.51914	1.49513	1.43924	1.40436
May	23	2023	301.54684	1.51930	1.49529	1.43939	1.40451
May	24	2023	301.57897	1.51946	1.49545	1.43954	1.40465
May	25	2023	301.61110	1.51962	1.49561	1.43970	1.40480
May	26	2023	301.64323	1.51979	1.49577	1.43985	1.40495
May	27	2023	301.67535	1.51995	1.49593	1.44000	1.40510
May	28	2023	301.70748	1.52011	1.49609	1.44016	1.40525
May	29	2023	301.73961	1.52027	1.49625	1.44031	1.40540
May	30	2023	301.77174	1.52043	1.49640	1.44046	1.40555
May	31	2023	301.80387	1.52060	1.49656	1.44062	1.40570
CPI-U (NSA) for:			January 2023 299.170	February 2023 300.840	March 2023 301.836		

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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	
May 1 2023	300.84000	1.39188	1.37376	1.33138	1.30851	
May 2 2023	300.87213	1.39203	1.37390	1.33152	1.30865	
May 3 2023	300.90426	1.39218	1.37405	1.33167	1.30879	
May 4 2023	300.93639	1.39232	1.37420	1.33181	1.30893	
May 5 2023	300.96852	1.39247	1.37434	1.33195	1.30907	
May 6 2023	301.00065	1.39262	1.37449	1.33209	1.30921	
May 7 2023	301.03277	1.39277	1.37464	1.33224	1.30934	
May 8 2023	301.06490	1.39292	1.37478	1.33238	1.30948	
May 9 2023	301.09703	1.39307	1.37493	1.33252	1.30962	
May 10 2023	301.12916	1.39322	1.37508	1.33266	1.30976	
May 11 2023	301.16129	1.39337	1.37522	1.33280	1.30990	
May 12 2023	301.19342	1.39351	1.37537	1.33295	1.31004	
May 13 2023	301.22555	1.39366	1.37552	1.33309	1.31018	
May 14 2023	301.25768	1.39381	1.37566	1.33323	1.31032	
May 15 2023	301.28981	1.39396	1.37581	1.33337	1.31046	
May 16 2023	301.32194	1.39411	1.37596	1.33352	1.31060	
May 17 2023	301.35406	1.39426	1.37610	1.33366	1.31074	
May 18 2023	301.38619	1.39441	1.37625	1.33380	1.31088	
May 19 2023	301.41832	1.39455	1.37640	1.33394	1.31102	
May 20 2023	301.45045	1.39470	1.37654	1.33408	1.31116	
May 21 2023	301.48258	1.39485	1.37669	1.33423	1.31130	
May 22 2023	301.51471	1.39500	1.37684	1.33437	1.31144	
May 23 2023	301.54684	1.39515	1.37698	1.33451	1.31158	
May 24 2023	301.57897	1.39530	1.37713	1.33465	1.31172	
May 25 2023	301.61110	1.39545	1.37728	1.33479	1.31186	
May 26 2023	301.64323	1.39560	1.37742	1.33494	1.31200	
May 27 2023	301.67535	1.39574	1.37757	1.33508	1.31214	
May 28 2023	301.70748	1.39589	1.37772	1.33522	1.31228	
May 29 2023	301.73961	1.39604	1.37786	1.33536	1.31242	
May 30 2023	301.77174	1.39619	1.37801	1.33551	1.31256	
May 31 2023	301.80387	1.39634	1.37816	1.33565	1.31270	
CPI-U (NSA) for:	January 2023	299.170	February 2023	300.840	March 2023	301.836

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May 2023

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-3/8% 10-Year TIPS Series D-2023 912828VM9 July 15, 2013 July 31, 2013 September 30, 2013 November 29, 2013	0-5/8% 10-Year TIPS Series A-2024 912828B25 January 15, 2014 January 31, 2014 March 31, 2014 May 30, 2014	1-3/8% 30-Year TIPS TIPS of February 2044 912810RF7 February 15, 2014 February 28, 2014 June 30, 2014 October 31, 2014	0-1/8% 10-Year TIPS Series D-2024 912828WU0 July 15, 2014 July 31, 2014 September 30, 2014 November 28, 2014
Maturity Date: Ref CPI on Dated Date:			July 15, 2023 232.71797	January 15, 2024 233.33058	February 15, 2044 233.05900	July 15, 2024 237.44594
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2023	300.84000	1.29272	1.28933	1.29083	1.26698	
May 2 2023	300.87213	1.29286	1.28947	1.29097	1.26712	
May 3 2023	300.90426	1.29300	1.28960	1.29111	1.26725	
May 4 2023	300.93639	1.29314	1.28974	1.29125	1.26739	
May 5 2023	300.96852	1.29328	1.28988	1.29138	1.26752	
May 6 2023	301.00065	1.29341	1.29002	1.29152	1.26766	
May 7 2023	301.03277	1.29355	1.29016	1.29166	1.26779	
May 8 2023	301.06490	1.29369	1.29029	1.29180	1.26793	
May 9 2023	301.09703	1.29383	1.29043	1.29193	1.26807	
May 10 2023	301.12916	1.29397	1.29057	1.29207	1.26820	
May 11 2023	301.16129	1.29410	1.29071	1.29221	1.26834	
May 12 2023	301.19342	1.29424	1.29084	1.29235	1.26847	
May 13 2023	301.22555	1.29438	1.29098	1.29249	1.26861	
May 14 2023	301.25768	1.29452	1.29112	1.29262	1.26874	
May 15 2023	301.28981	1.29466	1.29126	1.29276	1.26888	
May 16 2023	301.32194	1.29479	1.29139	1.29290	1.26901	
May 17 2023	301.35406	1.29493	1.29153	1.29304	1.26915	
May 18 2023	301.38619	1.29507	1.29167	1.29318	1.26928	
May 19 2023	301.41832	1.29521	1.29181	1.29331	1.26942	
May 20 2023	301.45045	1.29535	1.29195	1.29345	1.26955	
May 21 2023	301.48258	1.29548	1.29208	1.29359	1.26969	
May 22 2023	301.51471	1.29562	1.29222	1.29373	1.26982	
May 23 2023	301.54684	1.29576	1.29236	1.29386	1.26996	
May 24 2023	301.57897	1.29590	1.29250	1.29400	1.27010	
May 25 2023	301.61110	1.29604	1.29263	1.29414	1.27023	
May 26 2023	301.64323	1.29618	1.29277	1.29428	1.27037	
May 27 2023	301.67535	1.29631	1.29291	1.29442	1.27050	
May 28 2023	301.70748	1.29645	1.29305	1.29455	1.27064	
May 29 2023	301.73961	1.29659	1.29319	1.29469	1.27077	
May 30 2023	301.77174	1.29673	1.29332	1.29483	1.27091	
May 31 2023	301.80387	1.29687	1.29346	1.29497	1.27104	
CPI-U (NSA) for:	January 2023	299.170	February 2023	300.840	March 2023	301.836

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
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May 2023

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	0-3/8% 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
Maturity Date: Ref CPI on Dated Date:			January 15, 2025 236.85403	February 15, 2045 235.48150	July 15, 2025 237.14365	January 15, 2026 237.61129
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2023	300.84000	1.27015	1.27755	1.26860	1.26610	
May 2 2023	300.87213	1.27029	1.27769	1.26873	1.26624	
May 3 2023	300.90426	1.27042	1.27783	1.26887	1.26637	
May 4 2023	300.93639	1.27056	1.27796	1.26900	1.26651	
May 5 2023	300.96852	1.27069	1.27810	1.26914	1.26664	
May 6 2023	301.00065	1.27083	1.27823	1.26928	1.26678	
May 7 2023	301.03277	1.27096	1.27837	1.26941	1.26691	
May 8 2023	301.06490	1.27110	1.27851	1.26955	1.26705	
May 9 2023	301.09703	1.27123	1.27864	1.26968	1.26718	
May 10 2023	301.12916	1.27137	1.27878	1.26982	1.26732	
May 11 2023	301.16129	1.27151	1.27892	1.26995	1.26745	
May 12 2023	301.19342	1.27164	1.27905	1.27009	1.26759	
May 13 2023	301.22555	1.27178	1.27919	1.27022	1.26772	
May 14 2023	301.25768	1.27191	1.27933	1.27036	1.26786	
May 15 2023	301.28981	1.27205	1.27946	1.27049	1.26799	
May 16 2023	301.32194	1.27218	1.27960	1.27063	1.26813	
May 17 2023	301.35406	1.27232	1.27974	1.27077	1.26826	
May 18 2023	301.38619	1.27246	1.27987	1.27090	1.26840	
May 19 2023	301.41832	1.27259	1.28001	1.27104	1.26854	
May 20 2023	301.45045	1.27273	1.28014	1.27117	1.26867	
May 21 2023	301.48258	1.27286	1.28028	1.27131	1.26881	
May 22 2023	301.51471	1.27300	1.28042	1.27144	1.26894	
May 23 2023	301.54684	1.27313	1.28055	1.27158	1.26908	
May 24 2023	301.57897	1.27327	1.28069	1.27171	1.26921	
May 25 2023	301.61110	1.27340	1.28083	1.27185	1.26935	
May 26 2023	301.64323	1.27354	1.28096	1.27199	1.26948	
May 27 2023	301.67535	1.27368	1.28110	1.27212	1.26962	
May 28 2023	301.70748	1.27381	1.28124	1.27226	1.26975	
May 29 2023	301.73961	1.27395	1.28137	1.27239	1.26989	
May 30 2023	301.77174	1.27408	1.28151	1.27253	1.27002	
May 31 2023	301.80387	1.27422	1.28165	1.27266	1.27016	
CPI-U (NSA) for:	January 2023	299.170	February 2023	300.840	March 2023	301.836

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May 2023

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	0-3/8% 10-Year TIPS Series A-2027 912828V49 January 15, 2017 January 31, 2017 March 31, 2017 May 31, 2017	0-7/8% 30-Year TIPS TIPS of February 2047 912810RW0 February 15, 2017 February 28, 2017 June 30, 2017 October 31, 2017
Maturity Date: Ref CPI on Dated Date:			February 15, 2046 236.94448	July 15, 2026 239.70132	January 15, 2027 241.55919	February 15, 2047 241.39250
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2023	300.84000	1.26966	1.25506	1.24541	1.24627	
May 2 2023	300.87213	1.26980	1.25520	1.24554	1.24640	
May 3 2023	300.90426	1.26994	1.25533	1.24568	1.24654	
May 4 2023	300.93639	1.27007	1.25546	1.24581	1.24667	
May 5 2023	300.96852	1.27021	1.25560	1.24594	1.24680	
May 6 2023	301.00065	1.27034	1.25573	1.24607	1.24693	
May 7 2023	301.03277	1.27048	1.25587	1.24621	1.24707	
May 8 2023	301.06490	1.27061	1.25600	1.24634	1.24720	
May 9 2023	301.09703	1.27075	1.25613	1.24647	1.24733	
May 10 2023	301.12916	1.27088	1.25627	1.24661	1.24747	
May 11 2023	301.16129	1.27102	1.25640	1.24674	1.24760	
May 12 2023	301.19342	1.27116	1.25654	1.24687	1.24773	
May 13 2023	301.22555	1.27129	1.25667	1.24701	1.24787	
May 14 2023	301.25768	1.27143	1.25680	1.24714	1.24800	
May 15 2023	301.28981	1.27156	1.25694	1.24727	1.24813	
May 16 2023	301.32194	1.27170	1.25707	1.24740	1.24827	
May 17 2023	301.35406	1.27183	1.25721	1.24754	1.24840	
May 18 2023	301.38619	1.27197	1.25734	1.24767	1.24853	
May 19 2023	301.41832	1.27211	1.25747	1.24780	1.24866	
May 20 2023	301.45045	1.27224	1.25761	1.24794	1.24880	
May 21 2023	301.48258	1.27238	1.25774	1.24807	1.24893	
May 22 2023	301.51471	1.27251	1.25788	1.24820	1.24906	
May 23 2023	301.54684	1.27265	1.25801	1.24834	1.24920	
May 24 2023	301.57897	1.27278	1.25814	1.24847	1.24933	
May 25 2023	301.61110	1.27292	1.25828	1.24860	1.24946	
May 26 2023	301.64323	1.27305	1.25841	1.24873	1.24960	
May 27 2023	301.67535	1.27319	1.25855	1.24887	1.24973	
May 28 2023	301.70748	1.27333	1.25868	1.24900	1.24986	
May 29 2023	301.73961	1.27346	1.25881	1.24913	1.25000	
May 30 2023	301.77174	1.27360	1.25895	1.24927	1.25013	
May 31 2023	301.80387	1.27373	1.25908	1.24940	1.25026	
CPI-U (NSA) for:	January 2023	299.170	February 2023	300.840	March 2023	301.836

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Ref CPI and Index Ratios for
May 2023

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	0-3/4% 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:			July 15, 2027 244.61839	January 15, 2028 246.66571	February 15, 2048 246.59650	July 15, 2028 251.01658
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2023	300.84000	1.22983	1.21963	1.21997	1.19849	
May 2 2023	300.87213	1.22997	1.21976	1.22010	1.19861	
May 3 2023	300.90426	1.23010	1.21989	1.22023	1.19874	
May 4 2023	300.93639	1.23023	1.22002	1.22036	1.19887	
May 5 2023	300.96852	1.23036	1.22015	1.22049	1.19900	
May 6 2023	301.00065	1.23049	1.22028	1.22062	1.19913	
May 7 2023	301.03277	1.23062	1.22041	1.22075	1.19925	
May 8 2023	301.06490	1.23075	1.22054	1.22088	1.19938	
May 9 2023	301.09703	1.23088	1.22067	1.22101	1.19951	
May 10 2023	301.12916	1.23102	1.22080	1.22114	1.19964	
May 11 2023	301.16129	1.23115	1.22093	1.22127	1.19977	
May 12 2023	301.19342	1.23128	1.22106	1.22140	1.19989	
May 13 2023	301.22555	1.23141	1.22119	1.22153	1.20002	
May 14 2023	301.25768	1.23154	1.22132	1.22166	1.20015	
May 15 2023	301.28981	1.23167	1.22145	1.22179	1.20028	
May 16 2023	301.32194	1.23180	1.22158	1.22192	1.20041	
May 17 2023	301.35406	1.23194	1.22171	1.22205	1.20053	
May 18 2023	301.38619	1.23207	1.22184	1.22218	1.20066	
May 19 2023	301.41832	1.23220	1.22197	1.22231	1.20079	
May 20 2023	301.45045	1.23233	1.22210	1.22244	1.20092	
May 21 2023	301.48258	1.23246	1.22223	1.22257	1.20105	
May 22 2023	301.51471	1.23259	1.22236	1.22270	1.20117	
May 23 2023	301.54684	1.23272	1.22249	1.22284	1.20130	
May 24 2023	301.57897	1.23285	1.22262	1.22297	1.20143	
May 25 2023	301.61110	1.23299	1.22275	1.22310	1.20156	
May 26 2023	301.64323	1.23312	1.22288	1.22323	1.20169	
May 27 2023	301.67535	1.23325	1.22301	1.22336	1.20181	
May 28 2023	301.70748	1.23338	1.22314	1.22349	1.20194	
May 29 2023	301.73961	1.23351	1.22327	1.22362	1.20207	
May 30 2023	301.77174	1.23364	1.22340	1.22375	1.20220	
May 31 2023	301.80387	1.23377	1.22353	1.22388	1.20233	
CPI-U (NSA) for:	January 2023	299.170	February 2023	300.840	March 2023	301.836

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2023

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	0-1/4% 10-Year TIPS Series D-2029 9128287D6 July 15, 2019 July 31, 2019 September 30, 2019 November 29, 2019
Maturity Date: Ref CPI on Dated Date:			January 15, 2029 252.50248	February 15, 2049 251.63550	April 15, 2024 252.20853	July 15, 2029 255.79368
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2023	300.84000	1.19143	1.19554	1.19282	1.17610	
May 2 2023	300.87213	1.19156	1.19567	1.19295	1.17623	
May 3 2023	300.90426	1.19169	1.19579	1.19308	1.17636	
May 4 2023	300.93639	1.19182	1.19592	1.19320	1.17648	
May 5 2023	300.96852	1.19194	1.19605	1.19333	1.17661	
May 6 2023	301.00065	1.19207	1.19618	1.19346	1.17673	
May 7 2023	301.03277	1.19220	1.19630	1.19359	1.17686	
May 8 2023	301.06490	1.19232	1.19643	1.19371	1.17698	
May 9 2023	301.09703	1.19245	1.19656	1.19384	1.17711	
May 10 2023	301.12916	1.19258	1.19669	1.19397	1.17723	
May 11 2023	301.16129	1.19271	1.19682	1.19410	1.17736	
May 12 2023	301.19342	1.19283	1.19694	1.19422	1.17749	
May 13 2023	301.22555	1.19296	1.19707	1.19435	1.17761	
May 14 2023	301.25768	1.19309	1.19720	1.19448	1.17774	
May 15 2023	301.28981	1.19322	1.19733	1.19461	1.17786	
May 16 2023	301.32194	1.19334	1.19745	1.19473	1.17799	
May 17 2023	301.35406	1.19347	1.19758	1.19486	1.17811	
May 18 2023	301.38619	1.19360	1.19771	1.19499	1.17824	
May 19 2023	301.41832	1.19372	1.19784	1.19512	1.17837	
May 20 2023	301.45045	1.19385	1.19796	1.19524	1.17849	
May 21 2023	301.48258	1.19398	1.19809	1.19537	1.17862	
May 22 2023	301.51471	1.19411	1.19822	1.19550	1.17874	
May 23 2023	301.54684	1.19423	1.19835	1.19563	1.17887	
May 24 2023	301.57897	1.19436	1.19848	1.19575	1.17899	
May 25 2023	301.61110	1.19449	1.19860	1.19588	1.17912	
May 26 2023	301.64323	1.19461	1.19873	1.19601	1.17924	
May 27 2023	301.67535	1.19474	1.19886	1.19613	1.17937	
May 28 2023	301.70748	1.19487	1.19899	1.19626	1.17950	
May 29 2023	301.73961	1.19500	1.19911	1.19639	1.17962	
May 30 2023	301.77174	1.19512	1.19924	1.19652	1.17975	
May 31 2023	301.80387	1.19525	1.19937	1.19664	1.17987	
CPI-U (NSA) for:	January 2023	299.170	February 2023	300.840	March 2023	301.836

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2023

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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 912828ZJ7 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	0-1/8% 5-Year TIPS Series X-2025 912828ZJ2 April 15, 2020 April 30, 2020 June 30, 2020 July 13, 2020
Maturity Date: Ref CPI on Dated Date:			October 15, 2024 256.56513	January 15, 2030 257.28368	February 15, 2050 257.09503	April 15, 2025 258.30093
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2023	300.84000	1.17257	1.16929	1.17015	1.16469	
May 2 2023	300.87213	1.17269	1.16942	1.17028	1.16481	
May 3 2023	300.90426	1.17282	1.16954	1.17040	1.16494	
May 4 2023	300.93639	1.17294	1.16967	1.17053	1.16506	
May 5 2023	300.96852	1.17307	1.16979	1.17065	1.16519	
May 6 2023	301.00065	1.17319	1.16992	1.17078	1.16531	
May 7 2023	301.03277	1.17332	1.17004	1.17090	1.16543	
May 8 2023	301.06490	1.17344	1.17017	1.17103	1.16556	
May 9 2023	301.09703	1.17357	1.17029	1.17115	1.16568	
May 10 2023	301.12916	1.17369	1.17042	1.17128	1.16581	
May 11 2023	301.16129	1.17382	1.17054	1.17140	1.16593	
May 12 2023	301.19342	1.17395	1.17067	1.17153	1.16606	
May 13 2023	301.22555	1.17407	1.17079	1.17165	1.16618	
May 14 2023	301.25768	1.17420	1.17092	1.17178	1.16631	
May 15 2023	301.28981	1.17432	1.17104	1.17190	1.16643	
May 16 2023	301.32194	1.17445	1.17117	1.17203	1.16655	
May 17 2023	301.35406	1.17457	1.17129	1.17215	1.16668	
May 18 2023	301.38619	1.17470	1.17142	1.17228	1.16680	
May 19 2023	301.41832	1.17482	1.17154	1.17240	1.16693	
May 20 2023	301.45045	1.17495	1.17167	1.17253	1.16705	
May 21 2023	301.48258	1.17507	1.17179	1.17265	1.16718	
May 22 2023	301.51471	1.17520	1.17192	1.17278	1.16730	
May 23 2023	301.54684	1.17532	1.17204	1.17290	1.16742	
May 24 2023	301.57897	1.17545	1.17217	1.17303	1.16755	
May 25 2023	301.61110	1.17557	1.17229	1.17315	1.16767	
May 26 2023	301.64323	1.17570	1.17241	1.17328	1.16780	
May 27 2023	301.67535	1.17582	1.17254	1.17340	1.16792	
May 28 2023	301.70748	1.17595	1.17266	1.17353	1.16805	
May 29 2023	301.73961	1.17607	1.17279	1.17365	1.16817	
May 30 2023	301.77174	1.17620	1.17291	1.17378	1.16830	
May 31 2023	301.80387	1.17632	1.17304	1.17390	1.16842	
CPI-U (NSA) for:			January 2023 299.170	February 2023 300.840	March 2023 301.836	

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2023

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	0-1/8% 30-Year TIPS TIPS of February 2051 912810SV1 February 15, 2021 February 26, 2021 August 31, 2021
Maturity Date: Ref CPI on Dated Date:			July 15, 2030 256.39126	October 15, 2025 259.46997	January 15, 2031 260.31619	February 15, 2051 260.35150
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2023	300.84000	1.17336	1.15944	1.15567	1.15551	
May 2 2023	300.87213	1.17349	1.15956	1.15579	1.15564	
May 3 2023	300.90426	1.17361	1.15969	1.15592	1.15576	
May 4 2023	300.93639	1.17374	1.15981	1.15604	1.15588	
May 5 2023	300.96852	1.17386	1.15994	1.15617	1.15601	
May 6 2023	301.00065	1.17399	1.16006	1.15629	1.15613	
May 7 2023	301.03277	1.17411	1.16018	1.15641	1.15626	
May 8 2023	301.06490	1.17424	1.16031	1.15654	1.15638	
May 9 2023	301.09703	1.17437	1.16043	1.15666	1.15650	
May 10 2023	301.12916	1.17449	1.16055	1.15678	1.15663	
May 11 2023	301.16129	1.17462	1.16068	1.15691	1.15675	
May 12 2023	301.19342	1.17474	1.16080	1.15703	1.15687	
May 13 2023	301.22555	1.17487	1.16093	1.15715	1.15700	
May 14 2023	301.25768	1.17499	1.16105	1.15728	1.15712	
May 15 2023	301.28981	1.17512	1.16117	1.15740	1.15724	
May 16 2023	301.32194	1.17524	1.16130	1.15752	1.15737	
May 17 2023	301.35406	1.17537	1.16142	1.15765	1.15749	
May 18 2023	301.38619	1.17549	1.16155	1.15777	1.15761	
May 19 2023	301.41832	1.17562	1.16167	1.15789	1.15774	
May 20 2023	301.45045	1.17574	1.16179	1.15802	1.15786	
May 21 2023	301.48258	1.17587	1.16192	1.15814	1.15798	
May 22 2023	301.51471	1.17599	1.16204	1.15826	1.15811	
May 23 2023	301.54684	1.17612	1.16216	1.15839	1.15823	
May 24 2023	301.57897	1.17625	1.16229	1.15851	1.15835	
May 25 2023	301.61110	1.17637	1.16241	1.15863	1.15848	
May 26 2023	301.64323	1.17650	1.16254	1.15876	1.15860	
May 27 2023	301.67535	1.17662	1.16266	1.15888	1.15872	
May 28 2023	301.70748	1.17675	1.16278	1.15900	1.15885	
May 29 2023	301.73961	1.17687	1.16291	1.15913	1.15897	
May 30 2023	301.77174	1.17700	1.16303	1.15925	1.15909	
May 31 2023	301.80387	1.17712	1.16316	1.15937	1.15922	
CPI-U (NSA) for:	January 2023	299.170	February 2023	300.840	March 2023	301.836

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2023

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	0-1/8% 10-Year TIPS Series A-2032 91282CDX6 January 15, 2022 January 31, 2022 March 31, 2022 May 31, 2022
Maturity Date: Ref CPI on Dated Date:			April 15, 2026 262.25027	July 15, 2031 268.02090	October 15, 2026 273.25771	January 15, 2032 277.20274
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2023	300.84000	1.14715	1.12245	1.10094	1.08527	
May 2 2023	300.87213	1.14727	1.12257	1.10106	1.08539	
May 3 2023	300.90426	1.14739	1.12269	1.10117	1.08550	
May 4 2023	300.93639	1.14752	1.12281	1.10129	1.08562	
May 5 2023	300.96852	1.14764	1.12293	1.10141	1.08573	
May 6 2023	301.00065	1.14776	1.12305	1.10153	1.08585	
May 7 2023	301.03277	1.14788	1.12317	1.10164	1.08597	
May 8 2023	301.06490	1.14801	1.12329	1.10176	1.08608	
May 9 2023	301.09703	1.14813	1.12341	1.10188	1.08620	
May 10 2023	301.12916	1.14825	1.12353	1.10200	1.08631	
May 11 2023	301.16129	1.14837	1.12365	1.10211	1.08643	
May 12 2023	301.19342	1.14850	1.12377	1.10223	1.08655	
May 13 2023	301.22555	1.14862	1.12389	1.10235	1.08666	
May 14 2023	301.25768	1.14874	1.12401	1.10247	1.08678	
May 15 2023	301.28981	1.14886	1.12413	1.10258	1.08689	
May 16 2023	301.32194	1.14899	1.12425	1.10270	1.08701	
May 17 2023	301.35406	1.14911	1.12437	1.10282	1.08713	
May 18 2023	301.38619	1.14923	1.12449	1.10294	1.08724	
May 19 2023	301.41832	1.14935	1.12461	1.10306	1.08736	
May 20 2023	301.45045	1.14948	1.12473	1.10317	1.08747	
May 21 2023	301.48258	1.14960	1.12485	1.10329	1.08759	
May 22 2023	301.51471	1.14972	1.12497	1.10341	1.08770	
May 23 2023	301.54684	1.14984	1.12509	1.10353	1.08782	
May 24 2023	301.57897	1.14997	1.12521	1.10364	1.08794	
May 25 2023	301.61110	1.15009	1.12533	1.10376	1.08805	
May 26 2023	301.64323	1.15021	1.12545	1.10388	1.08817	
May 27 2023	301.67535	1.15033	1.12557	1.10400	1.08828	
May 28 2023	301.70748	1.15046	1.12569	1.10411	1.08840	
May 29 2023	301.73961	1.15058	1.12581	1.10423	1.08852	
May 30 2023	301.77174	1.15070	1.12593	1.10435	1.08863	
May 31 2023	301.80387	1.15082	1.12605	1.10447	1.08875	
CPI-U (NSA) for:	January 2023	299.170	February 2023	300.840	March 2023	301.836

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2023

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	1-5/8% 5-Year TIPS Series AE-2027 91282CFR7 October 15, 2022 October 31, 2022 December 30, 2022
Maturity Date: Ref CPI on Dated Date:			February 15, 2052 278.37500	April 15, 2027 282.34640	July 15, 2032 290.54829	October 15, 2027 296.22858
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
May 1 2023	300.84000	1.08070	1.06550	1.03542	1.01557	
May 2 2023	300.87213	1.08082	1.06561	1.03553	1.01568	
May 3 2023	300.90426	1.08093	1.06573	1.03564	1.01578	
May 4 2023	300.93639	1.08105	1.06584	1.03575	1.01589	
May 5 2023	300.96852	1.08116	1.06595	1.03586	1.01600	
May 6 2023	301.00065	1.08128	1.06607	1.03597	1.01611	
May 7 2023	301.03277	1.08139	1.06618	1.03609	1.01622	
May 8 2023	301.06490	1.08151	1.06630	1.03620	1.01633	
May 9 2023	301.09703	1.08162	1.06641	1.03631	1.01643	
May 10 2023	301.12916	1.08174	1.06652	1.03642	1.01654	
May 11 2023	301.16129	1.08185	1.06664	1.03653	1.01665	
May 12 2023	301.19342	1.08197	1.06675	1.03664	1.01676	
May 13 2023	301.22555	1.08209	1.06687	1.03675	1.01687	
May 14 2023	301.25768	1.08220	1.06698	1.03686	1.01698	
May 15 2023	301.28981	1.08232	1.06709	1.03697	1.01709	
May 16 2023	301.32194	1.08243	1.06721	1.03708	1.01719	
May 17 2023	301.35406	1.08255	1.06732	1.03719	1.01730	
May 18 2023	301.38619	1.08266	1.06743	1.03730	1.01741	
May 19 2023	301.41832	1.08278	1.06755	1.03741	1.01752	
May 20 2023	301.45045	1.08289	1.06766	1.03752	1.01763	
May 21 2023	301.48258	1.08301	1.06778	1.03763	1.01774	
May 22 2023	301.51471	1.08312	1.06789	1.03774	1.01784	
May 23 2023	301.54684	1.08324	1.06800	1.03785	1.01795	
May 24 2023	301.57897	1.08336	1.06812	1.03797	1.01806	
May 25 2023	301.61110	1.08347	1.06823	1.03808	1.01817	
May 26 2023	301.64323	1.08359	1.06834	1.03819	1.01828	
May 27 2023	301.67535	1.08370	1.06846	1.03830	1.01839	
May 28 2023	301.70748	1.08382	1.06857	1.03841	1.01850	
May 29 2023	301.73961	1.08393	1.06869	1.03852	1.01860	
May 30 2023	301.77174	1.08405	1.06880	1.03863	1.01871	
May 31 2023	301.80387	1.08416	1.06891	1.03874	1.01882	
CPI-U (NSA) for:	January 2023	299.170	February 2023	300.840	March 2023	301.836

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
May 2023

Security:			1-1/8% 10-Year TIPS	1-1/2% 30-Year TIPS		
Description:			Series A-2033	TIPS of February 2053		
CUSIP Number:			91282CGK1	912810TP3		
Dated Date:			January 15, 2023	February 15, 2023		
Original Issue Date:			January 31, 2023	February 28, 2023		
Additional Issue Date(s):			March 31, 2023			
Maturity Date:			January 15, 2033	February 15, 2053		
Ref CPI on Dated Date:			297.87606	297.25400		
Date			Ref CPI	Index Ratio	Index Ratio	
May	1	2023	300.84000	1.00995	1.01206	
May	2	2023	300.87213	1.01006	1.01217	
May	3	2023	300.90426	1.01017	1.01228	
May	4	2023	300.93639	1.01027	1.01239	
May	5	2023	300.96852	1.01038	1.01250	
May	6	2023	301.00065	1.01049	1.01260	
May	7	2023	301.03277	1.01060	1.01271	
May	8	2023	301.06490	1.01071	1.01282	
May	9	2023	301.09703	1.01081	1.01293	
May	10	2023	301.12916	1.01092	1.01304	
May	11	2023	301.16129	1.01103	1.01314	
May	12	2023	301.19342	1.01114	1.01325	
May	13	2023	301.22555	1.01124	1.01336	
May	14	2023	301.25768	1.01135	1.01347	
May	15	2023	301.28981	1.01146	1.01358	
May	16	2023	301.32194	1.01157	1.01369	
May	17	2023	301.35406	1.01168	1.01379	
May	18	2023	301.38619	1.01178	1.01390	
May	19	2023	301.41832	1.01189	1.01401	
May	20	2023	301.45045	1.01200	1.01412	
May	21	2023	301.48258	1.01211	1.01423	
May	22	2023	301.51471	1.01222	1.01433	
May	23	2023	301.54684	1.01232	1.01444	
May	24	2023	301.57897	1.01243	1.01455	
May	25	2023	301.61110	1.01254	1.01466	
May	26	2023	301.64323	1.01265	1.01477	
May	27	2023	301.67535	1.01275	1.01487	
May	28	2023	301.70748	1.01286	1.01498	
May	29	2023	301.73961	1.01297	1.01509	
May	30	2023	301.77174	1.01308	1.01520	
May	31	2023	301.80387	1.01319	1.01531	
CPI-U (NSA) for:			January 2023	299.170	February 2023	300.840
					March 2023	301.836