

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
December 2022

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	
December 1 2022	296.80800	1.83509	1.80547	1.67216	1.57461	
December 2 2022	296.84684	1.83533	1.80571	1.67238	1.57481	
December 3 2022	296.88568	1.83557	1.80595	1.67260	1.57502	
December 4 2022	296.92452	1.83581	1.80618	1.67281	1.57522	
December 5 2022	296.96335	1.83605	1.80642	1.67303	1.57543	
December 6 2022	297.00219	1.83629	1.80666	1.67325	1.57564	
December 7 2022	297.04103	1.83653	1.80689	1.67347	1.57584	
December 8 2022	297.07987	1.83677	1.80713	1.67369	1.57605	
December 9 2022	297.11871	1.83701	1.80736	1.67391	1.57625	
December 10 2022	297.15755	1.83725	1.80760	1.67413	1.57646	
December 11 2022	297.19639	1.83749	1.80784	1.67435	1.57667	
December 12 2022	297.23523	1.83773	1.80807	1.67456	1.57687	
December 13 2022	297.27406	1.83797	1.80831	1.67478	1.57708	
December 14 2022	297.31290	1.83822	1.80855	1.67500	1.57728	
December 15 2022	297.35174	1.83846	1.80878	1.67522	1.57749	
December 16 2022	297.39058	1.83870	1.80902	1.67544	1.57770	
December 17 2022	297.42942	1.83894	1.80925	1.67566	1.57790	
December 18 2022	297.46826	1.83918	1.80949	1.67588	1.57811	
December 19 2022	297.50710	1.83942	1.80973	1.67610	1.57831	
December 20 2022	297.54594	1.83966	1.80996	1.67632	1.57852	
December 21 2022	297.58477	1.83990	1.81020	1.67653	1.57873	
December 22 2022	297.62361	1.84014	1.81044	1.67675	1.57893	
December 23 2022	297.66245	1.84038	1.81067	1.67697	1.57914	
December 24 2022	297.70129	1.84062	1.81091	1.67719	1.57934	
December 25 2022	297.74013	1.84086	1.81114	1.67741	1.57955	
December 26 2022	297.77897	1.84110	1.81138	1.67763	1.57976	
December 27 2022	297.81781	1.84134	1.81162	1.67785	1.57996	
December 28 2022	297.85665	1.84158	1.81185	1.67807	1.58017	
December 29 2022	297.89548	1.84182	1.81209	1.67828	1.58037	
December 30 2022	297.93432	1.84206	1.81233	1.67850	1.58058	
December 31 2022	297.97316	1.84230	1.81256	1.67872	1.58079	
CPI-U (NSA) for:			August 2022 296.171	September 2022 296.808	October 2022 298.012	

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
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December 2022

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	
December 1 2022	296.80800	1.49542	1.47179	1.41677	1.38243	
December 2 2022	296.84684	1.49562	1.47198	1.41695	1.38261	
December 3 2022	296.88568	1.49582	1.47218	1.41714	1.38279	
December 4 2022	296.92452	1.49601	1.47237	1.41732	1.38298	
December 5 2022	296.96335	1.49621	1.47256	1.41751	1.38316	
December 6 2022	297.00219	1.49640	1.47275	1.41770	1.38334	
December 7 2022	297.04103	1.49660	1.47295	1.41788	1.38352	
December 8 2022	297.07987	1.49679	1.47314	1.41807	1.38370	
December 9 2022	297.11871	1.49699	1.47333	1.41825	1.38388	
December 10 2022	297.15755	1.49719	1.47352	1.41844	1.38406	
December 11 2022	297.19639	1.49738	1.47372	1.41862	1.38424	
December 12 2022	297.23523	1.49758	1.47391	1.41881	1.38442	
December 13 2022	297.27406	1.49777	1.47410	1.41899	1.38460	
December 14 2022	297.31290	1.49797	1.47429	1.41918	1.38478	
December 15 2022	297.35174	1.49816	1.47449	1.41936	1.38497	
December 16 2022	297.39058	1.49836	1.47468	1.41955	1.38515	
December 17 2022	297.42942	1.49856	1.47487	1.41973	1.38533	
December 18 2022	297.46826	1.49875	1.47506	1.41992	1.38551	
December 19 2022	297.50710	1.49895	1.47526	1.42011	1.38569	
December 20 2022	297.54594	1.49914	1.47545	1.42029	1.38587	
December 21 2022	297.58477	1.49934	1.47564	1.42048	1.38605	
December 22 2022	297.62361	1.49953	1.47584	1.42066	1.38623	
December 23 2022	297.66245	1.49973	1.47603	1.42085	1.38641	
December 24 2022	297.70129	1.49993	1.47622	1.42103	1.38659	
December 25 2022	297.74013	1.50012	1.47641	1.42122	1.38677	
December 26 2022	297.77897	1.50032	1.47661	1.42140	1.38696	
December 27 2022	297.81781	1.50051	1.47680	1.42159	1.38714	
December 28 2022	297.85665	1.50071	1.47699	1.42177	1.38732	
December 29 2022	297.89548	1.50090	1.47718	1.42196	1.38750	
December 30 2022	297.93432	1.50110	1.47738	1.42214	1.38768	
December 31 2022	297.97316	1.50130	1.47757	1.42233	1.38786	
CPI-U (NSA) for:			August 2022 296.171	September 2022 296.808	October 2022 298.012	

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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	0-1/8% 10-Year TIPS Series A-2023 912828UH1 January 15, 2013 January 31, 2013 March 28, 2013 May 31, 2013
Maturity Date: Ref CPI on Dated Date:			February 15, 2040 216.13950	February 15, 2041 218.99100	February 15, 2042 225.96062	January 15, 2023 230.82203
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
December 1 2022	296.80800	1.37322	1.35534	1.31354	1.28587	
December 2 2022	296.84684	1.37340	1.35552	1.31371	1.28604	
December 3 2022	296.88568	1.37358	1.35570	1.31388	1.28621	
December 4 2022	296.92452	1.37376	1.35588	1.31405	1.28638	
December 5 2022	296.96335	1.37394	1.35605	1.31423	1.28655	
December 6 2022	297.00219	1.37412	1.35623	1.31440	1.28672	
December 7 2022	297.04103	1.37430	1.35641	1.31457	1.28688	
December 8 2022	297.07987	1.37448	1.35658	1.31474	1.28705	
December 9 2022	297.11871	1.37466	1.35676	1.31491	1.28722	
December 10 2022	297.15755	1.37484	1.35694	1.31509	1.28739	
December 11 2022	297.19639	1.37502	1.35712	1.31526	1.28756	
December 12 2022	297.23523	1.37520	1.35729	1.31543	1.28772	
December 13 2022	297.27406	1.37538	1.35747	1.31560	1.28789	
December 14 2022	297.31290	1.37556	1.35765	1.31577	1.28806	
December 15 2022	297.35174	1.37574	1.35783	1.31594	1.28823	
December 16 2022	297.39058	1.37592	1.35800	1.31612	1.28840	
December 17 2022	297.42942	1.37610	1.35818	1.31629	1.28857	
December 18 2022	297.46826	1.37628	1.35836	1.31646	1.28873	
December 19 2022	297.50710	1.37646	1.35854	1.31663	1.28890	
December 20 2022	297.54594	1.37664	1.35871	1.31680	1.28907	
December 21 2022	297.58477	1.37682	1.35889	1.31698	1.28924	
December 22 2022	297.62361	1.37700	1.35907	1.31715	1.28941	
December 23 2022	297.66245	1.37718	1.35925	1.31732	1.28958	
December 24 2022	297.70129	1.37736	1.35942	1.31749	1.28974	
December 25 2022	297.74013	1.37754	1.35960	1.31766	1.28991	
December 26 2022	297.77897	1.37772	1.35978	1.31784	1.29008	
December 27 2022	297.81781	1.37790	1.35995	1.31801	1.29025	
December 28 2022	297.85665	1.37808	1.36013	1.31818	1.29042	
December 29 2022	297.89548	1.37826	1.36031	1.31835	1.29059	
December 30 2022	297.93432	1.37844	1.36049	1.31852	1.29075	
December 31 2022	297.97316	1.37862	1.36066	1.31870	1.29092	
CPI-U (NSA) for:			August 2022 296.171	September 2022 296.808	October 2022 298.012	

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Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-5/8% 30-Year TIPS TIPS of February 2043 912810RA8 February 15, 2013 February 28, 2013 June 28, 2013 October 31, 2013	0-3/8% 10-Year TIPS Series D-2023 912828VM9 July 15, 2013 July 31, 2013 September 30, 2013 November 29, 2013	0-5/8% 10-Year TIPS Series A-2024 912828B25 January 15, 2014 January 31, 2014 March 31, 2014 May 30, 2014	1-3/8% 30-Year TIPS TIPS of February 2044 912810RF7 February 15, 2014 February 28, 2014 June 30, 2014 October 31, 2014
Maturity Date: Ref CPI on Dated Date:			February 15, 2043 229.91100	July 15, 2023 232.71797	January 15, 2024 233.33058	February 15, 2044 233.05900
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
December 1 2022	296.80800	1.29097	1.27540	1.27205	1.27353	
December 2 2022	296.84684	1.29114	1.27556	1.27222	1.27370	
December 3 2022	296.88568	1.29131	1.27573	1.27238	1.27386	
December 4 2022	296.92452	1.29148	1.27590	1.27255	1.27403	
December 5 2022	296.96335	1.29164	1.27607	1.27272	1.27420	
December 6 2022	297.00219	1.29181	1.27623	1.27288	1.27436	
December 7 2022	297.04103	1.29198	1.27640	1.27305	1.27453	
December 8 2022	297.07987	1.29215	1.27657	1.27321	1.27470	
December 9 2022	297.11871	1.29232	1.27673	1.27338	1.27486	
December 10 2022	297.15755	1.29249	1.27690	1.27355	1.27503	
December 11 2022	297.19639	1.29266	1.27707	1.27371	1.27520	
December 12 2022	297.23523	1.29283	1.27723	1.27388	1.27536	
December 13 2022	297.27406	1.29300	1.27740	1.27405	1.27553	
December 14 2022	297.31290	1.29317	1.27757	1.27421	1.27570	
December 15 2022	297.35174	1.29333	1.27773	1.27438	1.27586	
December 16 2022	297.39058	1.29350	1.27790	1.27455	1.27603	
December 17 2022	297.42942	1.29367	1.27807	1.27471	1.27620	
December 18 2022	297.46826	1.29384	1.27824	1.27488	1.27636	
December 19 2022	297.50710	1.29401	1.27840	1.27505	1.27653	
December 20 2022	297.54594	1.29418	1.27857	1.27521	1.27670	
December 21 2022	297.58477	1.29435	1.27874	1.27538	1.27686	
December 22 2022	297.62361	1.29452	1.27890	1.27554	1.27703	
December 23 2022	297.66245	1.29469	1.27907	1.27571	1.27720	
December 24 2022	297.70129	1.29485	1.27924	1.27588	1.27736	
December 25 2022	297.74013	1.29502	1.27940	1.27604	1.27753	
December 26 2022	297.77897	1.29519	1.27957	1.27621	1.27770	
December 27 2022	297.81781	1.29536	1.27974	1.27638	1.27786	
December 28 2022	297.85665	1.29553	1.27990	1.27654	1.27803	
December 29 2022	297.89548	1.29570	1.28007	1.27671	1.27820	
December 30 2022	297.93432	1.29587	1.28024	1.27688	1.27836	
December 31 2022	297.97316	1.29604	1.28040	1.27704	1.27853	
CPI-U (NSA) for:	August 2022	296.171	September 2022	296.808	October 2022	298.012

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
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Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	0-3/8% 10-Year TIPS Series D-2025 912828XL9 July 15, 2015 July 31, 2015 September 30, 2015 November 30, 2015
Maturity Date: Ref CPI on Dated Date:			July 15, 2024 237.44594	January 15, 2025 236.85403	February 15, 2045 235.48150	July 15, 2025 237.14365
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
December 1 2022	296.80800	1.25000	1.25313	1.26043	1.25160	
December 2 2022	296.84684	1.25017	1.25329	1.26060	1.25176	
December 3 2022	296.88568	1.25033	1.25345	1.26076	1.25192	
December 4 2022	296.92452	1.25049	1.25362	1.26093	1.25209	
December 5 2022	296.96335	1.25066	1.25378	1.26109	1.25225	
December 6 2022	297.00219	1.25082	1.25395	1.26125	1.25241	
December 7 2022	297.04103	1.25098	1.25411	1.26142	1.25258	
December 8 2022	297.07987	1.25115	1.25427	1.26158	1.25274	
December 9 2022	297.11871	1.25131	1.25444	1.26175	1.25291	
December 10 2022	297.15755	1.25147	1.25460	1.26191	1.25307	
December 11 2022	297.19639	1.25164	1.25477	1.26208	1.25323	
December 12 2022	297.23523	1.25180	1.25493	1.26224	1.25340	
December 13 2022	297.27406	1.25197	1.25509	1.26241	1.25356	
December 14 2022	297.31290	1.25213	1.25526	1.26257	1.25372	
December 15 2022	297.35174	1.25229	1.25542	1.26274	1.25389	
December 16 2022	297.39058	1.25246	1.25559	1.26290	1.25405	
December 17 2022	297.42942	1.25262	1.25575	1.26307	1.25422	
December 18 2022	297.46826	1.25278	1.25591	1.26323	1.25438	
December 19 2022	297.50710	1.25295	1.25608	1.26340	1.25454	
December 20 2022	297.54594	1.25311	1.25624	1.26356	1.25471	
December 21 2022	297.58477	1.25327	1.25641	1.26373	1.25487	
December 22 2022	297.62361	1.25344	1.25657	1.26389	1.25504	
December 23 2022	297.66245	1.25360	1.25673	1.26406	1.25520	
December 24 2022	297.70129	1.25376	1.25690	1.26422	1.25536	
December 25 2022	297.74013	1.25393	1.25706	1.26439	1.25553	
December 26 2022	297.77897	1.25409	1.25723	1.26455	1.25569	
December 27 2022	297.81781	1.25426	1.25739	1.26472	1.25585	
December 28 2022	297.85665	1.25442	1.25755	1.26488	1.25602	
December 29 2022	297.89548	1.25458	1.25772	1.26505	1.25618	
December 30 2022	297.93432	1.25475	1.25788	1.26521	1.25635	
December 31 2022	297.97316	1.25491	1.25805	1.26538	1.25651	
CPI-U (NSA) for:	August 2022	296.171	September 2022	296.808	October 2022	298.012

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Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-5/8% 10-Year TIPS Series A-2026 912828N71 January 15, 2016 January 29, 2016 March 31, 2016 May 31, 2016	1% 30-Year TIPS TIPS of February 2046 912810RR1 February 15, 2016 February 29, 2016 June 30, 2016 October 31, 2016	0-1/8% 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
Maturity Date: Ref CPI on Dated Date:			January 15, 2026 237.61129	February 15, 2046 236.94448	July 15, 2026 239.70132	January 15, 2027 241.55919
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
December 1 2022	296.80800	1.24913	1.25265	1.23824	1.22872	
December 2 2022	296.84684	1.24930	1.25281	1.23840	1.22888	
December 3 2022	296.88568	1.24946	1.25298	1.23857	1.22904	
December 4 2022	296.92452	1.24962	1.25314	1.23873	1.22920	
December 5 2022	296.96335	1.24979	1.25330	1.23889	1.22936	
December 6 2022	297.00219	1.24995	1.25347	1.23905	1.22952	
December 7 2022	297.04103	1.25011	1.25363	1.23921	1.22968	
December 8 2022	297.07987	1.25028	1.25380	1.23938	1.22984	
December 9 2022	297.11871	1.25044	1.25396	1.23954	1.23000	
December 10 2022	297.15755	1.25060	1.25412	1.23970	1.23016	
December 11 2022	297.19639	1.25077	1.25429	1.23986	1.23033	
December 12 2022	297.23523	1.25093	1.25445	1.24002	1.23049	
December 13 2022	297.27406	1.25109	1.25461	1.24019	1.23065	
December 14 2022	297.31290	1.25126	1.25478	1.24035	1.23081	
December 15 2022	297.35174	1.25142	1.25494	1.24051	1.23097	
December 16 2022	297.39058	1.25158	1.25511	1.24067	1.23113	
December 17 2022	297.42942	1.25175	1.25527	1.24083	1.23129	
December 18 2022	297.46826	1.25191	1.25543	1.24100	1.23145	
December 19 2022	297.50710	1.25207	1.25560	1.24116	1.23161	
December 20 2022	297.54594	1.25224	1.25576	1.24132	1.23177	
December 21 2022	297.58477	1.25240	1.25593	1.24148	1.23193	
December 22 2022	297.62361	1.25257	1.25609	1.24164	1.23209	
December 23 2022	297.66245	1.25273	1.25625	1.24181	1.23225	
December 24 2022	297.70129	1.25289	1.25642	1.24197	1.23242	
December 25 2022	297.74013	1.25306	1.25658	1.24213	1.23258	
December 26 2022	297.77897	1.25322	1.25675	1.24229	1.23274	
December 27 2022	297.81781	1.25338	1.25691	1.24245	1.23290	
December 28 2022	297.85665	1.25355	1.25707	1.24262	1.23306	
December 29 2022	297.89548	1.25371	1.25724	1.24278	1.23322	
December 30 2022	297.93432	1.25387	1.25740	1.24294	1.23338	
December 31 2022	297.97316	1.25404	1.25757	1.24310	1.23354	
CPI-U (NSA) for:	August 2022	296.171	September 2022	296.808	October 2022	298.012

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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):			0-7/8% 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 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
Maturity Date: Ref CPI on Dated Date:			February 15, 2047 241.39250	July 15, 2027 244.61839	January 15, 2028 246.66571	February 15, 2048 246.59650
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
December 1 2022	296.80800	1.22957	1.21335	1.20328	1.20362	
December 2 2022	296.84684	1.22973	1.21351	1.20344	1.20378	
December 3 2022	296.88568	1.22989	1.21367	1.20360	1.20393	
December 4 2022	296.92452	1.23005	1.21383	1.20375	1.20409	
December 5 2022	296.96335	1.23021	1.21399	1.20391	1.20425	
December 6 2022	297.00219	1.23037	1.21414	1.20407	1.20441	
December 7 2022	297.04103	1.23053	1.21430	1.20423	1.20456	
December 8 2022	297.07987	1.23069	1.21446	1.20438	1.20472	
December 9 2022	297.11871	1.23085	1.21462	1.20454	1.20488	
December 10 2022	297.15755	1.23101	1.21478	1.20470	1.20504	
December 11 2022	297.19639	1.23117	1.21494	1.20485	1.20519	
December 12 2022	297.23523	1.23134	1.21510	1.20501	1.20535	
December 13 2022	297.27406	1.23150	1.21526	1.20517	1.20551	
December 14 2022	297.31290	1.23166	1.21542	1.20533	1.20567	
December 15 2022	297.35174	1.23182	1.21557	1.20548	1.20582	
December 16 2022	297.39058	1.23198	1.21573	1.20564	1.20598	
December 17 2022	297.42942	1.23214	1.21589	1.20580	1.20614	
December 18 2022	297.46826	1.23230	1.21605	1.20596	1.20630	
December 19 2022	297.50710	1.23246	1.21621	1.20611	1.20645	
December 20 2022	297.54594	1.23262	1.21637	1.20627	1.20661	
December 21 2022	297.58477	1.23278	1.21653	1.20643	1.20677	
December 22 2022	297.62361	1.23294	1.21669	1.20659	1.20693	
December 23 2022	297.66245	1.23311	1.21684	1.20674	1.20708	
December 24 2022	297.70129	1.23327	1.21700	1.20690	1.20724	
December 25 2022	297.74013	1.23343	1.21716	1.20706	1.20740	
December 26 2022	297.77897	1.23359	1.21732	1.20722	1.20756	
December 27 2022	297.81781	1.23375	1.21748	1.20737	1.20771	
December 28 2022	297.85665	1.23391	1.21764	1.20753	1.20787	
December 29 2022	297.89548	1.23407	1.21780	1.20769	1.20803	
December 30 2022	297.93432	1.23423	1.21796	1.20785	1.20819	
December 31 2022	297.97316	1.23439	1.21811	1.20800	1.20834	
CPI-U (NSA) for:	August 2022	296.171	September 2022	296.808	October 2022	298.012

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
December 2022

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			0-5/8% 5-Year TIPS Series X-2023 9128284H0 April 15, 2018 April 30, 2018 August 31, 2018 December 31, 2018	0-3/4% 10-Year TIPS Series D-2028 912828Y38 July 15, 2018 July 31, 2018 September 28, 2018 November 30, 2018	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:			April 15, 2023 248.39153	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	
December 1 2022	296.80800	1.19492	1.18242	1.17547	1.17952	
December 2 2022	296.84684	1.19508	1.18258	1.17562	1.17967	
December 3 2022	296.88568	1.19523	1.18273	1.17577	1.17982	
December 4 2022	296.92452	1.19539	1.18289	1.17593	1.17998	
December 5 2022	296.96335	1.19555	1.18304	1.17608	1.18013	
December 6 2022	297.00219	1.19570	1.18320	1.17623	1.18029	
December 7 2022	297.04103	1.19586	1.18335	1.17639	1.18044	
December 8 2022	297.07987	1.19601	1.18351	1.17654	1.18060	
December 9 2022	297.11871	1.19617	1.18366	1.17670	1.18075	
December 10 2022	297.15755	1.19633	1.18382	1.17685	1.18090	
December 11 2022	297.19639	1.19648	1.18397	1.17700	1.18106	
December 12 2022	297.23523	1.19664	1.18413	1.17716	1.18121	
December 13 2022	297.27406	1.19680	1.18428	1.17731	1.18137	
December 14 2022	297.31290	1.19695	1.18444	1.17747	1.18152	
December 15 2022	297.35174	1.19711	1.18459	1.17762	1.18168	
December 16 2022	297.39058	1.19727	1.18474	1.17777	1.18183	
December 17 2022	297.42942	1.19742	1.18490	1.17793	1.18199	
December 18 2022	297.46826	1.19758	1.18505	1.17808	1.18214	
December 19 2022	297.50710	1.19773	1.18521	1.17823	1.18229	
December 20 2022	297.54594	1.19789	1.18536	1.17839	1.18245	
December 21 2022	297.58477	1.19805	1.18552	1.17854	1.18260	
December 22 2022	297.62361	1.19820	1.18567	1.17870	1.18276	
December 23 2022	297.66245	1.19836	1.18583	1.17885	1.18291	
December 24 2022	297.70129	1.19852	1.18598	1.17900	1.18307	
December 25 2022	297.74013	1.19867	1.18614	1.17916	1.18322	
December 26 2022	297.77897	1.19883	1.18629	1.17931	1.18337	
December 27 2022	297.81781	1.19899	1.18645	1.17946	1.18353	
December 28 2022	297.85665	1.19914	1.18660	1.17962	1.18368	
December 29 2022	297.89548	1.19930	1.18676	1.17977	1.18384	
December 30 2022	297.93432	1.19945	1.18691	1.17993	1.18399	
December 31 2022	297.97316	1.19961	1.18707	1.18008	1.18415	
CPI-U (NSA) for:	August 2022	296.171	September 2022	296.808	October 2022	298.012

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
December 2022

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	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
Maturity Date: Ref CPI on Dated Date:			April 15, 2024 252.20853	July 15, 2029 255.79368	October 15, 2024 256.56513	January 15, 2030 257.28368
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
December 1 2022	296.80800	1.17684	1.16034	1.15685	1.15362	
December 2 2022	296.84684	1.17699	1.16049	1.15700	1.15377	
December 3 2022	296.88568	1.17714	1.16065	1.15716	1.15392	
December 4 2022	296.92452	1.17730	1.16080	1.15731	1.15407	
December 5 2022	296.96335	1.17745	1.16095	1.15746	1.15423	
December 6 2022	297.00219	1.17761	1.16110	1.15761	1.15438	
December 7 2022	297.04103	1.17776	1.16125	1.15776	1.15453	
December 8 2022	297.07987	1.17791	1.16140	1.15791	1.15468	
December 9 2022	297.11871	1.17807	1.16156	1.15806	1.15483	
December 10 2022	297.15755	1.17822	1.16171	1.15821	1.15498	
December 11 2022	297.19639	1.17838	1.16186	1.15837	1.15513	
December 12 2022	297.23523	1.17853	1.16201	1.15852	1.15528	
December 13 2022	297.27406	1.17868	1.16216	1.15867	1.15543	
December 14 2022	297.31290	1.17884	1.16232	1.15882	1.15558	
December 15 2022	297.35174	1.17899	1.16247	1.15897	1.15573	
December 16 2022	297.39058	1.17915	1.16262	1.15912	1.15589	
December 17 2022	297.42942	1.17930	1.16277	1.15927	1.15604	
December 18 2022	297.46826	1.17945	1.16292	1.15943	1.15619	
December 19 2022	297.50710	1.17961	1.16307	1.15958	1.15634	
December 20 2022	297.54594	1.17976	1.16323	1.15973	1.15649	
December 21 2022	297.58477	1.17992	1.16338	1.15988	1.15664	
December 22 2022	297.62361	1.18007	1.16353	1.16003	1.15679	
December 23 2022	297.66245	1.18022	1.16368	1.16018	1.15694	
December 24 2022	297.70129	1.18038	1.16383	1.16033	1.15709	
December 25 2022	297.74013	1.18053	1.16399	1.16049	1.15724	
December 26 2022	297.77897	1.18069	1.16414	1.16064	1.15740	
December 27 2022	297.81781	1.18084	1.16429	1.16079	1.15755	
December 28 2022	297.85665	1.18099	1.16444	1.16094	1.15770	
December 29 2022	297.89548	1.18115	1.16459	1.16109	1.15785	
December 30 2022	297.93432	1.18130	1.16474	1.16124	1.15800	
December 31 2022	297.97316	1.18146	1.16490	1.16139	1.15815	
CPI-U (NSA) for:	August 2022	296.171	September 2022	296.808	October 2022	298.012

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
December 2022

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	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
Maturity Date: Ref CPI on Dated Date:			February 15, 2050 257.09503	April 15, 2025 258.30093	July 15, 2030 256.39126	October 15, 2025 259.46997
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
December 1 2022	296.80800	1.15447	1.14908	1.15764	1.14390	
December 2 2022	296.84684	1.15462	1.14923	1.15779	1.14405	
December 3 2022	296.88568	1.15477	1.14938	1.15794	1.14420	
December 4 2022	296.92452	1.15492	1.14953	1.15809	1.14435	
December 5 2022	296.96335	1.15507	1.14968	1.15824	1.14450	
December 6 2022	297.00219	1.15522	1.14983	1.15839	1.14465	
December 7 2022	297.04103	1.15537	1.14998	1.15855	1.14480	
December 8 2022	297.07987	1.15553	1.15013	1.15870	1.14495	
December 9 2022	297.11871	1.15568	1.15028	1.15885	1.14510	
December 10 2022	297.15755	1.15583	1.15043	1.15900	1.14525	
December 11 2022	297.19639	1.15598	1.15058	1.15915	1.14540	
December 12 2022	297.23523	1.15613	1.15073	1.15930	1.14555	
December 13 2022	297.27406	1.15628	1.15088	1.15945	1.14570	
December 14 2022	297.31290	1.15643	1.15103	1.15961	1.14585	
December 15 2022	297.35174	1.15658	1.15118	1.15976	1.14600	
December 16 2022	297.39058	1.15673	1.15133	1.15991	1.14615	
December 17 2022	297.42942	1.15689	1.15148	1.16006	1.14630	
December 18 2022	297.46826	1.15704	1.15163	1.16021	1.14645	
December 19 2022	297.50710	1.15719	1.15178	1.16036	1.14660	
December 20 2022	297.54594	1.15734	1.15194	1.16052	1.14675	
December 21 2022	297.58477	1.15749	1.15209	1.16067	1.14689	
December 22 2022	297.62361	1.15764	1.15224	1.16082	1.14704	
December 23 2022	297.66245	1.15779	1.15239	1.16097	1.14719	
December 24 2022	297.70129	1.15794	1.15254	1.16112	1.14734	
December 25 2022	297.74013	1.15809	1.15269	1.16127	1.14749	
December 26 2022	297.77897	1.15824	1.15284	1.16142	1.14764	
December 27 2022	297.81781	1.15840	1.15299	1.16158	1.14779	
December 28 2022	297.85665	1.15855	1.15314	1.16173	1.14794	
December 29 2022	297.89548	1.15870	1.15329	1.16188	1.14809	
December 30 2022	297.93432	1.15885	1.15344	1.16203	1.14824	
December 31 2022	297.97316	1.15900	1.15359	1.16218	1.14839	
CPI-U (NSA) for:	August 2022	296.171	September 2022	296.808	October 2022	298.012

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
December 2022

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	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
Maturity Date: Ref CPI on Dated Date:			January 15, 2031 260.31619	February 15, 2051 260.35150	April 15, 2026 262.25027	July 15, 2031 268.02090
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
December 1 2022	296.80800	1.14018	1.14003	1.13177	1.10741	
December 2 2022	296.84684	1.14033	1.14018	1.13192	1.10755	
December 3 2022	296.88568	1.14048	1.14033	1.13207	1.10770	
December 4 2022	296.92452	1.14063	1.14048	1.13222	1.10784	
December 5 2022	296.96335	1.14078	1.14062	1.13237	1.10799	
December 6 2022	297.00219	1.14093	1.14077	1.13251	1.10813	
December 7 2022	297.04103	1.14108	1.14092	1.13266	1.10828	
December 8 2022	297.07987	1.14123	1.14107	1.13281	1.10842	
December 9 2022	297.11871	1.14138	1.14122	1.13296	1.10857	
December 10 2022	297.15755	1.14153	1.14137	1.13311	1.10871	
December 11 2022	297.19639	1.14167	1.14152	1.13325	1.10886	
December 12 2022	297.23523	1.14182	1.14167	1.13340	1.10900	
December 13 2022	297.27406	1.14197	1.14182	1.13355	1.10915	
December 14 2022	297.31290	1.14212	1.14197	1.13370	1.10929	
December 15 2022	297.35174	1.14227	1.14212	1.13385	1.10943	
December 16 2022	297.39058	1.14242	1.14227	1.13400	1.10958	
December 17 2022	297.42942	1.14257	1.14241	1.13414	1.10972	
December 18 2022	297.46826	1.14272	1.14256	1.13429	1.10987	
December 19 2022	297.50710	1.14287	1.14271	1.13444	1.11001	
December 20 2022	297.54594	1.14302	1.14286	1.13459	1.11016	
December 21 2022	297.58477	1.14317	1.14301	1.13474	1.11030	
December 22 2022	297.62361	1.14332	1.14316	1.13488	1.11045	
December 23 2022	297.66245	1.14346	1.14331	1.13503	1.11059	
December 24 2022	297.70129	1.14361	1.14346	1.13518	1.11074	
December 25 2022	297.74013	1.14376	1.14361	1.13533	1.11088	
December 26 2022	297.77897	1.14391	1.14376	1.13548	1.11103	
December 27 2022	297.81781	1.14406	1.14391	1.13562	1.11117	
December 28 2022	297.85665	1.14421	1.14406	1.13577	1.11132	
December 29 2022	297.89548	1.14436	1.14420	1.13592	1.11146	
December 30 2022	297.93432	1.14451	1.14435	1.13607	1.11161	
December 31 2022	297.97316	1.14466	1.14450	1.13622	1.11175	
CPI-U (NSA) for:	August 2022	296.171	September 2022	296.808	October 2022	298.012

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
December 2022

Security: Description: CUSIP Number: Dated Date: Original Issue Date: Additional Issue Date(s):			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	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
Maturity Date: Ref CPI on Dated Date:			October 15, 2026 273.25771	January 15, 2032 277.20274	February 15, 2052 278.37500	April 15, 2027 282.34640
Date	Ref CPI	Index Ratio	Index Ratio	Index Ratio	Index Ratio	
December 1 2022	296.80800	1.08618	1.07073	1.06622	1.05122	
December 2 2022	296.84684	1.08633	1.07087	1.06636	1.05136	
December 3 2022	296.88568	1.08647	1.07101	1.06650	1.05149	
December 4 2022	296.92452	1.08661	1.07115	1.06664	1.05163	
December 5 2022	296.96335	1.08675	1.07129	1.06677	1.05177	
December 6 2022	297.00219	1.08689	1.07143	1.06691	1.05191	
December 7 2022	297.04103	1.08704	1.07157	1.06705	1.05204	
December 8 2022	297.07987	1.08718	1.07171	1.06719	1.05218	
December 9 2022	297.11871	1.08732	1.07185	1.06733	1.05232	
December 10 2022	297.15755	1.08746	1.07199	1.06747	1.05246	
December 11 2022	297.19639	1.08760	1.07213	1.06761	1.05259	
December 12 2022	297.23523	1.08775	1.07227	1.06775	1.05273	
December 13 2022	297.27406	1.08789	1.07241	1.06789	1.05287	
December 14 2022	297.31290	1.08803	1.07255	1.06803	1.05301	
December 15 2022	297.35174	1.08817	1.07269	1.06817	1.05315	
December 16 2022	297.39058	1.08832	1.07283	1.06831	1.05328	
December 17 2022	297.42942	1.08846	1.07297	1.06845	1.05342	
December 18 2022	297.46826	1.08860	1.07311	1.06859	1.05356	
December 19 2022	297.50710	1.08874	1.07325	1.06873	1.05370	
December 20 2022	297.54594	1.08888	1.07339	1.06887	1.05383	
December 21 2022	297.58477	1.08903	1.07353	1.06901	1.05397	
December 22 2022	297.62361	1.08917	1.07367	1.06915	1.05411	
December 23 2022	297.66245	1.08931	1.07381	1.06929	1.05425	
December 24 2022	297.70129	1.08945	1.07395	1.06943	1.05438	
December 25 2022	297.74013	1.08959	1.07409	1.06956	1.05452	
December 26 2022	297.77897	1.08974	1.07423	1.06970	1.05466	
December 27 2022	297.81781	1.08988	1.07437	1.06984	1.05480	
December 28 2022	297.85665	1.09002	1.07451	1.06998	1.05493	
December 29 2022	297.89548	1.09016	1.07465	1.07012	1.05507	
December 30 2022	297.93432	1.09031	1.07479	1.07026	1.05521	
December 31 2022	297.97316	1.09045	1.07493	1.07040	1.05535	
CPI-U (NSA) for:	August 2022	296.171	September 2022	296.808	October 2022	298.012

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
Ref CPI and Index Ratios for
December 2022

Security:			0-5/8% 10-Year TIPS	1-5/8% 5-Year TIPS		
Description:			Series D-2032	Series AE-2027		
CUSIP Number:			91282CEZ0	91282CFR7		
Dated Date:			July 15, 2022	October 15, 2022		
Original Issue Date:			July 29, 2022	October 31, 2022		
Additional Issue Date(s):			September 30, 2022			
Maturity Date:			July 15, 2032	October 15, 2027		
Ref CPI on Dated Date:			290.54829	296.22858		
Date	Ref CPI	Index Ratio	Index Ratio			
December 1 2022	296.80800	1.02154	1.00196			
December 2 2022	296.84684	1.02168	1.00209			
December 3 2022	296.88568	1.02181	1.00222			
December 4 2022	296.92452	1.02195	1.00235			
December 5 2022	296.96335	1.02208	1.00248			
December 6 2022	297.00219	1.02221	1.00261			
December 7 2022	297.04103	1.02235	1.00274			
December 8 2022	297.07987	1.02248	1.00287			
December 9 2022	297.11871	1.02261	1.00300			
December 10 2022	297.15755	1.02275	1.00314			
December 11 2022	297.19639	1.02288	1.00327			
December 12 2022	297.23523	1.02301	1.00340			
December 13 2022	297.27406	1.02315	1.00353			
December 14 2022	297.31290	1.02328	1.00366			
December 15 2022	297.35174	1.02342	1.00379			
December 16 2022	297.39058	1.02355	1.00392			
December 17 2022	297.42942	1.02368	1.00405			
December 18 2022	297.46826	1.02382	1.00418			
December 19 2022	297.50710	1.02395	1.00432			
December 20 2022	297.54594	1.02408	1.00445			
December 21 2022	297.58477	1.02422	1.00458			
December 22 2022	297.62361	1.02435	1.00471			
December 23 2022	297.66245	1.02449	1.00484			
December 24 2022	297.70129	1.02462	1.00497			
December 25 2022	297.74013	1.02475	1.00510			
December 26 2022	297.77897	1.02489	1.00523			
December 27 2022	297.81781	1.02502	1.00536			
December 28 2022	297.85665	1.02515	1.00550			
December 29 2022	297.89548	1.02529	1.00563			
December 30 2022	297.93432	1.02542	1.00576			
December 31 2022	297.97316	1.02555	1.00589			
CPI-U (NSA) for:			August 2022 296.171	September 2022 296.808	October 2022 298.012	