

# TIPS Daily Report - May 22, 2025

Date  
5/21/2025

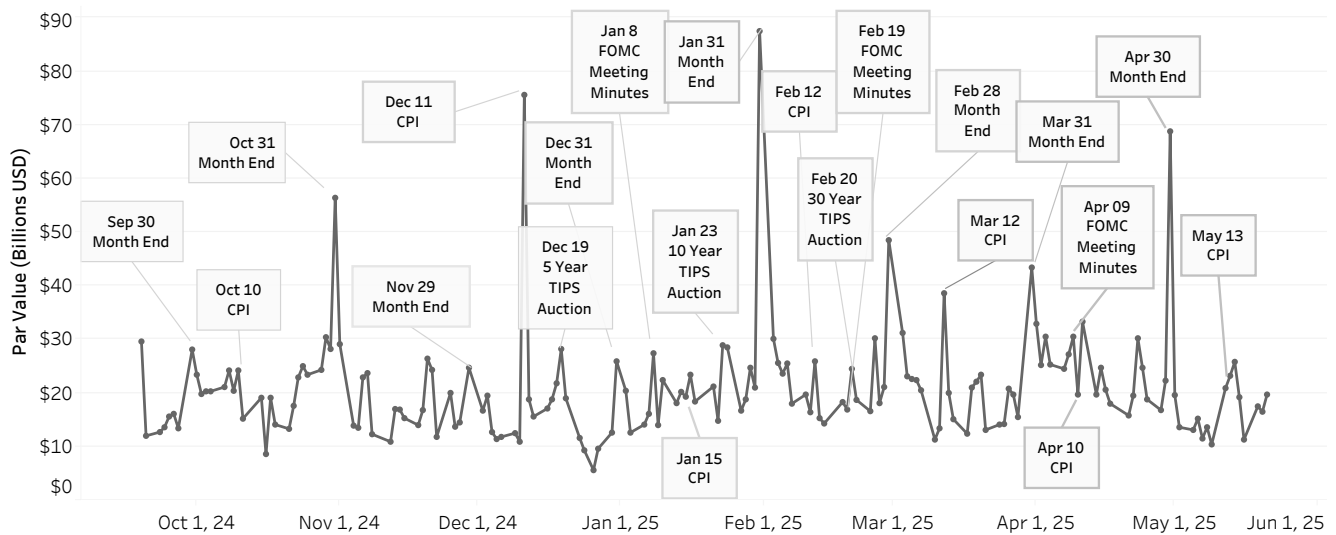
## Total Return Comparison Nominal vs Inflation Indexed

Total Return  
-39.57%  31.86%

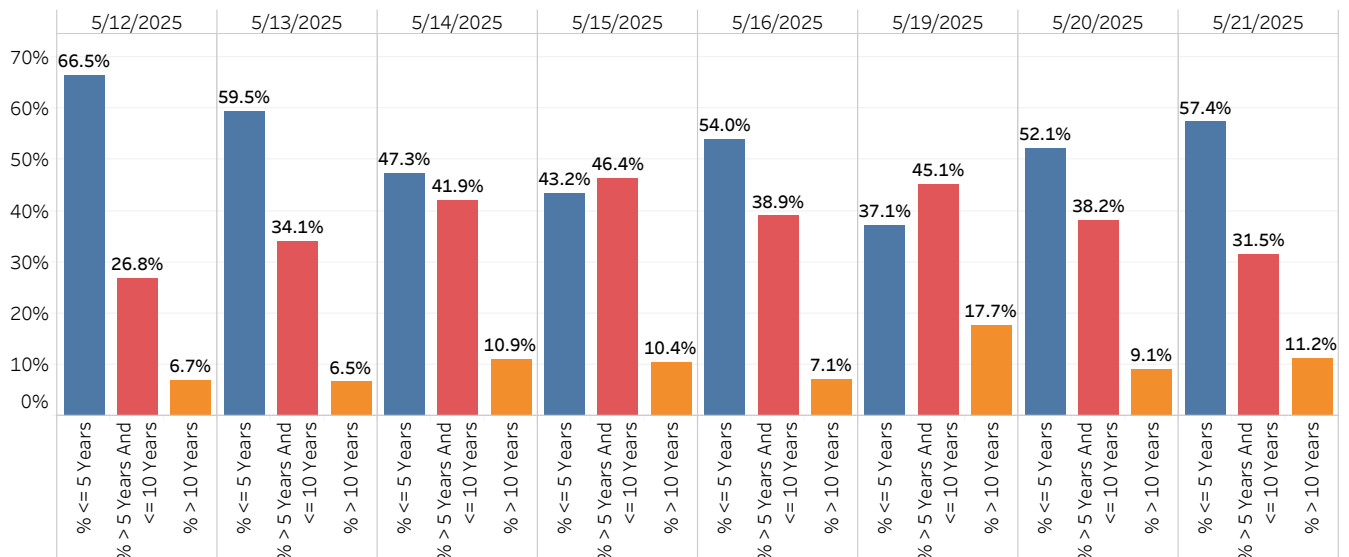
| Maturity  | MTD     |        | YTD     |        | 1 Year  |        | 2 Years |         | 5 Years |         | 10 Years |        |
|-----------|---------|--------|---------|--------|---------|--------|---------|---------|---------|---------|----------|--------|
|           | Nominal | TIPS   | Nominal | TIPS   | Nominal | TIPS   | Nominal | TIPS    | Nominal | TIPS    | Nominal  | TIPS   |
| 1-5 Year  | -0.61%  | -0.59% | 2.20%   | 3.49%  | 5.38%   | 6.44%  | 8.67%   | 10.95%  | 3.01%   | 17.38%  | 15.06%   | 31.86% |
| 5-10 Year | -1.91%  | -1.27% | 2.45%   | 3.41%  | 4.40%   | 4.64%  | 4.62%   | 6.24%   | -10.02% | 4.79%   | 10.47%   | 29.69% |
| 10+ Year  | -4.91%  | -4.20% | -2.05%  | -2.34% | -3.19%  | -4.94% | -9.03%  | -10.27% | -39.57% | -29.52% | -7.16%   | 7.89%  |

## TIPS Trading Volume

Total Daily Trading Volume in Billions of US Dollars



## Daily TIPS Volume by Sector



# U.S. Inflation Heatmap

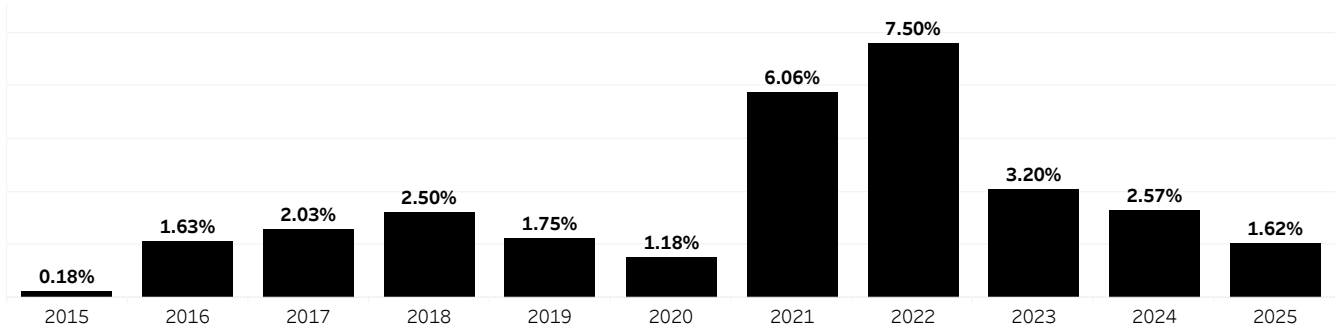
## Consumer Price Index Components

Month-over-Month % Change, Seasonally Adjusted

MoM % Change  
-6.25% 4.02%

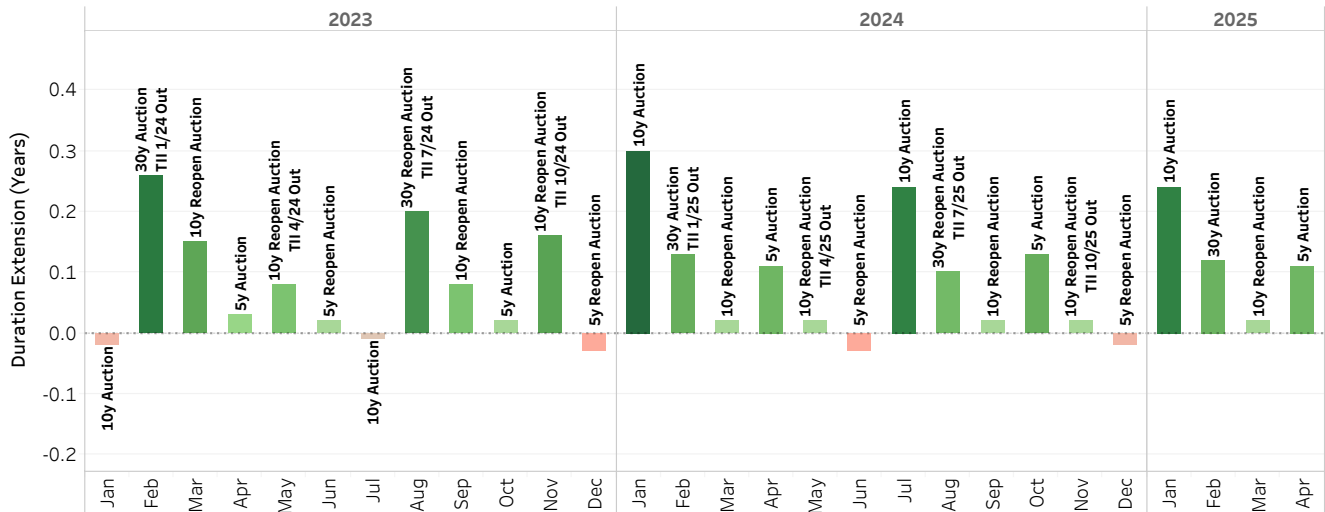
|                           | 2024   |        |        |        |        |        |        |        | 2025   |        |        |        |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                           | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    |
| Headline CPI              | 0.04%  | 0.00%  | 0.14%  | 0.18%  | 0.23%  | 0.23%  | 0.28%  | 0.36%  | 0.47%  | 0.22%  | -0.05% | 0.22%  |
| Core CPI                  | 0.14%  | 0.09%  | 0.19%  | 0.28%  | 0.31%  | 0.27%  | 0.29%  | 0.21%  | 0.45%  | 0.23%  | 0.06%  | 0.24%  |
| Core Services Ex-Housing  | -0.04% | -0.05% | 0.21%  | 0.33%  | 0.40%  | 0.31%  | 0.34%  | 0.21%  | 0.76%  | 0.22%  | -0.24% | 0.21%  |
| Energy                    | -1.34% | -1.57% | -0.43% | -0.99% | -0.95% | -0.22% | 0.09%  | 2.42%  | 1.08%  | 0.20%  | -2.39% | 0.67%  |
| Gasoline                  | -2.43% | -3.03% | -0.90% | -1.18% | -2.33% | -0.98% | 0.29%  | 4.02%  | 1.75%  | -0.96% | -6.25% | -0.09% |
| Electricity               | 0.05%  | -0.30% | 0.16%  | -0.41% | 0.54%  | 0.79%  | -0.23% | 0.20%  | -0.04% | 1.02%  | 0.94%  | 0.85%  |
| Utility Gas               | -0.63% | 1.51%  | -0.53% | -1.61% | 0.67%  | 0.50%  | 0.48%  | 2.82%  | 1.79%  | 2.54%  | 3.57%  | 3.70%  |
| Food                      | 0.14%  | 0.24%  | 0.15%  | 0.15%  | 0.32%  | 0.21%  | 0.32%  | 0.29%  | 0.36%  | 0.16%  | 0.44%  | -0.08% |
| Food At Home              | 0.00%  | 0.12%  | 0.11%  | 0.08%  | 0.31%  | 0.19%  | 0.35%  | 0.28%  | 0.46%  | 0.01%  | 0.49%  | -0.44% |
| Food Away From Home       | 0.35%  | 0.41%  | 0.21%  | 0.26%  | 0.34%  | 0.24%  | 0.28%  | 0.30%  | 0.24%  | 0.39%  | 0.36%  | 0.44%  |
| Core Goods                | -0.14% | -0.17% | -0.23% | -0.12% | 0.17%  | 0.02%  | 0.21%  | -0.04% | 0.28%  | 0.22%  | -0.09% | 0.06%  |
| Apparel                   | -0.21% | -0.01% | -0.27% | 0.10%  | 0.99%  | -0.89% | 0.08%  | 0.13%  | -1.38% | 0.60%  | 0.37%  | -0.20% |
| New Vehicles              | -0.42% | -0.15% | -0.14% | 0.03%  | 0.13%  | -0.02% | 0.47%  | 0.36%  | 0.04%  | -0.07% | 0.10%  | -0.01% |
| Used Cars and Trucks      | -0.82% | -1.63% | -1.44% | -0.16% | 0.50%  | 1.21%  | 1.29%  | 0.76%  | 2.19%  | 0.88%  | -0.69% | -0.53% |
| Core Services             | 0.22%  | 0.19%  | 0.32%  | 0.38%  | 0.36%  | 0.34%  | 0.29%  | 0.26%  | 0.51%  | 0.25%  | 0.11%  | 0.29%  |
| Shelter                   | 0.37%  | 0.23%  | 0.36%  | 0.48%  | 0.27%  | 0.39%  | 0.34%  | 0.27%  | 0.37%  | 0.28%  | 0.22%  | 0.33%  |
| Rent of Primary Residence | 0.37%  | 0.27%  | 0.47%  | 0.35%  | 0.29%  | 0.30%  | 0.25%  | 0.30%  | 0.35%  | 0.28%  | 0.33%  | 0.34%  |
| OER                       | 0.42%  | 0.31%  | 0.36%  | 0.47%  | 0.34%  | 0.41%  | 0.25%  | 0.31%  | 0.31%  | 0.28%  | 0.40%  | 0.36%  |

## Annual TIPS Inflation Accrual



## Monthly Duration Extension

US TIPS (Series-L)



US TIPS Report

5/22/2025

| Issue  |        |           | Closing Level |           | Total Return |         |         | Breakevens |        |        |        |         |        |        |         |        |        | UST       |
|--------|--------|-----------|---------------|-----------|--------------|---------|---------|------------|--------|--------|--------|---------|--------|--------|---------|--------|--------|-----------|
| Issuer | Coupon | Mat. Date | Bid Price     | Bid Yield | MTD (%)      | QTD (%) | YTD (%) | Current    | 1d Chg | 5d Chg | 1m Chg | 3m High | 3m Low | 3m Avg | 1y High | 1y Low | 1y Avg | Mat. Date |
| TIPS   | 0.375  | 15-Jul-25 | 99.877        | 0.588     | 0.21         | 0.39    | 1.92    | 358.2      | -13.4  | -4.8   | -13.6  | 525.1   | 345.4  | 430.7  | 526.9   | 146.0  | 295.2  | 15-Aug-25 |
| TIPS   | 0.125  | 15-Oct-25 | 99.809        | 0.382     | 0.07         | 0.37    | 2.35    | 386.9      | -0.7   | 20.1   | -7.8   | 467.0   | 358.7  | 404.1  | 467.0   | 160.3  | 283.6  | 31-Oct-25 |
| TIPS   | 0.625  | 15-Jan-26 | 99.618        | 1.087     | -0.04        | 0.43    | 2.57    | 311.9      | -4.0   | 14.1   | -31.5  | 385.2   | 290.4  | 333.1  | 385.2   | 154.6  | 247.0  | 15-Nov-25 |
| TIPS   | 2.000  | 15-Jan-26 | 100.488       | 1.063     | -0.06        | 0.43    | 2.57    | 253.9      | 8.0    | 22.4   | -13.7  | 294.6   | 222.4  | 261.0  | 294.6   | 91.8   | 187.6  | 15-Feb-26 |
| TIPS   | 0.125  | 15-Apr-26 | 98.961        | 1.189     | -0.18        | 0.31    | 2.76    | 295.9      | -2.9   | 8.8    | -30.3  | 350.8   | 281.0  | 311.9  | 350.8   | 147.1  | 236.6  | 30-Apr-26 |
| TIPS   | 0.125  | 15-Jul-26 | 99.198        | 0.756     | -0.28        | 0.33    | 2.95    | 339.2      | -2.3   | 8.8    | -12.5  | 374.6   | 325.6  | 344.0  | 374.6   | 190.1  | 271.9  | 15-May-26 |
| TIPS   | 0.125  | 15-Oct-26 | 98.824        | 0.909     | -0.38        | 0.27    | 3.00    | 316.5      | -2.1   | 7.9    | -10.8  | 342.4   | 303.5  | 321.0  | 342.4   | 183.0  | 261.3  | 31-Oct-26 |
| TIPS   | 2.375  | 15-Jan-27 | 101.778       | 1.202     | -0.51        | 0.24    | 3.06    | 237.6      | -3.5   | 4.0    | -3.4   | 267.0   | 228.6  | 246.5  | 267.0   | 136.4  | 203.1  | 15-Feb-27 |
| TIPS   | 0.375  | 15-Jan-27 | 98.557        | 1.211     | -0.50        | 0.32    | 3.14    | 285.6      | -1.7   | 5.8    | -8.3   | 308.3   | 275.7  | 290.9  | 308.3   | 173.3  | 242.0  | 15-Nov-26 |
| TIPS   | 0.125  | 15-Apr-27 | 97.755        | 1.284     | -0.59        | 0.28    | 3.35    | 270.7      | -3.7   | 4.9    | -3.7   | 290.5   | 262.3  | 274.3  | 290.5   | 170.8  | 233.5  | 30-Apr-27 |
| TIPS   | 0.375  | 15-Jul-27 | 98.458        | 1.069     | -0.60        | 0.32    | 3.47    | 290.2      | -2.6   | 4.5    | 0.5    | 306.1   | 278.3  | 290.7  | 306.1   | 192.9  | 252.9  | 15-Aug-27 |
| TIPS   | 1.625  | 15-Oct-27 | 101.038       | 1.157     | -0.62        | 0.29    | 3.56    | 280.0      | -2.5   | 5.2    | 3.9    | 295.6   | 265.3  | 280.2  | 295.6   | 190.0  | 247.5  | 30-Sep-27 |
| TIPS   | 1.750  | 15-Jan-28 | 100.969       | 1.325     | -0.68        | 0.24    | 3.65    | 250.2      | -1.9   | 1.2    | 8.4    | 267.3   | 230.3  | 248.5  | 267.3   | 172.6  | 222.6  | 15-Nov-27 |
| TIPS   | 0.500  | 15-Jan-28 | 97.740        | 1.338     | -0.71        | 0.24    | 3.71    | 263.8      | -2.8   | 3.1    | 5.1    | 277.6   | 247.9  | 263.3  | 277.6   | 184.0  | 236.0  | 15-Feb-28 |
| TIPS   | 3.625  | 15-Apr-28 | 106.175       | 1.399     | -0.64        | 0.22    | 3.79    | 242.9      | -4.3   | 1.3    | 10.0   | 258.9   | 220.6  | 241.1  | 258.9   | 165.0  | 215.6  | 15-Aug-28 |
| TIPS   | 1.250  | 15-Apr-28 | 99.427        | 1.421     | -0.68        | 0.26    | 3.82    | 254.3      | -3.0   | 2.7    | 8.3    | 268.2   | 237.1  | 253.2  | 268.2   | 180.5  | 230.1  | 31-Mar-28 |
| TIPS   | 0.750  | 15-Jul-28 | 98.298        | 1.278     | -0.67        | 0.24    | 3.91    | 271.9      | -2.9   | 5.3    | 11.1   | 283.0   | 251.4  | 268.1  | 283.0   | 198.8  | 246.6  | 15-Aug-28 |
| TIPS   | 2.375  | 15-Oct-28 | 103.328       | 1.348     | -0.71        | 0.13    | 3.92    | 265.3      | -1.5   | 3.2    | 11.0   | 277.5   | 245.5  | 262.7  | 277.5   | 195.8  | 242.4  | 30-Sep-28 |
| TIPS   | 2.500  | 15-Jan-29 | 103.496       | 1.475     | -0.73        | 0.10    | 3.93    | 238.5      | -1.2   | 2.4    | 15.4   | 250.4   | 213.1  | 233.9  | 251.6   | 173.1  | 217.6  | 15-Feb-29 |
| TIPS   | 0.875  | 15-Jan-29 | 97.748        | 1.485     | -0.75        | 0.09    | 3.97    | 252.6      | -1.3   | 1.8    | 11.8   | 264.8   | 232.0  | 250.0  | 265.8   | 192.6  | 234.3  | 15-Nov-28 |
| TIPS   | 3.875  | 15-Apr-29 | 108.732       | 1.524     | -0.73        | 0.13    | 4.03    | 233.6      | -1.2   | 1.9    | 16.6   | 244.2   | 206.6  | 228.4  | 247.2   | 171.2  | 213.4  | 15-Feb-29 |
| TIPS   | 2.125  | 15-Apr-29 | 102.099       | 1.550     | -0.75        | 0.08    | 4.03    | 249.6      | -1.2   | 1.8    | 13.6   | 258.9   | 227.9  | 245.5  | 261.2   | 187.7  | 229.4  | 30-Apr-29 |
| TIPS   | 0.250  | 15-Jul-29 | 95.122        | 1.442     | -0.83        | 0.00    | 4.07    | 260.0      | -1.0   | 1.4    | 14.4   | 270.3   | 237.6  | 256.0  | 273.2   | 202.2  | 242.2  | 15-May-29 |
| TIPS   | 1.625  | 15-Oct-29 | 100.427       | 1.500     | -0.82        | -0.10   | 4.04    | 258.4      | -0.4   | 2.2    | 16.1   | 267.7   | 234.7  | 253.5  | 270.1   | 234.6  | 252.3  | 31-Oct-29 |
| TIPS   | 0.125  | 15-Jan-30 | 93.298        | 1.605     | -0.90        | -0.15   | 4.08    | 243.9      | -1.2   | 1.3    | 14.8   | 253.9   | 221.2  | 239.7  | 258.4   | 193.9  | 229.3  | 15-Nov-29 |
| TIPS   | 1.625  | 15-Apr-30 | 99.732        | 1.667     | N/A          | N/A     | N/A     | 243.9      | -0.8   | 1.4    | N/A    | 244.7   | 242.5  | 243.8  | 244.7   | 242.5  | 243.8  | 30-Apr-30 |
| TIPS   | 0.125  | 15-Jul-30 | 92.732        | 1.578     | -0.93        | -0.30   | 4.19    | 256.2      | -1.3   | 1.0    | 15.4   | 264.8   | 232.8  | 251.3  | 268.3   | 205.0  | 240.8  | 15-Aug-30 |
| TIPS   | 0.125  | 15-Jan-31 | 91.290        | 1.732     | -0.94        | -0.43   | 4.19    | 241.6      | -1.5   | 2.7    | 15.0   | 251.0   | 218.2  | 236.8  | 255.9   | 195.3  | 228.8  | 15-Feb-31 |
| TIPS   | 0.125  | 15-Jul-31 | 90.549        | 1.731     | -1.04        | -0.65   | 4.17    | 253.1      | -1.7   | 2.2    | 15.5   | 259.8   | 229.5  | 246.9  | 264.7   | 204.3  | 238.6  | 15-Aug-31 |
| TIPS   | 0.125  | 15-Jan-32 | 89.008        | 1.879     | -1.11        | -0.89   | 4.00    | 243.6      | -1.5   | 1.5    | 15.5   | 250.4   | 220.9  | 238.0  | 256.4   | 200.3  | 232.1  | 15-Feb-32 |
| TIPS   | 3.375  | 15-Apr-32 | 109.725       | 1.831     | -1.07        | -0.53   | 3.91    | 230.2      | -1.5   | -0.9   | 16.2   | 240.2   | 207.2  | 225.7  | 246.9   | 181.5  | 218.3  | 15-Feb-31 |
| TIPS   | 0.625  | 15-Jul-32 | 91.572        | 1.876     | -1.15        | -1.06   | 3.97    | 247.4      | -1.4   | 1.9    | 15.6   | 253.3   | 225.0  | 241.1  | 260.3   | 203.6  | 235.3  | 15-Aug-32 |
| TIPS   | 1.125  | 15-Jan-33 | 93.755        | 1.994     | -1.27        | -1.20   | 3.62    | 235.3      | -1.4   | 1.2    | 14.4   | 244.3   | 214.2  | 230.5  | 250.2   | 195.8  | 226.5  | 15-Nov-32 |
| TIPS   | 1.375  | 15-Jul-33 | 95.206        | 2.002     | -1.37        | -1.44   | 3.58    | 240.6      | -1.7   | 0.9    | 11.7   | 249.8   | 222.5  | 236.4  | 255.6   | 202.2  | 231.9  | 15-May-33 |
| TIPS   | 1.750  | 15-Jan-34 | 97.191        | 2.096     | -1.46        | -1.62   | 3.33    | 237.5      | -1.1   | 0.8    | 13.2   | 245.2   | 218.2  | 232.7  | 250.2   | 199.0  | 228.0  | 15-Feb-34 |
| TIPS   | 1.875  | 15-Jul-34 | 98.053        | 2.101     | -1.67        | -1.80   | 3.19    | 238.9      | -1.2   | -0.2   | 11.4   | 247.8   | 221.7  | 234.9  | 252.9   | 202.2  | 230.5  | 15-May-34 |
| TIPS   | 2.125  | 15-Jan-35 | 99.496        | 2.174     | -1.83        | -2.01   | N/A     | 235.4      | -1.7   | 0.0    | 11.4   | 242.9   | 217.9  | 231.0  | 247.8   | 217.9  | 233.5  | 15-Nov-34 |
| TIPS   | 2.125  | 15-Feb-40 | 96.008        | 2.418     | -3.04        | -3.76   | 1.71    | 247.3      | -2.3   | 1.4    | 12.8   | 249.6   | 227.8  | 238.4  | 250.9   | 201.4  | 232.0  | 15-Feb-40 |
| TIPS   | 2.125  | 15-Feb-41 | 94.916        | 2.487     | -3.28        | -4.68   | 0.34    | 247.6      | -3.1   | 0.4    | 13.0   | 250.7   | 229.9  | 239.8  | 253.4   | 205.1  | 235.0  | 15-Feb-41 |
| TIPS   | 0.750  | 15-Feb-42 | 75.038        | 2.573     | -3.68        | -5.41   | -0.32   | 246.9      | -2.7   | 1.1    | 13.5   | 249.6   | 228.4  | 238.8  | 253.7   | 210.9  | 236.5  | 15-Feb-42 |
| TIPS   | 0.625  | 15-Feb-43 | 71.694        | 2.606     | -3.89        | -5.73   | -0.41   | 247.7      | -2.2   | 0.5    | 12.4   | 249.9   | 229.6  | 239.4  | 253.8   | 214.3  | 238.7  | 15-Feb-43 |
| TIPS   | 1.375  | 15-Feb-44 | 81.221        | 2.630     | -3.63        | -5.50   | -0.31   | 246.7      | -1.7   | 1.8    | 12.9   | 248.4   | 228.0  | 238.6  | 253.3   | 216.6  | 238.5  | 15-Feb-44 |
| TIPS   | 0.750  | 15-Feb-45 | 70.473        | 2.666     | -3.90        | -6.10   | -0.93   | 248.2      | -1.7   | 2.0    | 13.6   | 249.9   | 228.8  | 239.3  | 252.8   | 216.9  | 239.0  | 15-Feb-45 |
| TIPS   | 1.000  | 15-Feb-46 | 72.954        | 2.690     | -4.06        | -6.40   | -1.18   | 247.1      | -1.5   | 1.7    | 12.6   | 248.6   | 228.9  | 239.0  | 251.1   | 216.4  | 238.2  | 15-Feb-46 |
| TIPS   | 0.875  | 15-Feb-47 | 69.587        | 2.718     | -4.34        | -6.98   | -1.91   | 244.2      | -1.7   | 1.3    | 10.7   | 247.4   | 228.0  | 238.0  | 252.1   | 216.3  | 238.3  | 15-Feb-47 |
| TIPS   | 1.000  | 15-Feb-48 | 70.656        | 2.720     | -4.48        | -6.96   | -2.09   | 245.2      | -1.7   | 1.1    | 11.0   | 247.4   | 228.3  | 238.4  | 252.5   | 218.3  | 239.0  | 15-Feb-48 |
| TIPS   | 1.000  | 15-Feb-49 | 69.572        | 2.733     | -4.70        | -7.36   | -2.59   | 243.8      | -1.5   | 0.6    | 10.6   | 247.1   | 227.3  | 238.1  | 251.8   | 218.5  | 238.8  | 15-Feb-49 |
| TIPS   | 0.250  | 15-Feb-50 | 55.229        | 2.736     | -5.37        | -8.41   | -3.73   | 244.4      | -1.5   | 1.2    | 10.8   | 246.6   | 227.6  | 237.8  | 251.7   | 219.2  | 238.4  | 15-Feb-50 |
| TIPS   | 0.125  | 15-Feb-51 | 51.679        | 2.736     | -5.96        | -9.03   | -4.56   | 242.7      | -1.5   | 0.5    | 10.2   | 246.4   | 226.4  | 237.0  | 251.3   | 219.4  | 238.0  | 15-Feb-51 |
| TIPS   | 0.125  | 15-Feb-52 | 50.710        | 2.714     | -6.12        | -9.41   | -5.02   | 243.2      | -1.3   | 1.4    | 10.4   | 245.7   | 225.6  | 236.7  | 251.1   | 217.4  | 237.2  | 15-Feb-52 |

|      |       |           |        |       |       |       |       |       |      |     |      |       |       |       |       |       |       |           |
|------|-------|-----------|--------|-------|-------|-------|-------|-------|------|-----|------|-------|-------|-------|-------|-------|-------|-----------|
| TIPS | 1.500 | 15-Feb-53 | 75.755 | 2.738 | -5.06 | -7.82 | -3.42 | 236.8 | -1.2 | 1.2 | 10.6 | 238.0 | 218.9 | 230.0 | 242.8 | 208.9 | 230.0 | 15-Feb-53 |
| TIPS | 2.125 | 15-Feb-54 | 87.618 | 2.735 | -4.84 | -7.51 | -3.18 | 235.2 | -1.0 | 1.7 | 11.4 | 236.2 | 216.0 | 227.6 | 240.2 | 206.1 | 227.4 | 15-Feb-54 |
| TIPS | 2.375 | 15-Feb-55 | 92.542 | 2.735 | -4.90 | -7.40 | N/A   | 232.7 | -1.2 | 1.4 | 12.0 | 233.9 | 213.0 | 224.5 | 233.9 | 213.0 | 224.5 | 15-Feb-55 |

US TIPS Total Return Performance vs. Nominal

5/22/2025

| Tips   |           | Nominal |           | WTD Total Return |         |            | MTD Total Return |         |            | QTD Total Return |         |            | YTD Total Return |         |            |
|--------|-----------|---------|-----------|------------------|---------|------------|------------------|---------|------------|------------------|---------|------------|------------------|---------|------------|
| Coupon | Mat.Date  | Coupon  | Mat.Date  | Tips             | Nominal | Net Return | Tips             | Nominal | Net Return | Tips             | Nominal | Net Return | Tips             | Nominal | Net Return |
| 0.375  | 15-Jul-25 | 2.000   | 15-Aug-25 | 0.05             | 0.08    | -0.03      | 0.21             | 0.27    | -0.06      | 0.39             | 0.60    | -0.21      | 1.92             | 1.64    | 0.28       |
| 0.125  | 15-Oct-25 | 0.250   | 31-Oct-25 | 0.11             | 0.04    | 0.07       | 0.07             | 0.19    | -0.12      | 0.37             | 0.54    | -0.17      | 2.35             | 1.63    | 0.72       |
| 0.625  | 15-Jan-26 | 2.250   | 15-Nov-25 | 0.15             | 0.05    | 0.10       | -0.04            | 0.21    | -0.25      | 0.43             | 0.53    | -0.10      | 2.57             | 1.66    | 0.91       |
| 2.000  | 15-Jan-26 | 6.000   | 15-Feb-26 | 0.15             | 0.20    | -0.05      | -0.06            | 0.10    | -0.16      | 0.43             | 0.59    | -0.16      | 2.57             | 1.79    | 0.78       |
| 0.125  | 15-Apr-26 | 0.750   | 30-Apr-26 | 0.13             | 0.04    | 0.09       | -0.18            | 0.00    | -0.18      | 0.31             | 0.45    | -0.14      | 2.76             | 1.70    | 1.06       |
| 0.125  | 15-Jul-26 | 1.625   | 15-May-26 | 0.11             | 0.03    | 0.08       | -0.28            | -0.04   | -0.24      | 0.33             | 0.45    | -0.12      | 2.95             | 1.75    | 1.20       |
| 0.125  | 15-Oct-26 | 1.125   | 31-Oct-26 | 0.12             | 0.04    | 0.08       | -0.38            | -0.31   | -0.07      | 0.27             | 0.38    | -0.11      | 3.00             | 1.87    | 1.13       |
| 2.375  | 15-Jan-27 | 6.625   | 15-Feb-27 | 0.09             | 0.05    | 0.04       | -0.51            | -0.40   | -0.11      | 0.24             | 0.34    | -0.10      | 3.06             | 1.94    | 1.12       |
| 0.375  | 15-Jan-27 | 2.000   | 15-Nov-26 | 0.09             | 0.03    | 0.06       | -0.50            | -0.28   | -0.22      | 0.32             | 0.41    | -0.09      | 3.14             | 1.93    | 1.21       |
| 0.125  | 15-Apr-27 | 2.750   | 30-Apr-27 | 0.08             | 0.03    | 0.05       | -0.59            | -0.51   | -0.08      | 0.28             | 0.40    | -0.12      | 3.35             | 2.12    | 1.23       |
| 0.375  | 15-Jul-27 | 2.250   | 15-Aug-27 | 0.07             | 0.01    | 0.06       | -0.60            | -0.60   | 0.00       | 0.32             | 0.39    | -0.07      | 3.47             | 2.24    | 1.23       |
| 1.625  | 15-Oct-27 | 4.125   | 30-Sep-27 | 0.09             | 0.03    | 0.06       | -0.62            | -0.63   | 0.01       | 0.29             | 0.40    | -0.11      | 3.56             | 2.32    | 1.24       |
| 1.750  | 15-Jan-28 | 6.125   | 15-Nov-27 | 0.03             | 0.02    | 0.01       | -0.68            | -0.65   | -0.03      | 0.24             | 0.31    | -0.07      | 3.65             | 2.27    | 1.38       |
| 0.500  | 15-Jan-28 | 2.750   | 15-Feb-28 | 0.05             | 0.02    | 0.03       | -0.71            | -0.75   | 0.04       | 0.24             | 0.36    | -0.12      | 3.71             | 2.48    | 1.23       |
| 3.625  | 15-Apr-28 | 5.500   | 15-Aug-28 | 0.05             | 0.00    | 0.05       | -0.64            | -0.87   | 0.23       | 0.22             | 0.23    | -0.01      | 3.79             | 2.53    | 1.26       |
| 1.250  | 15-Apr-28 | 3.625   | 31-Mar-28 | 0.05             | 0.00    | 0.05       | -0.68            | -0.79   | 0.11       | 0.26             | 0.37    | -0.11      | 3.82             | 2.57    | 1.25       |
| 0.750  | 15-Jul-28 | 2.875   | 15-Aug-28 | 0.07             | -0.01   | 0.08       | -0.67            | -0.89   | 0.22       | 0.24             | 0.33    | -0.09      | 3.91             | 2.67    | 1.24       |
| 2.375  | 15-Oct-28 | 4.625   | 30-Sep-28 | 0.01             | -0.06   | 0.07       | -0.71            | -0.94   | 0.23       | 0.13             | 0.29    | -0.16      | 3.92             | 2.70    | 1.22       |
| 2.500  | 15-Jan-29 | 5.250   | 15-Feb-29 | -0.02            | 0.00    | -0.02      | -0.73            | -1.02   | 0.29       | 0.10             | 0.22    | -0.12      | 3.93             | 2.71    | 1.22       |
| 0.875  | 15-Jan-29 | 3.125   | 15-Nov-28 | -0.04            | -0.04   | 0.00       | -0.75            | -0.97   | 0.22       | 0.09             | 0.30    | -0.21      | 3.97             | 2.75    | 1.22       |
| 3.875  | 15-Apr-29 | 5.250   | 15-Feb-29 | -0.04            | 0.00    | -0.04      | -0.73            | -1.02   | 0.29       | 0.13             | 0.22    | -0.09      | 4.03             | 2.71    | 1.32       |
| 2.125  | 15-Apr-29 | 4.625   | 30-Apr-29 | -0.03            | -0.05   | 0.02       | -0.75            | -1.08   | 0.33       | 0.08             | 0.21    | -0.13      | 4.03             | 2.83    | 1.20       |
| 0.250  | 15-Jul-29 | 2.375   | 15-May-29 | -0.10            | -0.11   | 0.01       | -0.83            | -1.16   | 0.33       | 0.00             | 0.15    | -0.15      | 4.07             | 2.81    | 1.26       |
| 1.625  | 15-Oct-29 | 4.125   | 31-Oct-29 | -0.12            | -0.11   | -0.01      | -0.82            | -1.26   | 0.44       | -0.10            | 0.10    | -0.20      | 4.04             | 2.90    | 1.14       |
| 0.125  | 15-Jan-30 | 1.750   | 15-Nov-29 | -0.17            | -0.14   | -0.03      | -0.90            | -1.33   | 0.43       | -0.15            | 0.07    | -0.22      | 4.08             | 2.94    | 1.14       |
| 1.625  | 15-Apr-30 | 3.875   | 30-Apr-30 | -0.20            | -0.20   | 0.00       | N/A              | N/A     | N/A        | N/A              | N/A     | N/A        | N/A              | N/A     | N/A        |
| 0.125  | 15-Jul-30 | 0.625   | 15-Aug-30 | -0.26            | -0.22   | -0.04      | -0.93            | -1.57   | 0.64       | -0.30            | -0.12   | -0.18      | 4.19             | 3.12    | 1.07       |
| 0.125  | 15-Jan-31 | 1.125   | 15-Feb-31 | -0.27            | -0.31   | 0.04       | -0.94            | -1.68   | 0.74       | -0.43            | -0.20   | -0.23      | 4.19             | 3.09    | 1.10       |
| 0.125  | 15-Jul-31 | 1.250   | 15-Aug-31 | -0.32            | -0.36   | 0.04       | -1.04            | -1.86   | 0.82       | -0.65            | -0.50   | -0.15      | 4.17             | 3.03    | 1.14       |
| 0.125  | 15-Jan-32 | 1.875   | 15-Feb-32 | -0.42            | -0.45   | 0.03       | -1.11            | -1.99   | 0.88       | -0.89            | -0.67   | -0.22      | 4.00             | 2.84    | 1.16       |
| 3.375  | 15-Apr-32 | 5.375   | 15-Feb-31 | -0.46            | -0.26   | -0.20      | -1.07            | -1.52   | 0.45       | -0.53            | -0.17   | -0.36      | 3.91             | 3.01    | 0.90       |
| 0.625  | 15-Jul-32 | 2.750   | 15-Aug-32 | -0.51            | -0.49   | -0.02      | -1.15            | -2.09   | 0.94       | -1.06            | -0.84   | -0.22      | 3.97             | 2.77    | 1.20       |
| 1.125  | 15-Jan-33 | 4.125   | 15-Nov-32 | -0.61            | -0.51   | -0.10      | -1.27            | -2.00   | 0.73       | -1.20            | -0.81   | -0.39      | 3.62             | 2.66    | 0.96       |
| 1.375  | 15-Jul-33 | 3.375   | 15-May-33 | -0.67            | -0.57   | -0.10      | -1.37            | -2.15   | 0.78       | -1.44            | -0.99   | -0.45      | 3.58             | 2.70    | 0.88       |
| 1.750  | 15-Jan-34 | 4.000   | 15-Feb-34 | -0.75            | -0.69   | -0.06      | -1.46            | -2.33   | 0.87       | -1.62            | -1.32   | -0.30      | 3.33             | 2.45    | 0.88       |
| 1.875  | 15-Jul-34 | 4.375   | 15-May-34 | -0.84            | -0.69   | -0.15      | -1.67            | -2.31   | 0.64       | -1.80            | -1.37   | -0.43      | 3.19             | 2.34    | 0.85       |
| 2.125  | 15-Jan-35 | 4.250   | 15-Nov-34 | -0.92            | -0.79   | -0.13      | -1.83            | -2.51   | 0.68       | -2.01            | -1.63   | -0.38      | N/A              | N/A     | N/A        |
| 2.125  | 15-Feb-40 | 4.625   | 15-Feb-40 | -1.58            | -1.60   | 0.02       | -3.04            | -3.93   | 0.89       | -3.76            | -3.97   | 0.21       | 1.71             | 0.47    | 1.24       |
| 2.125  | 15-Feb-41 | 4.750   | 15-Feb-41 | -2.06            | -1.74   | -0.32      | -3.28            | -4.23   | 0.95       | -4.68            | -4.41   | -0.27      | 0.34             | -0.14   | 0.48       |
| 0.750  | 15-Feb-42 | 3.125   | 15-Feb-42 | -2.29            | -1.93   | -0.36      | -3.68            | -4.65   | 0.97       | -5.41            | -5.09   | -0.32      | -0.32            | -0.82   | 0.50       |
| 0.625  | 15-Feb-43 | 3.125   | 15-Feb-43 | -2.42            | -1.94   | -0.48      | -3.89            | -4.68   | 0.79       | -5.73            | -5.10   | -0.63      | -0.41            | -0.71   | 0.30       |
| 1.375  | 15-Feb-44 | 3.625   | 15-Feb-44 | -2.20            | -1.97   | -0.23      | -3.63            | -4.63   | 1.00       | -5.50            | -5.08   | -0.42      | -0.31            | -0.78   | 0.47       |
| 0.750  | 15-Feb-45 | 2.500   | 15-Feb-45 | -2.37            | -2.26   | -0.11      | -3.90            | -5.16   | 1.26       | -6.10            | -5.81   | -0.29      | -0.93            | -1.56   | 0.63       |
| 1.000  | 15-Feb-46 | 2.500   | 15-Feb-46 | -2.57            | -2.31   | -0.26      | -4.06            | -5.21   | 1.15       | -6.40            | -5.98   | -0.42      | -1.18            | -1.61   | 0.43       |
| 0.875  | 15-Feb-47 | 3.000   | 15-Feb-47 | -2.65            | -2.28   | -0.37      | -4.34            | -5.11   | 0.77       | -6.98            | -5.81   | -1.17      | -1.91            | -1.47   | -0.44      |
| 1.000  | 15-Feb-48 | 3.000   | 15-Feb-48 | -2.79            | -2.31   | -0.48      | -4.48            | -5.22   | 0.74       | -6.96            | -5.86   | -1.10      | -2.09            | -1.52   | -0.57      |
| 1.000  | 15-Feb-49 | 3.000   | 15-Feb-49 | -2.91            | -2.32   | -0.59      | -4.70            | -5.24   | 0.54       | -7.36            | -5.93   | -1.43      | -2.59            | -1.57   | -1.02      |

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|       |           |       |           |       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-----------|-------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.250 | 15-Feb-50 | 2.000 | 15-Feb-50 | -3.34 | -2.66 | -0.68 | -5.37 | -5.96 | 0.59  | -8.41 | -6.83 | -1.58 | -3.73 | -2.50 | -1.23 |
| 0.125 | 15-Feb-51 | 1.875 | 15-Feb-51 | -3.60 | -2.71 | -0.89 | -5.96 | -6.05 | 0.09  | -9.03 | -7.04 | -1.99 | -4.56 | -2.72 | -1.84 |
| 0.125 | 15-Feb-52 | 2.250 | 15-Feb-52 | -3.66 | -2.71 | -0.95 | -6.12 | -6.01 | -0.11 | -9.41 | -6.94 | -2.47 | -5.02 | -2.69 | -2.33 |
| 1.500 | 15-Feb-53 | 3.625 | 15-Feb-53 | -3.09 | -2.47 | -0.62 | -5.06 | -5.54 | 0.48  | -7.82 | -6.29 | -1.53 | -3.42 | -2.18 | -1.24 |
| 2.125 | 15-Feb-54 | 4.250 | 15-Feb-54 | -2.95 | -2.43 | -0.52 | -4.84 | -5.50 | 0.66  | -7.51 | -6.24 | -1.27 | -3.18 | -2.44 | -0.74 |
| 2.375 | 15-Feb-55 | 4.625 | 15-Feb-55 | -2.99 | -2.46 | -0.53 | -4.90 | -5.59 | 0.69  | -7.40 | -6.33 | -1.07 | N/A   | N/A   | N/A   |