Suppose that the current one-year rate (one-year spot rate) and expected one-year T-bond rates over the following three years (i.e., years 2, 3, and 4, respectively) are as follows:

\[ R_1 = 1.94\%, \quad E_2(R_2) = 3.00\%, \quad E_3(R_3) = 3.74\%, \quad E_4(R_4) = 4.10\% \]

In addition, investors charge a liquidity premium on longer-term securities such that:

\[ L_2 = 0.10\%, \quad L_3 = 0.20\%, \quad L_4 = 0.30\% \]

Using the liquidity premium theory, current rates for one-, two-, three-, and four- year maturity Treasury securities should be:

\[ R_1 = 1.94\% \]

\[ R_2 = \left[ (1 + 0.0194)(1 + 0.03 + 0.001) \right]^{1/2} - 1 = 2.52\% \]

\[ R_3 = \left[ (1 + 0.0194)(1 + 0.03 + 0.001)(1 + 0.0374 + 0.002) \right]^{1/3} - 1 = 2.99\% \]

\[ R_4 = \left[ (1 + 0.0194)(1 + 0.03 + 0.001)(1 + 0.0374 + 0.002)(1 + 0.041 + 0.003) \right]^{1/4} - 1 = 3.34\% \]

and the current yield to maturity curve will be upward sloping as shown:

Comparing the yield curves in Example 2–7 and this appendix, notice that the liquidity premium in year 2 \( L_2 = 0.10\% \) produces a 0.05 percent premium on the yield to maturity on a two-year T-note, the liquidity premium for year 3 \( L_3 = 0.20\% \) produces a 0.10 percent premium on the yield to maturity on the three-year T-note, and the liquidity premium for year 4 \( L_4 = 0.30\% \) produces a 0.15 percent premium on the yield to maturity on the four-year T-note.