Short-Term Debt / Money Market Instruments

What are money market securities?

**Treasury bills** – 4-, 13-, 26-, and 52-week maturities

Minimum face $100
Pure discount securities
Exempt from state and local taxes

Auctions – Competitive versus Non-competitive bids
Money Market Instruments

<table>
<thead>
<tr>
<th>Maturity</th>
<th>Days to maturity</th>
<th>Bid</th>
<th>Asked</th>
<th>Chg</th>
<th>Ask yld</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun 24, 14</td>
<td>87</td>
<td>5.93</td>
<td>5.92</td>
<td>0.01</td>
<td>6.10</td>
</tr>
</tbody>
</table>

Bid and Asked are Bank Discount Yield (BD)

\[
\text{Price} = \text{Face value} \left(1 - \frac{\text{Days}}{360} \times R_{BD}\right)
\]

\[
R_{BD} = \frac{\text{Par-Price}}{\text{Par}} \times \frac{360}{n}
\]

Problems:
1) 360 day year
2) Simple interest, not compound interest
3) Denominator is face value, not investment amount

Ask Yield – Bond Equivalent Yield (BEY)

\[
R_{BEY} = \frac{\text{Par-Price}}{\text{Price}} \times \frac{365}{n}
\]
To convert BD to BEY:

\[ R_{BEY} = \frac{365 \times R_{BD}}{360 - (R_{BD} \times n)} \]

Leap Year Convention – If February 29th occurs in the next 12 months, use 366 days in the year, not 365. For example, 2016 is a leap year, so starting March 1, 2015, 366 days will be used in the calculations.

Problems:
1) APR – simple interest, not compound interest

Bank discount yield < Bond equivalent yield < Effective annual rate

To find the EAR:
Other Money Market Instruments

- Negotiable CDs

- Commercial paper

- Bankers’ acceptances

- Eurodollars

- Repurchase agreement (Repos)

- Reverse repos

- Federal Funds

- Brokers’ call

- LIBOR loans