Key to 4:00 Quiz: 2/15/12

Quiz: Assume that the past four years are representative for both Google and Ford. Set up the calculations (equations and all relevant numbers) to determine on which of the two stocks you could expect to earn the highest return and on which of the stocks you could expect the most volatile returns.

<table>
<thead>
<tr>
<th>Year</th>
<th>Google</th>
<th>Ford</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>-3%</td>
<td>-22%</td>
</tr>
<tr>
<td>2010</td>
<td>13%</td>
<td>36%</td>
</tr>
<tr>
<td>2009</td>
<td>57%</td>
<td>100%</td>
</tr>
<tr>
<td>2008</td>
<td>-28%</td>
<td>-72%</td>
</tr>
</tbody>
</table>

Note: You don’t have to solve anything, just set everything up.

\[
\bar{r}_g = \frac{1}{4} (-3 + 13 + 57 - 28)
\]

\[
\bar{r}_f = \frac{1}{4} (-22 + 36 + 100 - 20)
\]

\[SD(R_g) = \sqrt{\frac{1}{4} \left( \frac{(-3 - \bar{r}_g)^2 + (13 - \bar{r}_g)^2 + (57 - \bar{r}_g)^2 + (-28 - \bar{r}_g)^2)}{4} \right)}
\]

\[SD(R_f) = \sqrt{\frac{1}{4} \left( \frac{(-22 - \bar{r}_f)^2 + (36 - \bar{r}_f)^2 + (100 - \bar{r}_f)^2 + (-72 - \bar{r}_f)^2)}{4} \right)}
\]

=> can expect highest return on stock with highest \( \bar{r} \)

=> can expect most volatile returns on stock with highest SD