Projecting Stock Price Movements with Fair Value Analysis

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Projecting Stock Price Movements with Fair Value Analysis

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Study Objective:
• Assess the predictive capabilities of Morningstar’s fair value metric
• Determine if Morningstar’s fair value metric can identify mispriced stocks

Study Design:
• Data Set
  • Dow Jones 30 stocks
  • Morningstar fair value metrics
  • Stock returns, Dow 30
  • Fair value indices, Dow 30
• Time Period
  • 2009-2012
  • Quarterly intervals

Fair Value Model:
• FVI_{it} = \frac{FV_{it}}{P_{it}}
• Mispriced Securities
  • FVI_{it} > 1, undervalued
  • FVI_{it} = 1, fair value
  • FVI_{it} < 1, overvalued

Hypotheses:
• FVI_{it} > 1, P_{it+n} > P_{it}
• FVI_{it} = 1, P_{it+n} = P_{it}
• FVI_{it} < 1, P_{it+n} < P_{it}

Nomenclature:
• Fv_{it} = \text{Fair value of stock (i)}
• P_{it} = \text{Price of stock (i)}
• FVI_{it} = \text{Fair value index (i)}
• t= time period, quarterly

Returns versus FVI

<table>
<thead>
<tr>
<th>FVI</th>
<th>Returns</th>
<th>Total Return Count</th>
<th>Positive Returns/Total Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 1.60</td>
<td>+</td>
<td>-</td>
<td>50</td>
</tr>
<tr>
<td>1.5-1.59</td>
<td>13</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>1.4-1.49</td>
<td>20</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>1.20-1.39</td>
<td>66</td>
<td>35</td>
<td>101</td>
</tr>
<tr>
<td>1.00-1.19</td>
<td>87</td>
<td>56</td>
<td>143</td>
</tr>
<tr>
<td>&lt; 1.00</td>
<td>45</td>
<td>35</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>264</td>
<td>156</td>
<td>420</td>
</tr>
</tbody>
</table>

Conclusion:
• Comparing FVI > 1.60 to FVI < 1.00 the percent of positive returns was 66% versus 56%
• FVI from 1.4 and greater consistently had a higher percentage of positive returns compared to FVI of 1.39 or less
• Negative returns (absolute) were much lower for FVI 1.4 and greater compared to FVI 1.39 and lower
• Morningstar’s FV has some predictive capabilities in identifying mispriced securities