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Do Dividends Matter: An empirical analysis of the impact of dividends on portfolio stock selection, portfolio weights, and portfolio returns for S&P 500 stocks over the period 2005-2010

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Purpose: To determine if a portfolio of stocks focused on dividends can create alpha (i.e. excess returns) in both declining and rising stock markets. At the margin, I have assumed critical factors in determining alpha are dividend yield, dividend growth rate, and dividend payout ratio. S&P 500 stocks were screened to compile a list of securities meeting the following criteria:

[1] Price/Earnings < Market (S&P 500)
[2] 1 Yr. or 15 Yr. EPS Growth Rate > Market
[3] Return on Common Equity > Market
[4] Dividend Yield > 0%

Portfolio Weighting Process

\[ Yld_{it} = \frac{D_{it}}{P_{it}} \]

\[ \text{Sum}(Yld) = \sum_{i=1}^{n} Yld_{i} \]

\[ Yld_{w} = \frac{Yld_{i}}{\text{Sum}(Yld)} \]

\[ Yld_{w} \times 1,000,000 = DV_{it} \]

\[ Shares_{it} = \frac{DV_{it}}{P_{it}} \]

\[ PV_{t+1} = Shares_{it} \times P_{t+1} \]

Conclusions

• There is no single dividend weighting factor that consistently outperforms over all time periods of analysis

• In the downswing period, dividend weighting appears important, as both Yield and 5-Year Dividend Growth Rate outperformed the equal-weighted benchmarks

• In the upswing period, dividend weighting also appears important, since both 1/Yield and 5-Year Dividend Growth Rate weighting outperformed the equal-weighted benchmarks

• Of all the dividend weighting factors, 1/Yield appears to have the strongest appeal since it strongly outperformed the benchmark portfolio long-term (2005 – 2011)

• All dividend factors outperformed the S&P 500 for all time periods

Performance vs. Equal-Weighted Benchmarks

• The original stock filter criteria set a very high standard
• When dividend-weighting outperformed is critical
• 1/Yield appears to have the strongest overall appeal, implying the presence of a hidden growth rate in low-yielding stocks
• Dividend Growth Rate appears critical in market downturns

<table>
<thead>
<tr>
<th>Year</th>
<th>Yield</th>
<th>1/Yield</th>
<th>5 Yr. Growth Rate</th>
<th>Payout Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2011</td>
<td>-11.70%</td>
<td>17.76%</td>
<td>-18.84%</td>
<td>-24.16%</td>
</tr>
<tr>
<td>2006-2011</td>
<td>-9.47%</td>
<td>-0.76%</td>
<td>-3.81%</td>
<td>-9.70%</td>
</tr>
<tr>
<td>2007-2011</td>
<td>-9.28%</td>
<td>-7.17%</td>
<td>6.80%</td>
<td>-10.47%</td>
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<tr>
<td>2008-2011</td>
<td>3.61%</td>
<td>-2.37%</td>
<td>5.00%</td>
<td>-7.60%</td>
</tr>
<tr>
<td>2009-2011</td>
<td>-18.29%</td>
<td>40.27%</td>
<td>-3.12%</td>
<td>-16.95%</td>
</tr>
</tbody>
</table>

Table 6-B: Performance vs. Equal-Weighted Benchmarks

Performance of GARP 1 vs. Dividend Portfolios

<table>
<thead>
<tr>
<th>Year</th>
<th>Yield</th>
<th>1/Yield</th>
<th>5 Yr. Growth Rate</th>
<th>Payout Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2011</td>
<td>0.96%</td>
<td>15.54%</td>
<td>-6.43%</td>
<td>-17.45%</td>
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<tr>
<td>2006-2011</td>
<td>-6.65%</td>
<td>-5.14%</td>
<td>-0.03%</td>
<td>-6.69%</td>
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<tr>
<td>2007-2011</td>
<td>-7.00%</td>
<td>-6.13%</td>
<td>3.53%</td>
<td>-9.66%</td>
</tr>
<tr>
<td>2008-2011</td>
<td>5.04%</td>
<td>-3.72%</td>
<td>6.02%</td>
<td>-10.01%</td>
</tr>
<tr>
<td>2009-2011</td>
<td>-16.72%</td>
<td>25.03%</td>
<td>3.76%</td>
<td>-24.38%</td>
</tr>
</tbody>
</table>

Table 6-A: Performance of GARP 1 vs. Dividend Portfolios

Table 6-B: Performance vs. Equal-Weighted Benchmarks

Performance of S&P 500 vs. Dividend Portfolios (GARP 1)

Performance of S&P 500 vs. Dividend Portfolios (GARP 2)