Closing Keynote:

The Incredible Shrinking Alpha

Speaker:

LARRY SWEDROE
Managing Principal & Director of Research
Buckingham Family of Financial Services & the BAM Alliance
The Incredible Shrinking Alpha

and what YOU can do to ESCAPE its CLUTCHES!

SWEDROE & BERKIN

Larry Swedroe
Director of Research
The First Asset Pricing Model

Capital Asset Pricing Model (CAPM)

\[ r_a = r_f + \beta_a (r_m - r_f) \]

Anomalies to the CAPM

1. Introduction

The single-period capital asset pricing model (henceforth CAPM) posits a simple linear relationship between the expected return and the market risk of a security. While the results of direct tests have been mixed, recent evidence suggests the existence of additional factors, a number of which are relevant for asset pricing. Lizenga and Rimlongwany (1974) find a significant positive relationship between dividend yield and returns on common stocks for the 1926-1967 period. Basu (1977) finds that price earnings ratios and risk adjusted returns are related. He suggests that earnings per share and market efficiency tests are often done tests of the efficient market hypothesis. The relationship between earnings and returns is supported by the work of Fama and French (1985), who demonstrate that small-cap stocks have higher returns than large-cap stocks.

2. Further Evidence

Recent empirical research on the relationship between earnings and stock returns has revealed some anomalies in the pricing of corporate equities. In particular, the findings reported in (1977) indicate that portfolios of low (high) earnings yeild trading on the NYSE appear to have earned higher (lower) risk-adjusted rates of return on average, than portfolios randomly selected stocks. As noted by Basu, the results suggest that the single-period capital asset pricing model has descriptive validity, and (ii) security prices are not consistent with market efficiency.

3. Conclusions

In conclusion, the evidence presented in this paper suggests that the single-period capital asset pricing model is not capable of explaining the market risk of a security. Further, the evidence supports the notion that small-cap stocks have higher returns than large-cap stocks.

References

The Fama-French Three-Factor Model

1927 - 2013

Value: 5.0%
Size: 3.6%
Beta: 8.4%

Source: Ken French Data Library. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio nor do indices represent results of actual trading. Information from sources deemed reliable, but its accuracy cannot be guaranteed. Performance is historical and does not guarantee future results. Total return includes reinvestment of dividends.
The Four-Factor Model

<table>
<thead>
<tr>
<th>1927 - 2013</th>
<th>Value: 5.0%</th>
<th>Size: 3.6%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta: 8.4%</td>
<td>Momentum: 9.6%</td>
</tr>
</tbody>
</table>

2 Ken French Data Library. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio nor do indices represent results of actual trading. Information from sources deemed reliable, but its accuracy cannot be guaranteed. Performance is historical and does not guarantee future results. Total return includes reinvestment of dividends.

Note: I did not verify this data. KG or JK should be able to provide it for you if it's not already included in another slide.
The Profitability / Quality Factor

- Stable
- Growing
- High Payout Ratio

The Other Side of Value:
The Gross Profitability Premium

Robert Novy-Marx

June, 2012

Abstract

Profitability, measured by gross profits-to-assets, has roughly the same power as book-to-market predicting the cross-section of average returns. Profitable firms generate significantly higher returns than unprofitable firms, despite having significantly higher valuation ratios. Controlling for profitability also dramatically increases the performance of value strategies, especially among the largest, most liquid stocks. These results are difficult to reconcile with popular explanations of the value premium, as profitable firms are less prone to distress, have longer cash flow durations, and have lower levels of operating leverage. Controlling for gross profitability explains most earnings related anomalies, and a wide range of seemingly unrelated profitable trading strategies.

Keywords: Profitability, value premium, factor models, asset pricing.

JEL Classification: G12.
Buffett’s Alpha

Safe
Cheap
High-Quality
Large

Buffett’s Alpha
Characteristics of High-Quality Stocks

- Low earnings volatility
- High margins
- High asset turnover
- Low financial leverage
- Low operating leverage
- Low specific stock risk

Factors in the Performance of Bond Portfolios

Average Annual Premium 1926 - 2013

Term: 1.9%
Default: 0.3%

Source: Ken French Data Library. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio nor do indices represent results of actual trading. Information from sources deemed reliable, but its accuracy cannot be guaranteed. Performance is historical and does not guarantee future results. Total return includes reinvestment of dividends.
The Arithmetic of Active Management

\[ \text{TOTAL MARKET} = \text{ACTIVE INVESTORS} + \text{PASSIVE INVESTORS} \]

The Pool of Victims is Shrinking

Households With Equities Holdings

1945: 90%

The Pool of Victims is Shrinking

Households With Equities Holdings

2008: 20%

TODAY:
40% of Institutional Assets in Passive Strategies

Skill Level of Competition Is Increasing
Why There Are No More .400 Hitters

Source: This image or file was extracted from a baseball card produced by Bowman Gum. According to the United States Copyright Office, copyrights belonging to Bowman Gum were not renewed within the required period for filing. Thus, all baseball cards printed by Bowman before 1989 have lapsed into the public domain and are free for use.
The Paradox of Skill

Decline in Standard Deviation of Excess Returns for U.S. Large Capitalization Funds

The Paradox of Skill

### Where's Berkshire's Alpha?

#### 1999–2013

<table>
<thead>
<tr>
<th></th>
<th>15-Year Annualized Returns (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berkshire Hathaway, Class B</td>
<td>6.4</td>
</tr>
<tr>
<td>S&amp;P 500 Index</td>
<td>4.7</td>
</tr>
<tr>
<td>MSCI US Prime Market Value Index</td>
<td>6.2</td>
</tr>
<tr>
<td>MSCI US Small Cap 1750 Index</td>
<td>10.4</td>
</tr>
<tr>
<td>MSCI US Small Cap Value Index</td>
<td>10.5</td>
</tr>
<tr>
<td>Dow Jones US Select REIT Index</td>
<td>10.5</td>
</tr>
<tr>
<td>Equal-Weighted Fund Portfolio</td>
<td>8.5</td>
</tr>
</tbody>
</table>

Source: Morningstar. Information from sources deemed reliable, but its accuracy cannot be guaranteed. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio nor do indices represent results of actual trading. Performance is historical and does not guarantee future results.
Where’s Sequoia’s Six-Factor Alpha*?

<table>
<thead>
<tr>
<th>1999–2013</th>
<th>15-Year Annualized Returns (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sequoia Fund (SEQUX)</strong></td>
<td>7.5</td>
</tr>
<tr>
<td>S&amp;P 500 Index</td>
<td>4.7</td>
</tr>
<tr>
<td>MSCI US Prime Market Value Index</td>
<td>6.2</td>
</tr>
<tr>
<td>MSCI US Small Cap 1750 Index</td>
<td>10.4</td>
</tr>
<tr>
<td>MSCI US Small Cap Value Index</td>
<td>10.5</td>
</tr>
<tr>
<td>Dow Jones US Select REIT Index</td>
<td>10.5</td>
</tr>
<tr>
<td><strong>Equal-Weighted Fund Portfolio</strong></td>
<td>8.5</td>
</tr>
<tr>
<td><strong>Sequoia’s Alpha</strong>**</td>
<td>–0.7</td>
</tr>
</tbody>
</table>

Source: Morningstar. Information from sources deemed reliable, but its accuracy cannot be guaranteed. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio nor do indices represent results of actual trading. Performance is historical and does not guarantee future results.

* Six Factors: Beta, Size, Value, Momentum, Quality and Low Beta
**Portfolio Visualizer.
Where's Tweedy, Browne’s Six-Factor Alpha?

### 1999–2013

<table>
<thead>
<tr>
<th>Fund/Panels</th>
<th>15-Year Annualized Returns (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tweedy, Browne Value Fund (TWEBX)</strong></td>
<td>5.7</td>
</tr>
<tr>
<td>S&amp;P 500 Index</td>
<td>4.7</td>
</tr>
<tr>
<td>MSCI US Prime Market Value Index</td>
<td>6.2</td>
</tr>
<tr>
<td>MSCI US Small Cap 1750 Index</td>
<td>10.4</td>
</tr>
<tr>
<td>MSCI US Small Cap Value Index</td>
<td>10.5</td>
</tr>
<tr>
<td>Dow Jones US Select REIT Index</td>
<td>10.5</td>
</tr>
<tr>
<td><strong>Equal-Weighted Fund Portfolio</strong></td>
<td>8.5</td>
</tr>
<tr>
<td><strong>Tweedy, Browne’s Alpha</strong></td>
<td><strong>–1.9</strong></td>
</tr>
</tbody>
</table>

Source: Morningstar. Information from sources deemed reliable, but its accuracy cannot be guaranteed. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio nor do indices represent results of actual trading. Performance is historical and does not guarantee future results.

*Six Factors: Beta, Size, Value, Momentum, Quality and Low Beta

**Portfolio Visualizer.
Skating Where the Puck Was
Hedge Fund Alpha

1998–2002

9%

Skating Where the Puck Was
Hedge Fund Alpha

1998–2002
9%

2003–2007
−0.7%

Hedge Fund Alpha

1998–2002: 9%
2003–2007: −0.7%
2008–2012: −4.5%

## Annualized Returns 2005–2014

<table>
<thead>
<tr>
<th>Benchmark Index</th>
<th>Return (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HFRX Global Hedge Fund Index</strong></td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Domestic Indexes</strong></td>
<td></td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>7.7</td>
</tr>
<tr>
<td>MSCI US Small Cap 1750 (gross dividends)</td>
<td>9.0</td>
</tr>
<tr>
<td>MSCI US Prime Market Value (gross dividends)</td>
<td>7.2</td>
</tr>
<tr>
<td>MSCI US Small Cap Value (gross dividends)</td>
<td>7.9</td>
</tr>
<tr>
<td>Dow Jones Select REIT</td>
<td>8.1</td>
</tr>
<tr>
<td><strong>International Indexes</strong></td>
<td></td>
</tr>
<tr>
<td>MSCI EAFE (net dividends)</td>
<td>4.4</td>
</tr>
<tr>
<td>MSCI EAFE Small Cap (net dividends)</td>
<td>6.0</td>
</tr>
<tr>
<td>MSCI EAFE Small Value (net dividends)</td>
<td>6.4</td>
</tr>
<tr>
<td>MSCI EAFE Value (net dividends)</td>
<td>3.9</td>
</tr>
<tr>
<td>MSCI Emerging Markets (net dividends)</td>
<td>8.4</td>
</tr>
<tr>
<td><strong>Fixed Income</strong></td>
<td></td>
</tr>
<tr>
<td>Merrill Lynch One-Year Treasury Note</td>
<td>2.0</td>
</tr>
<tr>
<td>Five-Year Treasury Notes</td>
<td>4.5</td>
</tr>
<tr>
<td>20-Year Treasury Bonds</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Source: Dimensional Fund Advisors

Information from sources deemed reliable, but its accuracy cannot be guaranteed. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio nor do indices represent results of actual trading. Performance is historical and does not guarantee future results.
Active Managers Provide Societal Benefits

Increasing Hurdles for Alpha Seekers

- Pool of available alpha has been shrinking
- Pool of victims is shrinking.
- Competition is getting tougher.
- Amounts of assets competing is growing.
So What’s the Good News?
Thank You.
Questions?