Investing in Global Equities

Missing Art of Portfolio Management in ‘Smart beta’

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August 2014

‘Smart Beta’
The big new trend

Source: Schroders. For illustrative purposes only.
What is ‘Smart Beta’?
An alternative to cap weighted benchmarks

smart beta / alternative beta / strategic beta / harvesting risk premiums

- Transparent, rules based strategies
- Generally use a non-market capitalisation approach
- Target characteristics that are expected to add value or reduce risk in the long run

Attraction of ‘Smart Beta’
Historical performance of smart beta/non-market-cap indices

<table>
<thead>
<tr>
<th>Relative to MSCI World USD</th>
<th>Equally Weighted</th>
<th>Minimum Volatility</th>
<th>High Dividend Yield</th>
<th>Momentum</th>
<th>RAFI Developed</th>
<th>RAFI All-World</th>
<th>Value Weighted</th>
<th>Quality</th>
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<tbody>
<tr>
<td>2000</td>
<td>13.1</td>
<td>14.1</td>
<td>-8.4</td>
<td>15.7</td>
<td>14.3</td>
<td>10</td>
<td>2.7</td>
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<td>2001</td>
<td>4.9</td>
<td>7.7</td>
<td>8.2</td>
<td>2.7</td>
<td>8.7</td>
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<td>7.1</td>
<td>6.8</td>
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<td>-3.6</td>
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<td>5.1</td>
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<td>6.5</td>
<td>-11.7</td>
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<tr>
<td>2004</td>
<td>8.9</td>
<td>5</td>
<td>4.4</td>
<td>-0.1</td>
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<td>6.2</td>
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<td>-2.6</td>
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<td>2006</td>
<td>1.5</td>
<td>0.8</td>
<td>7.9</td>
<td>-0.5</td>
<td>6.3</td>
<td>7.5</td>
<td>2.9</td>
<td>-3.9</td>
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<td>2008</td>
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<td>-2.3</td>
<td>4.1</td>
<td>-1.6</td>
<td>-1.4</td>
<td>-2.2</td>
<td>6.9</td>
</tr>
<tr>
<td>2009</td>
<td>11.4</td>
<td>-13.6</td>
<td>2.5</td>
<td>-12.9</td>
<td>10.6</td>
<td>16.6</td>
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<td>2010</td>
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<td>-5.5</td>
<td>1</td>
<td>-0.5</td>
<td>2</td>
<td>-0.5</td>
<td>-1.1</td>
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<td>2011</td>
<td>-4.2</td>
<td>12.8</td>
<td>9.4</td>
<td>1.8</td>
<td>-2.6</td>
<td>-3.5</td>
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<td>2012</td>
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<td>-7.8</td>
<td>-3.6</td>
<td>3.2</td>
<td>0.7</td>
<td>0.5</td>
<td>0.5</td>
<td>-2.8</td>
</tr>
<tr>
<td>2013</td>
<td>0.7</td>
<td>-8.1</td>
<td>-4.8</td>
<td>-2.4</td>
<td>3.2</td>
<td>-0.7</td>
<td>1.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Average for period</td>
<td>4.40%</td>
<td>0.30%</td>
<td>2.10%</td>
<td>-0.10%</td>
<td>3.90%</td>
<td>5.90%</td>
<td>1.90%</td>
<td>0.60%</td>
</tr>
</tbody>
</table>

Source: MSCI, Bloomberg, FSTE as of December 31, 2013. The indices used are MSCI World Equally Weighted Index, MSCI Minimum Volatility Index, MSCI World High Dividend Yield Index, FTSE RAFI Developed ActiveBeta Momentum Index, FTSE RAFI Developed 1000 Index, MSCI World Value Weighted Index, MSCI World Quality Index. Performance shown is past performance. Past performance is not a guide to future performance. The value of investments can go down as well as up and is not guaranteed.
The importance of rebalancing
Addressing the anti-value bias of cap weighting

- The anchor can be anything measurable as long as it is not linked to the share price
- Reweighting stocks in the MSCI index by the length of their name (i.e., stocks with longest names are assigned higher weights) generates a return advantage over time

Cumulative return

Source: Schroders, Worldscope, MSCI, QEP. All returns are in USD (gross) and portfolios are rebalanced twice a year, 1988-2013. Every 6 months we take the MSCI World constituent stocks and calculate: Length of Company Name Weighted portfolio which uses all stocks in the index weighted using the length of the company name i.e., the company with the longest name is given the biggest weight. Performance shown represents past performance. Past performance is no guarantee of future results and current performance may be higher or lower than the performance shown.

Dangers of rules based rebalancing
Concentration in specific themes

MSCI World Min Vol
>70% in US and Japan

MSCI AC Momentum
>65% in US & 3% in Japan

MSCI World Quality
74% in US, 1% in Japan

Source: Schroders, MSCI, as of June 2, 2014

Other Regions  US
Japan
Defensives

Other Regions  US
Defensives

Health Care & Staples
Tech
Financials

US

Other Regions  Japan
Defensives

Other Regions  Japan
Cyclicals

Health Care & Staples
Tech
Financials

Japan

Other Regions  Japan
Health Care & Staples
Tech
Financials

Health Care & Staples
Tech
Financials
Dangers of rules based rebalancing
Smart beta/alternative indices – RAFI Emerging Markets

Four countries account for almost 70% of exposure

![Bar chart showing exposure to four countries (China, Brazil, Taiwan, Russia) for RAFI Emerging Markets and MSCI Emerging Markets.]

Significant holding in State Owned Enterprise (SOE) – Government holds >20% equity

![Pie chart showing SOE weight in RAFI Emerging Markets and MSCI Emerging Markets.]

Dangers of rules based rebalancing
Asset allocation of alternative beta strategies can shift dramatically on one day

![Before and after pie charts showing MSCI AC Momentum in Nov 26, 2013 and Nov 27, 2013.]

Source: Schroders QEP, FTSE RAFI, MSCI. Holdings as of December 31, 2013. Regions and sectors mentioned are shown for illustrative purposes only and should not be viewed as a recommendation to buy/sell.
Dangers of rules based rebalancing
Asset allocation of alternative beta strategies can shift dramatically on one day

![Change in Financial Sector Exposure for FTSE RAFI Index](image)

Source: Schroders, FTSE, as of March 20, 2009 and March 23, 2009 and March 19, 2010 and March 22, 2010. Countries and sectors mentioned are shown for illustrative purposes only and should not be viewed as a recommendation to buy/sell.

A simple rules-based approach...
Managing strategies through the investment cycle

![Low Volatility is not always low risk](image)

![Active Risk can change dramatically through the investment cycle](image)

Source: MSCI, Schroders as of May 31, 2014. For information purposes only. LHS Chart: Each month we take the MSCI World universe and calculate the median trailing 12 month stock volatility for all stock in the index and for only stocks in the financial sector. Sectors are based on the Global Industry Classification Standard (GICS). RHS Chart: Historic Rolling 5 Yr Tracking Error of MSCI World Min.Vol index (Net Dividends Reinvested) vs MSCI World Index. Sectors mentioned are shown for illustrative purposes only and should not be viewed as a recommendation to buy/sell. Performance shown represents past performance. Past performance is no guarantee of future results and current performance may be higher or lower than the performance shown.
The Art of Portfolio Management

Improving consistency through the investment cycle

- Smart beta are active strategies. Due diligence is key
- Simple rules don’t lead to known outcomes!
  - Risk characteristics can change dramatically
- Portfolio Management is required to manage active strategies through the investment cycle
**Compliance Disclaimers**

**Important information**

The returns are presented as gross returns, including cash, reinvestment of dividends, interest and other income earned in the period and are calculated on a trade date basis after transaction charges (brokerage commissions), but before taxes and management and custody fees. Performance would have been reduced by such fees and the effect of these fees on performance compounds over time.

As an illustration see the chart below. The value of a $5,000,000 account would be reduced by the following amounts due to the compound effect of the management fees. (This has been calculated assuming an assumed constant return of 10% per annum and a hypothetical management fee of 0.75% per annum, which has been applied on a simple average of opening and closing annual fund values):

<table>
<thead>
<tr>
<th></th>
<th>Gross Value</th>
<th>Net Value</th>
<th>Compound Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Year</td>
<td>$5,500,000</td>
<td>$5,447,500</td>
<td>$52,500</td>
</tr>
<tr>
<td>3 Years</td>
<td>6,655,000</td>
<td>6,446,238</td>
<td>186,762</td>
</tr>
<tr>
<td>5 Years</td>
<td>8,052,550</td>
<td>7,675,491</td>
<td>377,059</td>
</tr>
<tr>
<td>10 Years</td>
<td>12,968,712</td>
<td>11,782,633</td>
<td>1,186,079</td>
</tr>
</tbody>
</table>

*The assumed 10% return is hypothetical and should not be considered a representation of past or future returns. The actual effect of fees on the value of an account over time will vary with future returns, which cannot be predicted and may be more or less than the amount assumed in this illustration. Actual fees may differ from the assumed rate presented above. Please consult Part II of Form ADV for a description of the fees.*

**Schroder QEP – Global Quality Composite**

**Composite disclosures as of: December 31, 2013**

**Definition of the Firm**

The Firm is defined as all accounts managed by Schroder Investment Management in the UK and US, by wholly-owned subsidiaries of Schroders PLC. Prior to January 1, 2007 SIM London & SIM North America existed as two separate Firms which were compliant & verified as separate entities until December 31, 2006. The consolidation of these two Firms was made as part of a move towards creating one global Firm. Composite and Firm assets reported prior to January 1, 2007 represent those of the legacy firms which managed the product. Prior to January 1, 2011 the SPFM (Schroder Property Investment Management) Firm existed separate to the Schroder Investment Management UK and US Firm from January 1, 2011 these Firms have been combined into a single firm.

On April 2, 2013, Schroder U.S. Holdings Inc., a subsidiary of Schroders plc; purchased STW Fixed Income Management LLC (“STW”) and on July 2, 2013, Schroders plc, purchased Cazenove Capital Holdings; assets managed by STW and Cazenov are included in the Firm from January 1, 2014. Assets Managed against a liability driven mandates are excluded from the GIPS Firm.

A complete list and description of the Firm's composites and performance results is available upon request.

**Composite Definition**

The QEP - Global Quality Composite (the “Composite”) is comprised of all Schroder Investment Management (UK & US) fully discretionary accounts that are managed in a similar manner and seek to achieve a total return above the MSCI AC World (NDR), MSCI World (NDR) or comparable index through active investment in diversified, index-unconstrained, Quality style-based portfolios. Composite accounts invest predominately in equities and equity-related securities, although other financial instruments are permitted. Derivatives may be used to manage currency risk. As of November 2013 the primary benchmark for this composite was changed from MSCI World (NDR) to the MSCI AC World (NDR) for all periods since inception. The latter is a more appropriate comparison for the strategy, as emerging markets are typically included in the investment universe.

No change was made to the investment process and the benchmark continues to be used only as a reference for performance comparison. This description was redrafted on 11/29/2012, the redrafting has been made to enhance the composite description by increasing the level of detail used to describe the investment strategy. Previous disclosures are available upon request.

**Composite Construction**

New accounts are included from the beginning of the first full month of management on a discretionary basis. Terminated accounts are excluded from the end of the last full month of discretionary management. This Composite has no minimum asset level for inclusion.

**Performance Calculation**

The portfolio returns are time-weighted return that are adjusted for cash flows. Portfolio returns are combined using beginning of period asset weights to produce the composite return. Periodic returns are geometrically linked to produce annual returns.

Dividends on equities are recognized net of irrecoverable withholding tax. Since January 1999 dividends have been recognized as of the ex-dividend date having previously been recognized on a cash basis. Performance results are presented before the deduction of management fees and custody fees but after trading expenses.

**Fee Calculation**

The fee applied to gross performance in order to calculate net performance is 0.70% p.a., which represents the highest bracket of the fee scale for institutional investors in this strategy in a segregated account.

**Dispersion**

The dispersion of annual returns is measured by the asset weighted standard deviation of portfolio returns represented within the composite for the full-year provided a minimum of 5 portfolios are available.

**Additional Information**

The exchange rates used are provided by WM. Each currency is valued at 4 pm on the last business day of the month. Additional information regarding policies for valuing portfolios, calculating and reporting returns and a description of all composites are available on request.

**GIPS Compliance and Verification**

Schroder Investment Management (UK & US) claims compliance with the Global Investment Performance Standards GIPS® and has prepared and presented this report in compliance with the GIPS standards. Schroder Investment Management (UK & US) has been independently verified for the periods January 1, 1996 to December 31, 2013. Verification assesses whether (1) the firm has complied with all the composite construction and performance requirements of the GIPS standards on a firm-wide basis and (2) the firm’s policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The QEP - Global Quality (the “composite”) has been examined for the periods January 1, 2011 to December 31, 2013. The verification and performance examination reports are available upon request.
### Schroder QEP – Global Quality Composite

**Composite performance results as of: December 31, 2013**

**Composite:** Schroder QEP – Global Quality  
**Primary Benchmark:** MSCI AC World (NDR)  
**Currency:** US Dollar  
**Gross Returns as of:** Dec-31-2013  
**Firm:** Schroders Investment Management–UK North America

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross Composite Return</th>
<th>Net Composite Return</th>
<th>Benchmark Return</th>
<th>Composite Risk1</th>
<th>Benchmark Risk1</th>
<th>Number of Portfolios (Throughout period)</th>
<th>Account Dispersion2</th>
<th>Market Value at end of Period</th>
<th>Average Account Value at end of Period</th>
<th>Percentage of Firm Assets</th>
<th>Total Firm Assets (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>24.29%</td>
<td>24.29%</td>
<td>22.26%</td>
<td>14.06%</td>
<td>1.48%</td>
<td>3.06%</td>
<td>1.18%</td>
<td>624,558,827</td>
<td>748,433,820</td>
<td>1.2%</td>
<td>205,807,895,763</td>
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<td>18.09%</td>
<td>15.14%</td>
<td>12.97%</td>
<td>1.48%</td>
<td>3.06%</td>
<td>1.18%</td>
<td>734,650,407</td>
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<td>231,949,458,201</td>
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<td>19.07%</td>
<td>16.91%</td>
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<td>-38.14%</td>
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<td>14.99%</td>
<td>1.48%</td>
<td>3.06%</td>
<td>1.18%</td>
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<td>-1.36%</td>
<td>-1.53%</td>
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<td>1.48%</td>
<td>3.06%</td>
<td>1.18%</td>
<td>89,646,473,691</td>
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<td>10%</td>
<td>7,458,327,019</td>
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<td>Annulled 3 Year</td>
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<td>17.36%</td>
<td>14.99%</td>
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<td>1.48%</td>
<td>3.06%</td>
<td>1.18%</td>
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<td>n/a</td>
<td>n/a</td>
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<td>3.06%</td>
<td>1.18%</td>
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<td>n/a</td>
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**Important Information**

Risks associated with Quantitative Equity Products: All investments, domestic and foreign, involve risks including the risk of possible loss of principal. The market value of a fund’s portfolio may decline as a result of a number of factors, including adverse economic and market conditions, prospects of stocks in the portfolio, changing interest rates, and real or perceived adverse competitive industry conditions. Investing overseas involves special risks including among others, risks related to political or economic instability, foreign currency (such as exchange, valuation, and fluctuation) risk, market entry or exit restrictions, illiquidity and taxation. Emerging markets pose greater risks than investments in developed markets.

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