

Benchmarking 130/30 Strategies

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- ❑ The proliferation of 130/30 products has raised interesting questions in terms of how they should be benchmarked. The use of leveraged long and short positions renders them different, at least at first blush, to traditional long only products.
- ❑ In this paper, we explore various benchmarking options for such strategies and evaluate them against a set of principles for a good benchmark.
- ❑ Based upon our evaluation, we suggest that while 130/30 strategies may be structurally different from long only managers, traditional long only market benchmarks are still appropriate for these strategies.

Introduction

Short extension strategies, which relax the traditional long only constraint for active managers and allow a greater expression of active views, have seen considerable growth in interest and assets in the recent past. While the short or leveraged long positions in such strategies typically range from 20% to 40%, 30% is the most widely used figure. Therefore, “130/30 strategies” have become synonymous with short extension strategies.

As is well known by now, the theoretical underpinnings for 130/30 strategies lie in the “Fundamental Law of Active Management,” first proposed by Grinold (1989). It laid out a framework that defined a manager’s risk adjusted value add (information ratio, IR) as a function of the manager’s skill (information coefficient, IC) and the number of active decisions (breadth, N) to apply that skill.

$$IR = IC \times \sqrt{N}$$

Clarke, de Silva and Thorley (2002) built upon that idea by adding a third variable – the degree to which manager is able to implement his ideas (transfer coefficient, TC). This variable reflects the ability of the manager to express his ideas given investment constraints.

$$IR \approx TC \times IC \times \sqrt{N}$$

One of the most important constraints imposed on active managers is the long only constraint. The impacts of this constraint are magnified by the structure of most market benchmarks which are top heavy and therefore limit the expression of negative opinion for a vast majority of stocks.

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What is a Good Benchmark?

The Merriam-Webster English Dictionary defines a benchmark as “**a**: a point of reference from which measurements may be made **b**: something that serves as a standard by which others may be measured or judged **c**: a standardized problem or test that serves as a basis for evaluation or comparison.” While this is not really a technical definition, it provides a simplistic gut-check on appropriateness of an index as a performance benchmark. In the world of performance measurement of funds, more granular requirements of performance benchmarks have been specified. Bailey (1992a) lays out six key principles of a good benchmark. These principles, which are required reading for prospective charter holders of the CFA Institute, are widely recognized among performance analysts. The six principles are:

- **Unambiguous:** The names and weights of securities constituting the benchmark are clearly delineated.
- **Investable:** The option is available to forgo active management and simply hold the benchmark.
- **Measurable:** The benchmark’s return can be calculated on a reasonably frequent basis.
- **Appropriate:** The benchmark is consistent with the manager’s style.
- **Reflective of current investment opinions:** The manager has current investment knowledge (be it positive, negative, or neutral) of the securities that make up the benchmark.
- **Specified in advance:** The benchmark is constructed prior to the start of an evaluation period.

Using these principles, we evaluate various benchmarking options for 130/30 funds.

130/30 Indices

As the 130/30 fund market has grown, several 130/30 indices have been launched. Prominent among the providers of such indices are Standard & Poor's and Credit Suisse. Murphy (2007) and Lo and Patel (2007) provide details on construction of the S&P 500 130/30 Strategy Index and the Credit Suisse 130/30 Index, respectively.

The construction of these index portfolios falls into three basic steps:

- Identify a market benchmark, such as S&P 500 or Russell 3000, as the universe.
- Establish a set of factors for identifying attractiveness (or lack thereof) of universe constituents, and combine these factors into a composite scoring algorithm.
- Use the output of the algorithm to sample or re-weight index constituents with appropriate risk controls. Risk controls are applied to beta, deviations from benchmark weights or degree of short extension.

It may be difficult to reconcile the notion of an index with a rules-based portfolio that represents, on a daily or real time basis, the outcome of an active investment strategy. Equity indexation has traditionally covered whole markets or market segments that have distinguishable characteristics as asset classes. The overriding feature of such broad indices is that they attempt to provide representation of their respective market or segment.

Increasingly, index providers offer narrower subsets of whole market segments, sometimes with components of active management. If such "strategy" indices provide sufficient transparency for interested parties to understand and replicate the exposure they provide, then there are benefits to the investment community because such exposure can be offered through linked investment products at a lower cost than comparable active management products. In fact, strategy indices are probably the fastest growing segment of the index market, and comprise a majority of exchange traded funds (ETFs) by count in the U.S. market. 130/30 indices clearly fit in the strategy index category.

Strategy indices require a subtle, but significant, shift in the mindset of investors. What has heretofore been called “passive” investment, that is, gaining index exposure through index-linked products, takes on a new meaning in light of these new index offerings. With this new meaning comes both opportunity and risk, and while strategy indices offer passive exposure to a particular investment strategy, investors must make an active choice in determining how such exposure fits within the context of their overall portfolio. Exhibit 1 provides an example of the equity index continuum in the U.S.

Exhibit 1: Example of the equity index continuum

<u>Representative Indices</u>	<u>Strategy Indices</u>		
<u>Beta</u>	<u>Beta Plus</u>		<u>Alpha-Seeking</u>
Market Exposure	Alternatively Weighted Market Exposure	Enhanced Index	Analyst Recommendations
S&P 500	Equal Weight S&P 500	S&P 500 130/30 Strategy Index	S&P U.S. Stars Index

Source: Standard & Poor's

A number of empirical factors have been investigated as alpha sources in literature over the last three decades. Chan, Karceski and Lakonishok (1988) provide a detailed summary of these factors, which they divide into five categories – accounting factors, technical factors, macroeconomic factors, statistical factors and the market factor. Since the turn of the century, quality of the accounting based factors and interaction of the empirical factors has also been well-researched in financial literature. (For example, see Figelman (2007) and Cornell and Landsman (2003).) But no set of factors used in 130/30 indices can claim to capture a broad consensus in identifying stock mispricing. There also is no constraint upon 130/30 managers to use a purely quantitative investment process and there may well be more qualitatively oriented 130/30 portfolios in the future than we find today. Therefore, 130/30 indices violate one of the key principles of a good benchmark – appropriateness.

Manager Universes

Manager universes, which are comprised of median or average returns of a peer group of funds, are widely used by investment consultants in selecting funds, and by fund management companies in advertising performance. However, the use of such benchmarks is questionable. Bailey (1992b) identifies several conceptual shortcomings and the survivorship bias issue as key problems in using such universes as benchmarks. The conceptual problems involve the peer universe not being reflective of the investment style or portfolio risk of a particular fund. The survivor bias issue involves the universe median returns being over-stated because under-performing funds which were merged or liquidated are typically removed from the database.

In terms of the qualities of a good benchmark, the above problems suggest manager universes may not meet appropriateness or measurability criteria. Furthermore, as a practical matter, the manager universe violates the investability criteria since it is not possible to invest in all constituent funds.

Conceptual shortcomings and survivorship bias aside, there is a more practical issue with using peer universes to evaluate 130/30 managers. Since the concept is fairly new, most of the funds have been launched in the last few years. The count of funds to comprising such a universe is fairly small as well, rendering the composites statistically unreliable. For instance, a search of U.S. active extension products in Nelson's institutional fund database as of March 2008 revealed only 20 products, most of which have launched in 2006 and 2007. This is shown in Exhibit 2. It will take a few more years and launch of quite some more funds for 130/30 manager universes to be meaningful.

**Exhibit 2: U.S. Equity Short Extension Products in Nelson’s Institutional Funds
Database as of March 2008**

Firm Name	Product Name	Benchmark	Starting Year
Credit Suisse Asset Management, LLC (US)	Short Extension	S&P 500	2007
Northern Trust Global Investments	Northern Trust Quant 130/30 Core Equity	Russell 1000	2007
Enhanced Investment Technologies Inc.	Collared Long/Short (120/20)	Russell 1000	2007
Shenandoah Asset Management, L.L.C.	130/30 Alpha Extension	Russell 1000	2007
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Robeco Investment Management Inc.	Robeco BP 130/30 Large Cap Value	Russell 1000	2007
American Century Investments	Large Cap Core 130/30	S&P 500	2007
State Street Global Advisors (US)	Large Cap Core Edge (130/30)	Russell 1000	2006
Los Angeles Capital Management & Research, Inc.	S&P 500 120/20 Plus	S&P 500	2006
Fuller & Thaler Asset Management Inc.	120-20	Russell 1000	2006
State Street Global Advisors (US)	Mid Cap Core Edge (130/30)	S&P Mid-Cap 400	2006
Twin Capital Management, Inc.	TWIN Extended Alpha (130/30)	S&P 500	2006
Independence Investments LLC	Long/Short 130/30	Russell 1000	2006
State Street Global Advisors (US)	Index Plus Edge Strategy (130/30)	S&P 500	2005
UBS Global Asset Management (Americas), Inc.	US Equity 130/30	Russell 1000	2005
RiverSource Institutional Advisors	RiverSource Contrarian 120/20	Russell 3000	2005
Martingale Asset Management, L.P.	Enhanced Alpha (130/30) LargeCap Value	Russell 1000 Value	2004
Martingale Asset Management, L.P.	Enhanced Alpha (130/30) LargeCap Growth	Russell 1000 Growth	2004
Martingale Asset Management, L.P.	Enhanced Alpha (130/30) LargeCap Core	Russell 1000	2004
Robeco Investment Management Inc.	Robeco WPG 130/30 Lg Cp Core Ins	S&P 500	2003

Source: Nelson’s Institutional Fund Database

Traditional Market Indices

Traditional market indices have long been used by long only active managers as benchmarks reflective of their opportunity set. These managers strive to beat such benchmarks by taking active bets through alternative selections or weightings of stocks.

Lo and Patel argue that traditional market indices are inappropriate benchmarks for 130/30 managers since there are leveraged long and short positions. We disagree for the following reasons:

1. The leveraged long and short positions are merely active bets, no different than the active bets taken by long only managers. While the effects of leverage may seem profound, they are no different than effects of big factor bets such as style, industry or size.
2. Leverage and shorting notwithstanding, the goal of 130/30 managers is to deliver a portfolio beta of close to 1. This beta is the market beta, which is represented by the appropriate market benchmark.

3. 130/30 managers seek to outperform market benchmarks in a risk controlled fashion. This is illustrated in Exhibit 2, which shows all institutional 130/30 managers adopting market benchmarks as their performance yardstick.

In terms of the qualities of a good benchmark, traditional market indices are clearly measurable, investable, specified in advance, reflective of current investment opinions and specified in advance. We also think they are appropriate, given the points above.

Conclusions

In Exhibit 3, we compare the three benchmarking options against the principles laid out at the beginning. Long only market benchmark indices, in our opinion, meet all the principles required of a good benchmark. While 130/30 strategies are structurally different from traditional long only managers, they are simply another active management strategy in the same asset class. Therefore, the benchmarks should be no different.

Exhibit 3: Benchmarking Options versus Principles of a Good Benchmark

	130/30 Indices	Manager Universes	Market Indices
Unambiguous	Yes	Yes	Yes
Investable	Yes	No	Yes
Measurable	Yes	No	Yes
Appropriate	No	No	Yes
Reflective of current investment opinions	Yes	Yes	Yes
Specified in advance	Yes	Yes	Yes

Source: Standard & Poor's

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