

# **Active Extension Strategies: A Response to the Skeptics**

**Arrowstreet Capital, Limited Partnership**

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For the better part of the 2000s, active extension strategies were heralded with great fanfare as a step into the future of active management. Managers using active extension strategies such as 130/30, holding 130% of invested capital in long positions and 30% in short positions, can express not only their positive outlooks for individual securities by over-weighting them in the portfolio, but also their negative outlooks via short sale positions. For boosters of active extension strategies, this relaxation of short sales constraints is an unambiguously good thing.

During the last few years, plan sponsors have grown skeptical of active extension strategies. This is understandable given that they experienced both systemic risk exposure during the global financial crisis and subpar investment performance by many managers in this space. In this note we discuss the main criticisms of active extension strategies advanced by their growing chorus of detractors. Are these criticisms valid, or is active extension still underutilized in investor portfolios?

Three powerful arguments are commonly made against active extension strategies:

- 1) Counterparty exposure to prime brokers is unacceptably high and should not be delegated to the active extension manager.
- 2) Early results for active extension strategies have fallen short of the benchmark in many cases.
- 3) Active managers lack sufficient understanding of short-sale candidate securities to overcome the additional costs imposed by borrowing fees.

We review each of these arguments in turn.

### 1) Counterparty risk

The bankruptcy of Lehman Brothers sent shockwaves through the investment industry. Not only did debt and equity holders suffer billions of dollars in losses, but investors who had mistakenly viewed prime brokerage custody as analogous to more traditional forms of bank custody were rudely awakened. The company's aggressive and sometimes disorganized rehypothecation practices (i.e., pledging client deposits and assets to secure additional financing from banks or other brokerage companies), compounded by additional legal complexities for those utilizing the firm's overseas services, made the situation nothing short of a quagmire. If the Lehman Brothers situation was not harrowing enough, such risks quickly became systemic throughout the prime brokerage industry, leaving managers and investors with limited options. It was not uncommon for hedge fund managers to be forcibly de-levered by a loss of prime brokerage financing, or for investors who had lent securities to be tied up in bankruptcy proceedings for months on end.

Clients now have an enlightened appreciation, bordering on phobia, for the dangers and pitfalls associated with long-short investing. Nonetheless, such risks, while certainly real, can largely be mitigated with proactive diligence. Given the value proposition that the more skilled managers of

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this group are able to offer (see items 2 and 3 below for additional details), the resources required to manage counterparty risks are well spent.

In light of the abysmal failure of the standard rating agencies during the financial crisis, clearly more robust tools for monitoring counterparties are in order. Of particular importance is overcoming the slow-to-react character of most rating agencies that seems to be rooted in their position of having no “skin in the game” with respect to the shorter-term accuracy of their opinions. This lack of capital exposure inevitably fosters complacency and passivity in quickly identifying and responding to changing conditions. Such shortcomings can be overcome by investors through the use of more timely capital market based measures. For example, as a proxy for investor’s willingness to pay a premium for down-side protective insurance for a given or group of companies, one could use the following market based measures to more accurately assess the status of a given counterparty:

- Levels and changes in credit default swap (CDS) spreads
- Levels and changes in implied volatilities for option contracts
- Imbalances in implied volatilities between put and call option contracts

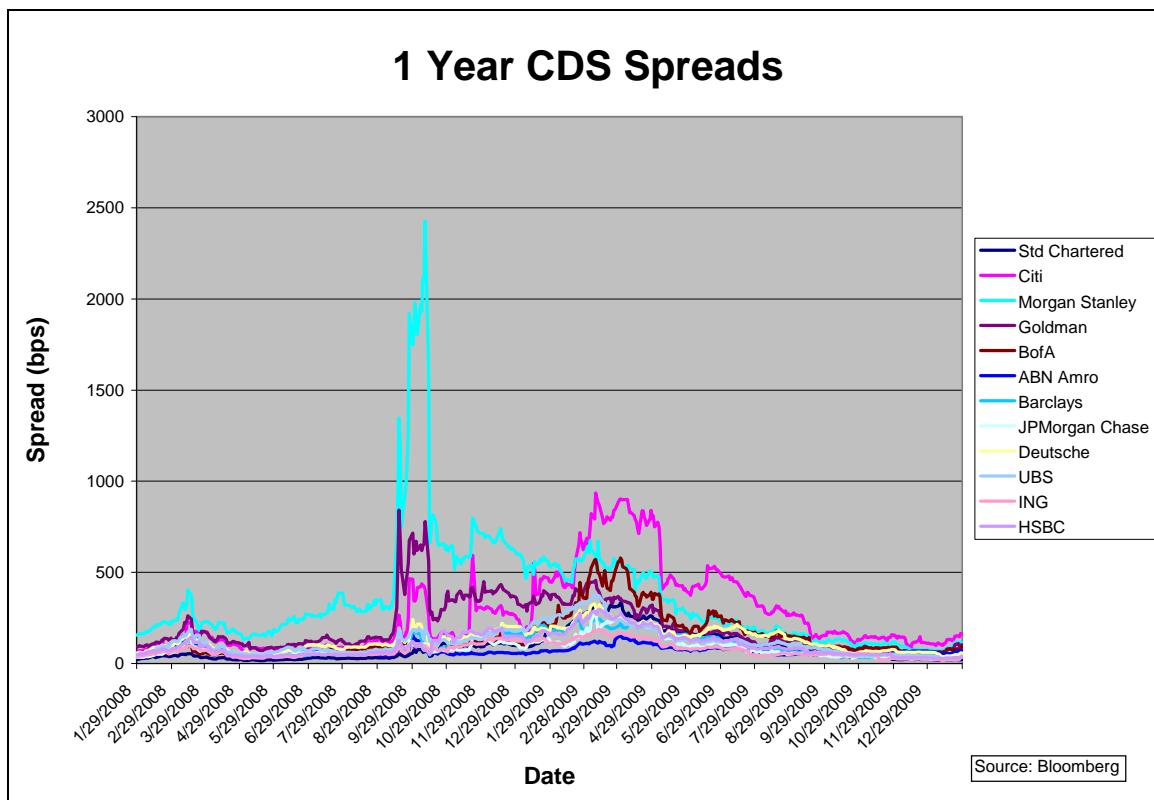
During the worst of the financial crisis, and as its effects spilled over into the prime brokerage industry, Arrowstreet was able to use such up-to-the-minute monitoring tools to more accurately assess the unfolding situation than would have been possible by relying only on credit ratings. Figure 1 illustrates the history of CDS spreads on major commercial and investment banks over the 2008-09 period. Of particular note is the extreme spike in the CDS spread for Morgan Stanley immediately following the Lehman bankruptcy.

Using the CDS market as a backdrop, the following is the chronology of how Arrowstreet was able to successfully navigate this period:

1. 9/15/2008 – Lehman announces bankruptcy.
2. Week of 9/15/2008 – Counterparty risk “contagion” quickly spreads to other prime brokers. Given the signal provided by Morgan Stanley’s CDS spread, and Arrowstreet’s use of Morgan Stanley as a prime broker, Arrowstreet begins investigating the implication of a potential Morgan Stanley bankruptcy on the fund and its clients. Ultimately judging these risks to be sufficiently high (>20%), and the consequences of bankruptcy to be unacceptable (i.e., loss of assets and/or freezing of assets for an indefinite period of time), Arrowstreet takes action to eliminate counterparty exposure to Morgan Stanley:
  - a. Closes out forward FX contracts.
  - b. Temporarily moves portfolio to a 100% long/0% short posture in preparation to transfer assets away from prime broker.
3. Week of 9/22/08 – Search for replacement prime broker initiated.
4. Week of 10/13/08 – Asset custody is transferred to a non-margined custody account with the Bank of New York/Mellon. Assets continue to be managed on a 100%/0% basis.
5. Week of 1/5/09 – Assets are transferred to a new prime broker. Settlement of all securities is confirmed before trading reinitiated.
6. Week of 1/12/09 – Arrowstreet reestablishes a 130%/30% posture for the portfolio and resumes management on a full active extension basis.

It is important to note that throughout this period the strategy continued to deliver the approximate beta exposure of the underlying benchmark and benefited from Arrowstreet’s active investment process, albeit on a temporarily unlevered basis. The firm’s professionals viewed this course of action to be the most prudent in light of the circumstances and counterparty risk considerations.

Figure 1



## 2) Performance results

A second critique of active extension strategies is that many of them have fallen short of performance expectations and even their relevant benchmarks. Much of the shortfall was attributable to the recent 2008-09 period, when active managers guilty of relying too narrowly on over crowded signals were adversely affected by capital flowing out of similarly motivated investment approaches.

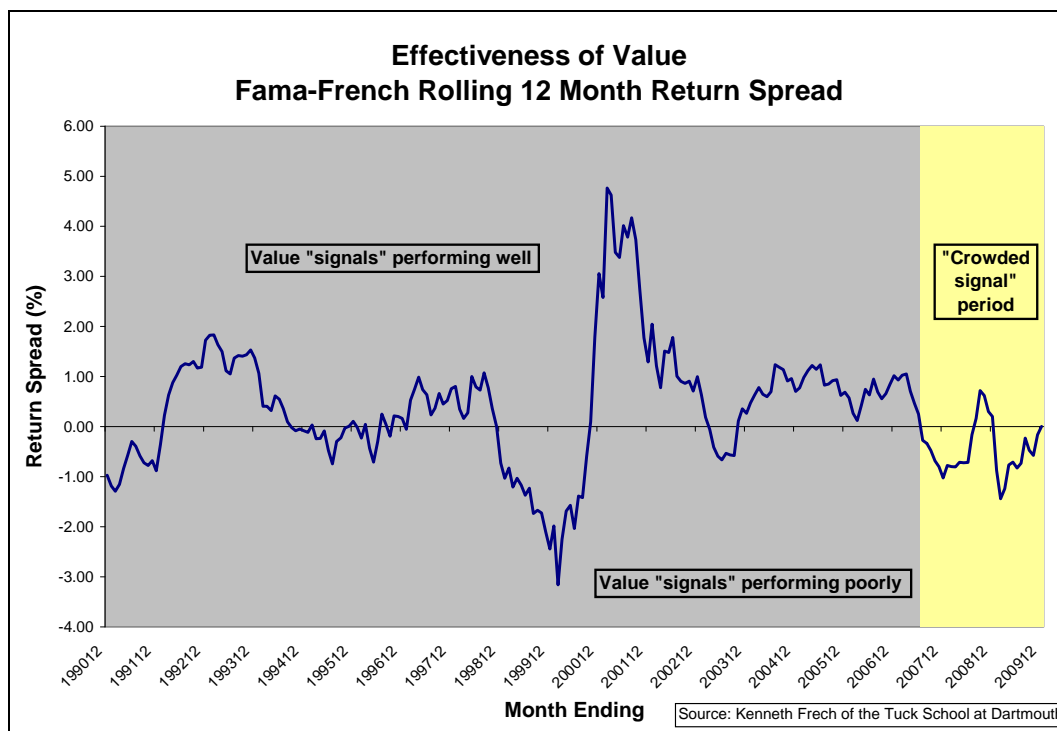
One subcategory of this manager group, “quant managers”, makes up a disproportionately large percentage of the active extension universe. As such, the universe’s short track record has tended to ebb and flow with the experiences of the average quant manager. The mediocre performance of the active extension universe in 2008-09 represents a failure of simplistic quant investing, not a failure of the active extension investment concept.

The active extension strategy is vulnerable to the troubles of a particular investment style because it is still in its infancy and has yet to foster a full complement of managers and manager styles. Also,

active extension strategies tend to be run at high risk. Therefore, when the narrow style of manager that makes up the group performs poorly, it has a conspicuous effect.

To illustrate the poor performance of crowded investment signals during the financial crisis, we report the efficacy of a simple value signal, which is a component of most quantitative investment strategies. The following graph was constructed using a standard academic dataset made available by Professor Kenneth French of the Tuck School at Dartmouth. It estimates the reward to an investor for employing a relatively straightforward composite of valuation signals. The graph is based on U.S. domestic securities only, but similar patterns are observed internationally.

Figure 2



Of particular note is the 2008-09 period, highlighted in yellow, during which valuation signals not only were ineffective, but worked perversely on average. This period is comparable in duration to that of the late 1990's, although the underperformance of value occurred for different underlying reasons. With this market environment as a backdrop, it is not surprising that the concentrated manager style that made up the active extension universe generated such poor results.

### 3) Inability to profit on the short side

Unlike long-only investing, short investing involves the additional cost of stock lending fees charged by the prime broker. This charge, which is above and beyond the usual long-only expenses of commissions and exchange fees, implicitly raises the bar for skill required to add value. Shorting costs typically range from as low as 20 basis points per annum for easy to borrow names to as high as 4 or 5% for less plentiful, harder to borrow names. Given the performance difficulties among managers using overcrowded signals, it is natural to become even more skeptical in the presence of this additional hurdle.

Some critics also argue that while active managers may be able to identify undervalued securities, the challenge of finding overvalued securities is insurmountable. This seems unlikely on prior grounds. If anything the cost of shorting should allow overvaluation to persist longer than undervaluation, as active managers find it more difficult to drive prices down than up. However, it is ultimately an empirical question whether an active manager can predict which stocks will decline in value.

Arrowstreet’s model-based attribution provides evidence that the firm’s approach is equally effective among stocks forecast to underperform as among those expected to outperform. The following graphs measure the effectiveness of the firm’s two primary signal groups, Basket (Indirect Effects) and Stock (Direct Effects), for both positive (blue) and negative (red) forecasted positions. If the model behaves as expected, the lines shown in the graph will be close to one. Lines above one indicate that the model performed better than expected, lines below one but still positive indicate performance in the expected direction but weaker than expected, and lines below zero indicate perverse model performance. The period of time most adversely affected by the crowded signal effect is highlighted in yellow.

These figures show that there is no systematic tendency for Arrowstreet’s negative forecasts to underperform its positive ones. In fact, while both types of forecasts generally did well, the firm’s negative forecasts strongly outperformed its positive forecasts during the worst of the financial crisis in the fall of 2008.

Figure 3

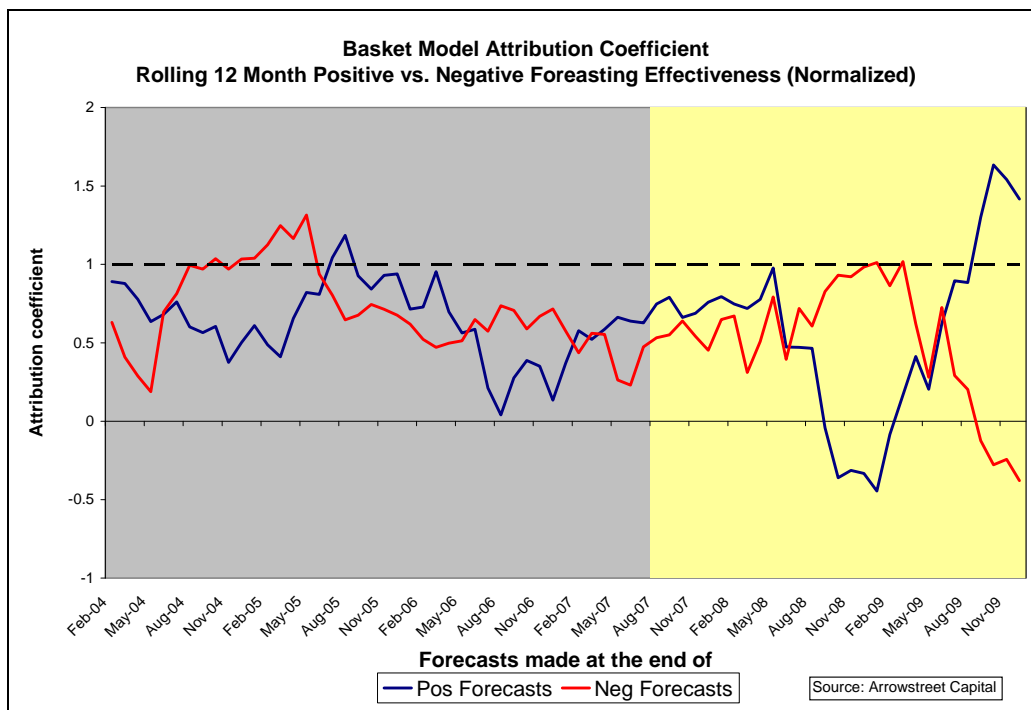
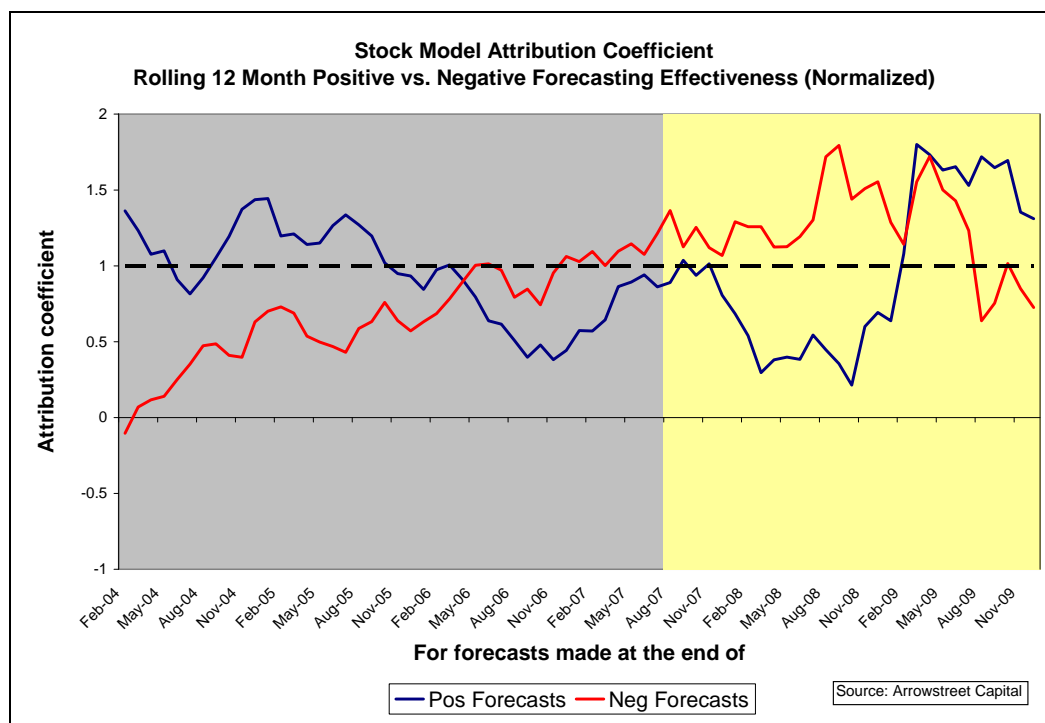


Figure 4



## Conclusion

Over their relatively short existence, active extension strategies have encountered several noteworthy setbacks that seem to support the skeptic’s claim that they are unsuitable for investor portfolios. However Arrowstreet believes that the most common skeptical arguments are ill-founded.

First, counterparty risk, while serious, can be managed with more effective monitoring tools, resource commitment, and contingency plans. Second, performance results for the strategy have been influenced primarily by the relatively narrow set of manager styles within the universe and the short interval for which we have actual results, rather than by a fundamental flaw in the active extension investment concept itself. Finally, like any other investment decision a manager may make, skill at identifying short candidate securities that can overcome borrowing costs can be measured and evaluated. In each instance, not all managers are created equal, and in each instance they should be evaluated on their own merits.

Arrowstreet has demonstrated, on a real-time basis, that adherence to the principles laid out in this document can produce favorable results for investor portfolios<sup>1</sup>. Notwithstanding the mediocre performance history within this short-lived universe, Arrowstreet views the active extension investment concept as a logical and less constrained version of the same principles that support active long-only investing. To capture the benefits of active extension, a manager must not only possess general investment skill, but also a detailed understanding of the institutional complexities associated with long-short investing.

<sup>1</sup> Arrowstreet’s Global 130/30 and International EAFE 130/30 Composite Performance Review Documents can be provided upon request. This note is provided for informational purposes only and is not intended as investment advice