

## 20 Myths about Enhanced Active 120–20 Strategies

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*Enhanced active equity strategies, including 120–20 and 130–30 long–short portfolios, have become increasingly popular as managers and investors search for new ways to expand the alpha opportunities available from active management. But these strategies are not always well understood by the financial community. How do such strategies increase investors' flexibility both to underweight and overweight securities? How do they compare with market-neutral long–short strategies? Are they significantly riskier than traditional, long-only strategies because they use short positions and leverage? This article sheds light on some common myths regarding enhanced active equity strategies.*

Enhanced active equity strategies, such as 120–20 or 130–30 portfolios, have short positions equal to some percentage of capital (generally 20 percent or 30 percent but possibly 100 percent or more) and an equal percentage of leveraged long positions.<sup>1</sup> Enhanced active equity strategies are facilitated by modern *prime brokerage* structures, which allow the proceeds from short sales to be used to purchase long equity positions. Long positions in excess of capital can be bought without the use of margin loans.

A 120–20 portfolio with initial capital of \$100, for example, sells \$20 of securities short and uses the proceeds from the short sales plus the initial \$100 to purchase \$120 of securities long. The \$20 in short positions offsets the \$20 in leveraged long positions, leaving a net market exposure of \$100. The portfolio retains full sensitivity to underlying market movements (a beta of 1) and participates fully in the equity market return.

If a portfolio manager is able to distinguish between securities that will perform better than the underlying benchmark and those that will perform worse, the 120–20 portfolio will achieve a return higher than the return on the underlying benchmark (at a higher risk level). It can also be expected to outperform a long-only portfolio based on comparable insights; relaxation of the short-selling constraint allows the 120–20 portfolio to achieve

security underweights that a long-only portfolio cannot attain, while the ability to invest the proceeds from short sales in additional long positions allows the portfolio to achieve security overweights that an unleveraged long-only portfolio cannot attain.<sup>2</sup> Compared with long-only portfolios, enhanced active equity strategies afford managers greater flexibility in portfolio construction, which allows for fuller exploitation of investment insights.<sup>3</sup> They also provide managers and investors with a wider choice of risk–return trade-offs.

Enhanced active equity strategies have become increasingly popular as managers and investors search for new ways to expand the alpha opportunities available from active management. The strategies build on the wave of interest in alternative strategies that followed the downturn in equity markets after 1999, which sent investors flocking to hedge funds and market-neutral strategies, such as convertible arbitrage, merger arbitrage, and long–short equity. Such strategies frequently use short selling to reduce market risk and improve performance.<sup>4</sup>

Enhanced active equity strategies differ in some fundamental ways from other active equity strategies, both long-only and long–short. As a result, the financial community has formed some misconceptions about these strategies.<sup>5</sup> An article in the *Wall Street Journal*, for example, suggested that the strategies are excessively risky because of their use of short positions (Patterson 2006). As we show, this and other myths about enhanced active equity strategies do not necessarily survive objective scrutiny.

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**Myth 1. Long-only portfolios can already underweight securities by holding them at less than their benchmark weights, so short selling offers little incremental advantage.**

Excess returns come from active security weights—portfolio weights that differ from benchmark weights. An active long-only portfolio holds securities expected to perform above average at higher-than-benchmark weights and those expected to perform below average at lower-than-benchmark weights. It can overweight any security by enough to achieve a significant positive active weight. Without short selling, however, it cannot underweight many securities by enough to achieve significant negative active weights. The long-only portfolio can underweight a security by, at most, the security's weight in the benchmark; it does so by not holding any shares of the security.

Consider that there are only about 15 stocks in the Standard & Poor's 500, Russell 1000, or Russell 3000 indices that have index weights greater than 1 percent. Half the stocks in the S&P 500 have index weights below 0.10 percent, half the stocks in the Russell 1000 have index weights below 0.03 percent, and half the stocks in the Russell 3000 have index weights below 0.01 percent. Thus, meaningful underweights of most securities can be achieved *only* if short selling is allowed.

**Myth 2. Constraints on short selling do not affect the portfolio manager's ability to overweight attractive securities.**

A 120–20 portfolio can sell short and use the proceeds from the short sales to purchase additional long positions. It can, therefore, take more and/or larger active overweight positions than a long-only portfolio with the same amount of capital (assuming the long-only portfolio does not increase its long positions via borrowing). The 120–20 portfolio's additional long positions, like its short positions, offer the opportunity for higher excess returns relative to the long-only portfolio.<sup>6</sup> Furthermore, the incremental overweights and underweights versus the long-only portfolio permit more diversification, which should result in greater consistency of performance.

Moreover, and more subtly, a portfolio manager's ability to overweight attractive securities may be limited by constraints on short selling. Consider, for example, a manager who has a strong belief that some companies in a given industry are significantly undervalued but desires a neutral industry weight for purposes of risk control. To maintain a market weight on the industry, the manager will have to offset overweights of the attractive securities with underweights of other securities in the industry. In

the absence of short selling, the ability to establish sufficient underweights may be limited, especially if the overvalued securities have insignificant benchmark weights. This limitation may, in turn, constrain the portfolio's ability to overweight the attractive securities in the industry. The portfolio that can sell short can underweight in larger amounts, which also allows for larger overweights. This ability should translate into higher expected excess returns than a long-only portfolio can provide.

**Myth 3. A 120–20 equity portfolio can be constructed by combining two portfolios—a long-only 100–0 portfolio and a 20–20 long–short portfolio.**

This type of construction is possible, but it negates most of the advantages of long–short construction. The real benefits of any long–short portfolio emerge only with an integrated optimization that considers all long and short positions simultaneously, together with any desired benchmark exposure, to produce a single portfolio:

The important question is not how one should allocate capital between a long-only portfolio and a long–short portfolio but, rather, how one should blend active positions (long and short) with a benchmark security in an integrated optimization. (Jacobs, Levy, and Starer 1998, p. 40)

**Myth 4. For portfolios that have only a limited amount in short positions (a 120–20 portfolio, for example), the ability to short must have only a small impact on performance.**

For a large number of securities, insights regarding overvaluation cannot be meaningfully reflected in a long-only portfolio because the portfolio's ability to underweight the securities is so constrained. Short selling, even in limited amounts, can extend portfolio underweights substantially. For example, compared with a long-only portfolio, a 120–20 portfolio, which sells short an amount equal to 20 percent of capital, can augment the underweights of 80 stocks by an average of 0.25 percent (or 40 stocks by 0.50 percent) each. Thus, the median stock in the S&P 500, with its weight of 0.10 percent, could be underweighted by 0.35 percent (or 0.60 percent), versus the maximum underweight of 0.10 percent attainable in a long-only portfolio. And the median stock in the Russell 3000, with a weight of 0.01 percent, could be underweighted by 0.26 percent (or 0.51 percent), versus an insignificant underweight in a long-only portfolio.

Note also that opportunities for shorting are not necessarily mirror images of opportunities for buying long. There is some theoretical foundation for believing that overvaluation is more common, and

larger in magnitude, than undervaluation (Jacobs and Levy 1993; Miller 2001).<sup>7</sup> In addition, price reactions to good and bad news may not be symmetrical. Earnings disappointments, for example, may have a stronger impact on security prices than positive earnings surprises. Thus, the ability to underweight shares subject to earnings disappointments may be more valuable than the ability to overweight shares subject to positive earnings surprises.

Should an investor find a 120–20 structure too limiting in terms of performance opportunities, the strategy may be extended to include more short selling (and more long positions). An enhanced active portfolio can take short (and additional long) positions as large as the prime broker's policies on leverage allow. For example, the portfolio could short securities equal to 100 percent of capital and use the proceeds plus the capital to purchase long positions, resulting in a 200–100 portfolio.

**Myth 5. An enhanced active 200–100 strategy is the same as an equitized market-neutral long–short strategy with 100 percent of capital in short positions, 100 percent in long positions, and 100 percent in an equity market overlay.**

A market-neutral long–short portfolio holds approximately equal amounts in long and short positions with approximately equal sensitivities to market moves. The long and short positions cancel out underlying market risk (beta) and market return. The portfolio offers the return (and risk) associated with the individual securities held long and sold short; its positions are fully active. By combining an equity market overlay—stock index futures, swaps, or exchange-traded funds (ETFs)—with a market-neutral long–short portfolio, the manager or investor can establish equity market exposure while retaining the active return benefits of a market-neutral long–short strategy (Jacobs and Levy 1999). The result is a portfolio that has 100 percent of capital in long stock positions, 100 percent in short stock positions, and 100 percent exposure to the market via the overlay. This portfolio may appear to be similar to an enhanced active 200–100 portfolio, but there are some significant differences.

The equity overlay is, by definition, passive; the investor cannot expect to receive a return in excess of the underlying index return and will generally receive a return that is, after costs, somewhat less. An enhanced active 200–100 strategy is more active. Full market exposure is established not by a passive overlay but by the 100 percent active net long investment in equities. For each \$100 of capital, the investor has \$300 in stock positions to use in pursuing return and controlling

risk. Furthermore, because the enhanced active 200–100 portfolio uses individual securities to achieve market exposure, it is not, as is the equitized market-neutral portfolio, confined to stock index benchmarks having liquid market overlays.

The cost of the enhanced active 200–100 structure is about the same as the cost of equitizing a market-neutral portfolio with an overlay (Jacobs and Levy 2006).<sup>8</sup>

**Myth 6. An equitized market-neutral long–short strategy is more flexible than an enhanced active equity strategy.**

Some might think that an enhanced active equity portfolio offers less flexibility to overweight and underweight securities than an equitized market-neutral long–short portfolio, which has fully active weights through its market-neutral portion and full exposure to the equity market through the overlay. In theory, however, enhanced active and equitized market-neutral portfolios are equivalent, having identical active weights and identical market exposures—hence, identical performance (Jacobs and Levy, forthcoming 2007).<sup>9</sup>

An equitized market-neutral long–short portfolio is typically an “untrim” portfolio.<sup>10</sup> In essence, an untrim portfolio is a portfolio that holds long and short positions in the same security. For example, a portfolio might have sold short a security in an amount equal to 0.60 percent of capital while at the same time holding, through the market overlay, a long position of 0.05 percent in the same security. The portfolio has an active underweight in the security of 0.55 percent. The remaining 0.05 percent of the short position overlaps the 0.05 percent long position, with neither contributing to portfolio return or portfolio risk control.

Untrim portfolios can be made trim if the overlap between long and short positions in each security can be eliminated without affecting the portfolio's overall performance. In the case of the security discussed in the preceding paragraph, reducing both the long and short positions by 0.05 percentage point results in a portfolio that holds a 0.55 percent active underweight in the security. Because this underweight is the same as the active weight held by the untrim equitized portfolio, portfolio risk and return remain unchanged.

In practice, trimming equitized portfolios is not feasible because market exposure is established with an equity market overlay, such as a futures contract or a swap. With an enhanced active equity portfolio, however, market exposure is established with individual security positions. The enhanced active portfolio can be constructed to be trim, with no overlapping long and short positions. The enhanced

active portfolio is thus more compact and uses less leverage than the equivalent equitized market-neutral long–short portfolio (Jacobs and Levy, forthcoming 2007). Also, because the enhanced active portfolio obtains its benchmark exposure through individual security positions, the investor can achieve benchmark exposure even if liquid overlays are not available.

**Myth 7. Enhanced active equity portfolios are inherently much more risky than long-only portfolios because they contain short positions.**

Whether a portfolio achieves an underweight by holding a security at less than the security's benchmark index weight or by not holding the security at all or whether it extends the underweight by selling the security short, the portfolio is in a risky position in terms of potential value added or lost relative to the benchmark index return. Of course, enhanced active equity strategies do involve risks not shared by unleveraged long-only strategies.

Losses on unleveraged long positions are limited because a security's price cannot drop below zero, but losses on short positions are theoretically unlimited because the security's price can rise without limit. In practice, however, this risk can be minimized by diversification and rebalancing. With proper diversification, losses in some positions should be mitigated by gains in others. And as noted earlier, short selling allows greater diversification among underweights and overweights than long-only investing allows. Trading to maintain security position sizes as prices change can also reduce the risk of unlimited losses, because short positions are scaled back or covered as their prices increase.<sup>11</sup>

**Myth 8. Enhanced active equity strategies provide investors a free lunch.**

No investment strategy provides a free lunch. An enhanced active equity strategy has an explicit cost—namely, a stock loan fee paid to the prime broker. The prime broker arranges for the investor to borrow the securities that are sold short and handles the collateral for the securities' lenders.<sup>12</sup> The stock loan fee amounts to about 0.50 percent annually of the market value of the shares shorted (about 10 bps of capital for a 120–20 portfolio). An enhanced active strategy will usually incur a higher management fee than a long-only portfolio and, given the additional trading owing to portfolio leverage, higher transaction costs. The strategy may also incur incremental implicit costs in the form of additional risk from expanded underweights and overweights.

What the strategy offers in return for these costs is a more efficient way to manage equities

than a long-only strategy allows. Expanding the manager's ability to underweight securities permits more comprehensive use of investment insights, which should translate into enhanced performance relative to a long-only portfolio based on the same insights. At the same time, the incremental underweights and overweights can lead to better diversification than in a long-only portfolio, which can translate into enhanced consistency of performance. Thus, enhanced active equity strategies, although they do not provide a free lunch, do provide a more complete lunch.

**Myth 9. The leverage in an enhanced active equity portfolio results in leveraged market return and risk.**

A 120–20 portfolio is leveraged, in that it has \$140 at risk for every \$100 of capital invested. The market exposure created by the 20 percent in leveraged long positions is offset, however, by the 20 percent sold short. The portfolio has a 100 percent net exposure to the market and, with appropriate risk control, a marketlike level of systematic risk (a beta of 1). The leverage and added flexibility can be expected to increase excess return and residual risk relative to the benchmark. If the manager is skilled at security selection and portfolio construction, any incremental risk borne by the investor should be compensated for by incremental excess return.

**Myth 10. An enhanced active 120–20 portfolio is simply a long-only portfolio leveraged 1.4 times.**

An investor can leverage a long-only portfolio by borrowing funds equal to 40 percent of the initial capital and investing in additional long positions. But the portfolio will still not be able to sell short, so its ability to underweight securities will be just as constrained as that of an unleveraged long-only portfolio. It will benefit from none of the added flexibility to underweight securities that gives the 120–20 portfolio the opportunity to enhance performance through more complete implementation of investment insights.<sup>13</sup> Furthermore, borrowing funds to leverage a long-only portfolio magnifies the portfolio's exposure to market risk by a factor of 1.4 and may leave an otherwise tax-exempt investor subject to taxes (see Myth 11).

**Myth 11. Because enhanced active equity strategies are leveraged, using the strategies subjects an otherwise tax-exempt U.S. investor to taxation.**

One might expect that a portfolio with long positions of more than 100 percent of capital must have taken advantage of margin borrowing. The otherwise tax-exempt investor that borrows funds to invest in long positions incurs "acquisition

indebtedness” and is subject to taxes on Unrelated Business Taxable Income (UBTI). With an enhanced active equity strategy, however, long positions established in excess of capital are purchased with the proceeds from the short sales; the longs are not purchased with a margin loan. U.S. IRS Ruling 95-8 concludes that borrowing shares to sell short does not give rise to UBTI because no acquisition indebtedness has been incurred (Jacobs and Levy 1997).<sup>14</sup>

**Myth 12. Leverage is limited by Federal Reserve Board Regulation T, so 150–50 portfolios are the most leveraged enhanced active equity strategies available.**

Mutual funds and other companies regulated under the Investment Company Act of 1940 cannot relinquish custody of their long positions to a broker. As a result, they may not be able to use stock loan accounts and may remain subject to the leverage limits of Reg T. These entities may be able to use enhanced active 120–20, or even 150–50 portfolios, but not portfolios with more leverage.<sup>15</sup>

In contrast, separate accounts and other types of investment vehicles can establish stock loan accounts with prime brokers. With a stock loan account, the investor is not a customer of the prime broker, as would be the case with a margin account, but is a counterparty to the stock lending transaction. In this arrangement, borrowing shares to sell short is not subject to Reg T limits on leverage. With a stock loan account, leverage is limited only by the broker’s own internal lending policies.<sup>16</sup>

**Myth 13. Enhanced active equity strategies must provide cash collateral for the short positions, including meeting daily marks to market, which complicates trading and requires a cash buffer that can reduce returns.**

With a traditional margin account, the lenders of any securities sold short must be provided with collateral at least equal to the current value of the securities. When the securities are first borrowed, the proceeds from the short sales usually serve as this collateral. As the short positions subsequently rise or fall in value, the investor’s account provides to or receives from the securities’ lenders cash equal to the change in value.

To avoid the need to borrow money from the broker to meet these collateral demands, the account usually maintains a cash buffer. It can use up to 10 percent of capital.<sup>17</sup> Long positions may sometimes need to be sold to replenish the cash buffer; in that case, an appropriate amount in short positions will also have to be covered to maintain portfolio balance. Neither the short-sale proceeds

nor the 10 percent cash buffer earns investment profits (although they do earn interest).

With the enhanced brokerage structures available today, the investor’s account must have sufficient equity to meet the broker’s *maintenance margin requirements*—generally 100 percent of the value of the shares sold short plus some additional percentage determined by the broker. This collateral requirement is usually covered by the long positions. The investor does not have to meet cash marks to market on the short positions; the broker covers those needs and is compensated by the stock loan fee. Also, dividends received on long positions can be expected to more than offset the amount the account has to pay to reimburse the securities’ lenders for dividends on the short positions. The investor thus has little need for a cash buffer in the account. An enhanced active portfolio will generally retain only a small amount of cash, similar to the frictional cash (the cash assets held between selling and buying) retained in a long-only portfolio.

**Myth 14. Short selling is problematic because of the possibility of short squeezes and the observance of uptick rules.**

Short squeezes tend to be limited to illiquid stocks that are generally not candidates for institutional portfolios. If a security does become subject to a short squeeze, a reduction in the supply of shares available for borrowing is usually signaled by a decline in the rebate rate offered by prime brokers or by warnings from the prime brokers, so the position can be scaled back or covered in advance of any demand that borrowed shares be returned to the prime broker.

Short sales used to require a plus tick to execute (that is, the last price change had to have been positive). The U.S. SEC recently rescinded the “tick test,” however, and as of 6 July 2007, brokers are prohibited from applying any price tests to short sales.<sup>18</sup>

**Myth 15. The short selling in enhanced active equity strategies will drive equity market levels down.**

Enhanced active portfolios have net market exposures of 100 percent. Their short sales are balanced by their leveraged long purchases. Any pressures put on individual security prices by the trading of enhanced active portfolios should net out at the aggregate market level. Thus, enhanced active equity strategies should not cause the aggregate market either to rise or to fall; the strategies are not inherently positive-feedback strategies, which can push prices up by buying as prices rise and push prices down by selling as prices fall.<sup>19</sup>

**Myth 16. Trading costs in an enhanced active equity portfolio are prohibitively high.**

Turnover in an enhanced active equity portfolio should be roughly proportional to the leverage in the portfolio. With \$140 in positions in a 120–20 portfolio, versus \$100 in a long-only portfolio, turnover can be expected to be about 40 percent higher in the 120–20 portfolio. The portfolio optimization process should account for expected trading costs so that a trade does not occur unless the expected benefit in terms of excess risk-adjusted return outweighs the expected cost of trading.

The enhanced active portfolio may incur more trading costs than a long-only portfolio because, as security prices change, it needs to trade to maintain the balance between its short and long positions relative to the benchmark. Suppose, for example, that a 120–20 portfolio experiences adverse stock price moves so that its long positions lose \$2 and its short positions lose \$3, causing capital to decline from \$100 to \$95. The portfolio now has long positions of \$118 and short positions of \$23—not the desired portfolio proportions. To reestablish portfolio exposures of 120 percent of capital as long positions and 20 percent of capital as short positions, the manager needs to rebalance by selling \$4 of long positions and using the proceeds to cover \$4 of short positions. The resulting portfolio restores the 120–20 proportions (because the \$114 long and \$19 short are, respectively, 120 percent and 20 percent of the \$95 capital).

**Myth 17. Converting long-only mandates to enhanced active equity has no effect on a manager's asset capacity.**

In enhanced active equity strategies, investments in securities exceed the capital provided, so the strategies use more market liquidity than do unleveraged long-only strategies. Any strain on capacity may be exacerbated by the smaller average capitalization of securities in enhanced active portfolios. Because short selling facilitates portfolio underweights that cannot be attained in long-only portfolios, and the constraint on short selling will more frequently be binding for smaller-cap than for larger-cap securities, the short positions in an enhanced active portfolio will generally have a smaller average capitalization than the underlying benchmark. To hedge the smaller-cap short positions, the long positions in the portfolio will also generally have a smaller average capitalization than the benchmark (so that, on a net basis, the enhanced active portfolio's market capitalization is similar to the benchmark's).<sup>20</sup> Smaller-cap securities, whether they are sold short or purchased long, tend to be less liquid than large-cap securities.

Managers need to focus on their overall equity positions rather than on assets under management when determining their asset capacities. A measure of capacity that is based on the average trading volume of each position will naturally take each security's liquidity into account.

When evaluating a manager's capacity for assets, investors should realize that managers offering enhanced active equity strategies will hold security positions that exceed the amount of capital they manage.

**Myth 18. The performance of an enhanced active equity portfolio can be measured in terms of the excess return of the long positions relative to the benchmark index and the excess return of the short positions relative to the benchmark index, together with their associated residual risks.**

If an enhanced active equity portfolio is constructed properly, with the use of integrated optimization, the performance of the long and short positions cannot be meaningfully separated. With integrated optimization, some or all of a short or long position may reflect a hedge of another position; it is not meaningful to look at such a position as a separate entity, just as it is not meaningful to look at a single stock within a long-only portfolio as a separate entity irrespective of its interactions with the other stocks in the portfolio. Furthermore, given that the average capitalization of the underlying benchmark will usually exceed the average of either the short positions or the long positions, the benchmark will provide a fair gauge of the portfolio's performance only when the portfolio is considered in its entirety. Its performance can be measured in terms of the entire portfolio's excess return and residual risk relative to the benchmark index.

**Myth 19. Enhanced active equity portfolios are a form of hedge fund.**

Like hedge funds, enhanced active equity portfolios use short selling and leverage to expand return opportunities. There are significant differences, however, between enhanced active investing and hedge fund investing.

Hedge funds typically lack risk-adjusted performance benchmarks. As a result, their risk may be greater than expected and their fees may be higher than warranted. When incentive fees are levied on the basis of absolute portfolio return or portfolio return in excess of a T-bill rate, investors in hedge funds may find themselves paying for indexlike (passive) returns that could be obtained for lower fees or find themselves paying for returns that reflect short-term volatility rather than manager skill.

Enhanced active equity strategies, like equity portfolios generally, are managed relative to an underlying benchmark, such as the S&P 500 or Russell 1000. Investors thus have an objective, risk-adjusted yardstick against which to measure portfolio performance and determine performance fees. Performance fees should generally be levied only on that portion of return that exceeds the underlying benchmark return—that is, on alpha.

Compared with hedge funds, enhanced active strategies typically provide greater transparency of the investment process, portfolio holdings, and security pricing. Hedge funds are often opaque in terms of their processes and holdings. They may invest in assets for which market prices are not readily available. Enhanced active strategies, in contrast, usually rely on liquid, publicly traded assets. Finally, many hedge funds restrict their investors' ability to withdraw funds, whereas an enhanced active portfolio can provide daily liquidity.

**Myth 20. For purposes of asset allocation, investors should classify enhanced active strategies with hedge funds and other “alternative investments.”**

Enhanced active portfolios share some characteristics with hedge funds and other alternative investments. From the perspective of an investor's asset allocation, however, an enhanced active portfolio is simply a more flexible equity portfolio, not an alternative investment. It has the same equity benchmark as a comparable long-only portfolio but has the potential to improve upon the performance of the long-only portfolio by virtue of its ability to extend portfolio overweights and underweights of attractive and unattractive securities. It is an enhanced form of active equity management.

*This article qualifies for 1 PD credit.*

## Notes

1. Enhanced active strategies can be developed for various equity benchmarks (large capitalization, small cap, growth, value) and for other asset classes, such as fixed income.
2. The constraint on short selling is a common constraint faced by equity investors (see Jacobs, Levy, and Starer 1998). Other constraints are those on portfolio risk levels (Jacobs and Levy 1996a) and on the investable universe (Ennis 2001; Jacobs and Levy 1995).
3. See Jacobs, Levy, and Starer (1998, 1999); Clarke, de Silva, and Sapra (2004); Jacobs and Levy (2006).
4. *Market Neutral Strategies*, edited by Jacobs and Levy (2005), provides a description of these strategies.
5. As they did with regard to long–short investing when it was first becoming popular (Jacobs and Levy 1996b).
6. A long-only portfolio that is allowed to take more residual risk can take larger and/or more overweights in the most attractive stocks. The portfolio's ability to underweight the most unattractive stocks is still limited, however, by the short-sale restriction. No matter how skilled the manager, the restriction on short selling limits the manager's ability to take active (residual) risk and hence produce excess return. When skill is present, the ability to sell short increases risk and return potential. In general, shorting becomes more desirable as portfolio active weights and manager skill increase because more shorting allows for greater exploitation of under- and overvalued stocks.
7. If enhanced active equity strategies do reduce overvaluation of individual securities, use of the strategies will improve market efficiency and perhaps improve allocation of societal resources.
8. For a market-neutral long–short portfolio using an enhanced prime brokerage structure, establishing an equity market exposure with futures involves moving either cash from the short-sale proceeds or U.S. T-bills (purchased with the cash proceeds) to the futures account to meet futures margin requirements. About 5 percent of the nominal futures value in cash or T-bill margin is needed, and the investor pays an annual stock loan fee of about 50 bps on this amount. The futures should provide a return approximating the return on the underlying market less an amount reflecting the difference between the LIBOR implicit in the futures value and the short rebate the investor earns on the proceeds of the short sale. This differential has recently averaged about 40 bps annually. Additionally, the investor incurs transaction costs to establish and roll the futures position. Establishing equity market exposure with ETFs involves an annual stock loan fee of about 50 bps applied to the amount invested, and the investor expects to receive the relevant stock index return less the transaction costs and management fees associated with the ETF. The cost of a swap is negotiated between the investor and the swap counterparty; it would presumably approximate the cost of alternative methods of equitization. The cost of an active equity overlay in a 200–100 portfolio is the annual stock loan fee of 50 bps applied to the value of the shorted securities.
9. Any equitized market-neutral long–short portfolio can be transformed into an enhanced active equity portfolio via “trimming,” and any enhanced active equity portfolio can be transformed into an equitized long–short portfolio by adding an equity market overlay to its active weights.
10. Trim and untrim portfolios are defined in Jacobs, Levy, and Markowitz (2005, 2006).
11. Any leveraged portfolio can experience losses that exceed capital. With properly constructed enhanced active portfolios, such an outcome is unlikely because of the portfolio's benchmark orientation and given proper control of residual risk.
12. The investor is usually under no obligation to trade through the prime broker; trades can be executed through other brokers, with the prime broker handling clearing and settlement.
13. See Jacobs and Levy (2006) for an illustration of how short selling can enhance performance.
14. Also, legal opinion generally holds that the purchase of additional long positions with proceeds from short sales does not give rise to acquisition indebtedness; hence, it does not give rise to UBTI for a tax-exempt investor. Prospective participants in these types of transactions should consult their tax and legal advisers.

15. Although a mutual fund's long positions cannot be held at the prime broker, they can be pledged as margin for the short positions. Doing so requires a margin account, which is subject to Reg T limits on leverage. Reg T requires 50 percent initial margin for long positions and 150 percent initial margin for short positions. When securities are used as margin for the short positions, they are generally valued at 50 percent of their market price (as opposed to a valuation of 100 percent for cash). Initial capital of \$100 can support no more than \$50 in short positions (and \$50 in additional long positions). The \$50 in short positions will require \$75 margin, which equals half the value of the \$150 in long positions (representing the investment of the \$100 in initial capital plus the \$50 in short-sale proceeds). Thus, the most leveraged enhanced active equity portfolio permitted under the Investment Company Act would hold long positions of 150 percent of capital and short positions of 50 percent of capital (a 150–50 portfolio).
16. Prospective participants in these types of transactions should consult their legal advisers.
17. For equitized market-neutral portfolios, the buffer is generally about half that percentage, with a comparable amount of cash used as collateral for the equity overlay (Jacobs and Levy 1997).
18. In accordance with SEC Release No. 34-55970, dated 28 June 2007, all price test restrictions on short sales found in Rule 10a-1 under the Securities Exchange Act of 1934 were eliminated and self-regulated organizations were prohibited from having such price tests. This release became effective on 3 July 2007, with compliance mandated by 6 July 2007.
19. For the possibly adverse effects of positive-feedback strategies, see Jacobs (2004).
20. To the extent that smaller-cap stocks are priced less efficiently, this migration down the capitalization spectrum for both long and short positions can result in greater active returns.

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