

## Investment Strategies

# Looking Beyond Traditional Equity Approaches: Relaxing the Long-Only Constraint

Low yields and evolving long-term expectations have driven many institutional investors to explore a range of non-traditional strategies in an effort to enhance returns, manage volatility, and make greater use of their asset managers' expertise. One such strategy is short selling, which when applied to an equity portfolio can allow skilled managers to make better use of their investment outlook – both positive and negative – for securities in their universe and better allocate capital within their portfolios. In this paper we will explain the concept of short selling, or “shorting,” and why it can be viewed as a natural next step in augmenting a traditional equity allocation. We discuss how shorting can supplement active management and identify some considerations for institutional investors who are contemplating allowing their equity managers to short stocks, and thereby “relax” the long-only constraint imposed by traditional equity mandates.

Traditional approaches to equity investing aim to outperform a stated benchmark by over- and underweighting securities, and generally proceed as follows:

1. Own stocks that have the potential to generate positive returns.
2. Avoid holding stocks that have the potential to generate negative returns.
3. Combine steps 1 and 2 above to create a portfolio that seeks returns in excess of those of a prescribed benchmark.

While simplistic, this characterization provides a reasonable starting point for investors interested in moving beyond this approach by allowing their managers greater flexibility of expression through short selling.

## Shorting as a Natural Complement to Traditional Active Management

When an equity manager builds a portfolio in the traditional manner outlined above, they express their outlook for a stock by overweighting (positive outlook) or underweighting (negative outlook) their holding of the stock relative to its allocation in the benchmark. Thus, we can think of the overweight positions as a manager's “longs” and the underweight positions as their “shorts.”

This oversimplification serves to highlight that institutional investors with traditional mandates are already exposed to active long and short stock decisions, albeit in the limited context of stock ownership. For those investors willing to consider relaxing the long-only constraint, we believe short selling represents a natural extension of that

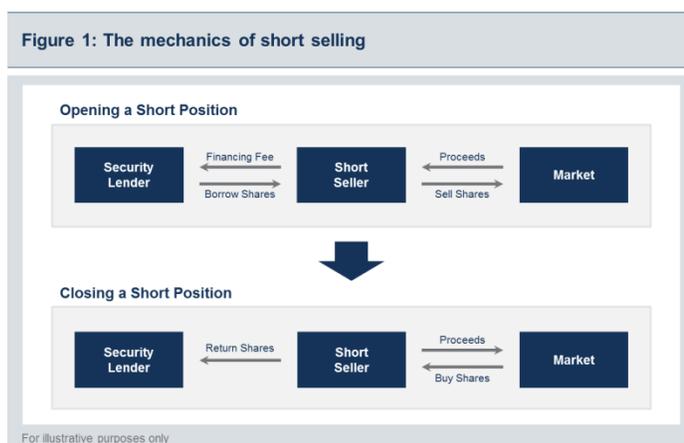


approach. Intuitively, this offers a more balanced process to investing by equalizing the opportunity to express both positive and negative outlooks.

## What is Short Selling?

Simply put, shorting means selling a stock that you do not own in the hopes that the price will fall and you can buy it back at a cheaper price when you close out your position. The goal of a short sale, therefore, is to profit from a security's declining price. Of course, if the stock's price rises instead, you will have to close the position at a loss (buying the stock back at a price above where you sold it), so steps must be taken to mitigate that risk.

In a short sale, an investor borrows a security and immediately sells it into the market with the intent of repurchasing it at a lower absolute or relative price in the future. The payoff in a short sale is the opposite of a traditional long investment: the short seller seeks to gain from *selling* securities that will *decline in value*, whereas the long investor seeks to gain from *owning* stocks that will *rise in value*. Figure 1 illustrates the mechanics of a typical short sale.



## The Benefits of Shorting

As discussed, one of the goals of short selling is to earn incremental returns by allowing the investment manager to express their negative views on a particular stock more fully than simply giving it a zero weight in the portfolio. In this manner, relaxing the long-only constraint can increase the range of opportunities available to the manager, create better symmetry in portfolio exposures (especially to small capitalization stocks), and improve the overall efficiency of capital allocation.

### 1. Increased Breadth of Opportunity

Shorting increases the breadth of opportunities available to a manager by allowing them to seek profit from both long positions in stocks that perform well and short positions in stocks that perform poorly. In a long-only portfolio, the manager can theoretically hold as much of a stock as there are assets in the portfolio, but the lowest possible weight is 0%. This means that the largest possible underweight position a manager can take is the size of its weight in the benchmark – e.g., for a stock comprising 0.10% of the benchmark, a manager can only underweight by 0.10% by holding none of it. Therefore, a traditional manager with a negative outlook for a stock is limited to not owning it and can avoid losing money, but cannot profit further from a conviction that the stock price will decline.

Figure 2: Lost opportunity: stocks that cannot be sold short



Figure 2 illustrates this concept. Here we show the distribution of a universe of stocks against the desired absolute exposure that a manager has for them. The red line represents the minimum weight (i.e., 0%) that a manager can hold in a long-only portfolio, and the blue line represents the distribution of stocks and the manager's desired exposures. Because a traditional manager cannot hold less than 0% of a security, any

insight about the decline in value for stocks to the left of the red line is effectively wasted information.

While avoiding a stock that we think will fall can position a portfolio well relative to its benchmark, we are unable to seek profit from that view if we cannot short. When shorting is permitted, the value-adding opportunity set expands and a manager can actively express a fuller range of investment views.

## 2. Improved Symmetry in Small- and Mid-Cap Opportunities

The case for relaxing the long-only constraint is particularly strong when a manager is operating within a broad investment universe dominated by a few large capitalization stocks. The security weight distribution in the S&P 500 Index – a common benchmark for active U.S. equity managers – highlights this issue (Figure 3). Over 80% of securities in this index have weights of less than 0.25%. The impact on performance of simply avoiding negative returns in a small-cap stock is muted in this broad yet skewed context.

Moreover, the five worst performing stocks listed on the S&P 500 Index during 2013 (highlighted in Figure 4) had weights of less than 0.20% each at the start of the year, and most of these are companies with recognized names.

Figure 3: Security index weight distribution (S&amp;P 500 Index)

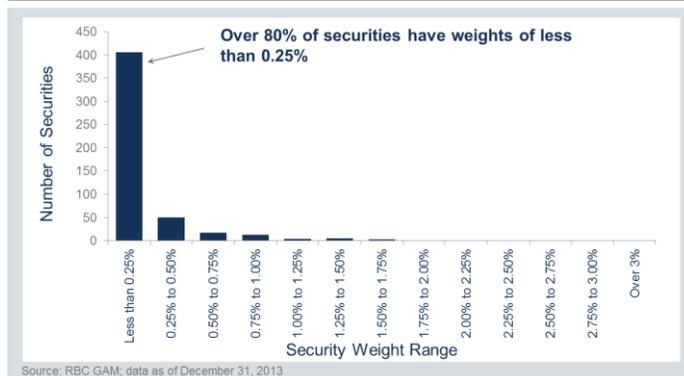


Figure 4: Worst performing stocks in 2013 (S&amp;P 500 Index)

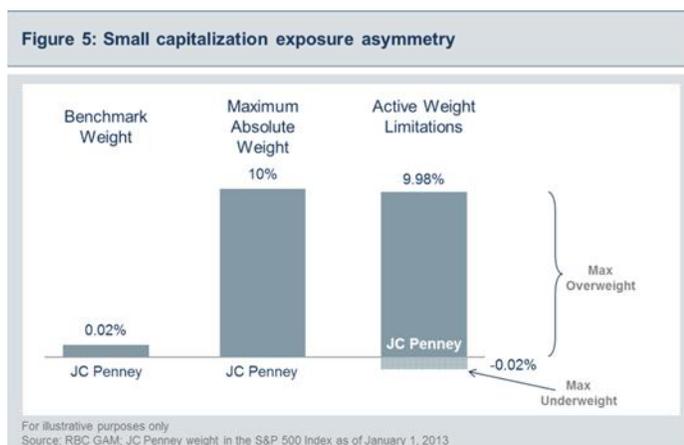
Company	Sector	Weight (Jan. 1, 2013)	Price (Jan 1, 2013)	Return
JC Penney	Consumer Discretionary	0.02%	\$19.72	-49.21%
Newmont Mining Corp	Materials	0.18%	\$46.44	-47.77%
Cliffs Natural Resources	Materials	0.04%	\$38.56	-30.53%
Abercrombie & Fitch Company	Consumer Discretionary	0.03%	\$47.97	-28.89%
Edwards Lifesciences Corp	Health Care	0.08%	\$90.17	-27.07%

Source: RBC GAM  
Returns for the period from January 1, 2013 to December 31, 2013

While simply avoiding these securities would have added some value relative to the benchmark, a skilled manager acting on a negative view for any of these companies at the beginning of the year could have profited even further by shorting them.

In a long-only portfolio, exposure to small- and mid-cap securities can become asymmetrical; in other words, meaningful overweight positions are possible, whereas the magnitude of each underweight position is constrained. Take for example a well-known retailer like JC Penney Company Inc. (JC Penney) from Figure 4 above, which has a small 0.02% weight in the index. A long-only manager with a particularly negative outlook for JC Penney is limited to not owning it, effectively “shorting” it by 0.02% relative to the benchmark index. Another long-only manager with a very positive outlook for the same company can realistically hold up to 10% of the portfolio<sup>1</sup> in this security, effectively overweighting it by 9.98% relative to the benchmark.

As Figure 5 shows, the asymmetry in permissible active weights in traditional long-only portfolios is most acute for small capitalization securities, such as JC Penney in our example, for which the maximum overweight (+9.98%) is approximately 500 times greater than maximum underweight (-0.02%).



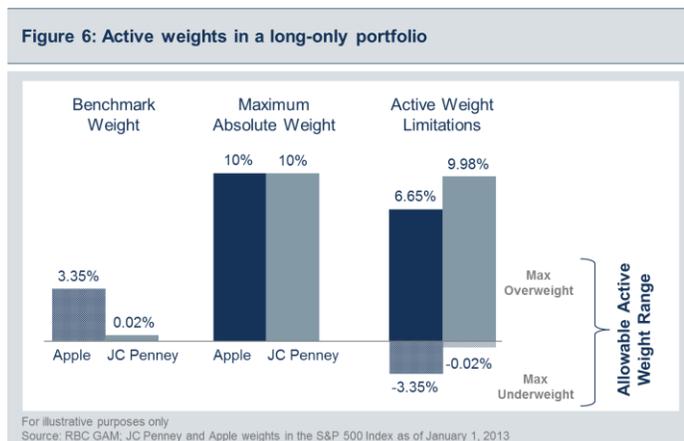
Given that small- and mid-cap stocks often represent the least efficient part of the market, permitting an active manager to short securities can meaningfully improve their ability to capitalize on negative forecasts in that segment of the market.

### 3. More Efficient Capital Allocation

Allocating capital in a traditional long-only strategy means the manager must fund overweight positions using funds from underweight positions elsewhere in the portfolio.

Figure 6 shows two securities, JC Penney and Apple, at both their benchmark weights and at the assumed maximum permissible absolute weight of 10% each. It also indicates the range of allowable active weights that a manager can establish in each stock.

As in Figure 5, the manager has a negative outlook for JC Penney, and a positive outlook for Apple with a target

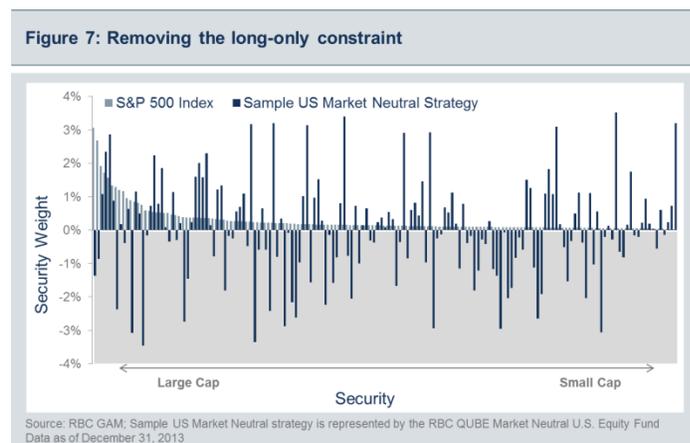


<sup>1</sup> Assuming a typical investment policy limit of 10% for a single issuer.

weight of 10%. In order to fund this overweight position, however, the manager must source funds from another security. Although their outlook for JC Penney is negative, the most the manager can free up to apply to their overweight Apple position is 0.02% of capital by not owning JC Penney. Like this JC Penney example, the majority of securities in most benchmarks have very small weights and thus the manager is more likely to take an easier route and raise the money to fund their Apple overweight by trimming a few larger, more liquid stocks in the benchmark, where sourcing capital is often easier.

The manager is thus making active decisions in the more efficient area of the market where gaining an edge may be more difficult – large-cap stocks are likely to be more widely researched and therefore may contain less mispricing for the manager to exploit. At the same time, this limits the opportunities to take advantage of negative views in the smaller, less efficient area of the market where alpha is typically more abundant (i.e., small-cap stocks like JC Penney). As a result, the manager's ability to reflect their views accurately in larger capitalization stocks is skewed if they look to this segment of the market to raise funds, potentially leading to less efficient capital allocation decisions within a traditional portfolio.

When the long-only constraint is relaxed, large overweight positions can be more easily funded, often through short positions in the small-cap area of the market, freeing the manager to express their outlook for larger cap stocks more accurately.



In Figure 7, security weights in a sample market-neutral strategy<sup>2</sup> are mapped against the weights of the same securities in the S&P 500 Index in order to demonstrate how the manager of a U.S. equity market-neutral strategy might utilize shorting to establish active weights that accurately represent their outlook.

The dark bars in this chart represent the manager's active weights across the universe of stocks, both long (above the X-axis) and short (below the X-axis – shaded area). When shorting is permitted, the manager has the flexibility to translate their investment outlook for stock returns into active portfolio weights across the entire capitalization spectrum.

Shorting increases the range of opportunities for the manager to exploit their investment views and permits more accurate alignment of portfolio weights with stock forecasts. In addition, it allows them to position the portfolio better in the less efficient, smaller capitalization area of the

<sup>2</sup> A market neutral investment strategy is one that permits a manager to short securities in an equivalent value to long positions in order to minimize market exposure. This type of strategy targets returns that are independent of market movement and isolates the stock picking and portfolio construction skills of active managers in an unconstrained mandate.

markets, and can thus improve the overall effectiveness of capital allocation in portfolio construction.

## Considerations for Institutional Investors

While the benefits of allowing shorting in an active equity mandate are appealing, they do present institutional investors with a number of additional considerations. Permitting short selling in a portfolio has implications for an organization’s investment governance and oversight policies as well as the manager selection process. Institutional investors must also recognize the importance of ensuring (to the extent possible) that their managers have the skill to implement these strategies and the processes and framework to mitigate the additional risks.

Trustees and investment committees need to be comfortable with the concept of borrowing securities, the introduction of implicit gross leverage, counterparty risk, and the theoretical potential for unlimited losses that investors often associate with shorting stocks.

Below we examine the practical potential for the theoretical “unlimited loss” and provide a list of considerations for Trustees contemplating mandates that allow shorting in their portfolios.

### *The risk of “unlimited losses”*

The risk of unlimited loss on a short position often concerns investors considering relaxing the long-only constraint. We believe that in practice, a properly diversified portfolio in a disciplined risk setting can help mitigate and contain any such losses.

That said, in theory, the risks are indeed higher. When an institutional investor owns a security (a long position) as part of a traditional active mandate, their losses are limited to the amount of their initial investment (since a stock’s value can only fall to zero). In contrast, losses on a short sale position occur when the price of a security sold short appreciates and, since there is no conceptual upper limit on the price of a security, in theory, losses can be infinite.

But how real is this risk? To better understand the probability of unlimited losses occurring, we looked at the frequency of extreme jumps in daily security prices across three major indices: the S&P/TSX Composite Index, the S&P 1500 Index, and the MSCI World Index. Among the 18.5 million observations, there were only 29 occurrences of a stock doubling in value and only three instances of a stock price tripling in a single day (Figure 8).<sup>3</sup>

Figure 8: Largest single-day price gains

Date	Company	Index	Daily Return
Feb 23, 2009	Nova Chemicals	S&P/TSX Composite Index	290%
Mar 21, 2003	Getronics	MSCI World Index	221%
Nov 27, 1998	Books-a-Million	S&P 1500 Index	200%

Source: RBC GAM, Bloomberg

From the most extreme perspective, assuming a maximum short position size of 5% and no change in values among the other portfolio holdings, a security’s value would have to increase

<sup>3</sup> This table shows the three largest recorded maximum daily price gains in securities from the S&P/TSX Composite Index from January 1984 to December 2013, MCSI World Index from March 2002 to December 2013, and S&P 1500 Index from January 1984 to December 2013.

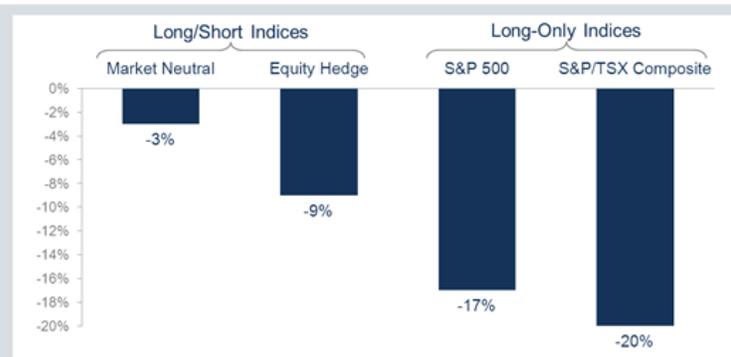
2100% (21 times) in a single day in order to erode the investor’s capital fully – and that is based on the unlikely assumption that the manager takes no mitigating steps to reduce exposure during the price move.

While this example of single-stock risk within a portfolio is instructive, it fails to capture interactions between other securities that would occur in a true long/short portfolio. To address this reality, we researched the worst single-month returns of indices comprising market-neutral strategies (strategies that seek to eliminate market risk and only profit from security/sector selection on both the long and short side of the portfolio) and/or equity hedge strategies (strategies that typically maintain a long bias while keeping a consistent level of short positions in the portfolio).

The results shown in Figure 9 demonstrate that long/short strategies experienced single-month losses that were significantly lower than the long-only indices. Importantly, single-month losses experienced by equity market-neutral strategies (where short exposure is balanced with equivalent long exposure) were substantially lower.

Moreover, Figure 10 highlights that the ability to short sell can help improve the expected risk-adjusted performance of an actively managed mandate. The annualized returns and risk metrics for both the Market Neutral and Equity Hedge indices lead to more attractive return-to-risk profiles, as determined by their Sharpe ratios.<sup>4</sup> The table in Figure 10 illustrates that long-term returns are attractive and that volatility in both cases is significantly lower. This supports the notion that shorting can actually help reduce portfolio volatility in traditional active mandates.

Figure 9: Worst single month returns



Based on monthly returns for the period from January 1990 to December 2013  
 S&P 500 Index and S&P/TSX Composite Index data sourced from Bloomberg  
 Market Neutral and Equity Hedge Index data sourced from Hedge Fund Research Inc.  
 Market Neutral = HFRI EH: Equity Market Neutral Index  
 Equity Hedge = HFRI EH: Equity Hedge Index

Figure 10: Historical return & risk profile: long/short vs. traditional long-only indices

Strategy	Annualized Return	Annualized Volatility <sup>1</sup>	Sharpe Ratio	Worst Month	Maximum Drawdown
Market Neutral	6.8%	3.2%	1.2	-2.9%	-9.2%
Equity Hedge	12.8%	9.1%	1.1	-9.5%	-30.6%
S&P 500 Index	9.5%	14.9%	0.4	-16.8%	-50.9%
S&P/TSX Composite Index	7.9%	14.8%	0.3	-20.1%	-43.3%

Source: RBC GAM, Hedge Fund Research Inc.  
 Market Neutral = HFRI EH: Equity Market Neutral Index  
 Equity Hedge = HFRI EH: Equity Hedge (Total Return) Index  
 Returns for the period from January 1, 1990 to December 31, 2013  
 1. As measured by annualized standard deviation of monthly returns

<sup>4</sup> Sharpe ratio is a measure of risk-adjusted returns; it shows excess return over a risk-free rate earned by a strategy per unit of risk taken (as measured by standard deviation). For the purposes of this calculation, we assumed a risk-free rate of 3% (based on annualized return of Citigroup 3-Month T-Bill Index over the stated period).

## Considerations for Trustees and Investment Committees

Permitting a manager to short sell can be beneficial to investment returns, but is not without additional risks and requirements. In addition to the perceived potential for unlimited losses (addressed above), we list below some other considerations for institutional investors exploring the opportunity offered by increasing the flexibility in their mandate.

### **Governance and Oversight:**

Governance and oversight policies and procedures should be reviewed to ensure they accommodate the expansion of active mandates beyond the traditional long-only universe.

### **Leverage:**

Strategies that include shorting usually have gross leverage greater than one, since short positions are implicitly used to finance long positions.

### **Cost:**

These are more complex strategies, often with higher operating costs and investment management fees (often including incentive fees)

### **Liquidity:**

Most long/short strategies do not provide daily liquidity, as is the norm in traditional mandates. Weekly or monthly liquidity is more common in pooled structures.

### **Counterparty Risk:**

Counterparties facilitate lending and borrowing of securities and it is important to ensure that they are financially sound and that agreements are clear about how posted collateral is used, guaranteed, and classified.

### **Borrowing Securities:**

The ability to borrow securities and liquidity are important considerations: not all securities can be borrowed and securities that are shorted can be “called-in” by the lender at any time – regardless of how inopportune it may be for the borrower.

### **Understanding Goals and Objectives:**

Educating board and committee members is critically important as institutional investors today are presented with a broad spectrum of long/short strategies that may be appropriate on a stand-alone basis or as part of a risk minimization/liability-driven investment approach depending on the goals and objectives of the portfolio.

## Conclusion

Relaxing the long-only constraint can represent a natural next step for an actively managed long-only equity portfolio. A traditional manager's active weights are already the expression of their positive and negative outlooks; adding shorting to their repertoire expands the breadth of opportunities available and the efficiency with which to implement their views.

When considering increasing a mandate's flexibility in this way, institutional investors should be aware that shorting introduces an additional layer of complexity to the investment management and governance processes. That said, when properly implemented in a disciplined, risk-conscious manner, shorting has the potential to enhance a manager's ability to deliver excess returns and improved risk-adjusted performance.

Given the current challenging investment environment, we believe that looking beyond traditional equity strategies and relaxing the long-only constraint merits consideration by many institutional investors.

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