A SHORT NOTE ON SHORT SELLING

FOUR POST-CRISIS HEADWINDS

BEACHHEAD
CAPITAL MANAGEMENT

INTRODUCTION

Short selling is an integral component of the hedge fund business model. In addition to mitigating market risk, hedge funds can generate excess returns by identifying overpriced securities. With the ability to both buy and short stocks, hedge funds have roughly double the opportunity set of long only investors, a critical competitive advantage.

Shorting has always been more difficult than buying stocks. Equity markets tend to appreciate over time, so even highly talented short sellers are likely to lose money on an absolute basis in most years. Heavily shorted stocks are often prone to significant price volatility and stock prices can run up before rationality sets in. Theoretical upside is capped at 100% while downside is unlimited. In extreme cases, regulatory changes can materially disrupt the market, such as the temporary short selling ban on financial stocks during the height of the financial crisis.

Based on internal studies, hedge funds had difficulty making money by shorting stocks during 2010 and 2011. In this note, we briefly explore four factors that have created headwinds for short sellers post-crisis:

- Lower interest rates have reduced the short rebate and made shorting more costly on an absolute basis.
- Stock lenders have become more proactive about increasing borrow costs for difficult to borrow securities which cuts into fund profits.
- A concentration of capital among larger funds has narrowed the opportunity set for large funds.
- Regulatory changes have increased disclosure and created other challenges.

It's important to note that the short side of the market in many ways is antiquated and much more opaque than the long side. Funds do not file 13Fs or other easily accessible reports (with the exception to the recently introduced disclosure requirements in Europe), there is no central repository or clearinghouse for stock borrow rates, and rebate and other costs are negotiated between lenders and borrowers on a confidential basis. The market is largely an overnight market since most stock lenders are unwilling to lend stock for term in case the portfolio manager elects to sell it.

FOUR FACTORS

1. Decline in interest rates. When a hedge fund borrows a stock and sells it short, the hedge fund provides the cash proceeds (plus a little extra) as collateral to the lender. The lender typically invests this cash and generates a return, a portion of which is shared with the hedge fund. This "short rebate" is typically tied to the Fed Funds rate. As shown in the adjacent chart, the Fed Funds rate is at historically low levels and is not expected to increase materially anytime soon.

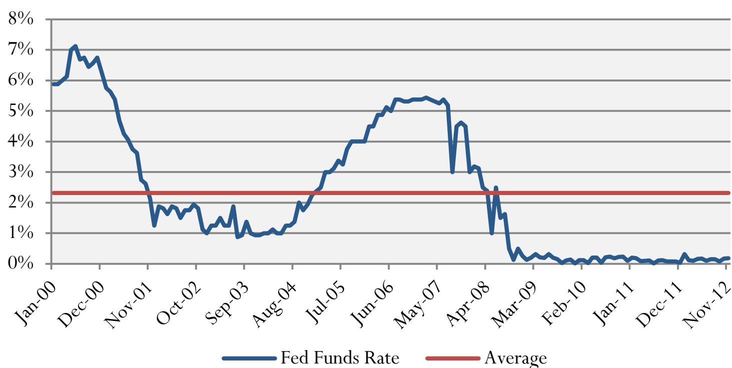


Figure 1 – Fed Funds Rate 2000-12

The decline in interest rates has a material impact on the economics of shorting. To use a simple example, when short-term rates are 4%, the hedge fund might expect a short rebate of, say, 3%. If the hedge fund runs an average gross short exposure of 70%, it can expect to earn around 2% from

the short rebate (assuming that the dividend yield on the stock is zero, a reasonable assumption for companies with deteriorating business models). This 2% gross return offsets the higher fee structure of hedge funds relative to long only managers. Conversely, when short-term rates are close to zero, the short rebate essentially is zero.

A related factor is that lenders are much more sensitive to the risks of how the collateral is invested. During the crisis, many beneficial owners experienced large and unexpected losses on collateral pools that were exposed to Lehman Brothers, SIVs, RMBS and other yield enhancement products.

2. More proactive stock lenders. JP Morgan recently published a highly informative report which demonstrates that the rising cost of borrowing heavily shorted stocks is not due to excess demand, but rather that lenders have become much more active participants in the market. Pre-crisis, many pension funds and other institutional investors were relatively passive lenders, content to earn a portion of the return on cash collateral to add a premium to stock returns. Today, the combination of the decline in short term rates and the unexpected losses on collateral pools led many beneficial owners to focus more on how to maximize profits and mitigate risk on securities lending.

As more beneficial owners and their agents view stock lending as a profit center, wholesale stock inventories have increased materially. Wholesale inventories have more than tripled over the past five years (Figure 2), which corresponds with a rapid growth in the shares held in wholesale inventories by agent lenders (Figure 3), who have the infrastructure and knowledge base to help beneficial owners maximize value on securities lending.

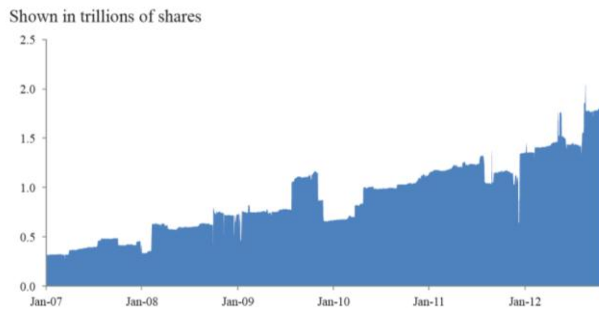


Figure 2 – Shares of equity securities available for lending in agent lender inventories [1]

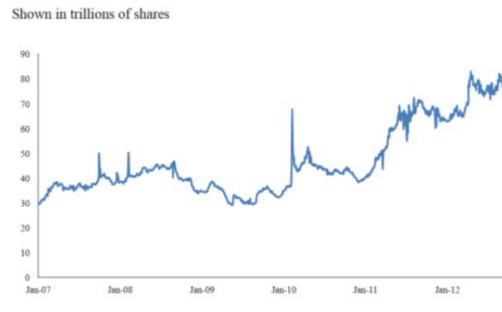
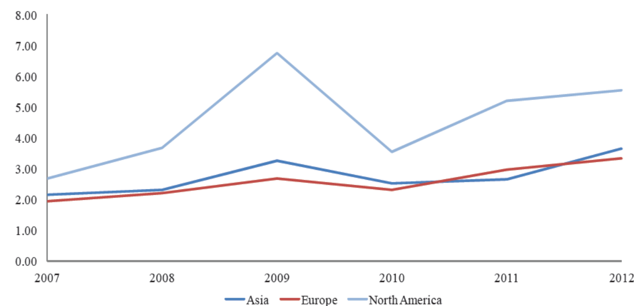


Figure 3 – Shares of equity securities on loan by agent lenders[2]

Notably, higher inventories have not translated into lower borrowing costs: in North America and Asia, the cost of borrowing equities has risen by 41 bps and 61 bps, respectively, since 2007.

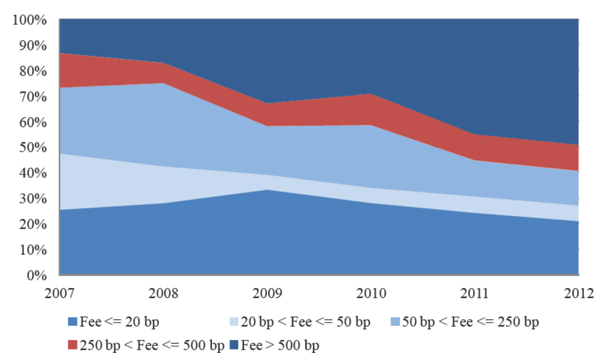
By far the greatest impact is in the small subset of stocks where demand to borrow is high – those with annual lending rates of greater than 250 bps per annum. With interest rates near zero and aversion to return-enhanced short term instruments increasing, stock lenders have become particularly aggressive in raising rates on 6% of securities that fall into this category – arguably, the stocks with the most demand from hedge funds. While the average borrowing cost on very hard-to-borrow securities (>250 bps per annum) has trended upward (Figure 4), these securities now constitute the majority of the stock lending revenue (Figure 5).

[1] Source: JP Morgan Prime Brokerage Perspectives December 2012
[2] Source: JP Morgan Prime Brokerage Perspectives December 2012



Source: Sungard's Astec Analytics

Figure 4 – Equity borrowing costs for specials[3]



Source: Sungard's Astec Analytics

Figure 5 – Securities lenders revenue attribution[4]

The net result is that borrow rates appear to rise faster today in response to greater demand and that successful fund managers must short stocks earlier than others. Timing and uniqueness of ideas have become substantially more important.

3. Concentration of capital. The concentration of capital among larger funds is a deterrent for the hedge fund industry as a whole to make money on the short side. Anecdotally, larger managers run into capacity constraints much earlier on the short than long side and are forced to rely more heavily on sector or market indices as beta hedges. In the chart, we show break points in the opportunity set of US equities assuming that a manager limits investable positions to 3% of the portfolio and 20% of the average daily trading volume over five days.

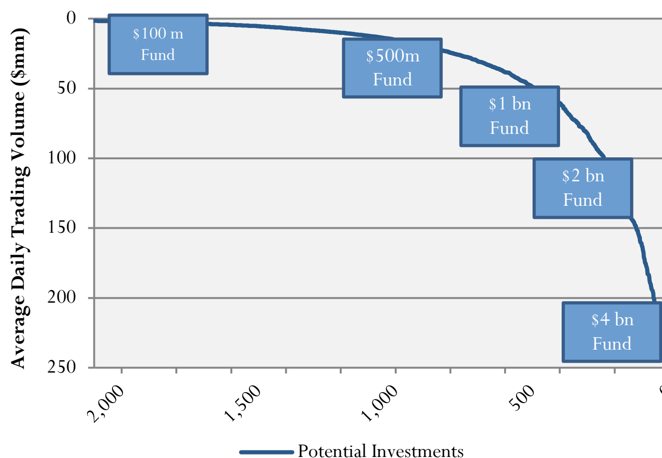


Figure 6 – Constraints as AUMs Increase

A diversified short portfolio typically includes 30 to 40 positions. In theory, a smaller average target position size should lead to a larger opportunity set. Somewhat paradoxically, though, larger managers run into capacity constraints much earlier on the short side. The reasons are both structural and behavioral. Short positions, especially those with higher short interest ratios, are subject to violent price movements; liquidity evaporates quickly as a succession of managers hit loss limits and rush to cover. Funds can be forced to buy-in positions if stock loans are pulled – generally, at precisely the wrong time. Due to this, liquidity constraints are far more onerous on the short

[3] Source: JP Morgan Prime Brokerage Perspectives December 2012
[4] Source: JP Morgan Prime Brokerage Perspectives December 2012

side. Loss aversion and risk control criteria lead managers to limit short-side positions sizes to avoid catastrophic, franchise-threatening losses.

4. **Regulatory changes**. Due to a widespread view that naked short sales exacerbated price declines during the crisis, US regulators have sought to tighten regulatory compliance and oversight in the stock lending market. Most significantly, in October 2008 the SEC issued temporary Rule 204T to curb naked short selling by shortening the delivery window and expanding the rule to cover all equity securities. The rule successfully reduced fails to deliver and the SEC finalized it in July 2009. The practical consequence is that prime brokers today have far less time to obtain shares, as short positions in equity securities must be closed out on the settlement date. This development has made it more difficult for hedge funds to short as aggressively as they once did. Additionally, to ensure that they are able to locate shares pursuant to Rule 204, prime brokers have become increasingly willing to borrow securities irrespective of their rates. Brokers' willingness to borrow at higher rates has, in turn, added to the rising costs for hedge funds to sell short equity securities.

In Europe, the EU passed new short selling regulations on November 1, 2012. The new rules have similar provisions to Regulation SHO to limit naked short sales. In addition, the regulations mandate public disclosure of large short positions (greater than 0.5% of the shares outstanding) for securities whose primary trading venue is in the EU.

CONCLUSIONS

The response from managers to these questions has been varied. A few consider the rising cost of specials to be insignificant relative to the opportunity set available on the short side: with so many industries in flux, they argue that a few hundred basis points of incremental borrowing costs are irrelevant when ailing businesses can disappear within a few years. Others argue that they tend to avoid crowded, and hence expensive, shorts by virtue of focusing on off the run opportunities. A third group argues that there are ample opportunities in large capitalization equities with de minimus borrowing costs.

Clearly, the most important factor in the profitability of a short book will be the ability of a given manager to identify securities that materially underperform the market, and hence add alpha. In a prior note, we noted that the most heavily shorted US equity securities outperformed (hence short sellers underperformed) the S&P 500 in both 2010 and 2011, in sharp contrast to the several hundred basis points of annual underperformance during the mid-2000s. We later saw some evidence that this trend abated in 2012, when heavily shorted equities performed in line with the S&P. Given the combination of macroeconomic uncertainty but strong equity markets, it will be interesting to see how this trend develops over the coming year or two.