Short-sellers: The neglected breed

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Abstract This paper shows that the short-sellers classification can shield a traditional investment portfolio against broad stock market declines. During the bull market of the 1990s the short-sellers strategy was crushed and a handful of remaining surviving funds managed to weather the storm. Short-sellers re-emerged at the start of the new millennium and have performed well compared to stock and bond market indices as well as to other hedge fund strategies. The conclusion is that the short-sellers strategy is a necessity in pension fund and institutional portfolios to protect investors from declining markets and should not be neglected.

Keywords: *short-sellers; hedge funds; options; leverage; performance; bear market*

Introduction

During the last three years short-sellers have performed well compared to other hedge fund classifications. Usually short-sellers make profits by shorting either overvalued stocks or currencies, hoping they will decrease in value. This hedge fund style does not foresee optimism for these publicly traded companies or the future growth of these firms. The shorting of securities implies borrowing and selling stock, in other words, betting the price will drop so the shares borrowed can be replaced at lower price in the future. This can be a very expensive strategy as short-sellers must hold stocks for a long period until financial analysts recognise they are overvalued and take actions to lower their value.

In world markets, especially during the current bear market, the number of hedge funds employing short selling has

increased dramatically. Small companies starting out may in fact not reach their objective if short-sellers believe certain internal problems could exist in those firms. Because short-sellers can cause the market value of a firm to drop by shorting their stock, there is further pressure on these firms which could stifle their growth. Many believe that short-sellers are not a true hedge fund style and do not follow the classic AW Jones 1949 hedge fund model of shorting overvalued stocks and purchasing undervalued stocks. They are often referred to as short-sellers, or bastions of pessimism because they do not 'go long' and employ leverage in short selling.

On the other hand, short-sellers can be a positive aspect for the market because in cases where fraud is suspected, this could be seen as a means of defence and can prevent the stock from being artificially inflated. Furthermore,

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short-sellers complete the market. Short-seller hedge funds discovered the corrupt accounting practices by Enron, Tyco, and WorldCom months before the disasters became common knowledge. After a decade of prosperous and economic growth, stock markets returned to more realistic levels, especially since US companies restated earnings back to 1996, to comply with the Accounting Industry Reform Act passed by the Bush administration on 30th July, 2002.

The main objective of short-sellers relies on the assumption of discovering fraudulent firms, unethical practices and making sure company fundamentals are sound. If securities are over-inflated, over-hyped and have little or no fundamentals, short-sellers will be the first to question their prices. Short-sellers borrow shares from a broker and then sell these securities short, pledging to return the shares with interest at some time in the future. Short-sellers want to see prices drop so they can repurchase these securities at a lower price and lock in profits and returns.

When markets experience extreme events and plunge rapidly, short-sellers are often the first to blame. Although they are a relatively small breed, with just 45 hedge funds totalling approximately \$4.2bn, the same 45 funds had approximately \$2.6bn at the start of the millennium.¹ This small group of short-sellers is frequently seen as profiting from market calamities and turmoil and is frequently the subject of much criticism, as occurred during the Asian crisis of 1997. However, it needs to be noted that hedge funds were not found guilty of causing the crisis.²

If short-sellers are wrong in their prediction of market direction and security movements they will lose financially, especially in bull markets, because they have borrowed shares and need a cushion of reserve capital to

avoid margin calls from the brokerage houses. Since short selling is a risky strategy, it was neglected during the bull market of the 1990s. According to the New York Stock Exchange and NASDAQ, less than 2 per cent and 1.2 per cent of trades respectively are short sales. Many argue that short-sellers make too much money in down markets, but if one looks at the long-term performance of short-sellers compared to market indices, they have only done better than market indices since 1997.

Short-sellers are experts in examining income statements and balance sheets to find aberrations that push stock prices lower, thereby reflecting more accurately the real or true worth of the firm. Many US traded companies are under pressure from short-sellers and have voiced their opinion to the Securities and Exchange Commission (SEC), asking it to implement a maximum on the amount short-sellers can trade.

More transparency is required for short-sellers because some funds may manipulate company stock. This tactic is often used as they are not required to disclose their individual positions to the SEC.

Literature review

During the height of the tech bubble in early 2000, many hedge funds were caught in a downward spiral because of their high correlation with the NASDAQ index.³ Overpriced dot.coms were selling at outrageous prices making valuation models yielding P/E ratios into the hundreds and thousands. A well known proponent of behavioural theory, Shiller⁴ has argued that the media over-hyped the market and was responsible for the irrational exuberance in technology stocks. Short-sellers were the ones to detect the high-tech bubble, confirming the findings of Gregoriou *et al.*⁵

Table 1: Performance of short-sellers January 1997–July 2002

Hedge Fund	Ending \$m managed	Maximum drawdown	Compound return	Annualised arithmetic return	Sharpe ratio arithmetic with 4.25% risk-free rate	Annualised arithmetic standard deviation
Rocker Partners	518.80	26.91	121.18	17.23	0.53	24.40
Permal US opportunities	282.00	19.03	95.77	13.60	0.53	17.52
C&O Investment Partnership	125.04	19.65	249.38	25.49	0.87	24.44
Arcas Fund II	64.00	75.02	30.73	15.57	0.25	44.57
International Fund (Arcas Interests)						
Arcas International Fund (Covered interests)	64.00	71.01	46.80	17.34	0.30	43.70
Reynard American Partners	6.50	65.75	-13.63	1.97	-1.00	30.57
Arcas Fund II (Covered interests)	5.00	75.02	30.73	15.57	0.25	44.57
Arcas International Fund II (Arcas Interests)	5.00	71.01	46.80	17.34	0.30	43.70
Reynard International Partners	0.50	65.09	-12.09	2.35	-1.00	30.84
Average	118.98	54.28	66.18	14.05	0.12	33.81

Furthermore, the same authors find that the short-sellers' classification exhibits superior market timing abilities, compared to all other hedge fund classifications.

Some studies have examined the performance of large hedge funds during the tech crisis and one hedge fund in particular (Zweig-DiMenna) was part of a study by Brunnermeier and Nagel³ examining the tech bubble. It was found the Zweig-DiMenna fund was riding the tech wave (NASDAQ index), a finding further confirmed by Gregoriou and Rouah⁶ using co-integration. Furthermore, studies show that short-sellers seem to possess superior information *vis-à-vis* traditional 'long only' investors.⁷ A recent study by Lamont and Thaler⁸ also confirmed that short-sellers can predict overvalued stocks more accurately than other fund managers.

Methodology

Funds from the Zurich Capital Markets database are used, spanning the period January 1997–July 2002 and investigate short-sellers' strategy. Although the

database included 20 funds, only nine were found in this category during the investigation period. The remaining funds began reporting after January 1997 and are not part of the study.

Furthermore, dead funds (those no longer in existence) are not examined and a small survivorship bias present in the data is recognised. Descriptive statistics are used to provide a clear and concise picture of the results and well-known stock and bond market indices have been used for comparison purposes. Calculations use a risk-free rate of 4.25 per cent.

Results

Table 1 shows that C&O Investment Partnership, the third-largest short-seller in terms of ending assets under management has the highest average annualised return along with the best risk-adjusted performance (the Sharpe ratio). The Sharpe ratio is used to measure risk-adjusted returns of an investment and is calculated by subtracting the risk-free rate from the rate of return of a portfolio divided by the standard deviation of those returns.

Table 2: Performance of stock and bond market indices January 1997–July 2002

Market indices	Maximum drawdown	Compound return	Annualised arithmetic return	Sharpe ratio arithmetic with 4.25% risk-free rate	Annualised arithmetic standard deviation
S&P 500 Index	38.40	33.12	6.75	0.14	18.00
Morgan Stanley World Index	39.79	10.61	3.13	−1.00	16.59
US Salomon Government Bond Index (all maturities)	4.22	51.08	7.50	0.78	4.16
NASDAQ	71.30	4.86	7.15	−1.00	35.43
Dow Jones Industrial Average	20.95	48.80	8.72	0.25	17.04
Average	34.93	29.69	6.65	−0.17	18.24

The higher the Sharpe ratio, the greater the potential return for a similar amount of risk. Small funds with less than \$6.50m have low Sharpe ratios, the smallest compound returns and higher volatility (larger standard deviation) than the large funds. Funds with over \$100m have the highest Sharpe ratios and large funds have lower volatility (smaller standard deviation) than small funds. Smaller funds had the largest maximum drawdown, in other words, the maximum percentage loss from ‘peak to valley’. This is expected since small funds will trade more frequently to achieve higher returns, thus attracting more investors.

The three biggest funds had the highest compound returns and Rocker Partners, the largest fund in terms of ending assets under management, had one of the smallest maximum drawdowns when compared to the rest of the funds. A possible explanation might be that due to the large amount of assets under management it is difficult for the fund to move in and out of positions quickly.

Table 2 compares stock and bond market indices to short-sellers. The latter had higher risk-adjusted returns than the former during the investigation period. However, short-sellers had greater volatility when compared to market indices, but the majority of short-sellers

outperformed the indices in Table 2 in terms of compound and average return.

The short-sellers classification has nearly twice the returns and volatility when compared to stock market indices. This can be seen when the compound return and annualised standard deviation of short-sellers and market indices in Tables 1 and 2 are compared. The average compound return for short-sellers is 66.18 per cent while it is only 29.69 per cent for market indices. The average annualised arithmetic return of short-sellers is 14.05 per cent whereas it is 6.65 per cent for market indices. In addition, the standard deviation of short-sellers (33.81 per cent) is slightly more than twice than that of the market indices (18.24 per cent). In terms of the risk-return relationship, short-sellers take more risks to obtain higher returns.

Conclusion

Including short-sellers as part of a fund of hedge funds (portfolio of hedge funds) or even as part of a traditional stock and bond portfolio, will increase the performance and reduce downside risk. Since the August 1998 Russian rouble crisis and the Long-Term Capital Management (LTCM) incident, short-sellers have outperformed major market indices. The lesson learned from

this paper is that the short-seller strategy cannot be neglected and must be considered as an integral part of traditional stock and bond portfolios. It reduces and stabilises the volatility of portfolio returns because of its negative correlation to markets.

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