

Short Selling Cometh the hour, cometh the literature

“Short sellers have always been unpopular on Wall Street. Like skeletons at the feast, they seem to oppose rising values, increasing wealth, and general prosperity.”¹

This group of investors have taken the blame for many of the crashes of the last 400 years; from the East India Company of 1609, the Great Wall Crash of 1929, Black Monday in 1987 and the bursting of the dot-com bubble in the early-2000s.

Data Explorers are an independent company who monitor short interest using stock borrowing data and are often consulted when it comes to tracking these trade flows. Their information has recently caught the attention of Academics keen to fill a gap in the literature. With "shorting" so topical it is a good time to take a step back and review empirical studies from the recent past and introduce the fresh work being done on short selling and its impact on stock prices.

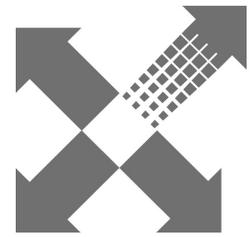
In more recent times we have seen the practice of short selling spark debate about ABC Learning Centres, with Australian journalists insinuating that short sellers were in some part responsible for the company's profit fall of 70%. This is also true of HBOS, Britain's fifth largest bank, where short sellers were accused of market abuse by spreading false rumours to profit from short selling.

The debates and what the academics say

Various academic debates and essays stem from notorious incidences when short selling has made headline news. In the case of dot-coms, academics asked why investors failed to short overpriced Internet stocks and thus bring them back to an equilibrium price. Ofek and Richardson (2003)² amongst others, claim this was down to the existence of short sale constraints. For example, they found that Internet stocks were relatively expensive to short because of high stock borrowing costs.

¹ Jickling, M. (2005) "Regulation of Naked Short Selling" CRS Report for Congress, RS22099, March 30, Congressional Research Service, The Library of Congress, USA.

² Ofek, Eli, Richardson, Matthew. 2003. DotCom Mania: the Rise and Fall of Internet Stock Prices. Journal of Finance, 58, 1113-1137.



However, Geczy et al (2002)³ find little support for the notion that short selling constraints made it difficult for arbitrageurs to short 'dot-coms'. Brunnermeier and Nagel (2004)⁴ argue that hedge funds were "riding the technology bubble," rather than short selling apparently over-valued stocks.

They would likely reach a similar conclusion to explain the recent poor performance of most hedge funds. Funds still tend to have many more long positions than shorts. Market neutral strategies that are better performers in bear markets are many fewer in number than the ubiquitous Long/Short funds who have been leveraged and Long only to maximise the rising markets of the last 5 years. It is interesting how alternative investment managers were as poorly positioned, in general, ahead of this downturn as they were going into the tech bubble collapse.

Price Efficiency and Short Selling

Academic studies have typically found that allowing short selling improves market efficiency. In a recent paper⁵, published on 10 June 2007, Pedro Saffi and Kari Sigurdsson from the London Business School were able to examine the impact of a liquid securities lending market on market efficiency at the level of individual securities. They concluded that short-sale constraints lower price efficiency. Stocks with limited lending supply and/or high borrowing fees responded more slowly to news in the public domain, and they did not exaggerate market-wide shocks, either. Moreover, in 2002, the Financial Services Authority (FSA) said that short selling is a "legitimate investment activity which plays an important role in supporting efficient markets...Hence we see no case for prohibiting short selling...and the introduction of specific regulatory constraints would not be warranted."

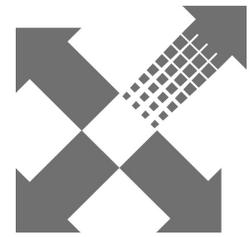
Crowded Exits

The relevance of short selling as a tool in a portfolio manager's armoury was open to question during the lengthy Bull Run that only came to an end during the summer of 2007. Until that point shorting shares was seldom fruitful. Underperforming companies were few and far between and even those that could be identified could be subject to a takeover. The removal of the so called 'private equity put' has made it safer to profit from this activity, but there are still risks. James Clunie, who ran the faculty of Finance at Edinburgh University, has been researching this topic for many years. He is now in charge of a 130/30 UK fund at Scottish Widows Investment Partnership. Clunie's latest paper addresses risks from 'crowded exits'.

³ Geczy, Christopher C., Musto, David K., and Reed, Adam V., 2002. Stocks are Special Too: an Analysis of the Equity Lending Market. *Journal of Financial Economics*, vol. 66, 241-269.

⁴ Brunnermeier, Markus K., and Nagel, Stefan, 2004. Hedge Funds and the Technology Bubble. *Journal of Finance*, Vol. 59, No. 5, 2013-2040.

⁵ Saffi, P.A.C, and Sigurdsson, K., 2007. Price Efficiency and Short Selling



This paper fills a gap in the academic literature because our understanding of how liquidity constraints affect short sellers is limited. Clunie puts meat on the bones of an issue close to every potential short seller – that of timing a successful exit. He uses stock borrowing data from Euroclear in combination with information from Data Explorers to study 681 LSE listed securities.

“Crowded exits arise in stocks where short sellers hold large positions relative to normal trading volume, and when a catalyst prompts short sellers to cover their positions rapidly and simultaneously... The idea is akin to the audience in a crowded theatre rushing to a narrow exit door once the fire alarm sounds...only so many can leave the building in any given interval of time.”

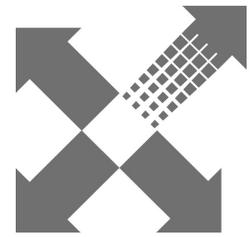
“The temporary excess of demand for stock relative to normal trading volume leads to upward pressure on the stock price and these events are associated with losses to short sellers that are economically and statistically significant. As such, the risk of a crowded exit represents an indirect constraint on short selling.”

Figure 1. Examples of ‘crowded exits’

Intermediate Capital Group (ICG) from late November 2007.
 Berkeley Group (BKGu) from late September 2007.

“Both of these stocks were failing because of poor economic industry,” says Clunie. “They became ‘crowded’ and successful short positions. In Berkeley’s case, a catalyst for recovery was stronger corporate news flow relative to the sector and aggressive director buying. For ICG, it was corporate re-assurance on the company’s performance and a rights issue to strengthen the balance sheet and finance new opportunities.”

It will not come as a surprise to those people who have recent experience of shorting in the UK that the main findings are that crowded exits are associated with positive abnormal returns (i.e. losses to short sellers) of up to 27% over a 60 day period. In situations where a short position is defined as large (above a certain % of the market cap on loan) and where liquidity is constrained (by calculating the number of days it would take to cover all outstanding shorts using average turnover) investors can surrender up to 27% of their profit by being the last – or forced - to close their short position.



Anatomy of Short Squeezes

In another paper, “Anatomy of Short Squeezes”⁶ Clunie looks at upwards of 350 UK listed stocks over a 45 month period and tries to define apparent short squeezes. “In the three day run-up to such events, stocks experience significant positive abnormal returns of 3.45% and hence short sellers would suffer significant losses when covering in the market stock recalled by lenders.”

Implications from these studies are interesting. Should stock borrow data become widely tracked, certain short term investors may seek to exploit these opportunities. That said, a truly ‘crowded exit’ is such that new investors cannot opportunistically buy shares when liquidity is so tight.

As outlined here, the literature shows that heavily shorted stocks perform poorly. It therefore follows that people could come up with imitation strategies if following the herd is profitable. However Clunie has the following warning, “the act of imitation changes the market dynamics and can lead to unexpected consequences. With imitation, short positions become more crowded, and the risk of ‘crowded exits’ increases.”

Short Selling and the Price/Volume Relationship

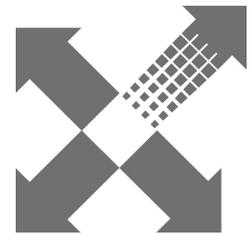
Two academics also unravelling the information content of short sales are Michael McKenzie and Olan T Henry. Taking advantage of publicly available information on shorting in Hong Kong, as published by the HKSE, they published a paper that appeared in the Journal of Business in 2006⁷ called, “The impact of Short Selling on the Price-Volume Relationship.”

Their angle is novel and interesting. They believe daily cash equity trading can be broken down to reveal an informative signal. Nonlinearities in the volume-volatility relationship are tested using short sales information so that it is possible to identify the activity of short sellers on a daily basis to predict share price returns. One of the clues that led them down this path was a common finding in the literature on stock market volatility that negative shocks cause more volatility than positive stocks of equal magnitude.

“In contrast to previous findings, however, this paper documents a new form of asymmetry in the dynamic process that determines stock return volatility. The source of this asymmetry is the trading activity of short sellers. Short sales are motivated by bad news about a company’s future prospects. The trading activity of short sellers (volume) reveals their informational advantage to noise traders and, as markets typically overreact to bad news compared to good news, elicits a larger response in volatility compared to a day in which short sellers are absent from the market. This is not to suggest, however, that volume drives prices as much of the theoretical literature suggests and many empirical studies implicitly assume. Rather, the parameter estimates of our model clearly indicate the presence of a strong nonlinear bidirectional relationship between innovations to volume and returns volatility.”

⁶ Anatomy of Short Squeezes, James Clunie, Peter Moles, Nelly Terekhova, 31 October 2007

⁷ Journal of Business, 2006, vol. 79, no. 2



In other words, short selling volume tells you more about the behaviour of share prices than just straightforward volatility.

The plot thickened in 2007 when McKenzie and Henry went to work on the Data Explorers' Hong Kong dataset. By combining shifts in the demand (to short) curve, as captured by DEL, they hoped to further refine the information content of short sales information. In general they found, "strong evidence that short interest is a major channel for the transmission of information about prices."⁸

On this point they echo the findings of Cohen, Diether and Malloy (2006) who researched stock lending data from a large institutional investor. They conclude that an increase in shorting leads to negative returns of 2.98% if the following month, particularly in markets with less public information flow⁹.

At a higher level, they were glad to pursue the anatomy of trading volume that clearly originates from any number of agents, each of whom may hold a different information set. Some trades initiate from trend followers so are 'noisy'. Others may be based on the need for liquidity to cover redemption and the like. Some, however, are based purely on information. "It is an interesting empirical issue to consider the extent to which the volume associated with different types of trading reveals information to the market. Especially interesting given the literature suggests that short sellers may be better informed than other traders."

All volume is not created equal

There can be 4 different motivations to a trade. 'Buying' shares can be for two reasons: opening a 'long' position (therefore buying a share expecting it to go up); closing a 'short' position (i.e. buying shares to make a profit having sold them at a higher price previously). 'Selling' shares can be for two reasons: closing a 'long' position (to take profits or cut losses or for liquidity needs); opening a 'short' position (in expectation of future price falls or for hedging).

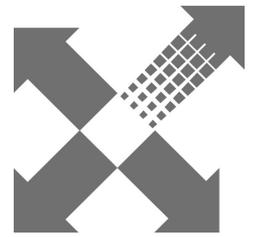
With HKSE data and Data Explorers' info, McKenzie and Henry can distinguish between short selling and all other trading volume. As McKenzie explained to the audience of the Spitalfields Advisors London Forum in March 08: "Short sales volume has significant explanatory power. All other volume does not. Higher short sales mean lower returns in the next period."

This is not the end of the story. Some might contend that the next most informative piece of volume to identify is active investors opening and closing Long positions. There may be a way to do this using the Data Explorers dataset and this is work in progress.

⁸ The Information Content of Trading Volume & Short Sales

⁹ Journal of Finance, Oct 2007 Supply and Demand Shifts in the Shorting Market, Cohen, Diether, Malloy, May 9 2006

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The final word goes to James Clunie, “The literature documents that short-sellers, unlike long only investors, face potentially unlimited losses, but does not describe how short-sellers manage this risk. There is a need to understand the importance of this risk, to what extent it acts as a short-sale constraint, and how short sellers manage the risk.”

Conclusion

For as long as short selling takes place behind closed doors with little disclosure, there will always be an element of mystery surrounding it and therefore likelihood that it will be blamed for major market swings. However, we hope this article has provided an insight into what less impassioned academics are finding in this under-researched area of the financial landscape as a balance to the journalistic viewpoint. Even if short selling tends to indicate a future share price fall they point out it is a short term effect. Fortunately, however, most realise that shorting is a symptom but not a cause. But the debate is moving on and into much more interesting areas. It is no longer about whether shorting is right or wrong. The issue now is how to be good at it. With the proliferation of hedge funds, and the onset of 130:30 strategies, more fund managers can express a negative view by shorting shares and are finding out what a different skill it is to buying shares. People are seeking to learn as the lights start, slowly but surely, to illuminate the world of shorting. Both academics and active investors are seizing the chance to learn about an area of the market that is poorly understood in the hope of being ahead of the chasing pack.

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