Banning short sales and market quality: The UK’s experience

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Abstract

We study the effects that the ban on short sales of shares in financial firms introduced in late 2008 and removed early 2009 had on the microstructure and the quality of UK equity markets. We show that the ban did nothing to affect order flows: financial stocks were being more aggressively sold off than their peers pre-ban and this situation persisted through the ban period. Trading volume in financials was massively reduced, however. The ban decimated order book liquidity for financials. The deterioration was symmetric, affecting the limit buy and limit sell side of the order book equally. Finally we show that, through the period of the ban, markets for financial stocks were substantially less efficient and that the role of the trading process in aiding price discovery was greatly reduced. The effects identified above were largely reversed once the ban was lifted. The persistence of the deterioration in market quality and liquidity though the relatively long-lasting UK ban on short selling suggests that other major market developments such as the TARP program were not responsible since these were concentrated in the early half of the ban. We thus argue that the short selling ban was responsible for detrimental effects on the quality of UK equity markets and that, far from being stabilising, the ban exacerbated problems in valuing UK financial stocks.

1. Introduction

Short selling is the practice of selling a security that an agent does not own. Speculators short sell a security with the intention of buying it back at a later date at a lower price, so as to profit from a price decline. While frequently attracting ire from executives of companies subjected to the practice, some form of shorting is permitted in most major stock markets since short sellers may add liquidity to the market and can contribute to price discovery. A large body of academic literature summarised below confirms that, on average, the presence of short sellers is beneficial for liquidity and price formation.

Amid the turmoil in financial markets as the banking crisis of 2008 intensified, however, the UK’s Financial Services Authority (FSA) took the step of banning short sales of the equities of a number of financial institutions. New provisions to the Code of Market Conduct were announced on Thursday 18th September 2008 effective 00:01am the following day. The provisions prohibited the creation or increase of net short positions, naked or covered, in publicly quoted financial companies and required daily disclosure (from 23rd September) of all net short positions in excess of 0.25 per cent of the ordinary share capital of the relevant companies, together with disclosure of net short positions held at close on 19th September. The ban included intraday trading and had a global reach such that shorting of UK financial shares outside of the UK was also banned. The ban extended to cover shorting through derivatives, contracts for differences and spread betting, but since only ordinary and preference shares were covered by the ban short positions in bonds and credit derivatives were still possible. Market makers were exempt. The announcement specified that the provisions would remain in force until 16th January 2009 but that they would be reviewed after 30 days.

Stocks in 32 financial firms were covered by the FSA’s ban at the time of announcement. The motivation for the new provisions banning short selling was clarified in a speech by Sir Callum McCarthy, Chairman of the FSA, on the evening of 18th September 2008.

“We have been much concerned – as have many – at the volatility and what I would describe as incoherence in the trading of equities, particularly for financial institutions. There is a danger in a trading system which allows financial institutions to be targeted and subject to extreme short selling pressures, because

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1 The seller might have arranged to borrow the security from a third party for delivery to the buyer at settlement (a covered short) or may simply promise to deliver (a naked short).

2 Some stocks were added to the list after the initial announcement and some companies were taken over during the period of the ban, unfortunately, too few to analyse separately.

3 Speech by Sir Callum McCarthy at the City Banquet, The Mansion House, London.
movements in equity prices can be translated into uncertainty in the minds of those who place deposits with those institutions with consequent financial stability issues. We have seen acute examples of this phenomenon in both London and New York this week."

His speech echoed the statement of his Chief Executive, Hector Sants, who earlier in the day had said: “While we still regard short selling as a legitimate investment technique in normal market conditions, the current extreme circumstances have given rise to disorderly markets.”

The statements from senior executives at the FSA make it clear that the ban on short sellers was in response to exceptional market events. Thus, to the extent that they were aware of it, regulators ignored existing academic research on short-selling in stable market conditions, almost all of which suggests that short-sellers have positive effects on market quality. As the regulatory response was predicated on short-sellers performing very different roles in stable versus turbulent markets, it seems worthwhile to analyse the quality of UK equity markets in Autumn 2009 and to evaluate the effects short-sellers might have had in those volatile times. We study how banning short sellers from operating in UK equity market in Autumn 2009 changed market quality (defined below). Other studies seek to do similar work on US and other markets and these are surveyed in Section 2.

The main innovation in our study is in the quality of the microstructural data we analyse.4 We have access to full order level data and signed transaction information on all stocks traded on the London Stock Exchange. From the order book data we can compute separate measures of buy and sell liquidity and, as the trade data sign every execution precisely, we can measure buy and sell volume, and thus net order flow. This allows us to go far beyond the study of prices, bid-ask spreads and volumes contained in prior work on emergency short sales bans (e.g. Beber and Pagano, 2009; Boehmer et al., 2009; Harris et al., 2009). For example, we can study whether financial stocks were subject to sustained and unusual selling pressure relative to other stocks. Further, given that the FSA’s policy intervention was explicitly designed to be asymmetric in its effects on traders, targeting short sellers but not long sellers or buyers, one might conjecture that it would affect trading and/or liquidity on the buy and sell sides of the market differently. Such asymmetries can only be detected using data such as that we employ.

We focus on the following measures of UK market quality around the time of the short sales ban:

- Trading activity: we measure volumes and, more interestingly, order flows (i.e. net aggressive buying pressure) in financial stocks versus non-financials.
- Liquidity: we examine spreads and the depth of the limit order book. We can analyse buy and sell side depth separately and thus evaluate whether the ban on short-sales had an asymmetric effect on liquidity.
- Efficiency: via the techniques introduced by Hashbrouck (1991) we calculate the proportion of variation in returns that is driven by information, as opposed to noise. This has been used as a measure of market efficiency by, for example, Hendershott and Moulton (2011).
- Price discovery: we evaluate the contribution of trades to the determination of the efficient market price, again using the Hashbrouck (1991) technology.

We use these measures to address two main issues: Can we identify the “disorderly” conditions that prevailed in the period prior to the ban’s introduction, and did the change in rules on short sales do anything to remedy the “incoherence” of stock markets at the time?

The answer to both of the questions above is “no”. We struggle to identify any factors that would justify regulatory intervention specifically to support financial sector stocks. While prices were falling and there was strong negative order flow (i.e. selling pressure) before the ban, this was true for both financial and matched non-financial stocks. Further, efficiency and the role of trading in price discovery declined pre-ban by roughly the same amount for financials and non-financials. It is therefore not clear to us why the FSA felt it needed to intervene specifically to change the nature of trading in the equities of financial sector stocks. Any disorderly conditions appear to have been market-wide and not concentrated in financials.

While we find few differences between the behaviour of financials and non-financials before the ban, once the ban was enacted differences become very apparent: liquidity drained from the order book for financials to a much larger extent than for non-financials; transactions costs for small and large trades increased much more dramatically and trading volumes fell much more dramatically for financials than non-financials.5 Finally, during the ban, efficiency and the information content of trading deteriorated much more for financials than non-financials. None of these moves would appear to be in line with the objectives of regulators.

Furthermore, we find no evidence that restrictions on one set of participants – short sellers – had asymmetric effects on the market. Liquidity drained more-or-less equally from both the bid and offer-sides of the order book, and while volume fell, aggressive sells and aggressive buys fell by similar amounts, leaving order flow unchanged (and thus still negative). If by removing short sellers the FSA had hoped to make buying financial stocks cheaper or more attractive their move failed. Trading in financial stocks, whether to buy or to sell, became much more expensive and less attractive. Finally, we also show that the ban resulted in a shift of trading off the limit order book towards darker bilateral trading between dealers. Again, it is unlikely that the FSA wished to shift the supply of liquidity towards less transparent segments of the market as this would likely contribute to the reduced efficiency and slower rates of price discovery that was observed for financials.

One additional benefit of our study is that we can take advantage of the relatively long-lived FSA ban on short selling. Studies of the effect of the SEC’s short sales ban are complicated by its very short duration and the multitude of other policy initiatives and news that were emerging at the same time. For example the announcement and introduction of the Troubled Asset Relief Program (TARP) were contemporaneous with the introduction and removal of the US ban respectively. We show that the detrimental effects on liquidity and market quality were stable and held persistently throughout the relatively long-lasting UK ban on short selling, but largely disappeared once it was lifted. The sharp improvements in liquidity and efficiency coinciding with lifting of the ban strongly suggest that the FSA’s ban on short selling was to blame rather than other market developments.

5 Research based on bid ask spreads at the top of the order book tell a limited albeit consistent story. Spreads for control group stocks during the ban were 79% higher than during the pre-crisis period while spreads for financials rose by 173%. The cost of executing a market sell order for 0.25% of the average daily volume of control group stocks rose by 137% while the cost for financial stocks jumped by over 600%. While spreads suggest that liquidity was generally lower during the ban and especially so for financials, our calculations of the costs of trading realistic numbers of shares show just how little liquidity was present for financial stocks during the ban.


4 Clifton and Michayluk (2010) examine the UK’s ban using similar data to ours. Their paper confirms several key order book developments that we note but it does not analyse the justification of the FSA’s move by considering developments in the pre-ban period. Further, it does not discuss the evolution of market efficiency and focuses instead on liquidity.
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