

IS THERE GOOD NEWS IN SHORT INTEREST? SOME INTERNATIONAL EVIDENCE.

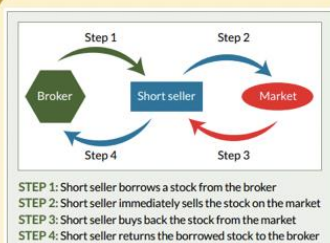
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ABSTRACT

Is there good news in short interest? Some international evidence, is a PhD situated in the field of finance looking to investigate short interest, market returns and the characteristics of short sellers. Short interest is characterized as the number of shares sold short of a stock still currently open in the market. This PhD hopes to answer the following questions:

- (1) In adjusting for risk, Boehmer et al. (2010) uses the Fama and French (1993) three-factor model augmented by the momentum factor. However, is there good news to short interest if a different and more recent model, such as Fama and French (2015) five-factor model, is used to adjust for risk premium?
- (2) After the publication of Boehmer et al. (2010), does the opportunity for excess returns remain, or have investors adopted this strategy and arbitrated away the excess returns?
- (3) Is there good news in short interest if the strategy is applied to other countries, e.g., 34 OECD countries?
- (4) Whether and to what extent short sales affect liquidity, price discovery, volatility and cross-section of stock returns?

THEORETICAL APPROACH



Fama French Regression Analysis

Question 1 to Question 3 of our research was answered using a Fama and French Regression Analysis. We constructed portfolios of heavily and lightly shorted stocks based on the short interest ratio on the previous month. We ran a regression analysis on our datasets using our respective models for each of these portfolios. We then observed the Fama and French factor weights for equal weighted portfolios and observe what drives the returns for these portfolios and whether any excess return remains.

EGARCH Model, Bid-Ask Spread Model and Runs Test

For Question 4, An EGARCH (1.1) was employed to see the relationship between short selling and volatility. A Bid-Ask Spread Model from Lobanova et al. (2010) was used to see the effects of short selling on liquidity. The Bid-Ask Spread is often one of the best indicators of liquidity and a model generating that is ideal. A Runs Test was used to see the effect of short selling on price discovery, as fat tail run distributions are indicative of short selling effecting returns.



NOVELTY OF THIS PHD

The novelty of this PhD is firstly the model employed to answer our first research question. Boehmer et al. (2010) uses the Fama French Three Factor Model with Momentum to test for Risk Premium. We use the Fama French Five Factor Model to test this instead. We need to see if the findings of Boehmer et al. (2010) are consistent with our model which seems to predict fair returns better. We also employ newer data sets in our second research questions while testing an arbitrage opportunity of Boehmer et al. (2010). We will also be the first to test across international datasets in our third research question as the focus of finance is usually centered around the United States. We will also be providing further data in the debate of whether short sales affect liquidity, volatility, price discovery and cross section of stock returns.

THE PROBLEM

The problem of this PhD is to firstly investigate whether the findings of Boehmer et al. (2010) are robust to model specification, across different countries and investment horizons. We will also look at whether the techniques of Boehmer et al. (2010) have been arbitrated away or whether excess return remains in the market. If it is shown that excess returns still remain in this strategy, this can be very valuable to investment funds as a risk adjusted way of gaining excess returns than what is deserved by the level of risk taken by the market participants.

Another problem is to see whether short sellers affect volatility, liquidity, price discovery and cross section of stock returns. A lot of research has been conducted on this, but this allows us to see what strategies central banks should take in regard to the stock market to stabilize the financial system.

GOING FORWARD

Going forward we will be working on the final part of Question 4 regarding the Runs Test and Price Discovery. We will also be disseminating research in the form of external PhD conferences and internal seminars at the University of Greenwich. Preparation for the viva will also be taking place.

REFERENCES

- Boehmer et al. (2010). The Good News in Short Interest. Journal of Financial Economics.
Fama and French (1993). Common Risk Factors in Returns on Stocks and Bonds. Journal of Financial Economics.
Fama and French (2015). A Five Factor Asset Pricing Model. Journal of Financial Economics.

RESULTS SO FAR

Regarding research question 1, we find that the most heavily shorted stocks underperform lightly shorted stocks. The Fama and French Five Factor model holds a higher positive alpha on both lightly shorted portfolios compared to their heavily shorted counterparts. The intercepts on the lightly shorted portfolios being 0.025 and 0.019 for the SIR 5% and SIR 10% portfolios respectively compared to the intercepts of 0.013 and 0.010 for the SIR 95% and SIR 90% portfolios respectively. Both lightly shorted portfolios hold a much higher raw return of 3.1% and 2.6% for the SIR 5% and SIR 10% portfolios respectively compared to 1.9% and 1.5% for the SIR 95% and SIR 90% portfolios respectively. There is good news in short interest with the Fama and French Five Factor Model, however we suggest going long the SIR 5% portfolio as no heavily shorted portfolio holds a negative raw or excess return.

Regarding research question 2, we find that the most heavily shorted stocks underperform the most lightly shorted stocks by 0.9% a month on a raw return basis, this is consistent across our findings, with the underperformance of heavily shorted stocks. The original strategy by Boehmer et al. (2010) was to go long the top percentile portfolio and go short the bottom percentile portfolio. We find that our SIR 95% portfolio yields a positive average return of 1.7% a month, therefore it is not advisable to have a short component in your strategy. Our findings suggest that it is best to go long the SIR 5% portfolio, as this provides the best raw return and risk adjusted alpha out of all the portfolios.

Regarding research question 3, our results indicate again that heavily shorted stocks underperform lightly shorted stocks. We find that the most heavily shorted stocks underperform the most lightly shorted stocks by 1.5% a month on a raw return basis. This is consistent with our findings in research question 2 and consistent with the previous literature as a whole. However again we find that our SIR 95% portfolio yields a positive raw return of 1% a month on average, this indicates that it is not viable to have a strategy that includes a short component. We again suggest the best strategy is to go long the least shorted stocks and therefore go long the SIR 5% portfolio.

Regarding research question 4, we find that volatility is not affected during the short sale ban, this in turn questions the significance of short sale bans like many other studies before ours have done. We employ a Bid-Ask Spread model to explore the effects of short selling on liquidity. The Bid-Ask Spread model shows good fit regression wise. We find that liquidity deteriorates during the short sale ban period.