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Pairs trading in the UK equity market: risk and return

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Keywords: pairs trading statistical arbitrage hedge funds asset allocation

Notes

1. For example, Chordia, Sarkar, and Subrahmanyam (2011) model the effect of liquidity on the cross-autocorrelation of stocks.

2. Gatev, Goetzmann, and Rouwenhorst (2006) argue that where a trade is triggered when the price of the long position at the opening of a trade is the bid price and the short position is the ask price, and the next day prices are equally likely to be at bid or ask, then delaying trades by one day will reduce the excess returns on average by half the sum of the spread of the long and short positions. Likewise, at convergence if the short is trading at bid, and the long is trading at ask, then delaying the closing by one day should lower the excess returns on average by half the sum of the spread of winner and loser. By waiting one day in opening and closing pairs, it should effectively reduce the excess returns by one round trip transaction cost.

3. In addition to bid-ask spreads, investors will incur stamp duty, commission charges and charges for borrowing stock. Due to data unavailability we do not model these direct transaction costs, but we caution the reader that incorporating these costs will lower re

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5. Pr … market make … lly for FTSE100 … n trading on SETS on … tem supporte … stocks. Our subsamp … ple.

6. Hende … ated trading system on the NYSE in 2003 with a large effect on the liquidity.

7. Examining the long and short portfolios reveals that approximately 70% and 42% of the monthly returns are positive, respectively, but the short portfolio reduces systematic risk in negative market return months. For example, in October 1987, there is a negative return of −12.5% for the long portfolio; however, it is accompanied by a short portfolio return of +23.1%. By investing in a hedged portfolio, investors are protected from large equity market shocks, which are unavoidable with either the long or short portfolio in isolation.

8. For the sake of brevity, we concentrate our discussion on the more conservative Committed Capital portfolios.

9. Khandani and Lo (2011) present evidence of the effect of the financial crisis on the returns of EMN funds in the USA.

10. We are grateful to Alan Gregory for providing the UK Fama and French factors.

11. Related evidence by Petkova (2006) shows that having incorporated innovations in four macroeconomic predictive variables alongside the Fama and French (1993) factors computed from a vector autoregression (VAR) process, the SMB and HML factors lose explanatory power. However, subsequent research has cast doubt over the ability of macroeconomic state variables to predict returns (Lewellen, Nagel, and Shanken 2010) and highlights the limitations in the methodologies used to create orthogonal factors, which re [illegible] (Lioui and Poncet 2 [illegible]

12. We t [illegible] idity variable [illegible] uidity variables [illegible] s the portfolio [illegible] ly noisy and have [illegible]

13. In [illegible] neasure of abnorma [illegible] de variables must be [illegible] the non-tradable [illegible] spreads in the left- [illegible]

14. Whil [illegible] of pairs trading portfolios formed using daily data, we are also interested in how these results

relate to trading at higher frequencies and whether there is a high correlation between an identical strategy being pursued at different frequencies. Using data from Bowen, Hutchinson, and O'Sullivan (2010), we provide a comparison between pairs trading at different frequencies for a one-year subset of the database. Results, available from the authors on request, show that the returns of the portfolios, estimated using hourly and daily data, are not correlated and provide very different return characteristics.

15. We thank the anonymous reviewer for highlighting this point.

Additional information

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