Institutional Investor

Keep a Weather Eye on Stock Liquidity, Study Says

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A new academic study has identified a means of predicting individual stock performance based on liquidity and developed an investment strategy surrounding it. Call it liquidity-shock arbitrage.

The findings are based on the fact that current stock prices do not fully capture likely changes in liquidity if market conditions change abruptly, despite or because of the availability of so much information. And the study by Turan Bali at Georgetown University, Lin Peng and Yannan Shen at Baruch College, and Yi Tang at Fordham University says portfolio strategies that exploit this oversight can generate excess investment returns.

In their report, entitled “Liquidity Shocks and Stock Market Reactions,” the authors compute ‘illiquidity’ ratios as daily absolute returns divided by dollar trading volume for the day. The authors split the stock universe into stocks that experience increases in liquidity in the wake of shocks and others with decreases in liquidity. A stock is liquid if its prices can withstand lots of upheaval without significant price change. Conversely, illiquid stocks move sharply in price on low trading volume. The study’s data, from the Center for Research in Security Prices, span five decades.

Consider two stocks, says Bali, Dean’s Research Professor of Finance at the McDonough School of Business at Georgetown. If stock A experiences an increase in liquidity in, say, April, while Stock B experiences a decrease in liquidity, then stock A is likely to outperform Stock B in May. To implement the strategy, portfolio managers would determine which stocks to short sell and which stocks to buy based on April activity and then hold on to that long-short portfolio for a month. At the end of May, investors should see a positive return.

The pattern sounds a lot like flight to quality, when anxious investors exchange illiquid stocks for more liquid stocks. But results that favor liquidity at specific companies apply to all periods including busts and boom. “Our results cannot be explained by flight to quality. In fact, they suggest that there is not enough flight to quality as the illiquid assets are not being sold enough,” Bali says. Still, he notes, “they provide supporting evidence for investors’ motive to move to more liquid assets, especially during financial crisis periods.”

Investors who short sell stocks that have recently become more illiquid and use proceeds to go long on stocks that have recently become more liquid can reap more than 1 percent a month in average risk-adjusted return, the study reports. The mirror strategy, shorting stocks apt to increase post-shock liquidity and buying stocks apt to become less liquid in the wake of market disharmony surrenders an equal amount, a hefty average swing per month between the best and worse outcomes.

Smaller, less-followed stocks see the biggest impact. But properly executed liquidity-shock arbitrage should add 50 basis points per month to risk adjusted returns in the largest cap sector. And these inefficiencies can create significant excess cumulative returns for up to a year.

The authors devote part of their paper to challenging their results with extensive back testing. They pose alternative measures of liquidity shock, screening for stock price, stock exchange and listing status, subsample analysis including expansionary and recessionary periods, and seeing if investors try to time the market when they anticipate periods of illiquidity. But whatever shocks they impose, their evidence supports the merits of a strategy employing liquidity-shock arbitrage.