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INVESTMENT STRATEGY: LIQUIDITY AND BUYBACK

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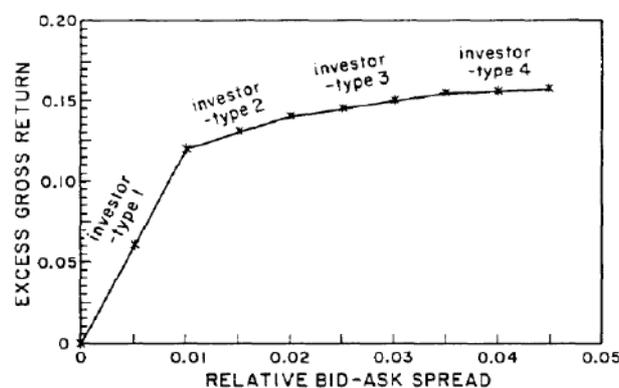
HOW TO MAXIMIZE RETURNS IN THE VIEW OF LIQUIDITY

The impact of liquidity on asset pricing and excess returns has been the subject of many studies during the last decades. Among the most important papers there are two that stand out: “Asset Pricing and Bid-Ask Spread” by Amihud and Mendelson in 1986 and “Liquidity Risk and Expected Stock Returns” by Pàstor and Stambaugh in 2001.

Amihud and Mendelson define liquidity (or lack thereof) as the cost of immediate execution of a trade, which translates into the quoted bid and ask prices of a given security. These prices include the premiums faced by investors for the instant purchase or sale of a traded asset, with market makers profiting from the difference between the price at which they are willing to sell (ask) and the one at which they are willing to buy (bid).

Illiquidity can then be measured by the spread between these two measures, as securities with higher spreads are more difficult to trade, indicating fewer market makers and lower volume.

The paper claims that illiquid assets (higher spread) offer higher expected excess returns compared to liquid ones, and that investors with longer holding periods tend to invest in assets with higher spreads. These findings show how securities returns are an increasing and concave function of the bid-ask difference, since trading costs are amortized over the life of the investment.



Furthermore, the authors suggest that the returns required by high spread stocks incentivize firms to enact liquidity-increasing policies, which decrease

the cost of capital, finally resulting in a higher value of the company.

Pàstor and Stambaugh expand the three-factor Fama and French model by introducing the illiquidity risk factor, after observing how the liquidity premium is not constant over time. They find that stocks with high sensitivity to liquidity conditions in the market outperform those with low sensitivity. Although not directly supporting Amihud and Mendelson’s conclusions, this paper can be referenced to justify the introduction of a liquidity measure in a portfolio composition.

In order to be included in a factor investing strategy, a liquidity factor can be built by computing the historical average bid-ask spread for each security and dividing it by its closing price at the end of the time-period considered for the historical sample. This one should be limited maximum to one year prior the factor score’s computation date, according to our view, making more realistic the hypothesis that recent past returns represent a proxy for future returns and, at the same time, eliminating some short-term macro biases from the returns of the sample. In a long-short investing view, higher values of this liquidity ratio could be considered as “buy signals” while low values as “sell signals”.

HOW STOCK MARKETS VIEW BUYBACKS

One of the main issues in firm management is the value distribution to its shareholders. While dividends are the most common solution to this problem, the DPS is said to be sticky and does not allow flexibility in the cash flow management. Rarely the DPS is decreased by companies as this might be seen as a negative signal by the market. That means that once the dividend per share is raised it is difficult for the firm to bring it back to a sustainable level.

Stock buyback, on the other hand, consists in the firm’s repurchase of its own stocks in the marketplace using its own level of cash. The repurchased shares are absorbed by the firm and the number of shares outstanding is therefore reduced.



However, value distribution to the firm's shareholders is not the only reason behind a stock buyback because, following this process, the company re-invests in itself. Thus, for a healthy operation, it is necessary for the firm to have a significant amount of cash and to evaluate the shares as underpriced. With a reduction in the equity amount, all the ratios go up leading to short-term benefits for shareholders: trivially, ROE and ROA rises after a buyback. Quite often one correlated reason behind such operations is to reduce the earnings dilution: with the same amount of earnings the less the number of shares the higher is the EPS and the better the short-term effects for the management and shareholders.

Nevertheless, it is difficult to evaluate 'a priori' if a stock buyback announcement would lead to an overall rise in the stock price. Several papers lead to the same conclusion: this operation does not have a unilateral effect on share prices. What can be interesting, though, is the market approach towards the buyback practice. Under the reasonable hypothesis that the effect of the operation can be valued only in the medium/long term, until few years ago the market (especially the US one, where buyback are particularly frequent) tended to trust repurchase programs. Stock price was in general affected positively in the short-term, to adjust, if necessary, in the long. However, now that buyback programs are frequent and used in a leverage-repurchase point of view, the market tends to see more negatively this kind of shareholders remuneration in the short-term. Empirical evidences highlight that stock-based compensation creates incentives for managers to focus on increasing shareholder value by repurchasing shares at the cost of declining real investment and long-run growth. For example, in the Enrico Maria Turco's paper "Are stock buybacks crowding out real investment? Empirical evidence from U.S. firms" 2018, these effects find an empirical proof.

In order to include such market view about buybacks in a factor investing strategy, it is possible to build a buyback factor by dividing historical records of buyback amounts for each firm with the firm's free float (to better capture the real effect on the capitalization). two years (before the inception date)

record of buyback amounts, for each firm, are taken into consideration. This obviously represents a negative factor which does not affect the dividend-based companies. Therefore, the higher the relative buyback amount the lower the score.

By introducing this factor to Minerva Multi-factor portfolio and backtesting the results, its performance proved to be 2.3 times higher the performance without the buyback factor in the past two years, thus demonstrating the validity of our analysis in the recent market scenario.

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