EMOTIONS AND MISPRICING IN THE STOCK MARKET

In finance, when it comes to examine valuation of stocks in the market, investors should make decisions based on Discounted Cashflow analyses and theoretically the market must reflect economic fundamentals. However, while people always expect the market to be efficient, sometimes it clearly isn't as emotions actually drive stock market value and create mispricing.

Mispricing happens under following conditions:

1. Irrational behaviors: information is not processed correctly by investors. For example, investors don't look at the whole picture but rely mainly on recent events while assessing the stock.
2. Irrational behavior emerges among investors: a large group of investors acting in the same irrational way can affect the market and price deviations occur.
3. Limits to arbitrage: arbitrage in general happens due to market inefficiency and actually it helps the market come back to its economically stable state. However, arbitrage opportunities are not always possible because of noise trader risk. When barriers that prevent investors to exploit the price difference occur, the mispricing persists for longer time.

To explain the arbitrage further, let's take a simple example of short selling. Assume an investor believes shares of company X are priced at $50/share but they are traded in the market at the price of $100/share. The investor expects the price would go down so he decides to sell short 10,000 shares with the total value of $1mil. If the price in fact drops to $50, he then earns $500,000. However, in order to be able to do such transaction, he has to borrow $10,000 shares from the bank to set out the short position. Banks do not lend the shares for nothing. Suppose in this case they require a $1mil-worth deposit of government bonds. It would be great if the shares immediately down to $50 from the $100 point. But if the share price soars up to $200 before declining to the anticipated value ($50), the bank will ask for another $1mil for deposit. In such bad case, the investor loses $1mil instead of gaining $500,000 even though his anticipation is correct.

<u>Types of Mispricing:</u>

1. **<u>Carve-outs and Dual listings:</u>**

   1.1 Carve-outs – The case of 3Com and Palm:

   On March 2nd, 2000, 3Com performed an equity carve-out by selling 5% of its stake to the public through an IPO for Palm then planned to make a full spin-off in which 3Com's shareholder would receive 1.5 Palm share for each 3Com share that they owned. It was expected that the 3Com's price would be above 1.5 times that of Palm.

   However, immediately after the 5% carve-out, Palm's price soared up and exceeded the entire market value of its parent company, implying that 3Com's other businesses had negative values which was impossible.

   The problem is investors cannot take short position in Palm's share as at that time 3Com still held 95%. When there wasn't enough shares for going short, the mispricing persisted for months until the spin-off completed.

1.2 Dual listings – Royal Dutch Petroleum and Shell T&T:

Royal Dutch Petroleum and Shell Transport & Trading were traded separately in two different stock markets (Amsterdam and London) before they formed a single group in 2005. These twin shares were entitled to a fixed portion 60:40 and were expected to be priced at that ratio as well. For some reasons, investors preferred one over the other but they didn't exploit the opportunity by going short for overpriced and long for underpriced. This can be explained by noise trader risk. As the investors aren't sure whether the price would decrease in near term, they don't want to take such risky strategy. Therefore, the price gap becomes wider.

2. Overreaction and Underreaction:

- Overreaction causes mispricing when investors assess the stock based on its recent performance only. In the case of IPO and season offerings, the stock price usually gets higher than its actual value. Also, if the company continuously performs well, the investors assume it would have a bright future and push up price too much. When the company fails to meet its investors' expectation, the situation gets reversed. A winning stock in the past becomes a low-performing stock in the future.
- Underreaction comes from conservative investors who react slowly to new information. They underestimate some situations, for example earning changes, repurchasing…

These mispricing phenomena may occur under very special conditions and causes market inefficiency only in short term. As they are not yet explained by behavioral finance and predicted easily by identified patterns, rational investors should make their decisions based DCF analyses and efficient market assumptions.

References:

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