CHAPTER 2

Contrarian/Momentum Strategy and Different Segments across Indian Stock Market

2.1 Introduction

Long-term reversal behavior and short-term momentum behavior in stock price are two of the most noticeable and controversial anomalies. Some of behavioral models like Barberis, Shleifer and Vishny (1998, BSV); Daniel, Hirshleifer and Subrahmanyam (1998, DHS) and Hong and Stein (1999) attempted to explain these two phenomena in terms of investors’ psychological biases. That is, they are part of new branch of theoretical finance referred to as behavioral finance.

In critique of behavioral finance, Fama (1998) argues that these models do well on anomalies that they are designed to explain but fail to explain other anomalies. He argues that, as a scientific rule, new models should have new coherently rejectable predictions for evaluating their effectiveness. Here is tried to support the same with the help of empirical results.

The BSV model predicts that overreaction will begin to be corrected immediately after investors overreact to a sequence of news that affects a firm’s value in the same direction. This correction process begins immediately because investors correctly (but slowly) adjust their biased expectations in response to new information. Thus, overreaction defined by the BSV model also explains the short-term profitability of the original contrarian strategy, that is, of longing long-term past losers and shorting long-term past winners.

On the other hand, the models of DHS and DeLong et al. (1990, DSSW) predict that overreaction will continue, at least in the short-term, because of either investors’ biased self-attribution or momentum trading. This continuing overreaction precludes the short-term profitability of the original strategy. Such overreaction will turn out to be reversed in the long
term as subsequent information about the fair value of the firm emerges. Thus, both of these models predict that the original contrarian strategy loses money in the short-term but earns money in the long-term.

There are many strategies available in market within contrarian and momentum strategies. For example: Simple contrarian strategy involves taking long position on short-term losers and short position on short-term winners; First overreaction-hypothesis, which talk about short short-term losers and long short-term winners; Second overreaction-hypothesis, which says short long-term loser to long long-term winners etc…

However, different researcher reported different reversal point form where contrarian profit starts working in different markets. These strategies are helps to generate abnormal returns based on past pattern of stock return behavior. Different asset pricing models are used for prediction of expected returns on stock based on past price behavior. Where expected returns tried to capture risk associated with investment and base on that risk estimation returns are calculated. For example in Capital Asset Pricing Model beta tried to capture risk and that of expected returns.

In present study possibility of contrarian and momentum profits are identified with the help of Indian Stock Market listed companies on National Stock Exchange (NSE). And if contrarian profit present then we may also tried to extend study for finding out reversal point for the profitability of contrarian profits.

2.2 Defining Different Segments

Different model of asset pricing models tried to capture risk associated with investment in particular underlying. However, none of the model provides accurate expected price of asset. Model only gives approximation of expected price and in real situation residual may considered as error part in the model itself. These error may reduced by newer and newer model, which may approach to real or practical situation in real life. Now, when researcher tried to reduce error they have to identify new variable which introduce some component of risk and not capture by earlier model. These new variable gives base for segmentation of asset.
For example in CAPM beta is capturing risk of asset to find out expected returns. But in real situation there is residual part of return exists (difference between actual return and expected return based on model) which is called as abnormal returns. These abnormal returns leads to identify different variable, those are book value of equity (BE), market value of equity (ME), book to market value (BE/ME), EPS pattern, E/P, seasonal effects, capital gain tax effect, news of specific economy, industry or company effects etc… The most prominent contradiction to such pricing model was the size effect of Banz (1981).

Now, these new variables (size) may used to identify segments and base on individual analysis researcher starts to understand applicability model within different segments. Here, in this case Industry may be one of variables, which classified level of risk across different categorical securities. Another variable may be Size / Market Equity (ME) based on that different stock can be categorized as large capitalized stocks, middle capitalized stocks and small capitalized stocks.

### 2.3 Industry-wise Segmentation

Defining Industry itself is considered as quite difficult task. As industry may be defined based on product and services offered by company or may be based on characteristic of business and according to business cycle within which company lies. However, Standard Industrial Classification (SIC) divided industry within 11 divisions as shown in Table 2.3.1

<table>
<thead>
<tr>
<th>Industrial Division</th>
<th>Includes</th>
<th>Major Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Agriculture, Forestry, and Fishing</td>
<td>01-09</td>
</tr>
<tr>
<td>B</td>
<td>Mining</td>
<td>10-14</td>
</tr>
<tr>
<td>C</td>
<td>Construction</td>
<td>15-19</td>
</tr>
<tr>
<td>D</td>
<td>Manufacturing</td>
<td>20-39</td>
</tr>
<tr>
<td>E</td>
<td>Transportation, Communication, Electric, Gas and Sanitary Services</td>
<td>40-49</td>
</tr>
<tr>
<td>F</td>
<td>Wholesale Trade, Durable Goods</td>
<td>50-51</td>
</tr>
<tr>
<td>G</td>
<td>Retail Trade</td>
<td>52-59</td>
</tr>
<tr>
<td>H</td>
<td>Finance, Insurance and Real Estate</td>
<td>60-69</td>
</tr>
<tr>
<td>I</td>
<td>Service</td>
<td>70-89</td>
</tr>
<tr>
<td>J</td>
<td>Public Administration</td>
<td>90-98</td>
</tr>
<tr>
<td>K</td>
<td>Non-Classifiable Establishments</td>
<td>99</td>
</tr>
</tbody>
</table>

However, many research used industrial index for the reference of classification. For example in Indian one can use stocks of BANK NIFTY for the purpose of analysis of banking industry, CNX IT for the purpose of analysis of IT industry and so on. Many researchers have used word relative strength index in which they use different company of same industry for the comparison and use these same strategy of buying past losers and selling past winners within industry to generate excess returns.

For example, Addae-Dapaah and Peiying (2009) found presence of momentum/contrarian profits in REITs. And many more similar results are found. Basically, due to overreaction to company specific good/bad news some stocks are performing better/worse than the other in the same industry stocks. This leads to possible reversal in stock returns from better/worse to worse/better performance and creates abnormal returns. Similarly, there is possibility of segmentation of company based on their size as size also affects momentum of stock returns.

### 2.4 Size-wise Segmentation

One more variable, which affect the behavior of stock returns is size of company. Size may considered based on book value as well on market value. This market value of company is depending up on current market price. So, it changes through the time and make possibility that company may change its category as time pass. In general, stocks are classified in four categories based on their market capitalization as large capitalized (LargeCap) stocks, middle capitalized (MidCap) stocks, small capitalized (SmallCap) stocks and Neno/penny stocks (NenoCap) based on their market capitalization. Market capitalization is nothing but the value of the outstanding shares of a company in the stock market. The number is derived by multiplying the number of outstanding stocks of a company with the price of a share. Or simply:

\[
\text{Market Capitalization} = \text{Market Price of the stock} \times \text{Number of the stock's outstanding* shares}
\]

The company's capitalization is an effective parameter to group corporate stocks. In the US, mid-cap shares are those stocks that have a market capitalization ranging from Rs 9,000 crore to Rs 45,000 crore (www.nyse.com). In India, these shares would be classified as
large-cap shares. Thus, classification of shares into large-cap, mid-cap, small-cap is made on the basis of the relative size of the market in that particular country. The total market capitalization of US markets is approx $15 trillion in year 2010. In India, the market capitalization of listed companies on National Stock Exchange is around Rs.6574743.20 crore as on June 30, 2011 (www.nseindia.com). Thus, term large capital, middle capital and small capital are relative terms and classification based on size, which change country to country. In India classification of the stocks that are done based on various criteria same as our previous discussion. Market capitalization of the company is one such metrics on which stocks are classified in a Indian market.

The large Cap Stocks of the largest companies (many being blue chip firms) in the market such as Tata, Reliance, ICICI, ICICI Bank, TCS, HDFC, HDFC Bank etc… are classified as large-cap stocks. Market capitalization of large cap stocks should be greater than Rs.4000 crore which indicates power of firm to be efficient in market. Being established enterprises, they have at their disposal large reserves of cash to exploit new business opportunities. The sheer volume of large-cap stocks does not let them grow as rapidly as smaller capitalized companies and the smaller stocks tend to outperform them over time. Investors, however gain the advantages of reaping relatively higher dividends compared to small- and mid-cap stocks while also ensuring the long-term preservation of their capital.

Mid-cap stocks are typically stocks of medium-sized companies. These are stocks of well-known companies, recognized as seasoned players in the market. They offer you the twin advantages of acquiring stocks with good growth potential as well as the stability of a larger company. Companies that have a market Capitalization in the range of Rs.250 crore to Rs.4000 crore are mid cap stocks. Mid-cap stocks also include baby blue chips; companies that show steady growth backed by a good track record. They are like blue-chip stocks (which are large-cap stocks) but lack their size. These stocks tend to grow well over the long term.

Small Cap stocks of small companies that have the potential to grow rapidly are classified as small-cap stocks. These stocks are the best option for an investor who wishes to generate
significant gains in the long run; as long he does not require current dividends and can withstand price volatility. Companies that have a market Capitalization in the range of Rs.50 crore to Rs.250 crore are small cap stocks. As many of these companies are relatively new, it is difficult to predict how they will perform in the market. Being small enterprises, growth spurts dramatically affect their values and revenues, sending prices soaring. On the other hand, the stocks of these companies tend to be volatile and may decline dramatically.

Most Initial Public Offerings are for small-cap companies, although these days large companies do tend to source the capital markets for expansion plans. Aggressive mutual funds are also enthusiastic about adding small-cap stocks in their portfolios. Because they have the advantage of being highly growth oriented, small-cap stocks can forego paying dividends to investors, which enables the profits earned to be reinvested for future growth.

Nano Cap stocks are generally of those small public companies, with market capitalization of less than Rs.50 crore is said to be Nano Cap stocks. These stocks are also known as penny stocks when price of such Nano Cap stocks are less than Rs.1. Defiantly, these type of stocks never shown efficiency in terms of liquidity and trading volume. And that may be reason why none of the study tried to cover such stocks, which may be easily manipulated in market.

2.5 Robustness of Contrarian/Momentum Strategies and Important of Segmentation Based on Size

Black (1993), Mackinlay (1995) argues that Capital Asset Pricing Model anomalies may be the results of data snooping. Many researchers are devoted to dredging for anomalies. Within the same data, they can find patterns in average returns, such as the size or book to market effect, which is inconsistent with the Capital Asset Pricing Model, but is sample specific. The data snooping hypothesis predicts that in out of sample tests, a contrarian strategy or a momentum strategy should not earn abnormal returns.

Several tests on international data, regarded as out of sample tests, show that contrarian and momentum effects exist. However, there are at least two reasons for questioning robustness.
First, Fama and French (1996) point out that the short-term momentum phenomenon is weak in the pre-1963 period. Jegadeesh and Titman (1993) and Conrad and Kaul (1998) also provide evidence that short-term momentum does not exist in the pre-1940 period. Further, all empirical studies using international data cover only the post-1980 test period. Hence, short-term momentum may be sample specific. Second, the momentum phenomenon appears to contradict the bulk of important observed anomalies, including reversal of long-term past returns, BE/ME, C/P and E/P. This uniqueness raises a flag of concern for data snooping.

Here is try to tests the robustness of the profitability of contrarian/momentum strategies with respect to size anomaly. Size is one of the important variables which may affect on time span for the applicability of short-term momentum continuity and long-term contrarian profits. Thus, based on size segmentation of different stocks are done in Indian stock market for listed companies and than analyze for possible contrarian/momentum profits.

2.6 Conclusion

Based on market capitalization Indian companies can be classified in LargeCap, SmallCap and MidCap companies. With the different market size there may be possible difference in result related to contrarian/momentum phenomenon. However, many study already tried to understand size effect on stock returns. This study is trying to understanding of efficient market hypothesis / overreaction hypothesis with special focus on size affects on contrarian/momentum abnormal profits in case of inefficient market existence.
2.7 References


