Company Characteristics and Common Stock Returns: The Indian Experience

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Abstract

The paper examines the relationship between selected company characteristics and common stock returns. The empirical results suggest using both market-based as well as non market based measures of company size that there is a strong size effect in the Indian stock market. We also detect a weak value effect in stock returns, especially when E/P ratio is employed as a relative distress proxy. The study further finds that the present stock classification system in India fails to differentiate in returns on different categories of stocks. We recommend an alternative stock classification system based on company size and relative distress. The proposed classification procedure will provide better insights to investors about the risk-return characteristics of common stocks.

1. Introduction

The capital asset pricing model developed by Sharpe (1964), Lintner (1965) and Black (1972) has for long shaped the way academics and investment managers understand the relationship between average return and risk. However, there is growing empirical evidence which demonstrates the inability of market factor in fully explaining security prices, as suggested by CAPM. As a consequence, a body of research has evolved the attempts to identify company characteristics which explain differences in common stock returns, once the market factor has been controlled. Amongst these firm attributes the most prominent ones are: size (Banz (1981), Cook and Roseff (1982)), leverage (Bhandari (1988)), book equity to market equity (BE/ME) ratio (Stattman (1980), Rosenberg, Reid and Lanstein (1985), Chan Hammao and Lakonishok (1991)), and E/P ratio (Basu (1983)). Fama and French (1992) study the joint role of beta, size, leverage, BE/ME and EP in the cross-section of average stock returns. They find that firm size and BE/ME tend to absorb the apparent roles of leverage and E/P in average stock returns.

The empirically negative relationship between company size and return and a positive relationship between BE/ME and return encouraged Fama and French (1993) to propose a three-factor asset pricing model comprising of the market, size and BE/ME (or value) factors, that competes with one-factor CAPM to explain cross-section of average stock returns.

In contemporary finance literature company size has been typically measured in terms of market capitalization (price times number of shares outstanding). Berk (1995) however argues that size or firm's market value are endogenously determined in equilibrium as the discounted value of expected future cash flow, it depends on the discount rate. Consequently, according to this view expected returns will always be negatively correlated with firm market value, cetrisperibus. Berk (1996) demonstrates that while expected negative relationship between market capitalization and return does persist for US data, similar hypothetical relationship is missing when such non-market based measures of company size as total assets, fixed assets and number of employees are used.

The book equity to market equity (BE/ME) ratio on the other hand, has been used as another measure of stock characterization. For instance, high BE/ME implies value stock i.e, companies which may have been poor performers in the past while low BE/ME characterises growth stocks that are supposed to have done well historically. Ball (1978) argues that scaled price variables such BE/ME, E/P and C/P (cash flow to price) categorize stocks and are hence overlapping. Thus, high E/P and C/P (like high BE/ME) implies a weak firm and vice versa.

In this paper, we evaluate if there is any significant size effect and value (or relative distress effect) for the Indian stock market and whether investment strategies based on these effects

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can provide extra-normal returns. We also verify if the size-return relationship is real or tautological by using both market and non-market based measures of company size. The study also examines the robustness of value effect by using alternative measures of relative distress, including a fundamental based measure. We also shed light on the stock classification system in India and its implications for stock returns.

We find the presence of strong size effect and weak distressed firm effect in stock returns and that the investment strategies based on them, particularly the former, are highly economically feasible. The study also reveals that the present stock classification system fails to differentiate between returns on different categories of stocks thus ruling out the presence of any significant stock classification effect.

The study consists of seven sections including the present one. The rest of the paper is organized as follows. Section 2 provides definitions of company characteristics used in the study. The testable hypotheses are contained in Section 3. Section 4 describes data and their sources. The methodological issues are discussed in Section 5. Section 6 provides the empirical results. Section 7 contains summary and concluding remarks.

2. Definitions

In this section, we define the size effect, value effect and stock classification effect, the prominent company characteristics that are expected to cause differences in common stock returns.

2.1. The Size Effect

Size effect (also termed as small firm effect) is the relationship between company size and common stock return. It implies that small firm stock should significantly outperform stocks of big firms. Size effect can mainly be attributed to the following[1]: (1) small firms are relatively ignored by investors; (2) they are less researched upon; (3) they exhibit less liquidity and hence their betas are generally under-estimated; (4) they have concentration of management ownership; (5) they do not have diversified operations, and (6) they have weak management, less committed customer base, high labour turnover, poor technology, etc.

As there are a variety of ways in which one can measure company size, we use the following alternatives:

a) **Market Capitalisation (MC)** – It is the market price of the company's share multiplied by number of shares outstanding. It is the most used measure of company size in investment management research (See Banz (1981), Fama-French (1992)).

b) **Total Asset (TA)** – It is the book value of total asset and it reflects the asset base needed to support business operations. It is valued on historical cost basis.

c) **Enterprise Value (EV)** – It has been approximated as the market value of equity plus book value of long-term debt. It is a hybrid measure as equity and debt components are valued at market value and book value respectively. Enterprise value is becoming increasingly popular in the light of the spurt in mergers and acquisitions in recent years as it shows the amount of funds required by a corporate raider to acquire a target company.

d) **Net Sales (NS)** – It is measured as the difference between gross sales and sales returns. It shows the level of business operations of a company.

2.2. The Value Effect

The value effect (also termed as distressed firm effect) implies a value premium as companies with relatively high distress (persistently low earnings record) tend to outperform companies which are relatively better performing (persistently high earnings record) (See Chan and Chen (1991)). While high BE/ME, high E/P and low past sales growth characterize weak firms; low BE/ME, low E/P and high past sales growth characterize strong firms. Alternative value measures used in the study are:

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[1] Refer to Banz (1981), Cook and Recoff (1982), Arbel Paul (1982), Reinganum (1982), Keim D.B. (1986), etc.

a) **BE/ME** – It is measured as the book value of equity divided by the market value of equity. It has been extensively used by investment researchers as a value measure (See Chan *et al* (1991), Fama-French (1992)).

b) **E/P** – It is measured as the earnings after taxes divided by the market value of company's shares. It is a scaled price measure like BE/ME.

c) **Past Sales Growth (PSG)** – It is measured as the compounded growth rate in net sale for three years prior to portfolio formation (two years in case of first portfolio formation owing to the data limitations). Past sales growth is a fundamentals based distressed firm measure, unlike BE/ME and E/P which are scaled price measures, and hence should provide a relationship between corporate distress and return that has a strong economic foundation. The fundamentals based measure is inspired by Fama and French (1996) though our estimation procedure[1] has been different.

The summary of estimated size and value measures is provided in the table given below.

Table 1

Summary of size and value measure

Company size	Estimation	Nature
Measure		
Market capitalization (MC)	Price times shares outstanding	Market-based
Total assets (TA)	Book value of total assets	Non-market based
Enterprise value (EV)	Market value of equity plus long-term debt	Hybrid
Net sales (NS)	Gross sales minus sales return	Non-market based
Corporate distress		
BE/ME	Book value of equity times market value of equity	Scaled price measure
E/P	Earnings after taxes divided by market value of equity	Scaled price measure
Past sales growth (PSG)	Compounded growth rate in sales in years prior to portfolio formation	Fundamentals based measure

2.3. Stock Classification Effect

Until 1996, the Bombay Stock Exchange[2] classified listed companies into specified and non-specified groups. Specified group comprised companies with a larger market capitalisation, higher trading volumes and an ore profit making consistent history and in which the badla system was allowed. Badla was an indigenous carry forward trading system under which transaction can be carried forward for unlimited settlement periods. Non-specified group comprised small and medium-sized companies with a less active trading record, relatively lower probability and that are traded on cash settlement basis.

Since 1996, the company classification is three-fold – groups A, B_1 and B_2. While group A comprises large capitalization, high trading volume and consistent profit record companies, the companies generally decreases in market cap and trading activity as one moves to group B_1 and subsequently to B_2. Further, the group A companies are traded on badla system while groups B_1 and B_2 are traded on cash basis. However, on the recommendations of J.Verma Committee Report on carry forward trading system, the badla system was modified in the more recent years, involv-

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[1] Fama and French (1996) construct `Past Scale Rank' as a measure of relative distress. They rank the sample securities on the basis of its net sales in t-1 year where t is the portfolio formation period. They generate similar rankings for t-2, t-3, t-4 and t-5 years. They give the weights 5/15, 4/15, 3/15, 2/15 and 1/15 to sales ranks for t-1, t-2, t-3, t-4 and t-5 years respectively, thereby giving a higher weight to more recent sales record, and construct a composite sales measure they call past sales rank. They use the scales rank measure to form portfolios and re-balance the portfolio in t+1 period.

[2] Bombay Stock Exchange is the oldest stock exchange in India, in operation since 1875. It is a voluntary association of persons. Bombay Stock Exchange, along with National Stock Exchange, constitutes the two largest stock exchanges in India in terms of number of listed companies, market capitalisation and trading volumes.

ing a carry forward upto a maximum limit of 90 days and imposition of some margin requirements, at least over the period of the study[1]. For the purpose of the study, sample stock has been classified into two main groups: A and B, where the latter contains both B_1 and B_2 stocks as they share a common trading system based on cash settlement. This will help us to analyse if difference in trading systems amongst groups A and B stocks does materialise the size, liquidity and distress factors, that are pronounced for these categories. In essence, stock classification acts as a composite proxy for company size, distress and liquidity. Stock classification effect implies that group B stocks should outperform group A stocks as they are relatively smaller, weaker and less liquid.

3. Testable Hypotheses

The study intends to test the following hypotheses:
- Small firm stocks outperform big firm stocks.
- Investment strategies based on size effect provide economically feasible payoffs.
- Value stocks outperform growth stocks.
- Investment strategies based on value effect provide extra-normal returns.
- Group B stocks perform better than group A stocks.
- Trading strategies based on stock classification effect provide extra-normal returns.

4. Data

4.1. The Sample Securities

The data comprises adjusted month-end share prices[2] for 364 companies from July, 1989 to March, 1999. The sample securities form part of the CRISIL-500 list. CRISIL-500 is a broad based market index in India that covers 97 industries and contains companies of varying levels of size and trading activity. The sample companies account for a major pattern of market capitalization and daily trading volume on the Indian stock market.

The share price data has been converted into return data to make it suitable for further estimation. Only the capital gains component has been considered while estimating returns. The dividend component has been consciously ignored as companies in India exhibit very low dividend yields (See L.C.Gupta (2001)) over the study period, and instead use the free cash reserves for re-investing or for acquisitions. The share price data has been taken from Capital Market Line software.

4.2. The Market Proxy

The Bombay Stock Exchange (BSE) National Index (base year 1983-84 = 100) has been used as surrogate for aggregate economic wealth. The BSE national index is a broad-based value-weighted market proxy constructed in the lines of Standard & Poor, USA.

4.3. The Risk-Free Proxy

The implicit yields on 91-day treasury bills have been used as a risk-free proxy, as is the conventional practice in investment management research. The t-bill yield series however exhibits a kink owing to the fact prior to Dec., 1993 the 91-day t-bills were available at a fixed annual yield of 4.6%. This was a gross under-estimation of the nominal rate of return in the light of the high inflation in those years. From Jan., 1993, the 9-day t-bills are traded on auction basis making their implicit yields market determined.

The treasury bill data has been taken from the Report on Currency and Finance, an annual publication of the Reserve Bank of India.

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[1] Badla system has been abolished in India w.e.f. July, 2001 which is outside the preview of the study period.
[2] The monthly prices have been adjusted for capitalization changes such as bonus, rights and stock splits to make the price series comparative over time.

4.4. Company Attributes

The relevant accounting and financial information needed to construct alternative measures of company size and relative distress has been taken for the financial years 1989-1999 (except for net sales data which has been taken from 1987). The data source is CMIE Provees, a popular financial software.

5. Methodology

We sort the sample securities in June, 1989 on the basis of market capitalization (MC). The ranked securities are then classified into five equal portfolios. Portfolio P_1 contains stocks with the lowest 20% MC, while portfolio P_5 consists of stocks with the highest 20% MC[5]. Monthly excess returns on the five equally-weighted portfolios are then estimated from July, 89 to June, 90. The sample securities are re-sorted in June of every year and the portfolio formation process is repeated till one reaches March, 1999. The mean excess returns on the five MC-sorted portfolios are then estimated.

Next, we regress the excess portfolio returns on the excess returns for the market factor using the familiar market model equation

$$R_{Pt} - R_{Ft} = \alpha + \beta (R_{Mt} - R_{Ft}) + e_t,$$

where
$R_{Pt} - R_{Ft}$ = excess portfolio return, i.e., return on portfolio p minus the return on 91-day t-bills,
$R_{Mt} - R_{Ft}$ = excess market returns,
α, β = are the estimated parameters,
e_t = error term.

The CAPM implies that excess returns on a portfolio should be fully explained by excess market returns. Hence, the expected value of alpha (the intercept term is 0). A significantly positive alpha (α) however implies extra-normal returns.

We then adopt a trading strategy that involves short selling of P_5 (large MC stocks) and buying of P_1 (low MC stocks) and evaluate its economic feasibility.

The entire formation procedure has also been carried out for security sorts on the basis of total assets (TA) enterprise value (EV) and net sales (NS). The company ranking has however been done in March of each year (t-1), the month of financial closing in India. The portfolio formation, however, has been done from July (t) to June (t + 1) to account for the time gap for the investors to receive financial information and use it for decision-making purposes. The mean return and alpha (measure of extra-normal return) are estimated for the portfolios formed on the alternative size measures. The trading strategies: `buy small TA – sell big TA stocks', and buy small EV – sell big EV stocks and buy low NS – sell high NS stocks are then evaluated for their profitability.

Next, the sample stocks are sorted on the basis of value measures i.e., book to market equity (BE/ME), earnings to price (E/P) and past sales growth (PSG). While ranking has been done based on these value measures in March (t – 1) each year, portfolio formation process has been performed from July (t) to June (t + 1) next year. The mean returns on three sets of portfolios, each set formed on sort of single value proxy, are then computed. The alpha values for all the portfolios are also estimated. The trading strategies': buy high BE/ME – sell low BE/ME stocks', `buy high E/P – sell low E/P stocks' and `buy low PSG – sell high PSG stocks' are next evaluated for their possible payoffs.

Further, securities are categorized into two groups – A and B in June of each year based on standard stock classification system (SC). Stocks classified as specified before 1996 and Group A after 1996 form part of portfolio A, while stocks classified as non-specified before 1996 and Groups B1 and B2 after 1996 are included in portfolio B. Mean returns and extranormal returns are estimated for the two portfolios and the trading strategy `Buy B and Sell A' is then evaluated.

6. Empirical Results

6.1. The Size Effect

Table 2 (Panel A) shows the mean excess returns on portfolios formed on alternative measures of company size. As hypothesized, there seems to be strong negative relationship between company size and return for the Indian stock market. The mean excess returns on P_1 (small stock portfolio) exceeds that of P_5 (big stock portfolio) by 2.34% per month for portfolios sorted on MC. Similar return differentials for portfolio formed on TA, EV and NS stand at 2.48%, 2.27% and 1.42% per month respectively. The t-values of excess mean returns are in general statistically significant at 5% level for small stock portfolios P_1 and P_2.

Table 2

Summary statistics of portfolio formed on alternative measures of company size
The company size increases as one moves from portfolio P_1 to P_5

Panel A
Mean excess return on size-sorted portfolios

Size Measure	Portfolio				
	P_1	P_2	P_3	P_4	P_5
MC	.0268	.0141	.0119	.0085	.0034
t-statistics	(2.642)	(1.561)	(1.325)	(0.916)	(0.377)
TA	.0260	.0147	.0133	.0085	.0012
t-statistics	(2.620)	(1.740)	(1.471)	(0.960)	(0.130)
EV	.0236	.0147	.0107	.0092	.0009
t-statistics	(2.403)	(1.653)	(1.182)	(0.976)	(0.113)
NS	.0218	.0118	.0149	.0080	.0076
t-statistics	(2.301)	(1.408)	(1.641)	(0.923)	(0.842)

Panel B
Market model results for size-sorted portfolios

ME							
Portfolio	α	α-SE	α-T	β	β-SE-B	β-T	R^2
P_1	.0199	.0057	3.452	.7713	.0498	15.464	.677
P_2	.0077	.0047	1.631	.7041	.0411	17.111	.719
P_3	.0055	.0045	1.222	.7167	.0390	18.345	.746
P_4	.0015	.0038	.408	.7779	.0334	23.281	.826
P_5	-.0034	.0031	-1.112	.7727	.0270	28.555	.877
TA							
Portfolio	α	α-SE	α-T	β	β-SE-B	β-T	R^2
P_1	.0194	.0059	3.281	.7379	.0513	14.375	.644
P_2	.0091	.0050	1.802	.6273	.0440	14.249	.640
P_3	.0073	.0054	1.349	.6645	.0471	14.086	.635
P_4	.0025	.0050	.500	.6746	.0436	15.458	.677
P_5	-.0053	.0046	-1.157	.7418	.0400	18.513	.750

EV							
Portfolio	α	α-SE	α-T	β	β-SE-B	β-T	R^2
P_1	.0174	.0063	2.759	.6979	.0545	12.793	.589
P_2	.0091	.0057	1.591	.6318	.0495	12.764	.588
P_3	.0048	.0055	.871	.6637	.0475	13.947	.631
P_4	.0025	.0048	.530	.7473	.0414	18.028	.740
P_5	-.0047	.0040	-1.166	.6314	.0348	18.124	.742
NS							
Portfolio	α	α-SE	α-T	β	β-SE-B	β-T	R^2
P_1	.0154	.0055	2.806	.7128	.0475	14.982	.663
P_2	.0061	.0047	1.296	.6415	.0407	15.726	.684
P_3	.0088	.0052	1.668	.6817	.0457	14.904	.661
P_4	.0024	.0053	.449	.634	.0462	13.712	.623
P_5	.0011	.0044	.264	.718	.0388	18.487	.750

Panel C
Investment strategies based on size effect

Investment strategy:
Buy P_1 (small firm stocks)
Sell P_5 (big firm stocks)

Size strategy based on	Alpha differentiated	t (alpha differentiated)
MC	.0165	27.966
TA	.0141	20.435
EV	.0127	18.406
NS	.0143	22.000

The market model results for the size-sorted portfolios, given in Table 2 (Panel B) also provide a similar picture. The alpha value (measure of extra-normal returns) tapers down, in general, as the moves from small stock portfolios to big stock portfolios, i.e., P_1 to P_5. Further, the alpha value for P_1 is statistically significant at 5% level for all types of size-sorted portfolios.

Next, we evaluate the investment strategy that involves short selling of large stock portfolio and buying of small stock portfolio. The results relating to the hypothetical strategy by P_1 – sells P_5 are shown in Table 2 (Panel C). The size effect based strategy provides significantly positive returns. Moreover, the success of the size-based strategy is fairly robust to the choice of size measure for portfolio formation purposes.

The empirical results on size effect for India do not confirm with similar evidence for US market (See Berk (1996)). Berk finds a distinct negative relationship between size, measured as market capitalization and return. However, he demonstrates that the size effect is virtually absent when non-market based measures of company size such as total assets, fixed assets etc. are used as portfolio formation criterion. We however, find a strong size-return relationship for the Indian market using market-based (market capitalization), non-market based (total asset and net sales) as well as hybrid (enterprise value) measures of company size. Thus, size effect owing to its robust nature is more strongly confirmed for the Indian equity market. The findings probably reflect the differences in underlying investor behaviour for mature and emerging markets and the investment strategies the investor adopt thereon.

6.2. The Value Effect

Table 3 (Panel A) provides the mean excess returns on the portfolio sorted on value proxies. Hypothetically, P_5 (the value stocks) should provide significantly higher returns than P_1

(growth stocks). The empirical results however provide a mixed picture. While for portfolios sorted on BE/ME, the returns on P_5 and P_1 are almost identical, the past sales growth sorted portfolios actually show a negative value effect, with excess returns on P_1 (low B PSG stocks) exceeding P_5 (high PSG stocks) by .37% per month. A strong and positive value effect however emerges for E/P sorted portfolios. The high E/P portfolio provides a return differential of .97% per month.

Table 3

Summary statistics of portfolio formed on alternative value (relative distress) measures
Relative distress increases as one moves from portfolio P_1 to P_5

Panel A
Mean excess return on value-sorted portfolios

Value Measure	Portfolio				
	P_1	P_2	P_3	P_4	P_5
BE/ME	.0.103	.0141	.0082	.0127	.0106
t-statistics	(1.169)	(1.534)	(0.919)	(1.289)	(1.031)
E/P	.0087	.0096	.0116	.0106	.0166
t-statistics	(0.996)	(1.125)	(1.419)	(1.170)	(1.628)
PSG	.0134	.0172	.0051	.0160	.0097
t-statistics	(1.489)	(1.919)	(0.552)	(1.762)	(0.901)

Panel B
Market model results for value-sorted portfolios

BE/ME							
Portfolio	α	SE-α	α-T	β	β-SE	β-T	R^2
P_1	.0053	.0038	1.396	.7477	.0328	22.766	.820
P_2	.0090	.0043	2.074	.7597	.0377	20.135	.781
P_3	.0036	.0046	.780	.7212	.0402	17.898	.738
P_4	.0080	.0054	1.486	.7850	.0469	16.734	.711
P_5	.0046	.0069	.666	.7023	.0590	11.904	.586
E/P							
Portfolio	α	SE-α	α-T	β	β-SE	β-T	R^2
P_1	.0029	.0052	.558	.6509	.0452	14.389	.645
P_2	.0037	.0047	.794	.6701	.0403	16.615	.708
P_3	.0061	.0048	1.286	.6218	.0411	15.121	.667
P_4	.0046	.0054	.852	.6787	.0462	14.683	.654
P_5	.0100	.0063	1.580	.7474	.0547	13.662	.621
PSG							
Portfolio	α	SE-α	α-T	β	β-SE	β-T	R^2
P_1	.0045	.0049	.925	.6713	.0427	15.692	.685
P_2	.0073	.0059	1.225	.6299	.0514	12.251	.570
P_3	.0107	.0054	1.976	.6584	.0468	14.057	.636
P_4	-.0016	.0054	-.312	.7002	.0467	14.967	.665
P_5	.0097	.0058	1.657	.6424	.0504	12.722	.589

Panel C
Investment strategies based on value effect

Investment strategy:
Buy P_5 (value stocks)
Sell P_1 (growth stocks)

Value strategy based on	Alpha differentiated	t (alpha differentiated)
BE/ME	-.0007	-.903
E/P	.0071	9.342
PSG	.0052	7.35

The empirical results relating to the market model are given in Table 3 (Panel B). The market model provides the alpha value which is a measure of abnormal returns, a return which is over and above the risk-adjusted return for a given financial asset. The alpha values do tend to increase, in general, for PSG and E/P sorted portfolios, where α for P_5 exceeding that of P_1. The pattern of alpha values for BE/ME sorted portfolios is however difficult to interpret.

Finally, we devise investment strategies based on value-sorted portfolios involve buying of value stocks (high BE/ME, high E/P or low PSG stocks) and short selling of growth stocks (low BE/ME, low E/P or high PSG stocks). As expected, owing to market model results in Table 3 Panel B), the value strategies based on E/P and PSG formed portfolios tend to provide significantly positive payoffs. The BE/ME based investment strategy however is not economically feasible.

Thus, there seems to be a weak value effect in the Indian stock market, as the value premiums are much smaller than size premiums. E/P seems to be a more appropriate value measure compared to BE/ME and post sales growth measures.

6.3. The Stock Classification Effect

As desired in a previous section, according to the BSE classification system group B (B_1 and B_2 stocks) represents company stocks with smaller market capitalization, weaker profitability track record and lower trading volume compared to group A stocks. The stock classification effect should, therefore, act as a composite proxy for size, value and liquidity effects and implies that group B stocks should significantly outperform group A stocks.

The empirical results of stock classification effect are however contrary to expectations. The mean excess return on group A stocks actually exceeds that of group B stocks by .17% per month as shown in Table 4 (Panel A). Similarly, as per market model results (Table 4 (Panel B)), the alpha value of group A stocks is higher than that of group B stocks. Hence, an investment strategy that involves buying group B – selling group A is not economically feasible (See Table 3 Panel C)). Instead, an inverse trading strategy that involves buy group A – sell group B may actually be economically feasible.

Table 4

Summary statistics for portfolios formed on stock classification effect

Panel A
Mean excess returns on group A and group B stocks

A	B
.0137	.0120
(1.699)	(1.325)

Panel B
Market model results for group A and group B stocks

	α	SE-α	α-T	β	β-SE	β-T	R^2
A	.0080	.0041	1.935	.6405	.0358	17.889	.737
B	.0058	.0050	1.164	.7004	.0428	16.363	.701

Panel C
Investment strategy based on stock classification effect

Investment strategy:
Buy group B stocks
Sell group A stocks

α-differential	β-(α-differential)
-.0022	-3.67

Thus, the empirical findings relating to stock classification effect need an explanation. One may note that groups A and B stocks are traded on different basis. While forward trading is allowed in case of group A stocks, group B stocks are traded only on cash basis. The differences in trading systems makes group A stocks relatively more speculative. The group A stocks are expected to exhibit a greater price volatility. If the price volatility risk of category A stocks more than offsets the combined effect of company size, relative distress and liquidity on stock returns, the return differentials shall be contrary to what is hypothesised in the light of the stock classification effect.

The proximity in returns on group A and B stocks suggests that the stock classification system in India is not able to clearly bring out the stock characterisation that it is supposed to represent.

7. Summary and Concluding Remarks

In this paper, we evaluate the relationship between selected company attributes and common stock returns. We find a strong size effect in Indian stock returns. Interestingly, the size effect is discernible using both market-leased as well as non-market based measures of company size, contrary to the findings for US market. The investment strategies that involve buying of small firm stocks and selling of large firm stocks therefore, seem to be economically feasible.

We also identify a weak value effect for the Indian market, especially when one employs E/P ratio as a relative distress proxy. The study also finds that the existing stock classification system in India, (that classifies companies into broadly into group A and group B) fails to differentiate between returns for the two categories despite the fact that group B comprises relatively smaller sized companies that have a less consistent profit record and exhibit lower trading volumes. It seems that the higher volatility of group A stock returns, owing to differences in trading systems between the stock categories, more than offsets the combined effect of company size, relative distress and liquidity in stock returns, at least over the study period.

The study will be of great importance to mutual funds managers, investment managers and marginal investors. It brings to light the investment strategies based on size effect and value effect that the investors can adopt to generate extra-normal returns on long-term basis in the Indian market. Further we suggest an alternative stock classification system that categorises stocks on corporate size and value dimensions. Such a classification system will provide a better insight about the risk-return characteritics of common stocks in India, which the present classification system fails to achieve.

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