



INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE AND MANAGEMENT

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**RELATIONSHIP STUDY OF SELECTED INDIAN COMPANIES TRADED IN BOMBAY STOCK EXCHANGE WITH REFERENCE TO COST OF CAPITAL AND COMPANIES PERFORMANCE
(AN APPLICATION OF CORRELATION MATRIX & MULTIVARIATE REGRESSION MODEL)**

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ABSTRACT

Finance is the supply of funds, which regulates the activities and operations of the industry. Adequate finance is required besides the requirement of fixed and working capital for undertaking the program of extension, reorganization or expansion. Since, now a day market is open, finance are raising through issue of shares, debenture/bond from domestic as well as international capital market in the form of GDR (Global Deposit Receipts), ADR (American Deposit Receipts) and FCCB (Foreign Currency Convertible Bonds) and from the wide range of financial institutions. However, the finance is not free of cost. The suppliers of various sources of funds have a charge on the income of organization, like; dividend for shareholders, interest for bond/debenture holders; dividend /interest for non-banking financial companies, foreign investors and so on. This charge on each source capital is known as cost of capital. The present study focuses on whether cost of capital has any relationship with financial performance of companies like capital structure. For this purpose we have selected 151 top Indian companies on the basis of market capitalization 2007 and classified under different industrial groups. The statistical tools of ANOVA, correlation and multiple regression method have been applied. The study found that change of cost of capital affects the company's profitability position. The higher cost of capital adversely affects the profitability position of the companies. Specially, Indian larger companies should necessary to give proper emphasize at the time of procuring the funds. Again the relationship between cost of capital and companies performance is not specific rather depends on nature of industry as different companies are regulating under different regulations.

KEYWORDS

BSE, cost, capital, performance, market

INTRODUCTION

Finance regulates the activities and operations of the industry. Adequate finance is required besides the requirement of fixed and working capital for undertaking the program of extension, reorganization or expansion. In fact, the existing industrial units require substantially large amount of the capital to meet their reconstruction, modernization, expansion and diversification program so also the new industrial project. Finance can be raised through issue of shares, debenture/bond from domestic as well as international capital market and from the wide range of financial institutions. But finance is not free of cost. The suppliers of various sources of funds have a charge on the income of organization, like; dividend for shareholders, interest for bond/ debenture holder, dividend /interest for non-banking financial companies, foreign investors and so on. This charge on each source capital is known as cost of capital.

Cost of capital is regarded as one of the most important factors in the evaluation and comparison of investments to be made by the firm. From a firms perspective cost of capital is an important tool to measure the future financial performance. It determines the acceptability of investments opportunity, providing a rate that may be used to discount the future cash flows accepted for new investments.

Investments decisions are distinct from financing decisions and firms seek to obtain funds from a combination of sources that lowers its overall cost of capital. This involves consideration not only of individual cost of each source of funds, but also how the use of one source would affect the availability and the cost of other source. The optimum capital structure is therefore the combination of financing sources that minimizes the overall cost of capital.

STATEMENT OF THE PROBLEM

However, in case of Indian companies the concept of the cost of capital is to some extent has not received much attention over the years. Different survey witnessed that concept of cost of capital is misunderstood in Indian economy. Industry like chemical, fertilizer, toothpaste, diversifed believed that the calculation of cost of capital is academic and impractical, so they do not consider cost of capital for any of business decisions.

Therefore, the thrust of the present study lies with to see the nature of cost of capital of different industries along with the different firms and its impact on capital structure and on companies' financial performance.

REVIEW OF LITERATURE

A comprehensive review of literature in respect of the parameters pertaining to financial performance, determinants of capital structure and interrelationship between cost of capital and companies' performance both in the domestic and international level was carried out. The major observations are summarized as under:

Cost of capital declines with leverage due to the tax deductibility of interest charges, (Modigliani and Miller, 1962). The cost of capital is affected by debt apart from its tax advantages (Sarma and Rao, 1968). Age, retained earnings, and profitability were negatively correlated while total assets and capital intensity was positively related to debt- equity ratio (Chakroborty, 1977). Cost of capital of Indian firms increased from 7.36 percent to 12.36 percent over years. The average cost of capital for all consumer goods industry firms taken together was the highest while; it was lowest for the firms of intermediate goods (Chakroborty, 1977). There is an impact of size, growth, business risk, dividend policy, profitability, debt service capacity and the degree of operating leverage on the leverage ratio of the firm (Bhat, 1980). The weighted average

cost of capital of a company will fall with the increased borrowing until a point is reached where the higher cost of share and loan capital force the average up. The optimum-earning ratio is achieved only when the weighted average cost of capital is at the lowest point (Knott, 1991). The cost of capital is playing significant role for determining the capital structure of multi National Corporation also. The multi national corporation is assumed to finance its foreign subsidiaries in such a way as to minimize its incremental weighted cost of capital (Bhalla, 2000). The firms are mainly concerned about financial flexibility and credit ratings when issuing debt and per share dilution and recent stock appreciation when issuing equity. The most firms have target debt-equity and issue-equity to maintain a target-debt ratio (Graham and Harvey, 2001). A project that requires highly specific assets would initially be financed by equity. However, as the debt to equity ratio decreases in line with agency theory, the demand for debt falls and equity rises (Vialasuso and Minkler, 2001). Cost of capital is a central concept in financial management linking both investment and financing decision. The Indian companies faced a high relative cost of capital as compared to their international counterparts (Chadha, 2003).

The foregoing studies attempted to examine the relationship between cost of capital and companies performance. In most of the studies it is been seen, emphasis is given on effects of capital structure on cost of capital and on determinant of capital structure. However, no serious and systematic efforts have been made by the researcher in regard to relationship between cost of capital and companies financial performance.

OBJECTIVES

The major objectives of the study are framed in below

- i) To examine the existence or non existence of inter company variation within different sector in respect of cost of capital.
- ii) To examine the existence or non existence of inter company variation within different sector in respect cost of equity.
- iii) To examine the existence or non existence of inter company variation within different sector in respect cost of debt capital.
- iv) To study interrelationship between Cost of capital and variables determining companies performance.

MAJOR HYPOTHESES

- Cost of capital of different companies within an industrial sector is similar with each other.
- Costs of equity capital of different companies within an industrial sector are similar with each other.
- Costs of debt capital of different companies within an industrial sector are similar with each other.
- Cost of capital is not influenced by size, growth, liquidity, profitability and dividend payout of the companies.

RESEARCH METHODOLOGY

- **Sampling Designing:** Top 500 companies were selected on the basis of rank of market capitalization as on March 2007. Finally on the basis of availability of comparable data 151 companies included in the study and classified under 13 industrial groups.
- **Study Period:** The study covers a period of 5 years from the year 2004 to 2008. For the brevity of the analysis and make in comparison of financial data pertaining into individual firm and also maintaining the parity we restrict our analysis for five years.
- **Collection of Data:** The study based on secondary data. The data mainly collected from Capitalline database 2007 , website entitled to www.indiaonline.com and annual reports of companies has also been used.
- **Tools & Techniques:** To analyse the data financial as well as statistical tools has been used. The financial tools like ratio analysis and statistical tools such as average, ANOVA, correlation coefficient and multiple regressions were used. The statistical results were verified by applying t-test, F-test, Z-test in appropriate cases

METHODOLOGY OF COMPUTATION COST OF CAPITAL

Following are the steps that are used in evaluating the Cost of capital for the companies taken for study.

*Estimation of the cost of the specific sources of funds. Due to the non availability of data Earning Price method is applied to evaluate **cost of equity**.

Cost of Equity (K_e) = (EPS/ MPS)+Growth of EPS

Where, EPS= Earning per Share, MPS= Market price per share

The Cost of Equity of both sample companies and the industry as a whole pertaining to individual year has been calculated at first and then simple average of the same has been taken. **Cost of debt** is calculated in the following way.

Cost of Debt (K_d) = $r(1-t)$

Where, t= tax rate of the firm and r= interest payable.

Where discounts or premium and flotation are involved, the cost of debt capital was computed as under, $K_d = (C/I)(1-t)$

Where, C= fixed interest cost, I = net processed of the issue, t =applicable tax rate of the firm

*Then, their respective proportions in the capital structure are multiplied by these costs of sources. The book value weight of each source of finance used in calculating cost of capital because in practice ,the firm are using book value weight due to the book values are readily availability from the published records of the firm. (Khan & Jain, 2004)

Weighted Average Cost of capital (cost of capital) =

$$\frac{E}{V} K_e + \frac{D}{V} K_d + \frac{R}{V} K_r$$

Where, V= (equity capital+ debt capital+ retained earnings), K_e = cost of equity, K_d = Cost of debt capital, K_r = cost of retained earnings, E= equity capital, D= debt capital R= retained earnings.

CONCEPTUAL FRAMEWORK (VARIABLES OF MEASURING COMPANIES' PERFORMANCE)

Financial Leverage: Financial leverage is usually measured by the ratio of long term debt to the long term capital. The debt equity ratio is calculated to measure the extent to which debt financing has been used in business. Geometric Mean of debt-equity ratio calculated for the period of 2004-2008.

Growth (G) – Growth of companies measures the rate at which a firm is growing. It is one of the determinants of financial performance of the company. Due to the non availability of data, we used only growth of profit after tax (RPAT) for measuring growth of companies. The rate of growth is the simple annual growth rate over the previous year of profit after tax. Geometric Mean of the ratio calculated for study period.

Size: The "capital employed" at the balance sheet value is used as a measure of the firm size. Capital employed comprises share capital plus reserves and surplus, long term debt, plus short-term loans. This measure is preferred over other measures of size, viz total assets, fixed assets, or employment and also, its magnitude indicates the confidence and attitude of investors towards the firm in providing financial resources. In other words, a firm can grow only when investors provide finance to it. For study purpose average value of the capital employed for the period considered.

Profitability: Profitability implies profit-making ability of business unit. Howard (1961) articulated that the term profitability is a combination of two ward profits and ability. Profitability may be defined as the ability of a given investment to earn a return from its use. We used return on net worth (RNW) as determinants of profitability and Geometric Mean of the ratio considered for study period.

Liquidity: Liquidity refers to the ability of a concern to meet its current obligation as and when these become due. Therefore to account for the short-term risk of the firms, liquidity ratio has been included in the models. It is calculated by dividing current assets by current liabilities. Geometric Mean of the current ratio calculated for the study period.

Dividend pay out ratio: - It measures the relationship between the earnings belonging to the ordinary shareholders and the dividend paid to them. Dividend pay out ratio is calculated by using the following formula. $DPR = \frac{\text{Equity Dividend}}{\text{Adjusted Profit after Tax} - \text{Preference Dividend} - \text{Dividend Tax}} \times 100$. Geometric Mean of the ratio calculated for the period 2004-2008.

ANALYSIS & FINDINGS

Inter company variation within different sector in respect cost of capital

To study the inter companies variation in respect of cost of capital within the industry we used ANOVA technique. We considered the null hypothesis that there is no significant difference between the overall costs of capital of companies within a particular industry. The calculations were performed for each of industry separately and the result of all such ANOVA is compiled into the table-1. The observed F-values for all the selected industrial sectors were found to be greater than the table values. Therefore the null hypothesis that the cost of capital of firm in an industrial sector is similar was rejected. This implies over all cost of capital of different companies are varying with each other due to variation of nature of industry and different components of cost of capital are not similar.

Inter company variation within different sector in respect cost of equity

We considered the null hypothesis that there is no significant difference between the costs of equity capital of companies within a particular industry. The calculations were performed for each of industry separately. The result of all such ANOVA is compiled into the table-2. The observed F-values for all the selected industrial sectors were found to be greater than the table values. Therefore the null hypothesis that the cost of equity of firm in an industrial sector is similar was rejected. So the companies are different in regard to cost of equity capital.

Inter company variation within different sector in respect cost of debt capital

We considered the null hypothesis that there is no significant difference between the costs of debt capital of companies within a particular industry. Again the calculations were performed for each of industry separately; the result of all such ANOVA is compiled into the table-3. The observed F-values for all the selected industrial sectors were found to be greater than the table values. Therefore the null hypothesis that the costs of debt capital of firm in an industrial sector are similar was rejected; implying that cost of debt capital of different companies is varying although belongs to same industrial group.

Interrelationship between cost of capital and variables determining companies' performance

To study whether the performance of the company is affected by the cost of capital, we calculated the correlation coefficient between cost of capital and the parameters representing the financial performance. The table-4 exhibits the result of the correlation coefficient.

The table-4 exhibited that there is a linear relationship between size and cost of capital and leverage and cost of capital. The sample of 151 companies as a group representing Indian industry shows that the correlation coefficient between size and cost of capital is 0.366 and leverage and cost of capital is -.320, and cost of capital and profitability is -.355, statistically significant at 5% level implying that size, leverage and profitability is affected by overall Cost of capital of the companies. The value of correlation coefficient between the variable established that with the increase of size the over all cost of capital is also increasing and with the increase of leverage the over all cost of capital decreasing or vice versa. It means cost of capital is affected by capital structure decision. On the other hand Indian companies having larger amount of capital are not given proper emphasize on the selection of source of capital resulting into enhance of over all cost of capital of the companies. The relationship between profitability and cost of capital suggesting that overall cost of capital affect the companies' profitability. Again no relationship has been seen in between cost of capital with other explanatory variables like liquidity, growth, and dividend of the companies as value of correlation coefficient are not found as statistically significant. But when we classified the data over different industrial group on the basis of nature of industry the table of correlation coefficient shows that the relationship is not specific. The relationship varies because of nature of industry are not same. However in most cases of the sample we have seen capital structure decision is more important for the companies. The result shows that leverage is negatively affected the overall cost of capital of the companies.

Now to confirm the correlation result, multiple regression equation has been fitted taking cost of capital as dependent variable. The results exhibited in table-5.

$$Y = x + b_1 \text{size} + b_2 \text{leverage} + b_3 \text{liquidity} + b_4 \text{growth} + b_5 \text{dividend} + b_6 \text{profitability}$$

Y = cost of capital, an independent variable

From the table-5, it is observed that, leverage becomes the major factor or influential factor of the cost of capital. Except Construction, Electricity, Engineering, Steel, Auto, Personal Care and Financial Service, it has been seen that leverage is negatively related with the cost of capital and statistically significant. It signifies the cost of capital declines with the inclusion of debt capital in the capital structure. The sectors of Construction, Electricity, Steel, Auto group are including almost two times of equity capital in form of borrowed capital in the capital structure. Where as the sector like Engineering and personal care are maintaining least level of borrowed capital in the capital structure resulting into no affect on cost of capital. It implies capital structure decision is playing important role for declining overall cost of capital of the companies. But the companies must have to maintain optimum level of capital structure based on nature of industrial group. On the other hand the relationship with growth, dividend, liquidity and profitability in regard to Indian sample companies are not be confirmed since their beta coefficients are not statistically significant. The regression coefficient of Size and cost of capital is 3.65 implying that there is positive association between the variables. The positive beta value of size implies that the larger Indian firms are not able to use their resources effectively compare to small size companies and possibly not being able to raise funds at cheaper rate by taking the advantage of their large scale funds collection.

It is evident from the above exhibits table a few, not all variables were detected as explanatory for the cost of capital across industrial sectors. Much of this is accountable to the nature of the industry.

Cost of capital and Size

There is no relationship between the cost of capital and size of the companies across industrial sectors. The companies when classified under different industrial group, no relationship has been found in between cost of capital and size of the companies.

Cost of capital and Growth

The aggregate result suggests that correlation between the costs of capital and growth is not significant. So, there is no relationship between the cost of capital and the growth of companies. Where as under the diversified sector, the table showed that the correlation coefficient between growth and cost of capital is -.511, statistically significant and the beta value between them is -.576, statistically significant implying, there is negative association between the variables of diversified companies. One unit of cost of capital changes due to change of .576 unit of growth of companies. On the other hand the overall cost of capital of diversified companies is declining because of constant growth of profit of the companies.

Cost of capital and Dividend

In the sector of IT and financial service of industries, dividend becomes the significant factor of the cost of capital. In the sector of computer, the dividend is negatively and in the financial service sector, the dividend is positively related with the cost of capital. The positive relationship signifies that the investors have no preference for current dividend in general; rather they prefer future growth of their investment on shares, where as, the negative coefficient of the payout variable suggests that investors have preference for current dividend.

Cost of capital and Liquidity

In the sector of energy and cement group of industries the overall cost of capital and liquidity is negatively related with each other. This implies that highly liquid companies are procuring the funds by incurring less amount of cost. On the other hand less risky companies in terms of liquidity are spending less amount of money for mobilizing the capital for their survival and growth. It is theoretically true that the investors generally prefer to invest their funds in less risky companies.

Cost of capital and Profitability

The aggregate result suggests that there is relationship between cost of capital and profitability of the companies. The relationship between the cost of capital and profitability has been found in the sector of energy, electricity and chemical. A negative relationship observed in case of energy, electricity and chemical. The negative relationship is theoretically true because the profitable companies are expected to procure the funds with cheaper cost. On the other hand with the increase of overall cost of capital the companies' profitability is decreasing.

SUMMARIZATION OF THE STUDY

1. By employing ANOVA analysis, it was found that the cost of capital of different companies vary with each other due to variation of nature of industry.
2. The components of cost of capital that is cost of equity and cost of debt capital are also varying from company to company and industry to industry.
3. The study observed among the variables of financial performance; size, leverage and profitability become significant factor of affecting cost of capital. The positive relationship of size and cost of capital implies the Indian larger companies are not able to procure the capital at cheaper cost by taking the advantages of large resources. The negative relationship between cost of capital and leverage signifying that with the increase of leverage (proportion of debt equity capital), the overall cost of capital declining. But the maintenance of optimum level of debt capital is mandatory; otherwise, the excess level of debt capital further leads to increase of overall cost of capital. Whereas the existence of negative relationship between cost of capital and profitability indicating the cost of capital have negative impact on profitability of the companies. With the increase of cost of capital, profit of the companies will automatically fall.
4. The cost of capital of diversified companies are negatively related with the growth of companies implying cost of capital are declining because of constant growth of companies.
5. The I.T. sector companies cost of capital is negatively related with the dividend whereas dividend is positively related with the cost of capital for finance and investments sector. The positive relationship signifies that the investors have no preference for current dividend in general; rather they prefer future growth of their investment on shares, where as, the negative coefficient of the payout variable suggests that investors have preference for current dividend
6. In the study liquidity taken as for measuring the risk of the companies from the point of view of shareholders investment concerned. It has been observed in case of energy and cement industries the cost of capital is negatively related with liquidity. It implies less risky companies that is keeping larger amount of funds in form of liquidity able to procure the funds at cheaper cost.
7. The study observed overall cost of capital has negative impact on the firm's profitability that is with the increase of overall cost of capital the companies' profitability is decreasing. The companies under energy sector with high cost of capital are earning comparatively lower amount of profit whereas companies under chemical and electricity sector earning optimum or satisfactory level of profit because of maintaining a standard level of cost of capital.

CONCLUSION

The overall cost of capital is affected by the designing of capital structure of Indian industries. Therefore, maintenance of optimum level of capital structure irrespective of nature of industries is mandatory for a firm. Hence, the corporate executive should give due attention for attaining optimum level of capital structure for sustainable growth of the firm. The optimum level of capital structure depends on nature of each industry.

The change of cost of capital affects the company's profitability position. Again the higher cost of capital adversely affects the profitability position of the companies. The Indian larger companies should necessary to give proper emphasize at the time of procuring the funds.

We never deny that the cost of capital has no relationship or affect on other explanatory variables for determining the financial performance like companies growth, liquidity, dividend pay out although the relationship is industry specific.

TABLE 1: RESULT OF ANOVA ANALYSIS

Industry	F value	F _{.05}	No. of companies in the sample
----------	---------	------------------	--------------------------------

Energy	3.23456	2.347878	12
IT	5.765123	2.347878	12
Construction	1.694329	2.347878	12
Pharmaceutical	6.09875	2.063541	16
Cement	3.907564	2.591096	10
Electric	3.710589	2.347878	12
Engines	3.709453	2.591096	10
Steel	4.90865	2.119166	15
Auto	5.09865	2.258518	13
Chemical	2.90845	2.456281	11
Personal Care	3.067432	2.99612	8
Finance & Investment	2.643278	2.591096	10
Diversified	2.64289	2.591096	10

Figures in bold indicate significant at 5% level, k = Number of companies

TABLE 2: RESULT OF ANOVA ANALYSIS

Industry	F value	F _{.05}	No. of companies in the sample
Energy	3.88961	2.347878	12
IT	2.817856	2.347878	12
Construction	2.940628	2.347878	12
Pharmaceutical	4.205632	2.063541	16
Cement	3.219052	2.591096	10
Electric	2.81652	2.347878	12
Engines	4.725904	2.591096	10
Steel	2.843857	2.119166	15
Auto	5.789304	2.258518	13
Chemical	3.178042	2.456281	11
Personal Care	3.873041	2.99612	8
Finance & Investment	4.782618	2.591096	10
Diversified	3.88961	2.591096	10

Figures in bold indicate significant at 5% level, k = Number of companies

TABLE 3: RESULT OF ANOVA ANALYSIS

Industry	F value	F _{.05}	No. of companies in the sample
Energy	3.142905	2.347878	12
IT	3.111723	2.347878	12
Construction	4.762941	2.347878	12
Pharmaceutical	2.975298	2.063541	16
Cement	4.102752	2.591096	10
Electricity	3.741381	2.347878	12
Engineering	3.289652	2.591096	10
Steel	3.029284	2.119166	15
Auto	3.889273	2.258518	13
Chemical	3.554409	2.456281	11
Personal Care	3.458169	2.99612	8
Finance & Inv.	3.852059	2.591096	10
Diversified	3.142905	2.591096	10

Figures in bold indicate significant at 5% level, k = Number of companies

Table 4: Correlation Coefficient Results: COST OF CAPITAL Vs Variables

Industry	size	leverage	liquidity	growth	dividend	Profitability
Aggregate	.366* (.042)	-.320* (.042)	-.090 (.272)	.004 (.595)	.030 (.716)	-.355* (.034)
Energy	-.107 (.742)	-.447* (.024)	-.522* (.042)	-.186 (.564)	.478 (.116)	-.516* (.036)
IT	.169 (.599)	-.528* (.048)	-.090 (.782)	-.231 (.470)	-.137 (.315)	.361 (.240)
Construction	.385 (.217)	-.066 (.840)	-.086 (.791)	-.080 (.805)	-.186 (.562)	.295 (.354)
Pharmaceutical	.088 (.745)	-.508* (.045)	-.157 (.560)	.116 (.668)	.251 (.347)	-.065 (.812)
Cement	-.049	-.591* (.045)	-.538* (.045)	-.289	-.191	.267

	(.892)	(.042)	(.039)	(.417)	(.597)	(.455)
Electricity	-.270 (.395)	-.123 (.704)	.387 (.214)	-.166 (.606)	-.360 (.250)	-.596* (.041)
Engineering	.197 (.586)	.115 (.753)	.125 (.731)	-.540 (.1070)	-.138 (.703)	-.446* (.036)
Steel	-.032 (.909)	.074 (.792)	-.029 (.918)	-.186 (.506)	-.213 (.446)	-.001 (.998)
Auto	.018 (.954)	-.425* (.038)	.010 (.975)	.101 (.742)	-.286 (.343)	.004 (.991)
Chemical	-.366 (.268)	-.419* (.041)	-.195 (.567)	-.019 (.955)	.492 (.125)	-.405* (.001)
Personal care	.232 (.580)	-.075 (.859)	-.070 (.870)	-.530 (.177)	.651 (.080)	.003 (.994)
Finance & Inv.	-.228 (.527)	.489 (.151)	.119 (.744)	.347 (.326)	.529* (.016)	.058 (.873)
Diversified	.389 (.237)	-.205* (.048)	.428 (.189)	-.511* (.012)	.221 (.514)	-.186 (.585)

Figures in () indicate p value

Table 5: Regression Result: COST OF CAPITAL as dependent variable

Industry	size	leverage	liquidity	growth	dividend	profitability	R ²	F
Aggregate	3.65* (1.970) [.041]	-.108* (-1.227) [.024]	-.069 (-.810) [.419]	.034 (.418) [.677]	.029 (.346) [.730]	-.490* (-1.061) [.041]	.452	1.334* [.024]
Energy	-.557 (-2.57) [.052]	-.677* (-2.993) [.030]	-.614* (-2.717) [.042]	-.342 (-1.46) [.202]	.121 (.551) [.605]	-.267* (-1.263) [.039]	.834	4.195* [.049]
IT	-.193 (-.504) [.636]	-.786* (-1.748) [.041]	-.127 (-.406) [.701]	.444 (.869) [.424]	-.581* (-1.798) [.032]	.382 (1.240) [.270]	.616	1.334* [.049]
Construction	.543 (1.634) [.163]	-.603 (-1.656) [.159]	-.154 (-.424) [.690]	-1.041 (-1.97) [.105]	-.545 (-1.522) [.189]	1.134 (2.235) [.076]	.413	1.320 [.449]
Pharmaceutical	.188 (.543) [.600]	-.910* (-2.952) [.016]	-.761 (-2.226) [.053]	.494 (1.530) [.160]	-.148 (-.393) [.704]	.391 (1.275) [.234]	.593	2.189* [.040]
Cement	-.095 (-.287) [.793]	-.701* (-1.791) [.045]	-.408* (-.883) [.042]	-.244 (-.720) [.524]	-.424 (-.806) [.479]	-.129 (-.228) [.834]	.746	1.466* [.036]
Electricity	-.096 (-.332) [.753]	-.082 (-.286) [.788]	.463 (1.491) [.196]	-.094 (-.299) [.777]	.034 (.103) [.922]	-.669* (1.996) [.048]	.617	1.343* [.049]
Engineering	-.116 (-.333) [.761]	-.107 (-.207) [.849]	.462 (1.260) [.297]	-.878 (-2.26) [.108]	-.388 (-.833) [.466]	-.443* (1.438) [.046]	.332	1.492* [.049]
Steel	-.119 (-.356) [.731]	.549 (1.008) [.343]	-.524 (-1.024) [.336]	-.430 (-1.15) [.281]	-.380 (-1.110) [.299]	-.067 (-.174) [.866]	.221	1.379 [.749]
Auto	-.105 (-.310) [.767]	-.535 (-1.736) [.133]	-.577 (-1.277) [.249]	.039 (.101) [.923]	-1.040 (-1.904) [.106]	.417 (.949) [.379]	.523	.997 [.649]
Chemical	.020 (.122) [.909]	-.296* (-1.451) [.042]	-.197 (-1.393) [.236]	-.097 (-.429) [.690]	.271 (1.175) [.305]	-.987** (4.740) [.009]	.732	9.096* [.025]
Personal care	-.519 (-.545) [.682]	-.488 (.722) [.602]	-1.307 (-.586) [.662]	-1.482 (-.769) [.583]	.076 (.056) [.964]	-.255 (-.450) [.731]	.343	.559 [.844]
Finance & Inv.	-.476 (-.563) [.613]	.134 (.296) [.786]	.396 (.392) [.721]	.251 (.292) [.789]	.601* (1.505) [.048]	.080 (.142) [.896]	.421	1.284* [.047]
Diversified	.507 (1.948)	-.700* (-1.129)	.985 (1.530)	-.576* (-2.05)	-.161 (-.481)	-.257 (-.861)	.542	2.395* [.044]

	[.123]	[.037]	[.201]	[.039]	[.656]	[.438]		
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Figures in () indicate t value and figures in [] indicate value at $t_{.05}$

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