A Study on Factors Related to Market Capitalization in Indian Manufacturing Firms

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Abstract

Manufacturing firms have always been a significant contributor to the Indian GDP and has been a fast-developing sector. The scope of the study included all publicly listed manufacturing firms in India for the time period between 2009–2018. Suitable pooled OLS regressions were run for each hypothesis. In all regressions, the dependent variable was the percent change in market capitalization for each firm for each year. In the group classification of risk and profitability, the variables regressed were the levered beta, return on assets, return on equity, debt to equity ratio, and a dummy variable indicating the financial crisis. For the group of variables under compensation to investors, variables selected were earnings per share, dividend paid per share, and interest paid divided by total assets. For the asset efficiency group, the variables selected included total assets, current assets, asset turnover ratio, cash turnover ratio, and cash flow to sales ratio. Finally, for the investment policy decision group, firms were segregated on the basis of being conservative to aggressive on the basis of investments in assets and the difference in the investment level between conservative and aggressive firms (CMA) were regressed against the dependent variable. The study found that variables – Leveraged beta was 5% significant ; ROA, ROE, DUMMY1, EPS, and debt to equity were 1% significant ; DPS was 5% significant ; while EPS and debt to equity were 1% significant. Further, for asset efficiency, the asset turnover and the cash turnover ratios were 5 % significant, and finally, investment policy as proxied by CMA was 1 % significant.

Keywords : **market capitalization, risk and return, profitability, asset efficiency, investment policy, OLS regression**

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Market capitalization represents the public's consensus on the value of a company's equity. In public corporations, ownership interest is freely bought and sold through purchases and sales of stock, providing a market mechanism which determines the price of a company's shares (Kaundal & Sharma, 2010). Market price of a share is one of the most important factors which affect investment decisions of investors. Market capitalization is a measure of the value of companies and stock markets, which is an on-going market valuation of a public firm whose shares are publicly traded on a stock exchange computed by multiplying the number of outstanding shares held by the shareholders with the current per share market price at a given time. A market capitalization calculation is a critical part of any stock valuation formula as it represents the total market value of all the company's outstanding shares. As outstanding stock is bought and sold in public markets, capitalization could be used as a proxy for the public opinion of a company's net worth and is a determining factor in some forms of stock valuation. Classifications such as large-cap, mid-cap, and small-cap are only approximations and may change over time.

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Throughout this study, market capitalization = current adjusted share price × number of shares outstanding for a particular firm in the concerned year (end).

Literature Review

EI - Kholy (2014) conducted a research on cash flow forecast, planning, and stated that management's motive was to maximize profit or minimize total cost of the firm's projects. With the use of a multi linear programming model for resolving the problem, this research presented advancement in both the development of the model and in the tool used for solving the problem of optimization. Finally, the model presented an effective decision-making tool to be used by industry practitioners with reasonable accuracy. Byun and Trung (2016) empirically investigated the effects on Vietnam stock market of share repurchase announcement. The study found that after the share repurchase, the small firms performed better than the large firms in the short term, while large firms performed better in the longer term. The main motive for the repurchase was the perceived undervaluation by the firms of the shares.

Al-Hasan, Asaduzzaman, and Karim (2013) evaluated the effects of dividend policy on market capitalization in the context of Bangladesh. They evaluated the effect of dividend policy on share prices of some selected listed companies in Bangladesh. The study highlighted the dividend policy of each industry and examined the relationship between dividend per share and share prices. The study proved that there was a significant effect of dividend policy on modality performed procedure step (MPPS), which supported the relevance theory of dividend policy. Patel and Prajapati (2014) found empirical evidence of stock dividend announcements of 20 companies in the Indian stock market, and also the existence of abnormal returns in the sample data and companies listed on the Bombay Stock Exchange (BSE). The study researched effects of the dividend announcements of the selected companies on the stock return, and also analyzed whether stock return was abnormal post announcement of the dividends. The study also discussed that speed or delay had an adjustment effect on dividend announcements. Multiple regression models were used to measure the statistical significance of the abnormal returns.

Pantea, Gligor, and Anis (2014) performed a panel data analysis to study the relationship between microeconomic factors and financial performance. The dataset included 55 Romanian industrial companies listed on the Bucharest Stock Exchange and covered the period of 1999–2012. The results indicated that the relationship was positive and statistically significant, supporting the importance and independence of the set of factors in explaining performance. Borhan, Naina Mohamed, and Azmi (2014) examined the impact of financial ratios on the financial performance of a chemical company by examining several ratios. Current ratio (CR) and quick ratio (QR) represented the liquidity ratios ; debt ratio (DR) and debt equity ratio (DTER) represented the leverage ratios ; while, operating profit margin (OPM) and net profit margin (NPM) represented the profitability ratios. The findings showed that CR, QR, DR, and NPM had a positive relationship, while DTER and OPM had a negative relationship with the company's financial performance. Among the six ratios, CR, DR, and NPM showed the highest significant impact on the company's performance. Andoain and Bacon (2009) tested whether the investors could make an above normal return by relying on public information impounded in a stock split announcement. The results suggested that the firms' public stock split announcements did not affect stock prices on the announcement day.

Horan (2012) reported that the buy backs were more frequent and more intense compared to the past, having an increased accretive effect on EPS. Chen, Liu, and Huang (2009) studied the empirical analysis of cash dividend payment in Chinese listed companies with 299 firms. They found that companies which paid more cash dividend had high EPS and ROE. They also found that EPS and ROE were positively related with stock prices of the firms.

Singh and Kumari (2011) examined the stock return behaviour around dividend announcements in India during the period from 2006–07–2009–10. Dividend announcements made by BSE A-Group listed companies

were taken for the study and a database of 671 observations was constructed, which was reduced to 427 observations after the implementation of their criteria. The event study methodology was used for calculating the abnormal returns and two methods, that is, percentile method and the paired *t* -test for means was used to see the impact of announcement on liquidity. The results indicated that abnormal returns were not found to be significant on event day during any period of dividend announcements. The results of paired *t*-test for means showed that there were significant differences in the average number of transactions before and after announcement from 2006–07 – 2009–10.

Research Gaps

Research gaps identified by reviewing the literature include :

(1) Studies on percent change in market capitalization specific to Indian manufacturing sector are limited.

(2) Inadequate research exists on profitability parameters like ROA's impact on percent change in market capitalization.

(3) Inadequate research exists on asset efficiency parameters like asset turnover ratio and cash turnover ratio on percent change in market capitalization.

(4) Research related to investment policy as proxied by CMA is limited.

Objectives of the Study

(1) To determine the impact of risk and return related variables on the percent change in market capitalization.

(2) To perform analysis on the effect of investor compensation related variables on percent change in market capitalization.

(3) To analyze the effect of asset efficiency on percent change in market capitalization.

(4) To analyze the effect of investment policy on percent change in market capitalization.

Problem Statement

This study aims to understand the effects of risk and return, investor's compensation, asset efficiency, and investment policy on the percent increase in market capitalization in Indian manufacturing firms for the period of 2009–2018. As per the study, the following are the independent variables identified. In all cases, the dependent variable is percent change in market capitalization.

Table 1. Identified Variables

Sl. No.	Variable Name	Brief Description and Calculation	Objective
1.	*LBETA*	Beta value adjusted for financial leverage	Objective 1 (Risk and Profitability)
2.	*ROA* (Return on asset)	Profit after tax/book value of total assets	
3.	*ROE* (Return on equity)	Profit after tax/book value of equity	
4.	*Dummy1*	0 if not fiscal 2009–2010, 1 if fiscal 2009–2010	

5.	Debt to equity	Total debt/Market value of equity	
6.	*EPS* (Earnings per share)	Profit after tax/Total number of shares outstanding	Objective 2(Investor Compensation)
7.	*DPS* (Dividend per share)	Dividend paid/Total number of shares outstanding	
8.	Interest to total assets	Total interest paid/Total assets	
9.	*TA*	Total assets (Proxy for firm size)	Objective 3 (Asset Efficiency)
10.	*CA*	Current assets	
11.	*ASSTO*	Total asset turnover (Total assets/Sales)	
12.	*CASHTO*	Total cash turnover (Cash/Sales)	
13.	*CFO_SLS*	Cash flow from operations/sales	
14.	*CMA* (Conservative minus aggressive)	Difference in investment level between low asset growth firms and high asset growth firms.	Objective 4 (Investment Policy)

There are four dependent class of variables that are hypothesized to affect the percent change in market capitalization : risk and return, profitability, asset efficiency, and investment policy. The independent variables are as shown in Table 1 grouped by their respective classes into their respective objectives.

Data Collection and Methodology

The study is done using publicly available information, collected from Quandl, a leading database for financial data. The study considers 251 companies from the Indian manufacturing sector covering chemical, textile, automobile, engineering, FMCG, healthcare, metals, and technology. The data of 10 years, that is, from 2009–2018 is considered. Hence, there are totally 2,510 firm-year observations i.e. (251 companies * 10 years data). From the data or observations collected, the effect of risk and return, profitability, asset efficiency, and investment policy on percent change in market capitalization is tested by running pooled OLS regressions using the Panel OLS package in Python by developing programs as required. The dependent variable in each of the regressions is the percent change in market capitalization. Each objective from 1–3 required one single pooled OLS regression each, while the objective 4 required five pooled OLS regressions, one for each portfolio from P1 – P5.

Table 2. Hypothesis Formulation

Sl. No.	Hypothesis Variable	H_0	Objective
H01	*LBETA*	$\Upsilon_1 = 0$	Objective 1 (Risk and Profitability)
Ha1		$\Upsilon_1 \neq 0$	
H02	*ROA*	$\Upsilon_2 = 0$	
Ha2		$\Upsilon_2 \neq 0$	
H03	*ROE*	$\Upsilon_3 = 0$	
Ha3		$\Upsilon_3 \neq 0$	
H04	*DUMMY1*	$\Upsilon_4 = 0$	
Ha4		$\Upsilon_4 \neq 0$	
H05	*Debt_Equity*	$\Upsilon_5 = 0$	
Ha5		$\Upsilon_5 \neq 0$	
H06	*EPS*	$\Upsilon_6 = 0$	Objective 2 (Investor Compensation)
Ha6		$\Upsilon_6 \neq 0$	

H07	*DPS*	$\Upsilon_7 = 0$	
Ha7		$\Upsilon_7 \neq 0$	
H08	*INT_TA*	$\Upsilon_8 = 0$	
Ha8		$\Upsilon_8 \neq 0$	
H09	*TA*	$\Upsilon_9 = 0$	Objective 3 (Asset Efficiency)
Ha9		$\Upsilon_9 \neq 0$	
H10	*CA*	$\Upsilon_{10} = 0$	
Ha10		$\Upsilon_{10} \neq 0$	
H11	*ASSTO*	$\Upsilon_{11} = 0$	
Ha11		$\Upsilon_{11} \neq 0$	
H12	*CASHTO*	$\Upsilon_{12} = 0$	
Ha12		$\Upsilon_{12} \neq 0$	
H13	*CFO_SLS*	$\Upsilon_{13} = 0$	
Ha13		$\Upsilon_{13} \neq 0$	
H14	*CMA*	$\Upsilon_{14} = 0$	Objective 4 (Investment Policy)
Ha14		$\Upsilon_{14} \neq 0$	

↳ **Hypothesis Formulation :** The Table 2 shows all the hypotheses constructed, grouped by class of variables and grouped by corresponding objectives 1 through 4.

Analysis and Results

(1) Objective 1 : To determine the impact of risk and return related variables on the percent change in market capitalization.

$$\frac{\Delta MCAP}{MCAP_{it}} = \alpha_0 + \gamma_1\beta_{it} + \gamma_2 ROA_{it} + \gamma_3 ROE_{it} + \gamma_4 DUMMY_{it} + \gamma_5 DE_{it} + \varepsilon_{it} \quad \text{.....(1)}$$

In Table 3, pooled OLS regression is run by selecting the variables and testing the impact of these on percent change in market capitalization. Five variables are tested namely, levered beta, return on assets, return on equity,

Table 3. Pooled OLS Regression Results for Risk and Profitability Variables

Mode : Ordinary Least Square			***R* Square: 0.223**	
Method: Least Square			**Adjusted *R* Square : 0.221**	
Variables	**Coefficient**	**Standard Error**	***T*-Statisc`**	***P*-Value**
Constant	0.2149	.0037	5.740	0.000**
L Beta	0.0776	0.032	2.404	0.016*
ROA	1.0608	0.249	4.266	0.000**
ROE	0.2381	0.074	3.376	0.001**
DUMMY 1	1.2074	0.053	22.885	0.000**
DEBT_EQUITY	-0.0284	0.007	-4.253	0.000**

Note. Dependent variable: Percent change in market capitalization.

Note. * is used to indicate significance at the 5% level and ** indicates significance at the 1% level.

debt to equity ratio, and one dummy variable. The variables taken are found to be significant if the regression returns a *p* - value below 0.05. The results obtained in Table 3 are all below the critical level, so all the variables taken are significant in this case.

(2) Objective 2 : To perform analysis on the effects of profitability related variables on percent change in market capitalization.

$$\frac{\Delta MCAP}{MCAP_{it}} = \alpha_0 + \gamma_6 EPS_{it} + \gamma_7 DPS_{it} + \gamma_8 INT\_TA_{it} + \varepsilon_{it} \quad \text{.....(2)}$$

Table 4. Pooled OLS Regression Results for Investor Compensation Variables

Mode : Ordinary Least Square			***R* Square : 0.012**	
Method : Least Square			**Adjusted *R* Square : 0.010**	
Variables	**Coefficient**	**Standard Error**	***T* - Statisc`**	***P* - Value**
Constant	0.3928	0.0033	12.019	0.000**
EPS	0.0033	0.0001	4.969	0.000**
DPS	-0.0048	0.002	-2.152	0.032*
INT_TOTAL_ASSET	1.7324	0.917	1.889	0.059*

Note. Dependent variable : Percent change in market capitalization.

Note. * is used to indicate significance at the 5% level and ** indicates significance at the 1% level.

A pooled OLS regression test is performed for all the selected variables under the group – Investor Compensation. The regression results in Table 4 show significance of each selected variable on the market capitalization of the selected companies. The variables grouped under Investor Compensation are EPS, DPS, and INT_Total_Asset. EPS variable *p*-value is 0.000, DPS *p*-value is 0.032, and INT_Total_Asset *p* - value is 0.059.

(3) Objective 3 : To analyze the effect of asset efficiency on percent change in market capitalization.

$$\frac{\Delta MCAP}{MCAP_{it}} = \alpha_0 + \gamma_9 TA_{it} + \gamma_{10} CA_{it} + \gamma_{11} ASSTO\ Ratio_{it} + \gamma_{12} CASHTO\ Ratio_{it} + \gamma_{13} CFO\_SLS_{it} + \varepsilon_{it} \quad \text{.....(3)}$$

Table 5. Pooled OLS Regression Results for Asset Efficiency Variables

Mode : Ordinary Least Square			***R* Square : 0.008**	
Method : Least Square			**Adjusted *R* Square : 0.006**	
Variables	**Coefficient**	**Standard Error**	***T* - Statisc`**	***P* - Value**
Constant	0.4419	0.027	16.548	0.000**
TA	0.000	0.000	0.343	0.731
CA	0.000	0.000	-1.284	0.199
ASSTO	0.0136	0.006	2.276	0.023*
CASHTO	0.0002	0.000	2.212	0.027*
CFO _SLS	-0.0016	0.002	-0.724	0.469

Note. Dependent variable : Percent change in market capitalization.

Note. * is used to indicate significance at the 5% level and ** indicates significance at the 1% level.

The variables selected to run the regression test, grouped under Asset Efficiency in the Table 5 are TA, CA, ASSTO, CASHTO, and CFO_SLS. The *p* - valve of the total assets is 0.731, current assets' *p* - value is 0.199, asset turnover ratio *p* - value is 0.002, cash turnover ratio *p* - value is 0.027, and the finally, CFO_SLS *p* - value is 0.4649.

(4) Objective 4 : To analyze the effect of investment policy on percent change in market capitalization.

$$\frac{\Delta MCAP}{MCAP_{it}} = \alpha_0 + \gamma_{14} CMA_{it} + \varepsilon_{it} \quad \text{.....(4)}$$

Table 6. Pooled OLS Regression for Investment Policy Variable

Variable	P1	P2	P3	P4	P5
Asset Growth	-0.085	0.014	0.070	0.142	0.303
Percent change in market capitalizaon`	0.142	0.172	0.251	0.263	0.330
Coefficient for CMA	3.118	0.960	2.922	0.570	-0.165
T-statisc`	3.239	1.055	2.908	0.597	-0.176
P-Value	0.001**	0.292	0.004**	0.551	0.861

Note. Dependent variable : Percent change in market capitalization.

Note. * is used to indicate significance at the 5% level and ** indicates significance at the 1% level.

Table 7. Hypothesis Test Result for Objective 4

SL. No	Hypothesis Variable	H_0	*P*-value	Accept /Reject
H14	*CMA*	$\Upsilon_{14} = 0$	0.00**	Reject for P1 and P3 Portfolios
Ha14		$\Upsilon_{14} \neq 0$		

Note. * is used to indicate significance at the 5% level and ** indicates significance at the 1% level.

In Table 6, Asset Growth is not part of the 4th pooled OLS regression, however, it is useful in constructing five sets of portfolios on its basis. P1 constitutes of firms with least asset growth (20th percentile), P2 with the second least asset growth (40th percentile), and so on. As is evident, lower levels of asset growth are associated with lower levels of percent increase in market capitalization and vice-versa. Table 7 summarizes the hypothesis test results for variable – CMA related to investment policy.

The CMA variable represents the difference in asset investment rates between conservative (P1) and aggressive (P5) portfolios. When the CMA values are regressed in a pooled OLS against each of P1 through P5 with the dependent variable as percent change in market capitalization, P1 shows a statistically significant result as does P3 for CMA as independent, highlighting the role of investment policy in these portfolios. P4 and P5 show statistically insignificant results, presumably because they already have high levels of asset growth and the results show that larger negative CMA (larger difference between conservative and aggressive investment policy) is no more relevant in explaining the percent change in market capitalization. Figure 1 shows the asset growth data for the 2,250 firm- year observations as normally distributed.

Variables, hypothesis construction, associated *p*-values, hypothesis results, and associated objectives are appropriately summarized in Table 8, grouped by appropriate objectives.

Figure 1. Asset Growth Data Normally Distributed

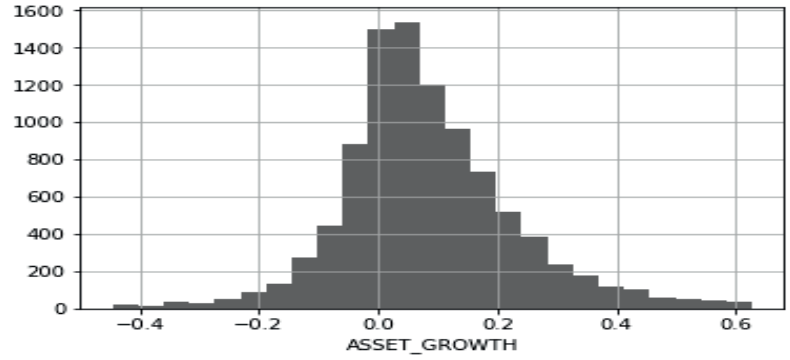

Table 8. Summary of Hypothesis Test Results

Sl. No.	Hypothesis Variable	H_0	*P*-Valve	Accept/Reject	Objective
H01	*LBETA*	$\Upsilon_1 = 0$	0.016*	Reject	Objective 1 (Risk and Return)
Ha1		$\Upsilon_1 \neq 0$			
H02	*ROA*	$\Upsilon_2 = 0$	0.000**	Reject	
Ha2		$\Upsilon_2 \neq 0$			
H03	*ROE*	$\Upsilon_3 = 0$	0.001**	Reject	
Ha3		$\Upsilon_3 \neq 0$			
H04	*DUMMY1*	$\Upsilon_4 = 0$	0.000**	Reject	
Ha4		$\Upsilon_4 \neq 0$			
H05	*Debt_Equity*	$\Upsilon_5 = 0$	0.000**	Reject	
Ha5		$\Upsilon_5 \neq 0$			
H06	*EPS*	$\Upsilon_6 = 0$	0.000**	Reject	Objective 2 (Investor Compensation)
Ha6		$\Upsilon_6 \neq 0$			
H07	*DPS*	$\Upsilon_7 = 0$	0.032*	Reject	
Ha7		$\Upsilon_7 \neq 0$			
H08	*INT_TA*	$\Upsilon_8 = 0$	0.059	Reject	
Ha8		$\Upsilon_8 \neq 0$			
H09	*TA*	$\Upsilon_9 = 0$	0.731	Accept	Objective 3 (Asset Efficiency)
Ha9		$\Upsilon_9 \neq 0$			
H10	*CA*	$\Upsilon_{10} = 0$	0.199	Accept	
Ha10		$\Upsilon_{10} \neq 0$			
H11	*ASSTO*	$\Upsilon_{11} = 0$	0.023*	Reject	
Ha11		$\Upsilon_{11} \neq 0$			
H12	*CASHTO*	$\Upsilon_{12} = 0$	0.027*	Reject	
Ha12		$\Upsilon_{12} \neq 0$			
H13	*CFO_SLS*	$\Upsilon_{13} = 0$	0.469	Accept	
Ha13		$\Upsilon_{13} \neq 0$			
H14	*CMA*	$\Upsilon_{14} = 0$	0.000**	Reject	Objective 4 (Investment Policy)
Ha14		$\Upsilon_{14} \neq 0$			

Note. * is used to indicate significance at the 5% level and ** indicates significance at the 1% level.

Discussion

(1) The *p* - value for the independent variable – L Beta is found to be less than 0.05, which implies that it positively impacts percent change in market capitalization. Levered beta being a proxy for risk reaffirms that higher levels of risk result in larger increases in market capitalization.

(2) The *p* - value for the independent variable – ROA is found to be less than 0.05, which implies that it positively impacts percent change in market capitalization. This reaffirms that higher levels of profit, as proxied by ROA, implies that the investors are rewarded by increased market capitalization for higher levels of ROA.

(3) The *p* - value for the independent variable – ROE is found to be less than 0.05, which implies that it positively impacts percent change in market capitalization. This reaffirms that higher levels of profit, as proxied by ROE, implies that the investors are rewarded by increased market capitalization for higher levels of ROE.

(4) The *p* - value for the independent variable – DUMMY 1 is found to be less than 0.05, which implies that it negatively impacts percent change in market capitalization, indicating that the presence of financial crisis in 2009–2010 was associated in a negative manner with the percent change in market capitalization.

(5) The *p*-value for the independent variable – debt to equity is found to be less than 0.05, which implies that it positively impacts percent change in market capitalization, indicating that higher leverage implies superior market capitalization.

(6) The *p* - value for the independent variable – EPS is found to be less than 0.05, which implies that it positively impacts percent change in market capitalization, indicating that EPS increases cause increase in percent change in market capitalization and vice-versa.

(7) The *p* - value for the independent variable – DPS is found to be less than 0.05, which implies that it positively impacts percent change in market capitalization, affirming that increases in dividend result in increased levels of returns required by investors (assuming reinvestment rates did not change).

(8) The *p* - value for the independent variable – INT _ TA is found to be more than 0.05, which implies that it did not impact percent change in market capitalization, which is not according to the classic finance theory that higher level of interest (implying higher level of debt) results in larger market capitalization. Perhaps, this calls for replacement of denominator in dependent variable from total assets to total debt, as total assets represent equity holders' stake also.

(9) The *p* - value for the independent variable – TA is found to be more than 0.05, which implies that it did not impact percent change in market capitalization, implying that size of firm does not play a role in determining percent change in market capitalization.

(10) The *p* - value for the independent variable – CA is found to be more than 0.05, which implies that it does not impact percent change in market capitalization, indicating that higher level of current assets do not impact percent change in market capitalization.

(11) The *p*-value for the independent variable – ASSTO is found to be less than 0.05, which implies that it

positively impacts the percent change in market capitalization, indicating that higher level of asset efficiency is important for rewarding investors with higher market capitalization.

(12) The *p* - value for the independent variable – CASHTO is found to be less than 0.05, which implies that it positively impacts the percent change in market capitalization, indicating that higher level of cash management is important for rewarding investors with higher market capitalization.

(13) The *p* - value for the independent variable – CFO_ SLS is found to be more than 0.05, which implies that it positively impacts the percent change in market capitalization, indicating that higher level of cash flow from operations scaled by sales is important for rewarding investors with higher market capitalization.

(14) The *p* - value for the independent variable – CMA is found to be less than 0.05, which implies that it positively impacts percent change in market capitalization, indicating that investment policy is important for rewarding investors with higher market capitalization.

Conclusion

Market capitalization is very crucial and needs measurement. This paper examines the factors that impact the percent change in market capitalization of manufacturing firms in India during the years 2009–2018. This research groups variables into four categories or classes, that is, risk and return, investor compensation, asset efficiency, and investment policy. It is found that Levered Beta, ROA, ROE, dummy, and debt to equity impact the dependent variable in a statistically significant manner, implying that higher level of risk does increase the level of return in a firm, a finding which is consistent with the findings of Sar (2019) that leverage impacted financial performance positively and Vijaylakshmi (2019) that higher level of risk did indeed give higher level of returns. Profitable firms with higher ROA and ROE are more likely to be rewarded with superior market capitalization according to the findings in this research. Furthermore, EPS and DPS statistically impact the percent change in market capitalization, a finding which is consistent with the observations of Poornima, Morudkar, and Reddy (2019) on dividend announcements in private sector banks of India as well as with Nadig (2017), who found significant abnormal returns in banking stocks upon dividend announcements. INT_TA did not, implying that compensation to equity holders plays a role in the increased level of market capitalization, while interest payments to debt holders did not. While the absolute levels of total and current assets do not play a role in the percent increase in market capitalization, the cash and asset turnover ratios do, implying that firms which manage assets more efficiently see greater rewards to investors via superior market capitalization. Finally, firms which invest more in assets see larger percent change in market capitalization than firms which invest less.

Research Implications

From this research, it is clear that the variables related to risk such as the levered beta and the debt to equity ratio do indeed play a role in boosting market capitalization, and this information is useful for managers to apply in the course of their financial policy decision making. Variables related to return such as ROA and ROE are found to be crucial in increasing market capitalization and should ,therefore, be on managers' radar at all times.

Further, variables related equity compensation to investors play a role in increased market capitalization of firms. Therefore, managers should devise appropriate dividend policies so that the market capitalization of the firms may increase with time. This is particularly true in the context where tax implications exist on dividend distribution. In addition, variables related to asset efficiency do play an important role in increasing firm market

capitalization, and thus, managers should try to boost efficiency of fixed and current assets, while keeping as low a level of cash as possible. Finally, on the variable related to investment policy, managers should invest as much as possible into the business, as asset growth has been shown to reward equity investors through higher market capitalization.

Limitations of the Study and Scope for Further Research

The study is limited to 250 selected Indian manufacturing companies for a period of 10 years from 2009–2018, both years included. Further studies could use a different geography, or different sectors to perform similar analysis and compare the results. In addition, more variables related to the four classes of inputs could be added to each class, thereby creating more explanatory power for the dependent variable.

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