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Influence of Market Capitalisation in Quality Investing: A Comparative Study of Large cap and Small cap Indian Stocks

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ABSTRACT

This research proceeds to analyse the role of market capitalization in quality investing by comparing "Large Capital and Small Capital Companies" in the Indian equity markets. In addressing companies whose fundamentals present a strong balance sheet, debt levels that can be managed, and positive cash flows, quality investing has largely been associated with larger-induced stocks. Nevertheless, this research seeks to investigate some key aspects of quality investing criteria such as Return on Equity (ROE), Compounded Profit Growth and Novy-Marx Gross Profitability through a comparison depending on market capitalization. Over 5 years (2019-2024), using a sample of 100 companies and filtering it to 26 companies consisting of 16 large-cap and 10 small-cap from the Nifty 100 and Nifty SmallCap 100 indices, the study employs statistical tests to evaluate the differences in financial performance across these two market segments. The findings reveal that large-cap companies exhibit significantly higher ROE compared to small-cap firms, but no significant differences are observed in profit growth or gross profitability. In addition, both large and Small Capital stocks are over-valued where both the capitalisation types do not show significant difference between the degrees of overvaluation. The present study enhances the existing literature on market capitalization and quality investing as well as provides recommendations on the possible approach for the investors interested in both large and small-cap segments.

Keywords: Quality investing, Market capitalization, Large-cap companies, Small-cap companies, Return on Equity (ROE), Profit Growth, Gross profitability, Overvaluation, Indian equity market.

INTRODUCTION

Quality investing is a strategy focused on identifying companies with stable and long- term profits, strong fundamentals, balanced capital structure, lower leverage and possessing a competitive advantage. This type of investing focuses on buying productive and high- quality stocks without paying premium as compared to values strategies which include getting moderate quality stocks at a discount. The companies considered in quality stocks generally possesses one or many of these characteristics like strong brand equity, market leadership, brand innovation etc.

Although quality investing has historically been linked to large-cap companies, recent research has looked into how this strategy can be applied to equities of all market capitalizations, including small-cap ones. With possible ramifications for risk management and portfolio creation, the subject of whether market capitalization affects the effectiveness of quality investment strategies is still one that requires careful investigation.

QUALITY STRATEGIES

A) Graham's Quality

Benjamin Graham, known for value metrics like price-to-earnings ratios, emphasized not just buying cheap stocks but **buying high-quality firms at undervalued prices**. He outlined **seven key criteria** to assess a firm's quality and value:

1. **Adequate size** for economic resilience.
2. A current ratio above two and net current assets greater than long-term debt indicate **sound financial standing.**
3. **Stability of earnings**, with ten years in a row of positive earnings.
4. A **20-year history of dividend** payments.
5. **EPS Growth** of at least one-third in the past decade.
6. A **P/E ratio below 15**.
7. A **P/B ratio below 1.5**.

These criteria ensure quality firms are bought at reasonable prices. A **Graham score** (G-score) from 0 to 5 is assigned to each stock based on five of these criteria, where a higher score signals better quality for stock selection.

B) Grantham's Quality

According to his company GMO, Grantham's philosophy of quality investing places a strong emphasis on funding businesses with **low levels of leverage, high profitability, and stable earnings**. According to GMO's 2004 white paper, these companies perform better over extended holding times. This is further supported by a 2012 study by GMO, which found that the average ROE of the least leveraged enterprises is 5% greater than that of highly leveraged firms. Major indices like the Russell Defensive Indexes and MSCI Quality Indices, which give **high ROE, steady earnings growth, and low leverage** top priority when evaluating quality companies for long-term investment returns, have been impacted by Grantham's ideas.

C) ROIC (Return on Invested Capital)

By classifying businesses according to **Return on Invested Capital (ROIC)** for quality and **Earnings Yield** (EY) for value, Joel Greenblatt's **Magic Formula** blends quality and value. Similar to Benjamin Graham's concept of identifying quality companies at attractive valuations, the strategy entails purchasing high-quality corporations at discounted costs.

D) Sloan's Earning Quality

Timothy Sloan created Sloan's quality measure in 1996. It evaluates the quality of earnings by dividing the difference between **net income and cash flow from operations** by total assets, or accruals.

A **high accruals measure** indicates lower earnings quality, suggesting reliance on non-cash earnings, while a **low measure** suggests higher quality and more sustainable earnings. This metric helps investors identify companies with reliable earnings and avoid those with aggressive accounting practices.

E) Financial Strength

Piotroski's F-Score is a financial metric developed by Joseph Piotroski to assess the strength of undervalued companies. It consists of **nine criteria** across three categories:

Profitability: Positive operating cash flow, positive net income, positive return on assets (ROA), and operational cash flow that is higher than net income.

- **Leverage/Liquidity:** Lower long-term debt than the previous year and an improving current ratio.
- **Operating Efficiency:** Gross margin and asset turnover higher than the previous year.

Scores range from 0 to 9, with higher scores (above 6) indicating better financial health and potential investment opportunities.

F) Gross Profitability

In his 2013 study, "Novy-Marx"9 shows that **gross profits-to-assets**, a straightforward quality indicator, has comparable predictive power to classic value metrics like book-to-price.

By investing in profitable companies and divesting unprofitable ones, investors can benefit from a **gross profitability premium**, which is total revenues less the costs associated with generating those revenues relative to assets.

G) Defensive Equities

Defensive equities are stocks from companies that remain stable or perform well during economic downturns, characterized by:

- **Stable Earnings**: Consistent revenue and earnings regardless of economic conditions.
- **Low Volatility**: Lower price fluctuations compared to the overall market.
- **Dividend Payments**: Regular dividends provide income during market downturns.

LITERATURE REVIEW

Definition and Metrics of Quality Investing:

"Jonna Laine (2020)'[4] and other researchers define quality investing as selecting stocks based on profitability, low earnings volatility, and financial health. Metrics such as Grantham's quality score, ROIC, and Piotroski's F-score are commonly used to identify high-quality stocks."

Studies by 'Louis Florentin-Lee (2023)'[2] and 'Frederic Lepetit et al. (2021)'[1] emphasize the importance of financial productivity and market capitalization in sustaining high-quality performance. Large-cap companies, benefiting from scale and competitive advantages, are more likely to maintain high financial productivity than smaller firms.

Impact of Market Capitalization:

"Lepetit et al. (2021)'[1]highlight that market capitalization impacts stock performance, especially during crises like the Global Financial Crisis and the COVID-19 pandemic. High-quality large-cap and mid-cap stocks had a better performance than small-cap stocks in such times."

'Georgi Kyosev et al. (2021)' contrast industry and academic definitions of quality investing, finding that academic variables (e.g., operating and gross profitability) predict performance more accurately than industry variables (e.g., ROE).

Combining Quality with Other Strategies:

Research by 'Jason Hsu et al. (2017)'[5] and 'Vaibhav Lalwani and Madhumita Chakraborty (2018)'[10] suggests that combining quality metrics with other investment strategies, such as value investing, can yield superior results. These studies highlight the diversity of quality portfolios and the significance of reliable indicators such as F-score and gross profitability.

Regional and Market-Specific Insights:

Studies focusing on specific markets, such as those by 'Chi Cheong Allen Ng and Jianfu Shen (2019)'[17] in Asian markets and 'Vaibhav Lalwani and Madhumita Chakraborty (2018)'[10] in the Indian market, find that high-quality stocks

generally yield positive returns. These studies also highlight the positive role of institutional investors and market conditions in shaping the performance of quality stocks.

Integration with ESG and Other Factors:

Otero González et al. (2023)'[3] and 'Dan Hanson and Rohan Dhanuka (2015)'[16] advocate for integrating ESG factors and other qualitative measures into quality investing strategies. This approach enhances long-term performance by identifying companies with durable business models and responsible management practices.

RESEARCH OBJECTIVES

1. Main Objective – To compare the stocks of "Large Capital and Small Capital Companies" in the Indian equities market in order to comprehend how market capitalization affects the performance of quality investing measures. The study will focus on the differential effectiveness of quality metrics such as Novy-Marx gross profitability, ROIC, Piotroski's F-score across market cap segments and during varying market conditions.

2. Sub Objectives –
   - To understand the impact of Market Capitalisation on Return on Equity
   - To understand the impact of Market Capitalisation on Earnings Growth.
   - To understand the impact of Market Capitalisation on Novy – Marx Gross Profitability.
   - To understand the impact of Market Capitalisation on valuation of the CMP of a stock based on the market price in National Stock Exchange (NSE)

HYPOTHESIS

H01: Return on Equity for Large-Cap stocks is not significantly higher than Small-Cap stocks.

H02: Compounded Profit Growth for Large-Cap stocks is not significantly higher than Small-Cap stocks.

H03: Compounded Novy Marx Gross Profitability for Large-Cap stocks is not significantly higher than Small-Cap stocks.

H04: There is no significant difference in the degree of overvaluation/undervaluation in Large-Cap stocks and Small-Cap stocks.

METHODOLOGY

Dataset Selection:

This study focuses on a sample size of 200 companies with 100 stocks from the Nifty 100 and Nifty SmallCap 100 indices each, to examine the effectiveness of quality investing metrics across different market capitalization segments. A step-by-step process was used to classify companies into quality stocks and select those for further analysis, with an emphasis on sector classification and specific financial metrics.

Sector Classification:

Companies were grouped into financial and non-financial sectors. Financial firms, such as banks, typically operate with high leverage, which is distinct from the structure of non-financial companies. Since quality investing prioritizes firms with lower leverage, the analysis focuses **exclusively** on non-financial companies.

Metrics for Company Selection:

A decision was reached on the valuation approach after several indicators were considered:

1. **Return on Equity (ROE):** Traditionally, the financial metric ROE assesses how well a corporation employs its equity investments to turn a profit for shareholders. Companies with a five-year ROE that is greater than the industry mean are regarded for their impressive profitability.

2. **Piotroski F-Score:** This is a measurement of nine metrics that show how profitable, liquid, and efficient a business is. Due to their superior quality attributes, companies with a score of seven or higher were included in the study.
3. **Debt-Equity Ratio:** A low debt-to-equity ratio, which shows that the business is less reliant on debt, is indicative of financial soundness. According to the standards for identifying quality enterprises, companies with a debt-to-equity ratio below two were selected.
4. **Return on Capital Employed (ROCE):** ROCE measures the efficiency with which the firm deployed its capital. Companies that have shown a consistent increase in ROCE over five years are recognized as strong candidates for selection.
5. **Free Cash Flow (FCF):** This is the net cash flow available to a firm after capital expenditures have been settled, thus indicating the financial strength of a company. Particularly the companies whose recent year FCF was higher than the five-year average were picked.
6. **Compound Annual Growth Rate (CAGR):** This shows in some indicators greater growth potential in companies over time. Companies whose latest year CAGR was higher than the five years index of Nifty 100 CAGR are eligible.

Using the above given measures, quality stocks filtered out from both the market capitalisation were, 16 stocks from Large – Capital and 10 stocks from small – capital. These stocks were then compared based on other quality strategies, to see if there lies a difference between level of presence of quality metrics within quality stocks due to market capitalisation.

Quality Metrics Based on Scholarly Recommendations:

Insights from Grantham, who highlights characteristics of quality stocks including **minimal leverage, strong profitability, and low earnings volatility**, are used into the technique to further evaluate the 26 stocks. Return on equity and earnings growth over time are used in this study to evaluate quality. Because it consistently predicts returns that are equivalent to more conventional value measures like the book-to-price ratio, **Novy-Marx's Gross Profitability metric**—which is computed as gross profit divided by total assets—is also included.

Comparative Analysis Across Market Capitalization Segments:

The study compares “Large Capital and Small Capital Companies” to analyze the impact of market capitalization on quality metrics with the help of JAMOVI software. The comparison focuses on Return on Equity, Growth in Earnings, and Novy-Marx Gross Profitability, providing insights into whether market capitalization influences the effectiveness of quality investing strategies.

Statistical Methods Employed:

An **Independent Sample T-test** was used to measure the statistical significance of market capitalization on the following dependent variables:

- **Return on Equity (ROE):** Hypothesis Set 1
- **Compounded Profit Growth:** Hypothesis Set 2
- **Compounded Novy-Marx Gross Profitability:** Hypothesis Set 3
- **Degree of Overvaluation:** Hypothesis Set 4

The independent variable in each test is market capitalization. Following a thorough filtering process of 100 companies from each index based on the specified criteria over a 5-year period (2019-2024), a final sample of 26 companies was shortlisted, comprising 10 small-cap and 16 large-cap companies.

Overvaluation and Undervaluation Assessment:

To determine whether a stock is overvalued or undervalued, the Graham’s Number was calculated using the formula:

$$GrahamNumber = \sqrt{22.5 \times EPS \times BVPS}$$

This value was divided by the closing market price of the stock as on 1st April 2024. If the ratio is above 1, it presents overvaluation and if it is lower than 1, then undervaluation.

DATA ANALYSIS & FINDINGS

Data set for different metrics were noted to be different in nature in terms of normality, hence the independent sample t – test used for different metrics vary according to their normality condition:

a) 5 - year Return on Equity Data: Not Normal, hence Mann - Whitney U test was used. *'Figure a. 5 - year Return on Equity Normality Test'* shows that the data for the metric is non-parametric.
b) 5 – year Compounded Profit Growth: Not Normal, hence Mann - Whitney U test was used. *'Figure b. 5 - year Compounded Profit Growth Normality Test'* shows that the data for the metric is non-parametric.
c) Novy - Marx 5 - year Gross Profitability CAGR: Normal but not Homogenous, hence Welch's t-test was used. *'Figure c. Novy - Marx 5 - year Gross Profitability CAGR Normality Test'* and *'Figure d. Novy - Marx 5 - year Gross Profitability CAGR Homogeneity Test'* shows that the data for the metric is normal but nor homogenous.
d) CMP/ Graham's Number: Overvalued/(Undervalued): Not Normal, hence Mann-Whitney U test was used. *'Figure e. CMP/ Graham's Number: Overvalued/(Undervalued) Normality Test'* shows that the data for the metric is non-parametric.

Tests of Normality			
		statistic	p
5 year Return on Equity	Shapiro-Wilk	0.7625	< .0001

Fig a. 5 - year Return on Equity Normality Test

Tests of Normality			
		statistic	p
5 year Compounded Profit Growth	Shapiro-Wilk	0.7712	< .0001

Fig b. 5 - year Compounded Profit Growth Normality Test

Tests of Normality			
		statistic	p
Novy - Marx 5 year Gross Profitability CAGR	Shapiro-Wilk	0.9746	0.7428

Fig c. Novy - Marx 5 - year Gross Profitability CAGR Normality Test

eneity of Variances Tests					
		F	df	df2	p
- Marx 5 year Gross Profitability CAGR	Levene's	4.4622	1	24	0.0452

ig d. Novy - Marx 5 - year Gross Profitability CAGR Homogeneity Test

Tests of Normality			
		statistic	p
CMP/ Graham's Number: Overvalued/(Undervalued)	Shapiro-Wilk	0.6073	< .0001

Fig e. CMP/ Graham's Number: Overvalued/(Undervalued) Normality Test

A) Impact of Market Capitalisation on Return on Equity –

The output of the test has p value < 0.05 '*Figure f. Return on Equity comparison*', which means we **reject H0.** Therefore, Return on Equity for Large-Capital stocks is significantly higher than Small-Capital stocks.

Independent Samples T-Test			
		Statistic	p
5 year Return on Equity	Mann-Whitney U	46.5000	0.0406
Note. H_a $\mu_{Large} > \mu_{Small}$			

Fig f. Return on Equity comparison

B) Impact of Market Capitalisation on Compounded Profit Growth –

The output of the test has p value > 0.05 '*Figure g.1 Profit Growth comparison*', which means we **accept H0.** Therefore, Compounded Profit Growth for Large-Capital stocks is not significantly higher than Small-Capital stocks.

Independent Samples T-Test

		Statistic	p
5 year Compounded Profit Growth	Mann-Whitney U	66.0000	0.7777

Note. H_a $\mu_{Large} > \mu_{Small}$

Fig g.1 Profit Growth Comparison

This is because there is no significant difference '*Figure g.2 Profit Growth comparison*' between Profit CAGR for small-cap and large-cap stocks.

Independent Samples T-Test

		Statistic	p
5 year Compounded Profit Growth	Mann-Whitney U	66.0000	0.4766

Note. H_a $\mu_{Large} \neq \mu_{Small}$

Fig g.2 Profit Growth Comparison

C) Impact of Market Capitalisation on Compounded Novy Marx Gross Profitability –

The output of the test has p value > 0.05 '*Figure h.1 Novy Marx Gross Profitability comparison*', which means we **accept H0.** Therefore, Compounded Novy Marx Gross Profitability for Large-Capital stocks is not significantly higher than Small-Capital stocks.

Independent Samples T-Test

		Statistic	df	p
Novy - Marx 5 year Gross Profitability CAGR	Welch's t	−0.1341	14.2499	0.5524

Note. H_a $\mu_{Large} > \mu_{Small}$

Fig h.1 Novy Marx Gross Profitability comparison

This is because there is no significant difference '*Figure h.2 Novy Marx Gross Profitability comparison*' between Gross Profitability for small-cap and large-cap stocks.

Independent Samples T-Test

		Statistic	df	p
Novy - Marx 5 year Gross Profitability CAGR	Welch's t	−0.1341	14.2499	0.8952

Note. H_a $\mu_{Large} \neq \mu_{Small}$

Fig h.2 Novy Marx Gross Profitability comparison

D) Impact of Market Capitalisation on valuation of a company –

Out of the 26 quality stocks filtered out, using Graham's number, it was found out that 90% of small-capital stocks and 87.5% of large-capital stocks were overvalued. This indicates the stocks listed in National Stock Exchange are generally overvalued. While comparing "Large Capital and Small Capital Companies" stocks indicates that there is no significant difference '*Figure i.2 Valuation Comparison'* in the degree of overvaluation of stocks in the "Large Capital and Small Capital Companies" stocks.

Independent Samples T-Test			
		Statistic	p
CMP/ Graham's Number: Overvalued/(Undervalued)	Mann-Whitney U	71.0000	0.3299
Note. H_a $\mu_{Large} > \mu_{Small}$			

Fig i.1 Valuation Comparison

Independent Samples T-Test			
		Statistic	p
CMP/ Graham's Number: Overvalued/(Undervalued)	Mann-Whitney U	71.0000	0.6599
Note. H_a $\mu_{Large} \neq \mu_{Small}$			

Fig i.2 Valuation Comparison

CONCLUSION

Impact of Market Capitalization on Return on Equity (ROE):

According to the study, the Return on Equity (ROE) of large-capital corporations is substantially higher than that of small-capital enterprises.

This shows that Large Capital firms are more efficient at generating profits from their shareholders equity as compared to the Small Capital firms. This is due to their expanded capacity and operational efficiency which gives them a competitive advantage. Positive attributes like economies of scale, large market share, economic moat etc., leads to higher profitability levels with lower leverage thus providing higher returns on the shareholders equity.

Impact of Market Capitalization on Compounded Profit Growth:

While large-cap companies showed higher ROE, the research revealed no significant difference between “Large Capital and Small Capital Companies” in terms of compounded profit growth. This suggests that while large-cap firms may generate higher profits from equity, small-cap companies are still capable of similar growth rates in profits over time. This finding gives a hope for the future potential of Small Capital companies. This shows that though Small Capital companies are not very efficient in getting return from the shareholders equity yet, the companies through economic expansion and leveraging niche markets can provide higher profitability overtime does leading to higher Returns

Impact of Market Capitalization on Compounded Novy-Marx Gross Profitability:

Additionally, the study found no discernible difference between "Large Capital and Small Capital Companies" in terms of compounded Novy-Marx gross profitability. The ability of a business to turn a profit in relation to its assets is evaluated using Novy-Marx's gross profitability indicator.
The lack of difference implies that both “Large Capital and Small Capital Companies” firms can be equally efficient in utilizing their assets to generate profits.
The finding has therefore refuted one of the quality measures by Novy- Marx entirely and challenged the widely accepted notion that large companies are more efficient at generating returns from their assets and provided a hope that small forms can also achieve similar operational success.

Impact of Market Capitalization on Overvaluation:

The study found that the majority of stocks—both “Large Capital and Small Capital Companies”—were overvalued in the Indian stock market. Specifically, 87.5% of large-capital stocks and 90% of small-capital stocks

were overvalued based on Graham's number, which measures a stock's intrinsic value. However, this was noted that there is no significant difference between the overvaluation on the basis of market capitalisation, hence it can be said that Indian market overall displays this sentiment. This overvaluation could pose risks for investors who prioritize value, as overpaying for stocks can erode future returns.

Broader Implications for Quality Investing:

The research suggests that market capitalization plays a role in quality investing, particularly with respect to profitability (ROE). Large-cap firms tend to offer more stable and predictable returns, which aligns with the principles of quality investing that emphasize stable earnings and strong financial fundamentals. However, small-cap companies still present potential growth opportunities and operational efficiency, as demonstrated by the findings on profit growth and gross profitability. For investors, this implies that while large-cap firms may be seen as "safer" investments due to their higher ROE and market stability, small-cap firms should not be discounted, especially for those looking to capitalize on growth opportunities and gross profitability. A diversified approach, combining both "Large Capital and Small Capital Companies" firms with strong quality metrics, may provide a balanced investment strategy.

LIMITATIONS

a) Data Size for analysis:

The analysis could only be conducted on a relatively small data size of 26 companies (16 large-cap and 10 small-cap), which may not be representative of the entire Indian stock market. A larger data size would provide more robust and generalizable results across different sectors and market segments. With only 10 small-cap companies, the findings for small caps may lack statistical power.

b) Sector Focus:
The research excluded financial companies, which are a significant part of the stock market. Different operating structures and levels of leverage are characteristics of financial businesses, especially banks, and are essential to comprehending the wider ramifications of sound investing practices.
Since financial firms typically have high leverage, their exclusion limits the generalizability of the findings to all sectors.

c) Limited Quality Metrics:
Return on Equity (ROE) was one of the primary measures that the study mostly relied on, Compounded Profit Growth, and Novy-Marx Gross Profitability to assess quality. However, quality investing involves a broader range of factors such as management quality, earnings stability, debt levels, cash flow generation, and ESG (Environmental, Social, Governance) factors. By focusing on a limited set of metrics, the research may overlook other dimensions of quality that could influence the performance of small-capital versus large-capital companies.

d) Data Normality Issues:
The majority of the data sets were subjected to a Mann-Whitney U test, which is a non-parametric test even though it is appropriate, because of the non-normal distribution of the data.

Non-parametric tests are less sensitive to variations in data and may not detect smaller but meaningful differences between "Large Capital and Small Capital Companies". A more normal dataset or additional tests could provide deeper insights and more nuanced findings.

FUTURE SCOPE OF RESEARCH

To delve further into the topic of quality investing, the below mentioned topics can be covered.

1. Impact of Market Cycles and Macroeconomic Conditions: One significant avenue for future research is understanding how quality investing performs across different market cycles (bull and bear markets) and macroeconomic environments in India. Indian markets are often influenced by factors such as inflation, interest

rate changes, and foreign direct investments, which may affect both "Large Capital and Small Capital Companies" differently. Future research could analyze how quality metrics such as Novy-Marx gross profitability, ROIC, and Piotroski's F-score perform during periods of economic expansion versus contraction. Furthermore, the interaction between global economic pressures (e.g., oil prices, geopolitical tensions) and domestic quality strategies could offer critical insights, especially given India's integration into the global economy.

2. Sectoral and Industry-Specific Performance: Another rich area for exploration lies in sector-specific applications of quality investing. The Indian economy is diverse, with sectors like technology, pharmaceuticals, infrastructure, and consumer goods playing a dominant role. Future studies could investigate how the effectiveness of quality metrics varies across sectors. For example, gross profitability might be a more effective predictor in capital-intensive industries like infrastructure, while metrics like ROIC or Piotroski's F-score could yield better results in technology or service-oriented sectors. Cross-sector analysis will also enable a more granular understanding of which quality factors are most relevant for different industry risk profiles and business models.

3. Quantitative Models and Machine Learning in Quality Investing: With the advent of artificial intelligence and machine learning, future research could adopt more quantitative methods to assess the predictive power of quality metrics in the Indian market. Algorithms could be employed to identify patterns in the historical performance of quality strategies across different market cap segments and generate insights into the optimization of quality metrics. Machine learning models could be used to simulate various market scenarios and provide a forward-looking view on the effectiveness of quality investing under different conditions, which would greatly enhance the robustness of traditional methods of stock analysis.

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APPENDIX

Table 1: Quality stocks filtered from Nifty 100

Company	CMP	Mar Cap [Rs. Cr.]	ROE [%]	ROE 5yr [%]	Earnings Yield [%]	F-Score	Avg FCF 5yr	D/E	FCF	Leverage	Graham's	Overvalu	5yrs return [%]
HCL Technologies	1543.55	484077.15	23.3	22.36	4.82	7	16547.4	0.08	21432	1.41	585.3	2.6371946	27.93
Sun Pharma.Inds.	1629.25	455489.75	16.69	13.79	2.77	9	6122.204	0.05	9964.01	1.3	508.46	3.2042835	36.43
Tata Motors	992.25	365567.01	49.44	5.84	9.75	8	11753.656	1.26	36732.82	4.15	764.19	1.2984336	52.63
Bajaj Auto	9042.15	352469.18	26.48	21.81	2.98	7	4053.512	0.07	5847.47	1.29	2578.18	3.5071834	33.67
Power Grid Corpn	280.15	339890.57	19	18.59	6.07	7	23032.188	1.42	25885.76	2.89	304.33	0.9205468	26.81
Trent	3886.8	278894.13	27.16	9.46	0.67	8	323.11	0.43	955.24	1.87	351.49	11.058067	73.58
Adani Power	560.45	256621.43	57.06	39.21	7.12	8	6067.954	0.8	11568.26	2.06	773.46	0.7246011	58.27
Siemens	5462.9	252035.21	15.36	12.35	1.32	8	994.72	0.01	1047.5	1.57	252.56	21.630108	36.22
Bharat Electron	211.1	212349.07	26.27	22.08	2.79	9	2947.21	0	4015.49	2.3	53.97	3.9114323	51.79
A B B	6504.65	171018.53	22.92	14.06	1.3	9	605.344	0.01	1168.4	1.71	714.01	9.1100265	42.63
Eicher Motors	3946.65	136872.77	24.23	18.84	4	7	1654.462	0.02	2909.35	1.17	2448.32	1.6119829	22.93
Cipla	1498.65	130971.21	16.79	13.5	4.76	7	2522.484	0.02	2818.78	1.16	629.84	2.3794138	29.85
Torrent Pharma.	2675.35	115482.55	24.23	21.39	2.29	9	1837.696	0.59	2966.96	2.12	207.05	12.921275	32.15
Bosch	30282.3	109544.98	15.97	12.77	2.28	8	583.46	0	926.7	1.39	497.29	60.894649	21.55
Zydus Lifesci.	999.8	107465.79	20.67	19.79	5.11	8	1916.38	0.04	2345	1.37	429.34	2.3286905	34.62
Colgate-Palmoliv	2716.2	100591.17	74.52	67.63	1.92	8	1080.422	0.04	1123.43	1.62	198.3	13.697428	19.08

Table 2: Quality Stocks filtered from Nifty SmallCap 100

Company	CMP	Mar Cap [Rs. Cr.]	ROE [%]	ROE 5yr [%]	Earnings Yield [%]	P-Score	Avg FCF 5yr	D/E	FCF	Leverage	Graham's	Overvalu	5yrs return [%]
Tata Inv.Corpn.	6556.1	34890.26	1.55	1.36	1.2	8	157.816	0	234.68	0.9	3118.4	2.1023923	52.83
M R P L	218.55	31159.48	31.93	13.36	11.73	8	2025.988	0.96	5503.46	2.66	25.81	8.4676482	29.88
C D S L	918.85	30697.92	31.31	26.36	2.07	7	172.42	0	312.55	1.11	160.74	5.7163743	69.92
NBCC	83.2	30436.2	24.85	17.08	3.1	8	60.292	0	68.34	5.78	215.09	0.3868148	35.88
Cyient	2006.7	21859.51	18.84	16.12	4.91	7	567.6	0.18	647.9	1.58	184.95	10.849689	34.15
NCC	232.35	19234.08	11.41	8.21	9.22	7	963.084	0.15	1108.67	2.61	168.26	1.3808986	39.33
GE Shipping Co	997.35	17219.15	21.01	14.97	20.84	7	1691.43	0.25	2372.78	1.29	285.49	3.4934674	33.6
Birlasoft Ltd	761.75	17018.75	22.48	16.91	5.26	7	442.732	0.03	699.08	1.17	239.31	3.1831098	53.36
Titagarh Rail	937	16820.75	18.13	7.36	2.82	7	4.638	0.07	77.73	1.18	289.11	3.2409573	87.78
Olectra Greentec	1915	13622.53	8.77	4.82	1.16	9	-22.964	0.13	63.96	1.72	423.48	4.5219373	52.46

Table 3: 5-year metrics and valuation multiple for Smallcap companies

Company Name	Market Cap	5 year Return on Equity	5 year Compounded Profit Growth	Novy - Marx 5 year Gross Profitability CAGR	CMP/ Graham's Number: Overvalued/(Undervalued)
Tata Inv.Corpn.	Small	0.01	0.24	-0.09	2.1024
M R P L	Small	0.13	0.60	0.17	8.4676
C D S L	Small	0.26	0.30	0.13	5.7164
NBCC	Small	0.17	0.07	-0.01	0.3868
Cyient	Small	0.16	0.09	-0.03	10.8497
NCC	Small	0.08	0.03	-0.04	1.3809
GE Shipping Co	Small	0.15	1.94	0.10	3.4935
Birlasoft Ltd	Small	0.17	0.18	0.05	3.1831
Titagarh Rail	Small	0.07	0.84	0.15	3.2410
Olectra Greentec	Small	0.05	0.47	0.14	4.5219

Table 4: 5-year metrics and valuation multiple for Large-Cap companies

Company Name	Market Cap	5 year Return on Equity	5 year Compounded Profit Growth	Novy - Marx 5 year Gross Profitability CAGR	CMP/ Graham's Number: Overvalued/(Undervalued)
HCL Technologies	Large	0.22	0.09	0.02	2.6372
Sun Pharma.Inds.	Large	0.14	0.23	0.09	3.2043
Tata Motors	Large	0.06	0.93	0.04	1.2984
Bajaj Auto	Large	0.22	0.11	0.03	3.5072
Power Grid Corpn	Large	0.19	0.08	0.05	0.9205
Trent	Large	0.09	0.57	0.14	11.0581
Adani Power	Large	0.39	0.88	0.19	0.7246
Siemens	Large	0.14	0.21	0.12	21.6301
Bharat Electron	Large	0.22	0.16	-0.05	3.9114
A B B	Large	0.14	0.20	0.09	9.1100
Eicher Motors	Large	0.19	0.13	-0.04	1.6120
Cipla	Large	0.14	0.25	0.04	2.3794
Torrent Pharma.	Large	0.21	0.22	0.06	12.9213
Bosch	Large	0.13	0.03	-0.02	60.8946
Zydus Lifesci.	Large	0.20	0.17	0.05	2.3287
Colgate-Palmoliv	Large	0.68	0.12	0.03	13.6974