

Selecting Valuable Long-Term Stocks A Sorting Exercise Using Fundamental Analysis

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Abstract

Investors are always looking for good quality stocks that have potential to outperform the market by giving excess return in the future. There are various tools available for selecting the stocks as well as there are research studies available on selecting the tools for picking up the stocks. But all these research focuses on only one tool or at times on some combination of tools. Some studies also focus on machine learning, artificial intelligence and building algorithms. But for retail investors using these tools is a challenging task. So, in this research an attempt is made to select the good quality stock by applying some basic filters using fundamental analysis. In Fundamental analysis, stocks future price movement can be predicted based on its financial statements. With help of various factors like the returns provided by the company in the past, the ability of management and financial ratios, one can predict which company can perform well in the future. Therefore, in this study an attempt is made to help the investors to select the winning stocks so that they can maximize the returns and minimize the risk by investing in financially strong companies. In this study the stocks are sorted at two levels. The first level is applying basic filters and the second level is of applying advanced filters. The parameters used for basic filters are financial ratios like ROCE, debt to equity, dividend payout ratio etc. and the parameters used for advanced filters are the financial scores like Altman's Z-score, Piotroski F-score and G-score. The main objective of this study is to pick the debt free stocks or stocks with very low debt funds that can give very healthy returns in the future. From this research it can be concluded that with proper knowledge and calculated risk, investors can make money consistently with the help of

the strategy which is used for filtering the stocks.

Keywords

Filters, Financial scores, Fundamental Analysis, Long-term investment, Sorting

1. Introduction

Stock markets across the globe are witnessing an increased interest of retail investors in the stock market. As per Business Line report dated May 20, 2021, the share of retail investors in India has increased from 6 per cent in December 2019 to 7 per cent by December 2020. Besides the impact of pandemic and lockdown, investors are still ardent to stock markets. Investors have an ocean of stocks available for investment but the crucial work is the selection of stocks for their investment. Practically it is unrealistic for an investor to participate in the entire market of tradeable securities. Therefore, a selection mechanism needs to be employed to reduce the number of possible securities competing for investment.

Investing in good quality stocks at the right price and holding them for a reasonable period is the best way for wealth creation. Picking the right stocks is often considered as one of the most complex activities in the world. However, with perseverance, hard work, passion and dedication towards the stock market this activity can be simplified. In this study various easy-to-implement methods and practical solutions to earn consistently in the stock market are discussed. Fundamental analysis is always used for picking the winning long-term stocks. Fundamental analysis focuses on the intrinsic or

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fundamental value of the shares. A company with good fundamental records has a potential to create sustainable wealth. With the help of fundamental analysis investors can sort and select the valuable shares from the junk ones. Winning stocks as well as the junk stocks exhibit few common traits. Fundamental analysis helps in identifying these traits with help of some easily available basic tools. Information required for doing fundamental analysis can be obtained from any or all of the following source:

- **Annual report of the company:**

All the information needed for the analysis of the company is available in its annual report. Annual reports are available in public domain and anyone can have an access to it through the company's website.

- **Chambers of commerce or associations and exchanges:**

Chambers of commerce, ministries and industry associations provides valuable information related to the industries, sectors and companies.

- **Business news websites:**

Most of the data is easily available on free websites like money control, screener, trading economics, equity master, economic times or financial times. All these websites contain huge amount of freely accessible data tools which can help the investors to perform fundamental analysis. Investors should always keep themselves updated with any latest corporate actions or announcements. For this information also the financial websites can be accessed. In this study the financial ratios are taken from such websites.

2. Purpose of the Study

The purpose of this study is to select fundamentally strong stocks so that the retail investors can maximize the profit by achieving extraordinary returns. Another aim is to understand the role of the factors like financial ratios, Altman's Z-score, Piotrowski F-score and G-score in selection of good quality stock. In this study the role of these factors as filters is explored. With help of this study the investors will be able to

sort out high quality, low debt, high ROE stocks which can create good investment opportunities in the long term.

3. Literature Review

The history of fundamental analysis can be traced back to Benjamin Graham. Graham B. published his first book 'Security Analysis' in 1934 in which he defined the framework of value investment. Since that time many researchers are studying fundamental analysis as key determinants of a securities future price. Many researchers have studied fundamental analysis from different views and in different contexts. There are studies that explore the effectiveness of fundamental analysis in identifying stock trends. Following are very interesting and useful for our research.

Joseph. D. Piotroski (2000) examines whether a simple accounting-based fundamental analysis strategy, when applied to a broad portfolio of high book-to-market firms, can shift the distribution of returns earned by an investor. In his research study he explored the relationship between the historical information (fundamental analysis) and firm performance.

Sonia R. Bentes, Raul Navas (2013) in their research paper provided the overview of fundamental analysis. They illustrated how this kind of approach can help in analyzing companies' stock price. Since the fundamental analysis is based on a plethora of company's accounting reports, covering most important financial aspects of a firm the authors believe that fundamental analysis is more suitable for long-term investing strategies.

George Athanassakos (2013) investigated whether there was a value premium in their sample of Canadian non-interlisted stocks, and whether an additional step to screening for possibly undervalued stocks can be employed to separate the good stocks from the bad ones. The paper extends the analysis to both value and growth stocks. The study concluded that value premium remained positive and statistically significant over time. The researchers were able to

construct a composite score indicator combining various fundamental and market metrics that enabled them to predict future stock returns and separate the winners from the losers among value and growth stocks.

Gunathilaka (2014) has examined the financial distress of 82 companies which are listed on the Colombo Stock Exchange (CSE) from various different industries by using Z-score models of Altman and Springate. Samples were collected from 2008 to 2012 and analyzed by incorporating Multivariate Discriminant Analysis (MDA). The results of the study were identical, though Altman's Z-score demonstrated a higher degree of accuracy in predicting the financial distress of the selected Sri Lankan companies at least a year before the distress.

Altman et al. (2017) revisited the model and investigated the accuracy of the model for businesses in 31 European and three non-European markets. These businesses were primarily private and included non-financial companies across all industrial sectors. The study offered evidence that the general Z-score model works reasonably well for most countries (prediction accuracy is approximately 0.75) and classification accuracy can be improved further (above 0.90) by using country specific estimation that incorporates additional variables.

Partha S. Mohanram (2004) tested whether a strategy based on financial statement analysis of low book-to-market (growth) stocks is successful in differentiating between winners and losers in terms of future stock performance. He created an index called G-score. A strategy based on buying high G-score firms and shorting low G-score firms consistently earns significant excess returns. He concluded that one can use a modified fundamental analysis strategy to identify mispricing and earn substantial abnormal returns. Trilochan Tripathy, Bijon Pani (2016) studied the effect of F-score on stock performance in Indian equity market. The study concluded that high

book-to-market firms with high F-score can shift the distribution of contemporaneous and future stock performances in favour of investors. However, such observation has been very prominent at higher level when applied to future valuation measures than the future stock return as measures of stock performance.

All the above studies provide us a solid base and give us an idea regarding fundamental analysis and its components. On basis of these researches done on stocks of different countries, we have tried to study the applicability of these tools on Indian stocks.

4. Research Objectives

The main objective of the study is to sort and pick the winning and valuable long-term stocks. The sub objectives are:

1. To understand the use of fundamental analysis tools in predicting the future price movement of the stocks.
2. To identify in advance the signs for growth potential in the companies.
3. To understand how to select undervalued stocks which can provide extraordinary returns in a long term.
4. To make a portfolio of stocks that will give retail investors maximum profit at minimize risk with the help of easily available resources.

5. Limitations

In this study the financial ratios and financial scores are taken from the websites like screener.com and moneycontrol.com. The ratios and the scores are not calculated, so some of the figures may differ in value if calculated using financial statements. Second limitation of this study is that financial institutions like banks and NBFCs can't be shortlisted with help of these parameters as they have high debt. Their main function is lending loan so their cash flow from operations is negative. For banks and NBFCs we cannot use these filters.

6. Research Methodology

The study is based on secondary data available from various financial websites and annual reports of the companies. Tabular analysis techniques employed are financial ratios and scores. Screener website is used to sort out the fundamentally strong stocks using basic and advanced filters. Post this data analysis is done using Microsoft excel to get the desired results.

- **Sample Selection**

All the companies listed on BSE stock exchange are considered for the study. More than 5,000 companies are selected as the sample. These companies are first sorted using market capitalization filter. The companies having market capitalization above Rs.5,000 crores and from different industrial sectors are selected to check the validity of the tools.

- **Period of study**

The data collected for computing the financial ratios and scores pertains to a period of 5 years i.e. from 2016 to 2020.

- **Source of Data**

The study is based on the secondary data collected from the annual reports of the selected companies, various financial dailies, business magazines, reports and websites.

7. Findings and Analysis

Around 5,000 companies are listed on BSE. These companies are filtered using basic filter and advanced filter. The parameters considered for basic filters are market capitalization and financial ratios. The ratios applied are classified as liquidity ratios, leverage ratios, return ratios and turnover ratios. After applying the basic filters the companies are further filtered using advanced filter. The financial scores like Altmans Z-score, Piotroski F-score and G-score are considered in advanced filter.

7.1 Applying Basic Filters

The companies listed on BSE are classified as small cap companies, mid cap companies and large cap companies. So, the first filter that we used is of market capitalization to shortlist the companies.

7.2 Filter 1

- **Market capitalization**

Market capitalization is calculated as market price per share \times total number of issued and outstanding shares. In India, normally a company below market capitalization of Rs.5,000 crores is classified as small cap company. A company which has a market capitalization above Rs.5,000 crores and less than Rs.20,000 crores is termed as a midcap company. Firms having market capitalization higher than Rs.20,000 crores are considered as Large cap companies. Small caps tend to have more risk as compared to midcaps and large caps. Mostly, midcaps are relatively more volatile than large caps. It is one of the reasons that they may give a higher return. Midcaps are converted in large caps if the company is fundamentally sound. Therefore the companies with market capitalization of more than Rs.5,000 are sorted.

7.3 Query

The companies above Rs.5,000 crores are selected for further study. So the filter applied is:

Market capitalization $>5,000$

7.4 Findings

After applying the first filter 435 companies got filtered. Since the list is too long, it is not included in the report.

7.5 Filter 2

Now these 435 companies were further filtered using fundamental analysis and applying financial ratios. For any company, a sound liquidity position is very important. The liquidity ratios like current ratio and quick ratios help in judging the liquidity of a company. So we first applied the filter of liquidity ratio.

Liquidity ratios measure the company's ability to meet current obligations, as and when they fall due. Companies should ensure that they do not suffer from lack of liquidity as well as they do not have excess liquidity. In the absence of adequate liquidity, the firm would not be able to pay creditors on the due date. Loss of creditworthiness may result in legal problems and also will spoil the reputation of the company. If corrective measures

are not taken then it may even lead to the closure of business of a company. Following ratios help in understanding the liquidity position of the company.

- **Current Ratio**

To check the liquidity position of the company current ratio is used. This ratio helps in identifying the short-term solvency position of the company. The ratio is calculated by dividing total current assets by total current liabilities. A ratio of 1.5 to 2 suggests that the company has an efficient management of working capital. If the ratio is below 1 then this indicated that there is some liquidity issue within the company. Also, if the current ratio is very high then also it's not good as it suggests that the company has too much of working capital. So, we need to compare these values with the industry peers. Since the companies selected are not from specific sector or industry a standard or ideal ratio is selected. To be on a safer side, we have considered a current ratio of greater than 2 in this study.

- **Quick ratio**

Liquid or Quick ratio establishes the relationship between quick assets and quick liabilities. This ratio judges the immediate solvency position of the company. This ratio is calculated by dividing the quick assets by quick liabilities. Quick assets are calculated as current assets minus inventories minus prepaid expenses. Quick liabilities are calculated as current liabilities minus bank overdraft minus prereceived income. Ideally the quick assets of the company should be equal to or greater than the quick liabilities. Therefore, we considered the quick ratio of greater than 1.

8. Query

The companies with current ratio of 2 or more and quick ratio of 1 or more is considered. So, the query run is:

Market capitalization >5,000 AND

Current ratio >2 AND

Quick ratio >1

9. Findings

After applying this filter of liquidity only 169 companies out of 435 companies were able to pass

the test and meet the criteria. Following is the list of companies filtered using liquidity ratios.

Table 1 – Companies sorted using Liquidity Ratios

S. No.	Name	Mar Cap Rs. Cr.	Current Ratio	Quick Ratio
1	3M India	29054.91	3	2.34
2	AAVAS Financiers	18581.63	9.66	9.66
3	Abbott India	34163.52	3.41	2.72
4	AIA Engineering	18357.1	7.78	6.08
5	Ajanta Pharma	16626.65	3.13	1.94
6	Amara Raja Batt.	12897.2	2.12	1.04
7	Anupam Rasayan	7490.68	2.75	1.27
8	Astrazeneca Phar	9441.38	2.04	1.51
9	Atul	26440.17	3.18	2.44
10	AU Small Finance	31150.9	3.15	3.15
11	Avanti Feeds	7679.48	5.5	4.34
12	Avenue Super.	206944.6	3.67	1.64
13	Axis Bank	225815.8	4.04	4.04
14	Bajaj Auto	122243.1	2.51	2.25
15	Bajaj Holdings	38756.19	3.78	3.72
16	Balaji Amines	8701.77	2.38	1.92
17	Bandhan Bank	51137.01	2.99	2.99
18	BOB	42327.6	3.3	3.3
19	BOI	26297.31	5.19	5.19
20	Bank of Maha	17187.62	3.42	3.42
21	Bata India	20022.66	3.41	1.92
22	Bayer Crop.	23751.9	2.26	1.41
23	BEML Ltd	5521.05	2.75	1.3
24	Bharat Rasayan	5394.55	3.66	2.71
25	Birlasoft Ltd	10507.92	3.32	3.32
26	Burger King	6042.11	2.19	2.13
27	CDSL	10144.86	5.06	5.06
28	Cams Services	13095.25	2.2	2.2
29	Canara Bank	25647.95	3.33	3.33
30	Carborundum Uni.	11191.84	3.67	2.68
31	Castrol India	14554.94	2.05	1.67
32	Central Bank	18794.23	3.29	3.29
33	Cera Sanitary.	5894.2	2.02	1.1
34	Chambal Fert.	11759.95	2.06	1.55
35	Cholamandal Finance	45582.62	4.87	4.87
36	Cipla	77314.49	2.87	1.85
37	City Union Bank	12131.46	4.1	4.1
38	Coforge	23319.27	2.53	2.53
39	Container Corpn.	43064.92	2.42	2.4
40	CreditAcc. Gram.	10603.85	7.68	7.68
41	CSB Bank	5740.65	5.45	5.45
42	Cummins India	22884.25	2.94	2.43

S. No.	Name	Mar Cap Rs. Cr.	Current Ratio	Quick Ratio
43	Cyient	8788.61	3.69	3.49
44	DCM Shriram	11429.79	2.27	1.27
45	Deepak Nitrite	24257.5	2.62	1.93
46	Dhani Services	11133.12	4.02	4.02
47	Divi's Lab.	113287.4	5.55	3.62
48	Dr Lal Pathlabs	24957.62	4.17	4.02
49	Eicher Motors	74609.07	3.35	3.02
50	Equitas Fin	6727.96	4.48	4.48
51	ERIS Lifescience	9604.44	2.8	2.23
52	Escorts	16155.2	2.73	2.3
53	FDC	5688.9	4.56	3.5
54	Federal Bank	16868.6	6.25	6.25
55	Fine Organic	9173.92	4.01	3.2
56	Finolex Cables	7251.62	7.64	5.72
57	GNFC	5836.8	3.57	2.73
58	GE Shipping	6081.47	3.55	3.39
59	Gland Pharma	50894.06	10	7.51
60	Graphite India	14747.93	4.53	3.2
61	Grindwell Norton	13274.77	2.86	2.12
62	Guj Pipavav Port	5201.81	3.59	3.55
63	Happiest Minds	13539.35	2.71	2.71
64	HCL Technologies	263578.3	2.48	2.47
65	HEG	8806.34	3.22	2.32
66	Hindustan Zinc	142836.9	3.12	2.94
67	Honeywell Auto	36442.72	2.75	2.68
68	IOB	38844.46	3.51	3.51
69	IRFC	31756.47	25.44	25.44
70	ICICI Bank	440405	2.38	2.38
71	ICICI Securities	18954.76	2.34	2.13
72	IDBI Bank	41934.37	9.53	9.53
73	IIFL Finance	10236.1	2.31	2.31
74	India Grid Trust	9221.37	3.17	3.17
75	Indiabulls	12120.48	2.59	2.59
76	Indiamart	21751.06	4.41	4.41
77	Indian Bank	15720.78	4.06	4.06
78	Indigo Paints	12084.19	2.37	1.96
79	IndusInd Bank	77654.2	3.89	3.89
80	Info Edg	60236.84	6.17	6.17
81	Infosys	603078.3	2.52	2.52
82	Ipca Labs	25872.76	3.03	1.63
83	ITC	261562.9	3.27	2.3
84	JB Chemicals	11800.59	3.95	2.86
85	JM Financial	8817.45	4.69	4.69
86	JSW Holdings	5960.76	9.24	9.24
87	Jubilant Pharmo	12101.22	2.82	1.74

S. No.	Name	Mar Cap Rs. Cr.	Current Ratio	Quick Ratio
88	KPR Mill	10919.46	2.55	1.22
89	Kajaria Ceramics	15850.83	3.01	2.04
90	Kansai Nerolac	31763.93	2.31	1.21
91	KEI Industries	6164.53	2.14	1.47
92	KIOCL	17266.21	7.34	6.3
93	Kotak Bank	353440	4.26	4.26
94	KPIT Technology	6617.83	2.44	2.44
95	KRBL	5350.41	6.73	1.86
96	L&T Infotech	68795.19	3.09	3.09
97	L&T Fin.Holdings	23482.87	7.05	7.05
98	L&T Technology	28767.89	3.19	3.19
99	Lak. Mach. Works	7095.49	2.01	1.59
100	Lux Industries	9829.68	2.96	1.87
101	Magma Fincorp	11866.39	2.63	2.63
102	Manappuram Fin.	13774.59	5.78	5.78
103	Metropolis Healt	14410.94	2.98	2.78
104	Mindtree	39851.33	2.87	2.87
105	Mphasis	35897.43	2.4	2.4
106	MCX	8011.34	2.02	2.02
107	Muthoot Finance	58939.68	3.54	3.54
108	Natco Pharma	19499.21	3.06	2.3
109	Navin Fluo.Intl.	16583.42	5.91	5.02
110	Nazara Technology	5140.29	3.19	3.19
111	Nippon Life	23028.18	2.14	2.14
112	NMDC	52575.07	3.68	3.34
113	Oberoi Realty	23299.63	3.25	1.01
114	Oracle Fin.Serv.	30163.33	7.35	7.35
115	Orchid Pharma	5681.44	3.87	2.79
116	P&G Health	9638.29	4.16	3.42
117	P&G Hygiene	42432.19	2.13	1.89
118	PI Industries	42665.41	3.57	2.74
119	Persistent Sys	19015.3	3.47	3.47
120	Petronet LNG	34245	3.93	3.77
121	Pfizer	24626.92	2.49	1.92
122	PNB Housing	13641.5	4.36	4.36
123	Poly Medicure	9368.01	4.12	3.38
124	Polycab India	26052.27	2.37	1.38
125	Power grid	10389.46	4.63	4.25
126	Punjab & Sind Bank	8166.13	7.18	7.18
127	Punjab Natlional Bank	44704.72	6.47	6.47
128	Rail Vikas	6484.41	4.42	4.41
129	Rain Industries	6044.21	2.91	1.98
130	Ratnamani Metals	9222.24	3.88	2.62
131	RBL Bank	12788.12	3.37	3.37
132	Relaxo Footwear	27013.11	2.4	1.46

S. No.	Name	Mar Cap Rs. Cr.	Current Ratio	Quick Ratio
133	Rossari Biotech	6884.16	2.44	1.81
134	Route Mobile	10062.65	2.17	2.17
135	Sanofi India	17820.38	2.69	2.15
136	Schaeffler India	16420.64	2.98	2.19
137	Shree Cement	102495.8	2.21	1.75
138	Shri.City Union.	11085.54	10.14	10.14
139	Shriram	36366.2	10.93	10.93
140	SJVN	11435.7	3.35	3.31
141	SKF India	11986.98	2.35	1.68
142	SBI	376127.8	3.65	3.65
143	Sumitomo	18178.89	2.12	1.42
144	Sun TV	20437.23	7.78	7.78
145	Supreme Inds.	28511.18	2.13	1.35
146	Suven Pharma	11993.83	2.57	1.66
147	Symphony	7466.16	2.53	2.09
148	Tata Consumer	64771.26	3.15	2.09
149	Tata Elxsi	23101.45	5.53	5.53
150	Tata Inv.Corpn.	5844.52	2.01	2.01
151	TCI Express	5972.34	2.64	2.64
152	TCS	1183789	2.13	2.13
153	Tech Mahindra	101925	2.46	2.45
154	Timken India	10177.85	2.45	1.43
155	TTK Prestige	12332.14	3.31	2.25
156	UCO Bank	16260.1	4.04	4.04
157	Ujjivan Small	5349.13	3.33	3.33
158	Union Bank	24126.66	4.36	4.36
159	V-Guard Industry	11273.09	2.38	1.31
160	V-Mart	5587.31	3.35	1.72
161	Vaibhav Global	13159.59	2.87	1.77
162	Vardhman Textile	7838.45	3.64	1.68
163	Vinati Organics	18272.08	6.17	5.02
164	VST Industries	5355.75	2.39	1.82
165	WABCO India	12912.71	3.92	3.69
166	Whirlpool India	27168.58	2.5	1.85
167	Wipro	298179.4	2.27	2.27
168	Zee Entertainment	20799.97	4.2	2.07
169	Zensar Tech.	6968.37	2.7	2.7

10. Filter 3

The data was further sorted to remove out high debt companies from others. For this leverage or capital structure ratios were used. Leverage ratios help in judging the soundness of a company on the basis of its long-term financial strength. Important ratio calculated under this category is debt to equity ratio. Along with the debt to equity ratio,

interest coverage ratio is also important as it disclose the margin of safety for the lenders.

• Debt/Equity (D/E) Ratio

Debt to equity ratio shows the relationship between the borrowed capital and own capital i.e. the relationship between Debt and Equity. This ratio is calculated to measure the relative claims of outsiders and owners against the firm's assets. From various research reports, it was seen that a debt to equity ratio of less than 2 is considered as healthy. It tells us that the companies can have 2 times the debt of their total shareholder funds. A company above 3 times is considered to be risky. Further banks and financial institutions consider a debt to equity ratio of 1.33 : 1 for lending new loan. Therefore, considering these criteria of bank financing a ratio of less than 1.33 is considered.

• Interest coverage ratio

The interest coverage ratio is used to test the company's ability of servicing the debt. The interest coverage ratio shows the number of times the interest charges are covered by the operating profit of the company. The ratio is calculated by dividing EBIT with interest charges. Generally, an interest coverage ratio of at least 2 times is considered as favorable. Analysts prefer to have a coverage ratio of 3 or better. In contrast, a coverage ratio of below 1 indicates that a company cannot meet its current interest payment obligations and, therefore, is not in good financial health. Here the ratio considered is 3.

11. Query

The companies with debt-to-equity ratio of less than 1.33 and interest coverage ratio of more than 3 are considered. So, the query run is:

Market capitalization >5000 AND

Current ratio >2 AND

Quick ratio >1 AND

Debt to equity <1.33 AND

Interest coverage ratio >3

12. Findings

After applying this filter of leverage, 116 companies got further shortlisted. Following is the list of companies which have optimum debt to equity ratio and the interest coverage ratio is also healthy.

Table 2 - Companies sorted using Leverage Ratios

S. No.	Name	Mar Cap Rs. Cr.	Current Ratio	Quick Ratio	Debt/Equity	Int Cov Ratio
1	3M India	29054.91	3	2.34	0.01	84.31
2	Abbott India	34163.52	3.41	2.72	0.06	51.65
3	AIA Engineering	18357.1	7.78	6.08	0.05	171.08
4	Ajanta Pharma	16626.65	3.13	1.94	0.01	109.85
5	Amara Raja Batt.	12897.2	2.12	1.04	0.02	83.94
6	Astrazeneca Phar	9441.38	2.04	1.51	0.03	117.6
7	Atul	26440.17	3.18	2.44	0.03	95.3
8	Avanti Feeds	7679.48	5.5	4.34	0.01	334.02
9	Avenue Super.	206944.6	3.67	1.64	0.03	36.62
10	Bajaj Auto	122243.1	2.51	2.25	0	938.15
11	Bajaj Holdings	38756.19	3.78	3.72	0	991.98
12	Balaji Amines	8701.77	2.38	1.92	0.11	18.86
13	Bayer Crop	23751.9	2.26	1.41	0	63.65
14	Bharat Rasayan	5394.55	3.66	2.71	0.05	42.99
15	Birlasoft Ltd	10507.92	3.32	3.32	0.06	35.88
16	CDSL	10144.86	5.06	5.06	0	12977
17	Cams Services	13095.25	2.2	2.2	0	40.66
18	Carborundum Uni.	11191.84	3.67	2.68	0.03	115.25
19	Castrol India	14554.94	2.05	1.67	0	257.24
20	Cera Sanitary.	5894.2	2.02	1.1	0.11	14.76
21	Chambal Fert.	11759.95	2.06	1.55	0.6	8.24
22	Cipla	77314.49	2.87	1.85	0.08	21.47
23	Coforge	23319.27	2.53	2.53	0	43.95
24	Container Corpn.	43064.92	2.42	2.4	0.01	17.8
25	Cummins India	22884.25	2.94	2.43	0.01	50.22
26	Cyient	8788.61	3.69	3.49	0.2	12.02
27	DCM Shriram	11429.79	2.27	1.27	0.28	8.29
28	Deepak Nitrite	24257.5	2.62	1.93	0.23	15.04
29	Divi's Lab.	113287.4	5.55	3.62	0	3065.41
30	Dr Lal Pathlabs	24957.62	4.17	4.02	0	25.65
31	Eicher Motors	74609.07	3.35	3.02	0.02	110.32
32	ERIS Lifescience	9604.44	2.8	2.23	0	220.16
33	Escorts	16155.2	2.73	2.3	0.01	87.57
34	FDC	5688.9	4.56	3.5	0.01	114.66
35	Fine Organic	9173.92	4.01	3.2	0.08	27.66
36	Finolex Cables	7251.62	7.64	5.72	0	313.95
37	GNF	5836.8	3.57	2.73	0	48.53
38	GE Shipping	6081.47	3.55	3.39	0.58	4.54
39	Gland Pharma	50894.06	10	7.51	0	392.45
40	Grindwell Norton	13274.77	2.86	2.12	0.01	93.75
41	Guj Pipavav Port	5201.81	3.59	3.55	0.02	53.32
42	Happiest Minds	13539.35	2.71	2.71	0.32	27.88
43	HCL Technologies	263578.3	2.48	2.47	0.11	32.02
44	Hindustan Zinc	142836.9	3.12	2.94	0.2	28.39
45	Honeywell Auto	36442.72	2.75	2.68	0.03	100.52
46	Indiamart	21751.06	4.41	4.41	0.04	59.1
47	Indigo Paints	12084.19	2.37	1.96	0.02	26.7
48	Info Edg.(India)	60236.84	6.17	6.17	0.02	7.76
49	Infosys	603078.3	2.52	2.52	0.07	137.17

S. No.	Name	Mar Cap Rs. Cr.	Current Ratio	Quick Ratio	Debt/Equity	Int Cov Ratio
50	Ipca Labs.	25872.76	3.03	1.63	0.04	153.8
51	ITC	261562.9	3.27	2.3	0	403.54
52	JB Chemicals	11800.59	3.95	2.86	0.02	77.75
53	JSW Holdings	5960.76	9.24	9.24	0	1253.86
54	Jubilant Pharmo	12101.22	2.82	1.74	0.6	7.27
55	KPR Mill	10919.46	2.55	1.22	0.26	21.98
56	Kajaria Ceramics	15850.83	3.01	2.04	0.06	24.89
57	Kansai Nerolac	31763.93	2.31	1.21	0.04	30.48
58	KEI Industries	6164.53	2.14	1.47	0.16	7.38
59	KIOCL	17266.21	7.34	6.3	0.06	28.61
60	KPIT Technologi.	6617.83	2.44	2.44	0.19	11
61	KRBL	5350.41	6.73	1.86	0.05	23.11
62	L&T Infotech	68795.19	3.09	3.09	0.11	33.85
63	L&T Technology	28767.89	3.19	3.19	0.14	20.72
64	Lak. Mach. Works	7095.49	2.01	1.59	0	1169.13
65	Lux Industries	9829.68	2.96	1.87	0.09	34.52
66	Metropolis Healt	14410.94	2.98	2.78	0.16	32.4
67	Mindtree	39851.33	2.87	2.87	0.12	30.73
68	Mphasis	35897.43	2.4	2.4	0.18	26.71
69	MCX	8011.34	2.02	2.02	0	1404.95
70	Natco Pharma	19499.21	3.06	2.3	0.11	48.04
71	Navin Fluo.Intl.	16583.42	5.91	5.02	0	187.04
72	Nazara Technolo.	5140.29	3.19	3.19	0	19.57
73	Nippon Life Ind.	23028.18	2.14	2.14	0	198.97
74	NMDC	52575.07	3.68	3.34	0.02	716.28
75	Oberoi Realty	23299.63	3.25	1.01	0.16	13.16
76	Oracle Fin.Serv.	30163.33	7.35	7.35	0.01	130.5
77	P&G Health Ltd	9638.29	4.16	3.42	0.01	390.63
78	P&G Hygiene	42432.19	2.13	1.89	0	142.47
79	PI Industries	42665.41	3.57	2.74	0.05	34.28
80	Persistent Sys	19015.3	3.47	3.47	0.04	106.26
81	Petronet LNG	34245	3.93	3.77	0.28	12.78
82	Pfizer	24626.92	2.49	1.92	0	45.26
83	Poly Medicure	9368.01	4.12	3.38	0.11	22.16
84	Polycab India	26052.27	2.37	1.38	0.04	20.85
85	Rail Vikas	6484.41	4.42	4.41	0.88	38.14
86	Ratnamani Metals	9222.24	3.88	2.62	0.07	16.87
87	Relaxo Footwear	27013.11	2.4	1.46	0.07	23.9
88	Rossari Biotech	6884.16	2.44	1.81	0	36.45
89	Route Mobile	10062.65	2.17	2.17	0.03	59.53
90	Sanofi India	17820.38	2.69	2.15	0.01	429.71
91	Schaeffler India	16420.64	2.98	2.19	0	91.81
92	Shree Cement	102495.8	2.21	1.75	0.12	12.95
93	SJVN	11435.7	3.35	3.31	0.15	20.1
94	SKF India	11986.98	2.35	1.68	0.01	187.05
95	Sumitomo Chemi.	18178.89	2.12	1.42	0.02	82.5
96	Sun TV	20437.23	7.78	7.78	0	149.73
97	Supreme Inds.	28511.18	2.13	1.35	0.01	128.2
98	Suven Pharma	11993.83	2.57	1.66	0.12	52.17
99	Symphony	7466.16	2.53	2.09	0.29	13.73
100	Tata Consumer	64771.26	3.15	2.09	0.11	20.34

S. No.	Name	Mar Cap Rs. Cr.	Current Ratio	Quick Ratio	Debt/Equity	Int Cov Ratio
101	Tata Elxsi	23101.45	5.53	5.53	0.05	73.06
102	Tata Inv. Corpn.	5844.52	2.01	2.01	0	1861.22
103	TCI Express	5972.34	2.64	2.64	0	170.51
104	TCS	1183789	2.13	2.13	0.09	71.59
105	Tech Mahindra	101925	2.46	2.45	0.12	35.21
106	Timken India	10177.85	2.45	1.43	0.02	190.53
107	TTK Prestige	12332.14	3.31	2.25	0.06	61.37
108	V-Guard Industry	11273.09	2.38	1.31	0.01	51.83
109	Vaibhav Global	13159.59	2.87	1.77	0.13	75.33
110	Vardhman Textile	7838.45	3.64	1.68	0.29	5.93
111	Vinati Organics	18272.08	6.17	5.02	0	1597.48
112	WABCO India	12912.71	3.92	3.69	0	77.51
113	Whirlpool India	27168.58	2.5	1.85	0	18.5
114	Wipro	298179.4	2.27	2.27	0.16	28.32
115	Zee Entertainment	20799.97	4.2	2.07	0	25.22
116	Zensar Tech.	6968.37	2.7	2.7	0.15	10.01

13. Filter 4

After sorting the companies on the basis of liquidity and leverage, further sorting was done using profitability or return ratios. The parameters used are Pledged percentage, return on capital employed, return on assets and PEG ratio.

- **Pledged Percentage**

Share pledging is a standard way of accessing funds for companies but experiences in the past have created a negative impression about the companies, as it signals poor cash flow patterns and credit crunch in a company. Promoters often make such share pledges for personal needs. Many of such cases have been seen in the past so the pledging should be as less as possible. So, it indicates a red flag for an investment purpose. Ideally for a good company, the value should be 0. But many midcaps use pledging as a mechanism to fund their business. Therefore, a buffer of 10% is used to filter out the stocks.

- **Return on Capital Employed (ROCE)**

The next most important parameter is the Return on Capital Employed (ROCE). ROCE measures the relationship between operating profit (EBIT) and the capital employed to earn it. This ratio tells how much profit is available to pay the returns on total capital. In India, the risk-free rate of interest is about 7%. So, by investing in stock a risk is undertaken so the returns of more than 7% are expected. Analysts consider that the company

should generate at least a return of 10%. ROCE needs to be compared with other industry peers. ROCE varies a lot from industry to industry. But as we are filtering from more than thousand stocks a minimum value of 10% is considered. So, the filter applied is ROCE > 10%.

- **Return on Assets**

ROA is a relationship between net profit after taxes and total assets. Net profit has a direct relationship with the total assets. If net profit is high, with no change in assets, return on assets would be high. If there is fall in profits, return on assets would also go down. ROA of 5% or better is typically considered a good ratio while 20% or more is considered great. In general, the higher the ROA, the more efficient the company is at generating profits. Here we have considered the minimum ROA ratio of 5%.

- **PEG Ratio**

The P/E ratio is calculated as the price per share of the company divided by the earnings per share. Once the P/E is calculated it is divided by the expected growth rate of the stock to calculate the PEG ratio. Lower PEG ratio indicates that the stock is undervalued and higher PEG ratio indicates that the stock is overvalued given its future earnings expectations. Prima facie, a PEG multiple of less than 1 suggests that the stock is undervalued and a PEG multiple of more than 1 suggests that the stock is overvalued. To what extent a stock is under or overvalued, varies from one industry to another. Therefore, interpretations should always be in the context of industry or sector or company type. As a broad rule of thumb, some investors feel that a PEG ratio below one is desirable. The PEG ratio can be negative because of a negative P/E ratio. This situation is to be avoided at all cost because negative earnings are extremely risky for a business. So, we need to remove the companies with negative PEG ratio. In order to remove companies with negative PEG ratio, we applied the filter of PEG > 0.

14. Query

The query run is:

Market capitalization > 5000 AND

Current ratio >2 AND

Quick ratio >1 AND

Debt to equity <1.33 AND

Interest coverage ratio >3 AND

Pledged percentage <10% AND

Return on capital employed >10% AND

Return on assets >5% AND

PEG Ratio >0

15. Findings

After applying the very important filter of profitability ratio and positive PEG, 92 companies got further shortlisted. Following is the list of companies.

Table 3 - Companies sorted using Return Ratios

S. No.	Name	Mar Cap Rs.Cr.	Current Ratio	Quick Ratio	Debt/ Equity	Int Cov Ratio	Pledged %	ROCE %	ROA %	PEG
1	Abbott India	34163.52	3.41	2.72	0.06	51.65	0	35.22	18.7	2.25
2	AIA Engineering	18357.1	7.78	6.08	0.05	171.08	0	17.79	12.68	7.4
3	Amara Raja	12897.2	2.12	1.04	0.02	83.94	0	22.05	11.98	3.41
4	Astrazeneca	9441.38	2.04	1.51	0.03	117.6	0	30.35	12.6	1.3
5	Atul	26440.17	3.18	2.44	0.03	95.3	1.5	24.78	14.54	2.12
6	Avanti Feeds	7679.48	5.5	4.34	0.01	334.02	0	36.64	21.7	0.84
7	Avenue	206944.6	3.67	1.64	0.03	36.62	0	12.71	8.55	6.71
8	Bajaj Auto	122243.1	2.51	2.25	0	938.15	0.01	25.41	16.16	6.95
9	Bajaj Hold	38756.19	3.78	3.72	0	991.98	0	11.59	9.34	1.06
10	Balaji	8701.77	2.38	1.92	0.11	18.86	0	36.08	20.09	1.11
11	Bayer Crop	23751.9	2.26	1.41	0	63.65	0	31.3	12.13	5.24
12	Bharat	5394.55	3.66	2.71	0.05	42.99	0	34.23	21.24	0.92
13	Birlasoft Ltd	10507.92	3.32	3.32	0.06	35.88	0	21.53	11.29	15.9
14	CDSL	10144.86	5.06	5.06	0	12977	0	32.42	20.68	2.1
15	Cams Services	13095.25	2.2	2.2	0	40.66	0	59.88	29.17	2.73
16	Carborundum	11191.84	3.67	2.68	0.03	115.25	0.02	20.06	12.21	2.54
17	Cera	5894.2	2.02	1.1	0.11	14.76	0	16.28	8.2	14.44
18	Cipla	77314.49	2.87	1.85	0.08	21.47	0	17.83	9.83	2.5
19	Coforge	23319.27	2.53	2.53	0	43.95	0	25.66	13.86	4.25
20	Cyient	8788.61	3.69	3.49	0.2	12.02	0	15.29	8.44	10.74
21	DCM	11429.79	2.27	1.27	0.28	8.29	0	16.65	8.46	0.98
22	Deepak	24257.5	2.62	1.93	0.23	15.04	0	40.11	22.9	0.48
23	Divi's Lab.	113287.4	5.55	3.62	0	3065.41	0	32.04	20.56	4.78
24	Dr Lal Pathlabs	24957.62	4.17	4.02	0	25.65	0	35.66	19.53	4.99
25	Eicher	74609.07	3.35	3.02	0.02	110.32	0	16.58	9.97	426.08
26	ERIS	9604.44	2.8	2.23	0	220.16	0	27.52	21.29	1.23
27	Escorts	16155.2	2.73	2.3	0.01	87.57	0	27.2	14.66	0.28
28	FDC	5688.9	4.56	3.5	0.01	114.66	0	23.82	16.07	1.43
29	Finolex	7251.62	7.64	5.72	0	313.95	0	19.47	13.93	1.23
30	GNFC	5836.8	3.57	2.73	0	48.53	0	15.83	8.29	0.27
31	Gland	50894.06	10	7.51	0	392.45	0	28	18.84	1.96
32	Grindwell	13274.77	2.86	2.12	0.01	93.75	0	25.01	13.76	2.97
33	Happiest Minds	13539.35	2.71	2.71	0.32	27.88	0	35.11	22.89	0.73
34	HCL	263578.3	2.48	2.47	0.11	32.02	0	26.06	13.22	1.6
35	Honeywell	36442.72	2.75	2.68	0.03	100.52	0	25.42	12.42	2.97
36	Indiamart	21751.06	4.41	4.41	0.04	59.1	0	39.09	15.4	2.25

S. No.	Name	Mar Cap Rs.Cr.	Current Ratio	Quick Ratio	Debt/Equity	Int Cov Ratio	Pledged %	ROCE %	ROA %	PEG
37	Indigo Paints	12084.19	2.37	1.96	0.02	26.7	0	24.64	11.49	2.47
38	Infosys	603078.3	2.52	2.52	0.07	137.17	0	35.25	19.44	4.21
39	Ipca Labs.	25872.76	3.03	1.63	0.04	153.8	0	30.84	20.15	0.34
40	ITC	261562.9	3.27	2.3	0	403.54	0	28.52	17.71	2.83
41	JB Chemicals	11800.59	3.95	2.86	0.02	77.75	0	22.54	14.4	1.32
42	Jubilant	12101.22	2.82	1.74	0.6	7.27	0	14.88	8	0.89
43	KPR Mill	10919.46	2.55	1.22	0.26	21.98	0	25.71	16.76	1.08
44	Kajaria	15850.83	3.01	2.04	0.06	24.89	0	18.78	10.55	9.52
45	Nerolac	31763.93	2.31	1.21	0.04	30.48	0	17.73	9.92	26.3
46	KEI	6164.53	2.14	1.47	0.16	7.38	0	21.48	8.7	0.66
47	KIOCL	17266.21	7.34	6.3	0.06	28.61	0	20.51	12.38	1.37
48	KRBL	5350.41	6.73	1.86	0.05	23.11	0	20.88	12.32	0.82
49	L&T Info	68795.19	3.09	3.09	0.11	33.85	0	39.4	19.85	1.95
50	L&T Tech	28767.89	3.19	3.19	0.14	20.72	0	27.92	14.22	4.51
51	Lux	9829.68	2.96	1.87	0.09	34.52	0	43.51	23.85	0.91
52	Metropolis	14410.94	2.98	2.78	0.16	32.4	3.3	35.78	20.9	3.74
53	Mindtree	39851.33	2.87	2.87	0.12	30.73	0	38.65	19.28	2.38
54	Mphasis	35897.43	2.4	2.4	0.18	26.71	0	24.01	13.42	2.18
55	MCX	8011.34	2.02	2.02	0	1404.95	0	19.22	8.6	1.75
56	Natco	19499.21	3.06	2.3	0.11	48.04	0	14.41	10.02	1.45
57	Navin	16583.42	5.91	5.02	0	187.04	3.01	22.41	14.02	2.71
58	Nippon Life	23028.18	2.14	2.14	0	198.97	0	30.96	21.69	2.97
59	Oracle	30163.33	7.35	7.35	0.01	130.5	0	36.71	21.75	1.62
60	P&G Health	9638.29	4.16	3.42	0.01	390.63	0	29.28	17.47	1.18
61	P&G Hyg	42432.19	2.13	1.89	0	142.47	0	58.3	25.25	15
62	PI Industries	42665.41	3.57	2.74	0.05	34.28	0	22.13	13.15	3.09
63	Persistent Sys	19015.3	3.47	3.47	0.04	106.26	0	23.15	13.34	3.62
64	Petronet	34245	3.93	3.77	0.28	12.78	0	28.9	15.49	0.42
65	Pfizer	24626.92	2.49	1.92	0	45.26	0	23.61	12.97	4.62
66	Poly Medi	9368.01	4.12	3.38	0.11	22.16	0	22.02	13.65	3
67	Polycab India	26052.27	2.37	1.38	0.04	20.85	0	24.8	13.53	0.82
68	Rail Vikas	6484.41	4.42	4.41	0.88	38.14	0	11.85	6.15	0.43
69	Ratnamani	9222.24	3.88	2.62	0.07	16.87	0	18.87	10.7	3.13
70	Relaxo	27013.11	2.4	1.46	0.07	23.9	0	26.11	14.52	4.67
71	Rossari	6884.16	2.44	1.81	0	36.45	0	28.75	15.62	1
72	Route Mobile	10062.65	2.17	2.17	0.03	59.53	0	33.06	16.12	4.64
73	Sanofi India	17820.38	2.69	2.15	0.01	429.71	0	31.57	16.49	2.42
74	Schaeffler	16420.64	2.98	2.19	0	91.81	0	13.21	7.46	5.79
75	ShreeCement	102495.8	2.21	1.75	0.12	12.95	0	19.4	11.05	3
76	SKF India	11986.98	2.35	1.68	0.01	187.05	0	22.85	12.48	13.11
77	Sumitomo	18178.89	2.12	1.42	0.02	82.5	0	32.71	14.54	1.32
78	Sun TV	20437.23	7.78	7.78	0	149.73	0	29.88	20.03	1.56
79	Supreme	28511.18	2.13	1.35	0.01	128.2	0	41.3	24.68	0.86
80	Symphony	7466.16	2.53	2.09	0.29	13.73	0	16.53	9.81	100.95
81	Tata Elxsi	23101.45	5.53	5.53	0.05	73.06	0	40.03	23.53	3.36

S. No.	Name	Mar Cap Rs.Cr.	Current Ratio	Quick Ratio	Debt/Equity	Int Cov Ratio	Pledged %	ROCE %	ROA %	PEG
82	TCI Express	5972.34	2.64	2.64	0	170.51	0	34.26	20.63	0.11
83	TCS	1183789	2.13	2.13	0.09	71.59	0.47	48.9	26.75	5.18
84	Tech Mah	101925	2.46	2.45	0.12	35.21	0	23.4	11.31	2.8
85	Timken India	10177.85	2.45	1.43	0.02	190.53	0	20.85	13.12	2.69
86	TTK Prestige	12332.14	3.31	2.25	0.06	61.37	0	20.79	11.87	3.87
87	V-Guard Industry	11273.09	2.38	1.31	0.01	51.83	0	26.13	12.06	4.63
88	Vaibhav	13159.59	2.87	1.77	0.13	75.33	0	36.64	21.86	1.02
89	Vinati	18272.08	6.17	5.02	0	1597.48	0	23.75	16.96	4.4
90	Whirlpool	27168.58	2.5	1.85	0	18.5	0	28.63	11.81	5.17
91	Wipro	298179.4	2.27	2.27	0.16	28.32	0	22.48	13.28	6.28
92	Zensar Tech.	6968.37	2.7	2.7	0.15	10.01	0	20.95	9.73	6.84

16. Filter 6

Though the profitability position of the company is important the distribution of the profits to the equity shareholders is also equally important. Dividend payout ratio is a ratio that shows the percentage of the profit that is given to the shareholders. So the parameter considered for further filtering is dividend payout ratio.

□ Dividend Payout Ratio (D/P)

Dividend Payout ratio shows the relationship between the actual dividends (DPS) paid to equity shareholders and the net income available to them or EPS. If the D/P ratio is 75%, then it implies that 25% of the profits of the company are retained and 75% are distributed as dividends. The retention percentage also helps in understanding the future investment policy of the company. If the retention percentage is higher than the D/P, then it indicates that the company is on expansion mode and is retaining its profits to finance its investment decisions. A range of 35% to 55% is considered healthy and appropriate from investor's point of view. A company that distributes roughly 50% of its earnings as dividends is considered as a well-established company and a leader in its industry

because it is reinvesting remaining 50% of its earnings for growth which is a good sign. In this research a more optimistic ratio of 30% is considered.

17. Query

The companies with dividend payout ratio of more than 30% are considered. So the query run is:

Market capitalization >5000 AND

Current ratio >2 AND

Quick ratio >1 AND

Debt to equity <1.33 AND

Interest coverage ratio >3 AND

Pledged percentage <10% AND

Return on capital employed >10% AND

Return on assets >5% AND

PEG Ratio >0 AND

Dividend payout ratio >30%

18. Findings

After applying this filter of dividend payout ratio of greater than 30%, 35 companies got further qualified. These companies are giving good returns to the shareholders in the form dividend. Following is the list of companies.

Table 4 – Companies sorted using Dividend Payout Ratio

S. No.	Name	Mar Cap Rs. Cr.	Current Ratio	Quick Ratio	Debt/Equity	Int Cov Ratio	Pledged %	ROCE %	ROA %	PEG	Div Payout %
1	Abbott India	34163.52	3.41	2.72	0.06	51.65	0	35.22	18.7	2.25	84.61
2	Bajaj Auto	122243.1	2.51	2.25	0	938.15	0.01	25.41	16.16	6.95	83.41
3	Bayer Crop	23751.9	2.26	1.41	0	63.65	0	31.3	12.13	5.24	104.72
4	Birlasoft Ltd	10507.92	3.32	3.32	0.06	35.88	0	21.53	11.29	15.9	30.25
5	CDSL	10144.86	5.06	5.06	0	12977	0	32.42	20.68	2.1	46.95
6	Cams	13095.25	2.2	2.2	0	40.66	0	59.88	29.17	2.73	113.84
7	Cyient	8788.61	3.69	3.49	0.2	12.02	0	15.29	8.44	10.74	51.4
8	Dr Lal Pathlabs	24957.62	4.17	4.02	0	25.65	0	35.66	19.53	4.99	57.13
9	Eicher	74609.07	3.35	3.02	0.02	110.32	0	16.58	9.97	426.08	34.5
10	Grindwell	13274.77	2.86	2.12	0.01	93.75	0	25.01	13.76	2.97	43.98
11	Infosys	603078.3	2.52	2.52	0.07	137.17	0	35.25	19.44	4.21	59.27
12	ITC	261562.9	3.27	2.3	0	403.54	0	28.52	17.71	2.83	100.54
13	JB	11800.59	3.95	2.86	0.02	77.75	0	22.54	14.4	1.32	31.26
14	Nerolac	31763.93	2.31	1.21	0.04	30.48	0	17.73	9.92	26.3	53.41
15	KIOCL	17266.21	7.34	6.3	0.06	28.61	0	20.51	12.38	1.37	33.66
16	L&T Info	68795.19	3.09	3.09	0.11	33.85	0	39.4	19.85	1.95	36.16
17	L&T Tech	28767.89	3.19	3.19	0.14	20.72	0	27.92	14.22	4.51	34.83
18	Mindtree	39851.33	2.87	2.87	0.12	30.73	0	38.65	19.28	2.38	37.08
19	Mphasis	35897.43	2.4	2.4	0.18	26.71	0	24.01	13.42	2.18	99.92
20	MCX	8011.34	2.02	2.02	0	1404.95	0	19.22	8.6	1.75	62.73
21	Nippon Life	23028.18	2.14	2.14	0	198.97	0	30.96	21.69	2.97	72.49
22	Oracle	30163.33	7.35	7.35	0.01	130.5	0	36.71	21.75	1.62	97.69
23	P&G Health	9638.29	4.16	3.42	0.01	390.63	0	29.28	17.47	1.18	150.27
24	P&G Hyg	42432.19	2.13	1.89	0	142.47	0	58.3	25.25	15	78.7
25	Persistent Sys	19015.3	3.47	3.47	0.04	106.26	0	23.15	13.34	3.62	33.92
26	Petronet	34245	3.93	3.77	0.28	12.78	0	28.9	15.49	0.42	58.69
27	Pfizer	24626.92	2.49	1.92	0	45.26	0	23.61	12.97	4.62	32.18
28	Rail Vikas	6484.41	4.42	4.41	0.88	38.14	0	11.85	6.15	0.43	31.55
29	Sanofi India	17820.38	2.69	2.15	0.01	429.71	0	31.57	16.49	2.42	175.77
30	Sun TV	20437.23	7.78	7.78	0	149.73	0	29.88	20.03	1.56	71.13
31	Symphony	7466.16	2.53	2.09	0.29	13.73	0	16.53	9.81	100.95	32.71
32	Tata Elxsi	23101.45	5.53	5.53	0.05	73.06	0	40.03	23.53	3.36	81.21
33	TCS	1183789	2.13	2.13	0.09	71.59	0.47	48.9	26.75	5.18	43.35
34	Tech Mah	101925	2.46	2.45	0.12	35.21	0	23.4	11.31	2.8	88.82
35	Timken	10177.85	2.45	1.43	0.02	190.53	0	20.85	13.12	2.69	152.8

19. Filter6

After sorting the companies on the basis of liquidity, leverage and profitability basis, the companies were further sorted using the free cash flow and asset turnover ratio. It is very much possible that a company may have strong bottom line i.e. Net Profit but it may be facing cash shortage problem. Therefore it is very important to check the free cash flows. The second aspect is

that cash is generated by selling the products and sales are generated with efficient use of assets. Therefore, there is a need to check the assets turnover ratio. So these two filters are used to sort the companies further.

- **Free Cash Flow (FCF)**

FCF is equal to cash from operations less capital expenditures. FCF represents the amount of cash

generated by a business, after accounting for reinvestment in non-current assets is done. Higher the FCF the more it can allocate to dividends and growth opportunities. If a company has a decreasing FCF that is not necessarily bad if the company is investing in its growth but the cash flow should not be negative. A company with negative FCF indicates the company's inability to generate enough cash to support the business. Hence we need to remove the companies having negative FCF. So, we considered those companies that had positive FCF in last 5 years. In order to sort such companies the filter applied is Free Cash Flow 5 Years >0.

- **Asset Turnover Ratio**

It shows the relationship between net sales of the company with its total assets. The assets turnover ratio measures the efficiency of a company in managing and utilizing its assets. Higher ratio signifies more efficient management and utilization of the assets while low ratio indicates underutilization of available resources and presence of idle capacity. In the retail sector, an asset turnover ratio of 2.5 or more is considered as good, while a company in the utilities sector is more likely to aim for an asset turnover ratio that

ranges between 0.25 and 0.5. This ratio differs from industry to industry. But a ratio of 1 is considered as good.

20. Query

The companies with positive FCF for last 5 years and an asset turnover ratio of greater than 1 are considered. So the query run is:

Market capitalization >5000 AND

Current ratio >2 AND

Quick ratio >1 AND

Debt to equity <1.33 AND

Interest coverage ratio >3 AND

Pledged percentage <10% AND

Return on capital employed >10% AND

Return on assets >5% AND

PEG ratio >0 AND

Dividend payout ratio >30% AND

Free cash flow 5years >0 AND

Asset turnover ratio >1

21. Findings

After applying these basic filters 14 companies were selected for advanced filtering. The current market price is the closing price as on 10th June 2020. Following is the list of companies.

Table 5 - Companies sorted based on Cash Flows

S. No.	Name	CMP Rs.	Mar Cap Rs.Cr.	Current Ratio	Quick Ratio	Debt/Equity	Int Cov Ratio	Pledged %	ROCE %	ROA %	PEG	Div Payout %	FCF 5Yrs Rs. Cr.	Asset T/O
1	Abbott India	16076.95	34163.52	3.41	2.72	0.06	51.65	0	35.22	18.7	2.25	84.61	2284.43	1.17
2	Bayer Crop Sci.	5285	23751.9	2.26	1.41	0	63.65	0	31.3	12.13	5.24	104.72	1859.3	1.06
3	Birlasoft Ltd	378.55	10507.92	3.32	3.32	0.06	35.88	0	21.53	11.29	15.9	30.25	899.46	1.25
4	Dr Lal Pathlabs	2994.5	24957.62	4.17	4.02	0	25.65	0	35.66	19.53	4.99	57.13	965.81	1.04
5	Infosys	1415.3	603078.3	2.52	2.52	0.07	137.17	0	35.25	19.44	4.21	59.27	67200	1.01
6	L&T Infotech	3936.5	68795.19	3.09	3.09	0.11	33.85	0	39.4	19.85	1.95	36.16	6622.4	1.27
7	L&T Technology	2738.6	28767.89	3.19	3.19	0.14	20.72	0	27.92	14.22	4.51	34.83	3123.7	1.16
8	Mindtree	2419.2	39851.33	2.87	2.87	0.12	30.73	0	38.65	19.28	2.38	37.08	4129.1	1.38
9	Mphasis	1918.25	35897.43	2.4	2.4	0.18	26.71	0	24.01	13.42	2.18	99.92	4635.43	1.07
10	P&G Hygiene	13071.85	42432.19	2.13	1.89	0	142.47	0	58.3	25.25	15	78.7	1912.89	1.74
11	Persistent Sys	2488.1	19015.3	3.47	3.47	0.04	106.26	0	23.15	13.34	3.62	33.92	1679.53	1.24
12	Petronet LNG	228.3	34245	3.93	3.77	0.28	12.78	0	28.9	15.49	0.42	58.69	12629.17	1.37
13	Tata Elxsi	3709.5	23101.45	5.53	5.53	0.05	73.06	0	40.03	23.53	3.36	81.21	1118.47	1.18
14	TCS	3200.25	1183789	2.13	2.13	0.09	71.59	0.47	48.9	26.75	5.18	43.35	138558	1.31

Applying Advanced Filters

After applying the basic parameters to filter 5,000 companies, 14 companies got shortlisted. All these

companies are fundamentally strong companies and can be considered for investments. In order to find the best stocks out of the good stocks we had

further filtered the stocks using advanced filter of financial scores. The parameters like Altman's Z-score, Piotroski F-score and G-score were used.

22. Filter 7

For filtering out the financially strong companies first we used the Altman's Z-score.

- **Altman's Z-score**

Altman's Z-score model is a measurement that is widely used to predict the chances of bankruptcy. Altman's Z-score combines five financial ratios which are used to predict the probability of a company becoming insolvent in the next two years. The score is calculated as: $Z\text{-score} = 1.2A + 1.4B + 3.3C + 0.6D + 1.0E$, where:

A = working capital / total assets

B = retained earnings / total assets

C = EBIT / total assets

D = market value of equity / total liabilities

E = sales / total assets

The score goes on increasing and can be anything positive or negative. A score below 1.8 means the company is heading for bankruptcy and a score above 3 suggests a company is in safe zone and having strong financial position. Therefore we applied a filter of Altman Z-score greater than 3. All the 14 companies had a score of more than 3. This is because in the basic parameters we have considered the ratio of debt to equity <1.33 . So, it has already helped us in sorting financially strong companies. But in order to make sure that the company is not heading towards bankruptcy in near future, we had applied a filter of Altman's Z-score.

- **Piotroski F-score:**

Piotroski F-score gives a ranking between 0 and 9 to the companies and it incorporates nine factors that speak about firm's financial strength. The score is broken down into the three categories viz. Profitability (4 Pts), Leverage, liquidity and source of funds (3 pts) and Operating efficiency (2 pts). A score of 8-9 is considered to be a good value investment. Any company with score of less than 2 is not a good value. In order to filter out the good companies we used the filter of Piotroski F-score is greater than 7.

- **G Factor**

Mr. Paratha Mohanram created an index which he termed as G-Score based on a combination of fundamentals such as earnings, cash flows and measures appropriate for growth firms such as the stability of earnings, growth, the intensity of R&D, capital expenditure and advertising. G-score ranges from 0-8. It can be used to identify growth stocks. Long-term investors often look for companies with high or improving cash flows over a period of time but with undervalued share prices. G-score strategy is based on buying high G-score firms and shorting low G-score firms. G-score of G1, G2 and G3 gives the similar results as the F-score factors. The next two scores G4 and G5 measures variability in earnings and sales and shows that companies with more stable earnings tend to have better earnings performance in the future. The final three scores G6, G7, and G8 are related to undervalue investments in R&D, advertising, and capital expenditures. These items have the potential to help longer term profitability. A firm that passes all eight criteria will obtain a G-score of 8, while firms that pass none get a G-score of 0. In case of our filters we want companies with stable returns so we want companies with a score of G4 and above. So, we applied the filter of G Factor >3 . This is the final list of queries we applied to get the best fundamentally strong stocks.

23. Query

The companies with Altman Z-score of greater than 3, Piotroski score of greater than 7 and G score of greater than 3 are considered. So the query run is:

Market capitalization >5000 AND

Current ratio >2 AND

Quick ratio >1 AND

Debt to equity <1.33 AND

Interest coverage ratio >3 AND

Pledged percentage $<10\%$ AND

Return on capital employed $>10\%$ AND

Return on assets $>5\%$ AND

PEG ratio >0 AND

Dividend payout ratio $>30\%$ AND

Free cash flow 5years >0 AND

Asset turnover ratio >1 AND
 Altman Z-score >3 AND
 Piotroski score >7 AND
 G Factor >3

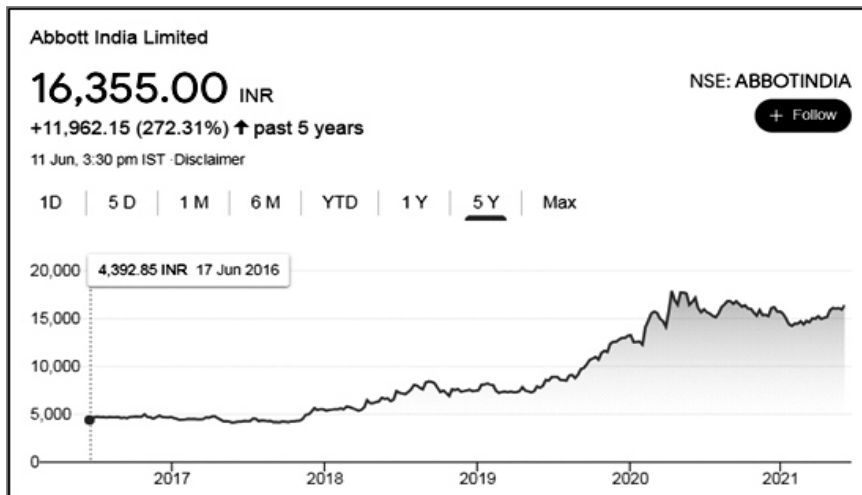
24. Findings

After applying these advanced filters only 4 companies got filtered. Following is the final list of stocks:

Table 6 - Companies sorted using Advanced Filter of Financial Scores

S. No.	Name	CMP Rs.	Mar Cap Rs. Cr.	Current Ratio	Quick Ratio	Debt/Equity	Int Cov Ratio	Pledged %	ROCE %	ROA %	PEG	Div Payout %	FCF 5 Yrs Rs. Cr.	Asset T/O	Altman Z Score	Piotroski F Score	G Factor
1	Abbott India	16076.95	34163.52	3.41	2.72	0.06	51.65	0	35.22	18.7	2.25	84.61	2284.43	1.17	20.98	8	6
2	Dr Lal Pathlabs	2994.5	24957.62	4.17	4.02	0	25.65	0	35.66	19.53	4.99	57.13	965.81	1.04	58.02	9	6
3	Infosys	1415.3	603078.3	2.52	2.52	0.07	137.17	0	35.25	19.44	4.21	59.27	67200	1.01	15.86	8	4
4	Persistent Sys	2488.1	19015.3	3.47	3.47	0.04	106.26	0	23.15	13.34	3.62	33.92	1679.53	1.24	16.53	9	5

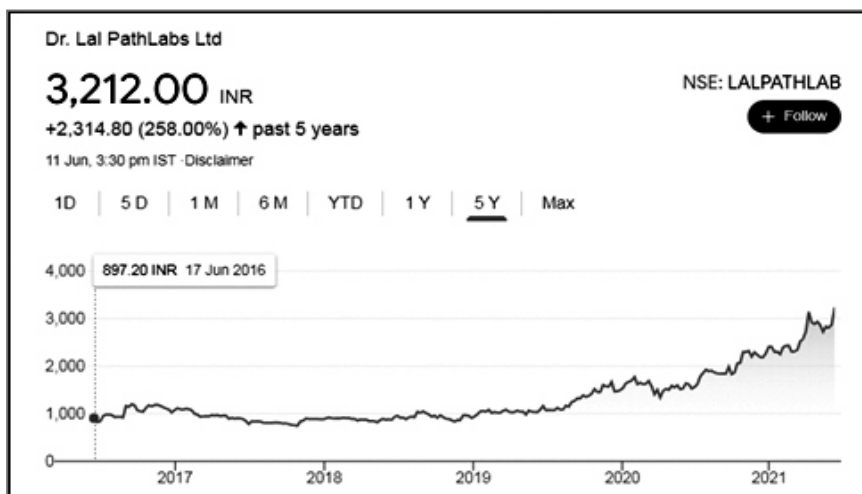
25. ABBOTTINDIA LTD



This is the five-year graph of Abbot India Ltd. As we can see from the chart, the stock was trading near about Rs.4,392 in 2016 and today the current market price (as on 11th June 2021) is Rs.16,355. So, we can expect a consistent growth in this stock.

Abbot has delivered good profit growth of 22.01% CAGR over last 5 years. It also had a good ROE track record of last 3 years of 26.23%. The Piotroski F-score is 8 and G-score is 6 which are very good indicators to make this stock stand out in the lot.

1. DR LAL PATHLABS LTD

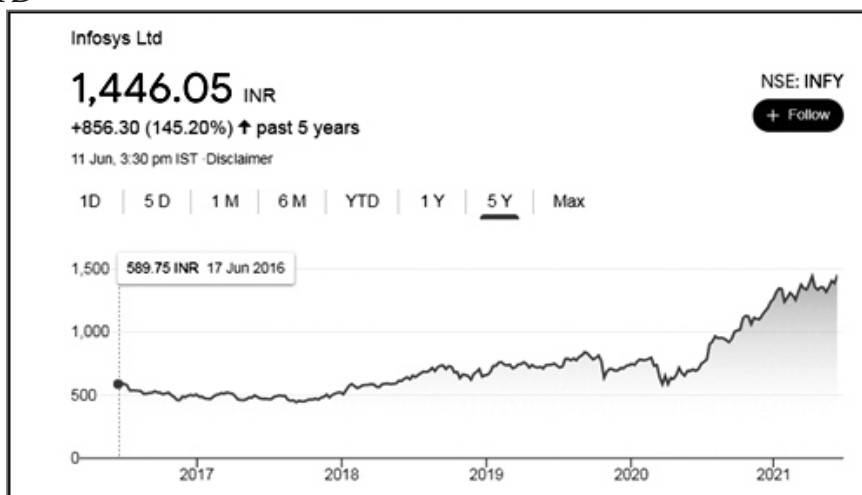


Dr. Lal Path Labs Ltd. is one of the India's leading consumer healthcare brands in diagnostic services. From the five-year graph of Dr. Lal Path Labs Ltd. it is clearly seen that the stock was

trading around Rs.897 in 2016 and today the current market price (as on 11th June 2021) is Rs.3,212 a growth of 258%. Altman's Z-score is 58.02. This shows that the company is a safe haven

for investment and is far away from bankruptcy. The Piotroski F-score is 9 which is the highest. It means that the stock is financially very strong. The G-score is 6. This indicates that the company is paying more attention on investments in R&D,

2. INFOSYS LTD

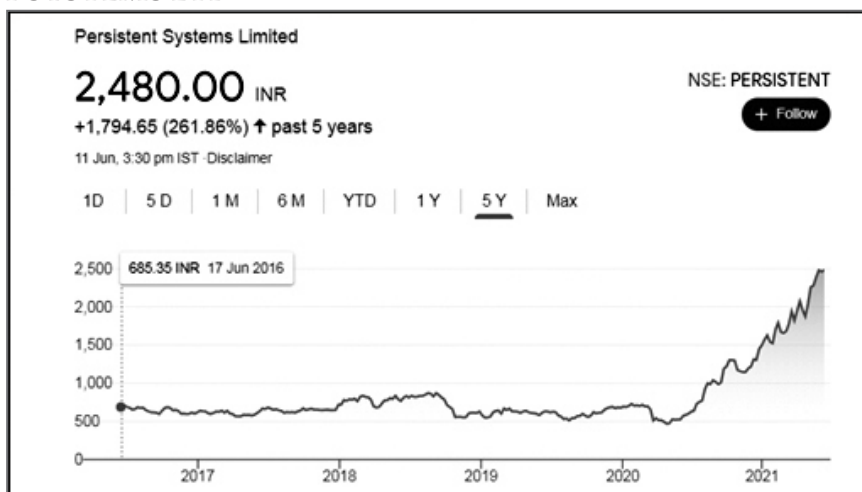


Infosys was trading at Rs.589 in 2016 and is now trading at Rs.1,446 a growth of 145%. Infosys is almost zero debt company and has a good ROE

advertising and capital expenditures and indicates that the company is on growth track. Hence, we can still expect a higher price for Dr. Lal PathLabs Ltd. in the coming years.

track record of last 3 Years of 25.39%. It also has been maintaining a healthy dividend payout of 54.63%. Till the date it is has been giving decent returns to its shareholders.

1. PERSISTENT SYSTEMS LTD



Persistent Systems Limited provides software engineering and strategy services to help companies implement and modernize their businesses. Persistent Systems has recently given a multiyear breakout after a strong consolidation for many years. Even though this stock has already given a lot of return this year, we can use the buy on dip strategy in this stock. This stock has a Piotrowski score of 9 which means it is

financially very strong. So, we can expect this company to provide multiple times returns in the coming years.

25. Conclusion

Following are the major conclusions from the results:

1. Investments should be made with 5 to 10 years point of view. As it is seen that the stocks had given good returns in the long-term period.

2. There are many risks apart from the basic fundamental factors like the macro risks and also management frauds which can happen anytime. So, the investors should manually keep a track on such company's news and need to verify management reports.

3. Various other factors like GDP, monsoons, balance of payments, inflation etc. also impacts the stock market. These factors are also to be considered while selecting a stock for investment.

4. Investors should keep themselves updated with the latest happening in the company. They should attend investor conference calls to get better idea of the company.

5. As the right time of entry is important in the capital market, similarly the right time to exit the market is also important. The investors should have a powerful exit plan before initiating the trade. The option of stop-loss can be utilized to restrict the loss.

6. As the results of the fundamental analysis are seen in a long term, it is necessary to make sure that the capital is not blocked in only one stock. So diversifying the portfolio is also important.

26. Recommendations

1. The method used in this report works excellently in the market if all the pointers are considered properly.

2. Any financial website can be used for this activity but one has to ensure that there no errors in the data.

3. Many websites use their own methods of calculation for certain ratios so there may be some variation in the values on different websites. So, the investors should manually verify the ratios wherever required.

4. The investors should always invest in fundamentally sound companies that have a good presence in the market.

5. Before making any investment decision, investors should thoroughly analyze the financial and non-financial information of the company.

6. The stock of companies that have good financial ratios and scores gives good stock returns. Therefore, investors should consider these parameters of analysis before selecting the companies.

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