Thematic | June 2017

Contrarian Investing

It pays to be different

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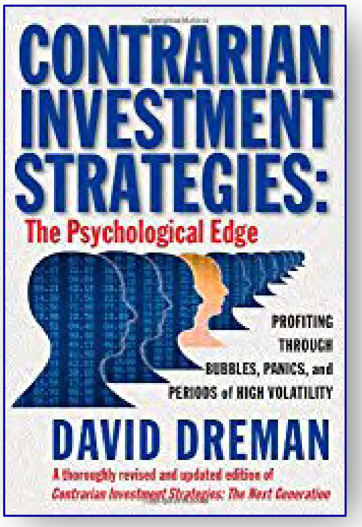


It pays to be different

Identifying contrarian investment strategies that work

Contrarian investing is a time-tested investment tool, which ***involves buying/selling stocks that goes against the prevailing sentiment of crowd or the market.*** It is among the first lessons taught to budding investors and literature on the subject dates back decades. **Contrarian Investment Strategies: The Psychological Edge** by David Dreman, **Extraordinary Popular Delusions and the Madness of Crowd** by Charles Mackay, and **The Triumph of Contrarian Investing** by Ned Devis are only some of the literary works that help understand this subject. The objective of this report is to develop an application toolkit for India. We have covered two major themes based on consensus ratings (stock popularity) and valuation multiples, and have demonstrated the success of contrarian investing in India.

What is stock popularity?

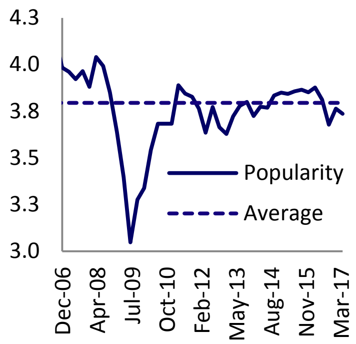
Bloomberg collects analyst recommendations on each stock and assigns a consensus rating based on these recommendations. It assigns 5 points for every buy recommendation, 3 points for every hold recommendation and 1 point for every sell recommendation. A consensus rating is arrived at by taking the average of these scores.

- A stock with a consensus rating of 5 would have all buy recommendations.
- A stock with a consensus rating of 3 would have an equal number of sell and buy recommendations, apart from hold/neutral recommendations.
- A stock with a rating change from <3 to >3 has a recommendation change from a net sell to a net buy.
- A stock with a consensus rating of 1 would have all sell recommendations.
- Consensus sell rating (%) of a stock = number of sell recommendations / total recommendations.
- Consensus buy rating (%) of a stock = number of buy recommendations / total recommendations.

Contrarian investing can generate disproportionate return

- Our analysis based on empirical evidence over the last decade suggests that investing in out-of-favor stocks can generate disproportionate returns as compared to the market.
- Our findings suggest that neutral to moderately popular stocks deliver significant outperformance, even bettering the most popular stocks. Our findings are in harmony with the findings of **"Analyzing the analysts: When do recommendations add value?"** by *Narasimhan Jegadeesh, Joonghyuk Kim, Susan D Krische and Charles Lee, Journal of Finance 2004*, that in the absence of favorable characteristics (value stocks and positive momentum stocks), the most popular stocks are associated with the worst returns.

BSE100 popularity



Contrarian Investing:

It pays to be different

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Please click here for Video Link


The Cross-Section of Expected Stock Returns

EUGENE F. FAMA and KENNETH R. FRENCH

- Our findings prove that out-of-favor low P/E stocks deliver disproportionate returns, significantly beating the benchmark. In contrast, the performance of high P/E stocks is dismal. Our findings are in harmony with the findings of ***"*Cross-Section of Expected Stock Returns**", **by Fama-French,** Journal of Finance, 1992.

Great recommendation: Buy stocks with a consensus change from net sell to net buy

- Our findings suggest that a simple strategy of investing in stocks for which analyst consensus has changed from "net sell to net buy" with a holding period of one year has delivered 24.1% annual returns over the last 10 years.

In the study, **"Analyzing the analysts: When do recommendations add value?**" the authors also find that the quarterly "change" in consensus recommendations is a robust return predictor that appears to contain information not contained in a large range of other predictive variables.

As a part of our analysis, we have divided BSE100 in 5 groups of 20 – Quintile-1 (Q1), Quintile-2 (Q2), Quintile-3 (Q3), Quintile-4 (Q4) and Quintile-5 (Q5), respectively, with Q1 being composed of the most popular stocks and so on

60 winners (Q4, Q2, Q1): 40 losers (Q5, Q3)

Besides the superiority of neutral to moderately-popular stocks, we have established that the most popular (Q1) and second-most popular (Q2) stocks also beat the benchmark.

Predicting the winners: Popularity > Consensus Sell > Consensus Buy

The result seems fit, as popularity is an aggregate measure of sell, buy and hold recommendations, and conveys more information than sell/buy recommendations in isolation. Consensus sell recommendations, with their scarcity value, are better predictors of stock performance than buy recommendations.

In each of our valuation themes, we have made groups based on P/E and P/B

Low P/E (P/B) stocks are the 20 stocks in the BSE-100 having the lowest P/E (P/B) ratios

Trailing multiples are better predictors than forward multiples

Our findings suggest that trailing valuation multiples are much better predictors of future performance as compared to forward multiples.

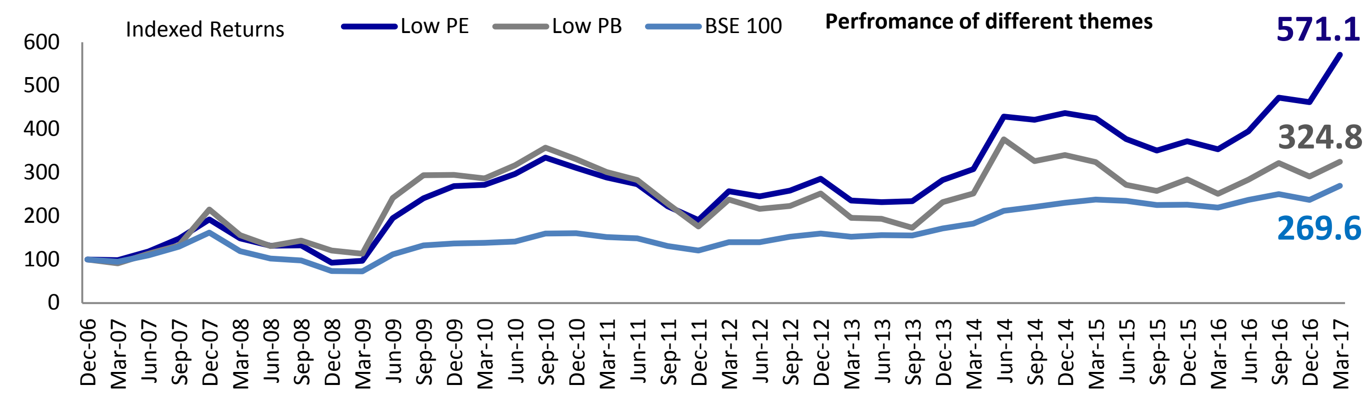
Predicting the winners: P/E > P/B

Our findings suggest that the price-to-earnings (P/E) multiple is a better predictor of returns, outperforming price-to-book (P/B), significantly.

Pharma ripe for Contrarian investing; IT not yet!!

The application of our framework on sectors suggests that opportunity for contrarian investing is best in the Pharma sector. We have also back-tested the thesis on the Metals sector based on numbers for FY16, when the sector checked all the boxes for Contrarian Investing. However, we still do not believe that the IT sector qualifies for Contrarian Investing yet.

Exhibit 1: Price to Earnings> Price to Book in stock selection



Source: Bloomberg

Top Contrarian BUY ideas based on Popularity metric

Company	Popularity score	Member of Quintile	% of Buy ratings	Correction from 52w High (%)	12 month return (%)	FY18E PE (x)	5 Yr Avg PE (x)	PE - Prem/ Disc to LPA (%)	FY18E PB (x)	5 Yr Avg PB (x)	PB - Prem/ Disc to LPA (%)	EPS CAGR FY17-19 (%)
Colgate	3.26	4	42	-1	25	42.9	38.3	12	22.2	24.7	-10	21
Axis Bank	3.22	4	40	-20	-2	21.7	16.0	35	2.1	1.9	9	64
Bajaj Auto	3.35	4	40	-9	8	18.9	18.0	5	4.3	5.1	-16	16
Idea	3.00	4	29	-35	-21	-6.2	21.1	LP	1.4	2.1	-31	Loss
Sun Pharma	3.45	4	52	-37	-27	21.2	30.6	-31	3.4	5.7	-41	9
PNB	3.04	4	28	-22	50	14.2	10.5	35	0.8	0.8	2	53

Top Contrarian BUY ideas based on Valuation metric

Company	Trailing P/E Quintile	Forward P/E Quintile	Popularity score	% of Buy ratings	Correction from 52w high (%)	12 month return (%)	FY18E PE (x)	5 Yr Avg PE (x)	PE - Prem/ Disc to LPA (%)	FY18E PB (x)	5 Yr Avg PB (x)	PB - Prem/ Disc to LPA (%)	EPS CAGR FY17-19 (%)
Tech Mahindra	5	5	3.94	63	-29	-27	12.0	14.0	-14	1.9	2.8	-34	9
Coal India	5	4	4.03	65	-30	-22	14.0	15.8	-12	6.2	6.2	0	12
Rural Elec.	5	5	3.43	52	-19	116	5.2	4.4	17	0.9	0.9	3	13
Shriram Tran. Fin.	3	4	3.68	58	-25	-14	12.8	15.1	-15	1.8	1.9	-8	33

Contrarian SELL ideas

COMPANY	Popularity score	% of Buy/Hold ratings	CMP (INR)	Member of PE Quintile	Member of Popularity Quintile	Appreciation from 52w low (%)	12 month return (%)	PE - Prem/Disc to LPA (%)	1 Year Fwd PB (x)	PB - Prem/Disc to LPA (%)	EPS CAGR FY17-19 (%)
Asian Paints	3.24	76%	1,164	1	4	37	18	28	14.1	24	14
Bajaj Finance	4.04	91%	1,401	1	2	89	85	98	6.5	125	38
Eicher	4.00	80%	27,653	2	2	54	47	21	11.1	36	36
Escorts	4.33	100%	710	NA	NA	294	242	152	3.1	266	38
GAIL	3.47	71%	360	3	3	34	28	-8	1.5	-4	18
IOC	4.03	84%	394	4	2	92	90	-12	1.9	69	3
LIC Housing Fin.	3.85	87%	770	4	3	65	59	47	3.1	51	16
Voltas	3.74	81%	465	NA	NA	62	44	58	4.2	56	8

Top BUY ideas based on the twin metrcis of Popularity and Valuation multiples

Our top contrarian picks are: **Axis Bank, Bajaj Auto, Colgate, Coal India, Idea, PNB, REC, Shriram Transport Finance, Sun Pharma & Tech Mahindra.**

Axis Bank

The bank has made significant investments to ride the next growth cycle (post near-term asset quality challenges), with support in the form of (1) strong capitalization (13% tier-I) and (2) expanding liability franchise (3,400+ branches). For FY19, we expect the bank to report 1.3-1.4% RoA and 16% RoE.

Axis Bank features in our list of Buy ideas owing to its presence in Quintile 4 of the popularity metric.

Bajaj Auto

Valuations at 18.7x/15.8x FY18/19E (MOSL Est.) standalone EPS are attractive, considering (a) scope of profitable market share gain, (b) high visibility of sustenance of superior profitability and (c) lower capex requirement driving return ratios.

Bajaj Auto is also a member of Quintile 4 of the popularity metric – its valuations are at long-period average (LPA), while the rest of the sector is at a premium to its average valuations.

Colgate

Colgate is a strong play on an imminent rural volume recovery, led by a confluence of positives such as likely normal monsoon, moderate inflation levels, government schemes to boost growth (expansion of DBT benefits, increase in rural allocation in the national/state budgets, and farm loan waivers) and a weak base of the past three years. Over the medium-to-long term, margin drivers are operating leverage on expanded capacity, lower A&P compared to elevated levels of the past three years and continued premiumization. Colgate features in Quintile 4 of the popularity metric.

Coal India

CIL has a strong balance sheet, healthy cash flow and net cash status. With volume uptick apparent in the recent months, we believe the benefit of operating leverage will result in EPS growth.

Coal India features in Quintile 5 of P/E valuation metric (quintile with lowest P/E) and has valuations which are trading at discount to its LPA.

Idea

Idea's merger with Vodafone will improve its spectrum and data network quality. In the current hyper-competitive market, it will allow Idea to match RJio's offering and subsequently arrest market share dilution. We believe the industry should stabilize in the next 3-4 quarters as RJio's free usage offer concludes and its network reaches optimum capacity. Idea has one of the lowest Buy ratings on the street and is part of Quintile 5 of the popularity metric.

Punjab National Bank

PNB remains highly levered to the RBI's resolution mechanisms and an improvement in recovery environment. Significant stress has been recognized over the last eight quarters, and OSRL has also come off sharply in last one year. Concentration of Infra (incl. power) and Iron & Steel is very high in stress loans (50%+), and any upgrade in these segments can lead to a significant upgrade in earnings. In our view, RoAs and RoEs have bottomed out in FY17, and we expect a gradual improvement hereon. PNB is part of Quintile 4 of our popularity metric, and has valuations trading at LPA with less than 30% of Buy ratings on the street.

Rural Electrification Corporation (REC)

REC's near- to medium-term earnings were at risk following the implementation of UDAY. However, progress so far has been encouraging both on the growth and NIM front, and RECL has delivered good results this year. Despite repayment of DISCOM debt under the UDAY scheme, loan growth is anticipated to be in positive trajectory, with working capital and refinancing demand on strong turf. RECL features in Quintile 5 of our valuation-based metric, with valuations at LPA.

Shriram Transport Finance (SHTF)

SHTF's return ratios are at cyclical lows, with decadal high credit cost and NPLs. We believe the worst of asset quality troubles is behind, and SHTF should witness improving return ratios due to lower credit costs. Additionally, we believe margin compression fears are overplayed, with the company yet to reap significant benefit on CoF. SHTF is part of Quintile 3 of our valuation-based metric, with valuations at discount to long-period averages.

Sun Pharma

Near-term earnings will be under pressure due to the weak business outlook in the US and the GST impact in India. However, this is more than factored in the recent stock price decline, in our view (valuations at ~30% below five-year average). We believe the strategic investments in the specialty business over last 2-3 years, coupled with stable growth in the domestic market and the enhanced focus on complex generics in the US, will help drive earnings growth in the medium term. Sun Pharma is part of Quintile 4 of the popularity metric, with valuations at 30% discount to long-period average.

Tech Mahindra

Gradual recovery in Telecom and continued outperformance in Enterprise are likely to lead to an improvement in revenue growth and profitability, subsequently resulting in valuation catch-up with peers. Tech Mahindra is part of Quintile 5 of the P/E valuation-based metric, with valuations at ~15% discount to LPA.

Top Contrarian BUY ideas based on Popularity metric

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Shriram Tran. Fin.	3	4	3.68	58	-25	-14	12.8	15.1	-15	1.8	1.9	-8	33

Top contrarian SELL ideas

Our top sell ideas are: **Asian Paints, Bajaj Finance, Escorts, GAIL, LIC Housing, IOC, Eicher and Voltas.**

Asian Paints

The slowdown in real estate is likely to inhibit growth prospects. Industry reports suggest that demand in this segment, which is 20% of the paints business, has nearly halved in recent months. The company has had tailwind of low crude costs in the past three years. Any sharp reversal would make margins vulnerable. RoCE has consistently declined from ~40% in FY11 to ~24% in FY17, as the non-paints businesses have struggled. Valuations at 42x FY19E EPS are at multi-year highs (5-year average is 39.6x, 10-year average is 31.2x, and 15-year average is 26.3x).
APNT features in Contrarian Sell owing to its presence in Quintile 1 of P/E based valuation metric with valuations at 30% premium to LPA and 75% Buy ratings.

Bajaj Finance

BAF – a dominant player in the consumer durables financing segment – continues to reap the benefits of healthy consumer demand, increasing its market share in consumer as well as other businesses. While yields are likely to remain under pressure due to lower share of CD financing, the stock looks expensive at 6.5x/5.2x FY17E/18E BV (MOSL Est.).
BAF is also a part of Quintile 1 of valuation based metric with valuations at 100%+ premium to its LPA and 90% Buy ratings.

Eicher Motors

We expect Royal Enfield (RE) volume growth to moderate to ~18% CAGR over FY17-20 (against ~55% CAGR over CY13-FY17). Despite factoring in EBITDA margin of ~33% for RE, consolidated EPS growth is estimated to moderate to ~31% CAGR over FY17-20 (v/s 62% CAGR over CY13-FY17). This moderation in earnings growth trajectory would drive moderation in valuations assigned to RE business (we assign exit P/E of ~27.5x for FY20), which in turn would result in stock underperformance.
Eicher Motors is member of Quintile 2 of P/E based valuation metric with valuations at 20% premium to its LPA and 80% Buy ratings.

Escorts

FY17 has been a robust year for ESC, with Tractors volume growth of 24% and EBITDA margin expansion of 280bp. However, Tractors is dependent on monsoon and undergoes business cycle; delivering growth on linear basis here thus appears challenging. With sharp-run up in stock , stock doesn't look attractive on valuation front. Escort's valuation are at 150% premium to its LPA with 100% Buy ratings.

GAIL

While we do build in 32%/15% growth in EPS in FY18/19, return ratios of 12% are 5% lower than what they were five years back. There is no visibility on most part of 5.8mmtpa 20yr contract to import gas from the US. A hit of USD1/mmBtu could wipe out 22% EBIDTA. The threat calls for lower multiple. We value it at INR357 using 9x FY19 adj EPS & adding value of investments.
Gail features in Quintile 3 of our Popularity metric with 70% Buy ratings.

Indian Oil Corporation (IOCL)

Adjusting for inventory gains and one-time employee expense, we would see ~15% EBITDA increase in FY18, with normalization of Paradip refinery. However, we do not see more than 3-4% growth in FY19. Market share loss has become significant, with private players achieving 3% share in petrol and 8% in diesel. Over the next two years, free cash flow would be good. However, with the company committed to INR1.75t capex over seven years, the balance sheet is likely to be strained. We see very little, if any, probability of valuation re-rating from here.

IOCL has 85% Buy ratings with valuations at 70% premium to its LPA on P/B.

LIC Housing Finance

While margins have been on an uptrend over the past four quarters due to declining cost of funds, growth remains an issue. Core home loan growth has been range-bound at 9-10% over the past 4-5 quarters. Almost 50% of the incremental loan growth in FY17 was driven by LAP and developer loans – this has also helped maintain yields. However, we believe that with the share of non-core book stabilizing, growth would slow down and margin expansion would be subdued. The stock has performed well over the past one year and now trades at 2.7x FY19E BV. LIC Housing Finance has 90% Buy ratings with valuations at 50% premium to its LPA.

Voltas

We expect the air conditioner (AC) industry to see a rapid shift to inverter ACs. We expect inverter ACs to constitute 30% of industry volumes in CY18 and 50% in CY20. Voltas has historically been weak in this category; it is likely to lose share to the Japanese/Koreans. Margins in UCP segment, which were at peak levels of 14.5% in FY17, are likely to decline over the next two years. Valuations are steep at 35x FY19E EPS for the UCP segment v/s historical band of 20-25x.

Voltas with 80% Buy ratings and valuations at 50% premium to LPA fits in well in our Contrarian Sell thesis.

Contrarian SELL ideas

COMPANY	Popularity score	% of Buy/Hold ratings	CMP (INR)	Member of PE Quintile	Member of Popularity Quintile	Appreciation from 52w low (%)	12 month return (%)	PE - Prem/Disc to LPA (%)	1 Year Fwd PB (x)	PB - Prem/Disc to LPA (%)	EPS CAGR FY17-19 (%)
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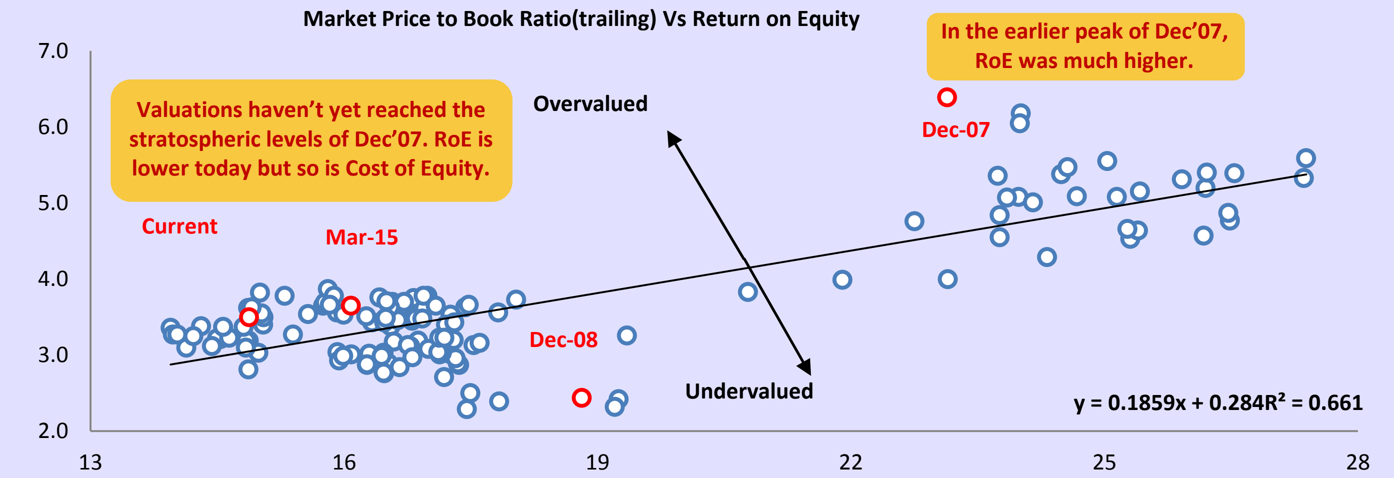
IOC	4.03	84%	394	4	2	92	90	-12	1.9	69	3
LIC Housing Fin.	3.85	87%	770	4	3	65	59	47	3.1	51	16
Voltas	3.74	81%	465	NA	NA	62	44	58	4.2	56	8

Disclaimer: The ideas highlighted in this section may not be in consonance with the ratings assigned to the respective stocks by our sector-specialist analysts.

Three interesting charts from this report

Exhibit 2 highlights the comparison of Trailing Price to Book vs. RoE for the markets and compares the historical trend.

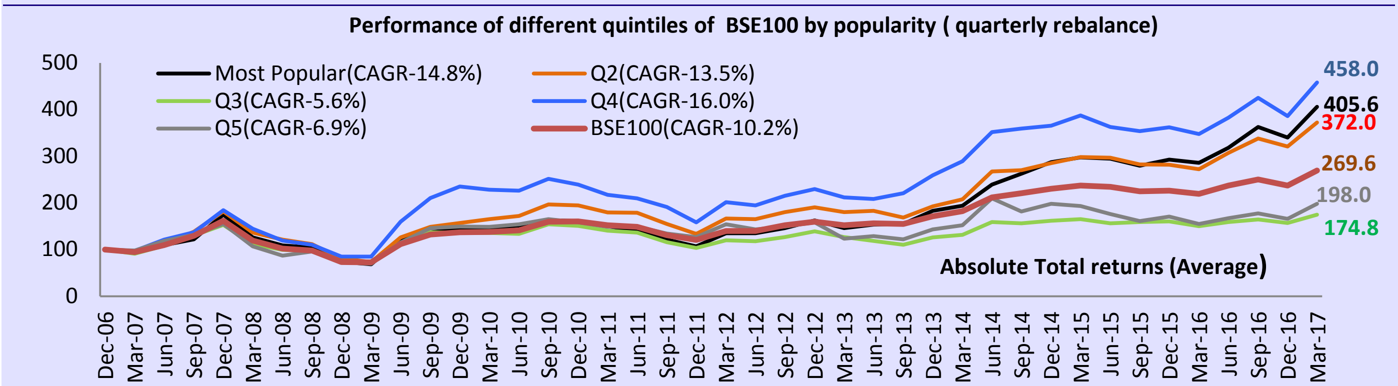
Exhibit 2: Herd behavior evident in 2007-2008 – Nifty P/B (trailing) v/s RoE



Source: NSE

Exhibit 3 demonstrates the key finding of our analysis based on popularity of consensus ratings – Quintile 4 (Neutral to Moderately Popular) stocks have given best returns.

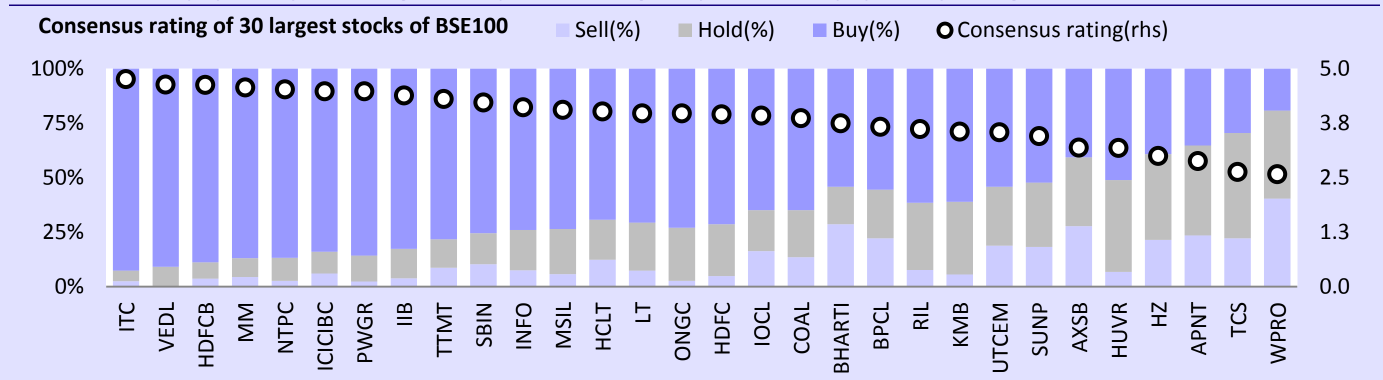
Exhibit 3: Stocks on which consensus is neutral to moderately positive have performed best



Source: Bloomberg

Exhibit 4 chart juxtaposes the popularity of current constituents of Sensex based on consensus ratings.

Exhibit 4: Stock popularity of 30 largest companies arranged by consensus popularity ratings



Source: Bloomberg

Key quotes and references on contrarian investing

Refer to page 13, (Contrarian investing: What it is; why it works) for details

Jesse Livermore, one of the greatest stock traders of all time, has remarked, "***Wall Street never changes. The pockets change, the stocks change, but Wall Street never changes because human nature never changes***". What he said decades ago holds true today as well! Contrarian investing works on the same premise.

As early as the 1840s, in his remarkable book, ***Extraordinary Popular Delusions and the Madness of Crowd,*** Charles Mackay observed: "We find that whole communities suddenly fix their minds upon one object and go mad in its pursuit; that millions of people become simultaneously impressed with one delusion, and run after it…Sober nations have all at once become desperate gamblers and risked almost their existence upon the turn of piece of paper …Men, it has been well said, think in herds …go mad in herds, while they only recover their senses slowly and one by one."

Benjamin Graham's "Intelligent Investor" *cites a study involving the constituents of Dow Jones Industrial Average*. The performance of the 10 lowest P/E stocks, 10 highest P/E stocks, and of all the 30 stocks in the index was measured over set periods between 1937 and 1969. In each time span, the low P/E did better than the market and the high P/E stocks did worse.

Refer to Page 46-53 "Low P/E stocks outperform high P/E" for details

In their legendary paper, **"Cross-section of Expected Stock Returns**", Journal of Finance, 1992, ***Eugene Fama and Kenneth French*** reported results similar to Benjamin Graham's findings. Several studies before and after the Fama-French study also point towards the outperformance of out-of-favor stocks.

*In "**Analyzing the analysts: When do recommendations add value**?", Journal of Finance 2004, Narasimhan Jegadeesh, Joonghyuk Kim, Susan D Krische and Charles Lee have highlighted that naive adherence to the consensus recommendations can be costly, because the "level" of the consensus recommendation adds value only among stocks with favorable quantitative characteristics (that is, value stocks and positive momentum stocks). In fact, among stocks with unfavorable quantitative characteristics, higher consensus recommendations are associated with worse subsequent returns.*

Refer to Page 23-26 "Neutral to moderately popular stocks emerge winners

*In "**Can Investors Profit from the Prophets? Security Analyst Recommendations and Stock Returns**", Journal of Finance 2002, Brad Barber, Reuven Lehavy, Maureen McNichols and Brett Trueman, highlight that stocks with the most favorable recommendations outperform stocks with the least favorable recommendations. Our findings are also on similar lines.*

Contrarian investing: What it is; why it works

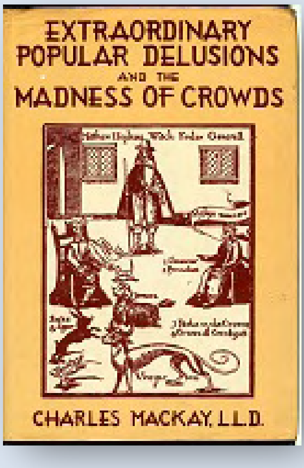
Amongst the multitudes of investment frameworks and styles which have worked, one of the most interesting and least popular is Contrarian Investing. Going against the grain and herd is not a common natural human instinct, be it investing or any other domain. In investment parlance, Contrarian investing, in simple terms, is an investment style which goes against the prevailing market consensus and is characterized by buying and selling against the prevailing market sentiment. It has some similarity with value investing as both contrarian and value investors are hunting for price-value mismatch. However, value investing focuses mostly on valuations and its overarching priority is to look for valuation mismatch vs. intrinsic value of the company. Contrarian investing can also encompass several qualitative aspects (market sentiments, macros, expectations) along with the quantitative parameters of valuations.

Jesse Livermore, one of the greatest stock traders of all time, has remarked, "***Wall Street never changes. The pockets change, the stocks change, but Wall Street never changes because human nature never changes***". What he said decades ago holds true today as well! Contrarian investing works on the same premise.

"*Contrarian investing is an investment strategy that is characterized by investing in stocks which are out of favor with the crowd or market. A contrarian investor believes that certain crowd behavior like irrational exuberance, overreaction, and human limitation as a forecaster can lead to certain mispricing's in stock market which can be exploited in a consistent and systematic manner*". Our evidence from India suggests the same.

Investor enthusiasm or crowd herding often causes popular stocks to become overpriced. Similarly, lack of investor enthusiasm often dumps unpopular stocks into the bargain basement. Earnings and other surprises result in re-evaluation of both groups and more realistic pricing. Contrarian investing focuses on buying stocks dumped into the bargain basement. Some contrarian strategies are:

1. Buying stocks with low price-to-earnings
2. Buying stocks with low price-to-book
3. Buying stocks with low price-to-cash-flow
4. Buying neutral-to-moderately-popular stocks (popularity based on consensus rating*)



Evidence from India shows that the companies the market expects the best future for (as reflected in high price-to-earnings or high price-to-cash-flow) often underperform, while the companies the market expects the worst future for (as reflected in low price-to-earnings or low price-to-cash-flow) often outperform.

As early as the 1840s, in his remarkable book, ***Extraordinary Popular Delusions and the Madness of Crowd,*** Charles Mackay observed: "We find that whole communities suddenly fix their minds upon one object and go mad in its pursuit; that millions of people become simultaneously impressed with one delusion, and run after it…Sober nations have all at once become desperate gamblers and risked almost their existence upon the turn of piece of paper …Men, it has been well said, think in herds …go mad in herds, while they only recover their senses slowly and one by one."

This is the case in the stock market, as well – investors get fixated with some popular stocks. As investors crowd around these popular stocks, they become overpriced, and as evidenced in this study, fail to deliver returns.

We delve into facets of human behavior, heuristics and biases, which explain the success of contrarian investing.

Investor overreaction hypothesis (IOH)

The investor overreaction hypothesis (IOH) states that investors overreact to certain events in a consistent and predictable manner. Some key predictions of IOH are:

1. Investors will continuously overvalue favored stocks and undervalue out-of-favor stocks.
2. Investors will find themselves over-optimistic on forecasts of the "best" stocks and too pessimistic on those of the "worst" stocks over time.
3. Absolute contrarian strategies provide superior returns over time.
4. Out-of-favor stocks as valued by at least three major fundamental measurements – low price-to-earnings, low price-to-cash-flow and low price-to-book-value – will outperform the market as a group over longer periods of time, normally 5-10 years or more.
5. Favored stocks as measured by high price-to-earnings, high price-to-cash-flow and high price-to-book ratios will underperform the market over the same time periods.
6. IOH posits that the outperformance of out-of-favor stocks and the underperformance of favorites are caused primarily by behavioral influences (affect, cognitive heuristics, neuroeconomics and other psychological variables).

As implicitly stated in IOH, it is not only in manias, contagion and panic that this predictable overreaction occurs. We see this consistently in normal market settings. As we will see across themes, the "best" stocks (those with the most promising prospects by various yardsticks) underperform as a group as compared to "out-of-favor" stocks. ***And that's why contrarian investing works successfully***!

Human limitation as a forecaster – overconfidence bias and over-optimism

The consistent underperformance of the best stocks comes from investors' and analysts' over-confidence in their ability to predict earnings accurately, though empirical evidence proves that this cannot be done.

Consider for instance, the Nifty constituents, all well-tracked companies on which a plethora of information is easily available. We juxtaposed the forecasted aggregate earnings growth for the Nifty against the actual earnings growth for the last eight years. We found significant over-optimism on earnings growth towards the start of the year, which tapers off towards the end of the fiscal year, and the forecasts are quite off the mark, even towards the end of the fiscal year.

If the magnitude of error is so high for the most actively tracked companies, the error would probably be much larger for companies outside the Nifty. The market would be more likely to punish high-multiple stocks, for which expectations are much more than low-multiple stocks, from which expectations are muted.

Our study highlights that trailing multiples are better predictor of future performance as compared to forward estimates, which emphasizes human limitation as a forecaster.

Exhibit 5: Nifty earnings growth (%) – actual v/s consensus estimates

	Estimate (12 months prior)	Estimate (3 months prior)	Actual
FY09	18.9	5.8	-13.4
FY10	11.9	7.6	7.8
FY11	25.1	25.4	25.8
FY12	19.3	8.9	7.1
FY13	17.2	14.1	2.9
FY14	23.9	16.2	14.5
FY15	17.1	18.0	-5.1
FY16	22.0	15.4	-0.7
FY17	20.7	17.7	10.8
Average	**19.6**	**14.3**	**5.5**

Source: Bloomberg

Combining this with IOH which states that crowd consistently overvalues favorite stocks, such an overvaluation with the over optimism of analysts to predict the earnings hits them much harder as compared to the other stocks. Simply put it, ***"negative earnings surprise would affect these stocks much more as compared to other stocks***".

Human biases and heuristics

Affect: Our strong likes, dislikes and opinions, experienced feelings such as happiness, sadness, excitement and fear, can consciously or unconsciously, heavily influence our decision-making process. Affect can cause behavior to move many standard deviations away from the norm. So, our own preference for sports might prompt us to invest in a sports company as compared to a radio company, which appears dull to us but the radio company might be a better investment.

Availability bias: Availability bias is a behavioral concept that describes how our environment can shape our perceptions. Our perceptions are heavily influenced by what is personally most relevant, recent or dramatic, which represent only a part of the complete economic picture. For example, a person whose home has lost 20% of its market value and whose spouse endured a long period of unemployment is less likely to see or feel an economic recovery even while housing markets show signs of recovery and unemployment ticks down.

Anchoring and hindsight biases: The other two systematic heuristic biases that tend to cause investment errors are anchoring bias and hindsight bias. These biases also reinforce the others. **Anchoring** is a simplifying heuristic that sets up a price for a stock that is not far removed from its current trading price as its anchor. The heuristic process tends to drop the anchor far too close to the stock's current price and investors don't seem to believe that price can go either much lower if they want to sell or much higher if they want to buy; this often leads to missed opportunities.

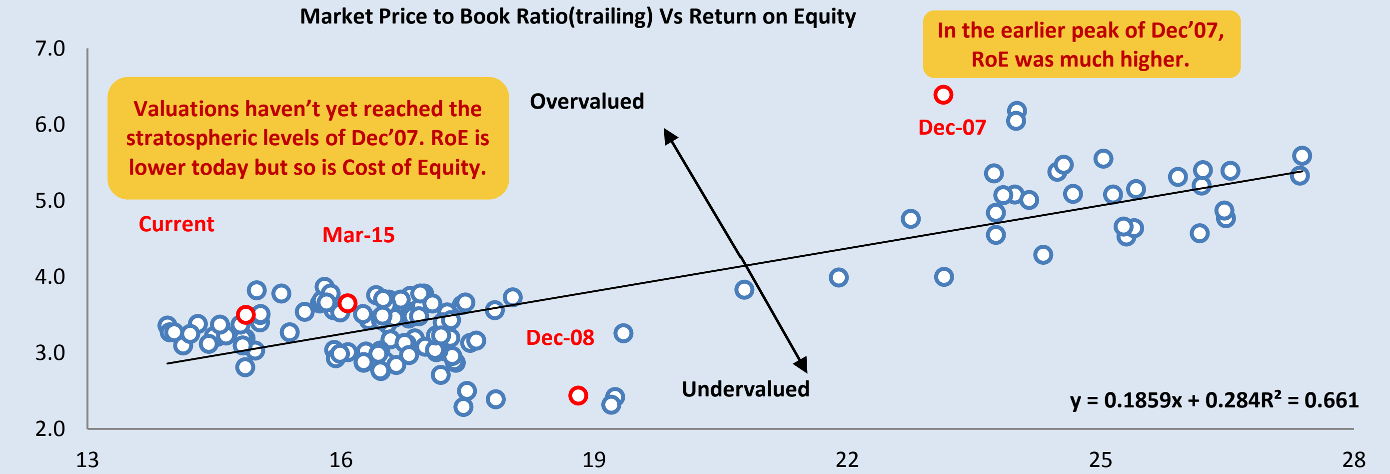
The inevitability of what happened seems obvious in retrospect. **Hindsight** bias seriously impairs proper assessment of past errors and significantly limits what can be seen from experience.

2007-2008: Could the crash have been foreseen?

In his book, Extraordinary Popular Delusions and the Madness of Crowd, Charles Mackay had remarked in 1840, *"**Men, it has been well said, think in herds ……go mad in herds, while they only recover their senses slowly and one by one**"*. Fast forward 168 years, did a similar thing happen in December 2007? Can crowd behavior led to bubbles and manias?

Consider Exhibit-6. The expectation (P/B) attached by the investor to return on equity (RoE) was mindboggling in December 2007. A crash was imminent (in hindsight?), as the valuations were extremely high. Even in the months prior to December 2007, the valuations were stretched, but the herd didn't budge!

Exhibit 6: Herd behavior evident in 2007-2008 – Nifty P/B (trailing) v/s RoE



Source: NSE

As things stand today, valuations haven't yet reached the stratospheric levels of December 2007. While RoE is lower for the aggregates vis-à-vis December 2007, the P/B multiple is also lower. In the previous peak of December 2007, valuations kept on rising, accompanied by expanding RoE. If the past is anything to go by, then we can see expansion in P/B multiples even from the current levels, if earnings growth recovers and capital efficiency ratios improve. Another difference vis-à-vis December 2007 is in the cost of capital – it is lower today, and thus, supportive of relatively rich valuation multiples.

Move to a different geography – the US, a year before crash! In the housing bubble in the US, which evolved into the Global Financial Crisis, excessive use of leverage played a massive role in destruction of wealth. The world's smartest investors and rating agencies that rated the mortgages were all caught in mania!

In his book, Charles Mackay highlights the **Dutch Tulip Mania**. In 1637, investors scrambled to buy tulips, paying the equivalent of USD75, 000 for a Semper Augustus, a rare bulb. Then, suddenly, the price collapsed to a miniscule fraction of this. The question is: how does something so valuable suddenly become worthless? There was no disruptive technology or substitute! Rationality definitely goes for a toss!

Human behavior has been remarkably similar across different geographies and time. In 1637, investors overreacted to events and then corrected their original reaction, causing a major reversal in price. In December 2008, the Nifty was at deep discount – investors had overreacted; normalcy returned thereafter.

Consensus recommendations

1

Popularity as the selection criterion
Does stock popularity with analyst has a meaningful impact on stock's performance?

2

Consensus Sell rating (%) as the selection criterion
Sell recommendations are not as common as buy/hold recommendations, and possess scarcity value.

3

Consensus Buy rating (%) as the selection criterion
With the scarcity value theme of consensus sell ratings playing out well, we put to test the street's capability to predict the winners.

4

Consensus recommendation change from "Net sell" to "Net buy"

Valuation

1

P/E

2

P/B

Consensus Recommendations

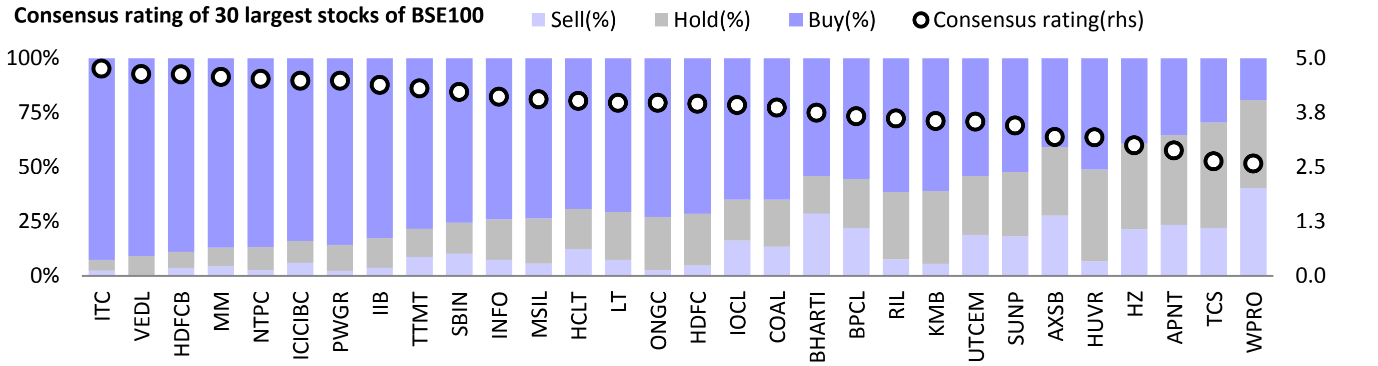
What is stock popularity?

In this report, we have tried to analyze whether a stock's popularity with the consensus can tell us about its market price performance. Bloomberg collects analyst recommendations on each stock and assigns a consensus rating based on these recommendations. It assigns 5 points for every buy recommendation, 3 points for every hold recommendation and 1 point for every sell recommendation. A consensus rating is arrived by taking the average of these scores.

- A stock with a consensus rating of 5 would have all buy recommendations.
- A stock with a consensus rating of 3 would have equal number of sell and buy recommendations, apart from hold/neutral recommendations.
- A stock with a rating change from <3 to >3 has a recommendation change from a net sell to a net buy.
- A stock with a consensus rating of 1 would have all sell recommendations.
- Consensus sell rating (%) of a stock is number of Sell recommendations/Total recommendations.
- Consensus buy rating (%) of a stock is number of Buy recommendations/Total recommendations

We have used the consensus rating of a stock as a measure of its popularity. A stock with a consensus rating of 5 is very popular with analysts, whereas a stock with a consensus rating of 1 is very unpopular. A stock with a consensus rating of 3 is termed as neutral.

Exhibit 7: Stock popularity of 30 largest companies ordered by popularity with analysts



Source: Bloomberg

Amongst these largest 30 companies, **ITC** is trading at relatively attractive valuations (32x FY18E EPS; at a significant discount to its FMCG peers). Cigarette volume growth has been resilient despite demonetization while GST has been a positive event for ITC. Earnings predictability and cigarette volume resilience coupled with valuation discount to the sector has resulted in the stock being the most popular large cap name on the street as per consensus popularity score.

HDFC Bank remains one of the most popular stocks, given its solid earnings growth led by consistent market share gains (value migration from public to private sector banks), pristine asset quality and unparalleled track record of multiple years of 20%+ earnings growth. HDFC Bank is one of our long-term picks in the BFSI space.

M&M has seen improvement in its popularity, as it is widely expected to be the key beneficiary of improving rural consumption prospects on the back of second consecutive year of normal monsoon. The management's upbeat guidance on tractor volume growth coupled with potential recovery in UV market share is also driving the overall bullish sentiment on the stock. M&M, Tata Motors and Maruti are our preferred bets in the Auto sector.

ICICI Bank has seen improvement in its consensus popularity scores post 4QFY17 results. Overall pool of stressed loans is showing signs of stability, and bulk of NPA recognition is happening from the watch list and OSRL. The government and RBI's sense of urgency **for resolution of lumpy stressed loans is also providing comfort at the margin.** Among the corporate-oriented private sector banks, the street's preference has tilted towards ICICI Bank.

Asian Paints has seen erosion in its consensus popularity scores largely owing to a combination of lifetime high valuations (42x FY19E EPS) coupled with moderating Decorative Paints volume growth. Implementation of GST could also impact performance in 1HFY18.

The IT sector is facing multiple headwinds: margin pressure in traditional services along with protectionist impetus in the US, which makes **TCS** and **Wipro** one of the least popular stocks, with consensus popularity score of 2.6-3.

Macroeconomic issues (sharp INR depreciation) in key export markets including Nigeria and Egypt, absence from the scooter segment (higher growth than motorcycles), and continued impact of demonetization on two-wheeler volumes have rendered a neutral consensus recommendation for **Bajaj Auto**.

Elevated slippages, weak business outlook and expected pressure on core income have led to **Axis Bank's** drop in popularity.

Analyzing themes based on consensus recommendations

For our study, we have divided the BSE-100 into five quintiles (groups of 20), based on different selection criterion. We have begun with the December 2006 quarter, and have re-balanced the quintiles quarterly, based on criterion/theme.

As a next step, we have evaluated the absolute total returns (including dividends) of each quintile and compared these with the returns from the BSE-100. This exercise has given us important insights for stock selection.

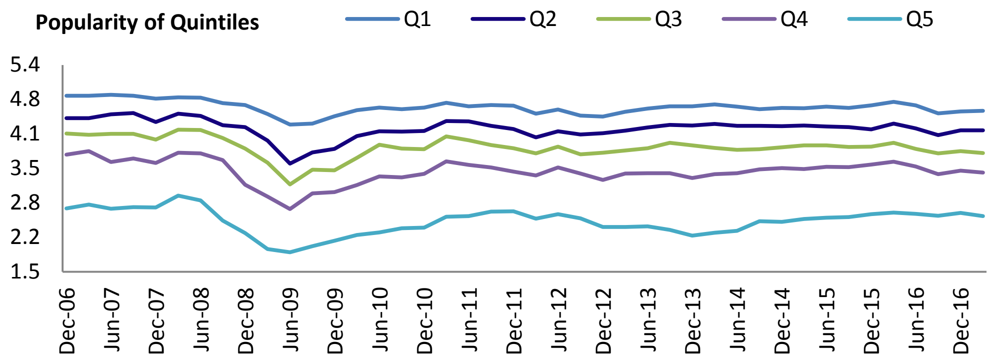
Central theme: Popularity as the selection criterion

This is the central theme of our study. The BSE-100 Index constituents have been divided into quintiles based on popularity score, with Quintile-1 being composed of the highest popularity stocks and so on. This has been done for each quarter starting December 2006 and the total returns from each quintile have been evaluated.

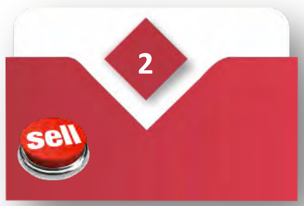
Neutral to moderately popular stocks (Quintile-4) performed the best, followed by the most popular stocks (Quintile-1, and then, Quintile-2). The least popular stocks (Quintile-5) and those in Quintile-3 were perennial underperformers, rarely beating the benchmark.

As a part of our analysis, we have divided BSE100 in 5 groups of 20-Quintile1 (Q1), Quintile2 (Q2), Quintile3 (Q3), Quintile4 (Q4) and Quintile5 (Q5) respectively with Q1 being composed of most popular stocks and so on.

Exhibit 8: Popularity of different quintiles



Source: Bloomberg

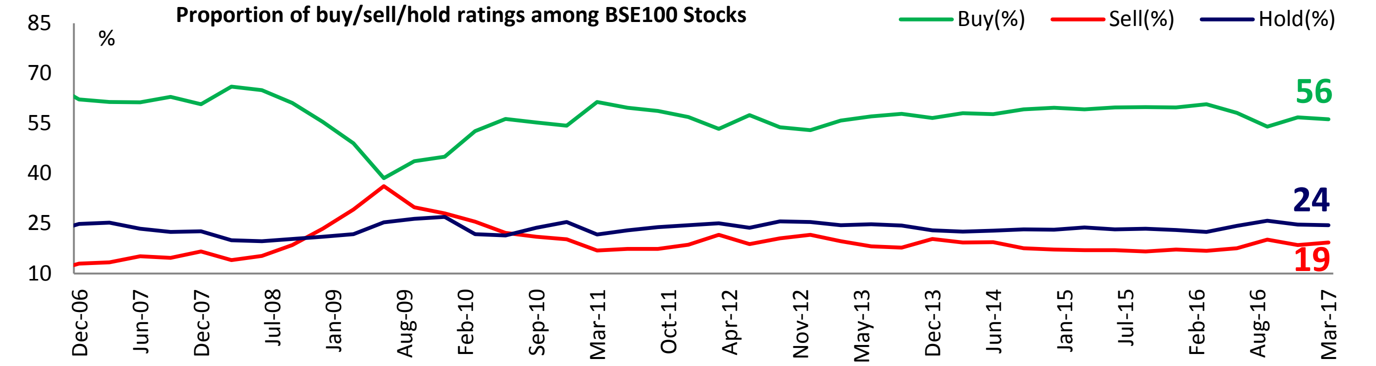


Associated theme-1: Consensus Sell rating (%) as the selection criterion

While analyzing the central theme, we noticed the scarcity value in sell recommendations. Sell recommendations are not as common as buy/hold recommendations, and could be a meaningful indicator of stock performance.

Once again, we created quintiles from the BSE-100, this time based on consensus sell ratings (%), with Quintile-1 being composed of stocks with the highest consensus sell ratings and so on. We started this from the December 2006 quarter and rebalanced the quintiles every quarter since.

Exhibit 9: Scarcity of SELL ratings aids the performance of Consensus SELL rated stocks



Source: Bloomberg

It was interesting to find that Quintile-1(quintile composed of stocks with highest Sell ratings) underperformed the rest of the quintiles, underscoring our thesis that stocks with Consensus Sell rating performs in line with recommendation given the scarcity of Sell ratings on the street. Quintile-5 (quintile of stocks with lowest Sell ratings) delivered the best returns among five quintiles.

Associated theme-2: Consensus Buy rating (%) as the selection criterion

With the scarcity value theme of consensus sell ratings playing out well, we put to test the street's capability to predict the winners. We created quintiles from the BSE-100, this time based on consensus buy ratings (%), with Quintile-1 being composed of stocks with the highest consensus buy ratings and so on.

The results of this exercise closely mimic the results thrown up by the popularity theme. *The top two quintiles along with Quintile-4 delivered good returns, whereas Quintile-3 and Quintile-5 underperformed the market. Quintile-4 was the winner portfolio and had a significant overlap with Quintile-4 of the popularity theme.*

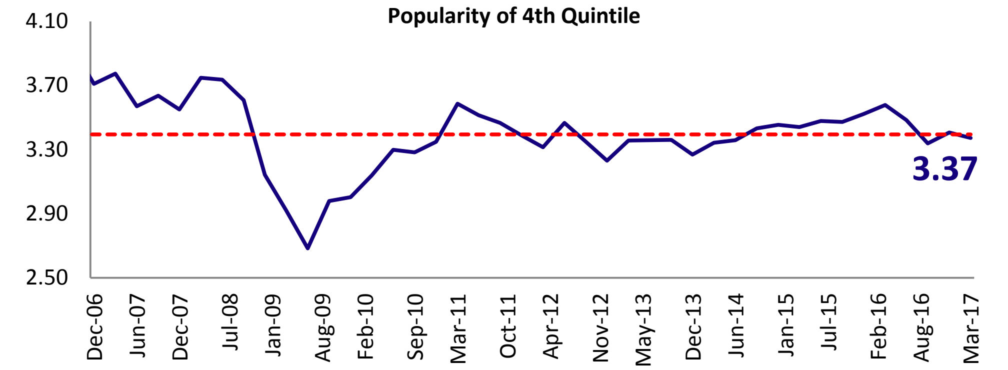
Neutral to moderately popular stocks emerge winners

With popularity as the selection criterion for creating quintiles of BSE-100, quintiles were created for each quarter and rebalanced quarterly. The 4th quintile comprises of stocks which are neutral to moderately popular which reflects in the consensus rating history of the 4th quintile.

Popularity of a stock is calculated as average of the ratings assigned to it by the street. Bloomberg assigns 5 points for every Buy rating, 3 for Hold and 1 for Sell rating.

- A stock with a consensus rating of 5 would have all buy recommendations.
- A stock with a consensus rating of 3 would have an equal number of sell and buy recommendations, apart from hold/neutral recommendations.
- A stock with a consensus rating of 1 would have all sell recommendations.
- Quintiles for Popularity were created such that Quintile 1 has the 20 stocks with the highest Popularity, Quintile 2 has next 20 stocks and so on such that Quintile 5 has the 20 stocks with the least popularity.

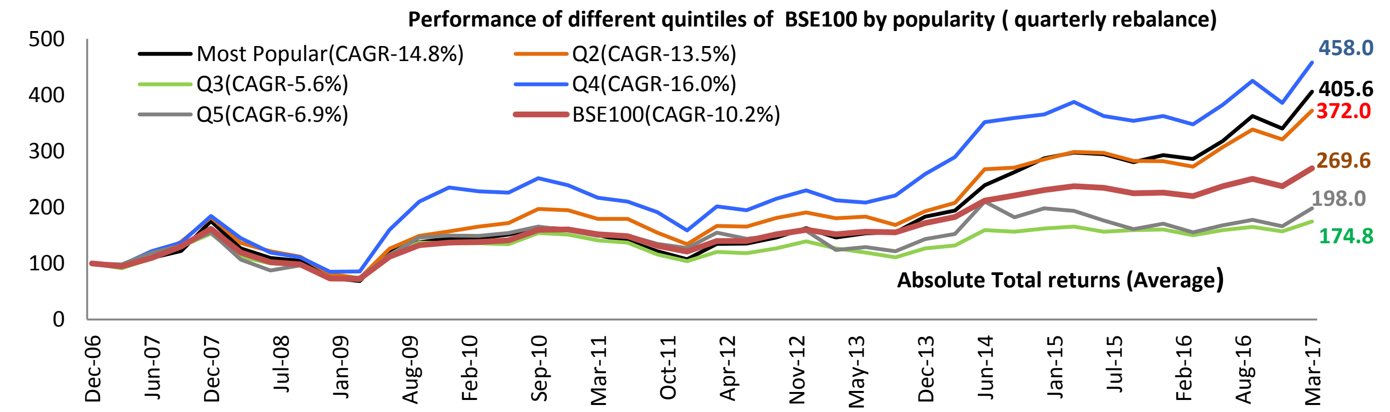
Exhibit 10: Quintile 4 is a mix of neutral to moderately popular stocks



Source: Bloomberg

On average measure, Quintile-4 has performed the best, followed by Quintile-1 and Quintile-2. Quintile-5 (the least popular stocks) and Quintile-3 have performed the worst. While average is an investable metric, median represents the quintile behavior more precisely. We achieved similar results with median measure!

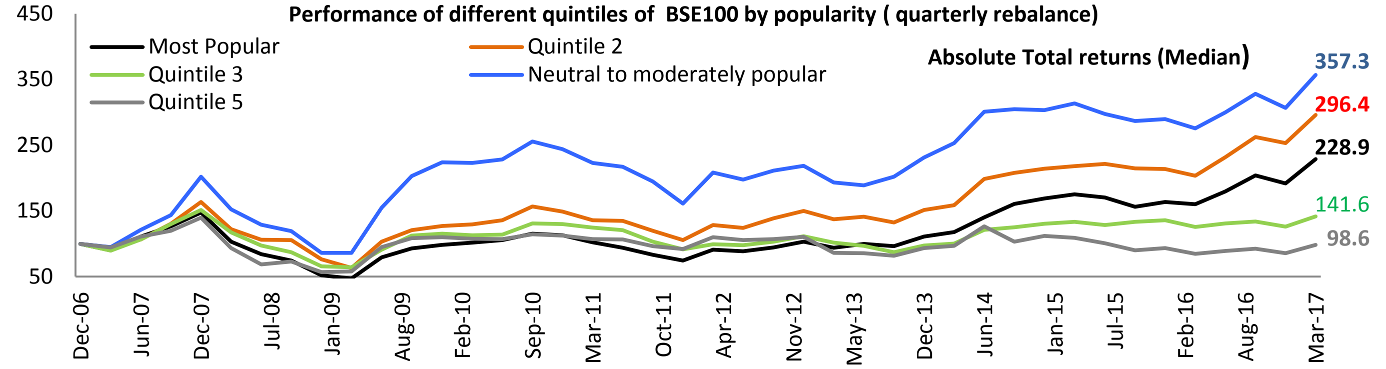
Exhibit 11: Stocks on which analysts are neutral to moderately positive have performed best



Source: Bloomberg

INR1k invested in Quintile-4 in December 2006 would be worth INR4.58k today.
INR1k invested in Quintile-1 in December 2006 would be worth INR4.06k today.
INR1k invested in Quintile-2 in December 2006 would be worth INR3.72k today.
INR1k invested in Quintile-5 in December 2006 would be worth INR1.98k today.
INR1k invested in Quintile-3 in December 2006 would be worth INR1.75k today.

Exhibit 12: Story remains intact at median measure as well



Source: Bloomberg

From Dec-2006 till date, BSE-100 has delivered a return of 10.2% per annum. If we look at the performance of the quintiles, Quintile-4 beats the benchmark convincingly. *Following a simple strategy of investing in Quintile-4 (neutral to moderately popular stocks) could generate a significant alpha over the benchmark.*

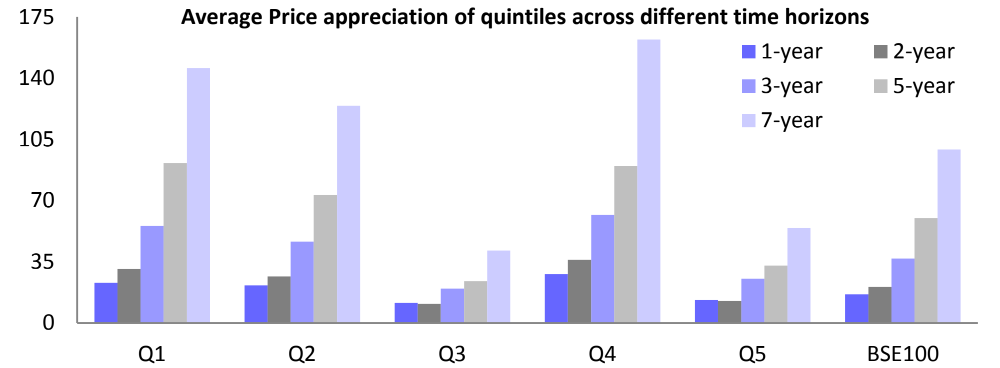
*In "**Analyzing the analysts: When do recommendations add value**?", Journal of Finance 2004, Narasimhan Jegadeesh, Joonghyuk Kim, Susan D Krische and Charles Lee have highlighted that naive adherence to the consensus recommendations can be costly, because the "level" of the consensus recommendation adds value only among stocks with favorable quantitative characteristics (that is, value stocks and positive momentum stocks). In fact, among stocks with unfavorable quantitative characteristics, higher consensus recommendations are associated with worse subsequent returns.*

Our findings confirm this and also establish that neutral stocks have even outperformed the most popular stocks as well as benchmark – evident in exhibits 10-13.

The most popular and second-most popular groups of stocks (Quintile-1 and Quintile-2) also beat the benchmark. The least popular stocks (Quintile-5) and stocks in Quintile-3 fail to beat the benchmark.

*In "**Can Investors Profit from the Prophets? Security Analyst Recommendations and Stock Returns**", Journal of Finance 2002, Brad Barber, Reuven Lehavy, Maureen McNichols and Brett Trueman, highlight that stocks with the most favorable recommendations outperform stocks with the least favorable recommendations. Our findings are also on similar lines. As evident from exhibits 10-13, the most popular stocks (Quintile-1) have outperformed the least popular stocks*

Exhibit 13: Stocks in quintile 4 have returned significant alpha across all time horizons



Source: Bloomberg

As apparent, neutral to moderately popular stocks (Q4) has beaten the benchmark on all time horizons. Additionally, most popular and 2nd most popular Quintile have also beaten the BSE 100 benchmark returns, which allows us to categorize BSE 100 constituents in 60 winners and 40 Losers.

Exhibit 14: Existing BSE100 constituents divided in five quintiles as per popularity

Q4	Q1	Q2	Q3	Q5
SUNP	RCAPT	YES	RECL	NMDC
GNP	HDIL	RELI	SHTF	APNT
BHFC	ARBP	TTCH	GAIL	CIPLA
CLGT	ITC	GMRI	BPCL	TPWR
UNSP	VEDL	LT	HPCL	SAIL
BOB	HDFCB	ONGC	RIL	RCOM
AXSB	HNDL	HDFC	BAF	UNBK
BOS	FB	IOCL	MSS	BOI
HUVR	MM	BRIT	LPC	CBK
SIEM	NTPC	COAL	CDH	ABB
BHIN	ICICIBC	TECHM	TGBL	ACC
NEST	PWGR	IHFL	JSTL	GCPL
BJAUT	UPLL	AL	KMB	TCS
DABUR	IIB	POWF	UTCEM	MRCO
BHEL	TTMT	JSP	GRASIM	WPRO
PNB	SBIN	Z	MMFS	UBBL
ACEM	EIM	TATA	KKC	DIVI
HZ	INFO	BHARTI	TTAN	DRRD
RPWR	MSIL	EXID	LICHF	DLFU
IDEA	HCLT	ADSEZ	HMCL	IDBI

Source: MOSL, Bloomberg

Amongst the current constituents of the BSE 100, we note that Quintile-4 (Q4) has popularity scores of 3-3.45. We are highlighting Sun Pharma, Axis Bank, Bajaj Auto, Colgate and PNB as our contrarian Buy ideas based on popularity metrics.

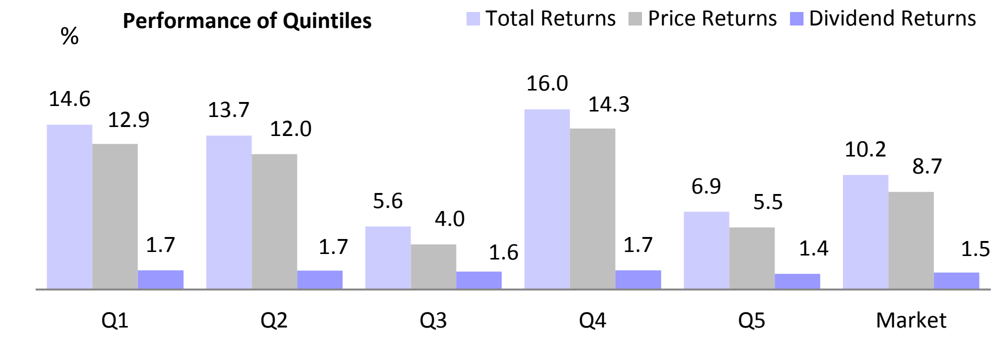
An important question remains unanswered! ***Why does the quintile composed of stocks that have low consensus ratings/popularity (Quintile-4) outperform all the other quintiles, even bettering the performance of the most popular stocks?***

This is because the investment thesis of the most popular stocks is quite popular, making them more likely to be discussed in the market. And, as such, there are fewer marginal buyers with time. On the other hand, neutral to moderately popular stocks are usually neglected by the street and their drivers are evolving. As the drivers evolve, there is a sudden surge in investor interest in such stocks, leading to a spike in returns. Thus, the stocks that were previously neglected by investors deliver significant outperformance.

On the other hand, the least popular stocks underperform. This is because the least popular stocks have a lot of sell recommendations. Sell recommendations are not popular on the street – only about 19% of recommendations are sell as against 556% buy and 24% hold. So, they have scarcity value and are more likely to be acted on (exhibit 21). We delve on this aspect in greater detail later in this report.

Quintile-4 offers higher dividend yield than market, which provides a downside protection, but the difference is only marginal, which prompts us to look at the ***beta*** *of the quintiles to explain the outperformance of Quintile-4. This is of particular interest for Qunitile-1 and Quintile-4.*

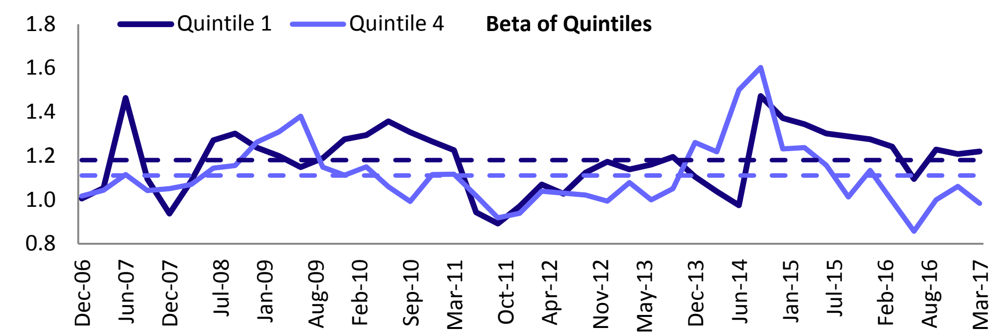
Exhibit 15: Quintile 1, 2 and 4 offer higher yields than market, but only marginally



Source: Bloomberg

Quintile-1 seems to have higher beta than Quintile-4 but the returns delivered by Quintile-1 stocks are lower. This tests the efficacy of EMH, which suggests that in order to deliver higher returns, one must take higher risk. However, the difference in beta is not very high, which prompts us to look at the up-capture and down-capture ratios. These capture up-market and down-market separately, overcoming the shortcomings of beta.

Exhibit 16: Quintile-1 seems to have higher beta than Quintile-4, but lags on returns



Source: Bloomberg

Up-capture and down-capture

Up-capture measures the percentage of market gains captured by a manager when the markets are up. Down-capture measures the percentage of market losses endured by a manager when the markets are down.

The two elements that drive the market are "greed" and "fear". The up-capture and down-capture ratios are a useful way of separating the two, so they can be analyzed independently. Also, up-capture and down-capture address the shortcomings of beta, which fails to distinguish between up and down markets.

The **upside capture ratio** should be greater than 100, indicating that when the market is up, the portfolio on an average, has done even better. The higher the up-capture, the better is the performance of the portfolio.

Alternatively, the **downside capture ratio** should be less than 100, meaning that when the market is down, the manager has caught only a fraction of the losses. The lower the down-capture, the better is the performance of the portfolio.

Computation of up-capture and down-capture

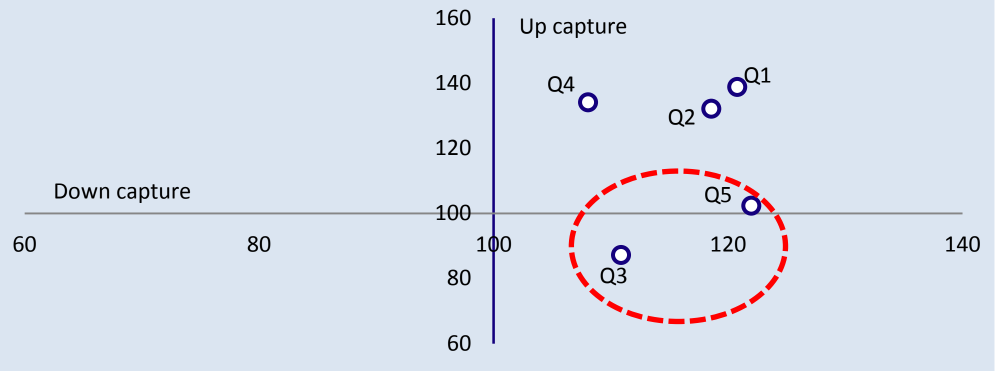
For the up-capture, the first step is the identification of all periods in which the market was up. For those up-market periods, the returns of both the portfolio and the benchmark are geometrically compounded and then annualized.

$$\text{Up Capture} = \frac{\left(\prod_{i=1}^{n_p} 1 + r_i\right)^{1/y} - 1}{\left(\prod_{k=1}^{n_p} 1 + s_k\right)^{1/y} - 1}$$

n_p = number of positive benchmark returns
s_k = k-th positive benchmark return
r_i = manager return for the same period as the i-th positive benchmark return
y = number of years, counting periods of positive benchmark returns only

For the down-capture, the same process is repeated, but for the periods during which the market was down.

Exhibit 17: Up-capture and down-capture of quintiles (on quarterly return basis)



Source: Bloomberg

The neutral stocks (Quintile-4) have high upside capture ratio, but what separates them from the rest is their superior downside protection. Quintile-4 has the highest up-capture ratio and the lowest down-capture ratio, which explains the outperformance of Quintile-4 over all the other quintiles.

The quintiles Q3 and Q5 have the lowest up capture ratios(87 and 102) respectively which implies that they rise less/ equal to the market in periods when benchmark has risen but have substantially higher down capture ratios(111 and 122) respectively, which implies that these groups perform worse than market in case of market downturn.

The characteristics exhibited by these quintiles are exactly opposite to characteristics exhibited by neutral to moderately popular stocks (Q4) having up capture of 134 and down capture of 108. What's also quite apparent that, none of the quintile had a desirable down capture of less than 100!

Exhibit 18: Neutral stocks have superior downside protection

	Q1	Q2	Q3	Q4	Q5
Upside capture ratio	139	132	87	134	102
Downside capture ratio	121	119	111	108	122

Source: Bloomberg

Quintile-4 is best on risk-reward metric

Additionally, we have calculated average return per standard deviation of returns of members comprising the quintile. Standard deviation is a measure of risk and average return/standard deviation can be seen as a measure of return per unit of risk.

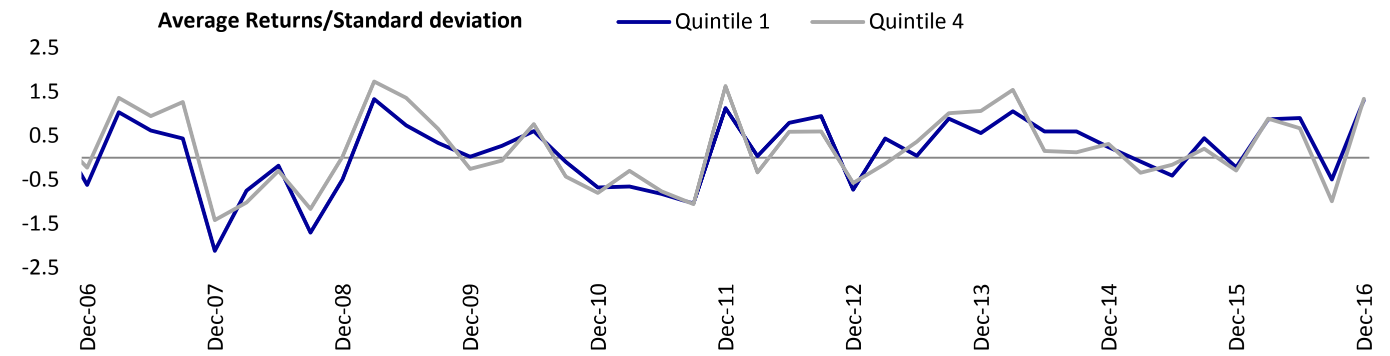
Exhibit 19: Average Return/Standard Deviation for Quintile-1 and Quintile-4

	Quintile 1	Quintile 4
All Returns	0.13	0.20
Positive Returns	0.65	0.85
Negative Returns	-0.69	-0.56

Source: Bloomberg

The findings are similar to what we observed in up-capture and down-capture ratios. Quintile-4 beats all other quintiles on risk-adjusted returns. Its higher return per standard deviation implies that the risk-reward ratio is better for Quintile-4.

Exhibit 20: Quintile-4 is best positioned on risk adjusted returns basis



Source: Bloomberg

The relative outperformance of the neutral stocks can be explained by the robust outperformance of these stocks both during up markets and down markets. When the market is up, they gain the most compared with other quintiles. When the market is down, they lose the least. The probable reason is that expectations from these stocks are muted; so, they deliver significant returns in case of an earnings surprise.

We attribute the success of Quintile-4 (neutral to moderately-popular stocks) to the fact that this quintile captures stocks just upgraded by the street (from a sell/neutral consensus rating).

This prompted us to look at all those stocks upgraded by the street, and particularly, those upgraded **from a "net sell to a net buy" (consensus rating change from <3 to >3),** as these are the stocks forming Quintile-4 and would be part of Qunitile-4 in the future as well. Among all the strategies outlined on the report, this strategy has delivered the best performance.

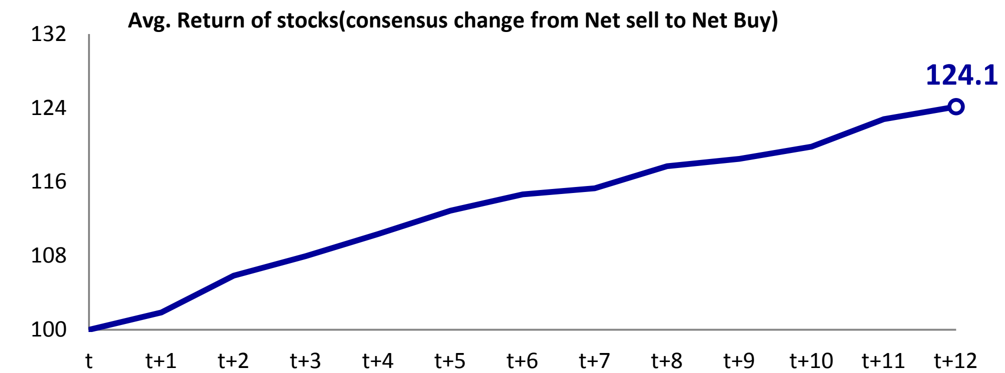
Final thoughts: Is consensus change significant?

We looked at instances of change in consensus rating from 'net sell' to 'net buy' over 2006-2017 across BSE-100 constituents. A change in consensus rating from 'net sell' to 'net buy' means a change in consensus rating from <3 to >3. We found that a strategy of investing in stocks with consensus rating change from <3 (net sell) to >3 (net buy) yields better results than any other strategy discussed in this study.

Essentially, these are stocks that (a) have been ignored, (b) have negative news flow associated with them, or (c) are battling short-to-medium-term challenges. Thus, typically they have consensus popularity rating <3. However, marginal earnings surprise, improvement in news flow, and beaten-down valuations are some of the factors that result in popularity scores moving closer to and then over 3 (Net Buy). These stocks are yet to become over-owned/most popular names on the street (Quintile-1 of the popularity thesis discussed in earlier sections).

By investing in stocks for which consensus recommendation has changed from 'net sell' to 'net buy' as soon as they have been upgraded, and then holding them for 12 months, an investor would have earned an average return of 24.1%.

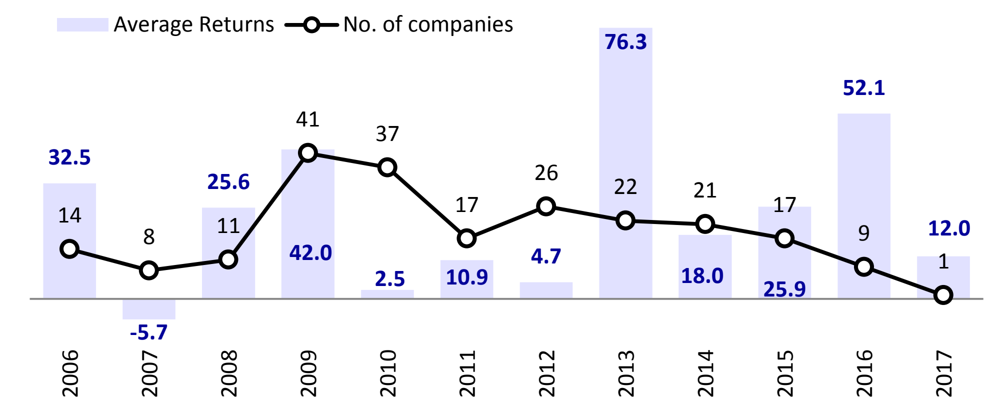
Exhibit 21: Indexed return over next 12 months from "Net sell to Net buy" Change



Source: MOSL, Bloomberg

We found this strategy to be effective across the entire time horizon. The lowest return delivered by the strategy across the time period was -5.7% in 2007, impacted by 2008 global financial crisis (GFC).

Exhibit 22: Returns have been significant across all years (2003-2016)



Source: MOSL, Bloomberg

We highlight that the investment was done after the stock's popularity rating changed from <3 to >3, that is, from Net Sell to Net Buy (and not Consensus Buy). Qualitatively, it suggests that when consensus recognizes the changing fortunes of underlying business and upgrades ratings, it pays to be among the early birds in investing in such a business. Our study shows that returns earned from this strategy are healthy even in absolute terms. However, one needs to move quickly, certainly before the stock becomes a Consensus Buy and crosses a popularity score of 3.5.

We applied this framework on BSE 100 constituents. Below is a snapshot of stocks where the consensus popularity score has changed from <3 to >3.

Exhibit 23: Stocks where popularity has improved from <3 to >3, recently

Company	Mar'17	Apr'17	May'17	June'17
BHEL	2.4	2.4	2.2	3.0
Nestle India	2.7	2.7	2.5	3.1
Punjab Natl. Bank	2.6	2.6	2.6	3.0
Siemens	2.2	2.4	2.6	3.2
Idea Cellular	2.9	2.9	2.8	3.0
Ambuja Cement	2.8	2.9	3.0	3.0

Needless to say, this metric has thrown names where a healthy degree of skepticism exists, and therefore, they do not appear in the list of stocks with fundamentally positive investment thesis. For example:

- **BHEL**: Future growth potential of thermal energy in India is being debated even as BHEL's slow-moving order book constricts its earnings performance.
- **Nestle**: Five years of low volume growth and loss in market share in key categories has hindered the long-term positive narrative around the stock.
- **PNB:** Asset quality issues hampering the entire PSU Banks pack.
- **Siemens**: Delay in recovery of private capex cycle.
- **Idea Cellular**: Internecine price competition in the Telecom sector, which is witnessing heightened competitive intensity.
- **Ambuja Cements**: Consistent earnings underperformance vis-à-vis large cap peers in the sector.

Cases based on popularity theme

We looked at the performance of Quintile-4, the quintile with neutral to moderately popular stocks. Quintile-4 has delivered significant returns accompanied by consensus upgrade. Based on recent history, we present **Ashok Leyland, Kotak Mahindra Bank, Dabur, Exide Industries, Asian Paints and Hindalco** as case studies**.**

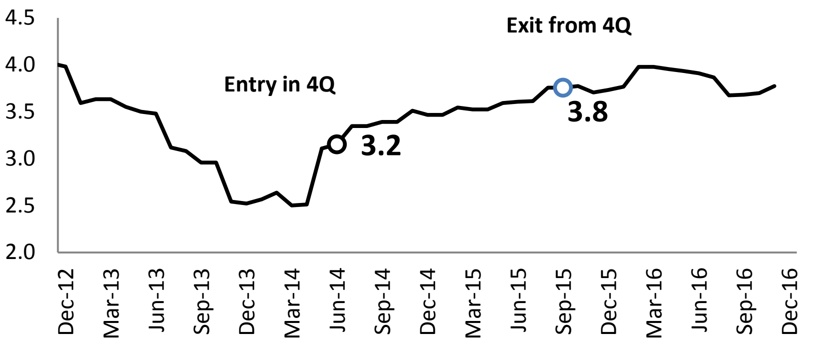
Case study: 1 Ashok Leyland

As the business outlook for Ashok Leyland improved, so did the consensus ratings. From a 'net sell' in the previous months, the stock was upgraded to a 'net buy' in May 2014. It entered Quintile-4 (neutral to moderately popular stocks) in the quarterly rebalancing in June 2014 and exited the quintile at the end of September 2015. While it was in Quintile-4, it significantly outperformed the BSE-100.

Post the downturn in the CV cycle, Ashok Leyland emerged leaner and stronger. It focused on generating cash and curtailing debt by cutting working capital, controlling capex, and monetizing non-core assets. Leverage reduced and so did interest costs. With the CV cycle turning up in 2HFY15, Ashok Leyland, being a pure play CV player, performed well. Its M&HCV market share increased to a decadal high supported by operating leverage, lower RM costs and favorable product mix, Ashok Leyland's EBITDA margin expanded to a 10-quarter high in 4QFY15. The stock significantly outperformed market indices.

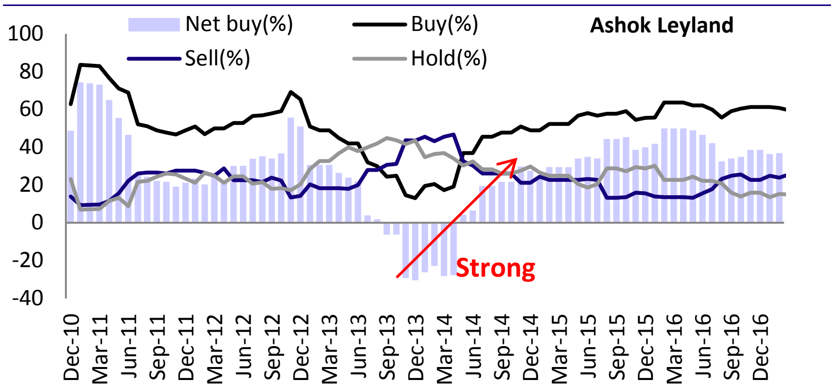
Stock performance: Over the 15-month period, June 2014 to September 2015, while the BSE-100 delivered 6.3% return, Ashok Leyland delivered 154.3% return, generating significant alpha. Even with 5% allocation in an equal-weighted portfolio of 20 stocks (Quintile-4 is a group of 20 stocks), it alone delivered 7.4% alpha.

Exhibit 24: Popularity of Ashok Leyland



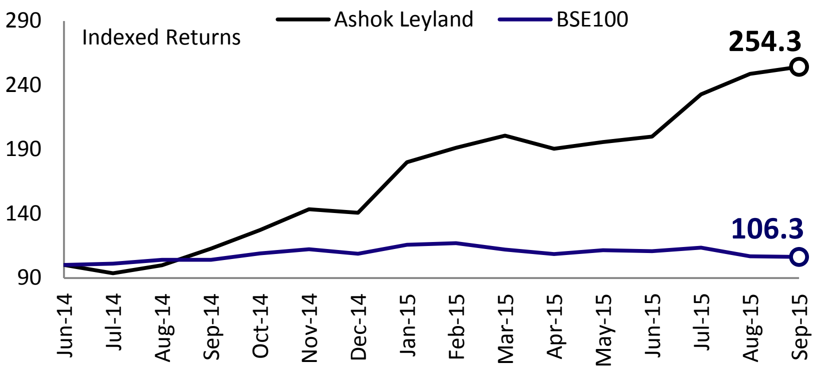
Source: Bloomberg

Exhibit 25: Ashok Leyland – upgrade from 'net sell' to 'net buy' delivered strong returns



Source: Bloomberg

Exhibit 26: Ashok Leyland – indexed returns



Source: Bloomberg

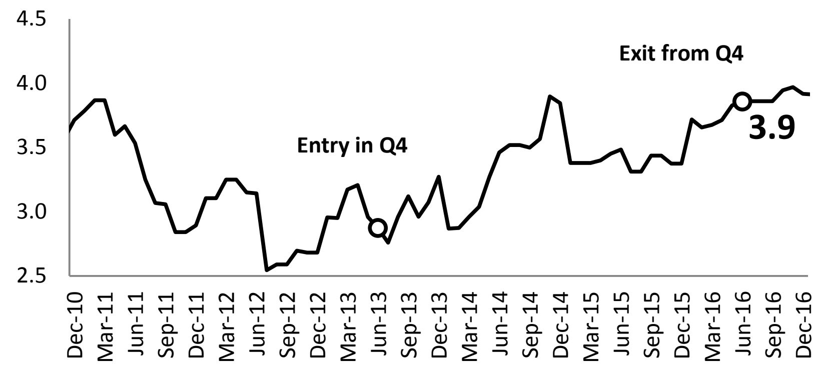
Case study: 2 Kotak Mahindra Bank (KMB)

Kotak Mahindra Bank (KMB) entered Quintile-4 (neutral to moderately popular stocks) in September 2013 and remained in this quintile till June 2016, barring the quarter ended March 2015. The stock had been a 'net sell' for a number of years, barring sporadic instances. Once it became a 'net buy' in September 2013, it delivered significant outperformance over BSE-100.

With healthy capitalization (CET1: 17-18%), improved liability profile, robust risk management system (stress loans at just 2%), and strong presence across loan products, KMB was well placed for the growth cycle. As macroeconomic conditions improved, KMB did well – it's NPAs reduced and Banking business profit increased, driven by loans and fee. Additionally, the merger of ING Vysya Bank (VYSB) with KMB in FY15-16 delivered strategic benefits. While KMB had a strong presence in the North and the West (80% of KMB branches) at that time, it made deep inroads into the South with the merger (64% of VYSB branches).

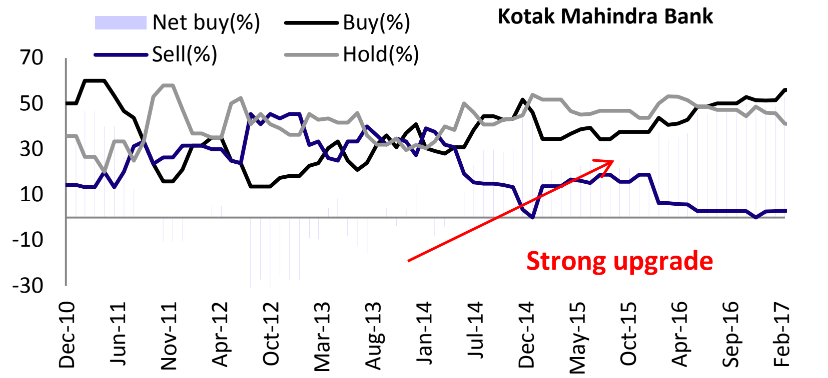
Stock performance: The stock significantly outperformed the broader indices during its consensus upgrade cycle. Over the 21 months, September 2013 to June 2016, the BSE-100 delivered 53% return; KMB delivered 125% return. In an equal-weighted portfolio of 20 stocks in Quintile-4, KMB alone contributed an alpha of 3.6%.

Exhibit 27: Popularity of KMB



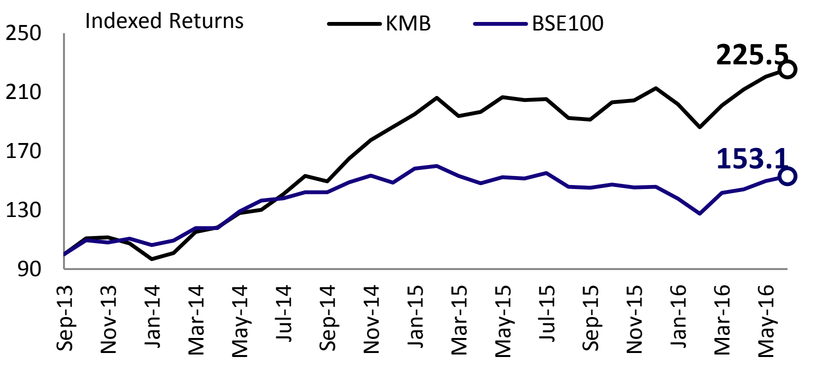
Source: Bloomberg

Exhibit 28: KMB upgrade from 'net sell' to 'net buy' delivered strong returns



Source: Bloomberg

Exhibit 29: KMB – indexed returns; outperformed BSE-100 by 72% over September 2013-June 2016



Source: Bloomberg

Case study: 3 Dabur India

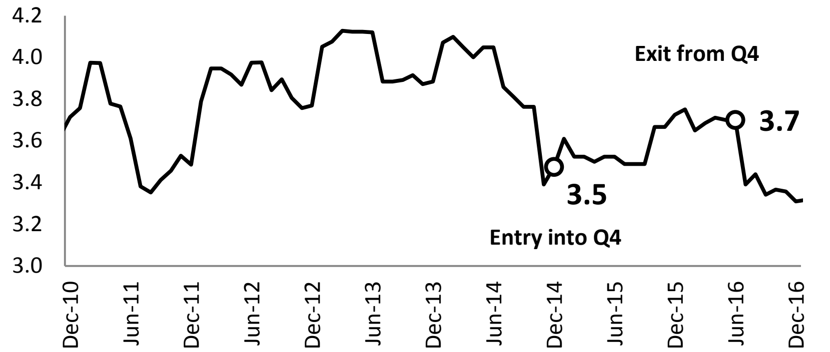
Dabur became a part of Quintile-4 in December 2014 and exited at the end of June 2016. The stock saw moderate upgrades during this period and outperformed the broader market.

'Net buys' on the stock reduced significantly before December 2014 due to slowdown in consumer demand and then saw moderate recovery in 'net buys', with a couple of 'holds' changing to 'buys'.

During the period December 2014 to June 2016, Dabur's consistent volume delivery in an overall weak macro scenario was impressive, underscoring its portfolio strength and carry-over benefits of distribution expansion. New initiatives on distribution ramp-up in the urban chemist channel and recovery in Namaste helped earnings grow. This led to some rating upgrades on the street and the stock price moved up in tandem with earnings.

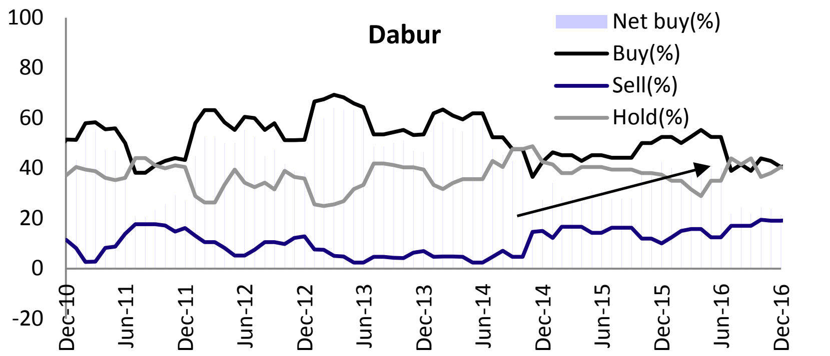
Stock performance: While the BSE-100 moved up 3% during this 18-month period, Dabur moved up 33.4%, significantly outperforming the benchmark. In an equal-weighted portfolio of 20 stocks in Quintile-4, Dabur alone contributed an alpha of 1.5%.

Exhibit 30: Popularity of Dabur



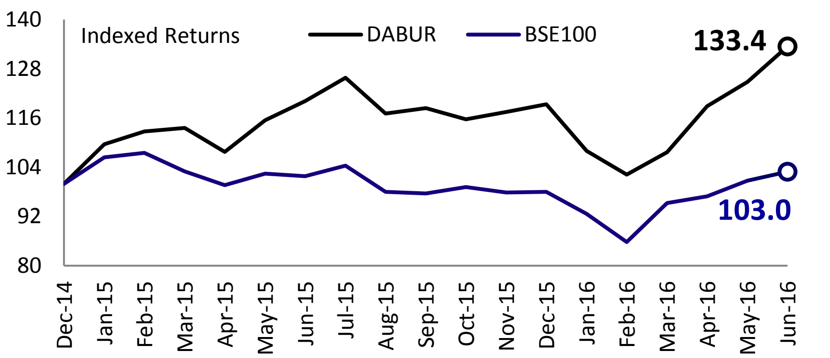
Source: Bloomberg

Exhibit 31: 'Net buys' on Dabur increased during the period December 2014 to June 2016



Source: Bloomberg

Exhibit 32: Dabur – indexed returns; outperformed BSE-100 by 30% over December 2014 – June 2016



Source: Bloomberg

Exhibit 33: Snapshot of Quintile-4 (neutral to moderately popular stocks)

Company	Popularity score	CMP (INR)	MCap (INR B)	Trailing PE (x) 5-yr Avg.	Trailing PE (x) Current	PE Prem/Disc (%)	PAT (INR M) FY17	PAT (INR M) FY18E	PAT (INR M) FY19E	PAT CAGR (%) FY17-19	ROE (%) FY17
Hind. Unilever	3.18	1094	2367	40.1	55.7	39.0	42490	49312	58367	11.2	65.6
Hero Motocorp	3.46	3733	746	21.2	22.1	4.3	33771	39559	40188	6.0	35.7
Titan Company	3.50	520	462	40.6	57.6	41.8	8017	9123	10784	10.4	20.6
M & M Fin. Serv.	3.51	341	193	18.0	48.1	167.4	4002	7309	9269	32.3	6.4
Bosch	3.18	24277	762	47.7	51.3	7.6	14441	19859	23692	17.9	15.8
Bank of Baroda	3.24	165	381	7.9	27.6	250.0	13831	43989	57488	60.8	4.1
Bharti Infra.	3.13	375	711	29.9	25.2	-15.4	27470	32343	36882	10.3	16.2
Dabur India	3.05	290	511	39.3	40.0	1.7	12769	13623	16110	8.1	28.4
Colgate-Palm.	**3.26**	**1101**	**299**	**41.7**	**51.9**	**24.5**	**5774**	**6977**	**8450**	**13.5**	**50.4**
Axis Bank	**3.19**	**508**	**1210**	**14.4**	**33.1**	**129.0**	**36793**	**56151**	**98609**	**38.9**	**6.9**
Bajaj Auto	**3.08**	**2840**	**822**	**19.6**	**21.5**	**9.8**	**38276**	**43513**	**51569**	**10.4**	**25.3**
Hind.Zinc	3.00	253	1067	9.6	12.8	34.0	83162	91033	100156	6.4	24.4
United Spirits	3.25	2294	333	110.2	85.8	-22.1	3885	5428	7530	24.7	21.3
Cipla	2.86	539	434	31.0	33.9	9.2	12766	16022	20071	16.3	10.2
Asian Paints	2.88	1164	1116	49.6	55.4	11.7	20162	22184	26318	9.3	28.5
Ambuja Cem.	3.00	244	485	29.3	50.0	70.8	9703	13163	14298	13.8	5.0
Tata Power Co.	2.85	82	223	93.2	16.0	-82.9	13969	18253	18951	10.7	11.2
ACC	2.65	1652	310	29.2	49.0	67.6	6343	8772	11021	20.2	7.5
Godrej Consumer	2.65	960	654	40.4	50.8	25.7	12876	14842	17001	9.7	24.6

Source: MOSL, Bloomberg

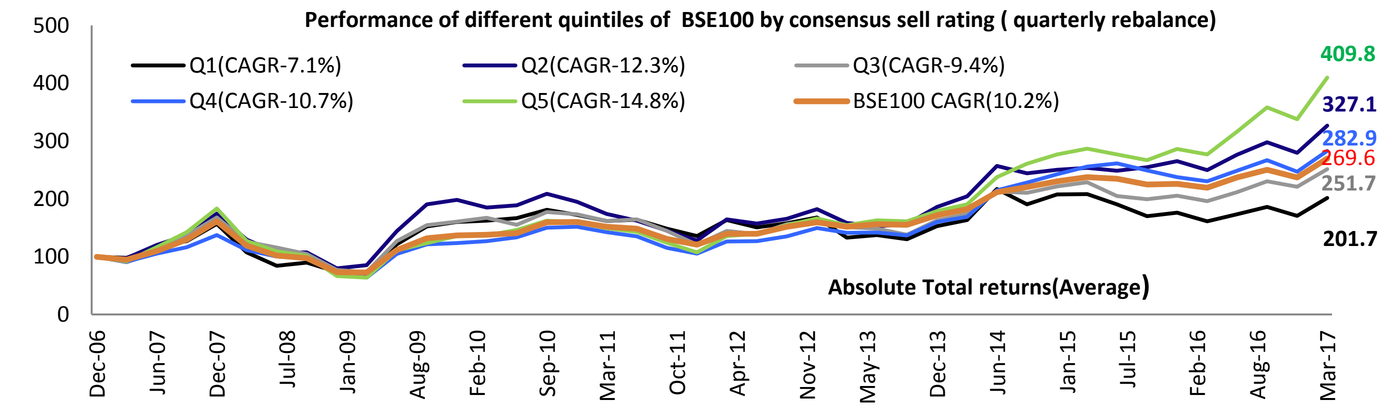
Consensus sells are significant underperformers

The underperformance of Quintile-5 (the least popular stocks) in the popularity theme proves that owing to their scarcity value, sell recommendations can be quite efficient in predicting stock performance. This scarcity value prompted us to look at consensus sell ratings in isolation.

Once again, we constructed quintiles, this time based on sell recommendations as a percentage of total recommendations. The intent was to explore how good the consensus sell recommendations are. We found consensus sell ratings to be quite right, if we take a longer term horizon!

Quintile-1, composed of stocks with the highest consensus sell ratings, underperformed the market significantly. So, the consensus has been quite right in predicting sells. ***This can have meaningful implications for investors who can short-sell stocks.***

Exhibit 34: Quintile-1, with highest consensus sell ratings, is the biggest underperformer



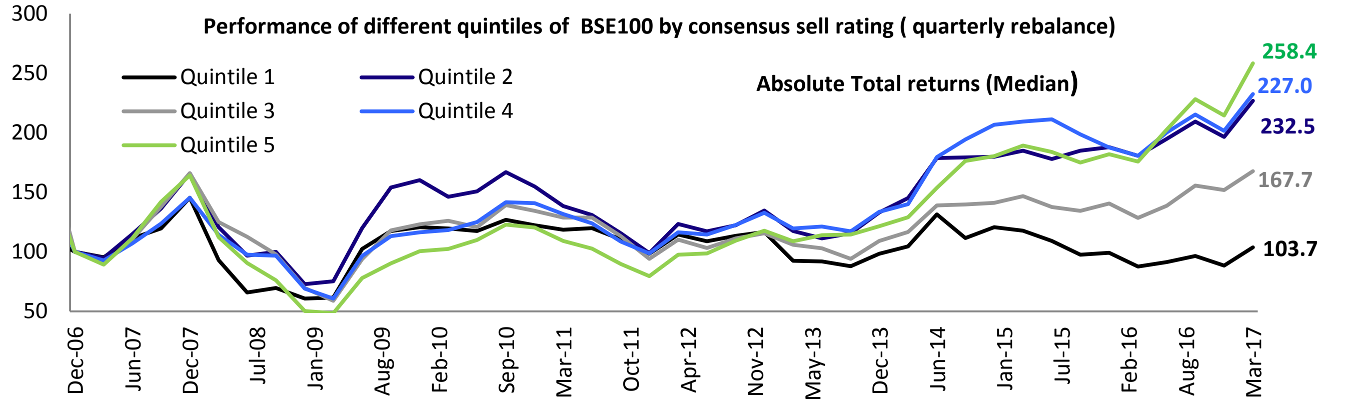
Source: Bloomberg

On the other hand, Quintile-5, composed of stocks with the least consensus sell ratings, performed the best. It is important to note that a portfolio of stocks with minimum sell ratings may not have many buys – the consensus could be crowded with hold ratings, making it a portfolio of *neutral to moderately popular stocks*.

Additionally, we observed that sell ratings were particularly scarce in 2004-2008. Both Quintile-4 and Quintile-5 had zero sell ratings. So, we repeated the same analysis from 2009, when Quintile-4 and Quintile-5 became materially different. The thesis stayed unchanged!

With the median measure as the basis of the performance, the results become even clearer, with Quintile-1 underperforming and Quintile-5 outperforming!

Exhibit 35: Quintile-1 underperformed, while Quintile-5 was the best performer!



Source: Bloomberg

Consensus sell recommendations have reasonable efficacy! We present an example based on the consensus sell rating theme, and then, put to test the efficacy of consensus buy ratings.

We present below the snapshot of Quintile 1 of current BSE 100 constituents with highest SELL Ratings and low popularity score.

Exhibit 36: Ten stocks with highest SELL ratings in BSE 100 – Quintile-1 of Consensus Sell theme

Company	Buy	Hold	Sell	% of Sell ratings	Popularity score
Divi's Lab.	5	3	10	56%	2.44
Dr Reddy's Labs	10	12	23	51%	2.42
DLF	1	6	7	50%	2.14
TCS	16	12	26	48%	2.63
ACC	12	9	19	48%	2.65
Godrej Consumer	12	9	19	48%	2.65
Marico	11	14	20	44%	2.60
Cipla	16	8	19	44%	2.86
Asian Paints	12	8	14	41%	2.88
Wipro	10	21	21	40%	2.58

The list is dominated by companies from IT, Pharma and Consumer sectors. While IT and Pharma are facing regulatory as well as business model evolution challenges, the Consumer sector is characterized by peak valuations.

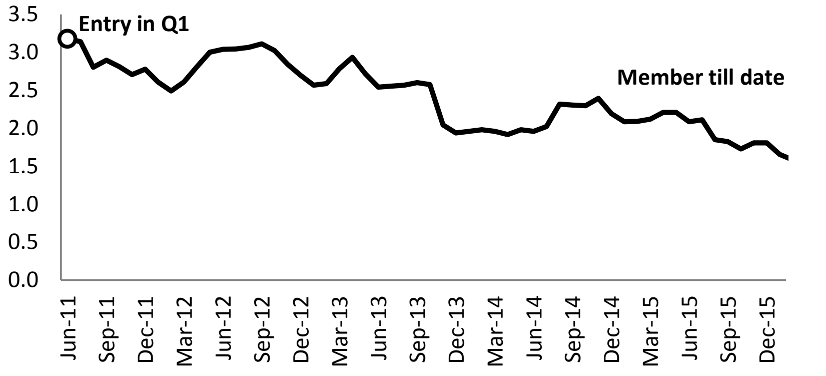
Case study: 4 Steel Authority of India (SAIL)

SAIL is a member of Quintile-1 from July 2011 till date. The stock has consistently been a net sell and the consensus' prediction of stock performance has been correct.

Over 2003-13, a significant portion of SAIL's earnings was driven by its captive iron ore advantage. As iron ore prices (and resultantly steel prices) have since declined globally, SAIL's competitive advantage has been eroded. Its employee cost per ton and operating cost are higher. Slow ramp-up of capacities has also impacted SAIL's performance. Eroding competitive advantage, higher operating cost and weak project execution are driving SAIL's underperformance.

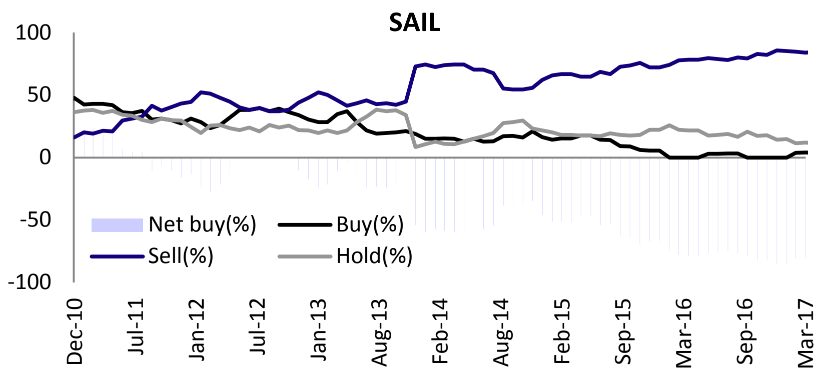
Stock performance: As apparent, SAIL has significantly underperformed the benchmark BSE100 Index (-49.3% vs. 81.7%).

Exhibit 37: SAIL has been consistently downgraded over the last five years



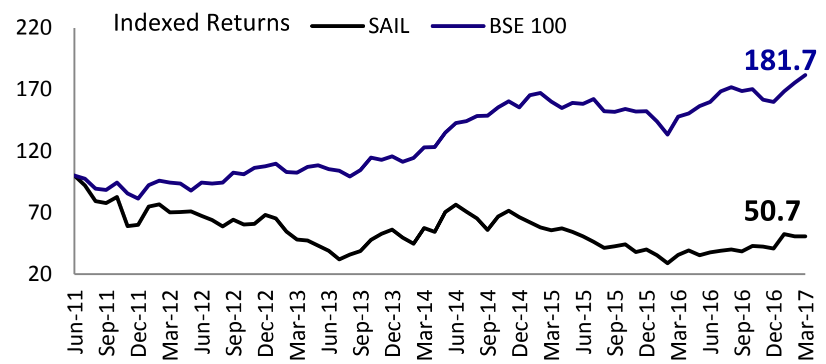
Source: Bloomberg

Exhibit 38: SAIL – consensus rating has been "strong sell" for recent and distant past



Source: Bloomberg

Exhibit 39: Sail has consistently underperformed indices



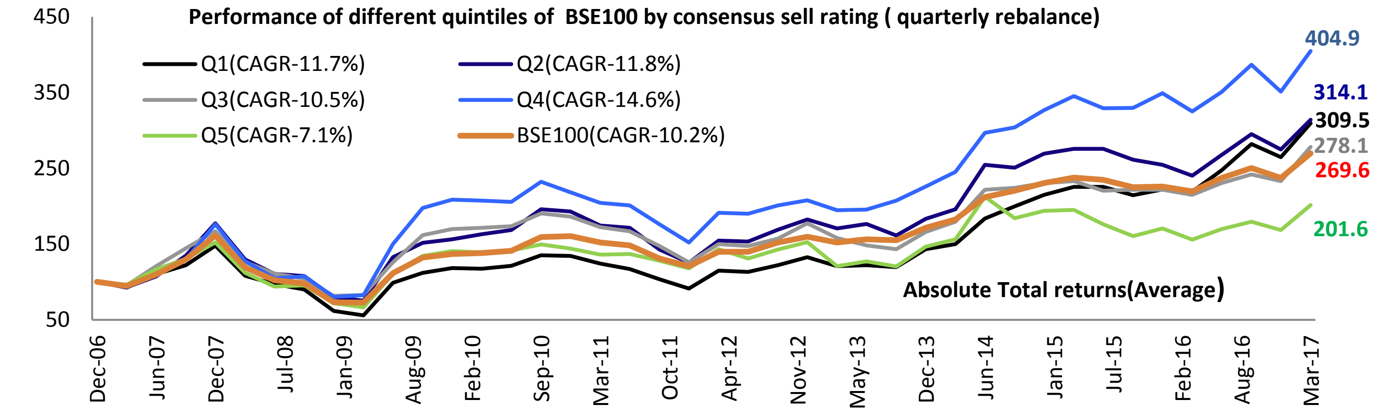
Source: Bloomberg

Consesus buys are not always great investments

To test the efficacy of consensus buy ratings, we constructed quintiles based on buys as a percentage of total recommendations. We looked at the performance of the quintiles and found that consensus buys are not necessarily great investments.

Quintile-4, the quintile with the second-lowest (in terms of percentage) consensus buy ratings, delivered the maximum returns! Quintile-4 was followed by Quintile-2, which was followed by Quintile-1. Quintile-4 has been the front runner, almost through the entire decade!

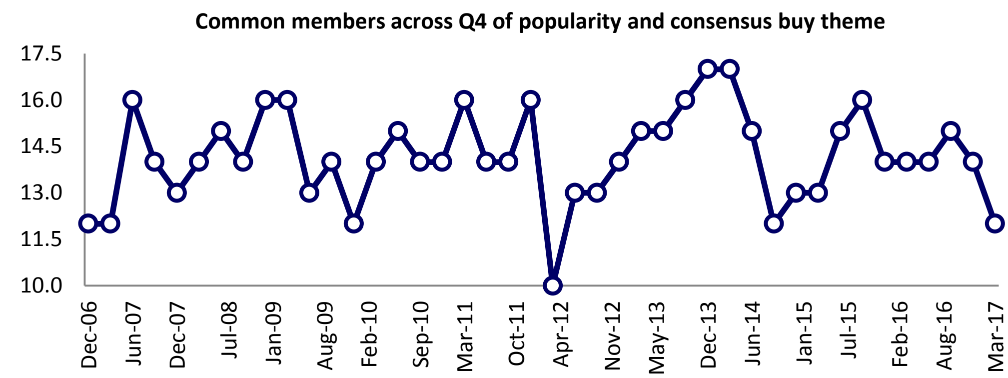
Exhibit 40: Quintile-1 does well, but there is not much difference across top-4 quintiles



Source: Bloomberg

So, contrarian investing does works with consensus buy recommendations. With Quintile-4 emerging as the winner both in the popularity theme and the consensus buy theme, we checked for how many stocks they have in common. We found the number of common members in both these portfolios to be significantly high.

Exhibit 41: Number of common members across Quintile-4 (popularity) and Quintile-4 (consensus buy) is significantly high (65-75%)



Source: Bloomberg

In a market characterized by preponderance of BUY calls, it is not difficult to find names enjoying tremendous popularity on the street.

We present below the snapshot of BSE 100 constituents that are top-most Consensus BUY calls today.

Exhibit 42: Ten stocks with highest BUY ratings in BSE 100 – Quintile-1 of Consensus Buy theme

Company	Buy	Hold	Sell	% of Buy ratings	Popularity score
ITC	38	1	2	93%	4.76
Aurobindo Pharma	35	2	1	92%	4.79
Vedanta	20	0	2	91%	4.64
HDFC Bank	48	2	4	89%	4.63
Federal Bank	31	1	3	89%	4.60
M & M	40	2	4	87%	4.57
NTPC	33	1	4	87%	4.53
Power Grid Corpn	36	1	5	86%	4.48
ICICI Bank	42	3	5	84%	4.48
Hindalco Inds.	26	4	1	84%	4.61

Summary: Performance of the quintiles

A review of the performance of the quintiles highlights that the central theme based on popularity is the most effective way of creating quintiles. It meaningfully separates the winners from the underperformers.

As evident, popularity is the best selection criterion amongst the three themes (popularity, consensus sell and consensus buy) for creation of quintiles. It separates the index members amongst the quintiles efficiently, which can be seen in significant return differential across quintiles. If the selection criterion is efficient, quintiles will show variation in returns otherwise the quintile returns will show little difference.
The consensus sell theme comes second, owing to scarcity value of sell ratings, whereas the consensus buy theme comes last.

The results seem fit, as popularity is an aggregate measure of sell, buy and hold recommendations and should convey more information than sell/buy recommendations in isolation.

Exhibit 43: Average returns (CAGR; 2006-16) across quintiles by strategy

Strategy	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Popularity	14.6	13.7	5.6	16.0	6.9
Consensus Sell	7.1	12.3	9.4	10.7	14.8
Consensus Buy	11.7	11.8	10.5	14.6	7.1

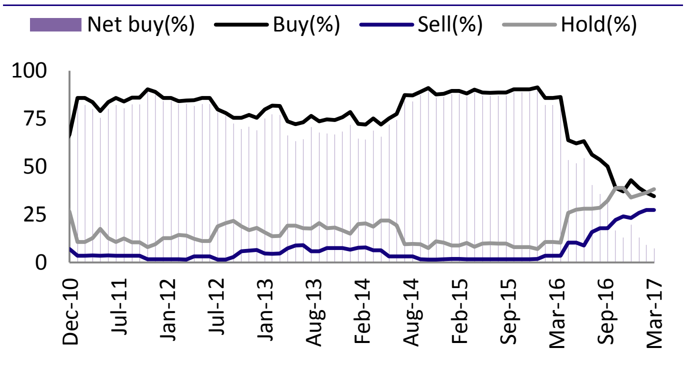
Source: Bloomberg

What's particularly interesting is that in the long term, if we decide to select an entire basket of stocks (quintile) based on any strategy, even the worst performing quintile would beat the returns from a savings bank account.

Annexure: Focus stocks – Quintile-4 (popularity theme winners)

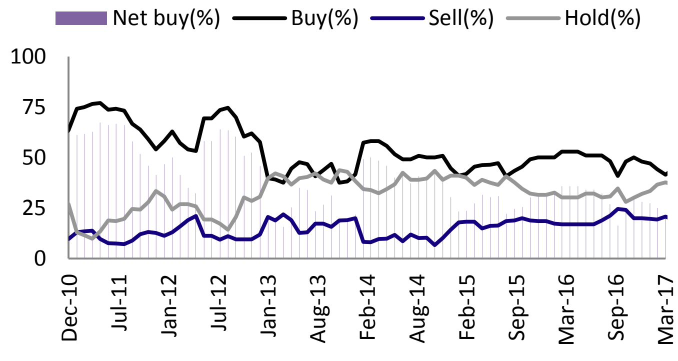
Consensus BUY (%) Consensus SELL (%) Consensus HOLD (%) Net Buy (%)

Exhibit 44: Axis Bank



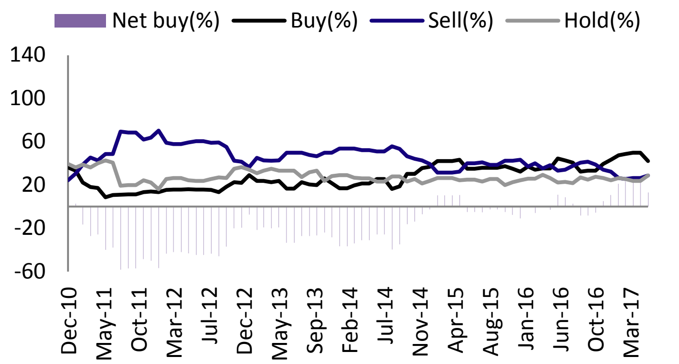
Source: Bloomberg

Exhibit 45: Bajaj Auto



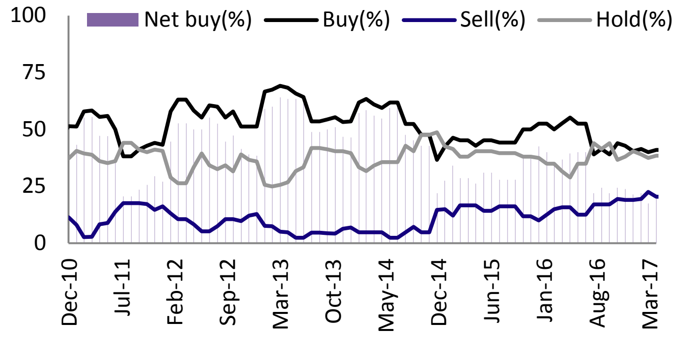
Source: Bloomberg

Exhibit 46: Colgate



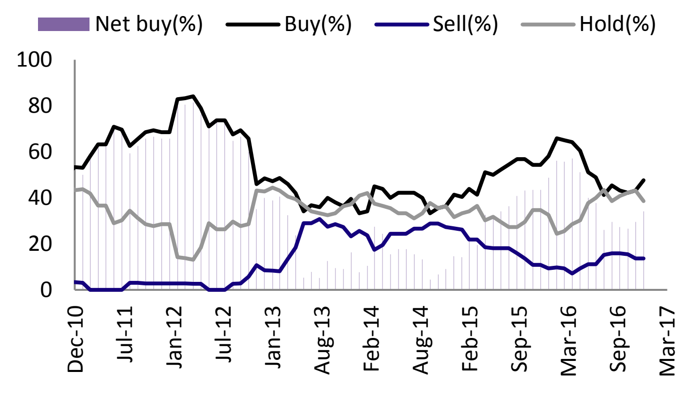
Source: Bloomberg

Exhibit 47: Dabur



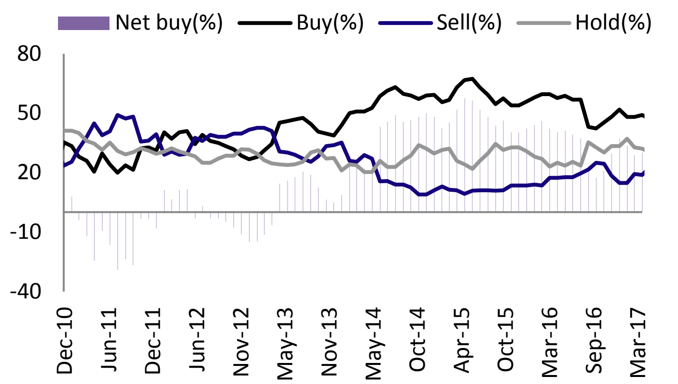
Source: Bloomberg

Exhibit 48: Godrej Consumer



Source: Bloomberg

Exhibit 49: Hero Motors

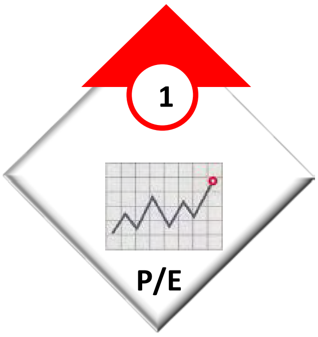


Source: Bloomberg

Contrarian strategies based on valuation multiples

While the first section of this note dealt with contrarian strategies based on analyst recommendations, this part deals with the contrarian strategies based on valuation multiples.

In his classical book, **Contrarian Investment Strategies: The Psychological Edge**, **David Dreman** suggested, “Favored stocks underperform the market while out-of favor companies outperform the market, but the reappraisal often happens slowly, even glacially”. Empirical evidence from the US markets suggests that the companies the market expects the best future for – as measured by ***price-to earnings, price-to cash-flow, price-to-book-value –*** have consistently done the worst, while the stocks believed to have the most dismal future have done the best. We will see whether this holds true in an emerging market like India.

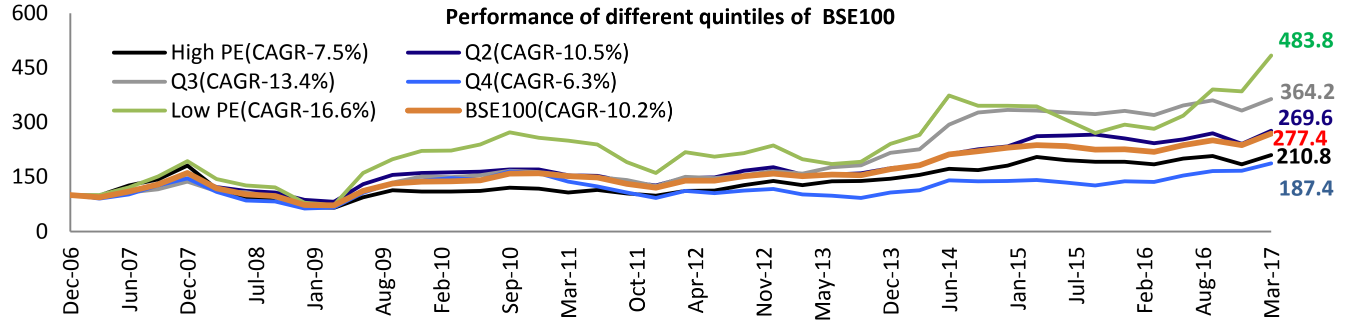


Theme 1: Based on price-to-earnings (P/E) ratio

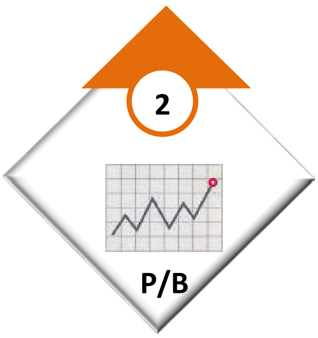
For every quarter starting with the quarter ended December 2006, we've divided the BSE-100 constituents into quintiles based on P/E ratio and evaluated the returns delivered by each quintile. Quintile-1 is composed of the highest P/E stocks, while Quintile-5 has the lowest P/E stocks.

Conclusion: We found that low P/E stocks outperformed the high P/E stocks by a huge margin. The margin of outperformance increased with trailing P/E as the criterion for forming the quintiles instead of 12-month forward P/E.

Exhibit 50: Low P/E stocks outperformed, whereas high P/E stocks failed to beat the market



Source: Bloomberg

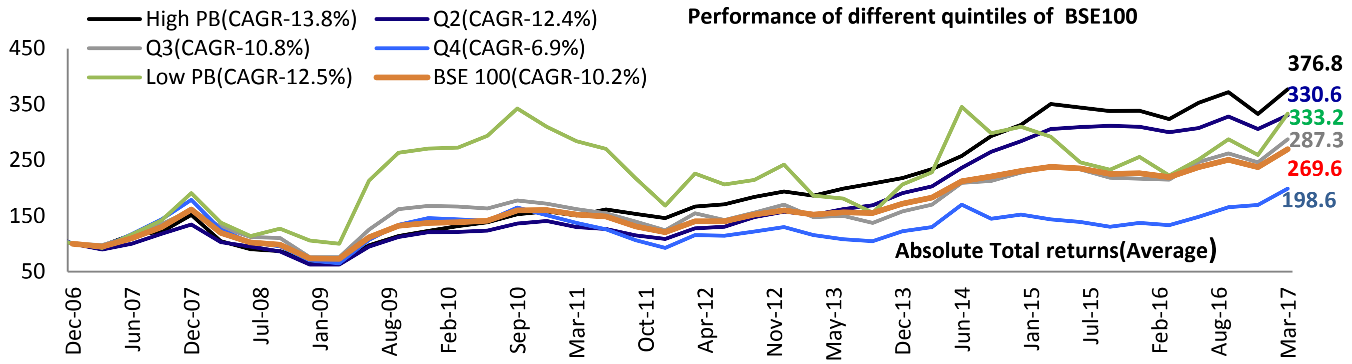


Theme 2: Based on price-to-book-value (P/B) ratio

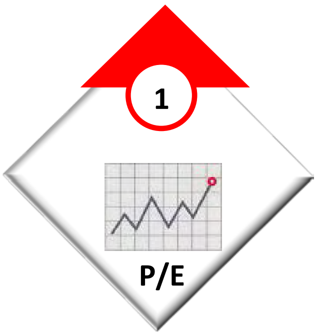
For every quarter starting with the quarter ended December 2006, we've divided the BSE-100 constituents into quintiles based on P/B ratio and evaluated the returns delivered by each quintile. Quintile-1 is composed of the highest P/B stocks, while Quintile-5 has the lowest P/B stocks.

Conclusion: Over the decade, low P/B stocks have underperformed the high P/B stocks on forward multiples and outperformed high P/B stocks on trailing basis. The alpha generated by low P/B stocks was much lower than other stocks. However, low P/B stocks led all the other quintiles on the returns chart for the majority of the decade.

Exhibit 51: Returns from BSE-100 and all quintiles barring Quintile-4 are quite close



Source: MOSL, Bloomberg



Low P/E stocks outperform high P/E stocks

***Benjamin Graham's "Intelligent Investor"** cites a study involving the constituents of Dow Jones Industrial Average*. The performance of the 10 lowest P/E stocks, 10 highest P/E stocks, and of all the 30 stocks in the index was measured over set periods between 1937 and 1969. In each time span, the low P/E did better than the market and the high P/E stocks did worse.

In their legendary paper, **"Cross-section of Expected Stock Returns"**, Journal of Finance, 1992, ***Eugene Fama and Kenneth French*** reported results similar to Benjamin Graham's findings. Several studies before and after the Fama-French study also point towards the outperformance of out-of-favor stocks.

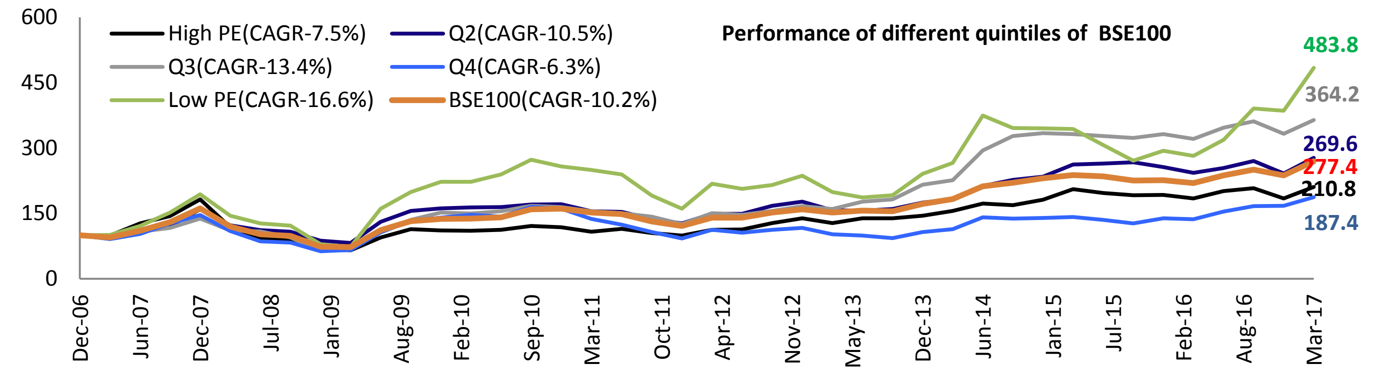
The findings of our study are similar. For every quarter starting with the quarter ended December 2006, we divided the BSE-100 constituents into quintiles based on one-year forward P/E ratio and evaluated the returns delivered by each quintile. Quintile-1 has the highest P/E stocks, while Quintile-5 has the lowest P/E stocks.

Here's what we found:

- INR1k invested in the low P/E quintile in December 2006 would be worth INR4.84k today.
- INR1k invested in the high P/E quintile in December 2006 would be worth INR1.87k today.
- INR1k invested in the BSE-100 in December 2006 would be worth INR2.77k today.

With remarkable consistency, investors misjudged subsequent performance. The results are completely uniform. The most favored stocks by the market with highest PE ratio continuously shows dismal returns, whereas the least favored stocks with lowest PE ratio were rewarded by the market.

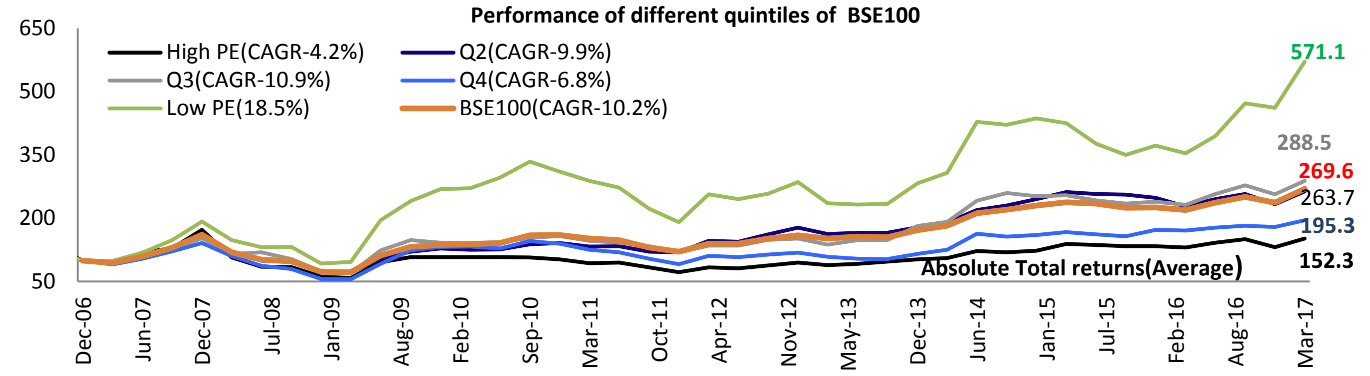
Exhibit 52: Low P/E stocks outperform market, whereas high P/E stocks fail to beat the market



Source: Bloomberg

Investors/analysts have consistently overvalued the favorite stocks and undervalued the out-of-favor stocks! This has worked the same way across a long time period (Benjamin Graham's study focused on the period, 1937-1969, Fama-French's study focused on the period, 1962-1989, and our study covers 2006-2016) and across geographies (the first two studies focused on the US and we focused on India).

Exhibit 53: The results are better with trailing P/E ratio

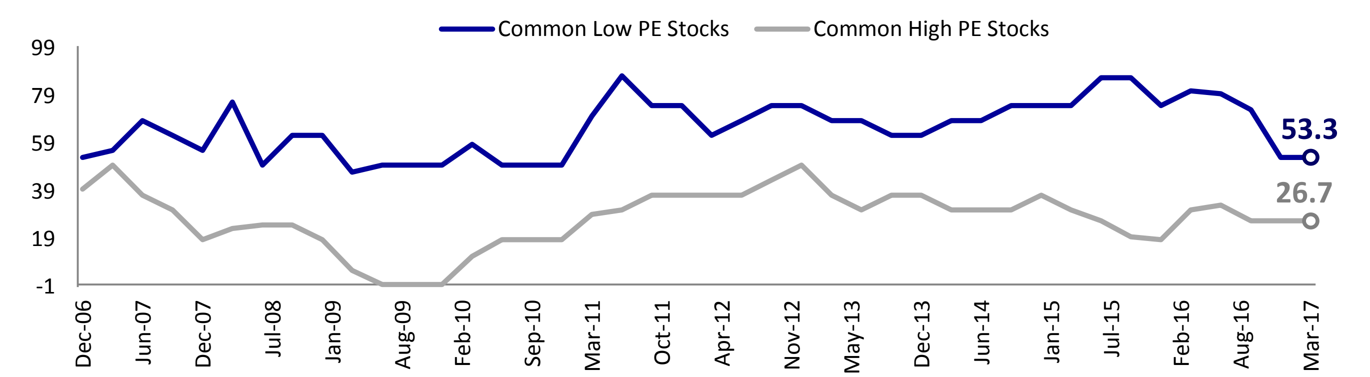


Source: Bloomberg

We repeated the same exercise with trailing P/E ratios. The results were even better, bringing to the fore two interesting observations:

1. **Trailing valuation multiple better predictor:** Low P/E stocks based on trailing earnings returned 18.5%, generating an alpha of 8.3% over the BSE-100 benchmark on annual basis, almost 1.7% more than low P/E stocks based on forward estimates. Returns from high P/E stocks, which failed to even beat the benchmark, were dismal on both trailing and forward earnings.
2. **The market is slow in re-appraisal of low P/E stocks.** Over the last 10 years, on an average, almost 63% of the members across low P/E quintiles based on trailing and forward earnings are common. On the other hand, just 20% of the stocks are common across high P/E quintiles on trailing and forward earnings, suggesting that re-appraisal happens much faster but erroneously.

Exhibit 54: Market is slow in re-appraisal of low P/E stocks, but quick for high P/E stocks



Source: Bloomberg

Case study: 5 Indian Oil Corporation (IOC)

IndianOil

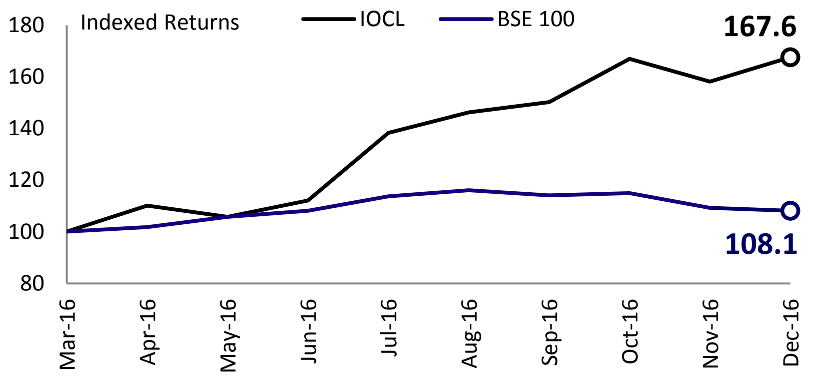
IOCL became a member of the low P/E quintile in March 2016 and exited at the end of December 2016, delivering a return of 67.6% against the BSE-100's 8.1% return during the nine months.

IOCL is the largest refining company in India, with ~43% market share in petrol and ~48% market share in diesel. It has the largest network of product pipelines, terminals and depots, giving it a pan-India reach.

While HPCL and BPCL got re-rated in 2014 post deregulation, IOCL has gone through a de-rating because of the concerns on the large capex of INR350b (almost one-third of the market cap at that time). Now that there is more visibility on the Paradip project, with 85% utilization in March 2017, the stock has started to re-rate. It still trades at 5.6x FY19E EV/EBITDA (MOSL estimates) and 9.4x FY19E EPS. Global peers trade at 10.8x one-year forward EPS and 6.8x one-year forward EV/EBITDA, with lower RoE of 13% (IOCL's RoE: ~20%).It has however exited from the low P/E quintile.

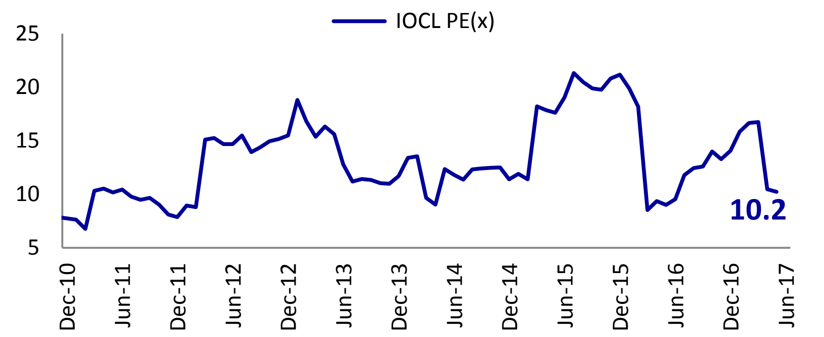
The 15mmtpa Paradip refinery, with a Nelson Complexity of 12.2 would have higher GRM than IOCL's vintage refineries and is expected to contribute to the company's profits. With successful commissioning of the Paradip refinery, IOCL would also have larger availability of products in the South, which it traditionally lacked.

Exhibit 55: IOCL beats BSE-100 by a significant 59.1% over March-December 2016



Source: Bloomberg

Exhibit 56: Trailing P/E of IOCL



Source: Bloomberg

Case study: 6

Rural Electrification Corporation

RECL is a member of the low P/E quintile from June 2011 and has delivered 154% returns, beating the BSE-100 by 73%. It has been consistently valued at lower multiple by the market and it has consistently outperformed the market. There have been instances across these 5-6 years when returns from the BSE-100 were higher, but for most of the time, RECL outperformed. POWF is another stock with the same story; it too has been outperforming the market.

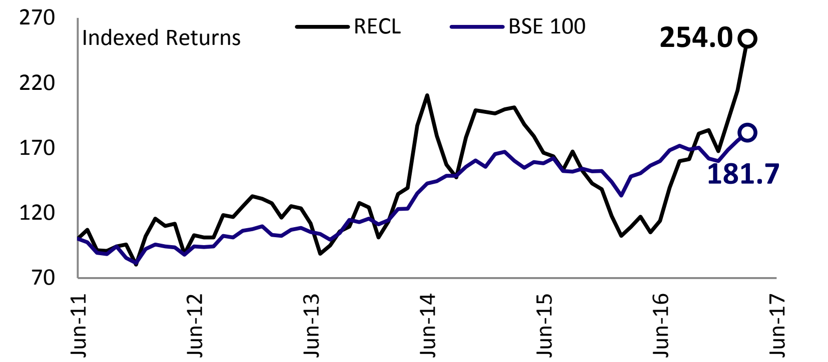
RECL is the government's nodal agency for financing rural electrification programs. It has strategic importance in funding power infrastructure in India. It has good capital adequacy, with healthy capitalization, diversified resources, and stable profitability.

RECL has delivered decent PAT CAGR of 17.1% over FY11-16, but the stock has always been a member of the low P/E quintile. Additionally, RECL offers good dividend yield, which provides protection to investor returns.

There have been concerns, too. Implementation of the UDAY scheme would result in loan book/NIM compression for RECL. Loan book has stayed flat due to prepayment under UDAY. However, disbursements were up 26% YoY in FY17.

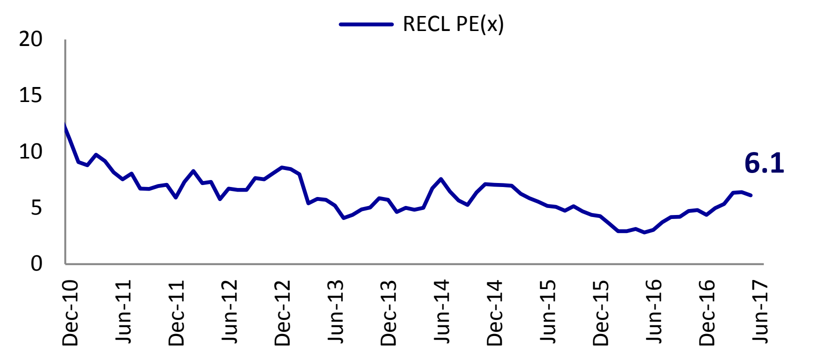
RECL trades at a huge discount to its peers.

Exhibit 57: RECL has stayed ahead of BSE-100 for the majority of the timeframe



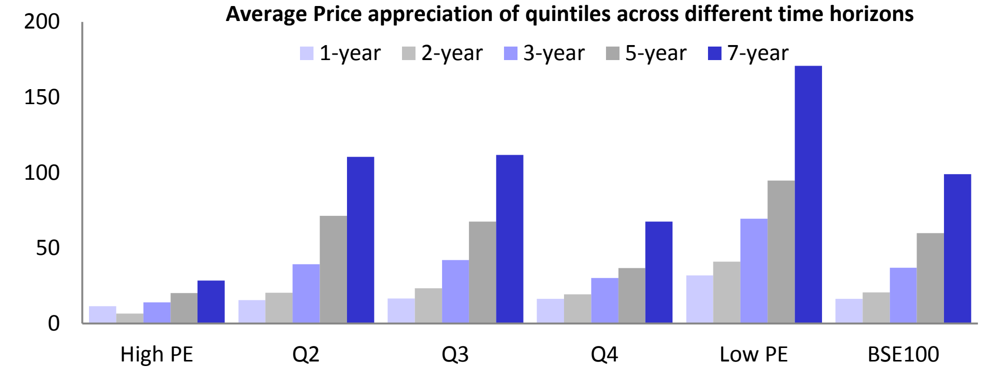
Source: Bloomberg

Exhibit 58: Trailing P/E of RECL`



Source: MOSL,

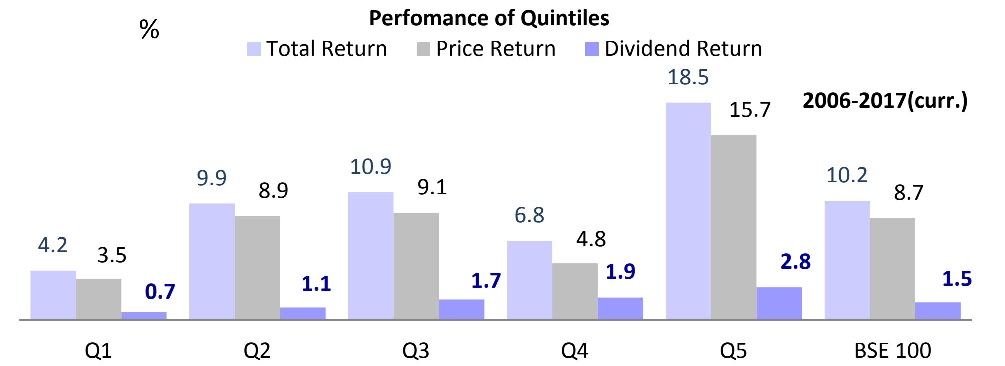
Exhibit 59: Low P/E stocks have generated significant alpha across all time horizons



Source: Bloomberg

The low P/E stocks offer higher dividend yield (2.8%) than the market (1.5%), which acts as a support for stock performance in a downturn. On the other hand, stocks with high P/E ratios offer lower dividend yield (0.68%) than the market. Worse, they fail to deliver the growth they promise based on higher PE ratios!.

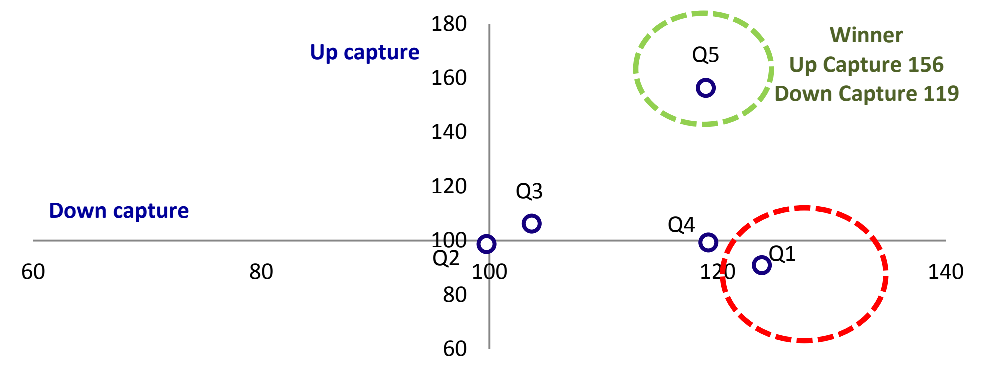
Exhibit 60: High dividend yield supports performance of low P/E stocks in bear phases



Source: Bloomberg

Low P/E quintile has the highest up-capture ratio (156), driven by low valuations and it beats the other quintiles by a significant margin (next best is Quintile-3: 106). However, what aids the performance of these stocks is that along with the stupendous up-capture, they also have a satisfactory down-capture!

Exhibit 61: Low P/E stocks have fantastic up-capture, with a decent down-capture



Source: MOSL, Bloomberg

The high P/E stocks perform miserably, with the highest down-capture (124) during a downturn and the lowest up-capture (91) during an upturn.

Exhibit 62: Up-capture and down-capture of quintiles

	Q1	Q2	Q3	Q4	Q5
Upside capture ratio	91	99	106	99	156
Downside capture ratio	124	100	104	119	119

Source: MOSL, Bloomberg

Exhibit 63: Fifteen stocks from our universe with lowest Trailing P/E

Company	CMP	MCap	Trailing PE (x)		PE	PAT CAGR (%)	Popularity	RoE (%)
	(INR)	(INR B)	5-yr Avg.	Current	Prem/Disc (%)	FY17-19	Score	FY17
Power Fin.Corpn.	129	340	6.2	5.0	-19.5	5.6	3.5	17.9
Rural Elec.Corp.	182	359	5.5	5.8	6.2	8.8	3.4	19.9
H P C L	512	521	21.2	8.4	-60.5	-9.2	3.4	32.4
B P C L	642	842	15.5	8.9	-43.0	-1.0	3.7	32.4
I O C L	394	1911	14.1	9.6	-31.8	1.9	4.0	22.3
O N G C	161	2060	11.8	9.8	-17.3	13.4	4.4	10.4
NMDC	109	346	12.0	11.0	-8.4	8.6	2.8	12.4
NTPC	159	1310	11.3	12.2	8.3	7.6	4.7	11.5
Hindalco Inds.	192	396	39.3	11.8	-69.9	16.9	4.4	14.0
Tech Mahindra	387	381	14.8	12.5	-15.1	6.1	3.9	18.4
Reliance Inds.	1433	4643	11.9	13.4	12.8	6.2	4.1	11.9
JSW Steel	197	477	28.2	13.3	-52.7	15.1	3.8	17.3
Tata Steel	515	500	8.5	13.9	63.6	21.6	3.8	15.4
HCL Technologies	849	1199	18.4	14.2	-22.9	3.4	4.1	27.5
Power Grid Corpn	202	1055	14.0	14.2	0.8	13.0	4.7	16.2

Source: MOSL, Bloomberg

Exhibit 64: Fifteen stocks from our universe with highest trailing P/E

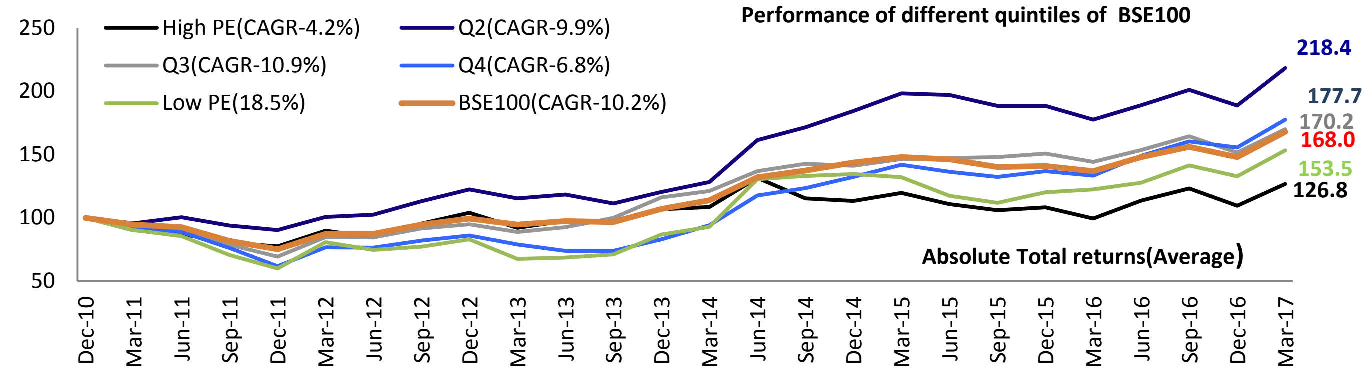
	CMP	MCap	Trailing PE (x)		PE	PAT CAGR (%)	POPULARITY	ROE (%)
Company	(INR)	(INR B)	5-yr Avg.	Current	Prem/Disc (%)	FY17-FY19	SCORE	FY17
Ambuja Cem.	244	485	29.3	50.0	70.8	13.8	3.0	5.0
M & M Fin. Serv.	341	193	18.0	48.1	167.4	32.3	3.4	6.4
Marico	314	404	41.7	49.9	19.6	10.2	2.9	36.7
Havells India	474	296	28.6	49.6	73.1	14.8	3.0	18.2
Colgate-Palm.	1101	299	41.7	51.9	24.5	13.5	3.3	50.4
Godrej Consumer	960	654	40.4	50.8	25.7	9.7	3.2	24.6
Bosch	24277	762	47.7	51.3	7.6	17.9	3.5	15.8
Asian Paints	1164	1116	49.6	55.4	11.7	9.3	3.2	28.5
Hind. Unilever	1094	2367	40.1	55.7	39.0	11.2	3.9	65.6
Nestle India	6773	653	92.2	57.4	-37.7	5.8	2.5	39.0
Titan Company	520	462	40.6	57.6	41.8	10.4	3.5	20.6
B H E L	137	335	20.6	67.6	228.4	34.7	2.2	1.5
Siemens	1353	482	90.9	75.9	-16.5	23.2	2.6	9.3
A B B	1486	315	99.1	75.4	-23.8	17.7	2.1	12.7
United Breweries	781	207	102.9	89.9	-12.7	19.2	2.8	10.4

Source: MOSL, Bloomberg

Analyzing stocks based on premium/discount w.r.t history

- After establishing the premise that low PE stocks outperform high PE stocks, we went a step forward of analyzing stocks based on their PE discount/premium w.r.t history. This is because we understand that there are certain sectors like consumer stocks that have outperformed index even when they have traded on higher valuations since 2008 or certain sectors always trade at lower multiples like OMC's, so looking at stock's valuation discount/premium w.r.t history can also be quite meaningful indicator.
- For every quarter starting with the quarter ended December 2010, we divided the BSE-100 constituents into quintiles based on discounts/premiums to their trailing ratios and evaluated the returns delivered by each quintile. Quintile-1 has the highest P/E stocks, while Quintile-5 has the lowest P/E stocks.

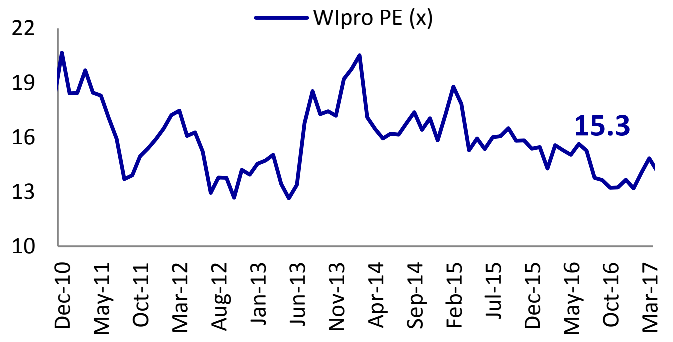
Exhibit 65: Low P/E stocks outperform market, whereas high P/E stocks fail to beat market



Source: Bloomberg

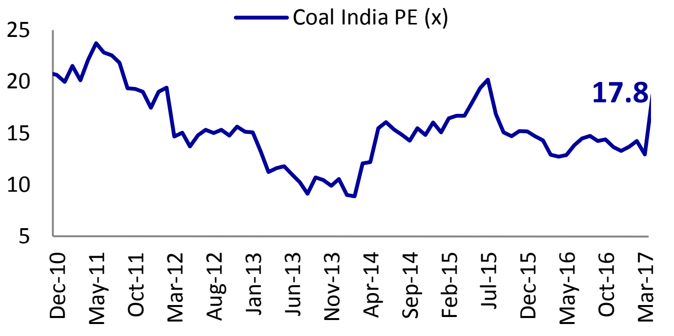
Annexure: Focus stocks - Low P/E quintile

Exhibit 66: Wipro trailing PE



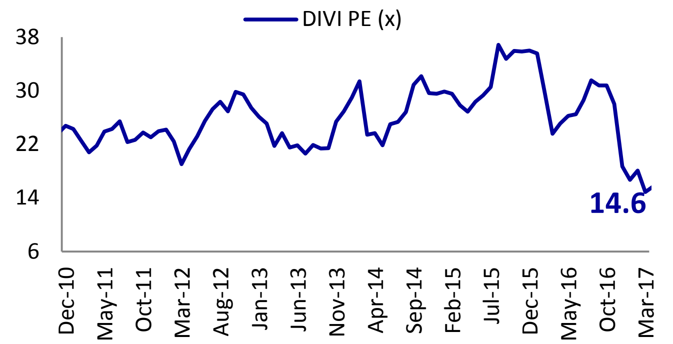
Source: Bloomberg

Exhibit 67: Coal India trailing PE



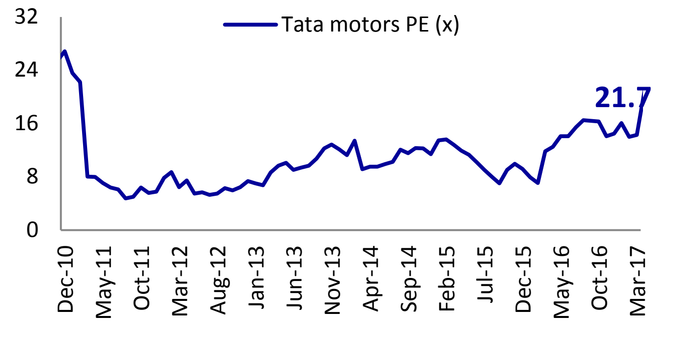
Source: Bloomberg

Exhibit 68: Divi's Laboratories trailing PE



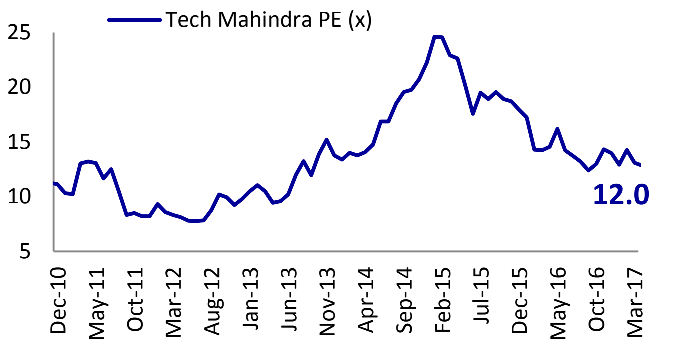
Source: Bloomberg

Exhibit 69: Tata motor trailing PE



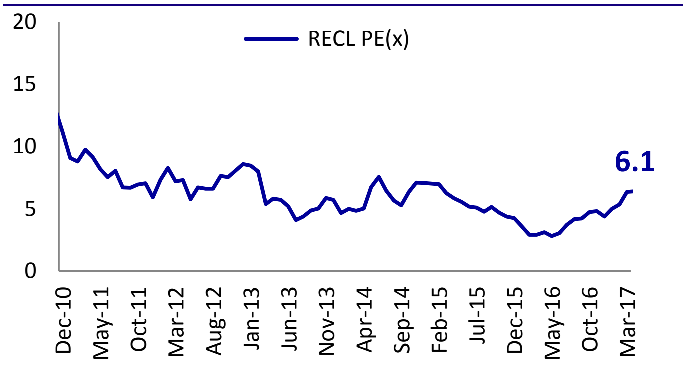
Source: Bloomberg

Exhibit 70: Tech Mahindra trailing PE

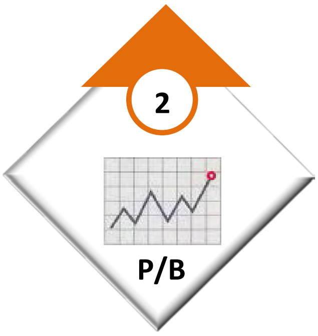


Source: Bloomberg

Exhibit 71: RECL trailing PE



Source: Bloomberg



Low P/B stocks dominate, but overall results mixed

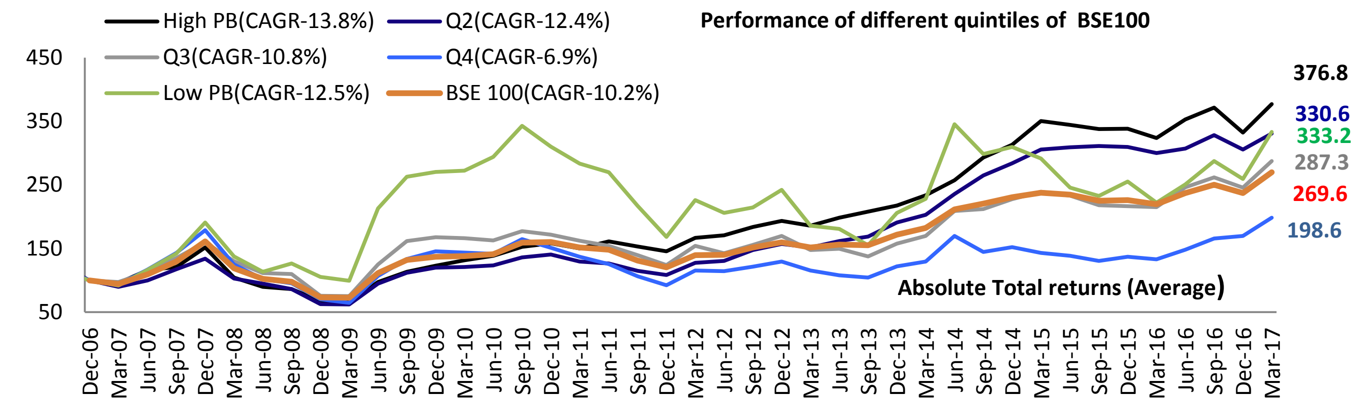
For every quarter starting with the quarter ended December 2006, we divided the BSE-100 constituents into quintiles based on P/B ratio and evaluated the returns delivered by each quintile. Quintile-1 is composed of the highest P/B stocks, while Quintile-5 has the lowest P/B stocks.

The most favored stocks, with the highest P/B ratios (Quintile-1) delivered highest returns (CAGR of 13.8%), followed by the low P/B quintile (CAGR of 12.5%) followed by Quintile-2 (CAGR of 12.4%) and Quintile-3 (CAGR of 10.8%). Among all the quintiles, only Quintile-4 failed to beat the benchmark.

The winner quintile (high P/B) did not generate as much alpha as the winner quintile of the previous theme (low P/E stocks). So, over the last 10 years, forward P/B ratio has not been as effective as P/E ratio in segregating the winners from losers.

In ***Cross-section of Expected Stock Returns***, Journal of Finance, 1992, **Eugene Fama** and **Kenneth French** highlighted the success of low P/B stocks over high P/B stocks. In India, this has not worked as well as themes based on P/E ratios. However, low P/B stocks have dominated other quintiles for most of the decade under consideration.

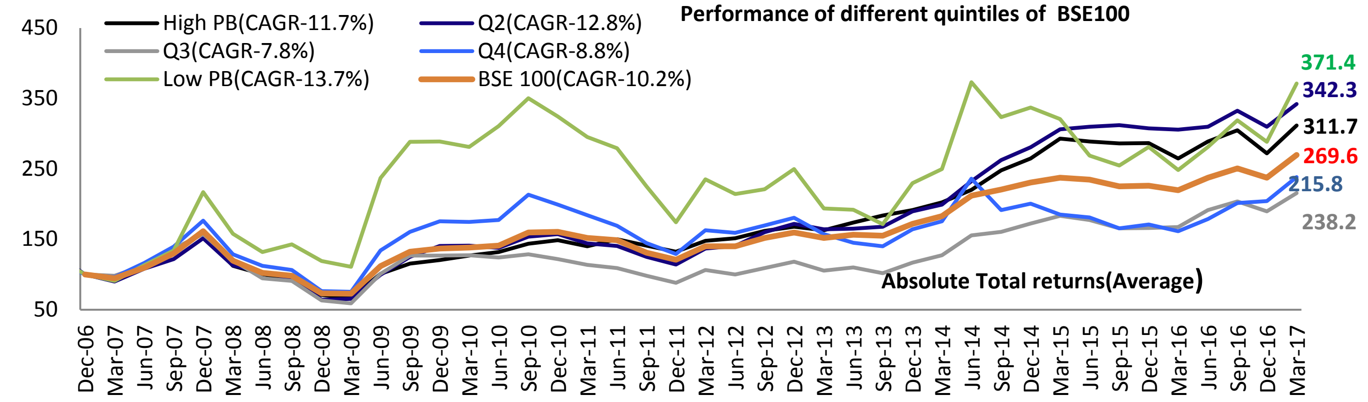
Exhibit 72: Returns of BSE-100 and all quintiles barring Quintile-4 are quite close



Source: Bloomberg

We have repeated the same analysis with trailing P/B ratio. The low P/B stocks based on trailing BV did better than low P/B stocks based on forward BV, whereas the high P/B stocks did somewhat worse. Again, low P/B stocks led the other groups for the majority of the decade and are the winners.

Exhibit 73: Trailing P/B ratio also presents the same picture



Source: Bloomberg

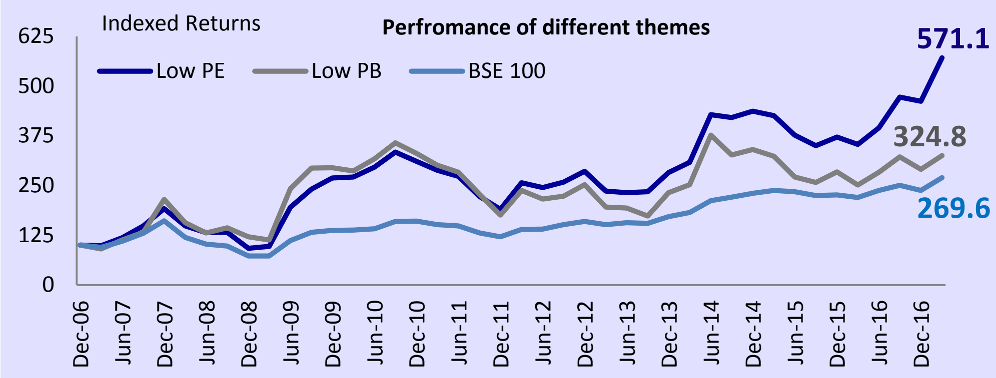
However, the results are again much less appealing as compared to the P/E theme. In our previous theme, we have done our analysis on BSE-100 excluding banks, as the price-earnings ratio is less relevant for banks. Also, private banks in general have been one of the biggest wealth creators, even at relatively high valuations. We want to be sure that the above result has not been affected by this exclusion of banks.

So, we repeated the same analysis on BSE-100 excluding banks. The results were similar, with low P/B stocks dominating, but high P/B stocks have also delivered significant returns. Similar results were achieved with forward P/B ratios.

Summary: Performance of contrarian themes

A review of the performance of contrarian themes based on relative valuation metrics suggests that the P/E ratio is a better predictor of returns as compared to P/B ratio.

Exhibit 74: Price to Earnings> Price to Book in stock selection



Source: Bloomberg

It separates the index members among the quintiles efficiently, which can be seen in the significant return differential across quintiles.

If the selection criterion is efficient, the quintiles show variation in returns. Otherwise, there is little difference in the quintile returns, which seems to be the case with P/B. Hence, the P/B theme ranks the last in our themes.

Exhibit 75: Returns (CAGR 2006-17(current)) by quintile under each strategy

Strategy	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Trailing PE	4.19	9.92	10.89	6.75	18.53
Trailing PB	11.73	12.76	7.79	8.83	13.66

Source: Bloomberg

What's particularly interesting is that in the long term, if we decide to select an entire basket of stocks (quintile) based on any strategy, even the worst-performing quintile would beat the savings account rate.

Analysis of sectors on our framework

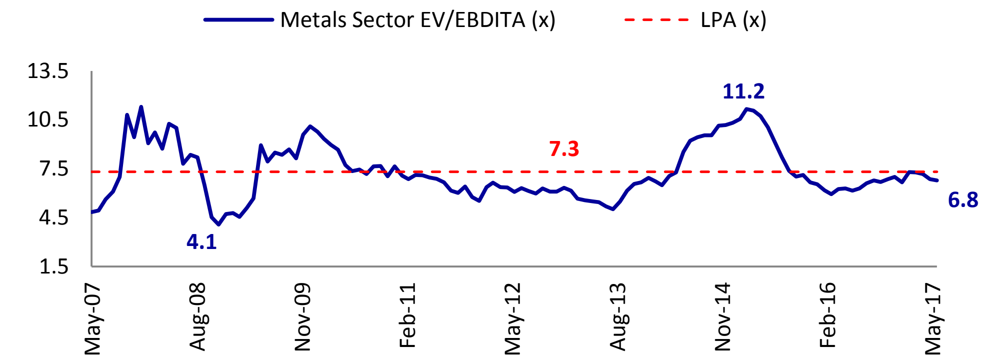
Metals: A contra bet of CY16

- Metals & mining was one of the best performing sectors in FY17, delivering returns (Nifty Metals index) of 61.9% and an alpha over the benchmark Nifty of 18.5%.
- The strong performance was primarily driven by a recovery in earnings (off the bottom) and aided by re-rating of multiples. Earnings for our metals pack (in EBITDA terms) grew 68% YoY in FY17, driven by higher prices across commodities and an increase in volumes.
- The sector is a living demonstration of the Contrarian Buy hypothesis highlighted in this report. The sector traded at a discount and its popularity hit the bottom in early-2016 when metal prices were at historical lows.

Valuations profile

Metals are trading at 6.7x EV/EBITDA, almost at a 10% discount to their long-term averages. Metals are generally counter-cyclical – they trade at a premium at the bottom of the earnings cycle and at some discount when the cycle is at its peak. ***This, however, was not the case in early-2016, when commodity prices were at their historical lows and the sector was available at a discount to its long-term average.*** The de-rating was due to concerns about sustainable demand growth for commodities in China and deflation, in our view.

Exhibit 76: Metals trade at 7% discount to historical average on EV/EBITDA basis



Source: Bloomberg

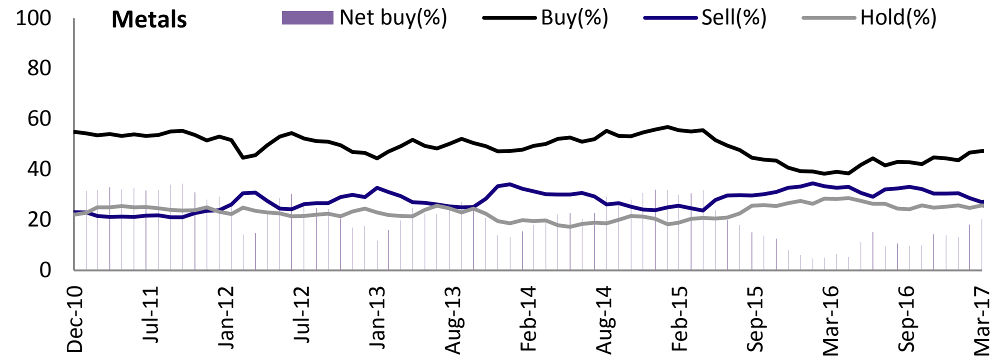
The outlook has since improved, as commodity prices have recovered from their lows, demand is growing at a steady pace in China and also led by a few supply-side initiatives. This is evident from the consensus rating profile of the sector.

The sector is now available at close to its long-term average multiple. In our view, the future performance will continue to be driven primarily by growth in earnings – partly on higher prices and also on improving utilization. A re-rating will be a factor of stern actions to curb overcapacity in China and developments around infrastructure investments in the US.

Sector consensus rating profile

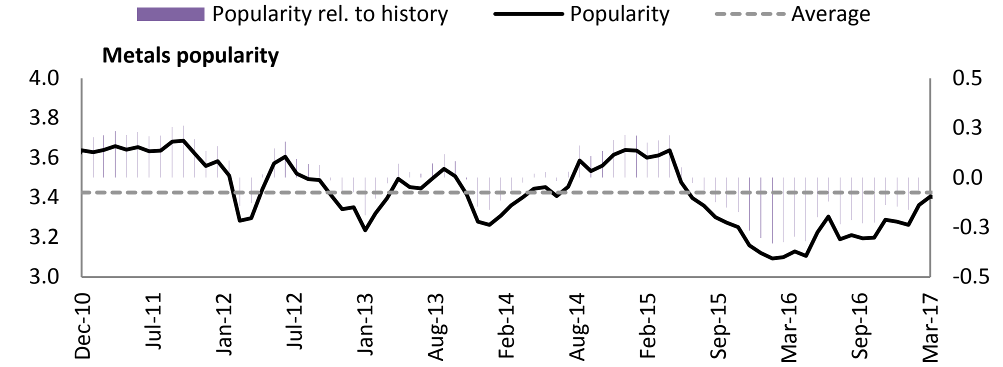
Exhibit 84-85 shows how the popularity of the metals sector has improved gradually after bottoming out in December 2015/January 2016, while Exhibit 145 shows the change in the net buy position.

Exhibit 77: Metals – popularity



Source: Bloomberg

Exhibit 78: Metals – popularity with analysts has increased, currently close to LTA



Source: Bloomberg

As apparent, metals' popularity was at bottom in Dec 15-Mar 16, and it was a contrarian call (in hindsight), which would have worked out very well.

Our top picks

Hindalco is our top pick in the sector, as (a) its India business has the competitive advantage of low-cost raw materials and a growing demand market, (b) Novelis is generating healthy cash and has attractive growth opportunities with the rising adoption of aluminum in automobiles (Novelis, being a first mover and with strong customer relations, has an edge) and (c) capex cycle is behind, and with strong FCF generation, the focus is on deleveraging. We value the stock on 6.5x FY18E EV/EBITDA, at INR242/share.

Pharma: Ripe for a contrarian bet

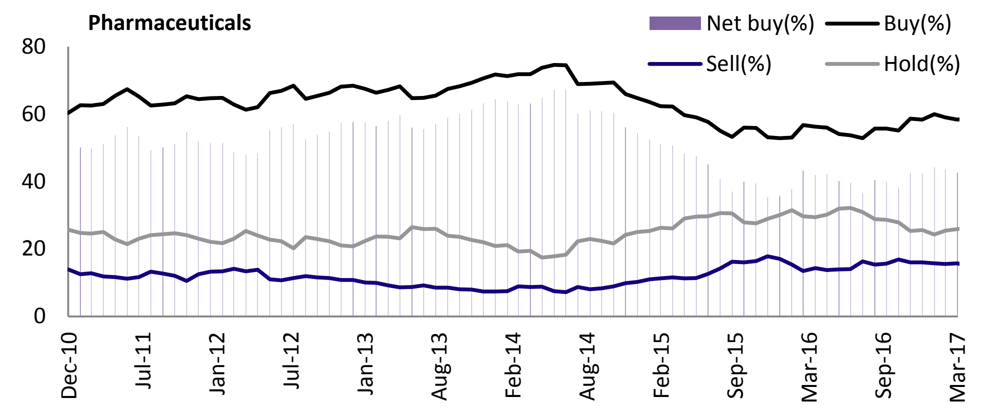
FY17 was a tough year for the pharmaceuticals and healthcare sector, delivering returns of -5.26% (Nifty Pharma & Healthcare index), as against the benchmark Nifty's 18.5% returns. The underperformance has continued in FY18. The Indian pharma industry finds itself engulfed in challenges posed by:

1. Pricing pressure in the US generics market
2. Investment in R&D in generic and specialty businesses at all-time high – returns to be visible in 2-3 years
3. Issues pertaining to US FDA inspection and resolution
4. Promotion of generic drugs in India – implementation will not be easy

We analyzed the sector through our Contrarian Investing framework, looking at analyst ratings, valuation profile, etc.

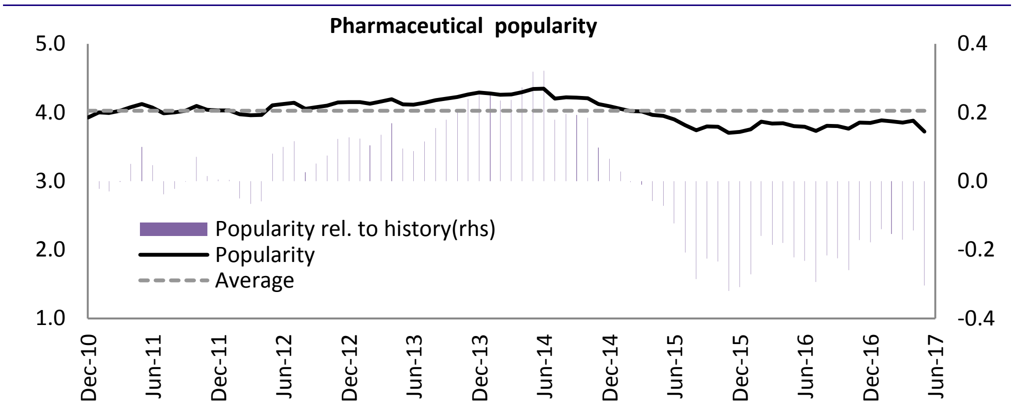
Sector consensus rating profile
Pharma sector popularity with consensus is at its lowest level in several years

Exhibit 79: Pharma sector popularity – Buy ratings lowest since 2010



Source: Bloomberg

Exhibit 80: Pharma sector popularity with analysts is below long-term average

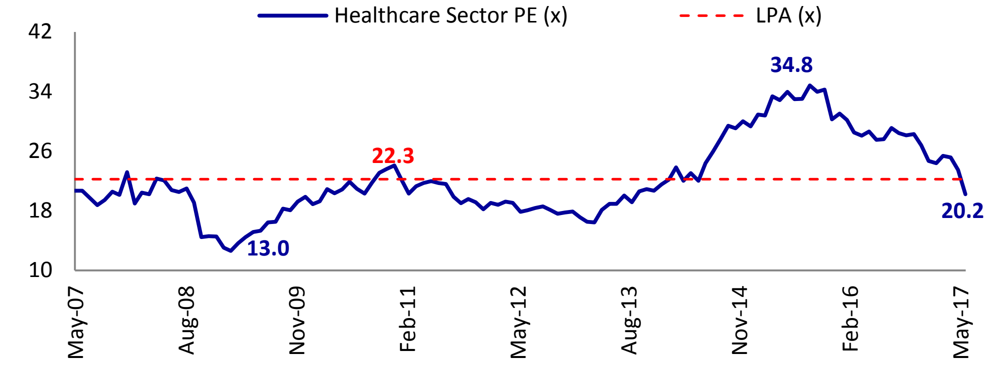


Source: Bloomberg

Valuations profile

These factors weighed on valuations, which have corrected significantly over the past two years. The sector trades at 20.2x, at a 10% discount to its long-term average.

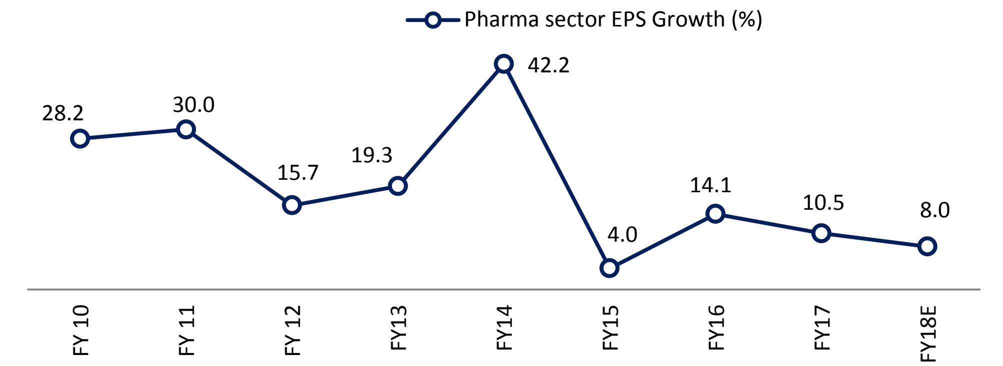
Exhibit 81: Pharma sector trading at 10% discount to LPA (on P/E basis)



Source: Bloomberg

Earnings growth took a hit in FY17, coming in below long-term average growth. We expect earnings growth to remain subdued in FY18 as well.

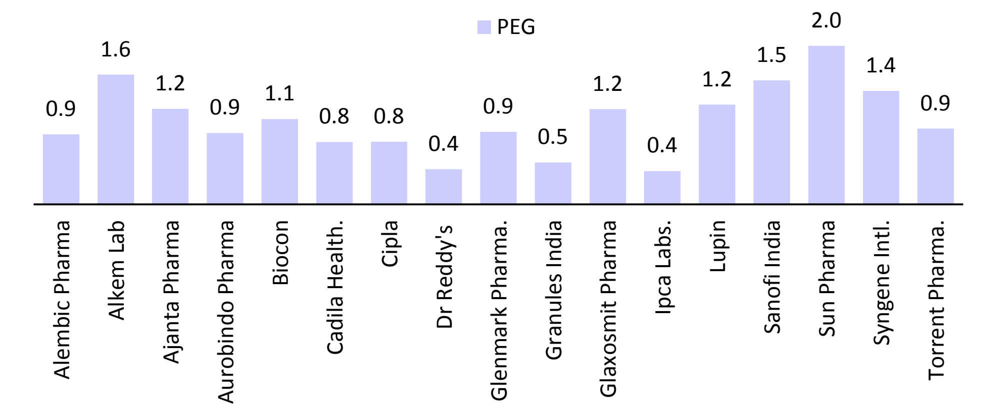
Exhibit 82: Earnings growth likely to remain subdued…



Source: Bloomberg

However, several pharma companies now appear cheap on PEG basis (FY19).

Exhibit 83: …however several pharma companies appear cheap on PEG basis



Source: Bloomberg

In our view, the Indian pharma sector fits well with the tenets of Contrarian Investment. Performance of the sector over the past two years has been subdued and news flow remains adverse. Amid this tumultuous phase, valuations have come off and the sector now trades at a discount to the long-period average. Popularity of the sector is also at its lowest in many years. The sector has seen a series of earnings cuts in the last 18 months and its weightage in the key indices has shrunk given the underperformance. Even from an institutional ownership perspective, the healthcare sector weight in the Indian Mutual Funds portfolio has reached a new low of 6.1% (-50bp MoM). As a result, the sector has fallen to the ninth position in sector allocation of mutual funds – it was at the fifth position 12 months ago.

Fundamentally, while we do not expect the sector's fortunes to change overnight, we believe it no longer suffers from an adverse combination of 'high expectations and premium valuations'. Valuations now offer an attractive entry opportunity from a medium- to long-term perspective, in our view, even as expectations have moderated.

Our top picks: **Sun Pharma**, **Aurobindo Pharma, Fortis Healthcare**

Information Technology: A contrarian bet? Not yet !!

The Indian IT industry finds itself caught up in the vortex of multiple challenges to growth (which is moderating) due to a confluence of factors:

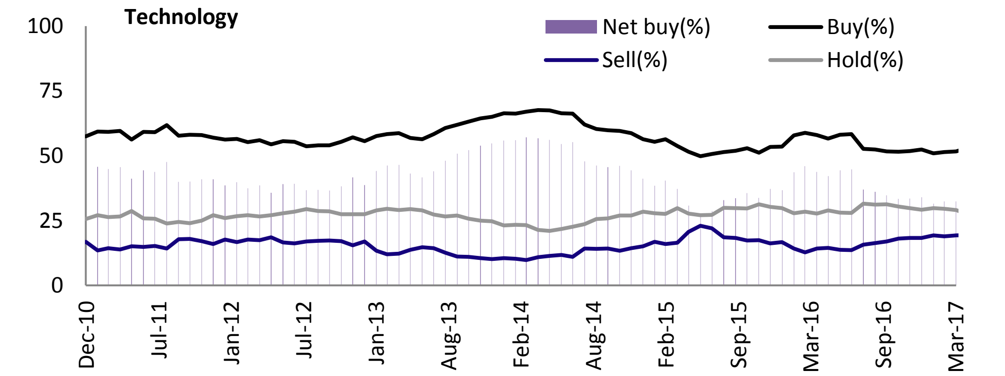
1. Value migration away from legacy business models to digital
2. Client uncertainty amid policy headwinds from its largest offshore market
3. Pricing pressure in traditional services from the combination of commoditized offerings and rising acceptance of automation

After a decade and a half of strong growth (24% CAGR over FY05-15), there has been a sharp moderation (6% CAGR over FY15-17). Given this context, we look at the important contrarian indicators for the IT sector – popularity and valuation profiles.

Sector consensus rating profile

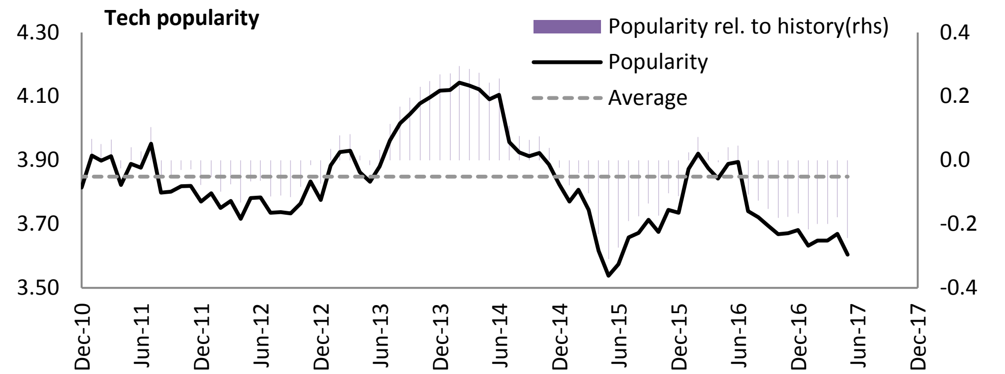
Scanning through the consensus rating data, we found the number of 'Buy' ratings lower and 'Sell' ratings higher than the historical trends.

Exhibit 84: Technology sector popularity



Put differently, the popularity of the Indian IT sector is at its lowest level in recent times.

Exhibit 85: Technology sector popularity with analysts is low relative to history



Source: Bloomberg

Valuations profile – discount to LPAs

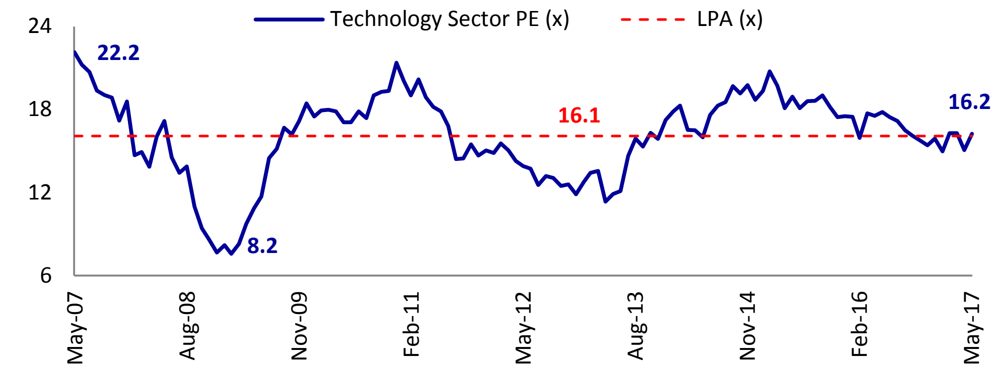
The Indian IT sector is trading at a P/E of 14.9x, at ~7% discount to its long-period average (LPA), with several companies trading lower than historical valuations.

Notwithstanding the healthy balance sheet characteristics (high RoE, net cash balance sheet, strong FCF conversion) of the Indian IT companies, the sector macros have weakened. Headwinds to both revenue growth and profitability have prevented any bounce from the prevailing low valuations.

The following questions arise:

- Can one look at the Indian IT sector as a contrarian bet?
- Do the current valuations adequately reflect the challenges?
- Do we see signs of revival in earnings growth?

Exhibit 86: Tech sector trades close to LPA



Source: Bloomberg

We do not expect the operating environment for Indian IT to ease in the immediate term – the shift to Digital and up-skill in automation will be gradual. Meanwhile, political uncertainty continues to drag client decisions. Even the management commentaries post 4QFY17 results do not suggest any material demand uptick. Unlike for several other sectors, the expectations around the Indian IT sector's performance are not very optimistic.

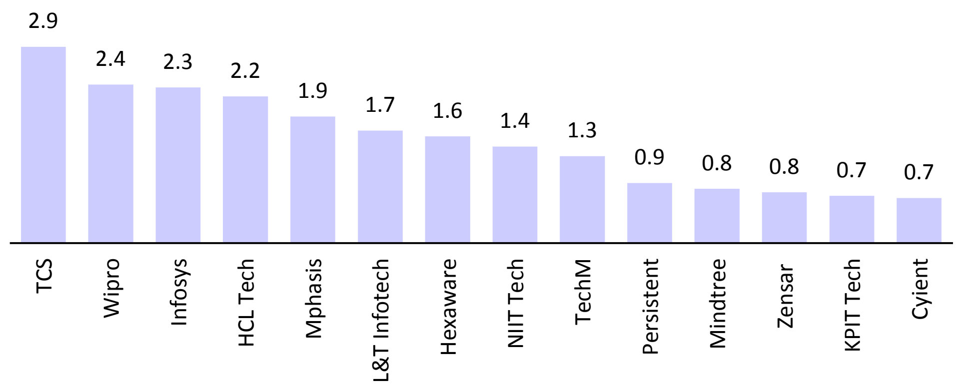
Forward P/E ratios are high relative to earnings growth (FY17-19E CAGR) – as such, most IT companies and the sector appears expensive on PEG basis.

Exhibit 87: Forward P/E ratios are high relative to EPS growth in general (PEG >1; stocks are expensive)

Company	MCap	Rating	TP	Upside	EPS (INR)			P/E (x)			RoE (%)			FY17-19E CAGR (%)	PEG
	USD b		(INR)	(%)	FY17	FY18E	FY19E	FY17	FY18E	FY19E	FY17	FY18E	FY19E	EPS	
TCS	70.0	Neutral	2,400	0.2	133.4	139.7	149.6	18.0	17.1	16.0	33.5	32.4	32.3	5.9	2.9
Wipro	18.7	Neutral	250	-1.8	16.9	17.3	19.1	15.1	14.7	13.3	16.9	15.5	15.7	6.2	2.4
Infosys	32.1	Buy	1,200	27.6	62.9	64.7	71.1	14.9	14.5	13.2	22.0	20.3	20.2	6.3	2.3
HCL Tech	18.3	Buy	960	13.1	59.8	61.9	67.6	14.2	13.7	12.6	27.5	25.4	26.0	6.3	2.2
Mphasis	1.9	Neutral	600	0.9	38.9	41.7	45.0	15.3	14.3	13.2	13.2	14.0	15.7	7.6	1.9
L&T Infotech	**2.1**	**Buy**	**850**	**3.9**	**55.5**	**59.7**	**65.0**	**14.7**	**13.7**	**12.6**	**40.4**	**32.8**	**28.3**	**8.2**	1.7
Hexaware	1.1	Neutral	235	-6.6	13.7	15.4	16.7	18.4	16.4	15.1	26.5	25.3	23.5	10.3	1.6
NIIT Tech	0.5	Neutral	470	-17.8	38.5	42.5	46.1	14.8	13.5	12.4	16.1	14.8	14.7	9.4	1.4
TechM	5.7	Buy	500	29.2	30.9	32.3	36.9	12.5	12.0	10.5	18.4	16.7	17.0	9.3	1.3
Persistent	**0.8**	**Buy**	**725**	**10.4**	**37.7**	**43.9**	**51.4**	**17.4**	**14.9**	**12.8**	**17.0**	**18.1**	**20.3**	**16.7**	0.9
Mindtree	0.7	Neutral	475	-8.8	24.9	30.5	36.5	20.9	17.1	14.2	16.8	18.9	20.5	21.2	0.8
Zensar	**0.6**	**Buy**	**1,000**	**14.6**	**54.9**	**65.5**	**76.0**	**15.9**	**13.3**	**11.5**	**16.3**	**17.2**	**17.4**	**17.6**	0.8
KPIT Tech	0.4	Neutral	135	11.2	11.9	13.4	15.2	10.2	9.0	8.0	14.3	15.6	15.2	12.9	0.7
Cyient	**0.9**	**Buy**	**620**	**20.2**	**30.6**	**38.3**	**44.2**	**16.8**	**13.5**	**11.7**	**16.2**	**17.8**	**17.9**	**20.1**	0.7

Source: MOSL

Exhibit 88: Almost all Tier-I IT companies are still not cheap on PEG basis (x)

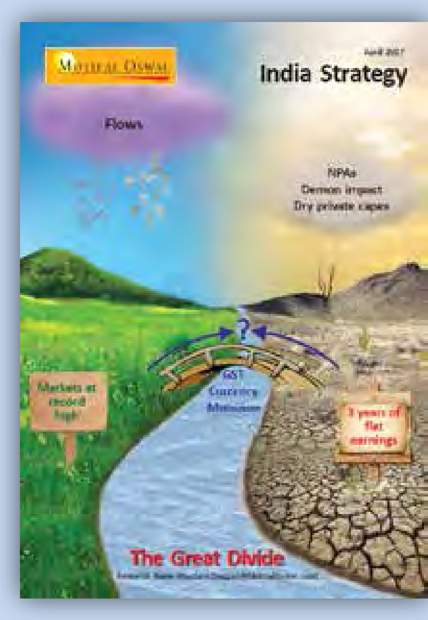


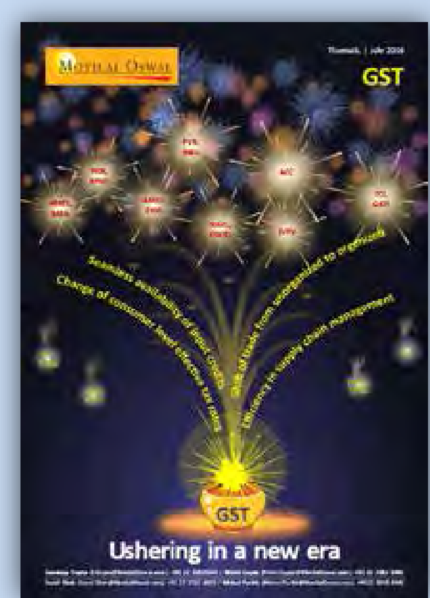
Source: MOSL

Thus, while the potential combination of weak sentiment and valuation discount to historical averages, coupled with low popularity on ratings, may tempt one to look at IT as a contrarian bet, we believe that the fundamental dynamics of the sector itself are changing and that business models will undergo significant changes. There has been a breakdown in the potential earnings growth rates that the sector can deliver. There does not yet appear to be a case for contrarian buying.

NOTES

THEMATIC/STRATEGY RESEARCH GALLERY





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