Introduction to Quant Strategy – Value Momentum

A quantitative strategy with focus on long-only equity investing

Devin Joshi, *Research Analyst*
Devin@keynoteindia.net

Humans – Flawed decision makers

Despite the widespread adoption of the value investment philosophy, exponential growth in computing power, and easy access to financial data, value phenomena persist. It seems to defy logic. Why does an efficient market leave a free lunch on the table?

Answer to that is simple: Humans are flawed decision-makers, especially under Duress

Humans or analysts suffer from representative bias. They often extrapolate poor earnings performance too far into the future, assume a downward trend in stock prices will persist, or simply overreact to bad news, leading them to oversell stocks to the point that they are undervalued.

The reverse is also true, where a company delivering excellent earnings performance is extrapolated into the future, assuming this trend will continue. This results in stocks trading at exorbitant valuations, where stocks are de-rated if earnings fail to materialize.

Based on historical data, we have observed that companies trading at higher valuations tend to have a stronger track record of past growth, while companies trading at lower valuations tend to have a poorer track record of growth. Interestingly, as a group, companies at the lower end of the valuation curve tend to outperform those at the higher end. With this premise in mind, we have created this model.

Executive Summary

Purpose of the report: The purpose is to create a strategy that invests in stocks available at attractive valuations, showing consistent momentum, and generates attractive risk-adjusted returns purely based on quantitative parameters without any human intervention.

Why quantitative strategy?: In today's data-rich environment, sifting through the constant streams of information has become crucial to discern what's truly valuable and cut out the noise. However, due to inherent human biases, distinguishing between relevant information and irrelevant information has become exceedingly challenging. Ultimately, only a handful of factors significantly impact stock returns, and by focusing on key factors, achieving substantial outperformance becomes plausible.

Methodology: We created a Quantitative strategy and Backtested the portfolio of stocks with reasonable valuations and strong momentum from April 2013 to August 2024 (11.4 Years), using the Historical Nifty 500 as our starting universe. The steps involved in the selection of stocks have been highlighted here.

Key Findings: In the past 11+ years, this strategy has outperformed the Nifty 500, generating an alpha of 16.9% and delivering a 32.0% CAGR. It outperformed the benchmark in 10 out of 11 years and experienced a relatively low drawdown and standard deviation compared to the benchmark.

Executive Summary

Conclusion: Value & Momentum are complementary strategies as Value & Momentum strategies tend to perform well at different times in the market cycle. Value strategies often do well in stable or declining markets, while Momentum strategies excel in trending markets. This negative correlation between the two strategies helps in smoothing out returns and reducing overall portfolio volatility.

Assumptions:

- **Nifty 500:** Nifty 500 as the starting universe has been considered. This universe includes de-listed, amalgamated companies as well to remove survivorship bias in the universe. Further, the Nifty 500 as of April of every year is considered for an entire year.
- **Lag Effect:** It bakes in a 7-month lag to the Financial Year ending and a 2-month lag to the Quarter ending. For example, March 2022 year-ending numbers are announced somewhere by May 2022 end, but they are incorporated in our model (just for the purpose of backtesting) until October ’22.
- **Return Computation:** In return computation, monthly rebalance is assumed. And at every rebalance, portfolio wt. is reset to equal wt. Return computation does not include dividends.
- **Data cleaning:** Companies that have not reported their year ending for more than 2 years have been removed from the backtest, checked at the end of every month
- **Data Source:** Ace Equity, NSE

KEYNOTE

Selection & Filtration Criteria

Nifty 500

- Basic hygiene exclusions — 406
- Stocks MF holding >= threshold — 295
- Stocks Altman Z score >= Threshold — 215
- Ranking based on Valuation factors — 110
- Selection on Generic Momentum — 58
- Top 25* stocks selected based on Low Beta — 25

**Stock once enters the universe, it will exit once rank is more than 30*

Basic Hygiene Exclusions

From our starting universe of Nifty 500, we have made certain **basic exclusions**

1. Excluded companies where the **latest 3 years of financials** are not available.
2. Excluded companies in the **BFSI sector** from the universe.
3. Excluded companies whose **total assets** and **sales** in the latest and previous years were **less than Rs. 10 Cr**.

Our starting universe performance post these exclusions are:

	Nifty 500 Index	Nifty 500 (Starting Universe)
# of Stocks	500	406
CAGR	15.1%	17.8%
Drawdown %	-27.2%	-47.4%
Standard Deviation	15.9%	22.1%
Sharpe	0.70	0.53
Calmar	0.55	0.37

Performance is for the period Apr’13 – Aug’24 in this report

In the latest list of Nifty 500 constituents, the Mcap of the 500th company is Rs. 4,908 Cr

Explanation

- ***Drawdown %:*** *It is maximum % fall in portfolio value from highest value to lowest value during certain period. Lower the number, better it is.*
- ***Standard Deviation:*** *It measures the volatility of portfolio returns, as to how much the returns of a portfolio can vary from its average over time. It is also called measure of risk in the portfolio. Lower the number, better it is.*
- ***Sharpe Ratio:*** *It tells you how much excess of risk free returns (CAGR) have been generated for every unit of risk (Standard Deviation). Higher the number, better it is.*
- ***Calmar Ratio:*** *It tell you how much returns (CAGR) has been generated for every unit of risk (Drawdown). Higher the number, better it is.*

Mutual Fund Holding >= Threshold (Mutual Fund Holding Rule)

Purpose: We aim to exclude those companies from the universe exhibiting poor governance or facing specific challenges initially identified through qualitative assessments

Rationale: Mutual Funds are smart money, and they exit at the first sign of trouble; taking a clue from the smart money; we have created a model that can dynamically react on softer aspects which gets captured in numbers later, but smart money exits first.

Specifics: We exclude those companies that have low mutual Fund holding in their shareholding pattern

We examined the outcomes at various Mutual Fund holding levels before selecting relevant threshold.

Companies with MF holding in Top 90 percentile are included in the universe

This gives a sense of cut off MF threshold for making it to the list

Rules	Low MF ownership Threshold								High MF ownership Threshold
	MF Holding Top 90 Percentile included	MF Holding Top 80 Percentile included	MF Holding Top 70 Percentile included	MF Holding Top 60 Percentile included	MF Holding Top 50 Percentile included	MF Holding Top 40 Percentile included	MF Holding Top 30 Percentile included	MF Holding Top 20 Percentile included	MF Holding Top 10 Percentile included
# of Companies	390	338	295	254	214	172	132	91	49
CAGR	17.8%	19.8%	19.9%	20.6%	20.6%	21.2%	21.6%	22.5%	23.7%
DD%	-46.8%	-41.5%	-40.7%	-40.2%	-40.7%	-40.8%	-41.4%	-44.1%	-45.4%
Std Dev	21.8%	20.8%	20.5%	20.4%	20.5%	20.5%	20.9%	21.2%	22.7%
Sharpe	0.54	0.67	0.68	0.71	0.71	0.74	0.75	0.78	0.78
Calmar	0.38	0.48	0.49	0.51	0.51	0.52	0.52	0.51	0.52
Average Mcap	30,466	33,032	32,166	29,645	25,306	23,647	20,406	17,913	14,586
Last 12Months MF Threshold	0.68	2.64	4.41	6.33	8.24	10.23	12.64	15.07	19.12

As we become more selective in our criteria, the number of stocks we consider naturally decreases. Interestingly, we've noticed that risk-adjusted returns, as measured by the Sharpe ratio, are higher when we use more stringent criteria. To balance risk-adjusted returns with the number of stocks for further analysis, we've chosen a threshold at the top 70th percentile. This threshold allows us to maintain a reasonable number of stocks while optimizing for risk-adjusted returns. Additionally, it enables us to focus on larger market capitalization companies.

KEYNOTE

Statistics post Mutual Fund Holding Rule

	Nifty 500 Index	Nifty 500 (excl BFSI)	Post MF Rule
# of Stocks	500	406	295
CAGR	15.1%	17.8%	19.9%
Drawdown %	-27.2%	-47.4%	-40.7%
Standard Deviation	15.9%	22.1%	20.5%
Sharpe	0.70	0.53	0.68
Calmar	0.55	0.37	0.49
Average Mcap		29,647	32,166

Improvement in returns

Good improvement in risk metrics but further scope for improvement compared to Nifty 500 Index

Altman Z Score >= Threshold (Altman Z score Rule)

Purpose: To reduce risk and remove companies with high leverage or under financial stress

Rationale: Despite implementing MF rule, there might still be instances of companies facing challenges such as high leverage coupled with poor earnings or financial stress. To address this issue, we incorporated Altman's Z score, a metric that gauges the likelihood of a business facing bankruptcy within the next two years.

Specifics: We exclude the bottom 30 percentile of companies with the worst Altman Z score

To confirm this hypothesis, let's look at the stats of the portfolio at different thresholds.

Rules	Low Altman Z score				High Altman Z score
	Altman Z Score Top 90 Percentile included	Altman Z Score Top 70 Percentile included	Altman Z Score Top 50 Percentile included	Altman Z Score Top 30 Percentile included	Altman Z Score Top 10 Percentile included
# of Companies	274	215	155	96	36
CAGR	20.4%	21.0%	20.8%	20.3%	15.2%
DD%	-38.3%	-30.0%	-25.7%	-21.6%	-23.8%
Std Dev	19.8%	18.2%	17.1%	16.2%	16.1%
Sharpe	0.73	0.82	0.86	0.88	0.57
Calmar	0.53	0.70	0.81	0.94	0.64
Average Mcap	32,076	30,246	34,050	40,732	55,586
Last 12Months Z Score Threshold	2.20	4.30	6.70	10.37	18.21

Significant improvement in risk metrics

The data clearly demonstrates that both return and standard deviation have improved at a higher threshold compared to lower ones. One major improvement in stats by the introduction of Altman's Z score is the substantial reduction in drawdowns and standard deviation.

Statistics post Mutual Fund Holding and Altman's Z score rule

	Nifty 500 Index	Nifty 500 (excl BFSI)	Post MF Rule	Post Altman's Z Score Rule
# of Stocks	500	406	295	215
CAGR	15.6%	17.8%	19.9%	21.0%
Drawdown %	-27.2%	-47.4%	-40.7%	-30.0%
Standard Deviation	15.8%	22.1%	20.5%	18.2%
Sharpe	0.74	0.53	0.68	0.82
Calmar	0.57	0.37	0.49	0.70
Average Mcap		29,647	32,166	30,246

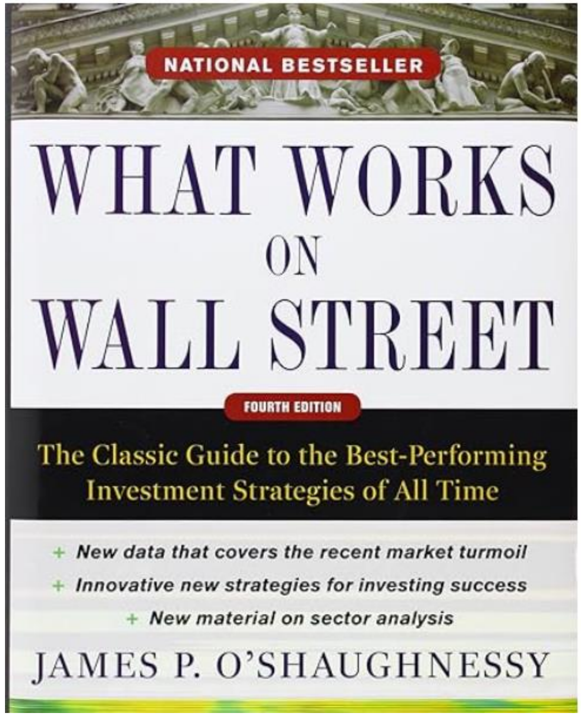
Improvement in returns compared to prior two universes

Reduction in portfolio drawdowns and standard deviation compared to prior two universes

Now that we have cleaned the universe for stocks with red flags, we can move towards our main strategy

Trending Value

Drawing inspiration from James P. O'Shaughnessy's influential book, "*What Works on Wall Street*," published in 1997, one strategy he explored is 'Trending Value.' This approach cleverly combines the value factor with the momentum factor. Over a 45-year period, the 'Trending Value' strategy has delivered an impressive CAGR of 21.1%, significantly outperforming the S&P 500, which achieved a CAGR of 6.2% during the same timeframe.



This strategy essentially aims to find the cheapest stocks available in the market that are also showing strong price momentum.

KEYNOTE

Finding Value

To find the value stocks, we will **rank all the stocks (215)** in the universe post Altman Z score on the basis of the **following valuation metrics**:

- Price to Earnings
- Price to Book
- Price to CFO (3 Yrs cumulative)
- EV to Sales
- EV EBITDA

Lower the better

Rank is computed for each of these valuation metrics and then **combined rank is computed**. Lower this rank, better it is.

Example:

	Price to Earnings Rank	Price to Book Rank	Price to CFO Rank	Price to Sales Rank	EV EBITDA Rank	Combined Rank
Stock A	5	15	3	2	25	5+15+3+2+25= 50
Stock B	10	4	20	10	17	10+4+20+10+17 =61

Stock A will be selected as it has ranked the lowest

This represents that stock A is ranked 5th out of 215 stocks based on PE multiple. The same for other parameters.

Let's check this hypothesis with data. We will compare the performance of the top and bottom halves of the universe by above rank.

KEYNOTE

Ranking based on Valuation Factors

	Bottom 50 percentile stocks (Inexpensive Stocks)	Top 50 percentile stocks (Expensive Stocks)
# of Stocks	110	107
CAGR	23.1%	18.9%
Drawdown %	-36.7%	-22.5%
Standard Deviation	19.9%	17.4%
Sharpe	0.86	0.74
Calmar	0.63	0.84
Average Mcap	27,935	32,838

Inexpensive universe of stocks have outperformed universe of expensive stocks

But this return has been generated with increased drawdown and volatility

Value strategies generally tend to be more volatile. But when we balance it with momentum stocks, numbers drastically improve.

Selection on Generic Momentum

Once the undervalued stocks are selected, we will rank them based on their price momentum over the past 12 months.

To compute momentum, we essentially consider the prior month's closing price and the 12-month prior closing price.

Let's examine the data to determine if momentum is indeed adding value.

We have divided the value universe into 5 buckets, ranging from the highest to the lowest momentum stocks in the last 12 months.

	Lowest Momentum Stocks				Highest Momentum Stocks
# of Companies	22	22	22	22	22
CAGR	14.8%	17.2%	20.7%	25.7%	36.3%
DD%	-47.8%	-46.9%	-43.9%	-33.0%	-23.9%
Std Dev	24.2%	21.7%	20.0%	18.6%	20.8%
Sharpe	0.37	0.51	0.74	1.06	1.45
Calmar	0.31	0.37	0.47	0.78	1.52
Average Mcap	22,275	26,507	33,482	31,459	26,213

As is clearly evident, stocks with the highest momentum have delivered higher returns with lower drawdowns and volatility. Essentially, the risk-adjusted returns for higher momentum stocks are much better than those for lower momentum stocks.

The issue of higher drawdowns and volatility, typically associated with the value universe, has been effectively addressed by incorporating momentum.

For further analysis, we will be selecting the top 50 percentile of stocks based on momentum.

KEYNOTE

Statistics post Value and Generic Momentum

	Nifty 500 Index	Nifty 500 (excl BFSI)	Post MF Rule	Post Altman's Z Score Rule	Value Universe	Generic Momentum
# of Stocks	500	406	295	215	110	58
CAGR	15.6%	17.8%	19.9%	21.0%	23.1%	28.7%
Drawdown %	-27.2%	-47.4%	-40.7%	-30.0%	-36.7%	-28.3%
Standard Deviation	15.8%	22.1%	20.5%	18.2%	19.9%	19.1%
Sharpe	0.74	0.53	0.68	0.82	0.86	1.19
Calmar	0.57	0.37	0.49	0.70	0.63	1.02
Average Mcap		29,647	32,166	30,246	27,935	29,598

Momentum Path Matters

For instance, a stock could qualify for our universe by delivering no returns for 11 months and then achieving all its returns in the final month.

Research by Wesley Gray and Jack Vogel, in their book "Quantitative Momentum," suggests that if you have to choose between two stocks that have delivered the same returns in the past, you should opt for the one with a smoother price trend rather than a more volatile one.

Extract from their book:

Humans suffer from "limited attention", which means that our cognitive resources are limited, and our brains will focus on processing the information that is more relevant or demanding at a given point in time. Determining what is most relevant turns out to be a challenging question. Psychology research has found that dramatic changes in the environment, as opposed to small changes attract more cognitive resources, all else being equal.

Hence, a series of frequent gradual changes attracts less attention than infrequent dramatic changes. Investors, therefore, underreact to continuous information.

Momentum Path Matters

We have selected stock Beta to filter out volatile stocks from the universe. For computing a stock's beta, we consider its latest 240 trading days (the last one year).

Let's look at universe post Generic Momentum performance at different Beta ranges.

We have sorted this universe in 5 buckets based on Beta volatility.

	Low Beta Stocks	←		→	High Beta Stocks
# of Companies	12	11	11	11	11
CAGR	33.0%	31.0%	26.0%	22.6%	29.5%
DD%	-24.8%	-27.6%	-39.4%	-41.6%	-26.5%
Std Dev	16.9%	19.0%	21.1%	23.7%	24.3%
Sharpe	1.60	1.32	0.95	0.70	0.97
Calmar	1.33	1.13	0.66	0.54	1.11
Average Mcap	29,501	33,175	32,593	28,632	24,984

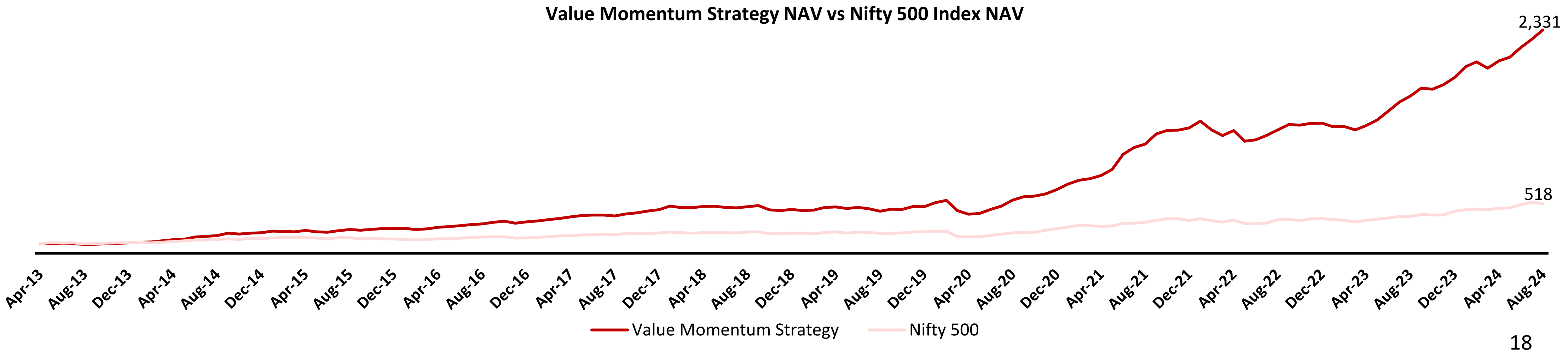
As is clearly evident, stocks with low beta delivered better risk-adjusted returns than stocks with higher beta.

From the universe of stocks filtered by Generic Momentum, we will select the top 25 stocks with the lowest beta. These top 25 stocks will form our final value momentum portfolio.

Value Momentum Model Performance

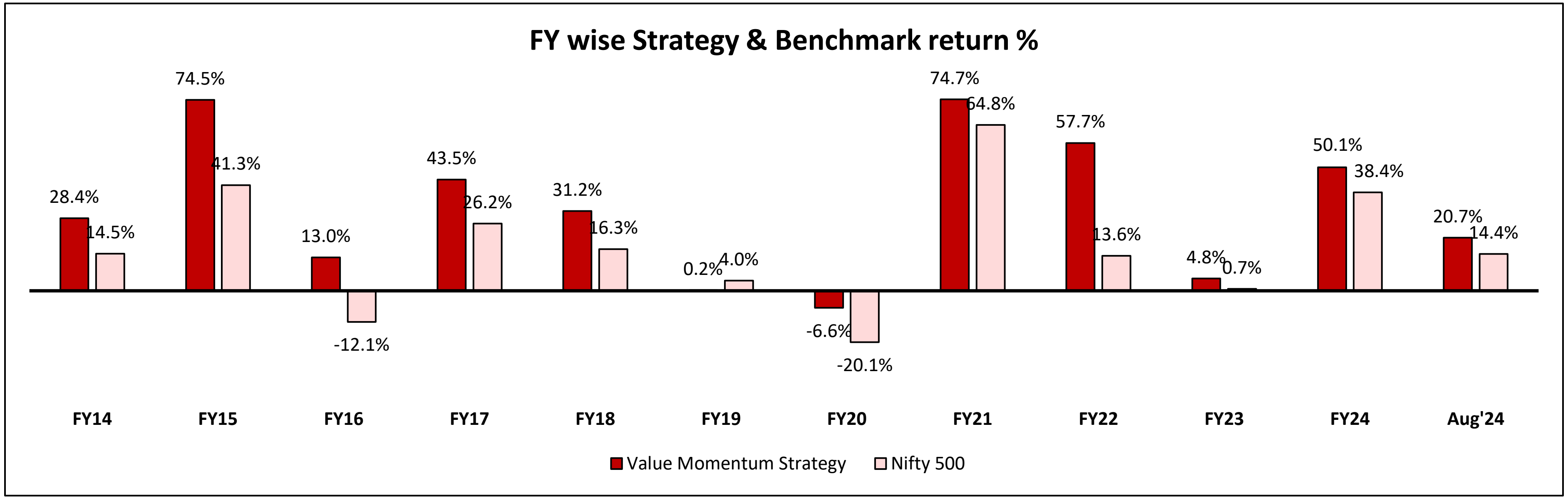
Here is the performance of those 25 stocks post all the filtration

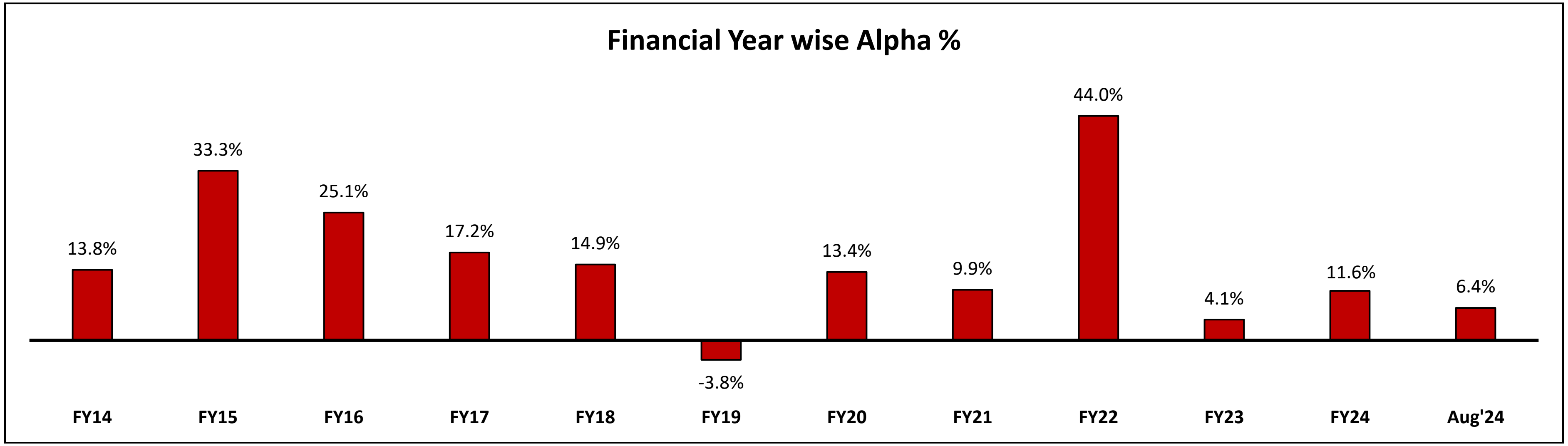
	Nifty 500 Index	Value Momentum Portfolio	Alpha over Nifty 500 Index
# of Stocks	500	25	
CAGR	15.6%	32.0%	+16.9%
Drawdown %	-27.2%	-25.9%	+1.3%
Standard Deviation	15.8%	17.1%	+1.2%
Sharpe	0.74	1.52	
Calmar	0.57	1.24	
Average Mcap		31,490	



KEYNOTE

Value Momentum Model Performance

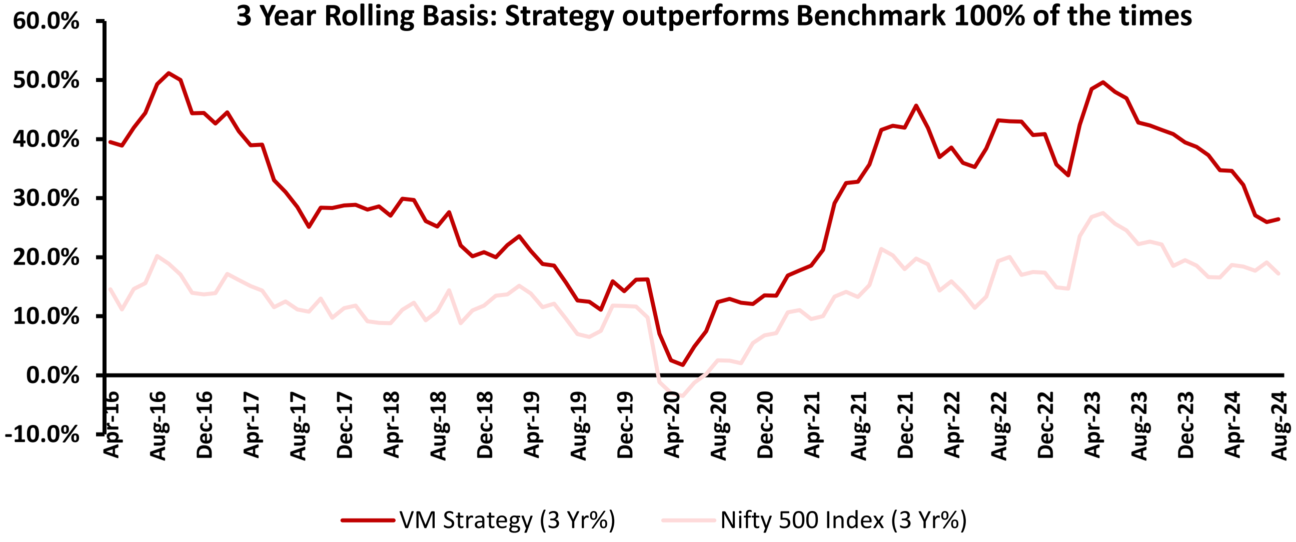




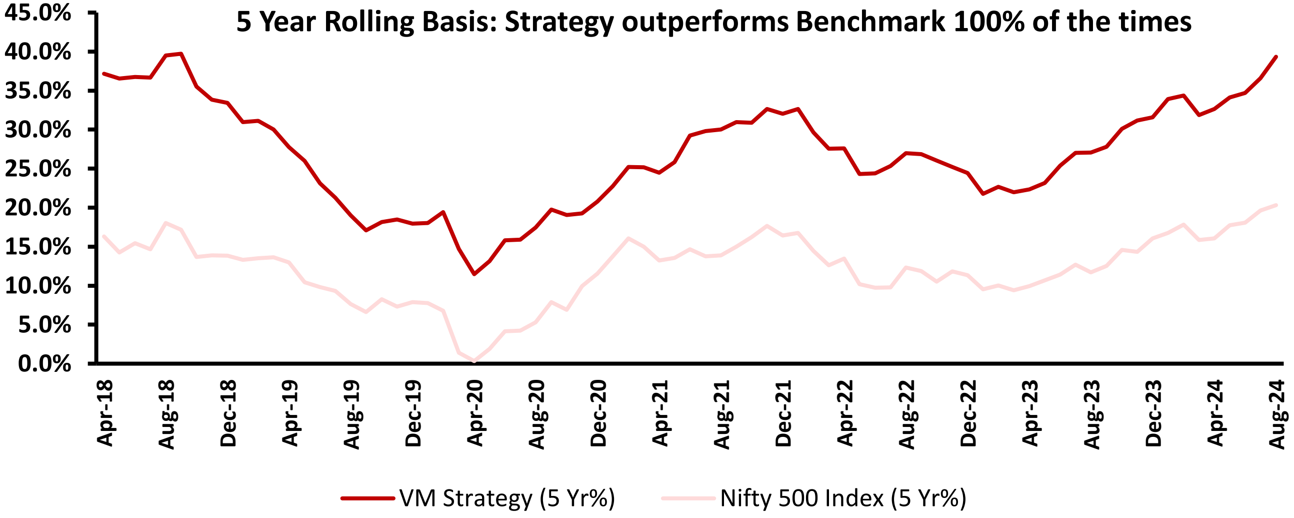
Strategy has managed to outperform the benchmark in all years except FY19

KEYNOTE

Rolling Performance

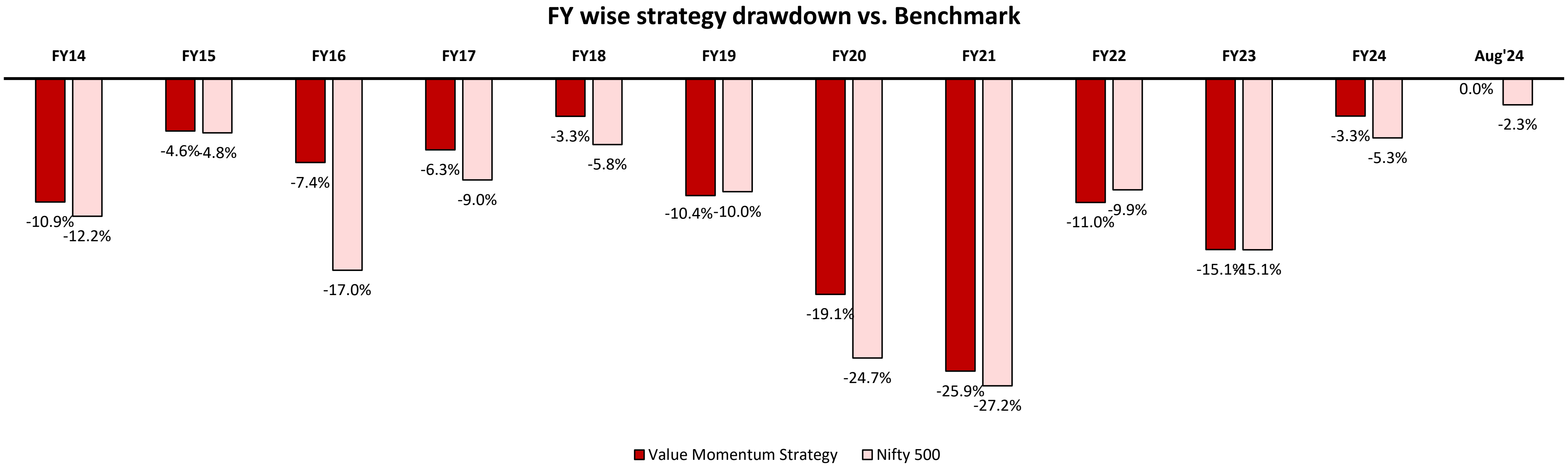


If you had invested in this strategy at any point in time, at the end of three years from your date of investment, you would have outperformed the market ~100% of the times.



If you had invested in this strategy at any point in time, at the end of five years from your date of investment, you would have outperformed the market 100% of the times.

VM Strategy Drawdown



Alpha	+1.3%	+0.2%	+9.5%	+2.7%	+2.5%	-0.3%	+5.6%	+1.3%	-1.1%	0.0%	+1.9%	+2.3%

Strategy has experienced lower drawdown than benchmark in all the years except FY19 (-0.3%) & FY22 (-1.1%).

KEYNOTE

Top Winners and Losers

Top 20 Losers

Sr. No.	Company Name	Buy Date	Exit Date	Abs Ret%
1.	Greenply Industries Ltd.	Jan-18	Jul-18	-44.1
2.	Suprajit Engineering Ltd.	Feb-20	Apr-20	-37.3
3.	Cochin Shipyard Ltd.	Jul-19	Mar-20	-36.6
4.	Eveready Industries India Ltd.	Apr-18	Jun-18	-33.8
5.	The Ramco Cements Ltd.	May-13	Dec-13	-31.8
6.	Vardhman Textiles Ltd.	Mar-20	May-20	-31.6
7.	Shankara Building Products Ltd.	Mar-20	Apr-20	-31.4
8.	K.P.R. Mill Ltd.	Nov-19	Jul-20	-31.1
9.	Cipla Ltd.	Aug-18	Sep-19	-27.4
10.	CIE Automotive India Ltd.	Feb-19	Sep-19	-26.1
11.	Minda Corporation Ltd.	Apr-16	Jan-17	-24.9
12.	Gujarat State Petronet Ltd.	Sep-21	Mar-22	-24.9
13.	Endurance Technologies Ltd.	Nov-21	Feb-22	-23.9
14.	Persistent Systems Ltd.	Mar-18	Feb-19	-23.8
15.	SIS Ltd.	Mar-22	Feb-23	-23.7
16.	Mahanagar Gas Ltd.	Feb-20	Mar-20	-23.3
17.	Bayer CropScience Ltd.	Aug-22	Apr-23	-23.2
18.	Greaves Cotton Ltd.	Sep-18	Jan-19	-23.1
19.	Gujarat State Petronet Ltd.	Apr-13	Jun-13	-22.8
20.	Bharat Electronics Ltd.	Jun-13	Jan-14	-22.7

Top 20 Winners

Sr. No.	Company Name	Buy Date	Exit Date	Abs Ret%
1.	JB Chemicals & Pharmaceuticals Ltd.	May-19	Aug-21	423.1
2.	Mphasis Ltd.	Mar-20	Oct-21	385.2
3.	Persistent Systems Ltd.	Nov-19	Aug-21	377.1
4.	Aarti Industries Ltd.	Jul-13	Sep-14	276.4
5.	Indraprastha Gas Ltd.	Nov-14	Oct-17	250.2
6.	Laurus Labs Ltd.	Apr-20	Sep-20	234
7.	eClerx Services Ltd.	Aug-20	Jul-22	197.4
8.	Welspun Living Ltd.	Mar-14	Oct-14	191.8
9.	Cyient Ltd.	Apr-13	Dec-15	186.4
10.	Aarti Industries Ltd.	May-16	Feb-19	177.8
11.	Balkrishna Industries Ltd.	Nov-13	Apr-15	161.8
12.	KSB Ltd.	May-13	Jun-14	155.1
13.	Ajanta Pharma Ltd.	Mar-23	Aug-24	154
14.	Zydus Lifesciences Ltd.	Feb-23	Open	149.4
15.	Bajaj Auto Ltd.	Jul-22	Open	149.1
16.	Lupin Ltd.	Jun-23	Open	148.5
17.	Jyothy Labs Ltd.	Jun-22	Oct-23	147.5
18.	KPIT Technologies Ltd.	Nov-20	Jul-21	139.2
19.	KEI Industries Ltd.	Apr-21	Jan-22	135.7
20.	Balkrishna Industries Ltd.	Oct-16	Dec-17	131.6

KEYNOTE

Latest Portfolio as of August 2024

Rank	Company Name	NSE Sector	Market Cap (Rs. Cr)	MF Holding	Altman Z Score	PE	EV EBITDA	EV Sales	Price to Book	Price to CFO	Momentum %	Beta
1	Sun Pharmaceutical Industries Ltd.	Healthcare	417,880	12.8	16.7	39.6	30.7	8.4	6.2	24.4	40%	0.43
2	Ipca Laboratories Ltd.	Healthcare	34,226	28.5	6.5	53.0	26.4	4.4	4.4	19.6	39%	0.47
3	Fortis Healthcare Ltd.	Healthcare	39,420	26.5	5.8	61.8	30.3	5.7	4.6	20.5	55%	0.48
4	Lupin Ltd.	Healthcare	94,575	16.2	8.3	41.8	22.8	4.7	6.6	17.1	69%	0.50
5	Bajaj Auto Ltd.	Automobile and Auto Components	272,189	5.4	18.8	34.0	29.1	5.9	9.4	23.0	110%	0.56
6	Bayer CropScience Ltd.	Chemicals	27,966	9.6	5.5	42.0	31.7	5.4	9.8	17.9	40%	0.57
7	Hero MotoCorp Ltd.	Automobile and Auto Components	101,439	13.8	9.3	24.9	17.3	2.5	5.7	13.5	86%	0.58
8	Jyothy Labs Ltd.	Fast Moving Consumer Goods	19,862	13.8	14.2	53.0	39.3	6.9	11.0	25.3	56%	0.58
9	Alkem Laboratories Ltd.	Healthcare	67,944	14.7	13.9	31.2	27.5	5.3	6.3	18.7	42%	0.62
10	Sun TV Network Ltd.	Media, Entertainment & Publication	32,043	7.2	32.5	16.9	10.9	6.6	3.5	8.6	48%	0.64
11	eClerx Services Ltd.	Services	11,446	20.2	17.0	22.1	13.9	3.6	6.7	12.2	49%	0.66
12	Aurobindo Pharma Ltd.	Healthcare	89,045	19.2	6.1	24.4	14.2	3.0	3.0	18.5	58%	0.68
13	Zydus Lifesciences Ltd.	Healthcare	117,780	7.2	11.6	28.1	20.4	6.0	5.3	19.9	85%	0.72
14	Aegis Logistics Ltd.	Oil, Gas & Consumable Fuels	26,337	6.7	6.3	45.0	27.7	4.1	5.9	26.0	138%	0.73
15	Quess Corp Ltd.	Services	10,158	9.1	5.4	29.5	14.2	0.5	3.7	10.0	51%	0.73
16	Endurance Technologies Ltd.	Automobile and Auto Components	34,920	8.6	10.2	48.4	24.9	3.2	7.0	18.2	57%	0.75
17	Eicher Motors Ltd.	Automobile and Auto Components	129,720	7.6	17.9	31.0	29.0	7.8	7.2	19.8	46%	0.76
18	Escorts Kubota Ltd.	Capital Goods	40,437	8.6	14.4	38.4	32.0	4.2	4.4	32.2	54%	0.80
19	Crompton Greaves Consumer Electricals Ltd.	Consumer Durables	27,576	42.3	7.7	58.3	36.4	3.7	8.0	19.8	44%	0.82
20	Coromandel International Ltd.	Chemicals	49,697	15.3	7.8	34.1	21.1	2.2	5.3	24.6	50%	0.84
21	Finolex Cables Ltd.	Capital Goods	22,602	10.7	25.4	30.7	37.3	4.2	5.2	27.3	58%	0.92
22	Redington Ltd.	Services	15,639	12.0	5.3	12.9	9.4	0.2	2.0	40.3	39%	0.92
23	Vardhman Textiles Ltd.	Textiles	14,187	15.1	5.8	19.3	13.1	1.5	1.6	4.3	62%	0.93
24	Minda Corporation Ltd.	Automobile and Auto Components	12,213	16.8	7.9	49.6	22.7	2.5	6.2	18.1	63%	0.95
25	Glenmark Pharmaceuticals Ltd.	Healthcare	42,080	10.9	5.3	78.1	33.7	3.8	4.3	24.3	77%	0.98
	Median		**34,920**	**12.8**	**8.3**	**34.1**	**26.4**	**4.2**	**5.7**	**19.8**	**55%**	**0.72**

Disclosures and Disclaimers

The following Disclosures are being made in compliance with the SEBI Research Analyst Regulations 2014 (herein after referred to as the Regulations).

Keynote Capitals Ltd. (KCL) is a SEBI Registered Research Analyst having registration no. INH000007997. KCL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Depository participant services & distribution of various financial products. Details of associate entities of Keynote Capitals Limited are available on the website at https://www.keynotecapitals.com/associate-entities/

KCL and its associate company(ies), their directors and Research Analyst and their relatives may; (a) from time to time, have a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein. (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies) or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of KCL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.

KCL and / or its affiliates do and seek to do business including investment banking with companies covered in its research reports. As a result, the recipients of this report should be aware that KCL may have a potential conflict of interest that may affect the objectivity of this report. Compensation of Research Analysts is not based on any specific merchant banking, investment banking or brokerage service transactions.

Details of pending Enquiry Proceedings of KCL are available on the website at https://www.keynotecapitals.com/pending-enquiry-proceedings/

A graph of daily closing prices of securities is available at www.nseindia.com, www.bseindia.com. Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of KCL or its associates maintains arm's length distance with Research Team as all the activities are segregated from KCL research activity and therefore it can have an independent view with regards to Subject Company for which Research Team have expressed their views.

Regional Disclosures (outside India)

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject KCL & its group companies to registration or licensing requirements within such jurisdictions. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction.

Specific Disclosure of Interest statement for subjected Scrip in this document:

Financial Interest of Research Entity [KCL] and its associates; Research Analyst and its Relatives	NO
Any other material conflict of interest at the time of publishing the research report by Research Entity [KCL] and its associates; Research Analyst and its Relatives	NO
Receipt of compensation by KCL or its Associate Companies from the subject company covered for in the last twelve months; Managing/co-managing public offering of securities in the last twelve months; Receipt of compensation towards Investment banking/merchant banking/brokerage services in the last twelve months; Products or services other than those above in connection with research report in the last twelve months; Compensation or other benefits from the subject company or third party in connection with the research report in the last twelve months.	NO
Whether covering analyst has served as an officer, director or employee of the subject company covered	NO
Whether the KCL and its associates has been engaged in market making activity of the Subject Company	NO
Whether the Research Entity [KCL] and its associates; Research Analyst and its Relatives, have actual/beneficial ownership of 1% or more securities of the subject company, at the end of the month immediately preceding the date of publication of the research report or date of the public appearance.	NO

The associates of KCL may have:

-Financial interest in the subject company
-Actual/beneficial ownership of 1% or more securities in the subject company
-Received compensation/other benefits from the subject company in the past 12 months
-Other potential conflicts of interests with respect to any recommendation and other related information and opinions.; however, the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of KCL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.
-Acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
-Be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies)
-Received compensation from the subject company in the past 12 months for investment banking / merchant banking / brokerage services or from other than said services.

The associates of KCL has not received any compensation or other benefits from third party in connection with the research report.

Above disclosures includes beneficial holdings lying in demat account of KCL which are opened for proprietary investments only. While calculating beneficial holdings, it does not consider demat accounts which are opened in name of KCL for other purposes (i.e. holding client securities, collaterals, error trades etc.). KCL also earns DP income from clients which are not considered in above disclosures.

Analyst Certification

The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issues, and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report.

Terms & Conditions:

This report has been prepared by KCL and is meant for sole use by the recipient and not for circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of KCL. The report is based on the facts, figures and information that are believed to be true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other sources believed to be reliable. Such information has not been independently verified and no guaranty, representation of warranty, express or implied, is made as to its accuracy, completeness or correctness. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. KCL will not treat recipients as customers by virtue of their receiving this report

Disclaimer:

The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult its own advisors to determine the merits and risks of such an investment. The investment discussed or views expressed may not be suitable for all investors. Certain transactions -including those involving futures, options, another derivative product as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. No representation or warranty, express or implied, is made as to the accuracy, completeness or fairness of the information and opinions contained in this document. The Disclosures of Interest Statement incorporated in this document is provided solely to enhance the transparency and should not be treated as endorsement of the views expressed in the report. This information is subject to change without any prior notice. The Company reserves the right to make modifications and alternations to this statement as may be required from time to time without any prior approval. KCL, its associates, their directors and the employees may from time to time, effect or have affected an own account transaction in, or deal as principal or agent in or for the securities mentioned in this document. KCL, its associates, their directors and the employees may from time to time invest in any discretionary PMS/AIF Fund and those respective PMS/AIF Funds may affect or have effected any transaction in for the securities mentioned in this document. They may perform or seek to perform investment banking or other services for, or solicit investment banking or other business from, any company referred to in this report. Each of these entities functions as a separate, distinct and independent of each other. The recipient should take this into account before interpreting the document. This report has been prepared on the basis of information that is already available in publicly accessible media or developed through analysis of KCL. The views expressed are those of the analyst, and the Company may or may not subscribe to all the views expressed therein.

KEYNOTE

Disclaimer:

This document is being supplied to you solely for your information and may not be reproduced, redistributed or passed on, directly or indirectly, to any other person or published, copied, in whole or in part, for any purpose. This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject KCL to any registration or licensing requirement within such jurisdiction.

The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, not its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of the information. The person accessing this information specifically agrees to exempt KCL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold KCL or any of its affiliates or employees responsible for any such misuse and further agrees to hold KCL or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.

Keynote Capitals Limited (CIN: U67120MH1995PLC088172)

Compliance Officer: Mr. Jairaj Nair; Tel: 022-68266000; email id: jairaj@keynoteindia.net

Registered Office: 9th Floor, The Ruby, Senapati Bapat Marg, Dadar West, Mumbai – 400028, Maharashtra. Tel: 022 – 68266000.

SEBI Regn. Nos.: BSE / NSE (CASH / F&O / CD): INZ000241530; DP: CDSL- IN-DP-238-2016; Research Analyst: INH000007997

For any complaints email at kcl@keynoteindia.net

General Disclaimer: Client should read the Risk Disclosure Document issued by SEBI & relevant exchanges and the T&C on www.keynotecapitals.com; Investment in securities market are subject to market risks, read all the related documents carefully before investing.

DEVIN PRAMOD JOSHI

Digitally signed by DEVIN PRAMOD JOSHI
Date: 2024.08.30 14:40:06 +05'30'