JM Financial

AlphaHedge
Alpha Generation Strategy – Quant Model Portfolio
July 2026 Portfolio

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Portfolio Rebalance Date: **August 03, 2026**

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India-focused Quant Model Portfolio

- Our AlphaHedge strategy offers consistency and reproducibility of a systematic framework
- Captures alpha in undervalued low-volatile stocks
- Addresses limitations of a traditional quant model by incorporating Garman-Klass volatility score
- Improves predictive accuracy in low-volatile conditions

Constituents in Nifty 500 Index
500
Basket of long-only
50
Factors
4
Monthly rebalancing
1

Our Quant team has been building **AlphaHedge,** a systematic equity Quant Model Portfolio (QMP) designed specifically for Indian markets. We have built it from scratch keeping in mind the Indian market micro-structure and Indian fund mandates. Indian equity markets have matured considerably and now offer better price discovery, deeper liquidity, expanded index universes and meaningfully improved data availability. The conditions for systematic investing based on data-driven quant models have arguably never been stronger. Yet the buy-side remains largely discretionary. Our AlphaHedge QMP is an attempt to bring the consistency and reproducibility of a systematic framework to Indian equity portfolios.

At its heart, our model is a data-driven quantitative strategy engineered to capture alpha in undervalued low-volatile stocks. At the same time, it addresses the limitations of a traditional quant model by incorporating Garman-Klass volatility score to improve predictive accuracy in low-volatile conditions. Extensive back-testing on data spanning the last five years – from Jan'21 to Jun'26 – demonstrates a cumulative and consistent return.

Methodology: What Street does…

Street applies the laws governing data science to create a quant-based model portfolio from indices such as Nifty 50, 200, 250 and 500. Quant analysts prepare the dataset and analyse it using multi-factor screens and various statistical tools. Even so, given a lack of economic and fundamental rationale in such quant models used heavily on Street, their respective scores allow for overfitting of data. This, in effect, renders quant models useless in the real-world application, i.e. on unseen data during live market.

…and what we argue

Our model rests on four signal pillars: liquidity (lower is better), volatility (lower is better), earnings yield (higher is better) and momentum (higher is better). After filtering/screening each stock for liquidity, volatility, earnings yield and momentum in the Nifty 500, we derive a composite score.

Weights assigned to portfolio constituents are based on the inverse of the volatility score. Insights derived thereof are intended to guide quant funds in restructuring their portfolios with a monthly rebalancing opportunity.

Portfolio metrics: Four factors and composite score

Our AlphaHedge QMP throws up a set of top 50 stocks with their respective scores based on:

- **Liquidity:** Identifies the least liquid stocks in last one year trading cycle.
- **Value:** Filters the stocks based on high earnings yield ratio.
- **Volatility:** Truncates dataset based on less volatile stocks in last one year on the scale of Garman-Klass Volatility Index.
- **Momentum:** Factors in higher 12-1 momentum score to capture the growing stocks discarding the recent month mean-reversion issue.

All the four factors have been calculated using a 12-month lookback window, i.e. the analysis period to create the portfolio is a rolling one-year window. Scores are cross-sectionally ranked within the universes, winsorised at the 1st and 99th percentile to control for outliers and converted to composite Z-scores within universes. That last step matters, with sector-neutral scoring, you end up running a true stock-selection model rather than an inadvertent sector bet.

The model is distinct as it aggregates the abovementioned metrics into an actionable single score. The top 50 stocks it throws up are selected based on the final scores of each constituent generated by the Garman-Klass Volatility Estimator. The estimator provides a more precise measure of price movement than traditional methods by incorporating a security's opening, closing, high and low prices into its calculation. For context, the Garman-Klass Volatility Estimator is 7.4 times more efficient than the basic close-to-close estimator.

Moreover, our model yields a sector-agnostic portfolio and investment strategy, and can be used for any specific industry or sector. Weights assigned to its individual constituents are based on the inverse of the GK volatility score.

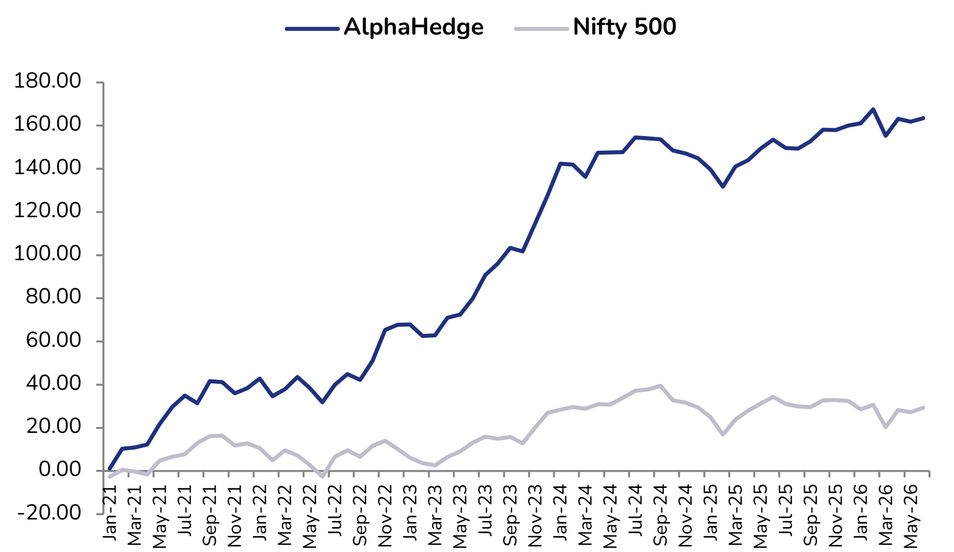
We shall rebalance our portfolio once a month, i.e. on 1st working day of every month while monthly return will be calculated on the last working day of every month benchmarked against Nifty 500 Index.

We've built this to work as a core portfolio overlay for equity MFs or as a research and benchmarking tool for quant teams that want an independent systematic view on the Indian market. The bespoke tier allows for custom factor weights, custom universe definitions, and custom constraints.

We've tried to be as conservative as possible. All fundamental data is point-in-time, lags 90 days post-quarter-end to avoid a look-ahead bias. We validated the model via walk-forward cross-validation across 12-month rolling windows.

Factor cramming is a real risk, particularly as systematic strategies grow in Indian markets. The regime model reduces, but doesn't eliminate, drawdowns. And back-tested numbers, however carefully constructed, may not be the same as live performance.

Exhibit 1: Cumulative performance since Jan'21



Source: Bloomberg, JM Financial

AlphaHedge QMP demonstrates strong cumulative growth, outperforming the benchmark by almost 5 times over the trailing five-year period

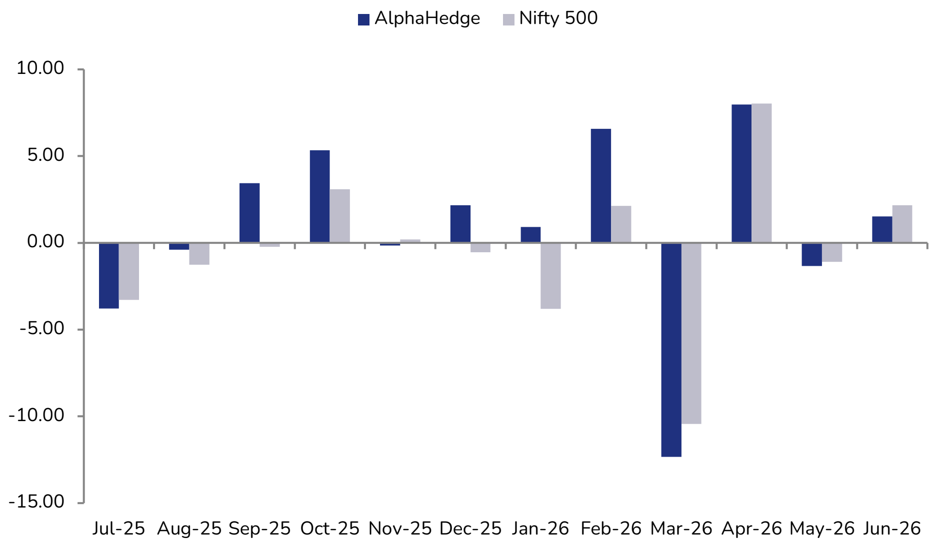
Exhibit 2: Performance in five years

	2021	2022	2023	2024	2025	2026	Total
Outperform	9	7	10	6	8	2	42
Underperform	3	5	2	6	4	4	24
Total	12	12	12	12	12	6	66

Source: JM Financial, Bloomberg

Our AlphaHedge portfolio has outperformed its target benchmark Nifty 500 index in 42 out of 66 months in last five years and it has experienced underperformance in 24 months, primarily due to temporary market headwinds.

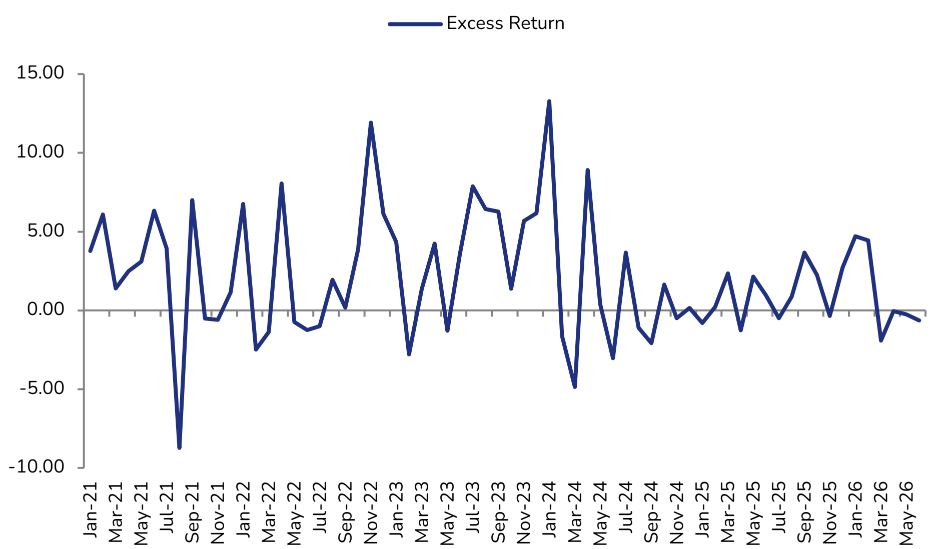
Exhibit 3: Performance in last year



Source: Bloomberg, JM Financial

Relative performance of our model in terms of absolute return in last one year against the benchmark

Exhibit 4: Performance deviation since Jan'21



Source: Bloomberg, JM Financial

Relative performance of our model in terms of excess return in last five years against the benchmark

Exhibit 5: Our AlphaHedge Quant Model Portfolio with constituents and their respective weights for July'26

NSE Symbol	Ticker	Weight	NSE Symbol	Ticker	Weight
INDUSINDBK	IIB IN Equity	0.03	GICRE	GICRE IN Equity	0.02
CASTROLIND	CSTRL IN Equity	0.03	BPCL	BPCL IN Equity	0.02
LICI	LICI IN Equity	0.03	PFC	POWF IN Equity	0.02
AXISBANK	AXSB IN Equity	0.03	NMDC	NMDC IN Equity	0.02
SBIN	SBIN IN Equity	0.03	BANKINDIA	BOI IN Equity	0.02
NTPC	NTPC IN Equity	0.03	CANBK	CBK IN Equity	0.02
ACC	ACC IN Equity	0.02	VEDL	VEDL IN Equity	0.02
POWERGRID	PWGR IN Equity	0.02	UCOBANK	UCO IN Equity	0.02
BAJAJHFL	BAJAJHFL IN Equity	0.02	INDIANB	INBK IN Equity	0.02
COALINDIA	COAL IN Equity	0.02	CHAMBLFERT	CHMB IN Equity	0.02
IOC	IOCL IN Equity	0.02	IRB	IRB IN Equity	0.02
LICHSGFIN	LICHF IN Equity	0.02	UNIONBANK	UNBK IN Equity	0.02
ONGC	ONGC IN Equity	0.02	HINDPETRO	HPCL IN Equity	0.02
GAIL	GAIL IN Equity	0.02	KARURVYSYA	KVB IN Equity	0.02
FEDERALBNK	FB IN Equity	0.02	MAHABANK	BOMH IN Equity	0.02
BANKBARODA	BOB IN Equity	0.02	TRIDENT	TRID IN Equity	0.02
NHPC	NHPC IN Equity	0.02	J&KBANK	JKBK IN Equity	0.02
PNB	PNB IN Equity	0.02	NATIONALUM	NACL IN Equity	0.02
YESBANK	YES IN Equity	0.02	WELCORP	WLCO IN Equity	0.02
RECLTD	RECL IN Equity	0.02	GESHIP	GESCO IN Equity	0.01
NIVABUPA	NIVABUPA IN Equity	0.02	SCI	SCI IN Equity	0.01
PETRONET	PLNG IN Equity	0.02	ACUTAAS	ACUTAAS IN Equity	0.01
HINDALCO	HNDL IN Equity	0.02	JINDALSAW	JSAW IN Equity	0.01
CENTRALBK	CBOI IN Equity	0.02	KIRLOSENG	KOEL IN Equity	0.01
IOB	IOB IN Equity	0.02	HFCL	HMFC IN Equity	0.01

Source: Bloomberg, JM Financial

Annexure 1

The Nifty 500 Index comprises the 500 largest and most liquid companies listed on the National Stock Exchange of India Limited (NSE). The index represents 92–96% of the total free-float market capitalisation of the NSE.

Universe Construction

Eligibility criteria

- The stock must be a constituent of the Nifty 500 Index as of the portfolio creation date.
- The stock must have a minimum 12 months of continuous price and volume historical data available in the dataset.
- The stock must have available financial statement data – earnings, P/E ratio, balance sheet, income statement, and cash flow statement for the most recently completed financial year.
- The stock must not be subject to trading suspension, circuit breaker restrictions or any regulatory action as on the portfolio construction date.
- The stock must not be in the process of delisting, merger or acquisition at the time of portfolio creation.

Data requirements

- **Market data:** Daily open, low, high, close prices and traded volume.
- **Income statement:** Trailing twelve months (TTM) earnings yield, inverse of P/E ratio.

Factor Construction

This section discusses the complete construction methodology for each of the four factors incorporated in the composite scoring model.

Factor 1: Liquidity

The liquidity factor in the present model captures the low liquidity premium by identifying stocks with relatively lower trading activity, which are expected to outperform highly liquid stocks on a risk-adjusted basis over portfolio lifetime. In the composite score framework, the liquidity factor is inverted so that a higher composite score corresponds to a less liquid name, consistent with the expected positive return contribution.

Factor 2: Garman-Klass Volatility Estimator

The conventional close-to-close volatility estimator uses only end-of-day prices, discarding information contained in intraday price movements. The Garman-Klass estimator utilises the full open, high, and close prices and their sequences to create a statistically more efficient estimate of the true underlying volatility of a stock's log-price process.

A lower Garman-Klass volatility score indicates a less volatile stock, which is expected to deliver superior risk-adjusted returns. The volatility factor is therefore inversed in the final score to capture low volatile stocks in the portfolio.

Factor 3: Earnings Yield

Earnings yield is the ratio of company's earnings to its market capitalisation; it is the inverse of the price-to-earnings (P/E) ratio; and represents the rate at which a company generates earnings relative to what investors pay for those earnings in the market.

The earnings yield factor captures the value premium; for cheap stocks to outperform expensive stocks over medium to long-term investment horizons. The earnings yield factor is used directly (without inversion) in the final composite score.

Factor 4: Momentum

Price momentum (12-1 month momentum factor) is the tendency of stocks that have performed well in the recent past to continue to outperform; similarly, the stocks that have performed poorly have a tendency to continue to underperform. The most recent month (M-1) has been excluded from the factor calculation to avoid a short-term reversal effect at the one-month horizon. Stocks that perform strongly in the most recent month tend to mean-revert and contaminate the momentum factor if the recent month is included in the factor creation. The momentum factor is used directly (without inversion) in the final composite score.

The final composite score for each eligible stock is constructed as the equal-weighted linear combination of the four (inverse adjusted) cross-sectionally normalised factor scores.

The Four-Factor portfolio consists of the top 50 stocks ranked by composite score. Each stock receives a capital allocation of the normalised Garman-Klass volatility scores.

The portfolio is rebalanced on the first trading day of every calendar month, and all factors will be re-calculated using data available as on the close of the last trading day of the preceding month.

Annexure 2

Transaction cost framework

Transaction costs reduce the gross alpha generated by our Four-Factor model. For a conservative back-testing, an all-in transaction cost estimate of 25-40bps (0.25–0.40%) per round trip trade is applied. This estimate includes brokerage, spread costs and market impact for Nifty 500 universe.

Risks, assumptions, and limitations

Factor cyclicity

Each factor in the model is subject to periods of underperformance that may persist for months. No single factor generates positive returns in every market environment, and hence a composite multi-factor approach is designed to smoothen the individual factor capacity.

Regime dependence

The strategy's performance is highly sensitive to the prevailing market regime. In a strongly trending bull market, the model may benefit from momentum, but suffer from the low volatility tilt.

Data quality issues

The accuracy of factor calculations depends significantly on the quality of the underlying data. Common data quality issues arise in the India equity market due to restatement of financial statements, delays in filing of quarterly results, inconsistencies in corporate action adjustments across data vendors, etc.

Model decay

Factor premia tend to decay over time as they become more widely known and more capital is allocated by investors to harvest the returns they may generate.

Crowding risk

If multiple investors simultaneously run the similar factor strategy using the same Nifty 500 universe, then the factor-favoured stocks will become crowded. Such positions are subject to sharp and correlated drawdowns.

Capacity limitations

The strategy's capacity is limited by market liquidity of the selected/screened stocks; stocks that score poorly on the composite factor are often less liquid. Position sizes must remain within the 5% average daily volume guideline.

Transaction costs

High turnover strategies are particularly sensitive to cost assumptions. The 25–40bps per trade cost is a reasonable estimation for the Nifty 500 universe; however, actual costs for less liquid stocks in the universe may be significantly higher.

Annexure 3

Disclosures and factsheet

JM Financial India Model Portfolio is a model portfolio of 50 stocks maintained by the Quant & Alternative (Quant) team of JM Financial Institutional Securities Limited. The purpose of the model is to guide investors on our stock preferences and review the Quant team's recommendations on a regular basis. Stock selection within the universe for the portfolio represents the house view on top picks by the team's Quant analyst. The portfolio assigns weights across various stocks selected by the Quant team of JM Financial Institutional Securities Limited.

- **Universe:** Nifty 500 Index constituents
- **Methodology:** Our portfolio philosophy is based on bottom-up analysis of stocks on the following factors: liquidity, volatility, earnings yield and momentum. Stock selection within the universe is based on the statistical and mathematical methods.
- **Labelling:** The portfolio is labelled as "AlphaHedge Quant Model Portfolio" and includes all stocks within the Nifty 500 universe. The portfolio comprises 50 stocks.
- **Launch date:** 3rd July'26
- **Investment horizon:** All the recommendations of stocks are for a 1-month horizon.
- **Frequency of portfolio review and update:** The portfolio shall be reviewed and updated monthly. In certain cases, there can be no changes to the portfolio for consecutive periods.
- **Risk disclosures:** The portfolio carries general system and market risks such as volatility and lack of liquidity, and cannot mitigate against market conditions, unforeseen news announcements and rumours.
- **Benchmarking:** Weights by stocks in the portfolio are measured against the individual stock's volatility in the Nifty 500 universe. The weights are recalculated on every update.

Market data source: Bloomberg, JM Financial

APPENDIX I

Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

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The portfolio recommends long positions to benefit from rising prices of securities. A long-only rating for our quant model portfolio indicates that the model exclusively selects securities to buy and hold, expecting their prices to rise. The model systematically over-weights the securities within a benchmark index viz., Nifty 500 to tilt towards factors mentioned in the model.

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