VecViz Opportunity At Risk (OaR) Performance Report

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1 July 2025

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Introduction

Opportunity at Risk, or OaR, as discussed in this report, is an estimate of the maximum amount an investor could gain by being long a ticker at the end of a specified forward time horizon, at a specified level of probability. An accurate OaR measure forecasts gains that are exceeded by actual gains in one minus the specified probability percent of all observations.

The aim of this report is to inform a broad spectrum of readers of the behavior and accuracy of VecViz's OaR estimates, and how they might influence portfolio performance. To do so, we rely upon both comparison to the well-known and still widely used "Sigma" approach to volatility and on well-established statistical tests from the academic literature. Please see the "Important Considerations" section of this report for disclosure of at least some of the many ways this report likely falls short of its objective and other important disclosures.

Evaluation of OaR Estimates

The metrics used in this report to evaluate OaR performance via comparison to Sigma include the mean absolute error (MAE) of breakage rates to the specified probability, Return on OaR Based Capital (ROLOBC), and the alpha of Vector Model ROLOBC to underlying ticker returns. Substantial supporting detail in terms of influential tickers and model dates are provided for each metric and model. The results of this comparative analysis are summarized in the Vector Model OaR "Report Card" section of this report.

We supplement this comparative analysis with two additional tests of Vector Model OaR that are well established in the quantitative finance literature (though more so with regard to Value at Risk, or VaR, than with regard to OaR): the Kupiec Test of breakage consistency with the specified probability and the Christoferson test of breakage independence. The results of these tests are also summarized in the Report Card section.

OaR Breakage Ratios

OaR Breakage refers to forward returns being above the OaR estimate for the corresponding horizon date. Because the Vector Model delivers ticker level probability analytics, breakage is measured at the individual ticker-model date level. and we aggregate it in various ways for evaluation purposes.

For example, 100 tickers tracked over 10 days represents 1,000 ticker-model dates. An ideal estimate of 95% ticker level OaR would generate 50 breaks. Therefore, we compare Vector Model OaR breakage to Sigma's on the basis of MAE to the ideal number of breaks. The model with the smaller MAE is deemed preferable with regard to OaR breakage proximity to target.

However, an ideal OaR estimate wouldn't have all those breaks concentrated in just a couple days or just a few tickers. The breaks generated by an ideal OaR estimate would also be independent with respect to model dates and tickers. Therefore, we also compare the Vector Model's OaR breakage to Sigma's on the basis of variability over time (on average across tickers) and across tickers (on average across dates).

Sigma is known to have some significant shortcomings in measuring the volatility of security price returns. Thus, we supplement the comparison of Vector Model breakage rate MAE to Sigma's MAE with the aforementioned Kupiec test, which tells us whether Vector Model OaR breakage is consistent with targeted breakage with a high degree of confidence (95%). Further, we supplement the comparison of Vector Model breakage variability across model dates with the Christoferson test of date independence.

ROLOBC and its drivers

The metric "ROLOBC" requires some explanation. Return on Long OaR Based Capital, or ROLOBC, attempts to capture the impact on investor returns of using the Vector Model OaR instead of Sigma OaR to size positions. OaR based position weighting might be appropriate for risk tolerant investors who are seeking to maximize returns. Weighting exposures proportionate to their estimated price upside, subject to caps to assure some minimum level of diversification, is consistent with the objectives of such investors, and that is what ROLOBC presumes.

ROLOBC assumes that Sigma earns the return of the underlying ticker and the Vector Model earns a return proportionate to that, where the proportion is the ratio of Vector OaR / Sigma OaR, subject to a cap and floor (we use 300% and 33.33%). So, for example, if Sigma said OaR for ticker ABC was 2.00% and the Vector Model said OaR for ABC was 4.00%, the Vector Model ROLOBC would be double Sigma's. Likewise, if the Vector Model said OaR for ABC was 1.00% the Vector Model's ROLOBC would be half Sigma's. No cost of borrowing or crediting for uninvested funds is incorporated.

For the Vector Model ROLOBC to be higher than Sigma's it signifies that either (1) Vector Model OaR exceeded Sigma's OaR (to the upside) and the ticker traded higher, or (2) Sigma OaR exceeded the Vector Model's OaR (to the upside) and the ticker traded lower.

Note that we do not yet present ROLOBC metrics on VecViz.com. Instead we present ROOBC (Return on OaR Based Capital), which views OaR as a risk metric for short sellers. ROOBC is highly correlated to ROLOBC, but has opposing directionality (if ROOBC is positive ROLOBC is negative and vice versa). Upon further reflection, we have decided that ROLOBC is a way to discuss how OaR can influence investment returns in a way that is relevant to a broader audience. We hope to replace reference to ROOBC on our website to ROLOBC later this year.

Addressing The Tradeoff Between OaR Breakage and ROLOBC

All else equal, assuming a positive drift higher in average asset prices over time, the model with higher average OaR levels will have lower breakage rates and also higher ROLOBC, and vice versa. Thus, relative ROLOBC must be considered in the context of relative breakage rate MAE. In the Report Card we include a metric that directly addresses this concern: comparison of Vector Model ROLOBC to Sigma ROLOBC "Adj. for Avg. VM-Sigma OaR Diff." (adjusted for average Vector Model - Sigma OaR differentials). Specifically, we multiply average aggregate Sigma ROLOBC by the ratio of average aggregate Vector Model OaR to average aggregate Sigma OaR. This multiplication almost entirely eliminates the influence of systematic OaR differentials on the relationship between Vector Model and Sigma ROLOBC. The bias that remains reflects only the aforementioned capping and flooring when calculating Vector Model ROLOBC.

We also provide a more elegant, though less transparent metric that addresses this concern - the alpha of Vector Model ROLOBC to Sigma ROLOBC (i.e., the underlying, equally weighted ticker returns). "Alpha", as discussed in this report, is the intercept of an ordinary least squares regression of Vector Model ROLOBC on the underlying ticker forward returns for corresponding TMD's. It represents the expected Vector Model ROLOBC when Sigma ROLOBC, i.e., the underlying ticker return, is 0.00%.

Determining the drivers of ROLOBC alpha

A ROLOBC Alpha greater than 0.00 across TMD's indicates that Vector Model OaR moved favorably from a market timing and / or ticker selection perspective. We present that statistic alongside an average ROLOBC alpha calculated at the single ticker level across dates. If this second alpha is >0 it indicates that market timing added to the overall alpha, and vice versa. If this second alpha exceeds the overall alpha then it indicates that ticker selection detracted from alpha.

ROLOBC Beta

ROLOBC Beta represents the expected sensitivity of Vector Model ROLOBC to Sigma ROLOBC, i.e., the underlying ticker return. It is the slope of the aforementioned ordinary least squares regression of Vector Model ROLOBC on Sigma ROLOBC. Like outright ROLOBC, it must be considered in the context of Breakage MAE, and like alpha it can be bifurcated to reveal additional insight.

We encourage readers to consider the Vector Model ROLOBC beta to Sigma ROLOBC in the context of how well each model's OaR breakage rates compare to targeted levels. For example, if the Sigma model OaR breakage is well above target and the Vector Model's OaR breakage is close to target, then Vector Model OaR levels are likely higher than Sigma's and the beta of Vector Model ROLOBC to Sigma ROLOBC should be expected to be > 1.00.

A ROLOBC Beta greater than 1.00 across TMD's indicates that Vector Model OaR was higher than Sigma's for more volatile dates and / or tickers. We also present an average Beta alpha calculated at the single ticker level across dates. If this second beta is >1.00 it indicates that Vector Model OaR was higher than Sigma OAR on more volatile days. If this second beta is less than the overall beta then it indicates that Vector Model OaR tended to be less elevated with respect to more volatile tickers than with respect to more volatile dates.

Vector Model Input and Calculation Details

The Vector Model uses systematic price channel identification and scoring in conjunction with machine learning to provide investors with volatility forecasts that reflect the asymmetric, jumpy, clustering, and price dependent behavior of realized and option implied volatility in the financial markets.

The sole input to Vector Model and the Sigma Model out of sample OaR analytics are daily closing prices obtained from QuoteMedia.

The Vector Model was trained upon ~ 60,000 ticker model dates (TMD's) representing ~550 tickers (including equities, currencies, and commodities) and ~ 120 model dates spanning from March 9, 2002 to February 3, 2021. The Out of Sample period starts on 1/31/2022, nearly a full one year from the last model date included in the training data. All OaR estimates discussed in this report are for model dates beyond January 31, 2022, making them fully out of sample.

This report includes Vector Model and Sigma model results for ~150 tickers. Only about twenty of these tickers were included in the Vector Model training data set discussed above. These tickers were selected using the following criteria at the time of selection: Top and Bottom 25 S&P 500 performers, Largest 25 publicly traded issuers in the LQD and HYG etf's, constituents of the Metals and Pharmaceuticals sector within the LQD and HYG etf's, and any other tickers that at the time drew significant financial media attention (Mag 7, meme-related stocks, bitcoin related stocks). We also included several major equity and debt-oriented ETF's. The complete Vector Model OaR coverage universe discussed in this report includes the following tickers:

AA, AAP, AAPL, ABBV, ACGL, ADBE, AMAT, AMC, AMD, AMGN, AMZN, AVGO, AZN, AZO, BA, BAC, BALL, BBY, BHC, BHP, BIIB, BMY, BUD, BXP, CAH, CCL, CDNS, CHTR, CITI, CLF, CMA, CMCSA, CMG, CNC, COST, CPRT, CSCO, CSTM, CTLT, CVS, CYH, CZR, DHI, ELAN, EMB, ETRN, EXPE, FCX, FIS, FITB, FRA, FRCB, FSUGY, GBTC, GE, GILD, GLD, GME, GNRC, GOLD, GOOGL, GS, GSK, GT, GWW, HCA, HD, HLT, HON, HSBC, HYG, IEP, INTC, INTU, IRM, ISRG, JAZZ, JPM, KALU, KEY, KHC, LEN, LLY, LNC, LQD, LUMN, LVS, LW, META, MNST, MOS, MRK, MS, MSFT, MSI, MSTR,

MU, MUB, NAVI, NEM, NFLX, NVDA, NVS, NWL, ON, ORCL, ORLY, OXY, PCG, PEP, PHM, POST, PRGO, PWR, QCOM, QQQ, RIO, SBNY, SBUX, SIVBQ, SLV, SNY, SPY, T, TDG, TEVA, TFC, THC, TLT, TMUS, TRGP, TSLA, TXN, UAA, UNH, USB, VCSH, VFC, VICI, VNO, VST, VZ, WDC, WFC, WRK, WYNN, X, XOM, ZION, ZTS.

The Vector Model is described further in the FAQ and Blog of vecviz.com.

Sigma Details

The core of Sigma, as presented alongside Vector Model output by VecViz, is the standard deviation of price-based returns that very likely gets discussed in any introductory book on risk or portfolio management. This is the same definition of volatility that is utilized in the Black Scholes option pricing formula.

Sigma's flaws as an estimate of forward volatility are well documented. Nevertheless, it remains perhaps the most popular metric for "risk" when it comes to investments, likely because of its simplicity and familiarity.

We present Sigma based on daily logarithmic price returns (akin to % changes in price), and a lookback period of two years. To enhance Sigma's accuracy, we apply a 6-month half-life rate of decay to the weightings applied to the daily returns used to calculate Sigma. This weighting scheme causes the most recent 6-month period to be weighted 8x the least recent 6-month period in the 2 year look back window.

Sigma is converted to probabilities by applying multipliers associated with the standard normal (i.e. Gaussian) distribution with a mean of 0 and sigma of 1.00. Thus, 95% OaR is assumed to be -1.645 sigma's lower than the current price and 99% OaR is presumed to be -2.326 sigma's lower than the current price.

Sigma based probability percentiles for longer time horizons are obtained by multiplying Sigma calculated from daily closing prices by the square root of the number of trading days in the given horizon. In doing so, we are assuming daily returns are independent and identically distributed. So, for example, the multiplier that converts daily horizon sigma to 1 year horizon sigma is the square root of 252 (~15.9).

All calculations for Sigma are based on the same pricing data obtained from QuoteMedia data used to calculate Vector Model OaR.

All Sigma estimates discussed in this report are for dates beyond January 31, 2022, the end of the training period for the Vector Model.

Using this report

This report is ~200 pages long. Some tips to help you navigate: 1) Clicking on the page headings in the Table of Contents will instantly take you to the corresponding page.
2) Use Ctrl-F to search for tickers of interest, to see what Top/Bottom contributor lists they land on, and for what horizons 3) Click Ctrl-Home to return to the Table of Contents

Important considerations about the analytics and performance metrics presented in this report:

1) Past performance is no guarantee of future results. None of the content in this report is investment advice or an offer to buy or sell securities. VecViz is not a SEC investment advisor or broker-dealer. The staff of VecViz actively transacts in securities tied to many of the tickers discussed in this report.
   See VecViz's Terms and Conditions for more context and detail at https://vecviz.com/terms-and-conditions/

2) Read ""Let me warn you…" of the limitations of VecViz's Analytics.", a blog entry on vecviz.com (https://vecviz.com/let-me-warn-you-of-the-limitations-of-vecvizs-analytics/)

3) There are many volatility models that the Vector Model could be compared to beyond Sigma. Thus, even if this report causes you to conclude that the Vector Model's OaR outperforms Sigma OaR, you should not necessarily conclude that Vector Model OaR is the best volatility model for your purposes. See the discussion of some of the other types of volatility models in this blog for more detail: https://vecviz.com/an-llms-comparison-of-vecviz-to-established-vol-models/

4) All breakage rate and ROLOBC performance statistics are as of the end of the horizon only. All interim price movement is ignored. In other words, a stock with a 10d OaR of -15% may have declined 99% the day after the OaR estimate of -15% was calculated, but if it reverts to being only down 14.99% on the 10th day then no breakage occurred as calculated in this report, and its ROLOBC performance will be based on a -14.99% price return.

5) Clearly, all horizons > 1d overlap when considered on a daily basis (except for those utilized in the Kupiec and Christoferson tests). Please note that the volatility of overlapping periodic returns is understated, because each observation shares return experience with other observations for such time horizons.
   Thus, we advise against considering any perceived volatility or volatility related metrics for multi-day horizons in isolation,, including p-values for alpha and beta statistics. However, we do believe that their use is valid for comparing the Vector Model to Sigma, whose multi-day horizon OaR breakage and ROLOBC returns are calculated similarly.

6) We are not considering transaction costs. The turnover and therefore transaction costs experienced by Vector Model ROLOBC based investors resulting in the change in the ratio between Vector Model and Sigma OaR is completely ignored.

7) We are not incorporating any financing charges or margin-related costs for implied "levered" ROLOBC positions.

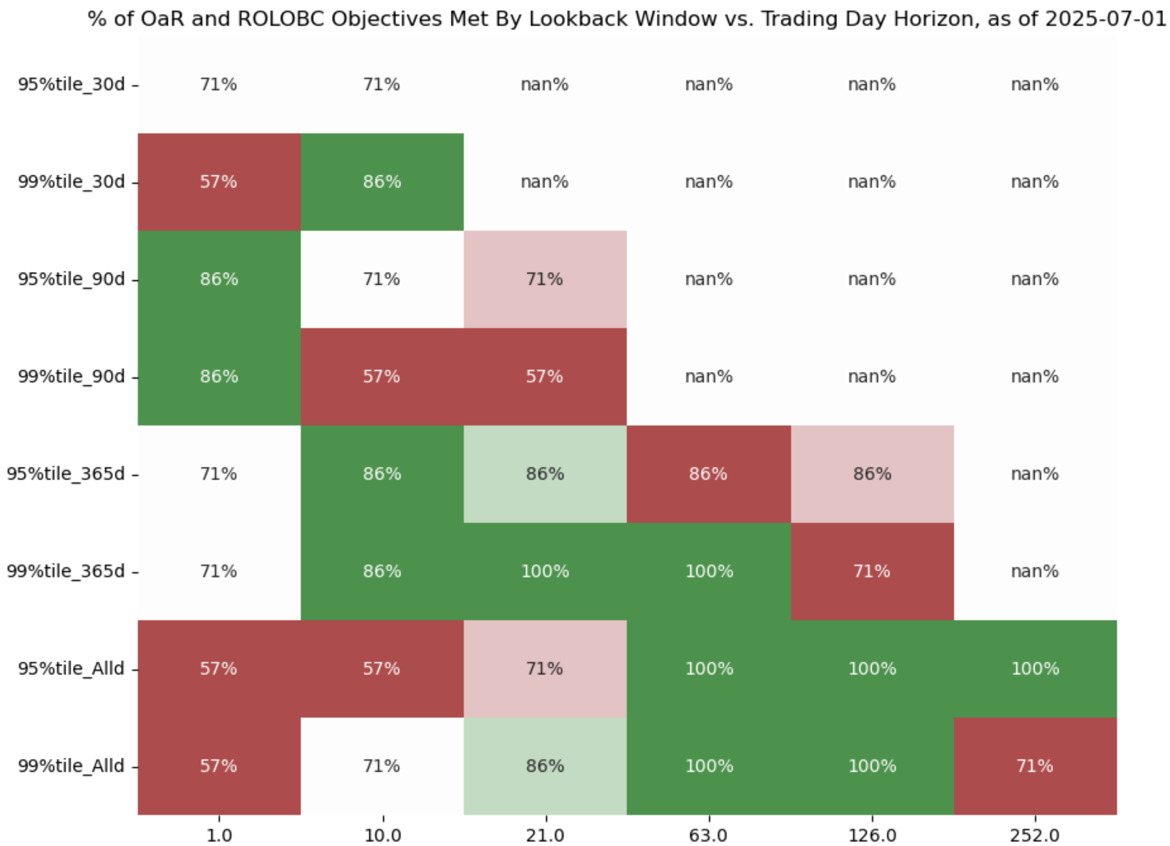
8) Note that OaR for both the Vector Model and Sigma as presented in this report assumes that prices are floored at $0.01. Since the coverage universe for this report includes only listed equities, that assumption is likely appropriate. However, if the Vector Model were applied to commodities or perhaps other potentially illiquid securities we would likely have to remove that floor for such tickers, and the resulting impact on model performance for such tickers has not yet been researched.

Thus, in summary, with the exception of the Kupiec and Christoferson tests, all metrics presented in this report are presented and are to be considered on a comparative basis. Are Vector Model OaR breakage rates closer to target than Sigma's? Does Vector Model ROLOBC outperform Sigma ROLOBC? Is the relative performance driven by alpha or beta? By timing or ticker selection? What tickers contributed or detracted the most from the relative performance? These are the primary questions this report is structured to answer.

Opportunity At Risk (OaR) Report Cards

Period examined: AllD = 2022-01-31 through 2025-06-27 while 365D /90D/ 30D include the 365/90/30 days ended 2025-06-27, respectively.

Sigma Comparison Report Card:



Vector Model Statistical Testing Report Card:

The Kupiec Proportion of Failures test statistic (listed as OaR_kStat in the table below), and its probability (OaR_pValK) are used to test the null hypothesis that the Vector Model's OaR breakage rate is consistent with expectations. The test statistic is calculated by comparing the number of OaR breaks experienced to the expected number of breaks given the total number of observations and the specified probability level. Breakage is measured at the individual ticker-model date level. The probability of the Kupiec statistic occurring is obtained from the chi-squared distribution. The lower the Kupiec statistic, the higher the p-Value, and the more likely that the Vector Model's OaR breakage rate is consistent with expectations.

The Christoferson OaR Violation Independence test statistic (listed as OaR_chrStat in the table below) and its probability (OaR_pValChr) are used to test the null hypothesis that the OaR model violations are independent. The test statistic focuses on consecutive breakages over time. We measure breakage at the portfolio level, with portfolio breakage for a given period defined as equally weighted ticker level breakage for that period being beyond expectation given the specified probability level. The probability of the Christoferson statistic occurring is obtained from the chi-squared distribution. The lower the Christoferson statistic, the higher the p-Value, and the more likely that Vector Model OaR breakage is independent.

Kupiec and Christoferson test results for Sigma OaR can be found in the Appendix.

Period examined: 2022-01-31 through 2025-06-27. Note that for horizon periods greater than 1d we exclude enough model dates to assure no overlap between observation periods.

Model	Pctile	Horizon	OaR_kStat	OaR_pValK	OaR_chrStat	OaR_pValChr
Vector	95	1	166.3	0	1.6	0.21
Vector	95	10	8.78	0	4.57	0.03
Vector	95	21	16.59	0	0.27	0.6
Vector	95	63	0	0.99	0.09	0.76
Vector	95	126	6.96	0.01	nan	0
Vector	95	252	0.05	0.83	nan	0
Vector	99	1	10.15	0	0.62	0.43
Vector	99	10	21.92	0	3.41	0.06
Vector	99	21	8.45	0	5.71	0.02
Vector	99	63	0.45	0.5	1.6	0.21
Vector	99	126	1.78	0.18	nan	0
Vector	99	252	2.4	0.12	nan	0

Combined Summary Report Card By Objective:

Here we summarize the results by objective, starting with the Sigma comparison-based objectives, for which a sub-total is provided. Each lookback period, horizon and specified percentile receives equal weighting in these calculations.

Then summary results for the statistical tests are provided, with success defined as a p-value for the corresponding test statistic > 0.05, and each horizon and specified percentile receiving equal weighting.")

Period examined: 2022-01-31 through 2025-06-27.

OaR and ROLOBC Criteria	Average Score(%)
1. Closer to Target OaR Breakage Than Sigma	62.5
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	87.5
3. Less Volatile OaR Breakage Across Tickers Than Sigma	40.62
4. Higher ROLOBC Than Sigma	75
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	90.62
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	96.88
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	100
Overall Comparison to Sigma Average	79.02
Kupiec Test of VaR Proximity to Target	41.6667
Christoferson Test of OaR Date Independence	50

OaR and ROLOBC Criteria By Fwd Hzn	1D	10D	21D	63D	126D	252D
1. Closer to Target OaR Breakage Than Sigma	62.5	62.5	50	75	75	50
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	75	75	100	100	100	100
3. Less Volatile OaR Breakage Across Tickers Than Sigma	12.5	12.5	16.67	100	100	100
4. Higher ROLOBC Than Sigma	50	75	100	100	50	100
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	100	87.5	83.33	100	100	50
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	87.5	100	100	100	100	100
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	100	100	100	100	100	100
TotalScore	69.64	73.21	78.57	96.43	89.29	85.71

OaR and ROLOBC Criteria Across Lookback Window	30D	90D	365D	AllD
1. Closer to Target OaR Breakage Than Sigma	75	33.33	70	66.67
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	0	100	100	100
3. Less Volatile OaR Breakage Across Tickers Than Sigma	25	0	60	50
4. Higher ROLOBC Than Sigma	100	100	60	66.67
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	100	66.67	100	91.67
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	100	100	100	91.67

OaR and ROLOBC Criteria Across Lookback Window	30D	90D	365D	AllD
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	100	100	100	100
TotalScore	71.43	71.43	84.29	80.95

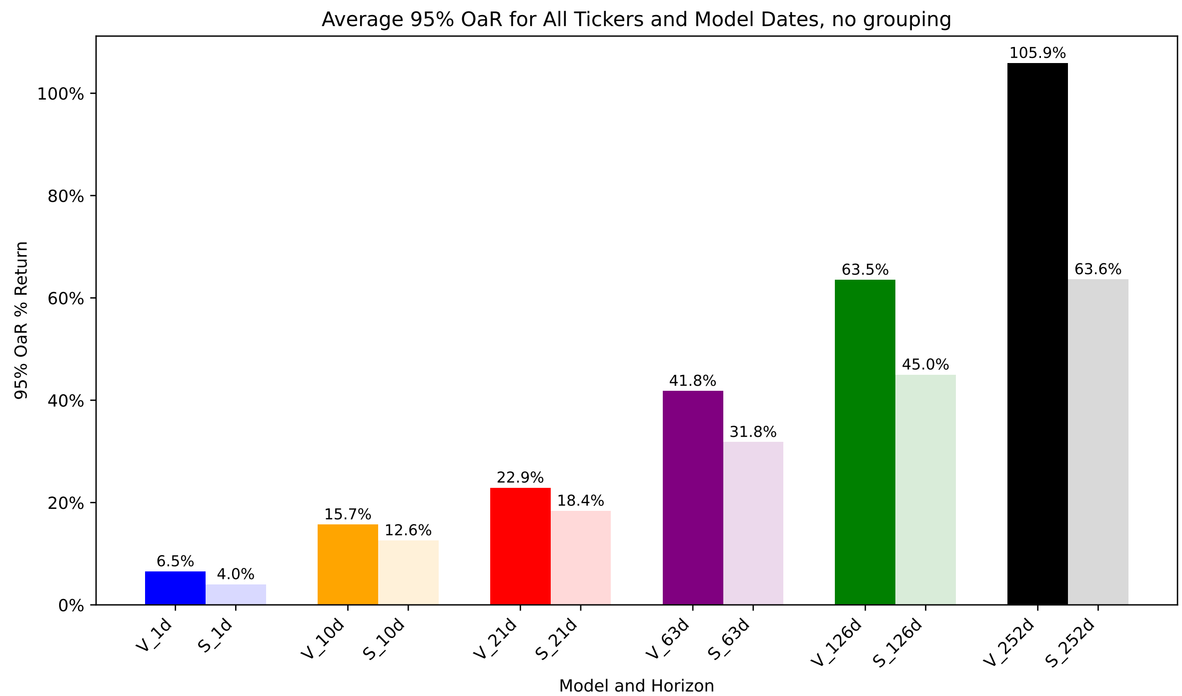
95% Opportunity At Risk (OaR)

Historic Average Levels

Here we compare Vector Model ("V", dark shading) and Sigma ("S", light shading) 95% OaR levels by horizon, on average across tickers. We make this comparison on average across tickers for select cohorts of model dates (ex: P30D), and forward horizons (ex: 21d) for all ticker model dates thru the present.

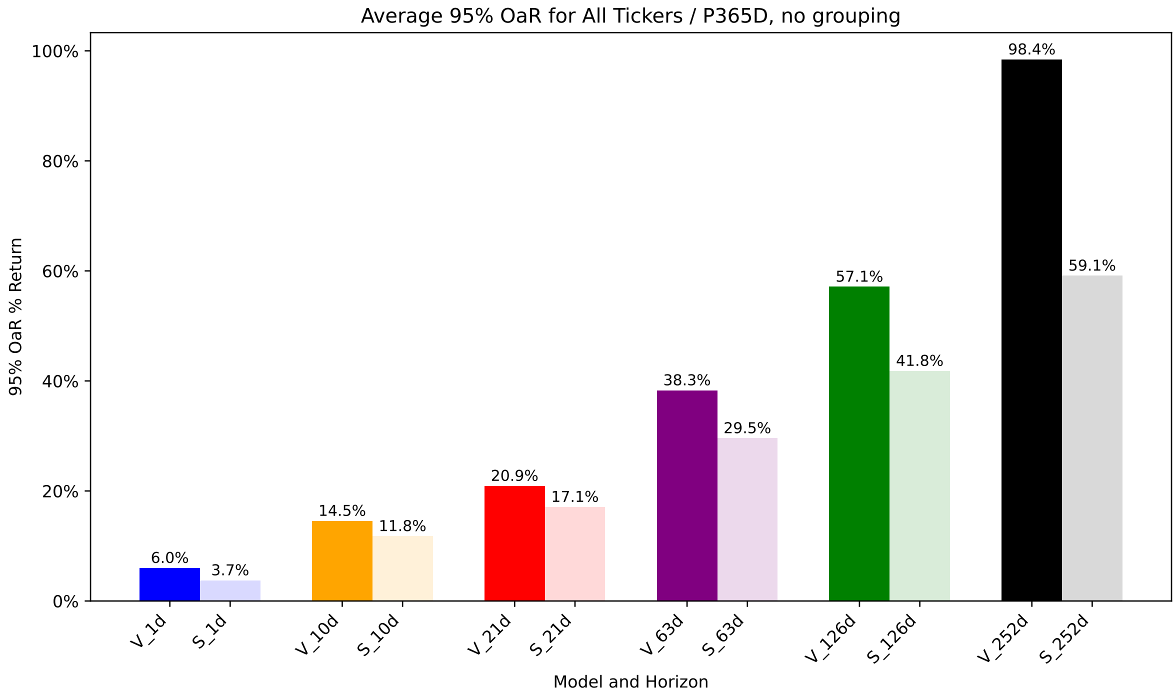
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-06-27



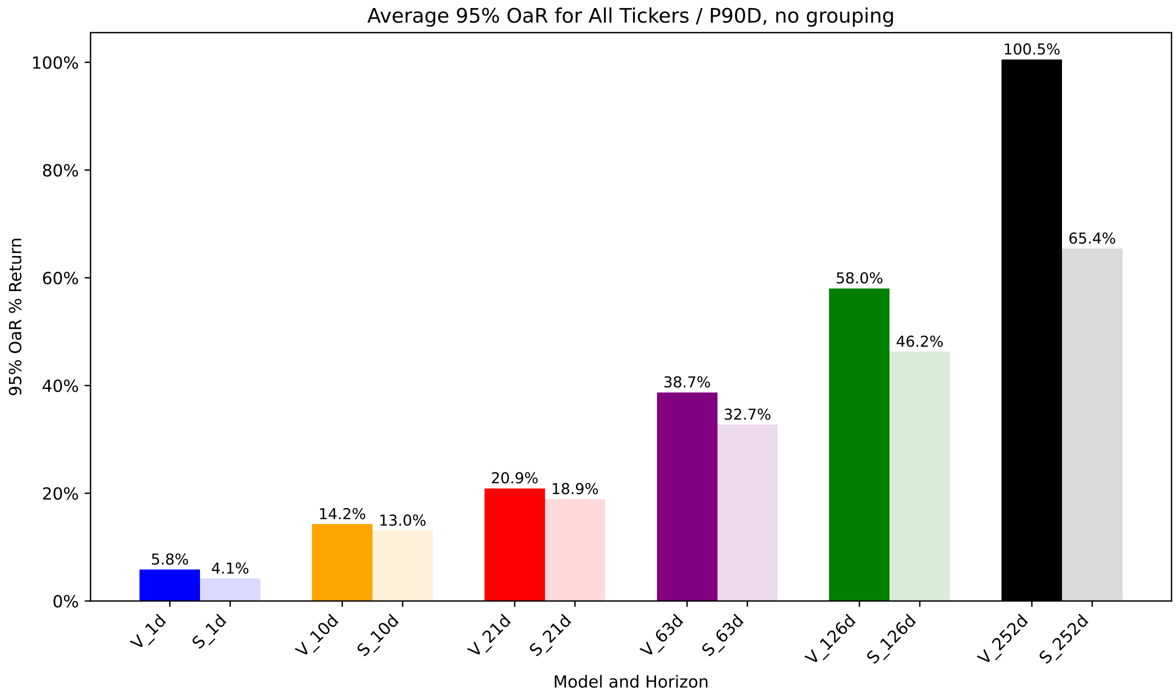
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2025-06-27 through 2024-07-02



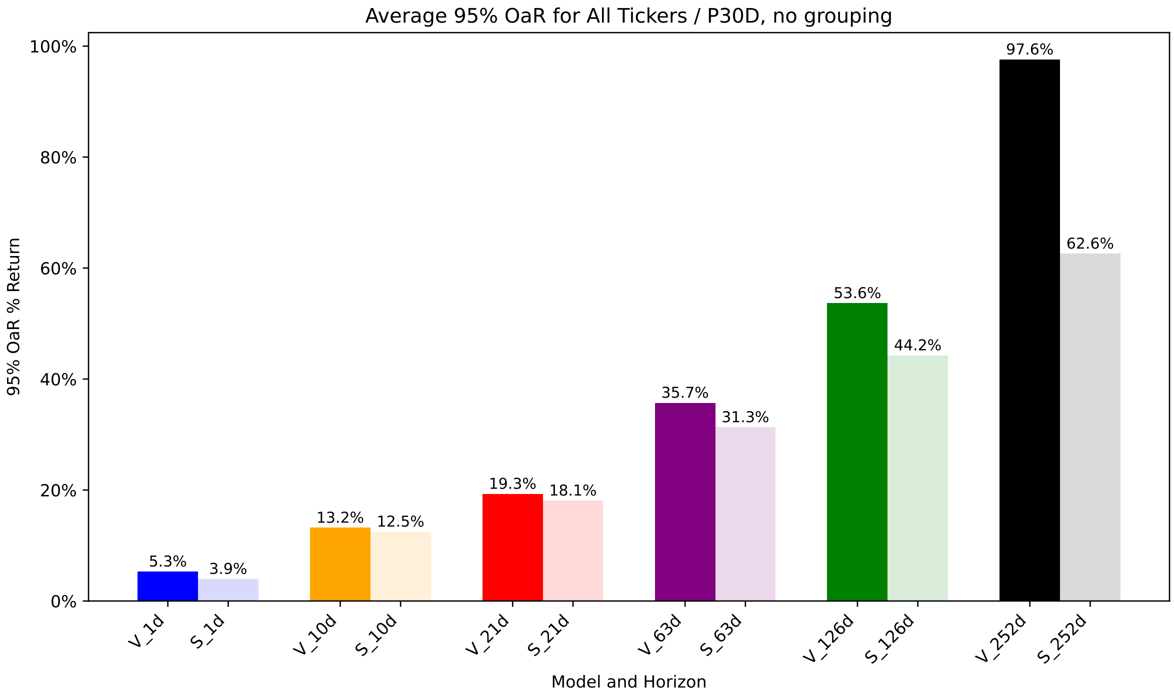
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-06-27 through 2025-04-03



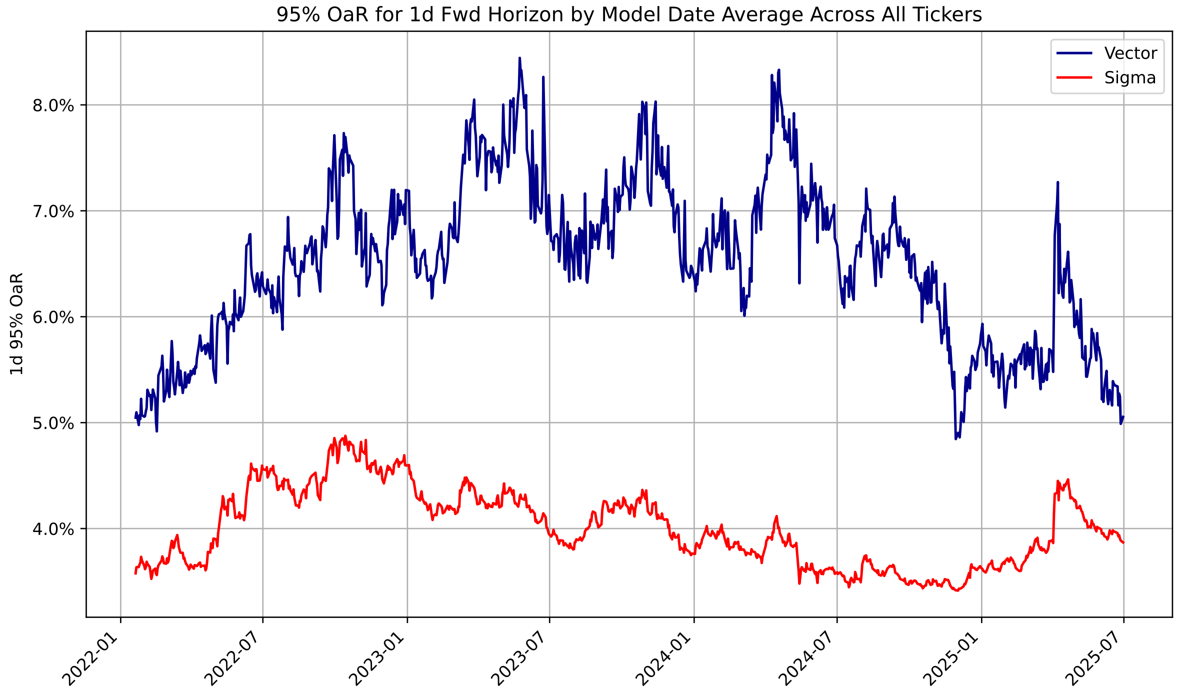
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-06-27 through 2025-06-02

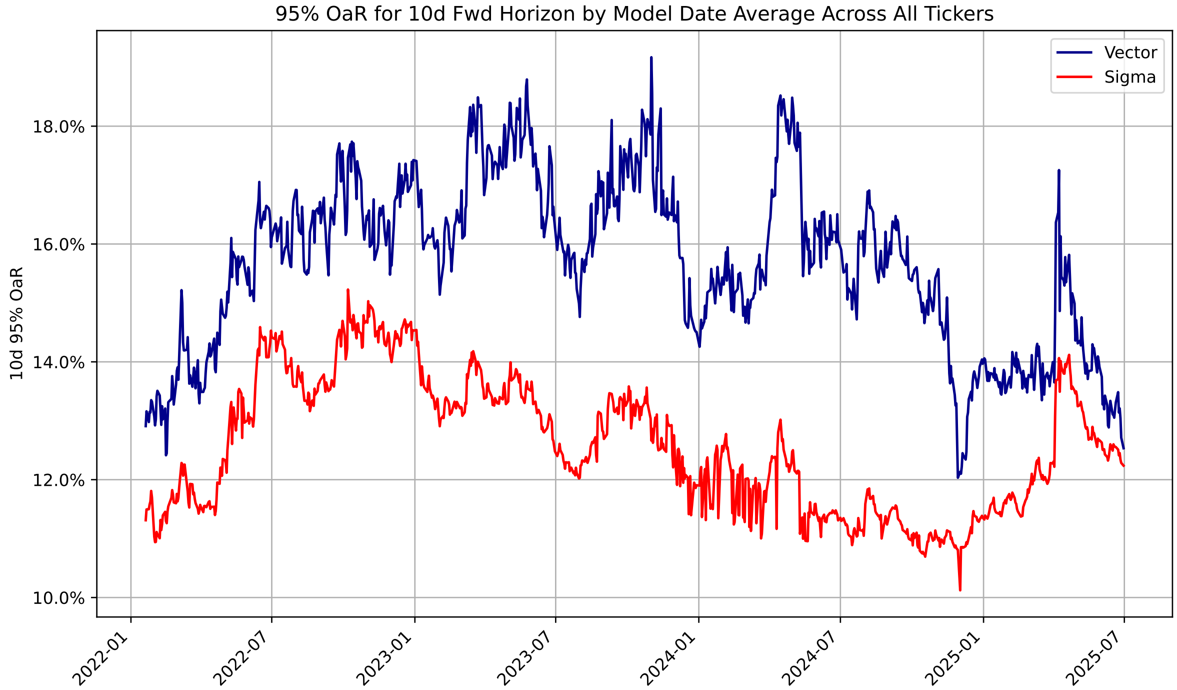


Daily Levels

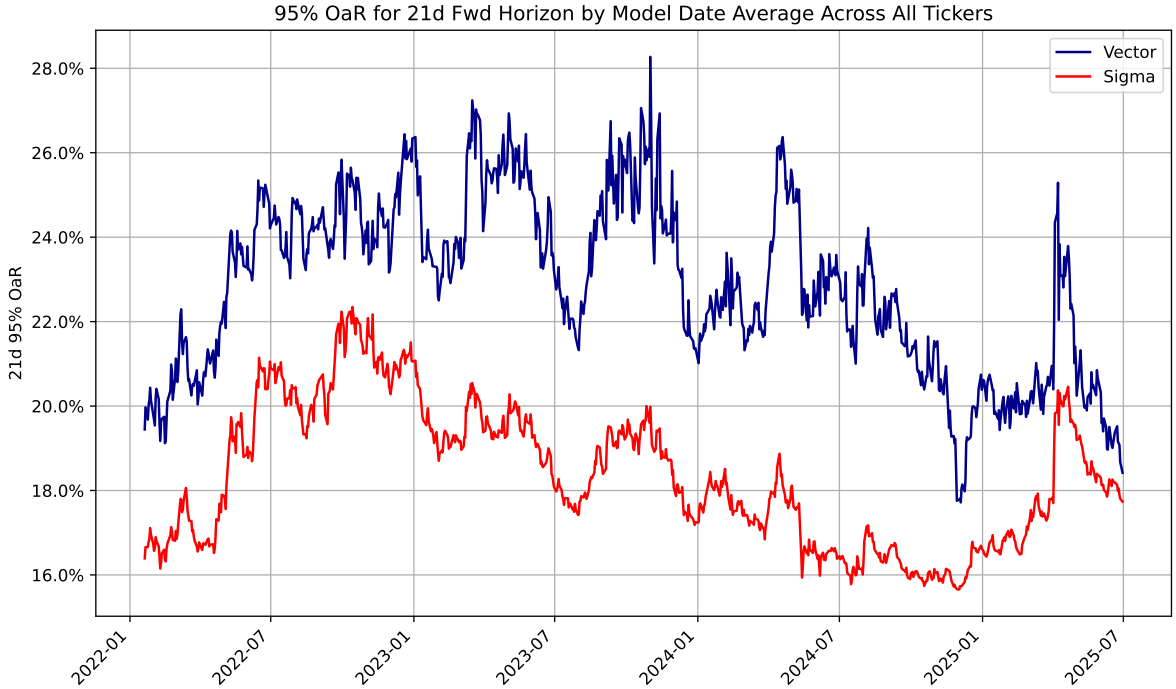
1d Horizon



10d Horizon


95% OaR for 10d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
10d 95% OaR
18.0%
16.0%
14.0%
12.0%
10.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

21d Horizon


95% OaR for 21d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
21d 95% OaR
28.0%
26.0%
24.0%
22.0%
20.0%
18.0%
16.0%
2022-01
2022-07
2023-01
2023-07
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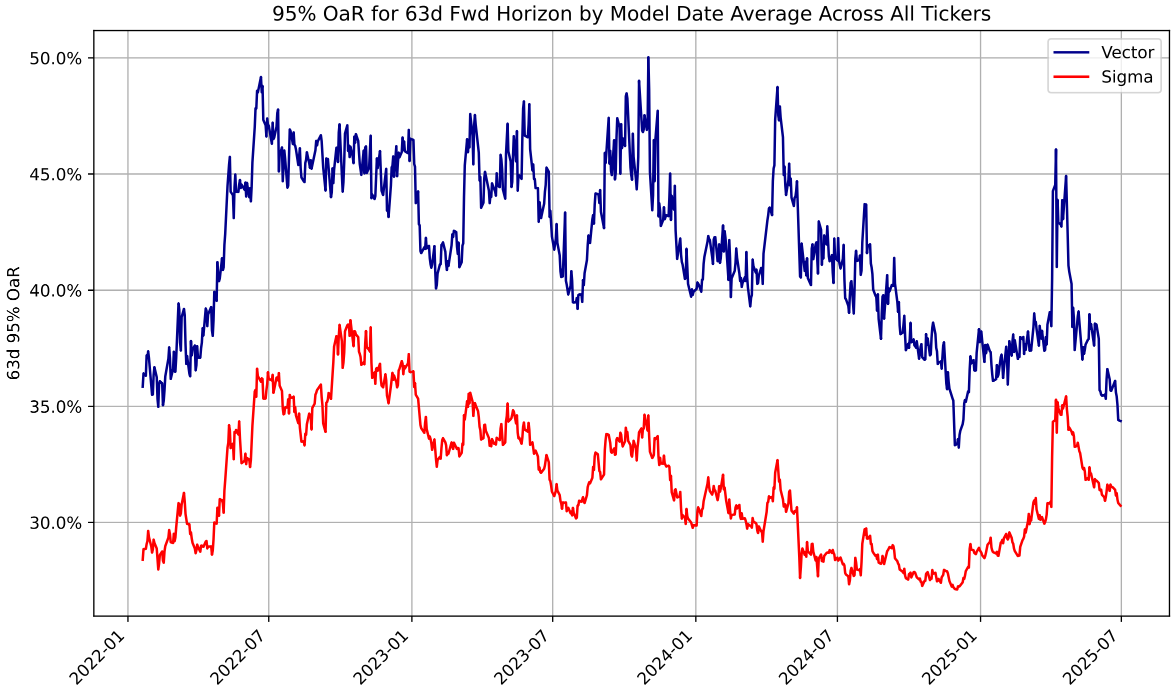
2024-07
2025-01
2025-07

63d Horizon


95% OaR for 63d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
63d 95% OaR
50.0%
45.0%
40.0%
35.0%
30.0%
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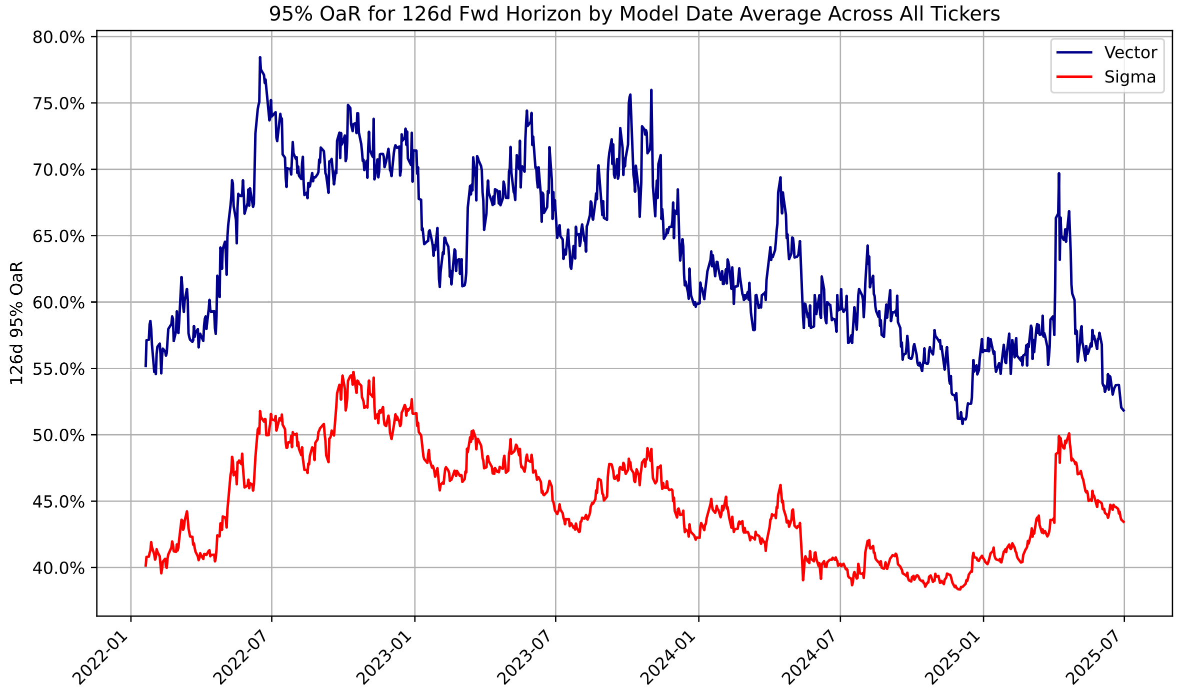
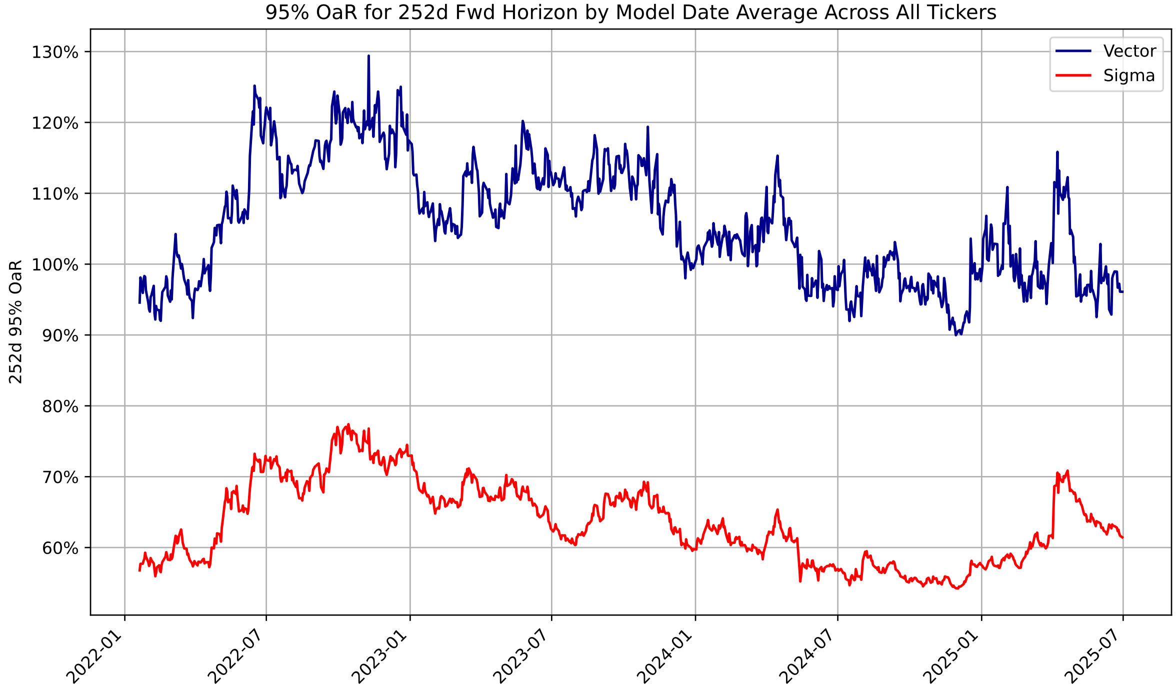
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

126d Horizon



252d Horizon



Performance Summary

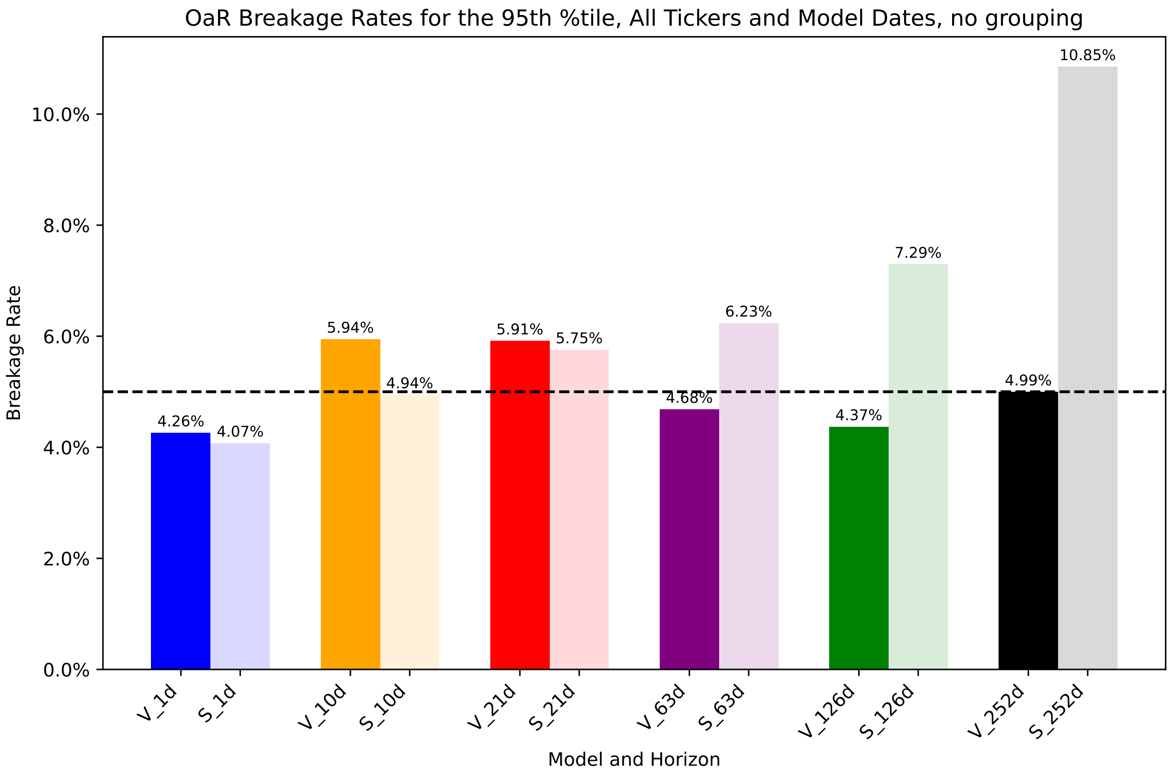
Here we compare the performance of 95% OaR estimates generated by the Vector Model ("V", presented with dark shading) with those generated by Sigma ("S", presented with light shading). This comparison is made on the basis of breakage rates and Return on Long OaR based Capital (ROLOBC), presenting the average results across tickers and model dates for all horizons as of the most recent model date.

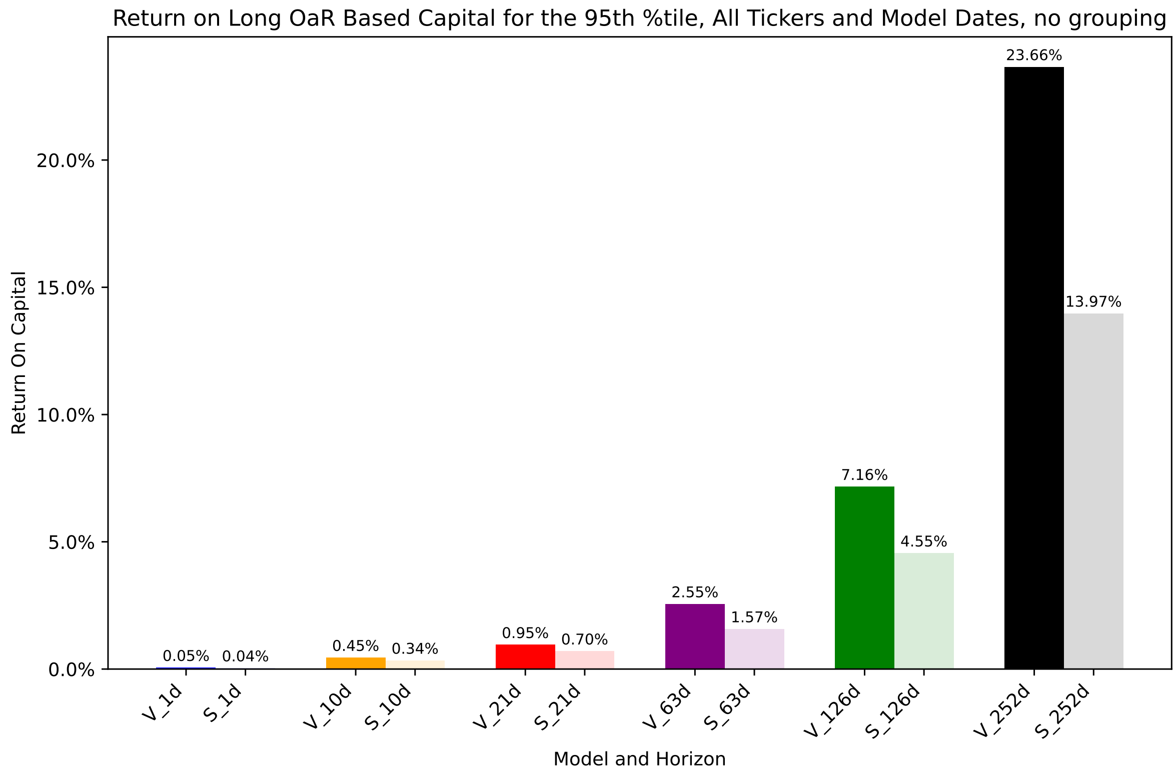
ROLOBC comparisons are made on the basis of outright ROLOBC and the alpha of Vector Model ROLOBC to underlying ticker returns (the proxy for Sigma ROLOBC). As discussed in the Introduction, ROLOBC for Sigma is presumed to be the return of the underlying ticker, and for the Vector Model it is based on the return of the ticker multiplied by the ratio Vector Model based OaR to Sigma model based OaR, with a cap of 3.0x and a floor of 0.333x. Alpha allows us to isolate ROLOBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROLOBC multiplier for the Vector Model and 1.00x. Alpha across TMD's could be driven by OaR differentials between tickers and / or between dates. Thus we also present average alpha by ticker across model dates.

Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons > 1d overlap.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-06-27





Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns across TMD's:

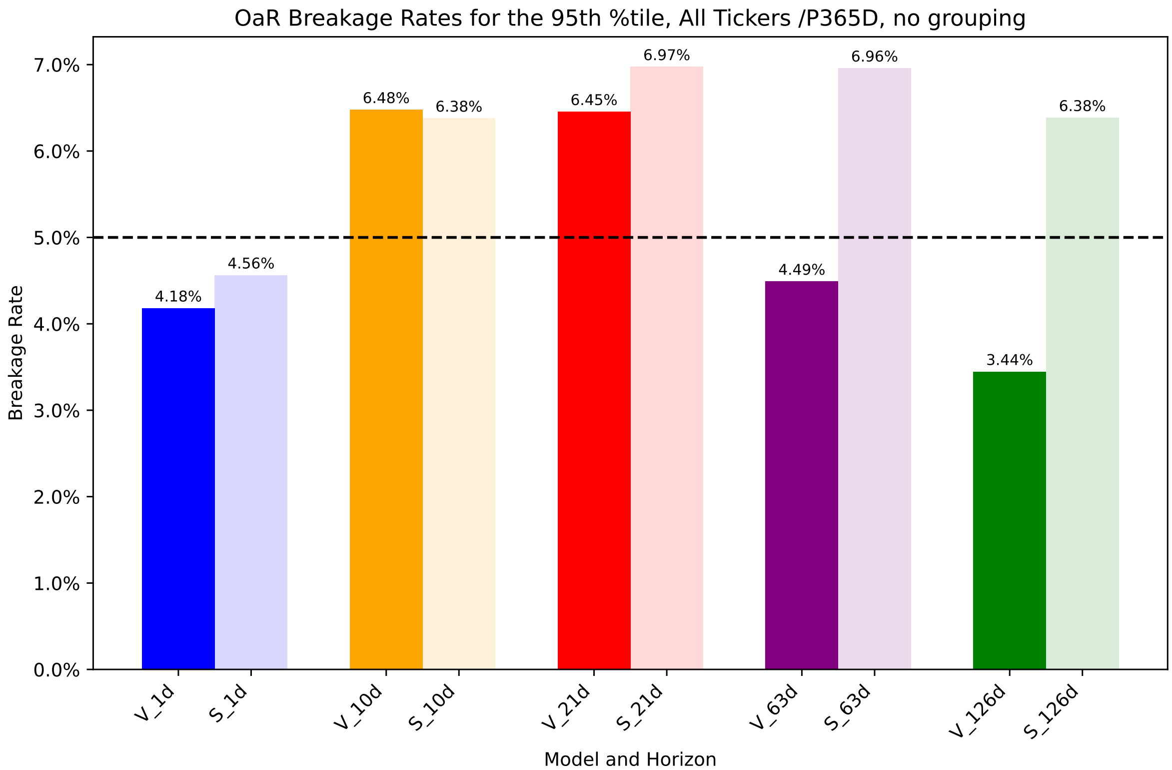
	1d	10d	21d	63d	126d	252d
intercept	-0.00%	0.04%	0.10%	0.40%	0.68%	2.50%
intercept_p_value	83.68%	0.58%	0.00%	0.00%	0.00%	0.00%
slope	145.46%	120.47%	122.15%	137.18%	142.47%	151.42%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

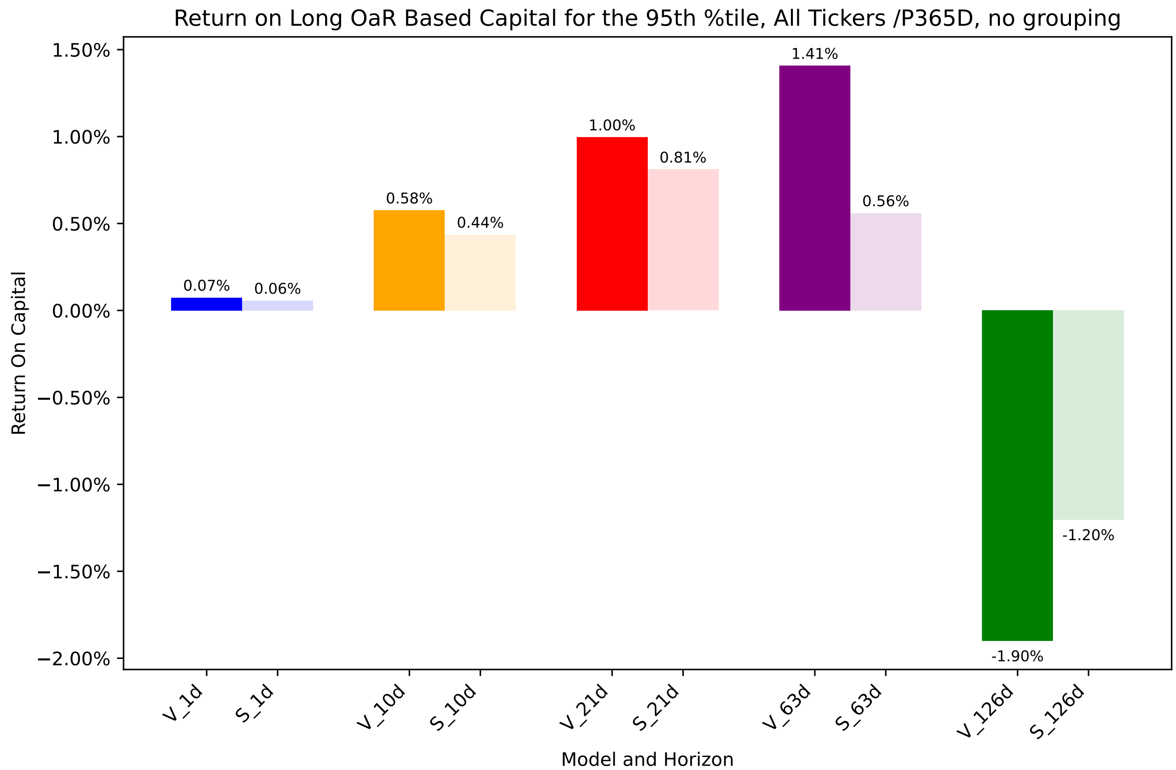
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

	1d	10d	21d	63d	126d	252d
intercept	-0.03%	-0.12%	-0.36%	-1.47%	-3.39%	-4.98%
intercept_p_value	0.03%	5.98%	1.38%	0.18%	0.02%	0.39%
slope	160.75%	146.04%	162.55%	174.72%	174.26%	162.77%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2025-06-27 through 2024-07-02





Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns across P365D:

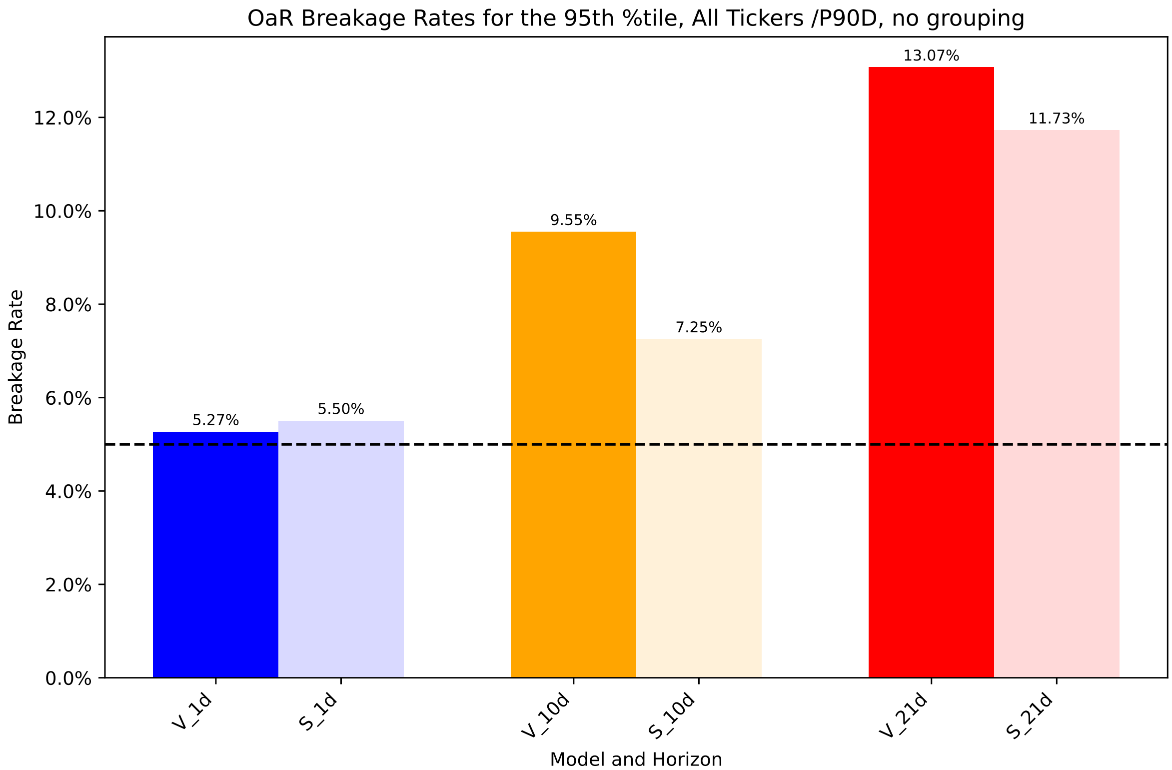
	1d	10d	21d	63d	126d
intercept	-0.01%	-0.00%	-0.06%	0.54%	-0.10%
intercept_p_value	27.11%	94.94%	13.93%	0.00%	25.88%
slope	151.39%	132.42%	129.62%	154.92%	149.25%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

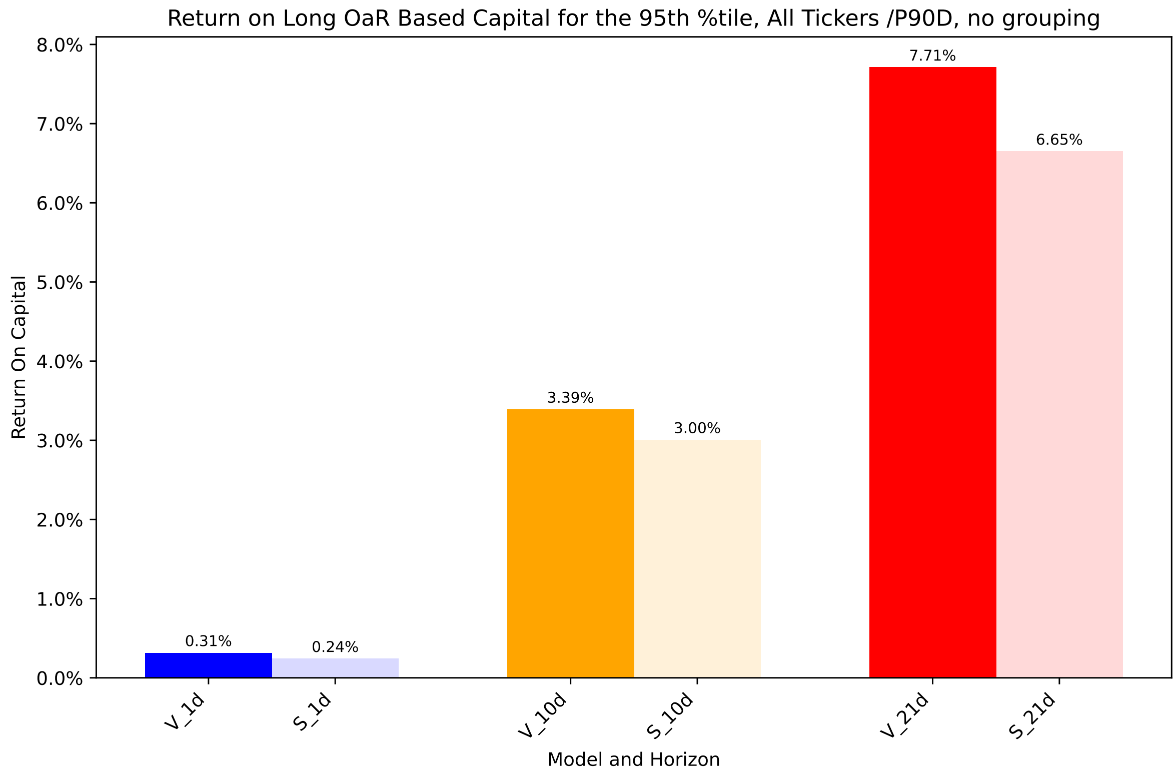
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P365D:

	1d	10d	21d	63d	126d
intercept	0.04%	0.19%	0.30%	0.10%	0.20%
intercept_p_value	0.02%	2.17%	5.78%	75.93%	71.10%
slope	45.78%	100.86%	108.10%	113.27%	114.22%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-06-27 through 2025-04-03





Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns across P90D:

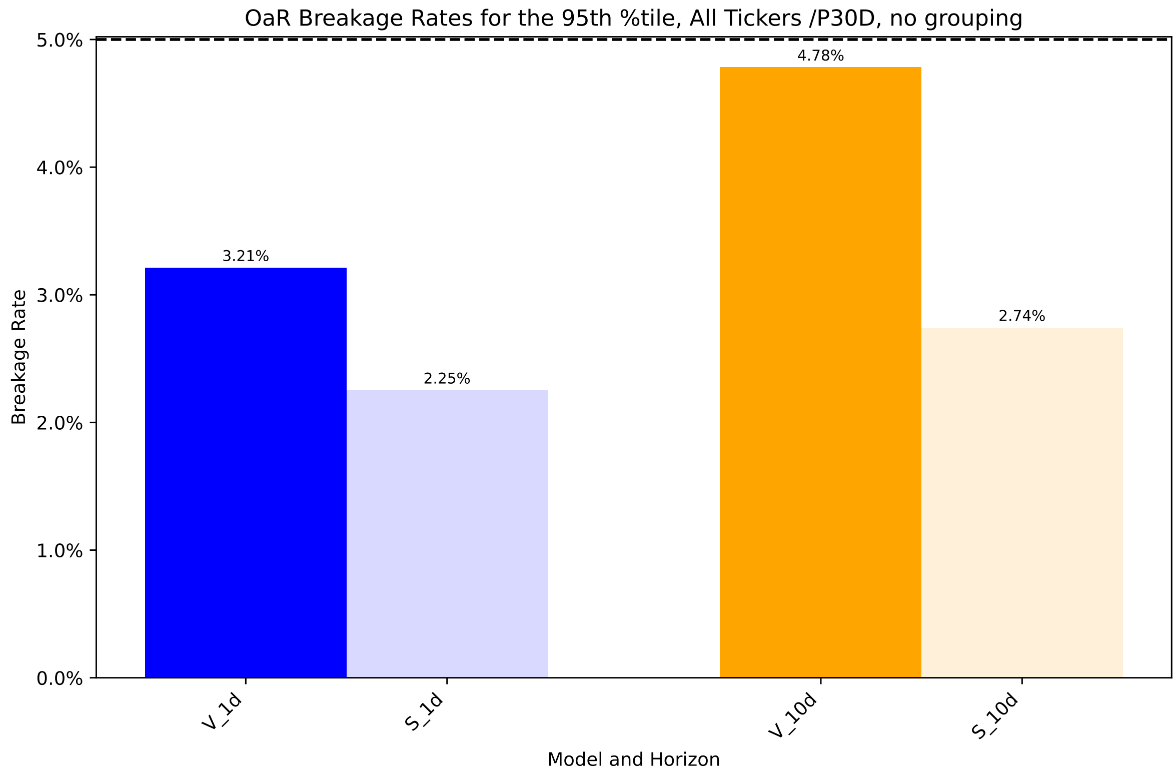
	1d	10d	21d
intercept	-0.03%	0.03%	0.34%
intercept_p_value	18.50%	59.89%	0.27%
slope	144.11%	111.82%	110.89%
slope_p_value	0.00%	0.00%	0.00%

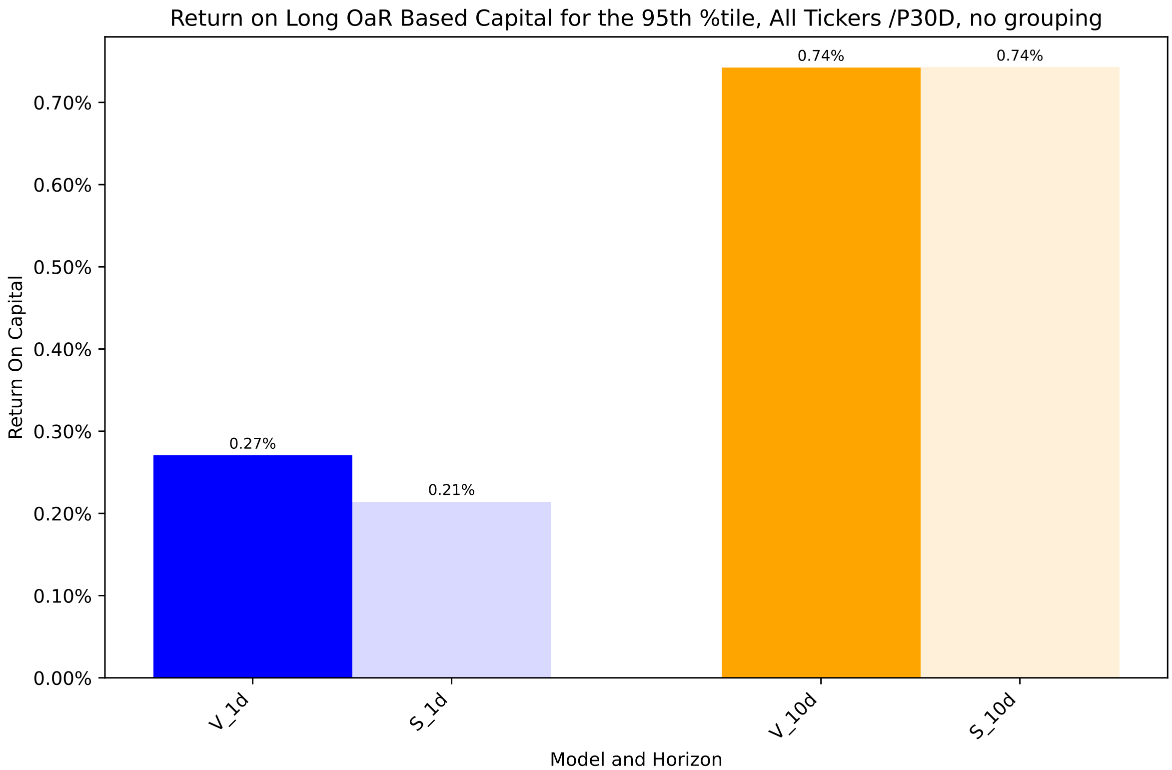
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P90D:

	1d	10d	21d
intercept	0.03%	-0.09%	-0.34%
intercept_p_value	30.60%	73.10%	60.59%
slope	114.18%	133.26%	141.98%
slope_p_value	0.00%	0.00%	0.00%

Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-06-27 through 2025-06-02





Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns across P30D:

	1d	10d
intercept	-0.02%	-0.01%
intercept_p_value	41.35%	93.72%
slope	136.92%	100.71%
slope_p_value	0.00%	0.00%

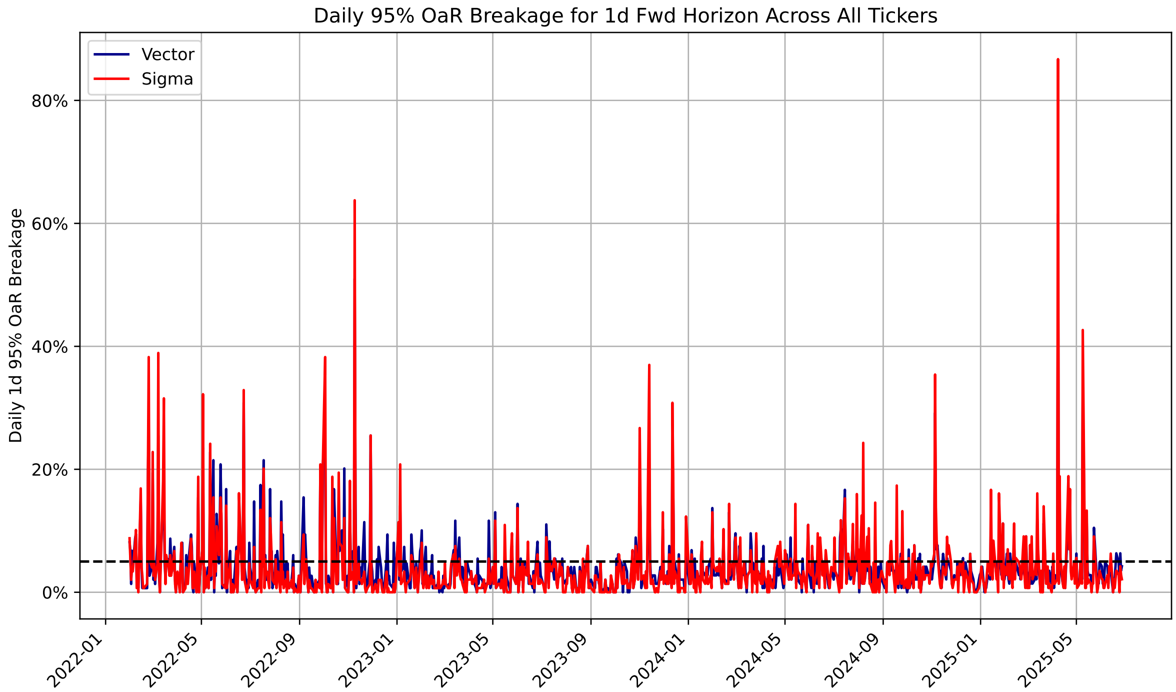
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P30D:

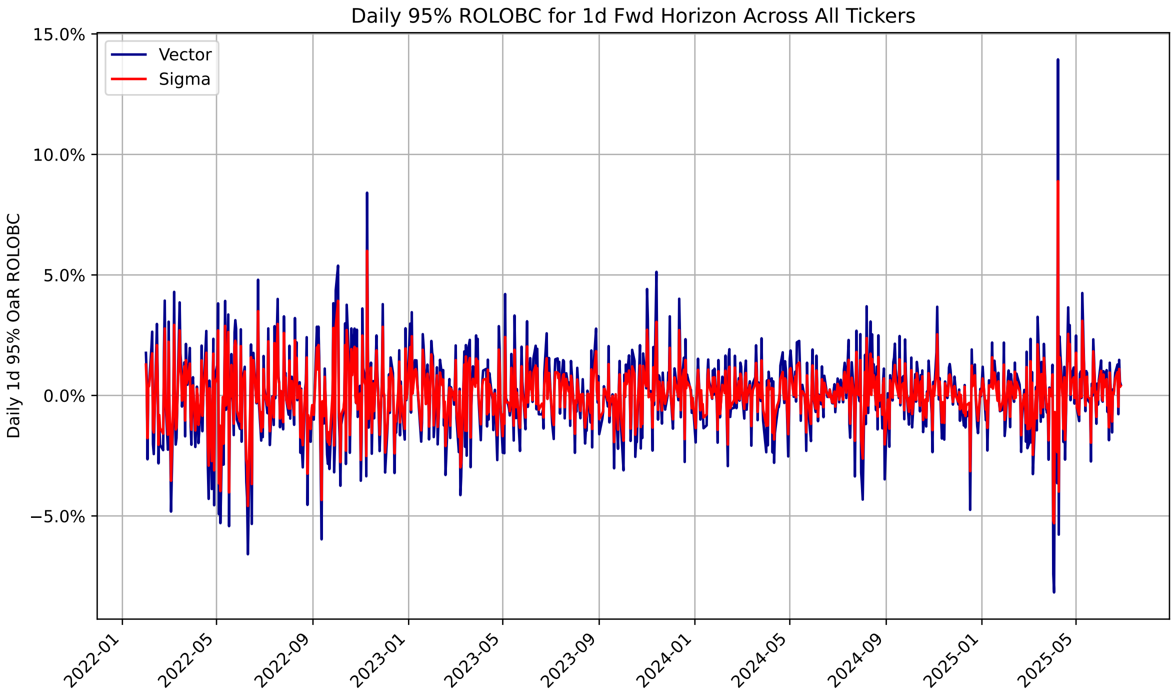
	1d	10d
intercept	-0.04%	-0.12%
intercept_p_value	20.33%	55.51%
slope	131.74%	129.87%
slope_p_value	0.00%	0.00%

Daily Performance

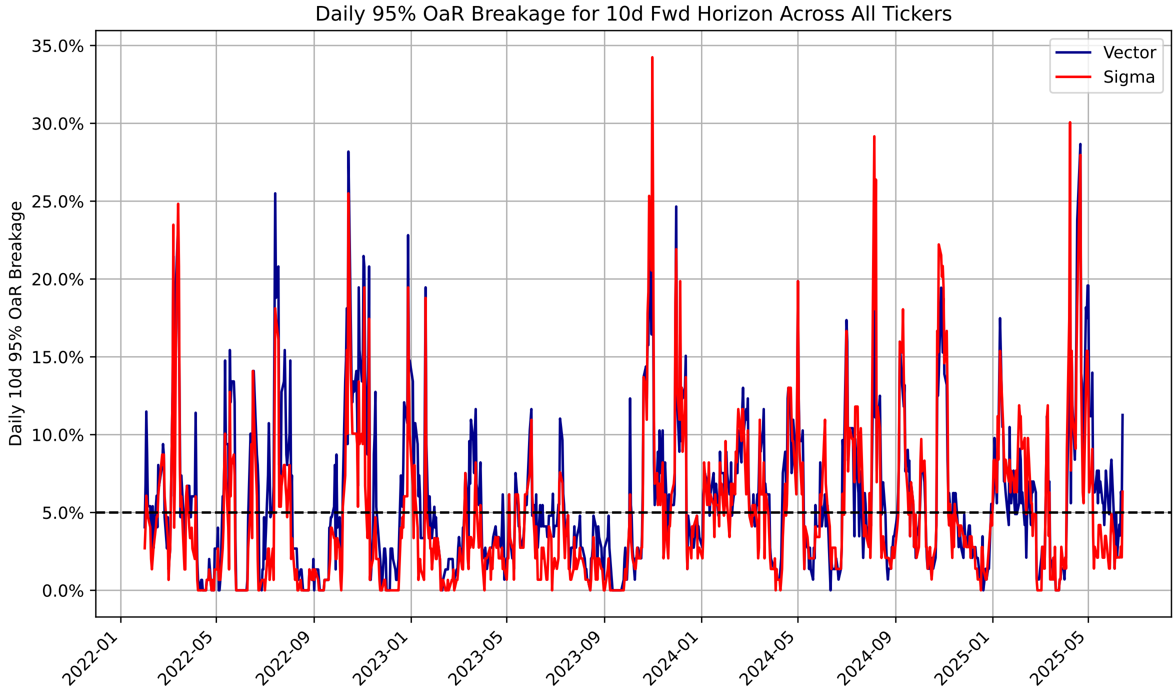
Here we look at the daily breakage and ROLOBC statitics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROLOBC outliers.

1d Horizon

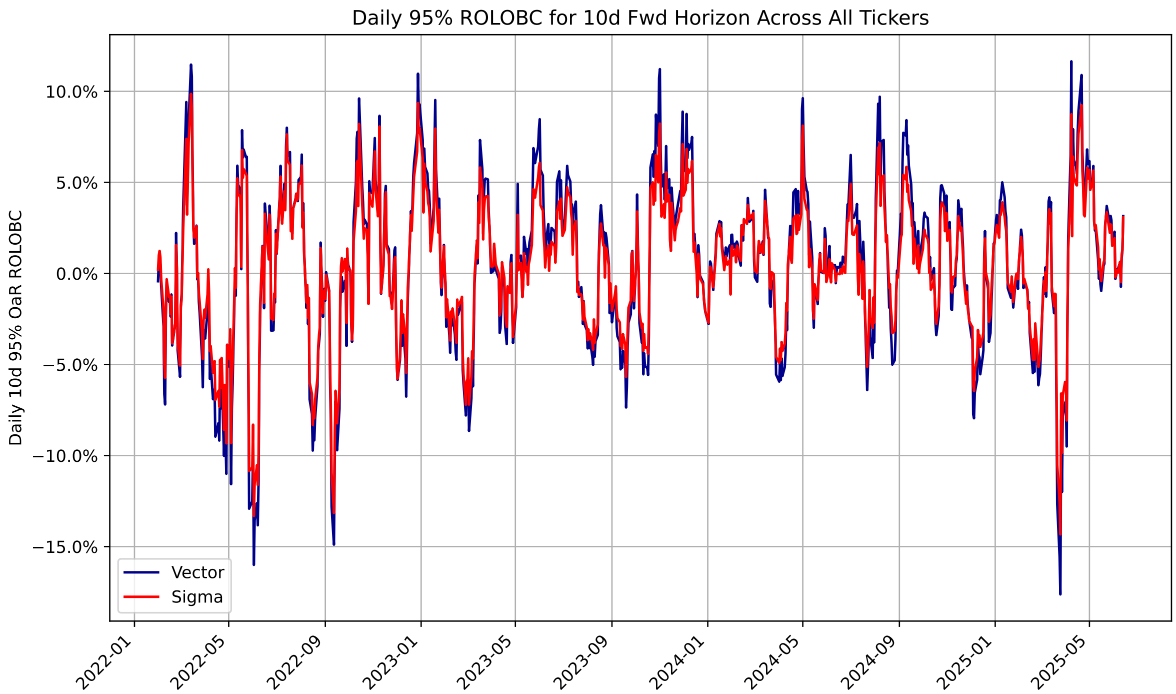



Daily 95% ROLOBC for 1d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 1d 95% OaR ROLOBC
15.0%
10.0%
5.0%
0.0%
−5.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

10d Horizon

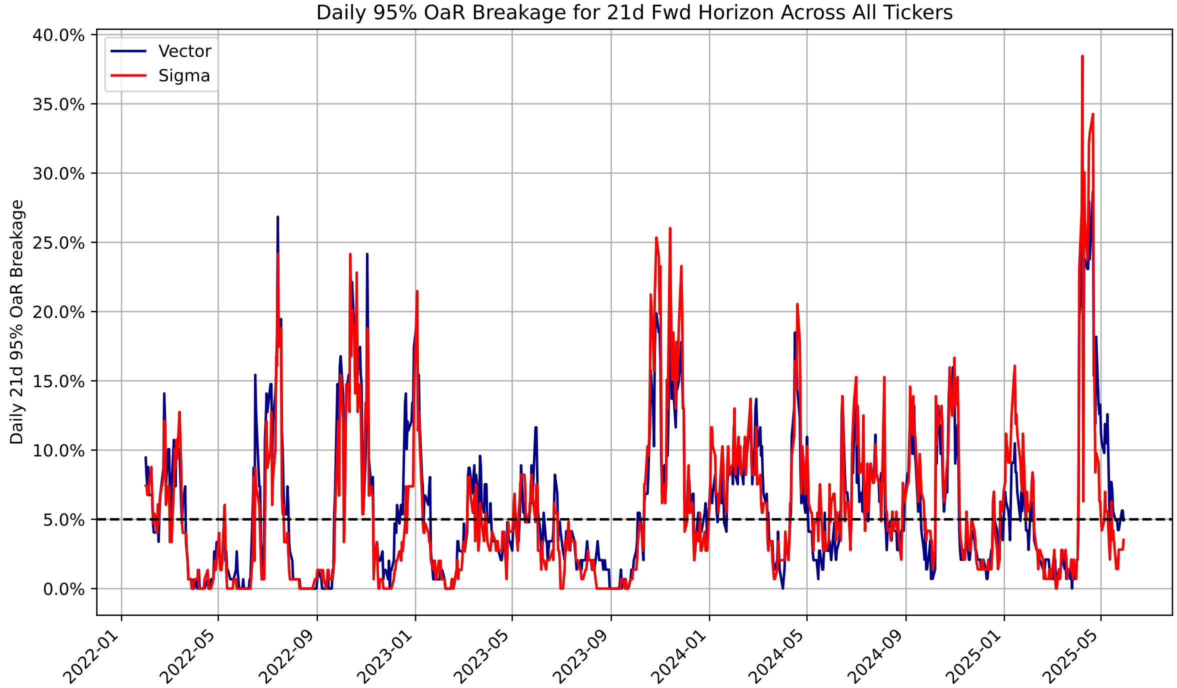


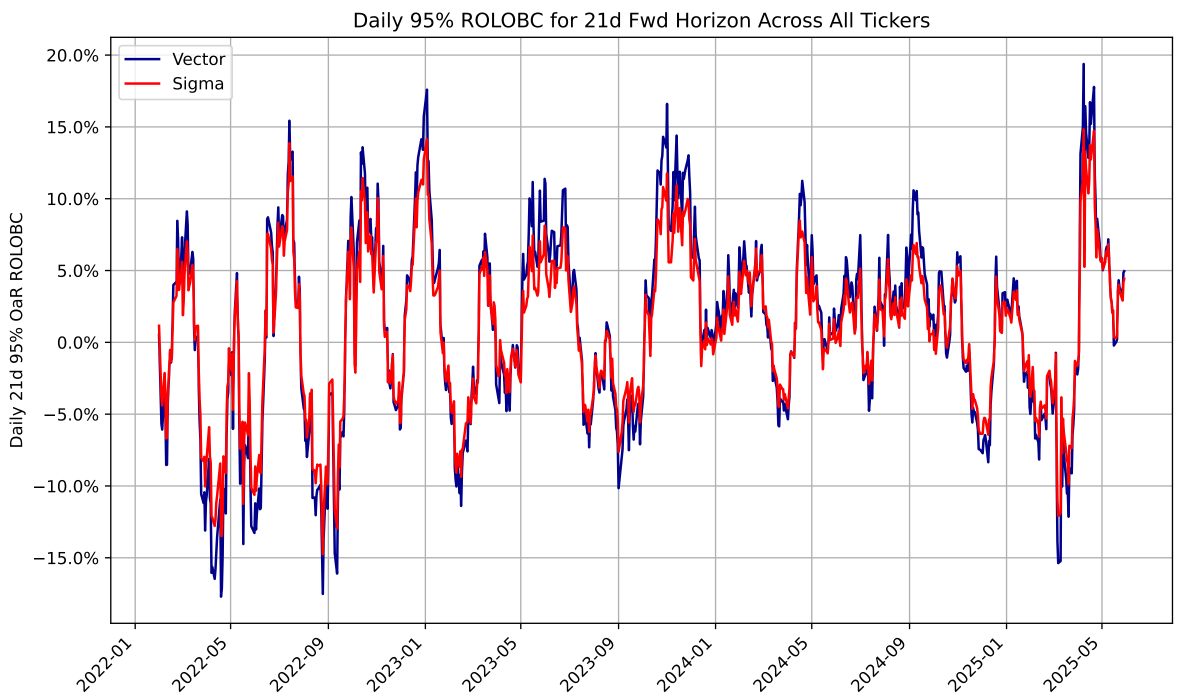
Daily 95% OaR Breakage for 10d Fwd Horizon Across All Tickers
Daily 10d 95% OaR Breakage
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Vector
Sigma
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05



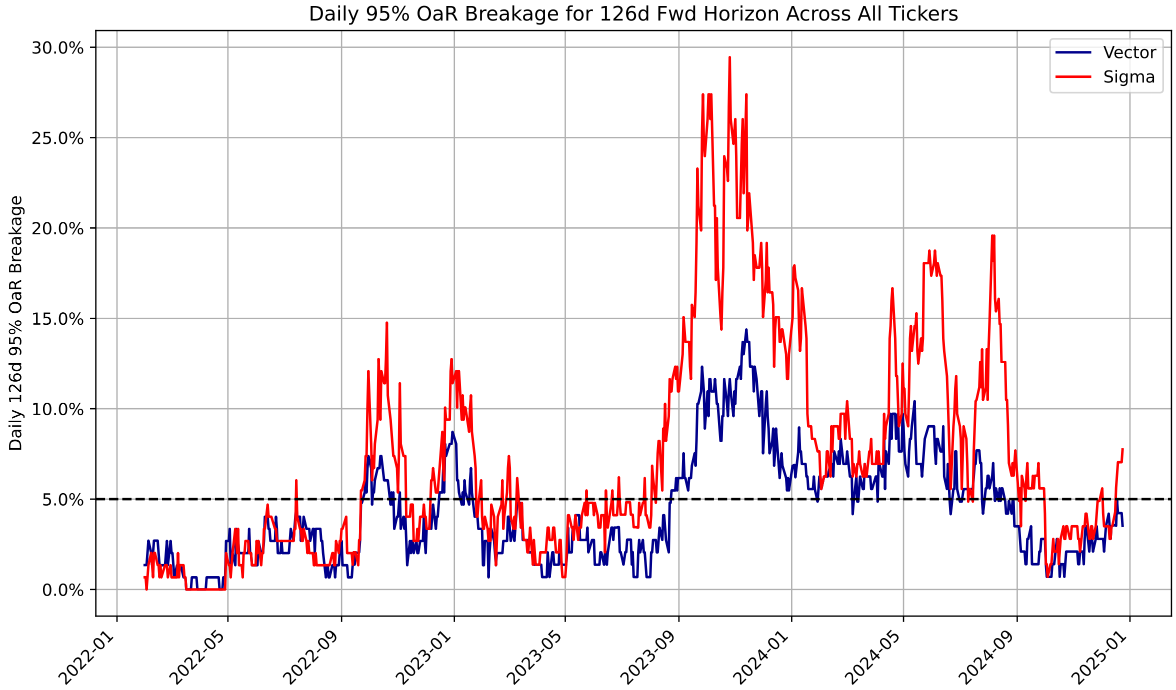
Daily 95% ROLOBC for 10d Fwd Horizon Across All Tickers
Daily 10d 95% OaR ROLOBC
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
Vector
Sigma
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

21d Horizon

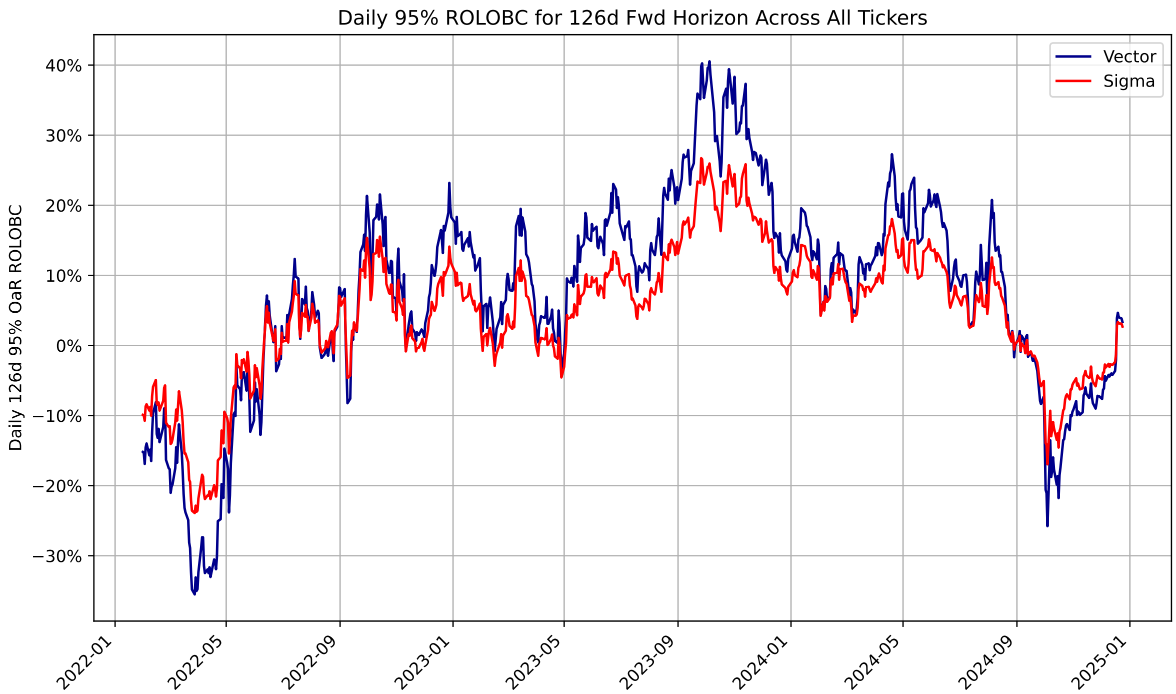

Daily 95% OaR Breakage for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 21d 95% OaR Breakage
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05


Daily 95% ROLOBC for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 21d 95% OaR ROLOBC
20.0%
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

63d Horizon

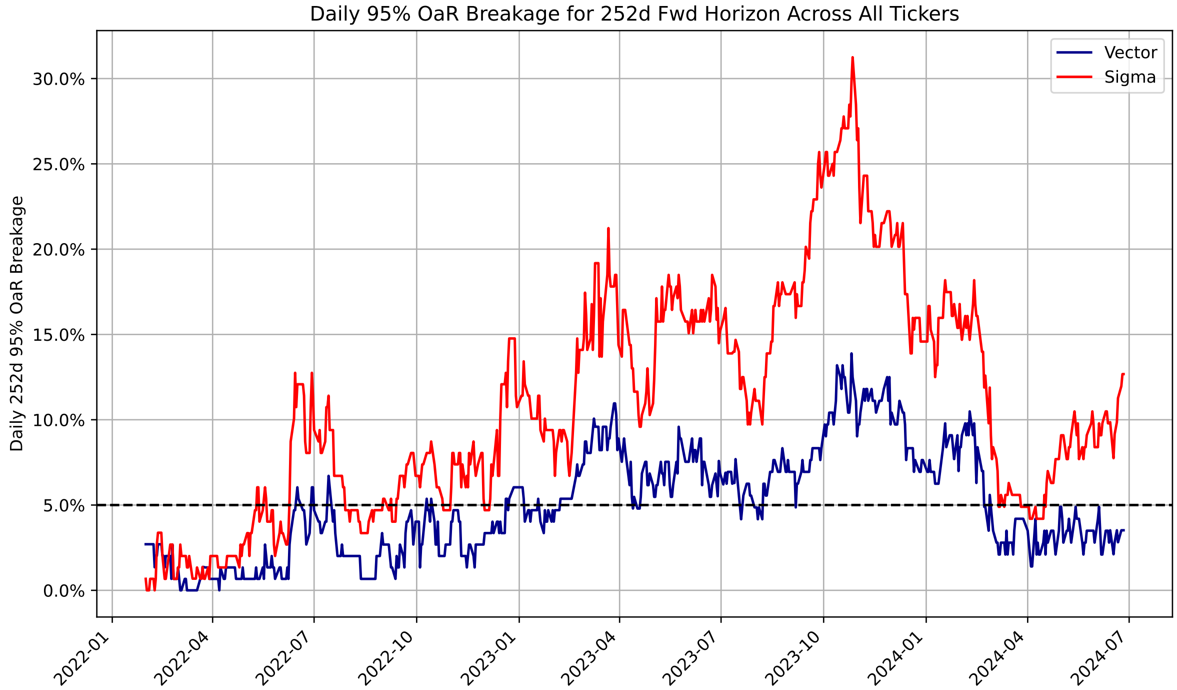


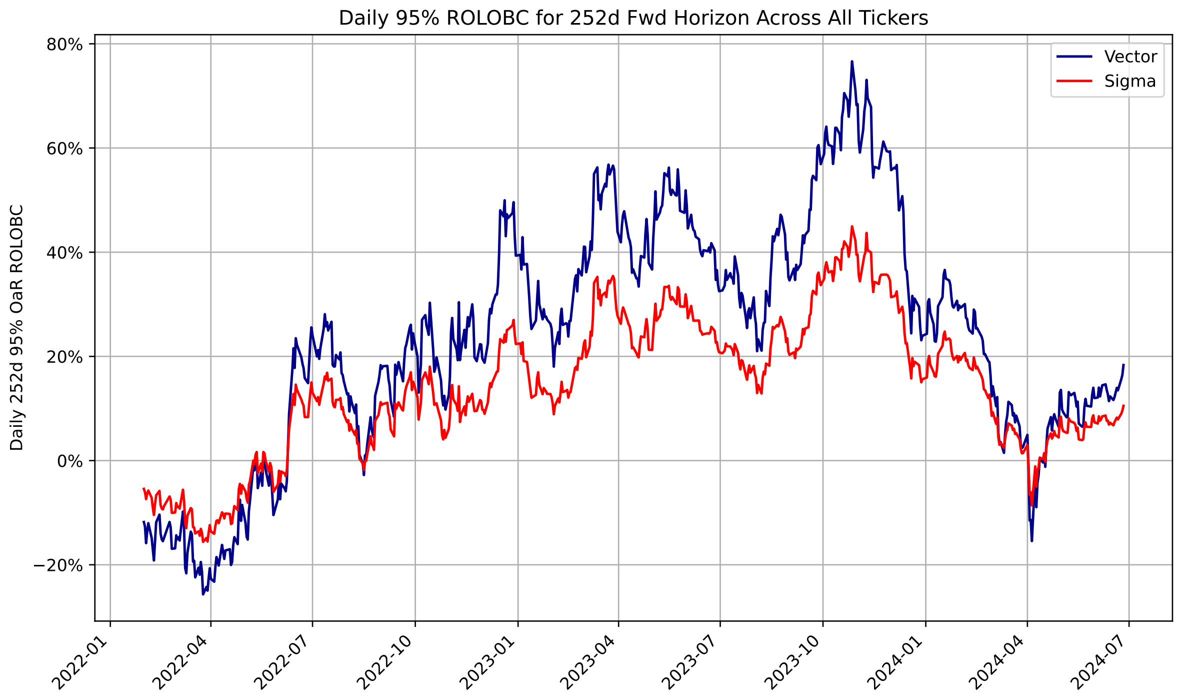
Daily 95% OaR Breakage for 126d Fwd Horizon Across All Tickers
Daily 126d 95% OaR Breakage
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
Vector
Sigma



Daily 95% ROLOBC for 126d Fwd Horizon Across All Tickers
Daily 126d 95% OaR ROLOBC
40%
30%
20%
10%
0%
−10%
−20%
−30%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
Vector
Sigma

252d Horizon

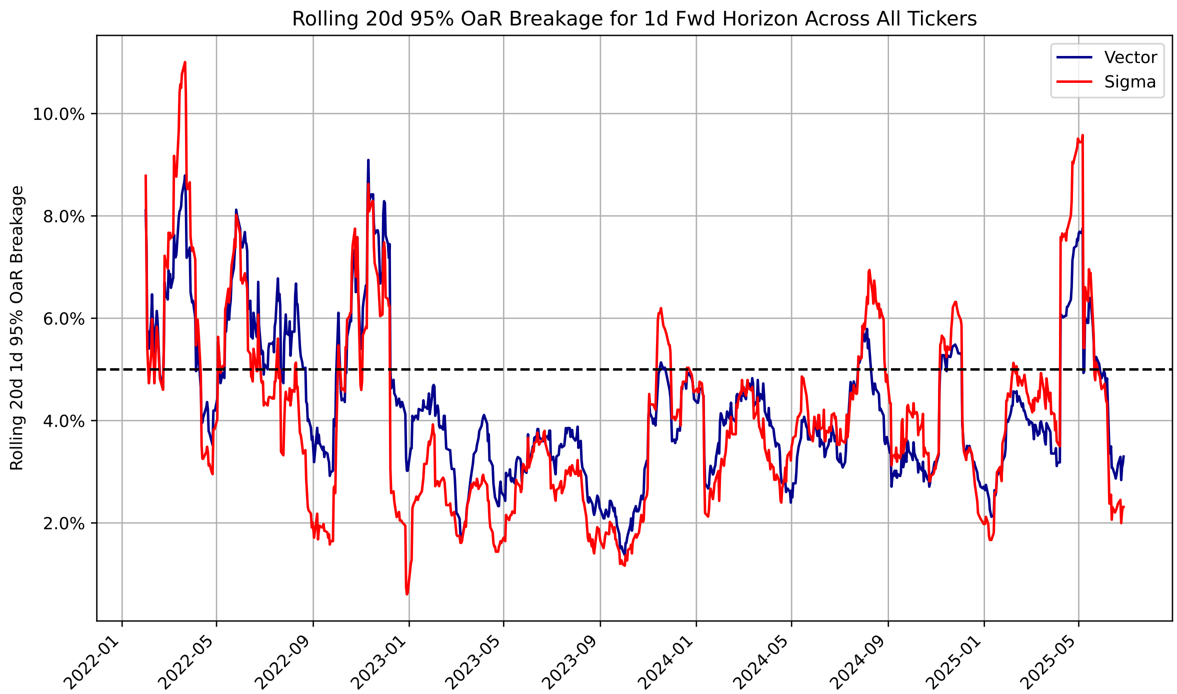


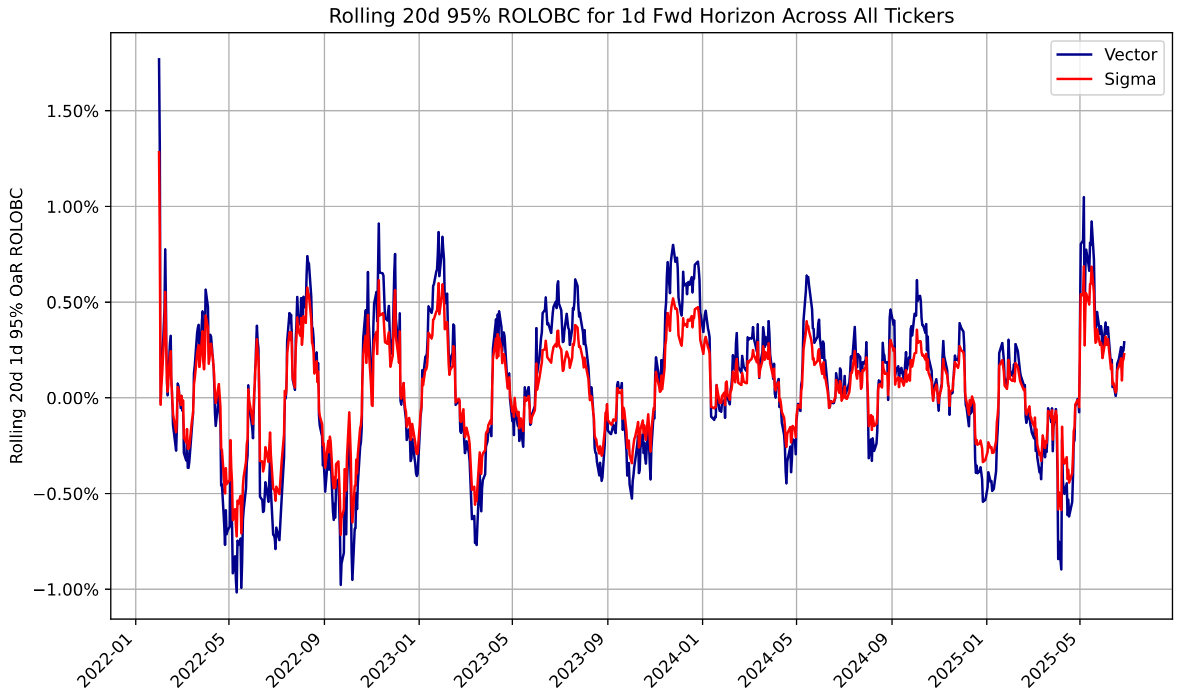


Rolling 20d Performance

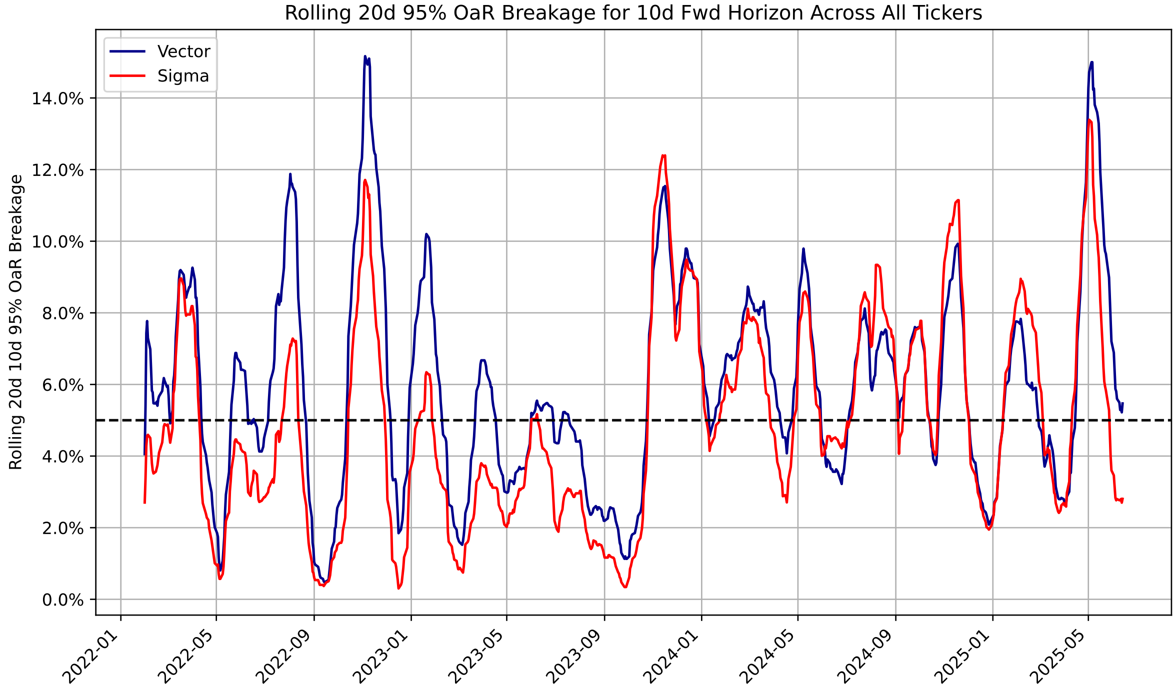
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statitics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

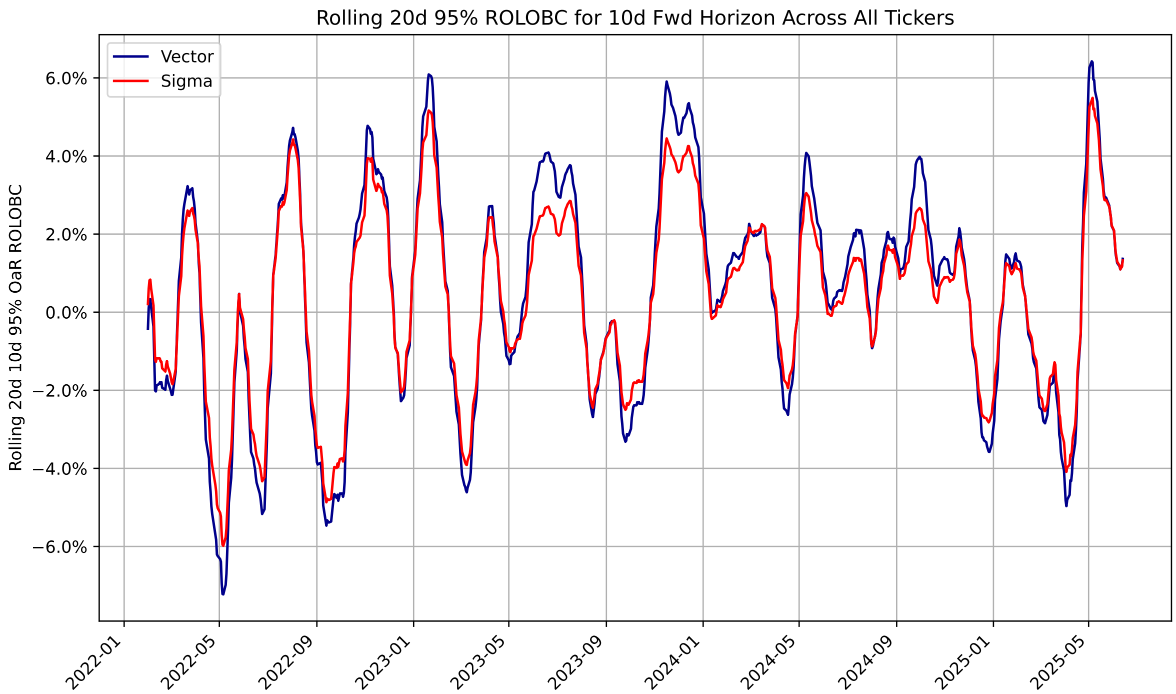
1d Horizon



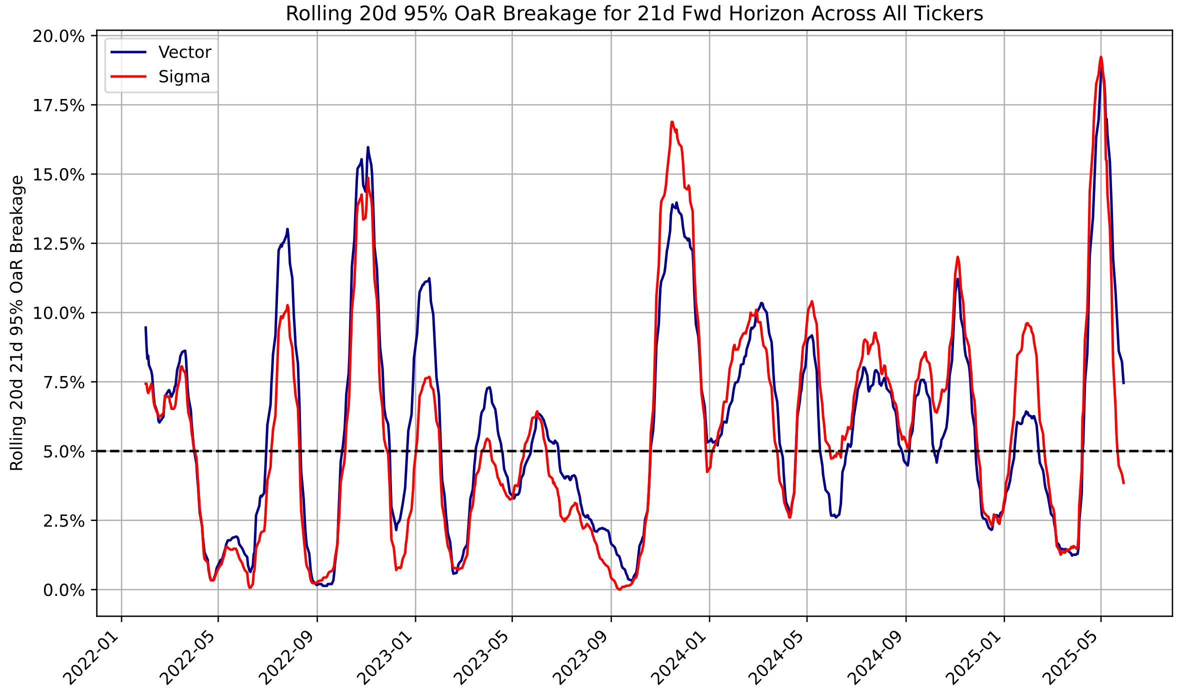

Rolling 20d 95% ROLOBC for 1d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 1d 95% OaR ROLOBC
1.50%
1.00%
0.50%
0.00%
−0.50%
−1.00%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

10d Horizon

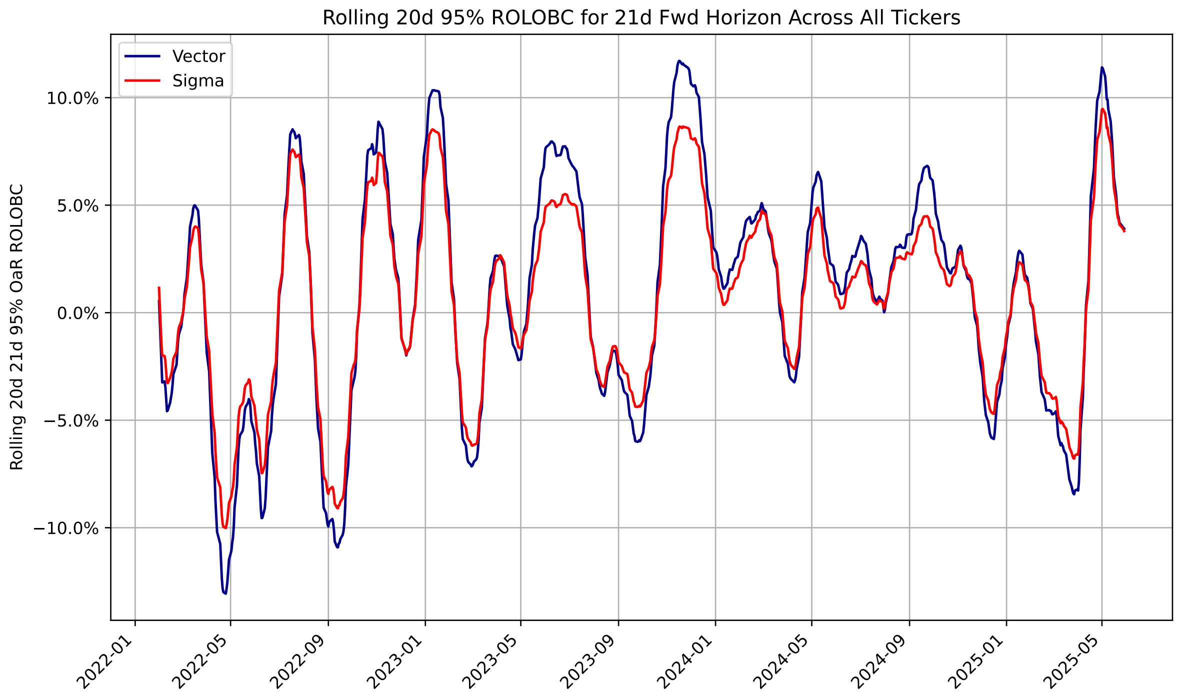

Rolling 20d 95% OaR Breakage for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 95% OaR Breakage
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05


Rolling 20d 95% ROLOBC for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 95% OaR ROLOBC
6.0%
4.0%
2.0%
0.0%
−2.0%
−4.0%
−6.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

21d Horizon

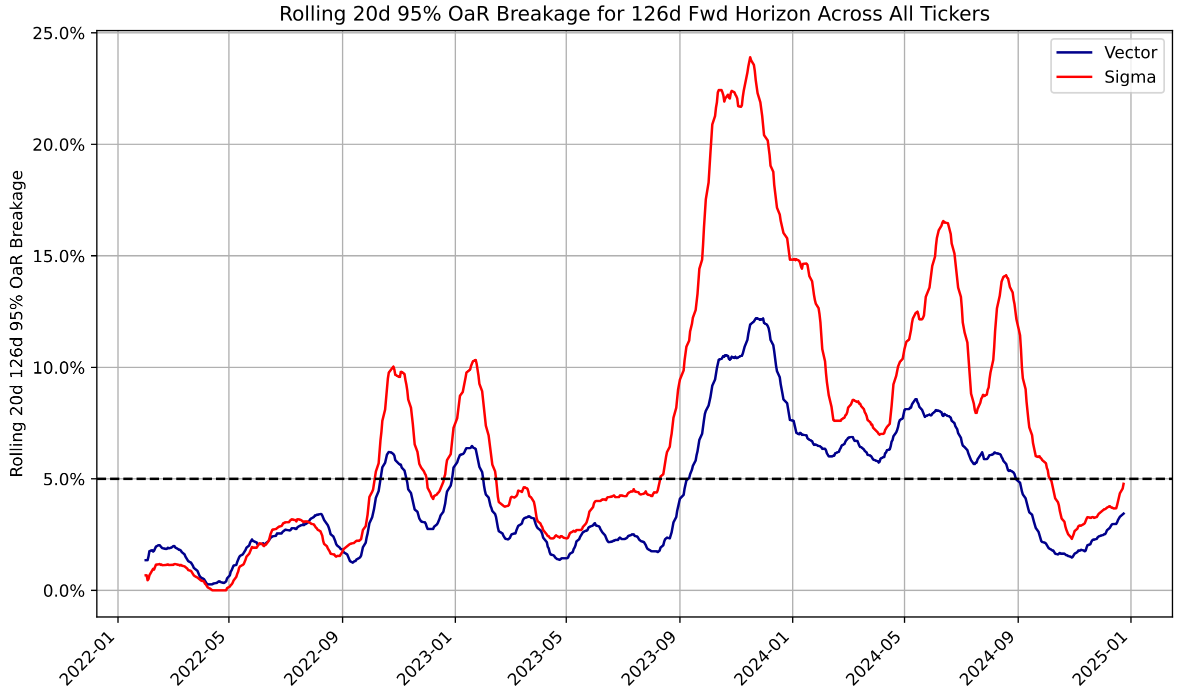


Rolling 20d 95% OaR Breakage for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 21d 95% OaR Breakage
20.0%
17.5%
15.0%
12.5%
10.0%
7.5%
5.0%
2.5%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

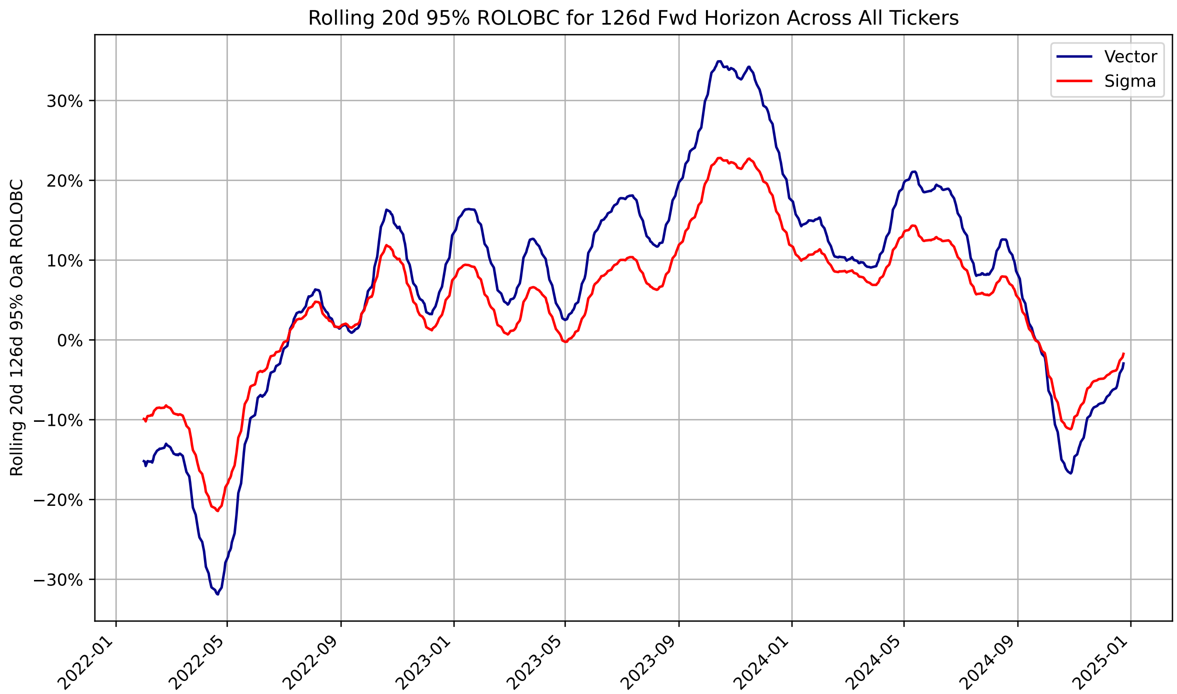


Rolling 20d 95% ROLOBC for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 21d 95% OaR ROLOBC
10.0%
5.0%
0.0%
−5.0%
−10.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

63d Horizon

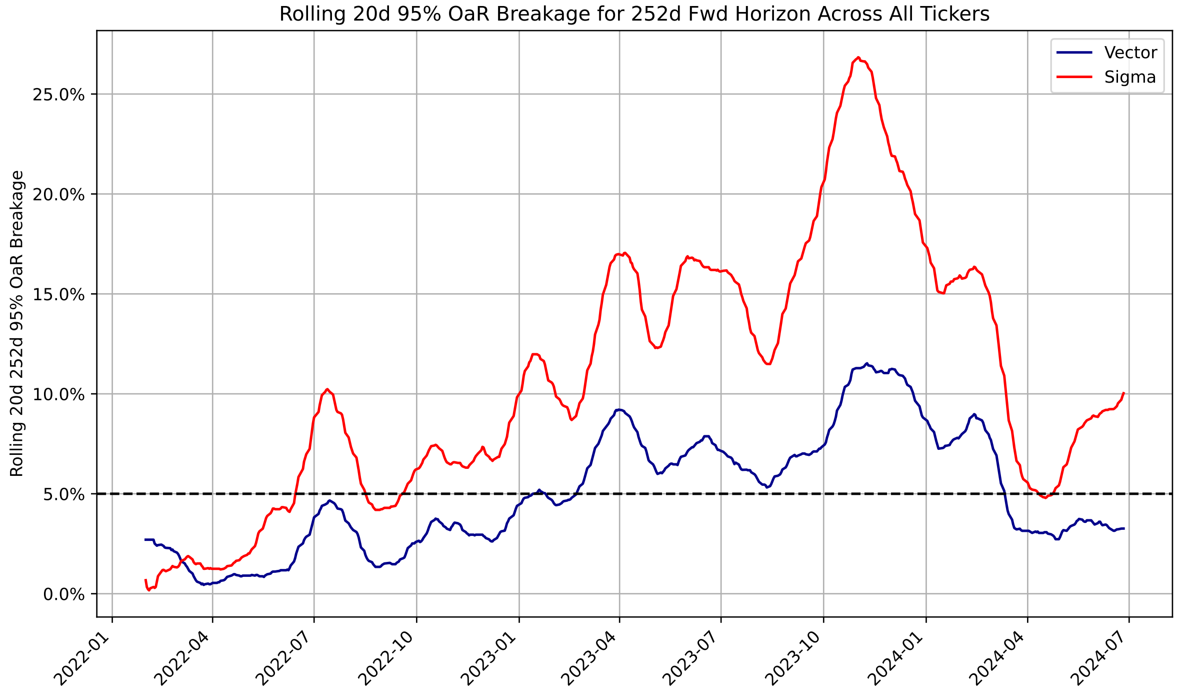


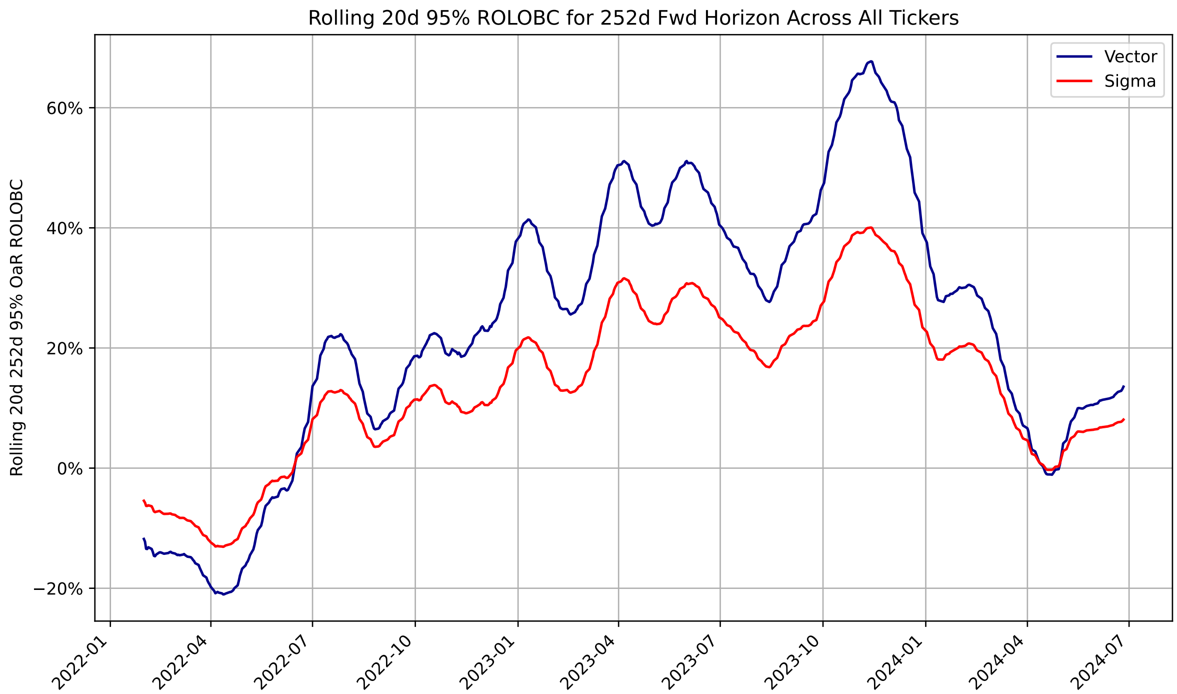
Rolling 20d 95% OaR Breakage for 126d Fwd Horizon Across All Tickers
Rolling 20d 126d 95% OaR Breakage
Vector
Sigma
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01



Rolling 20d 95% ROLOBC for 126d Fwd Horizon Across All Tickers
Rolling 20d 126d 95% OaR ROLOBC
Vector
Sigma
30%
20%
10%
0%
−10%
−20%
−30%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

252d Horizon





Top 30 Tickers By OaR Breakage

All TMD: 1d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	MSTR	18.25%	VST	10.41%
1.0	SBNY	16.55%	MSTR	7.72%
1.0	GME	13.92%	NVDA	7.37%
1.0	SIVBQ	12.95%	GLD	7.25%
1.0	CHTR	11.93%	AVGO	7.25%
1.0	AVGO	11.7%	TRGP	6.2%
1.0	SLV	11.7%	GBTC	6.2%
1.0	VST	10.99%	ACGL	6.2%
1.0	META	10.18%	MU	6.08%
1.0	FRCB	10.07%	ON	5.85%
1.0	GNRC	9.82%	CAH	5.85%
1.0	B	9.82%	PWR	5.85%
1.0	HLT	9.47%	FCX	5.73%
1.0	ZTS	8.77%	TEVA	5.61%
1.0	ACGL	8.54%	SLV	5.5%
1.0	TEVA	8.42%	WDC	5.5%
1.0	NFLX	8.19%	TXN	5.5%
1.0	INTU	8.19%	CDNS	5.5%
1.0	ORCL	7.95%	IRM	5.38%
1.0	BALL	7.72%	TSLA	5.38%
1.0	FRA	7.72%	AMAT	5.38%
1.0	BUD	7.49%	LLY	5.38%
1.0	XOM	7.25%	PHM	5.26%
1.0	TRGP	7.02%	HLT	5.15%
1.0	TSLA	7.02%	GS	5.15%

All TMD: 10d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	22.93%	VST	14.18%
10.0	META	19.74%	NVDA	12.41%
10.0	VST	18.2%	CAH	11.94%
10.0	AVGO	16.67%	LLY	11.23%
10.0	TEVA	16.31%	ORCL	10.87%
10.0	GME	15.48%	GS	10.17%
10.0	CHTR	14.78%	GLD	9.69%
10.0	IRM	14.42%	MSTR	9.46%
10.0	HCA	14.3%	TRGP	9.46%
10.0	SIVBQ	13.97%	IRM	9.1%
10.0	B	13.71%	GE	8.98%
10.0	SLV	13.48%	NVS	8.87%
10.0	TRGP	12.77%	ABBV	8.51%
10.0	ORCL	12.65%	TEVA	8.39%
10.0	GWW	12.29%	TSLA	8.39%
10.0	KALU	12.17%	AVGO	8.39%
10.0	GILD	11.82%	MUB	8.17%
10.0	BALL	10.76%	GBTC	8.04%
10.0	SBNY	10.66%	CPRT	8.04%
10.0	INTU	10.17%	MS	7.92%
10.0	HD	10.17%	GWW	7.92%
10.0	GNRC	10.17%	PWR	7.8%
10.0	NEM	9.81%	SLV	7.8%
10.0	ABBV	9.81%	CMG	7.57%
10.0	NFLX	9.69%	TMUS	7.45%

All TMD: 21d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	MSTR	23.83%	CAH	16.41%
21.0	AVGO	20.72%	MSTR	15.81%
21.0	META	20.72%	VST	15.45%
21.0	VST	19.52%	NVDA	14.97%
21.0	TRGP	17.13%	GLD	14.49%
21.0	TEVA	17.01%	TRGP	14.25%
21.0	CHTR	16.89%	LLY	14.13%
21.0	IRM	15.93%	GE	14.13%
21.0	GME	15.81%	AVGO	12.93%
21.0	ISRG	14.13%	GS	12.46%
21.0	B	13.89%	TSLA	12.1%
21.0	ORCL	13.89%	ORCL	12.1%
21.0	GWW	13.53%	GWW	11.86%
21.0	GILD	12.46%	GBTC	11.74%
21.0	BUD	12.46%	IRM	11.74%
21.0	HCA	12.22%	TEVA	10.78%
21.0	ETRN	12.14%	PWR	10.66%
21.0	CAH	11.86%	NVS	10.66%
21.0	SIVBQ	11.85%	MUB	10.55%
21.0	GNRC	11.74%	MS	10.54%
21.0	KALU	11.5%	CMG	10.54%
21.0	GS	11.26%	AMGN	10.42%
21.0	NEM	10.42%	X	10.4%
21.0	FRCB	10.37%	JPM	10.3%
21.0	NVS	10.06%	TMUS	10.18%

All TMD: 63d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	VST	31.02%	NVDA	29.89%
63.0	AVGO	27.62%	VST	29.0%
63.0	META	27.49%	GBTC	22.95%
63.0	MSTR	26.61%	TRGP	22.32%
63.0	IRM	18.92%	AVGO	20.81%
63.0	TRGP	18.16%	LLY	20.55%
63.0	GILD	17.53%	GLD	20.05%
63.0	CAH	17.02%	CAH	19.04%
63.0	ETRN	16.7%	MSTR	18.54%
63.0	TEVA	15.76%	THC	17.78%
63.0	BUD	15.51%	GE	17.78%
63.0	CHTR	15.38%	CMG	16.77%
63.0	WFC	13.62%	GILD	16.52%
63.0	MSI	13.37%	ETRN	16.15%
63.0	LW	12.48%	TMUS	15.13%
63.0	TMUS	11.98%	PHM	14.63%
63.0	EXPE	11.85%	TEVA	14.38%
63.0	GME	11.85%	META	13.75%
63.0	SIVBQ	11.11%	ORCL	13.62%
63.0	HCA	10.97%	WFC	13.37%
63.0	LLY	10.97%	IRM	12.74%
63.0	NVDA	10.84%	VNO	11.98%
63.0	GLD	10.72%	ACGL	11.85%
63.0	THC	10.72%	MRK	11.35%
63.0	GBTC	9.71%	ABBV	11.35%
63.0	GWW	9.46%	PWR	11.1%
63.0	ACGL	9.21%	TSLA	11.1%
63.0	ORCL	9.08%	CCL	10.97%
63.0	SNY	8.58%	GWW	10.84%
63.0	ISRG	8.07%	JPM	10.84%

All TMD: 126d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	47.67%	NVDA	47.81%
126.0	MSTR	39.45%	VST	47.12%
126.0	TRGP	30.82%	GE	35.48%
126.0	META	28.22%	GLD	34.93%
126.0	IRM	28.22%	AVGO	34.52%
126.0	AVGO	25.34%	MSTR	32.6%
126.0	TMUS	23.97%	TRGP	32.47%
126.0	TEVA	23.15%	LLY	30.0%
126.0	LW	21.92%	GILD	28.77%
126.0	NVDA	21.92%	PHM	28.08%
126.0	CAH	19.45%	CAH	23.84%
126.0	MSI	19.18%	GBTC	23.56%
126.0	GILD	19.04%	IRM	23.15%
126.0	LLY	18.36%	META	22.74%
126.0	GLD	17.81%	TMUS	22.33%
126.0	WFC	13.7%	THC	20.82%
126.0	THC	12.47%	ACGL	20.27%
126.0	ACGL	11.92%	TEVA	19.04%
126.0	GE	11.92%	GS	18.9%
126.0	EXPE	11.78%	MSI	18.63%
126.0	VFC	11.1%	ORCL	18.08%
126.0	ETRN	8.81%	JPM	17.26%
126.0	WDC	8.08%	COST	17.12%
126.0	GME	7.67%	CMG	17.12%
126.0	GOOGL	7.4%	WFC	15.89%
126.0	TDG	7.26%	T	15.62%
126.0	HCA	7.26%	TDG	15.48%
126.0	XOM	7.26%	NFLX	15.34%
126.0	GBTC	6.99%	GWW	14.52%
126.0	BALL	6.85%	CPRT	11.51%

All TMD: 252d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	VST	67.05%	AVGO	75.66%
252.0	MSTR	59.44%	GE	73.34%
252.0	AVGO	56.46%	NVDA	72.19%
252.0	NVDA	45.7%	VST	63.74%
252.0	TRGP	42.88%	PHM	59.6%
252.0	IRM	38.91%	LLY	56.13%
252.0	META	36.92%	MSTR	51.99%
252.0	LLY	30.96%	META	51.66%
252.0	TEVA	29.3%	GBTC	48.01%
252.0	GLD	28.81%	TRGP	47.68%
252.0	TDG	21.52%	COST	42.72%
252.0	GWW	20.2%	ACGL	42.22%
252.0	TMUS	19.7%	TDG	40.56%
252.0	THC	16.23%	GLD	38.25%
252.0	CAH	16.06%	JPM	37.75%
252.0	GILD	14.07%	TMUS	37.09%
252.0	LW	13.91%	IRM	33.94%
252.0	GE	12.91%	NFLX	32.62%
252.0	MSI	12.58%	ORCL	30.79%
252.0	GS	11.09%	GS	30.3%
252.0	WFC	10.26%	TEVA	30.13%
252.0	ACGL	8.77%	GWW	29.47%
252.0	WDC	8.11%	THC	28.97%
252.0	ETRN	8.01%	PWR	28.81%
252.0	ORCL	7.78%	CPRT	28.48%
252.0	GBTC	7.12%	CMG	26.49%
252.0	JPM	6.95%	ISRG	25.5%
252.0	CMG	6.95%	MSI	23.84%
252.0	GOOGL	6.29%	CAH	23.34%
252.0	HLT	5.63%	DHI	22.02%

P30D: 1d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	QQQ	26.32%	MOS	10.53%
1.0	AAP	26.32%	NEM	10.53%
1.0	SLV	26.32%	CMG	10.53%
1.0	TSLA	26.32%	CCL	10.53%
1.0	ORCL	21.05%	GNRC	10.53%
1.0	NEM	21.05%	BHC	10.53%
1.0	GILD	21.05%	ORCL	10.53%
1.0	WFC	15.79%	AZO	10.53%
1.0	NVS	15.79%	CSCO	10.53%
1.0	AVGO	15.79%	AMD	10.53%
1.0	CHTR	15.79%	LVS	10.53%
1.0	INTU	10.53%	X	9.09%
1.0	NAVI	10.53%	LLY	5.26%
1.0	META	10.53%	CSTM	5.26%
1.0	HLT	10.53%	DHI	5.26%
1.0	MSFT	10.53%	FCX	5.26%
1.0	ON	10.53%	SLV	5.26%
1.0	BXP	10.53%	SBUX	5.26%
1.0	INTC	10.53%	RIO	5.26%
1.0	JPM	10.53%	LNC	5.26%
1.0	VZ	10.53%	GE	5.26%
1.0	VST	10.53%	GILD	5.26%
1.0	UNH	5.26%	PRGO	5.26%
1.0	HD	5.26%	NVS	5.26%
1.0	OXY	5.26%	GT	5.26%
1.0	KEY	5.26%	PCG	5.26%
1.0	FCX	5.26%	OXY	5.26%
1.0	LLY	5.26%	TLT	5.26%
1.0	PRGO	5.26%	HSBC	5.26%
1.0	PWR	5.26%	LEN	5.26%

P30D: 10d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	ORCL	60.0%	ORCL	80.0%
10.0	CAH	60.0%	BHC	60.0%
10.0	NEM	50.0%	CAH	40.0%
10.0	AVGO	50.0%	XOM	40.0%
10.0	MSFT	40.0%	AMD	30.0%
10.0	MU	40.0%	GS	20.0%
10.0	VST	30.0%	CCL	20.0%
10.0	SLV	30.0%	CSCO	20.0%
10.0	BHC	30.0%	GNRC	10.0%
10.0	JPM	30.0%	NEM	10.0%
10.0	TSLA	30.0%	HLT	10.0%
10.0	GS	30.0%	CMG	10.0%
10.0	CSCO	20.0%	MU	10.0%
10.0	SBUX	20.0%	WFC	10.0%
10.0	HLT	20.0%	JPM	10.0%
10.0	AMD	20.0%	ON	10.0%
10.0	WFC	20.0%	NWL	0.0%
10.0	GNRC	10.0%	ORLY	0.0%
10.0	CCL	10.0%	NVS	0.0%
10.0	CMG	10.0%	OXY	0.0%
10.0	NFLX	10.0%	NVDA	0.0%
10.0	TDG	10.0%	NFLX	0.0%
10.0	TXN	10.0%	PCG	0.0%
10.0	QQQ	10.0%	PEP	0.0%
10.0	ON	10.0%	AA	0.0%
10.0	XOM	10.0%	NAVI	0.0%
10.0	KEY	10.0%	MNST	0.0%
10.0	NVDA	0.0%	LNC	0.0%
10.0	NVS	0.0%	LQD	0.0%
10.0	NWL	0.0%	LUMN	0.0%

P90D: 1d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SLV	28.81%	GLD	16.95%
1.0	NEM	23.73%	KALU	13.56%
1.0	GILD	22.03%	NEM	11.86%
1.0	AVGO	20.34%	CAH	11.86%
1.0	TSLA	20.34%	HSBC	11.86%
1.0	META	16.95%	HLT	11.86%
1.0	MU	15.25%	MOS	10.17%
1.0	WFC	13.56%	BALL	10.17%
1.0	AAP	13.56%	AZO	10.17%
1.0	QQQ	13.56%	AZN	10.17%
1.0	TXN	13.56%	GILD	10.17%
1.0	BUD	13.56%	ACGL	10.17%
1.0	CHTR	13.56%	LVS	10.17%
1.0	NVS	11.86%	CCL	8.47%
1.0	SNY	11.86%	SPY	8.47%
1.0	ZTS	11.86%	FIS	8.47%
1.0	TEVA	11.86%	NVS	8.47%
1.0	ORLY	11.86%	SLV	8.47%
1.0	NAVI	10.17%	ORCL	8.47%
1.0	MSFT	10.17%	CSCO	8.47%
1.0	ORCL	10.17%	BAC	8.47%
1.0	KALU	10.17%	GWW	8.47%
1.0	ON	10.17%	AMGN	8.47%
1.0	GLD	10.17%	META	8.47%
1.0	VZ	10.17%	NFLX	6.78%
1.0	AMZN	10.17%	FCX	6.78%
1.0	UNH	10.17%	PHM	6.78%
1.0	BXP	8.47%	PCG	6.78%
1.0	GOOGL	8.47%	EMB	6.78%
1.0	HD	8.47%	OXY	6.78%

P90D: 10d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	AVGO	62.0%	MOS	34.0%
10.0	WDC	44.0%	ORCL	32.0%
10.0	INTU	40.0%	CAH	26.0%
10.0	MU	40.0%	BA	24.0%
10.0	MSFT	38.0%	X	23.81%
10.0	KALU	34.0%	INTU	22.0%
10.0	NEM	34.0%	NFLX	22.0%
10.0	GE	34.0%	HLT	22.0%
10.0	SLV	34.0%	GS	20.0%
10.0	TSLA	32.0%	PWR	20.0%
10.0	TXN	32.0%	GE	20.0%
10.0	CHTR	30.0%	ELAN	20.0%
10.0	GS	30.0%	AAP	20.0%
10.0	BUD	28.0%	MSFT	20.0%
10.0	NFLX	28.0%	THC	18.0%
10.0	HCA	28.0%	MU	18.0%
10.0	ORCL	26.0%	LVS	18.0%
10.0	META	24.0%	CSCO	18.0%
10.0	HON	24.0%	CHTR	18.0%
10.0	AAP	24.0%	CCL	18.0%
10.0	AMZN	24.0%	GSK	18.0%
10.0	X	23.81%	META	18.0%
10.0	MSTR	22.0%	FIS	16.0%
10.0	WFC	22.0%	TXN	16.0%
10.0	ADBE	22.0%	LLY	16.0%
10.0	ON	22.0%	SLV	16.0%
10.0	ELAN	20.0%	BAC	16.0%
10.0	AMC	20.0%	QQQ	16.0%
10.0	CAH	20.0%	CDNS	16.0%
10.0	GOOGL	18.0%	HSBC	14.0%

P90D: 21d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	AVGO	100.0%	GE	58.97%
21.0	MU	84.62%	MOS	56.41%
21.0	TXN	66.67%	X	54.84%
21.0	WDC	64.1%	AAP	53.85%
21.0	GE	61.54%	ELAN	51.28%
21.0	INTU	56.41%	MSFT	48.72%
21.0	META	53.85%	INTU	48.72%
21.0	AAP	53.85%	ORCL	48.72%
21.0	ELAN	53.85%	CAH	46.15%
21.0	MSFT	48.72%	THC	38.46%
21.0	X	48.39%	AVGO	35.9%
21.0	TSLA	46.15%	MU	35.9%
21.0	KALU	46.15%	HLT	35.9%
21.0	BUD	41.03%	PWR	35.9%
21.0	HON	41.03%	BA	33.33%
21.0	ORCL	41.03%	META	33.33%
21.0	CHTR	38.46%	CHTR	33.33%
21.0	NEM	38.46%	CDNS	33.33%
21.0	SLV	38.46%	NFLX	30.77%
21.0	BAC	35.9%	HON	30.77%
21.0	PWR	35.9%	QQQ	30.77%
21.0	THC	35.9%	KALU	30.77%
21.0	HCA	35.9%	CSCO	30.77%
21.0	ZTS	35.9%	CCL	30.77%
21.0	GS	33.33%	GS	28.21%
21.0	AMZN	30.77%	HSBC	28.21%
21.0	CCL	30.77%	WFC	25.64%
21.0	JPM	28.21%	TXN	25.64%
21.0	WFC	28.21%	BAC	25.64%
21.0	ISRG	28.21%	MS	25.64%

P365D: 1d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	VST	15.32%	WRK	50.0%
1.0	SLV	14.52%	VST	11.69%
1.0	GILD	14.52%	MSTR	11.29%
1.0	AVGO	14.52%	TRGP	10.08%
1.0	CHTR	14.11%	GLD	10.08%
1.0	MSTR	12.9%	TXN	8.06%
1.0	TSLA	11.69%	PWR	8.06%
1.0	META	10.89%	TMUS	7.66%
1.0	IRM	10.89%	HLT	7.66%
1.0	GS	10.08%	GBTC	7.26%
1.0	ORLY	9.68%	AZO	6.85%
1.0	PWR	9.68%	CCL	6.85%
1.0	VFC	9.27%	TSLA	6.85%
1.0	HLT	8.87%	AVGO	6.45%
1.0	KEY	8.87%	HD	6.45%
1.0	HD	8.87%	GILD	6.45%
1.0	TXN	8.87%	COST	6.45%
1.0	B	8.87%	T	6.45%
1.0	FRA	8.87%	MS	6.45%
1.0	ZTS	8.47%	ACGL	6.45%
1.0	WFC	8.47%	UNH	6.05%
1.0	BAC	8.06%	CAH	6.05%
1.0	GNRC	8.06%	TDG	6.05%
1.0	HON	8.06%	SPY	6.05%
1.0	VZ	7.66%	HSBC	6.05%
1.0	SBUX	7.66%	GS	6.05%
1.0	NEM	7.66%	POST	6.05%
1.0	ABBV	7.26%	PHM	6.05%
1.0	UNH	7.26%	MU	6.05%
1.0	NFLX	7.26%	MOS	5.65%

P365D: 10d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	GILD	23.01%	TRGP	17.99%
10.0	AVGO	22.59%	VST	17.57%
10.0	META	21.34%	TMUS	17.57%
10.0	CHTR	20.92%	MS	15.9%
10.0	WFC	20.08%	CAH	15.48%
10.0	HCA	19.67%	WFC	15.48%
10.0	VST	17.15%	ORCL	15.06%
10.0	NEM	17.15%	GS	14.23%
10.0	TSLA	16.74%	GILD	14.23%
10.0	GS	16.74%	T	13.81%
10.0	VFC	16.32%	JPM	13.39%
10.0	MSTR	16.32%	CSCO	13.39%
10.0	SLV	15.9%	ABBV	13.39%
10.0	GE	15.9%	NFLX	13.39%
10.0	VZ	15.9%	CCL	12.55%
10.0	ORCL	15.9%	CPRT	11.72%
10.0	EXPE	15.06%	CHTR	11.72%
10.0	INTU	14.64%	LLY	11.3%
10.0	IRM	14.64%	WYNN	10.88%
10.0	ABBV	14.64%	LVS	10.46%
10.0	NFLX	13.81%	NVS	10.46%
10.0	KALU	13.39%	AMZN	10.46%
10.0	BUD	13.39%	BAC	10.46%
10.0	TRGP	12.97%	TSLA	10.04%
10.0	BXP	12.97%	COST	10.04%
10.0	HD	12.97%	META	10.04%
10.0	AMZN	12.97%	CVS	10.04%
10.0	TXN	12.97%	MOS	9.62%
10.0	MU	12.55%	GE	9.62%
10.0	BAC	12.13%	LUMN	9.62%

P365D: 21d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	AVGO	27.63%	TMUS	29.82%
21.0	META	26.32%	WFC	24.12%
21.0	VZ	24.56%	CAH	22.37%
21.0	TSLA	24.12%	MS	21.93%
21.0	TMUS	23.68%	TRGP	21.05%
21.0	CHTR	22.81%	MSTR	21.05%
21.0	BUD	21.93%	VST	20.61%
21.0	GILD	21.49%	NFLX	19.74%
21.0	GE	19.3%	ORCL	17.98%
21.0	VST	19.3%	GS	17.98%
21.0	GS	18.42%	JPM	17.11%
21.0	WFC	16.23%	TSLA	17.11%
21.0	ORCL	16.23%	SBUX	17.11%
21.0	HCA	15.79%	CCL	16.67%
21.0	MSTR	15.79%	AVGO	16.67%
21.0	TRGP	15.35%	GLD	16.67%
21.0	BAC	15.35%	GE	16.67%
21.0	MU	14.91%	T	16.23%
21.0	PWR	14.47%	GILD	16.23%
21.0	NEM	14.04%	CHTR	14.91%
21.0	EXPE	13.6%	CPRT	14.04%
21.0	KALU	13.6%	COST	14.04%
21.0	ISRG	13.16%	ABBV	13.6%
21.0	AAP	13.16%	IRM	13.16%
21.0	ABBV	12.72%	WYNN	13.16%
21.0	IRM	12.72%	LVS	13.16%
21.0	NFLX	12.72%	BUD	13.16%
21.0	HD	12.28%	GBTC	12.28%
21.0	INTU	11.84%	HLT	12.28%
21.0	TXN	11.84%	META	11.84%

P365D: 63d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	BUD	41.94%	GLD	45.16%
63.0	GILD	34.41%	TRGP	45.16%
63.0	TMUS	32.26%	TMUS	42.47%
63.0	TSLA	31.18%	VST	38.17%
63.0	VST	29.57%	NFLX	36.56%
63.0	AVGO	26.88%	WFC	34.41%
63.0	EXPE	26.34%	TSLA	31.18%
63.0	WFC	24.19%	MSTR	30.65%
63.0	GS	23.12%	GBTC	30.65%
63.0	MSI	22.58%	T	29.57%
63.0	CAH	22.58%	MS	27.42%
63.0	TRGP	22.04%	CAH	27.42%
63.0	GLD	20.43%	BUD	27.42%
63.0	META	15.59%	CCL	26.88%
63.0	ORCL	14.52%	ORCL	26.88%
63.0	IRM	13.98%	GILD	25.81%
63.0	MSTR	13.98%	GS	21.51%
63.0	VFC	12.37%	PWR	20.43%
63.0	HD	12.37%	MSI	19.89%
63.0	MS	12.37%	HSBC	18.82%
63.0	PWR	11.83%	VNO	18.28%
63.0	GBTC	11.83%	CSCO	17.2%
63.0	NEM	11.83%	LVS	16.13%
63.0	HCA	10.22%	SBUX	14.52%
63.0	CVS	10.22%	EXPE	13.98%
63.0	SNY	9.68%	HLT	12.9%
63.0	BXP	9.14%	MNST	12.9%
63.0	CMA	8.6%	GWW	12.37%
63.0	HSBC	8.06%	AMZN	12.37%
63.0	CHTR	8.06%	AVGO	12.37%

P365D: 126d

Results reflect ticker level average 95% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	TMUS	60.16%	GLD	70.73%
126.0	GILD	47.97%	NFLX	63.41%
126.0	EXPE	39.02%	HSBC	60.98%
126.0	CAH	35.77%	TMUS	60.98%
126.0	VFC	32.52%	T	60.16%
126.0	META	30.89%	CAH	56.1%
126.0	MSTR	27.64%	TRGP	49.59%
126.0	GLD	26.02%	MSTR	44.72%
126.0	VST	24.39%	GILD	41.46%
126.0	TRGP	24.39%	CSCO	39.02%
126.0	WFC	22.76%	VST	39.02%
126.0	BUD	22.76%	WFC	35.77%
126.0	MSI	17.07%	MS	26.02%
126.0	AVGO	16.26%	TSLA	22.76%
126.0	NFLX	13.01%	GS	21.95%
126.0	GE	11.38%	JPM	19.51%
126.0	TSLA	9.76%	BUD	19.51%
126.0	NWL	8.94%	AVGO	17.07%
126.0	NEM	6.5%	CCL	16.26%
126.0	HSBC	5.69%	GE	14.63%
126.0	ORLY	4.07%	BMY	13.82%
126.0	MS	3.25%	EXPE	11.38%
126.0	GS	2.44%	HLT	10.57%
126.0	OXY	0.0%	SBUX	8.94%
126.0	LUMN	0.0%	COST	8.13%
126.0	LLY	0.0%	ISRG	8.13%
126.0	ORCL	0.0%	AMZN	7.32%
126.0	ON	0.0%	GBTC	6.5%
126.0	LNC	0.0%	ORLY	6.5%
126.0	NVS	0.0%	META	6.5%

Top 30 Tickers By ROLOBC

All TMD: 1d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NVDA	0.49%	MSTR	0.47%
1.0	GBTC	0.42%	VST	0.31%
1.0	VST	0.4%	NVDA	0.28%
1.0	X	0.38%	AVGO	0.22%
1.0	CCL	0.36%	GBTC	0.22%
1.0	AVGO	0.34%	GME	0.2%
1.0	GE	0.34%	PWR	0.18%
1.0	TSLA	0.29%	NFLX	0.18%
1.0	MSTR	0.25%	GE	0.17%
1.0	TDG	0.24%	X	0.17%
1.0	LLY	0.24%	LLY	0.15%
1.0	THC	0.22%	CAH	0.15%
1.0	TRGP	0.21%	TRGP	0.15%
1.0	CAH	0.2%	META	0.15%
1.0	PWR	0.2%	THC	0.15%
1.0	CMG	0.19%	ORCL	0.14%
1.0	GME	0.17%	TDG	0.12%
1.0	MSFT	0.17%	TEVA	0.12%
1.0	AZO	0.17%	ETRN	0.12%
1.0	CDNS	0.17%	IRM	0.11%
1.0	B	0.16%	CCL	0.11%
1.0	ORLY	0.16%	CDNS	0.11%
1.0	COST	0.16%	PHM	0.11%
1.0	DHI	0.16%	TMUS	0.1%
1.0	IRM	0.16%	ISRG	0.1%
1.0	JPM	0.16%	GWW	0.1%
1.0	MU	0.15%	GS	0.1%
1.0	PHM	0.15%	ORLY	0.1%
1.0	AMD	0.15%	MU	0.1%
1.0	ON	0.14%	CMG	0.1%

All TMD: 10d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	5.54%	MSTR	4.71%
10.0	VST	3.47%	VST	3.03%
10.0	TSLA	3.45%	NVDA	2.72%
10.0	MSTR	3.34%	AVGO	2.12%
10.0	LLY	3.29%	GBTC	2.07%
10.0	AVGO	3.28%	NFLX	1.8%
10.0	GBTC	3.25%	PWR	1.73%
10.0	CCL	2.99%	GME	1.68%
10.0	PWR	2.51%	META	1.63%
10.0	GE	2.24%	GE	1.6%
10.0	CAH	1.79%	LLY	1.6%
10.0	AZO	1.74%	X	1.58%
10.0	CDNS	1.7%	CAH	1.48%
10.0	X	1.67%	TRGP	1.42%
10.0	MSFT	1.65%	ETRN	1.41%
10.0	ETRN	1.52%	ORCL	1.37%
10.0	THC	1.5%	THC	1.33%
10.0	ORLY	1.45%	TEVA	1.28%
10.0	TDG	1.45%	IRM	1.15%
10.0	PHM	1.44%	TDG	1.13%
10.0	COST	1.42%	CDNS	1.05%
10.0	HLT	1.4%	PHM	1.04%
10.0	GME	1.37%	GWW	1.03%
10.0	JPM	1.28%	TSLA	0.97%
10.0	NFLX	1.25%	ORLY	0.94%
10.0	TRGP	1.23%	MU	0.93%
10.0	MU	1.21%	ISRG	0.92%
10.0	DHI	1.19%	CCL	0.91%
10.0	AMD	1.19%	COST	0.88%
10.0	QQQ	1.17%	CMG	0.88%

All TMD: 21d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	11.43%	MSTR	10.57%
21.0	MSTR	8.83%	VST	6.47%
21.0	TSLA	8.57%	NVDA	5.86%
21.0	GBTC	7.84%	GBTC	4.56%
21.0	VST	7.73%	AVGO	4.44%
21.0	CCL	6.28%	NFLX	3.93%
21.0	LLY	5.84%	PWR	3.65%
21.0	PWR	5.56%	META	3.63%
21.0	AVGO	5.23%	GE	3.53%
21.0	GE	4.7%	ETRN	3.5%
21.0	AZO	4.16%	LLY	3.34%
21.0	CDNS	3.89%	X	3.17%
21.0	NFLX	3.69%	CAH	3.06%
21.0	CAH	3.67%	TRGP	2.92%
21.0	X	3.55%	GME	2.85%
21.0	PHM	3.35%	TEVA	2.81%
21.0	ETRN	3.28%	ORCL	2.8%
21.0	THC	3.23%	THC	2.79%
21.0	COST	3.15%	IRM	2.42%
21.0	ORLY	3.13%	TDG	2.34%
21.0	MSFT	3.11%	TSLA	2.33%
21.0	PCG	3.09%	GWW	2.31%
21.0	DHI	3.09%	PHM	2.24%
21.0	TDG	2.98%	CDNS	2.21%
21.0	JPM	2.88%	ISRG	2.07%
21.0	QQQ	2.82%	ORLY	2.01%
21.0	TRGP	2.6%	CCL	2.0%
21.0	HLT	2.58%	COST	1.97%
21.0	IRM	2.53%	ACGL	1.92%
21.0	ACGL	2.48%	TMUS	1.82%

All TMD: 63d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	46.05%	MSTR	30.78%
63.0	NVDA	33.88%	VST	19.34%
63.0	GBTC	25.51%	NVDA	18.55%
63.0	VST	21.12%	GBTC	14.94%
63.0	CCL	20.99%	NFLX	12.64%
63.0	PWR	16.03%	AVGO	12.24%
63.0	LLY	15.84%	META	11.79%
63.0	NFLX	14.83%	GE	10.4%
63.0	GE	13.64%	ETRN	10.28%
63.0	TSLA	13.16%	LLY	9.69%
63.0	AVGO	13.01%	PWR	9.17%
63.0	PHM	12.07%	CAH	8.56%
63.0	THC	10.89%	TRGP	8.3%
63.0	CAH	10.15%	PHM	7.9%
63.0	TDG	10.1%	THC	7.82%
63.0	DHI	10.1%	TDG	7.01%
63.0	AZO	10.03%	TEVA	6.81%
63.0	CDNS	9.9%	ORCL	6.75%
63.0	PCG	9.49%	GWW	6.63%
63.0	ETRN	9.32%	ISRG	6.41%
63.0	TRGP	9.2%	ACGL	6.13%
63.0	MSFT	9.06%	ORLY	6.04%
63.0	JPM	8.82%	CDNS	6.03%
63.0	VNO	8.63%	IRM	5.99%
63.0	ACGL	8.5%	X	5.91%
63.0	COST	8.39%	TMUS	5.74%
63.0	ORCL	8.35%	JPM	5.5%
63.0	QQQ	8.35%	CMG	5.44%
63.0	GWW	8.24%	CPRT	5.42%
63.0	CPRT	8.22%	CCL	5.41%

All TMD: 126d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	NVDA	91.9%	MSTR	73.94%
126.0	MSTR	78.71%	NVDA	49.33%
126.0	GBTC	69.48%	VST	43.95%
126.0	VST	51.82%	GBTC	40.42%
126.0	NFLX	43.86%	NFLX	30.16%
126.0	GE	39.22%	META	29.78%
126.0	PHM	37.92%	AVGO	28.09%
126.0	CCL	37.29%	GE	25.18%
126.0	AVGO	32.29%	LLY	21.09%
126.0	PWR	32.15%	TRGP	20.47%
126.0	THC	30.05%	PHM	19.21%
126.0	LLY	28.71%	THC	19.07%
126.0	AMZN	27.47%	ETRN	18.49%
126.0	META	27.44%	PWR	18.21%
126.0	VNO	26.76%	CAH	17.57%
126.0	DHI	25.57%	TDG	16.22%
126.0	MU	25.28%	ISRG	16.07%
126.0	ISRG	24.59%	TEVA	15.91%
126.0	TSLA	24.59%	ORCL	15.87%
126.0	ORCL	24.33%	GWW	14.82%
126.0	PCG	23.18%	ACGL	14.14%
126.0	ACGL	23.07%	IRM	13.86%
126.0	AMAT	23.05%	CCL	13.67%
126.0	QQQ	22.84%	JPM	13.33%
126.0	TDG	22.83%	ORLY	13.28%
126.0	TRGP	22.3%	MSI	13.07%
126.0	COST	21.67%	CMG	13.0%
126.0	JPM	21.42%	CPRT	12.76%
126.0	CAH	21.35%	COST	12.64%
126.0	CMG	21.1%	TMUS	12.35%

All TMD: 252d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	NVDA	285.63%	MSTR	226.72%
252.0	GBTC	242.48%	NVDA	146.81%
252.0	MSTR	218.8%	VST	126.5%
252.0	NFLX	132.58%	GBTC	120.3%
252.0	PHM	122.94%	META	81.19%
252.0	GE	122.48%	AVGO	73.18%
252.0	VST	117.27%	NFLX	68.62%
252.0	LLY	106.87%	GE	61.22%
252.0	META	98.57%	PHM	56.37%
252.0	AVGO	98.23%	LLY	54.67%
252.0	CCL	90.78%	THC	52.11%
252.0	PWR	87.62%	TRGP	50.35%
252.0	THC	82.91%	PWR	42.1%
252.0	DHI	79.18%	TDG	40.67%
252.0	AMZN	77.71%	ISRG	39.69%
252.0	ISRG	75.74%	TEVA	39.08%
252.0	VNO	74.03%	ORCL	38.06%
252.0	ACGL	73.9%	IRM	37.42%
252.0	COST	70.36%	CCL	36.24%
252.0	MU	70.32%	ETRN	35.78%
252.0	TRGP	69.05%	DHI	35.23%
252.0	CDNS	68.66%	ACGL	34.67%
252.0	QQQ	63.48%	GWW	34.43%
252.0	TDG	63.04%	CMG	32.73%
252.0	AMD	62.41%	CAH	32.53%
252.0	MSFT	62.19%	COST	31.56%
252.0	AMAT	59.6%	JPM	31.22%
252.0	ORCL	59.13%	CPRT	31.0%
252.0	CMG	58.39%	MSI	30.54%
252.0	INTU	56.86%	LEN	30.04%

P30D: 1d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	BHC	3.4%	BHC	2.15%
1.0	LUMN	2.23%	ORCL	1.51%
1.0	NVDA	1.9%	MU	1.22%
1.0	CCL	1.87%	AMD	1.17%
1.0	GNRC	1.63%	ON	1.17%
1.0	WDC	1.5%	WDC	1.09%
1.0	AMD	1.49%	CCL	0.98%
1.0	NWL	1.41%	GNRC	0.93%
1.0	MU	1.19%	GS	0.89%
1.0	AMAT	1.19%	AMAT	0.82%
1.0	ORCL	1.19%	VST	0.79%
1.0	GS	1.13%	NVDA	0.75%
1.0	ON	0.98%	LUMN	0.74%
1.0	DHI	0.98%	INTC	0.72%
1.0	CZR	0.96%	CMG	0.65%
1.0	LVS	0.95%	TXN	0.64%
1.0	CMG	0.95%	AA	0.58%
1.0	ELAN	0.87%	AVGO	0.57%
1.0	BALL	0.84%	ZION	0.55%
1.0	AA	0.84%	DHI	0.54%
1.0	UAA	0.81%	KEY	0.52%
1.0	PHM	0.8%	META	0.52%
1.0	CSTM	0.75%	NFLX	0.5%
1.0	ZION	0.74%	MS	0.49%
1.0	WYNN	0.7%	TFC	0.49%
1.0	CSCO	0.62%	CZR	0.49%
1.0	NFLX	0.62%	JPM	0.48%
1.0	CLF	0.59%	PWR	0.48%
1.0	FITB	0.58%	MSTR	0.46%
1.0	AVGO	0.54%	QCOM	0.45%

P30D: 10d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	BHC	30.06%	BHC	25.34%
10.0	ORCL	18.48%	ORCL	18.18%
10.0	AMD	16.94%	AMD	14.01%
10.0	NVDA	11.18%	MU	13.58%
10.0	MU	10.62%	WDC	10.73%
10.0	WDC	10.23%	VST	8.84%
10.0	CZR	10.13%	GS	7.83%
10.0	LUMN	9.51%	NEM	6.87%
10.0	GS	8.41%	INTC	6.47%
10.0	XOM	6.79%	ON	6.46%
10.0	CCL	6.64%	AMAT	6.27%
10.0	WYNN	6.56%	CAH	6.0%
10.0	GNRC	6.49%	CZR	5.91%
10.0	BALL	6.44%	CCL	5.65%
10.0	ON	6.23%	WYNN	5.46%
10.0	VST	6.15%	NVDA	5.39%
10.0	AMAT	6.11%	GNRC	5.37%
10.0	CAH	5.31%	JPM	5.21%
10.0	CMG	5.16%	CMG	5.07%
10.0	LVS	4.9%	XOM	5.02%
10.0	PHM	4.29%	CVS	4.6%
10.0	JPM	3.98%	TXN	4.43%
10.0	BAC	3.81%	BALL	4.37%
10.0	CSCO	3.68%	CSCO	3.98%
10.0	TFC	3.64%	MS	3.86%
10.0	INTC	3.64%	MSFT	3.77%
10.0	MS	3.52%	PWR	3.76%
10.0	NFLX	3.27%	NFLX	3.57%
10.0	NEM	3.11%	LUMN	3.4%
10.0	DHI	3.08%	BAC	3.38%

P90D: 1d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NVDA	2.18%	WDC	1.12%
1.0	MOS	1.74%	VST	1.06%
1.0	VST	1.72%	AVGO	1.05%
1.0	CCL	1.63%	MU	0.94%
1.0	LUMN	1.42%	CCL	0.9%
1.0	AMD	1.36%	ORCL	0.85%
1.0	CSTM	1.28%	NVDA	0.81%
1.0	CYH	1.26%	AMD	0.8%
1.0	ELAN	1.2%	ON	0.77%
1.0	WYNN	1.12%	X	0.76%
1.0	WDC	1.09%	ELAN	0.75%
1.0	LVS	1.05%	MSTR	0.72%
1.0	AVGO	1.05%	KALU	0.72%
1.0	BA	1.03%	PWR	0.72%
1.0	UAA	1.0%	CSTM	0.71%
1.0	X	0.92%	AAP	0.67%
1.0	KALU	0.87%	NFLX	0.67%
1.0	AAP	0.82%	MOS	0.61%
1.0	GBTC	0.82%	CYH	0.61%
1.0	NFLX	0.81%	BA	0.6%
1.0	IRM	0.8%	META	0.6%
1.0	CLF	0.8%	GS	0.58%
1.0	GE	0.78%	GE	0.57%
1.0	BHC	0.76%	AMAT	0.57%
1.0	INTU	0.76%	THC	0.53%
1.0	CZR	0.74%	MSFT	0.51%
1.0	AMAT	0.72%	FCX	0.5%
1.0	PWR	0.71%	INTU	0.5%
1.0	MU	0.68%	GBTC	0.49%
1.0	GNRC	0.67%	MS	0.48%

P90D: 10d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	20.74%	WDC	12.53%
10.0	MOS	17.57%	MU	12.3%
10.0	CSTM	15.44%	VST	11.37%
10.0	VST	14.32%	ELAN	10.18%
10.0	LUMN	13.06%	ORCL	10.14%
10.0	AAP	12.48%	CSTM	10.12%
10.0	LVS	12.26%	AAP	9.83%
10.0	CYH	11.34%	AVGO	9.33%
10.0	AMD	10.7%	ON	9.02%
10.0	ORCL	10.06%	AMD	8.72%
10.0	ELAN	8.76%	KALU	8.04%
10.0	MU	8.54%	MOS	7.74%
10.0	CCL	8.45%	CCL	7.68%
10.0	WYNN	8.17%	CYH	7.68%
10.0	X	8.17%	NVDA	7.56%
10.0	BA	8.03%	PWR	7.46%
10.0	WDC	7.67%	THC	6.95%
10.0	NFLX	7.64%	X	6.95%
10.0	PWR	7.31%	NFLX	6.91%
10.0	THC	6.87%	GE	6.64%
10.0	ON	6.61%	MSTR	6.44%
10.0	BHC	6.53%	BHC	6.4%
10.0	QQQ	6.53%	BA	6.37%
10.0	IRM	6.48%	TSLA	6.3%
10.0	HLT	6.27%	META	6.26%
10.0	GBTC	6.21%	GS	6.12%
10.0	NWL	6.16%	INTU	5.89%
10.0	CAH	5.94%	TXN	5.89%
10.0	GE	5.86%	LVS	5.72%
10.0	GT	5.8%	FCX	5.72%

P90D: 21d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	50.82%	AAP	28.29%
21.0	MOS	42.89%	MU	28.28%
21.0	CSTM	35.35%	WDC	27.21%
21.0	VST	32.39%	ELAN	27.09%
21.0	AAP	31.86%	VST	25.51%
21.0	AMD	26.85%	CSTM	24.36%
21.0	LVS	25.67%	AVGO	22.29%
21.0	CYH	25.66%	CYH	22.11%
21.0	ELAN	23.39%	ORCL	21.73%
21.0	LUMN	23.08%	ON	19.86%
21.0	BA	22.71%	NVDA	18.97%
21.0	ORCL	21.55%	AMD	18.81%
21.0	ON	19.35%	CCL	18.12%
21.0	THC	19.29%	KALU	18.0%
21.0	QQQ	19.15%	THC	17.66%
21.0	WYNN	18.97%	MOS	16.92%
21.0	CCL	18.84%	PWR	16.76%
21.0	MU	18.39%	GE	16.08%
21.0	MSFT	16.51%	META	15.65%
21.0	NWL	16.41%	X	14.98%
21.0	PWR	16.05%	TSLA	14.73%
21.0	WDC	16.0%	INTU	14.67%
21.0	NFLX	15.89%	BA	14.35%
21.0	IRM	15.51%	TXN	14.16%
21.0	X	15.49%	MSFT	12.92%
21.0	AMAT	15.21%	NFLX	12.85%
21.0	HLT	14.85%	LVS	12.38%
21.0	GBTC	14.6%	GS	11.9%
21.0	INTU	13.55%	FCX	11.51%
21.0	UAA	13.3%	LUMN	11.25%

P365D: 1d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	WRK	4.37%	WRK	2.75%
1.0	LUMN	1.27%	MSTR	0.63%
1.0	VST	0.75%	LUMN	0.47%
1.0	CCL	0.63%	VST	0.43%
1.0	VNO	0.48%	NFLX	0.29%
1.0	NVDA	0.48%	AVGO	0.28%
1.0	MOS	0.46%	CCL	0.24%
1.0	AVGO	0.45%	TSLA	0.23%
1.0	T	0.4%	CAH	0.23%
1.0	NFLX	0.38%	GBTC	0.23%
1.0	CAH	0.36%	GE	0.21%
1.0	GE	0.36%	X	0.21%
1.0	MS	0.34%	GILD	0.21%
1.0	GBTC	0.34%	ORCL	0.21%
1.0	TRGP	0.32%	PWR	0.21%
1.0	TSLA	0.31%	GS	0.19%
1.0	BMY	0.3%	VNO	0.19%
1.0	ETRN	0.3%	T	0.18%
1.0	CSCO	0.26%	META	0.18%
1.0	TDG	0.26%	NVDA	0.17%
1.0	B	0.25%	CSCO	0.17%
1.0	GT	0.25%	EXPE	0.17%
1.0	JPM	0.25%	NEM	0.16%
1.0	CYH	0.25%	MS	0.16%
1.0	WYNN	0.23%	ETRN	0.16%
1.0	AAP	0.22%	CHTR	0.15%
1.0	HLT	0.21%	JPM	0.15%
1.0	GILD	0.21%	THC	0.15%
1.0	HSBC	0.2%	GLD	0.15%
1.0	LVS	0.2%	HSBC	0.14%

P365D: 10d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	LUMN	15.49%	MSTR	5.86%
10.0	VST	6.05%	LUMN	5.74%
10.0	MSTR	5.66%	VST	4.14%
10.0	NVDA	4.2%	NFLX	2.92%
10.0	T	3.81%	GBTC	2.44%
10.0	NFLX	3.73%	AVGO	2.4%
10.0	CCL	3.54%	CAH	2.4%
10.0	CAH	3.47%	TSLA	2.07%
10.0	AVGO	3.27%	GILD	2.04%
10.0	MOS	3.18%	ORCL	2.0%
10.0	GT	2.72%	GE	1.99%
10.0	COST	2.65%	CCL	1.94%
10.0	GBTC	2.56%	X	1.91%
10.0	CSCO	2.48%	PWR	1.81%
10.0	VNO	2.41%	T	1.76%
10.0	WYNN	2.37%	VNO	1.73%
10.0	BMY	2.36%	CSCO	1.63%
10.0	CYH	2.04%	META	1.62%
10.0	LVS	2.0%	GS	1.59%
10.0	JPM	1.84%	HSBC	1.47%
10.0	GLD	1.83%	GLD	1.44%
10.0	WFC	1.72%	EXPE	1.42%
10.0	GILD	1.64%	MS	1.41%
10.0	HSBC	1.64%	JPM	1.4%
10.0	AAP	1.63%	MOS	1.37%
10.0	THC	1.61%	THC	1.37%
10.0	JAZZ	1.59%	NEM	1.36%
10.0	GE	1.58%	WFC	1.34%
10.0	TMUS	1.57%	TRGP	1.33%
10.0	AZO	1.56%	CHTR	1.33%

P365D: 21d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	LUMN	17.67%	MSTR	12.07%
21.0	VST	14.62%	VST	9.63%
21.0	MSTR	13.8%	LUMN	9.28%
21.0	NVDA	8.93%	NFLX	6.54%
21.0	NFLX	8.41%	AVGO	5.54%
21.0	T	7.55%	TSLA	4.97%
21.0	MOS	6.89%	CAH	4.92%
21.0	CAH	6.61%	GBTC	4.89%
21.0	CCL	6.19%	GE	4.32%
21.0	AVGO	5.89%	GILD	4.18%
21.0	GBTC	5.82%	CCL	4.06%
21.0	COST	5.46%	META	3.84%
21.0	WYNN	5.26%	T	3.84%
21.0	CSCO	4.75%	PWR	3.82%
21.0	VNO	4.68%	ORCL	3.78%
21.0	SBUX	4.36%	VNO	3.54%
21.0	LVS	4.31%	X	3.33%
21.0	GLD	4.16%	CSCO	3.29%
21.0	TSLA	4.05%	HSBC	3.18%
21.0	TMUS	3.99%	GLD	3.16%
21.0	MS	3.92%	EXPE	3.0%
21.0	HSBC	3.62%	GS	2.9%
21.0	GE	3.6%	MS	2.83%
21.0	JPM	3.56%	TMUS	2.81%
21.0	AZO	3.43%	WFC	2.75%
21.0	GILD	3.43%	JPM	2.72%
21.0	WFC	3.38%	TRGP	2.6%
21.0	BMY	3.38%	MOS	2.58%
21.0	TRGP	3.22%	THC	2.55%
21.0	THC	3.1%	SBUX	2.46%

P365D: 63d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	117.43%	MSTR	50.84%
63.0	VST	47.07%	VST	26.69%
63.0	NFLX	30.85%	NFLX	19.65%
63.0	GBTC	27.75%	GBTC	19.25%
63.0	CCL	27.05%	TSLA	17.67%
63.0	T	26.2%	CAH	12.67%
63.0	MOS	19.2%	AVGO	12.4%
63.0	GT	17.01%	GILD	12.34%
63.0	CSCO	16.61%	CCL	11.92%
63.0	CAH	15.88%	T	11.89%
63.0	TSLA	15.38%	GLD	10.04%
63.0	MS	15.09%	HSBC	9.86%
63.0	TRGP	14.61%	WFC	9.63%
63.0	VNO	13.77%	GE	9.32%
63.0	LUMN	13.46%	TMUS	9.24%
63.0	GLD	13.45%	EXPE	8.86%
63.0	AVGO	13.15%	PWR	8.57%
63.0	WFC	13.09%	CSCO	8.54%
63.0	HSBC	12.83%	TRGP	8.1%
63.0	PWR	12.28%	MS	7.99%
63.0	GILD	11.83%	MNST	7.87%
63.0	MNST	11.47%	GME	7.74%
63.0	NVDA	11.44%	ORLY	7.72%
63.0	JPM	10.59%	X	7.29%
63.0	TMUS	9.66%	VNO	7.24%
63.0	COST	9.28%	JPM	7.01%
63.0	GOOGL	9.21%	META	7.0%
63.0	AZO	9.15%	AZO	6.51%
63.0	ORLY	8.5%	GS	6.5%
63.0	AMZN	8.35%	MOS	6.05%

P365D: 126d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	MSTR	102.26%	MSTR	78.08%
126.0	VST	87.52%	VST	44.13%
126.0	NFLX	62.97%	NFLX	40.82%
126.0	T	58.91%	GBTC	34.65%
126.0	GBTC	51.11%	GILD	26.97%
126.0	CCL	39.51%	AVGO	26.92%
126.0	MS	36.53%	CAH	24.89%
126.0	HSBC	34.39%	HSBC	24.71%
126.0	CSCO	32.69%	T	24.58%
126.0	CAH	32.67%	TSLA	23.37%
126.0	TRGP	30.33%	WFC	19.91%
126.0	AVGO	29.66%	GE	19.65%
126.0	GLD	27.95%	GLD	19.33%
126.0	MOS	27.91%	TMUS	18.15%
126.0	GILD	27.9%	TRGP	18.12%
126.0	TSLA	26.66%	CSCO	17.49%
126.0	WFC	25.19%	CCL	17.29%
126.0	JPM	24.37%	EXPE	16.83%
126.0	GT	24.13%	ORLY	15.74%
126.0	AZO	23.0%	META	15.68%
126.0	BA	21.47%	JPM	15.52%
126.0	GE	19.79%	AZO	14.48%
126.0	GS	18.75%	MS	14.21%
126.0	ORLY	18.67%	GS	13.6%
126.0	COST	18.11%	GME	11.84%
126.0	AMZN	17.42%	BA	11.58%
126.0	MNST	16.96%	CTLT	10.62%
126.0	X	16.05%	MNST	10.46%
126.0	VNO	15.01%	COST	9.96%
126.0	TMUS	14.79%	ISRG	9.87%

Bottom 30 Tickers By ROLOBC

All TMD: 1d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SIVBQ	-0.8%	SIVBQ	-0.78%
1.0	IEP	-0.46%	SBNY	-0.45%
1.0	SBNY	-0.38%	FRCB	-0.23%
1.0	NWL	-0.3%	IEP	-0.18%
1.0	LUMN	-0.28%	AMC	-0.14%
1.0	CZR	-0.21%	VFC	-0.13%
1.0	UAA	-0.2%	AAP	-0.13%
1.0	BIIB	-0.18%	NWL	-0.11%
1.0	FRCB	-0.17%	LUMN	-0.08%
1.0	GNRC	-0.14%	UAA	-0.06%
1.0	LNC	-0.13%	BHC	-0.06%
1.0	BXP	-0.12%	CZR	-0.06%
1.0	AAP	-0.1%	TLT	-0.05%
1.0	TLT	-0.1%	BIIB	-0.05%
1.0	GT	-0.09%	INTC	-0.05%
1.0	BALL	-0.09%	BALL	-0.04%
1.0	VFC	-0.09%	LNC	-0.04%
1.0	AMC	-0.08%	BXP	-0.04%
1.0	INTC	-0.08%	GSK	-0.03%
1.0	AA	-0.07%	CVS	-0.03%
1.0	KHC	-0.06%	CLF	-0.03%
1.0	FSUGY	-0.06%	UNH	-0.03%
1.0	BHP	-0.05%	KHC	-0.03%
1.0	PEP	-0.05%	BMY	-0.03%
1.0	ZTS	-0.04%	PEP	-0.03%
1.0	UNH	-0.04%	CMCSA	-0.03%
1.0	CMA	-0.04%	ELAN	-0.02%
1.0	CHTR	-0.04%	GT	-0.02%
1.0	CTLT	-0.03%	CNC	-0.02%
1.0	RIO	-0.03%	GNRC	-0.02%

All TMD: 10d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SIVBQ	-4.46%	SBNY	-4.05%
10.0	IEP	-3.22%	SIVBQ	-3.9%
10.0	CZR	-2.32%	FRCB	-2.19%
10.0	LUMN	-2.3%	IEP	-1.67%
10.0	NWL	-2.22%	AMC	-1.56%
10.0	SBNY	-2.19%	VFC	-1.42%
10.0	FRCB	-1.26%	AAP	-1.21%
10.0	VFC	-1.14%	NWL	-1.18%
10.0	BIIB	-1.11%	CZR	-0.78%
10.0	GNRC	-1.09%	UAA	-0.77%
10.0	AMC	-1.0%	LUMN	-0.69%
10.0	UAA	-0.96%	BHC	-0.55%
10.0	CLF	-0.84%	CLF	-0.51%
10.0	LNC	-0.83%	TLT	-0.51%
10.0	AAP	-0.81%	BIIB	-0.49%
10.0	AA	-0.78%	INTC	-0.49%
10.0	BXP	-0.71%	LNC	-0.48%
10.0	BALL	-0.69%	BALL	-0.42%
10.0	INTC	-0.59%	BXP	-0.37%
10.0	FSUGY	-0.58%	AA	-0.35%
10.0	TLT	-0.51%	GNRC	-0.35%
10.0	KHC	-0.49%	ZION	-0.35%
10.0	VZ	-0.41%	CNC	-0.34%
10.0	FIS	-0.39%	ELAN	-0.34%
10.0	CMA	-0.39%	CYH	-0.34%
10.0	UNH	-0.37%	CVS	-0.34%
10.0	CYH	-0.36%	UNH	-0.33%
10.0	CVS	-0.34%	TFC	-0.29%
10.0	BHP	-0.34%	GSK	-0.29%
10.0	PEP	-0.33%	CMCSA	-0.29%

All TMD: 21d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SIVBQ	-9.97%	SBNY	-11.16%
21.0	IEP	-7.43%	SIVBQ	-9.37%
21.0	SBNY	-6.13%	FRCB	-6.02%
21.0	CZR	-5.82%	AMC	-3.67%
21.0	LUMN	-4.65%	IEP	-3.6%
21.0	NWL	-4.39%	VFC	-2.92%
21.0	FRCB	-3.78%	NWL	-2.58%
21.0	GNRC	-2.76%	AAP	-2.35%
21.0	VFC	-2.75%	CZR	-1.81%
21.0	CLF	-2.73%	BHC	-1.77%
21.0	AMC	-2.09%	UAA	-1.46%
21.0	AAP	-1.6%	LUMN	-1.27%
21.0	BALL	-1.5%	INTC	-1.23%
21.0	AA	-1.41%	CLF	-1.23%
21.0	UAA	-1.4%	LNC	-1.13%
21.0	INTC	-1.33%	AA	-1.09%
21.0	BIIB	-1.33%	TLT	-1.07%
21.0	FSUGY	-1.29%	BALL	-0.93%
21.0	TLT	-1.23%	BIIB	-0.91%
21.0	LNC	-1.23%	GNRC	-0.87%
21.0	BHC	-1.21%	BXP	-0.8%
21.0	VZ	-1.18%	CNC	-0.74%
21.0	KHC	-1.17%	CVS	-0.73%
21.0	BXP	-1.17%	UNH	-0.67%
21.0	CYH	-1.11%	KHC	-0.65%
21.0	BHP	-1.04%	TFC	-0.63%
21.0	RIO	-0.85%	BMY	-0.6%
21.0	CVS	-0.82%	ZION	-0.58%
21.0	PEP	-0.73%	CMCSA	-0.57%
21.0	CMA	-0.71%	PEP	-0.54%

All TMD: 63d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	SIVBQ	-36.58%	SBNY	-37.59%
63.0	IEP	-25.06%	SIVBQ	-33.73%
63.0	SBNY	-24.57%	FRCB	-24.04%
63.0	FRCB	-18.2%	AMC	-15.47%
63.0	NWL	-15.81%	IEP	-11.93%
63.0	GNRC	-13.2%	AAP	-10.04%
63.0	VFC	-11.39%	VFC	-8.68%
63.0	AAP	-10.11%	NWL	-8.45%
63.0	CZR	-9.68%	CLF	-6.76%
63.0	CLF	-9.26%	BHC	-6.32%
63.0	AMC	-8.59%	CZR	-6.09%
63.0	LUMN	-8.27%	AA	-5.47%
63.0	UAA	-7.25%	UAA	-4.84%
63.0	AA	-7.02%	INTC	-4.54%
63.0	BALL	-6.48%	LUMN	-3.95%
63.0	BHC	-6.1%	ELAN	-3.68%
63.0	INTC	-5.09%	LNC	-3.6%
63.0	BHP	-4.68%	MOS	-3.53%
63.0	BIIB	-4.0%	GNRC	-3.34%
63.0	CYH	-3.75%	BALL	-3.2%
63.0	CVS	-3.67%	BXP	-3.14%
63.0	BBY	-3.25%	BIIB	-3.07%
63.0	TLT	-3.23%	TLT	-2.94%
63.0	LNC	-3.18%	CVS	-2.67%
63.0	KHC	-3.04%	CNC	-2.3%
63.0	CSTM	-3.01%	BHP	-2.28%
63.0	ON	-2.95%	KHC	-2.23%
63.0	OXY	-2.94%	JAZZ	-2.17%
63.0	PRGO	-2.82%	BMY	-2.15%
63.0	FSUGY	-2.76%	PRGO	-2.14%

All TMD: 126d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	SIVBQ	-79.5%	SIVBQ	-65.15%
126.0	FRCB	-59.03%	SBNY	-64.8%
126.0	IEP	-49.36%	FRCB	-51.17%
126.0	SBNY	-45.8%	AMC	-29.49%
126.0	NWL	-38.74%	IEP	-22.85%
126.0	VFC	-24.48%	AAP	-19.78%
126.0	GNRC	-22.12%	NWL	-15.88%
126.0	AAP	-20.32%	VFC	-13.17%
126.0	AMC	-18.93%	CLF	-10.97%
126.0	LUMN	-17.16%	MOS	-9.58%
126.0	CLF	-16.3%	CZR	-8.98%
126.0	MOS	-13.37%	AA	-8.06%
126.0	CVS	-11.35%	INTC	-7.41%
126.0	AA	-11.15%	BHC	-7.36%
126.0	BALL	-10.62%	ELAN	-7.07%
126.0	CZR	-10.12%	CVS	-6.72%
126.0	BHC	-9.41%	UAA	-6.57%
126.0	PRGO	-8.38%	PRGO	-5.75%
126.0	UAA	-8.36%	CTLT	-5.69%
126.0	BHP	-7.65%	LUMN	-5.58%
126.0	LNC	-7.26%	GNRC	-5.57%
126.0	TLT	-7.06%	LNC	-5.42%
126.0	CHTR	-6.78%	TLT	-5.32%
126.0	CTLT	-6.66%	BXP	-5.32%
126.0	GSK	-6.49%	BIIB	-4.99%
126.0	VZ	-6.49%	BALL	-4.96%
126.0	KHC	-6.34%	CNC	-4.94%
126.0	ON	-5.45%	KHC	-4.49%
126.0	INTC	-5.29%	BMY	-4.01%
126.0	CMA	-4.89%	GSK	-3.91%

All TMD: 252d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	FRCB	-207.49%	SBNY	-95.75%
252.0	SIVBQ	-176.51%	SIVBQ	-95.29%
252.0	SBNY	-109.04%	FRCB	-91.61%
252.0	IEP	-94.09%	AMC	-56.89%
252.0	NWL	-74.7%	IEP	-44.6%
252.0	AAP	-53.73%	AAP	-42.05%
252.0	AMC	-42.28%	NWL	-28.61%
252.0	CLF	-37.85%	VFC	-23.96%
252.0	MOS	-37.09%	MOS	-22.15%
252.0	CVS	-36.73%	CVS	-17.93%
252.0	VFC	-34.68%	CLF	-16.91%
252.0	GNRC	-28.43%	CZR	-13.9%
252.0	CZR	-26.26%	PRGO	-12.91%
252.0	AA	-24.68%	UAA	-12.11%
252.0	GT	-18.72%	AA	-11.72%
252.0	UAA	-18.67%	BMY	-11.5%
252.0	PRGO	-18.54%	INTC	-10.36%
252.0	BHC	-17.86%	BIIB	-9.93%
252.0	BMY	-14.32%	JAZZ	-9.79%
252.0	JAZZ	-13.95%	CNC	-9.77%
252.0	TLT	-13.46%	BHC	-9.3%
252.0	CNC	-12.29%	TLT	-8.46%
252.0	KHC	-11.61%	KHC	-7.93%
252.0	BIIB	-10.8%	GT	-7.69%
252.0	CMA	-10.7%	LUMN	-7.09%
252.0	CTLT	-10.5%	OXY	-7.0%
252.0	BALL	-10.37%	CTLT	-6.24%
252.0	CHTR	-10.32%	BHP	-5.72%
252.0	KEY	-9.73%	LNC	-5.39%
252.0	BHP	-9.53%	CHTR	-5.11%

P30D: 1d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	PCG	-2.64%	GME	-1.02%
1.0	CYH	-1.69%	PCG	-0.9%
1.0	GME	-0.87%	CYH	-0.57%
1.0	GT	-0.87%	AMC	-0.53%
1.0	COST	-0.86%	ZTS	-0.42%
1.0	BMY	-0.6%	GSK	-0.42%
1.0	BIIB	-0.58%	GT	-0.35%
1.0	GSK	-0.55%	COST	-0.34%
1.0	LW	-0.51%	AAP	-0.31%
1.0	TEVA	-0.51%	TSLA	-0.29%
1.0	KHC	-0.46%	LW	-0.29%
1.0	ACGL	-0.42%	ACGL	-0.28%
1.0	AAP	-0.42%	BMY	-0.27%
1.0	BUD	-0.31%	IEP	-0.24%
1.0	CPRT	-0.24%	BIIB	-0.22%
1.0	BHP	-0.23%	ADBE	-0.2%
1.0	GLD	-0.22%	BUD	-0.19%
1.0	TMUS	-0.22%	CPRT	-0.18%
1.0	AMC	-0.21%	VFC	-0.17%
1.0	JAZZ	-0.2%	GWW	-0.16%
1.0	ZTS	-0.19%	KHC	-0.16%
1.0	GWW	-0.18%	AMGN	-0.16%
1.0	ADBE	-0.17%	AZN	-0.15%
1.0	VZ	-0.16%	TEVA	-0.13%
1.0	MOS	-0.16%	BHP	-0.13%
1.0	AZN	-0.14%	GLD	-0.11%
1.0	BBY	-0.14%	RIO	-0.1%
1.0	PRGO	-0.14%	JAZZ	-0.1%
1.0	IEP	-0.12%	VZ	-0.09%
1.0	SNY	-0.11%	MNST	-0.09%

P30D: 10d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	PCG	-12.31%	GME	-15.72%
10.0	BIIB	-11.78%	AMC	-8.66%
10.0	GT	-10.99%	PCG	-8.52%
10.0	GME	-9.03%	GT	-7.22%
10.0	BHP	-7.01%	AAP	-6.49%
10.0	COST	-6.67%	ADBE	-6.41%
10.0	KHC	-6.65%	VFC	-6.26%
10.0	TMUS	-6.64%	GSK	-5.98%
10.0	BMY	-6.36%	ZTS	-5.94%
10.0	GSK	-5.87%	CYH	-5.83%
10.0	BA	-4.86%	BMY	-4.26%
10.0	FSUGY	-4.85%	BBY	-4.22%
10.0	CPRT	-4.6%	BIIB	-4.2%
10.0	VNO	-4.25%	BHP	-4.04%
10.0	AZO	-4.24%	CPRT	-3.91%
10.0	AZN	-4.19%	GWW	-3.89%
10.0	GWW	-4.16%	TMUS	-3.85%
10.0	TEVA	-4.06%	BA	-3.78%
10.0	ADBE	-4.03%	AZN	-3.53%
10.0	ACGL	-3.98%	LW	-3.51%
10.0	LW	-3.9%	EXPE	-3.22%
10.0	BBY	-3.71%	SNY	-3.18%
10.0	CYH	-3.61%	COST	-3.12%
10.0	ZTS	-3.56%	VZ	-3.08%
10.0	VFC	-3.33%	FSUGY	-2.98%
10.0	RIO	-3.24%	TEVA	-2.91%
10.0	AMGN	-3.06%	KHC	-2.85%
10.0	AAP	-3.02%	ISRG	-2.8%
10.0	AMC	-2.99%	ACGL	-2.8%
10.0	SNY	-2.84%	AMGN	-2.72%

P90D: 1d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	UNH	-1.39%	UNH	-0.81%
1.0	KHC	-0.81%	BMY	-0.36%
1.0	PCG	-0.8%	PCG	-0.34%
1.0	LLY	-0.53%	KHC	-0.29%
1.0	BMY	-0.52%	CNC	-0.26%
1.0	LNC	-0.42%	PEP	-0.22%
1.0	PEP	-0.41%	CPRT	-0.22%
1.0	CNC	-0.35%	LW	-0.21%
1.0	TMUS	-0.34%	SNY	-0.19%
1.0	JAZZ	-0.26%	JAZZ	-0.18%
1.0	AZN	-0.25%	TMUS	-0.17%
1.0	SNY	-0.24%	AMGN	-0.16%
1.0	CPRT	-0.23%	IEP	-0.15%
1.0	T	-0.21%	POST	-0.13%
1.0	MSI	-0.2%	MRK	-0.12%
1.0	CMCSA	-0.2%	ABBV	-0.12%
1.0	IEP	-0.19%	ORLY	-0.1%
1.0	MRK	-0.18%	VZ	-0.08%
1.0	POST	-0.17%	AZN	-0.08%
1.0	BIIB	-0.15%	ACGL	-0.07%
1.0	TLT	-0.15%	TLT	-0.06%
1.0	LW	-0.13%	XOM	-0.05%
1.0	VZ	-0.12%	MSI	-0.04%
1.0	AA	-0.11%	BIIB	-0.04%
1.0	TEVA	-0.1%	AZO	-0.04%
1.0	AMGN	-0.08%	OXY	-0.03%
1.0	OXY	-0.07%	TRGP	-0.02%
1.0	XOM	-0.07%	MUB	-0.02%
1.0	TRGP	-0.07%	ZTS	-0.02%
1.0	ABBV	-0.06%	GSK	-0.01%

P90D: 10d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	UNH	-11.28%	UNH	-10.71%
10.0	KHC	-4.3%	PCG	-3.38%
10.0	TMUS	-3.18%	CPRT	-3.12%
10.0	CPRT	-3.03%	CNC	-2.75%
10.0	PEP	-2.81%	KHC	-2.4%
10.0	PCG	-2.61%	TMUS	-2.2%
10.0	CNC	-2.46%	BMY	-2.12%
10.0	BMY	-1.95%	PEP	-2.08%
10.0	SNY	-1.0%	SNY	-1.1%
10.0	GME	-0.86%	POST	-0.89%
10.0	POST	-0.8%	LW	-0.61%
10.0	VZ	-0.56%	ORLY	-0.57%
10.0	TLT	-0.49%	VZ	-0.57%
10.0	LW	-0.43%	AMGN	-0.41%
10.0	AMGN	-0.43%	TLT	-0.39%
10.0	ORLY	-0.39%	GME	-0.17%
10.0	MSI	-0.32%	MSI	-0.14%
10.0	CVS	0.07%	AZO	-0.0%
10.0	MUB	0.15%	MRK	0.0%
10.0	MRK	0.19%	ACGL	0.0%
10.0	CMCSA	0.24%	CVS	0.05%
10.0	HD	0.3%	MUB	0.1%
10.0	ACGL	0.31%	VCSH	0.2%
10.0	VCSH	0.32%	IEP	0.28%
10.0	GILD	0.44%	LQD	0.37%
10.0	ABBV	0.44%	HD	0.45%
10.0	LQD	0.49%	LEN	0.53%
10.0	AZO	0.53%	CMCSA	0.56%
10.0	AMC	0.73%	TRGP	0.57%
10.0	ZTS	0.81%	JAZZ	0.61%

P90D: 21d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	UNH	-16.55%	UNH	-20.13%
21.0	CPRT	-8.71%	CPRT	-8.51%
21.0	KHC	-8.51%	PCG	-6.99%
21.0	PCG	-6.59%	KHC	-5.75%
21.0	PEP	-5.63%	CNC	-5.63%
21.0	TMUS	-5.49%	TMUS	-4.1%
21.0	CNC	-5.3%	PEP	-3.86%
21.0	SNY	-2.85%	SNY	-3.2%
21.0	BMY	-2.59%	BMY	-2.8%
21.0	POST	-1.8%	POST	-1.86%
21.0	TLT	-1.41%	TLT	-1.21%
21.0	MSI	-1.4%	ORLY	-1.13%
21.0	MRK	-1.3%	CLF	-1.13%
21.0	GME	-1.07%	MSI	-0.95%
21.0	IEP	-0.87%	MRK	-0.87%
21.0	TRGP	-0.8%	IEP	-0.63%
21.0	LLY	-0.77%	LLY	-0.61%
21.0	ORLY	-0.71%	CVS	-0.58%
21.0	VZ	-0.58%	VZ	-0.38%
21.0	CVS	-0.27%	TRGP	-0.34%
21.0	MUB	0.09%	MUB	0.03%
21.0	AMGN	0.37%	VCSH	0.27%
21.0	VCSH	0.4%	AZO	0.37%
21.0	CLF	0.4%	AMGN	0.42%
21.0	AAPL	0.57%	AAPL	0.44%
21.0	LQD	0.67%	ACGL	0.55%
21.0	RIO	0.7%	JAZZ	0.55%
21.0	AZO	0.96%	RIO	0.55%
21.0	ACGL	1.01%	LQD	0.57%
21.0	DHI	1.13%	DHI	0.72%

P365D: 1d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	IEP	-0.67%	IEP	-0.25%
1.0	BIIB	-0.63%	BIIB	-0.23%
1.0	AMAT	-0.31%	CLF	-0.19%
1.0	OXY	-0.28%	MRK	-0.18%
1.0	FSUGY	-0.26%	AMC	-0.15%
1.0	UNH	-0.23%	UNH	-0.15%
1.0	PCG	-0.22%	OXY	-0.14%
1.0	AMC	-0.21%	LW	-0.13%
1.0	LEN	-0.21%	ADBE	-0.13%
1.0	ADBE	-0.2%	FSUGY	-0.12%
1.0	MRK	-0.2%	LEN	-0.08%
1.0	ON	-0.18%	PEP	-0.08%
1.0	KHC	-0.18%	KHC	-0.08%
1.0	BHP	-0.17%	AA	-0.08%
1.0	NWL	-0.16%	CSTM	-0.08%
1.0	TEVA	-0.15%	PCG	-0.07%
1.0	PEP	-0.15%	CZR	-0.07%
1.0	LNC	-0.14%	ON	-0.06%
1.0	RIO	-0.13%	AMAT	-0.06%
1.0	AMZN	-0.12%	BHP	-0.06%
1.0	INTC	-0.12%	CNC	-0.06%
1.0	BXP	-0.11%	QCOM	-0.06%
1.0	LLY	-0.11%	INTC	-0.05%
1.0	AA	-0.11%	BBY	-0.04%
1.0	AZN	-0.11%	RIO	-0.04%
1.0	CMCSA	-0.09%	ZTS	-0.03%
1.0	UAA	-0.09%	LLY	-0.03%
1.0	BBY	-0.08%	AMGN	-0.03%
1.0	CZR	-0.07%	CPRT	-0.03%
1.0	BHC	-0.06%	AZN	-0.03%

P365D: 10d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	IEP	-5.6%	CLF	-2.51%
10.0	BIIB	-4.48%	IEP	-2.41%
10.0	AMAT	-3.04%	BIIB	-2.29%
10.0	FSUGY	-2.25%	AMC	-1.89%
10.0	INTC	-2.18%	MRK	-1.8%
10.0	MRK	-2.07%	UNH	-1.57%
10.0	CLF	-1.94%	ADBE	-1.39%
10.0	OXY	-1.93%	FSUGY	-1.39%
10.0	ADBE	-1.8%	LW	-1.25%
10.0	ON	-1.79%	OXY	-1.17%
10.0	LEN	-1.68%	LEN	-1.16%
10.0	UNH	-1.5%	AMAT	-1.01%
10.0	KHC	-1.48%	ON	-0.99%
10.0	AMC	-1.42%	QCOM	-0.94%
10.0	AMD	-1.32%	PEP	-0.91%
10.0	BHP	-1.2%	CZR	-0.9%
10.0	QCOM	-1.17%	INTC	-0.9%
10.0	RIO	-1.09%	KHC	-0.85%
10.0	PEP	-1.03%	AA	-0.81%
10.0	CZR	-1.02%	CSTM	-0.78%
10.0	BBY	-0.93%	PCG	-0.77%
10.0	CNC	-0.86%	BHP	-0.71%
10.0	PCG	-0.86%	CNC	-0.69%
10.0	MU	-0.82%	BBY	-0.62%
10.0	AA	-0.82%	AMD	-0.61%
10.0	GOOGL	-0.71%	RIO	-0.54%
10.0	LNC	-0.69%	AMGN	-0.41%
10.0	CMG	-0.69%	AAPL	-0.4%
10.0	FCX	-0.64%	FCX	-0.39%
10.0	CMCSA	-0.49%	LLY	-0.38%

P365D: 21d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	IEP	-13.7%	CLF	-5.84%
21.0	BIIB	-7.87%	IEP	-5.47%
21.0	CLF	-6.33%	BIIB	-4.68%
21.0	INTC	-6.08%	UNH	-3.95%
21.0	OXY	-5.09%	MRK	-3.9%
21.0	AMAT	-4.93%	AMC	-3.71%
21.0	LEN	-4.7%	LEN	-3.23%
21.0	MRK	-4.59%	OXY	-2.83%
21.0	ON	-4.46%	FSUGY	-2.68%
21.0	UNH	-3.99%	INTC	-2.62%
21.0	FSUGY	-3.91%	ON	-2.58%
21.0	ADBE	-3.83%	ADBE	-2.52%
21.0	DHI	-3.05%	PEP	-2.16%
21.0	KHC	-3.02%	CZR	-2.03%
21.0	PEP	-2.89%	AMAT	-1.99%
21.0	BHP	-2.58%	KHC	-1.92%
21.0	QCOM	-2.57%	DHI	-1.89%
21.0	CZR	-2.5%	LW	-1.78%
21.0	AMC	-2.43%	QCOM	-1.76%
21.0	AMD	-2.35%	CNC	-1.63%
21.0	BHC	-2.27%	BBY	-1.43%
21.0	MU	-2.21%	CSTM	-1.39%
21.0	BBY	-2.04%	PCG	-1.38%
21.0	RIO	-2.0%	AMD	-1.37%
21.0	PCG	-1.99%	AA	-1.27%
21.0	CNC	-1.91%	BHP	-1.2%
21.0	AA	-1.64%	PHM	-1.02%
21.0	WDC	-1.63%	AMGN	-0.94%
21.0	CMCSA	-1.37%	RIO	-0.93%
21.0	PHM	-1.22%	CMCSA	-0.86%

P365D: 63d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	IEP	-42.8%	CLF	-17.47%
63.0	ON	-26.69%	IEP	-16.49%
63.0	BIIB	-24.91%	BIIB	-15.78%
63.0	OXY	-21.88%	AMC	-15.25%
63.0	AMD	-20.07%	ON	-14.68%
63.0	ADBE	-18.49%	LEN	-13.69%
63.0	LEN	-18.15%	MRK	-12.54%
63.0	CLF	-17.65%	CSTM	-11.53%
63.0	AMAT	-16.53%	UNH	-11.52%
63.0	MRK	-15.84%	ADBE	-11.13%
63.0	CSTM	-15.49%	DHI	-10.4%
63.0	UNH	-15.21%	OXY	-9.58%
63.0	DHI	-14.89%	AMD	-9.44%
63.0	AMC	-13.65%	CYH	-9.43%
63.0	CYH	-12.31%	CZR	-9.11%
63.0	CZR	-12.26%	BBY	-8.34%
63.0	BBY	-12.23%	WDC	-8.15%
63.0	PCG	-11.2%	AMAT	-7.75%
63.0	FSUGY	-10.69%	PEP	-7.73%
63.0	PHM	-10.57%	FSUGY	-7.43%
63.0	WDC	-10.39%	CNC	-6.75%
63.0	PEP	-9.86%	KHC	-6.73%
63.0	BHP	-9.18%	PHM	-6.7%
63.0	INTC	-8.31%	BALL	-5.99%
63.0	KHC	-7.99%	NAVI	-5.76%
63.0	VFC	-7.82%	QCOM	-5.54%
63.0	QCOM	-7.54%	AAP	-5.33%
63.0	ELAN	-5.79%	ELAN	-4.97%
63.0	NAVI	-5.66%	FCX	-4.93%
63.0	CNC	-5.59%	ZTS	-4.79%

P365D: 126d

Results reflect ticker level average 95% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	IEP	-79.68%	ON	-33.83%
126.0	ON	-76.77%	AMC	-33.44%
126.0	AMD	-47.43%	IEP	-32.07%
126.0	ADBE	-45.12%	CLF	-31.61%
126.0	CLF	-44.06%	LEN	-31.38%
126.0	UNH	-42.92%	BIIB	-28.83%
126.0	AMC	-41.38%	CYH	-27.23%
126.0	PCG	-39.14%	AMD	-24.85%
126.0	BIIB	-38.07%	DHI	-24.73%
126.0	WDC	-36.67%	MRK	-22.29%
126.0	DHI	-34.58%	ADBE	-22.22%
126.0	CYH	-33.13%	CSTM	-22.18%
126.0	LEN	-32.53%	CZR	-21.98%
126.0	MRK	-31.85%	WDC	-21.71%
126.0	CSTM	-31.72%	UNH	-21.39%
126.0	CZR	-30.71%	LW	-20.43%
126.0	NWL	-29.81%	PHM	-18.61%
126.0	PHM	-29.2%	BBY	-16.58%
126.0	OXY	-28.12%	GNRC	-16.29%
126.0	FSUGY	-28.06%	BALL	-16.03%
126.0	BBY	-27.49%	FSUGY	-15.97%
126.0	AMAT	-25.76%	PEP	-15.83%
126.0	BHP	-25.66%	OXY	-15.74%
126.0	ELAN	-25.49%	PCG	-15.39%
126.0	IRM	-23.68%	AA	-15.37%
126.0	BHC	-20.98%	UAA	-14.97%
126.0	PEP	-19.37%	AMAT	-14.93%
126.0	KHC	-18.75%	FCX	-14.76%
126.0	FCX	-17.81%	KHC	-14.4%
126.0	BALL	-16.24%	IRM	-14.35%

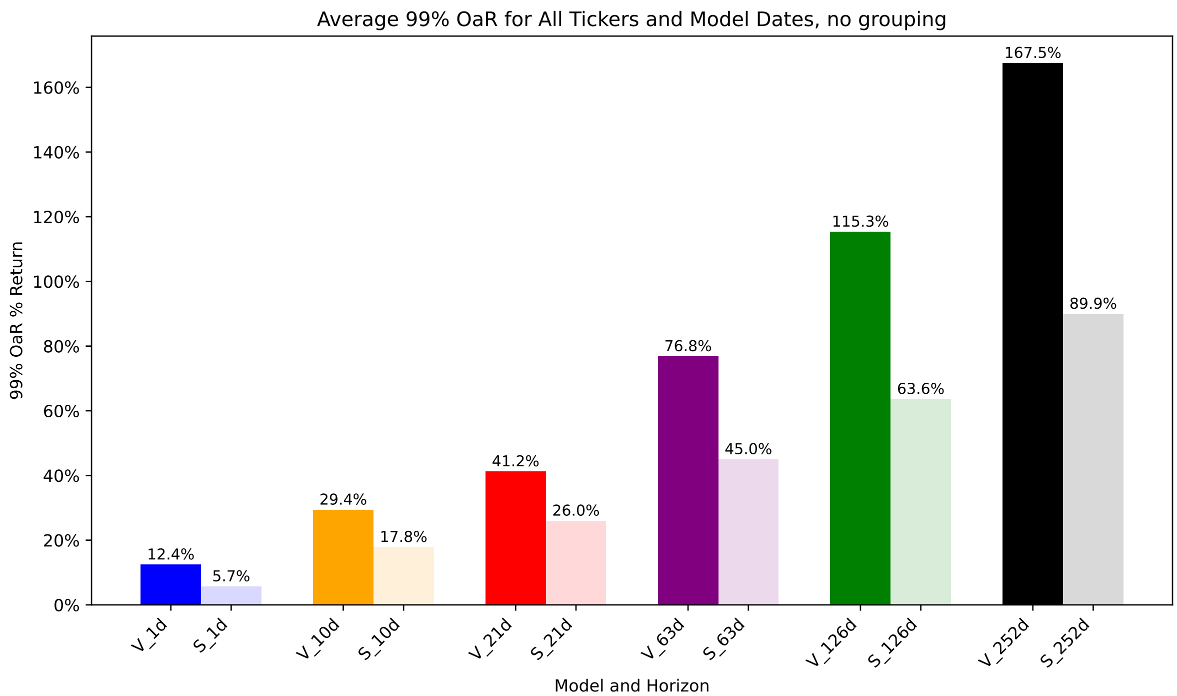
99% Opportunity At Risk (OaR)

Historic Average Levels

Here we compare Vector Model ("V", dark shading) and Sigma ("S", light shading) 99% OaR levels by horizon, on average across tickers. We make this comparison on average across tickers for select cohorts of model dates (ex: P30D), and forward horizons (ex: 21d) for all ticker model dates thru the present.

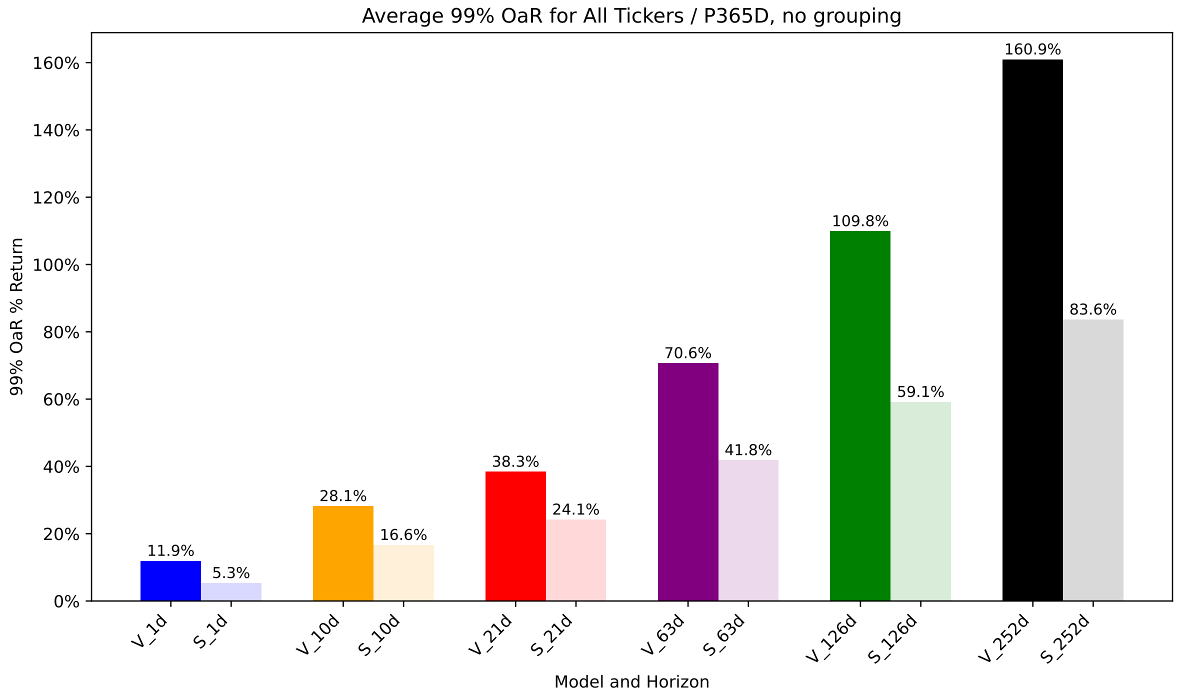
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-06-27



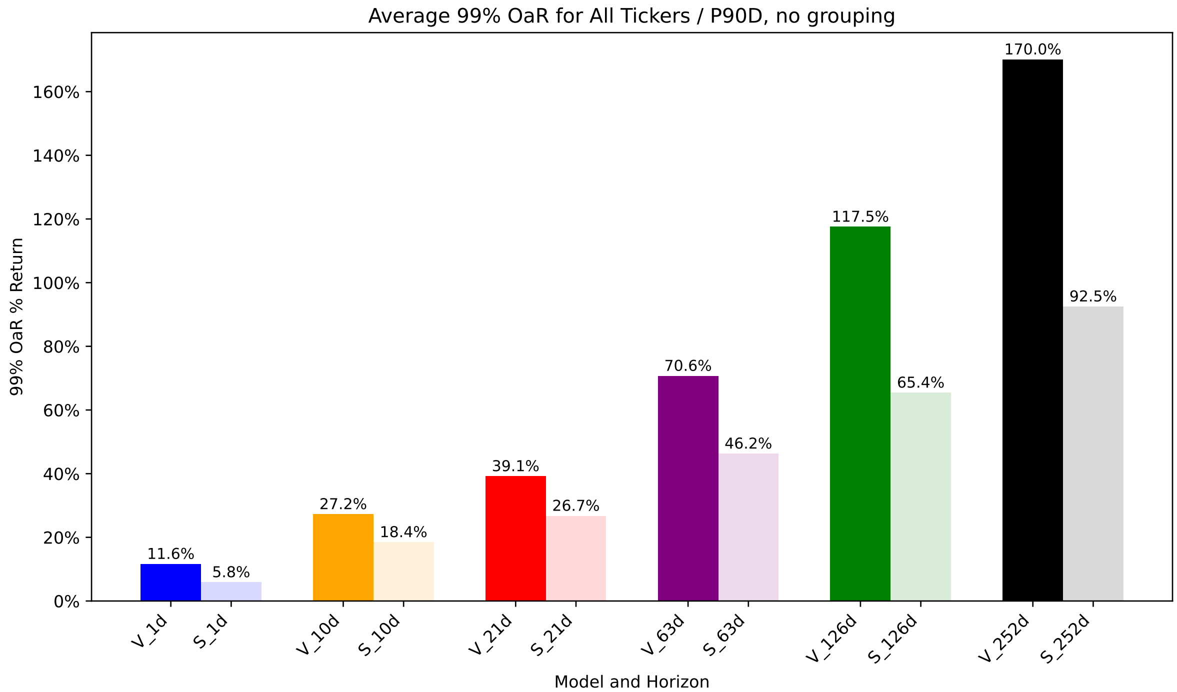
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2025-06-27 through 2024-07-02



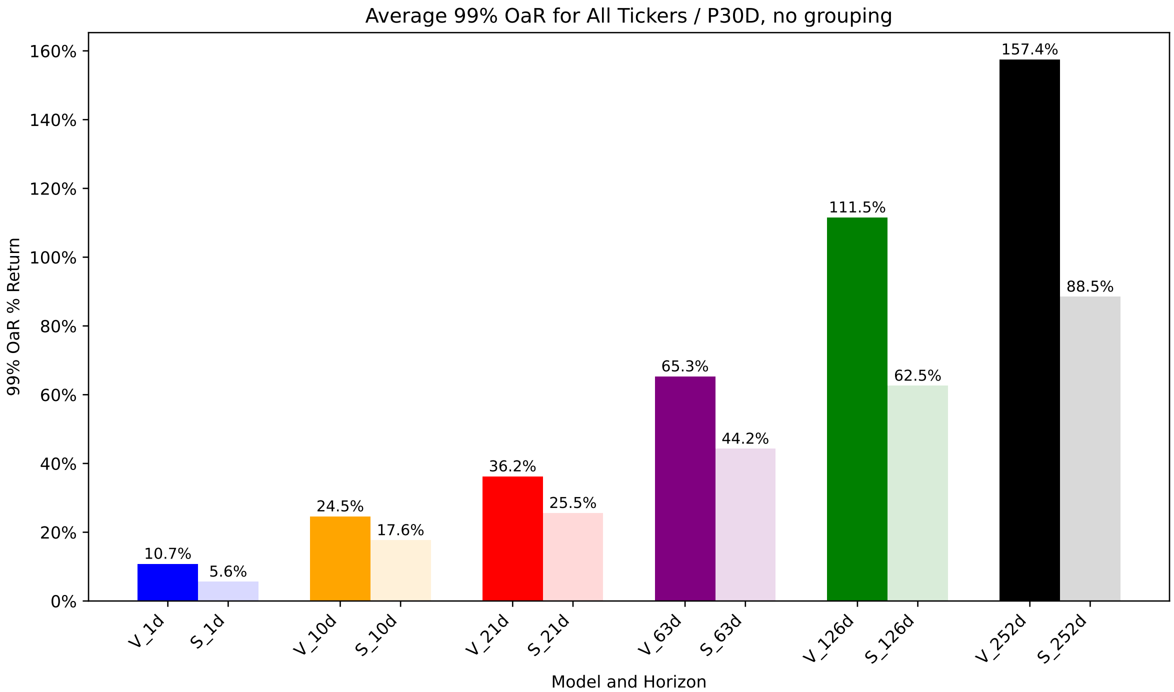
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-06-27 through 2025-04-03



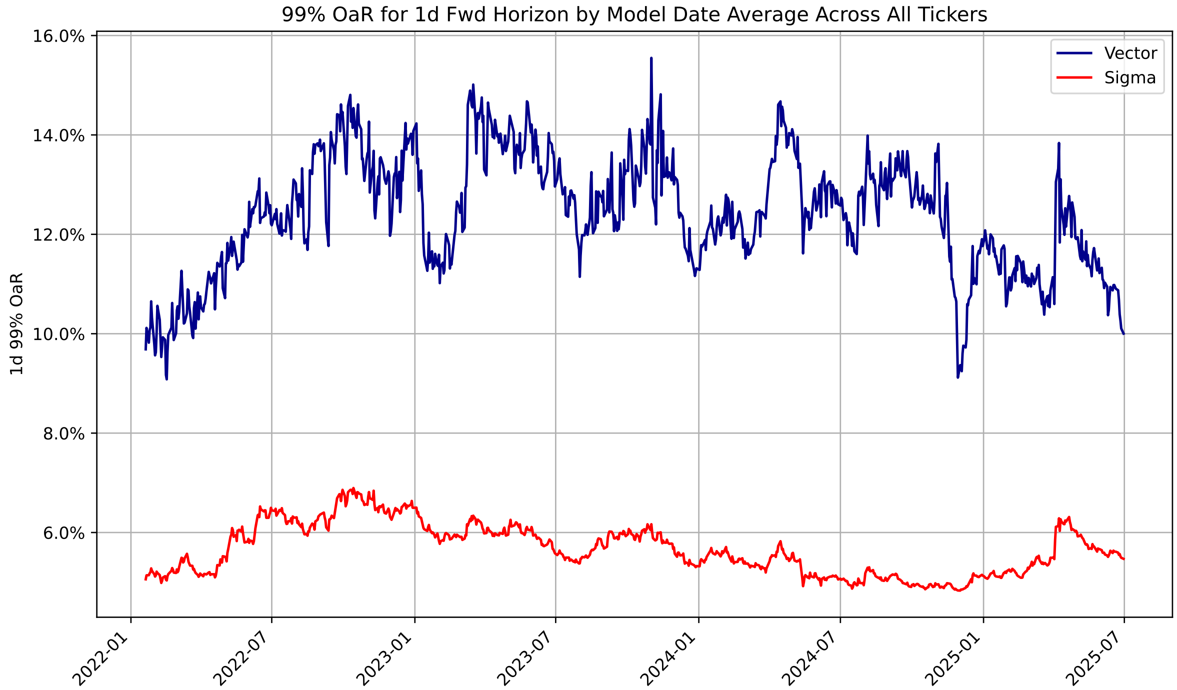
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-06-27 through 2025-06-02

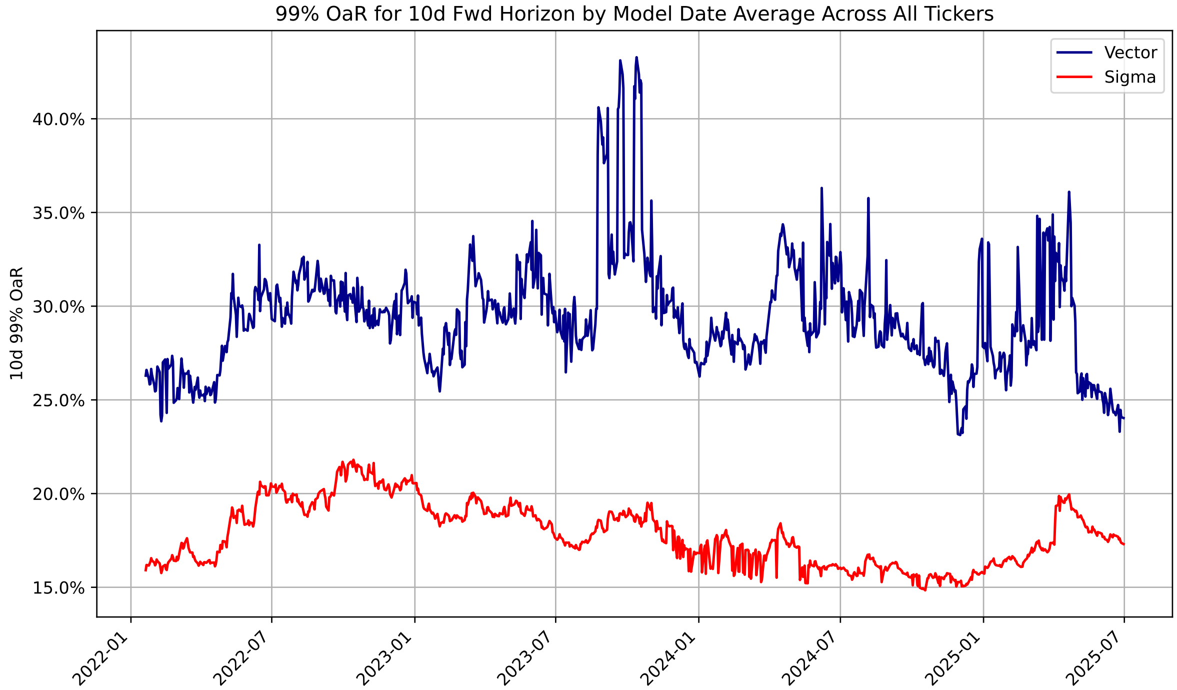


Daily Levels

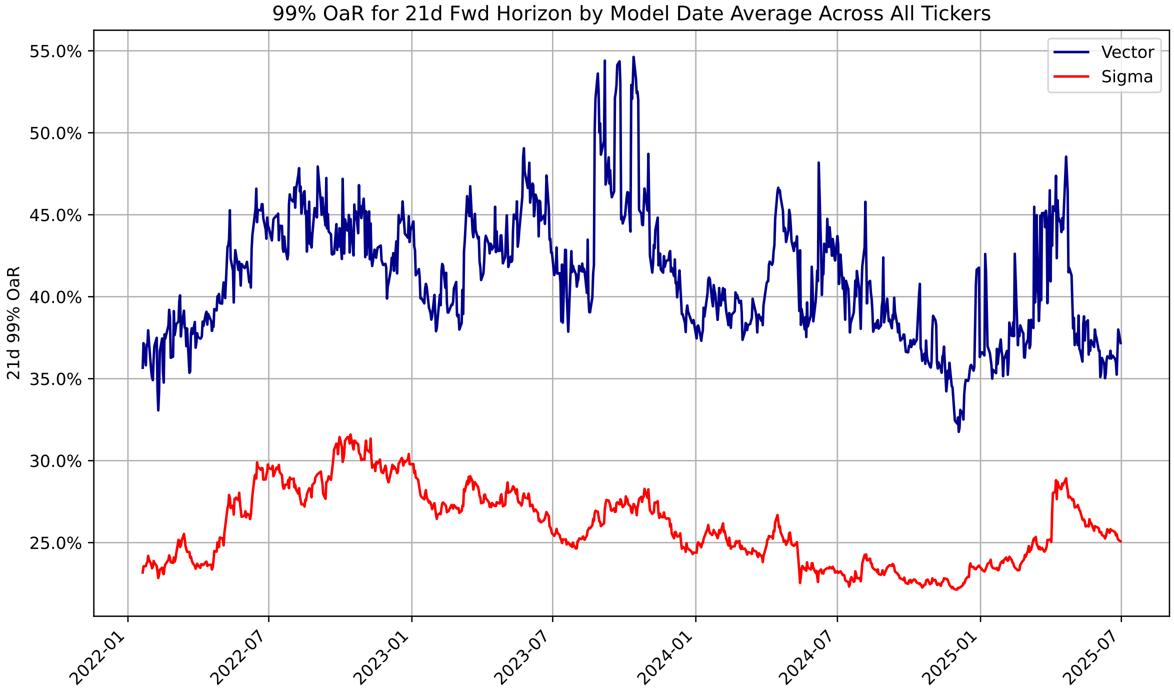
1d Horizon



10d Horizon

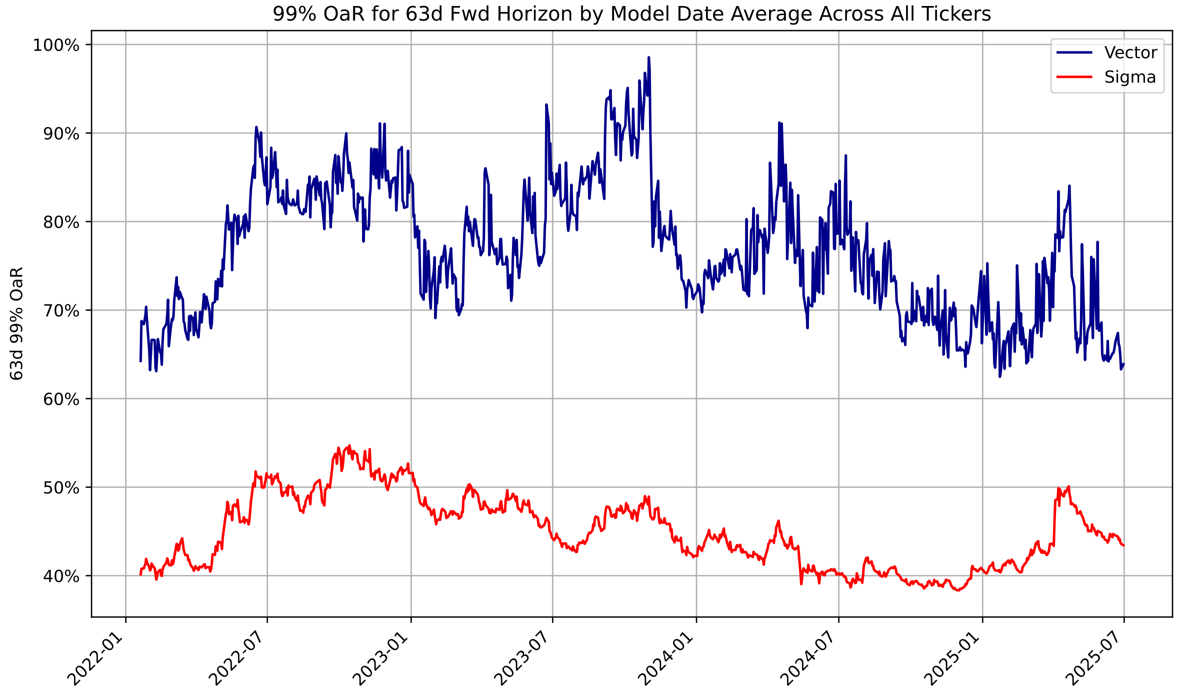

99% OaR for 10d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
10d 99% OaR
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

21d Horizon



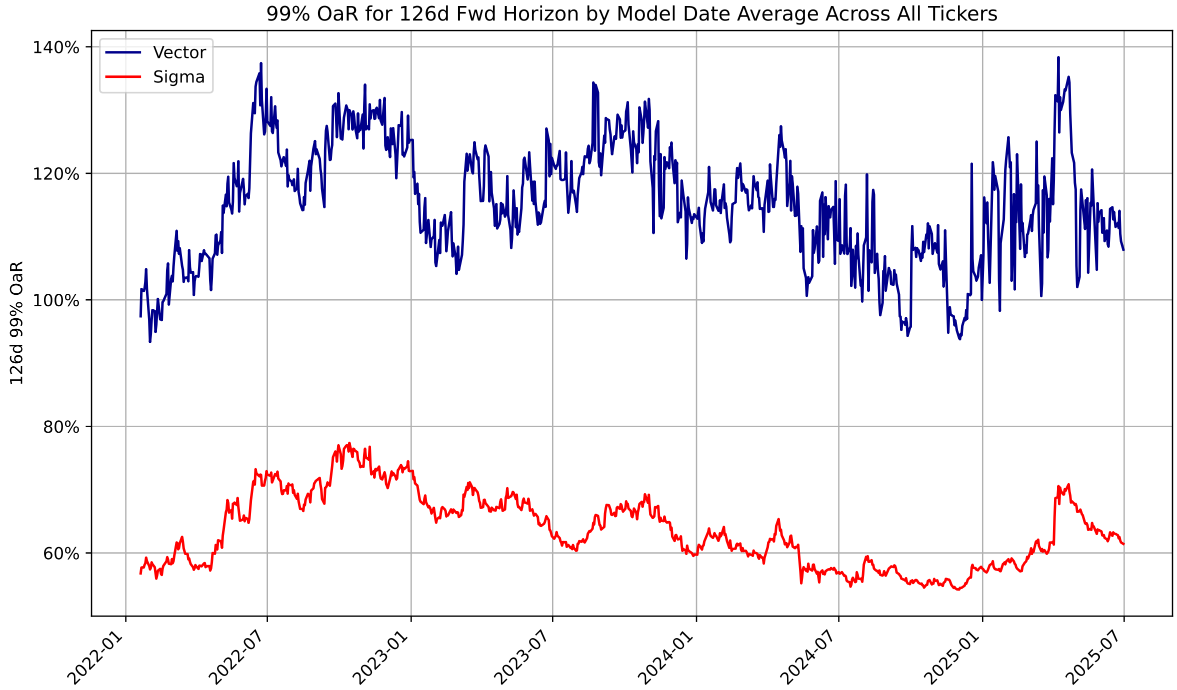
99% OaR for 21d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
21d 99% OaR
55.0%
50.0%
45.0%
40.0%
35.0%
30.0%
25.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

63d Horizon

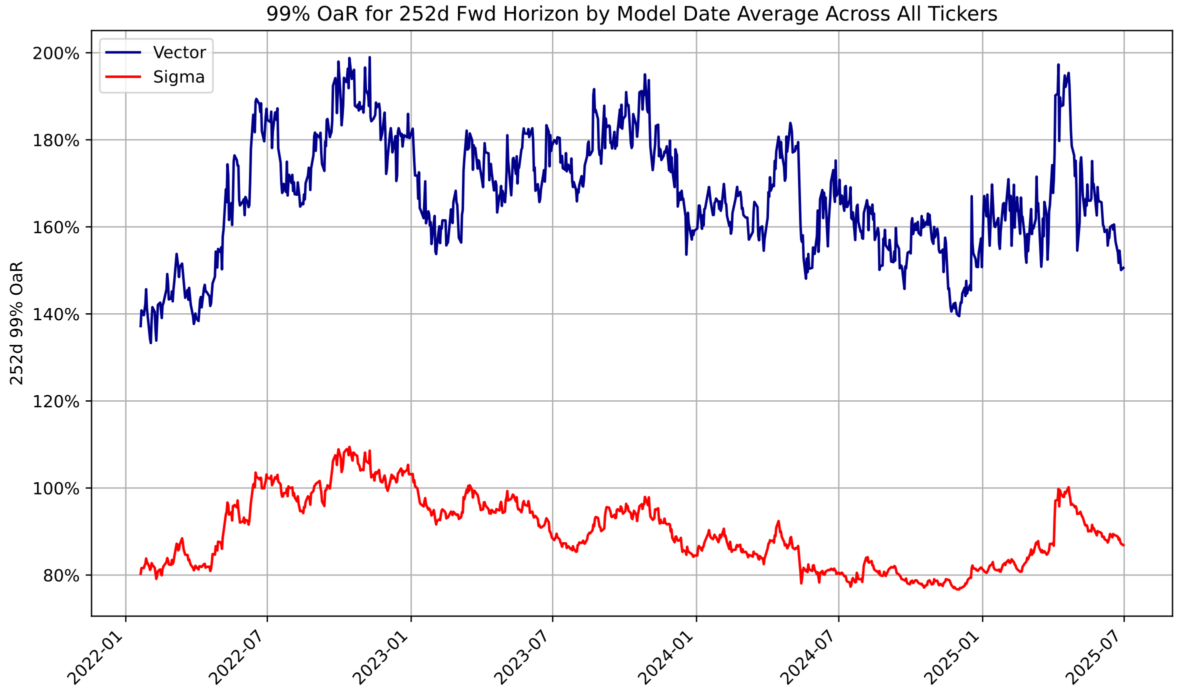


99% OaR for 63d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
63d 99% OaR
100%
90%
80%
70%
60%
50%
40%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

126d Horizon



252d Horizon



Performance Summary

Here we compare the performance of 99% OaR estimates generated by the Vector Model ("V", presented with dark shading) with those generated by Sigma ("S", presented with light shading). This comparison is made on the basis of OaR breakage rates and Return on Long OaR Based Capital (ROLOBC), presenting the average results across tickers and model dates for model dates in the period indicated.

To faciliate evaluation of OaR breakage we provide dashed horizontal lines at the targetted breakage level. Proximity to that line is the key breakage related criteria.

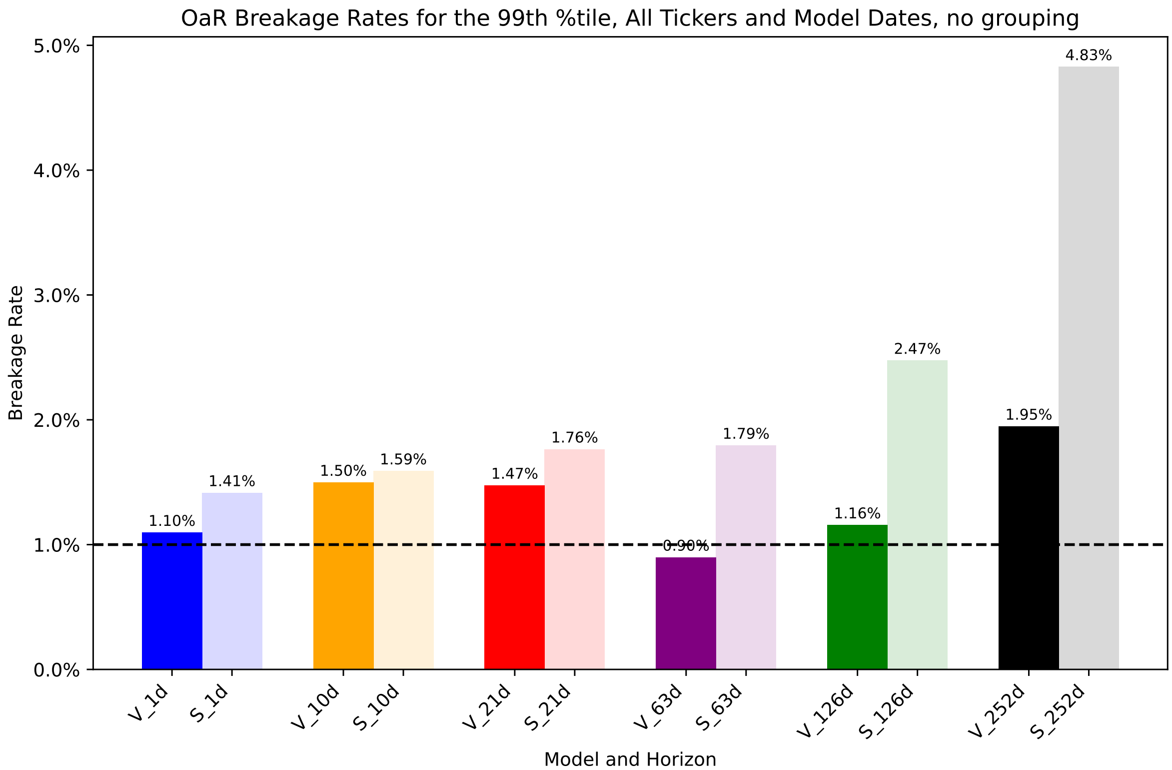
Vector Model ROLOBC can be evalauated on the basis of outright levels relative to Sigma and alpha relative to Sigma ROLOBC (which, as discussed previously, is assigned the underlying ticker price returns). We advise keeping proximity of OaR breakage rates to targetted levels in mind when comparing outright ROLOBC levels. For example, a model with much more benign OaR estimates will likely have higher ROLOBC in the context of an upwardly trending market, but how did it do on OaR breakage rates compared to the other model. This tradeoff between ROLOBC and OaR breakage rate proximity to target is the motivation for including ROLOBC Adjusted for Average Vector Model-Sigma OaR Differentials in the Report Card presented earlier in this report, and for providing the alpha metrics.

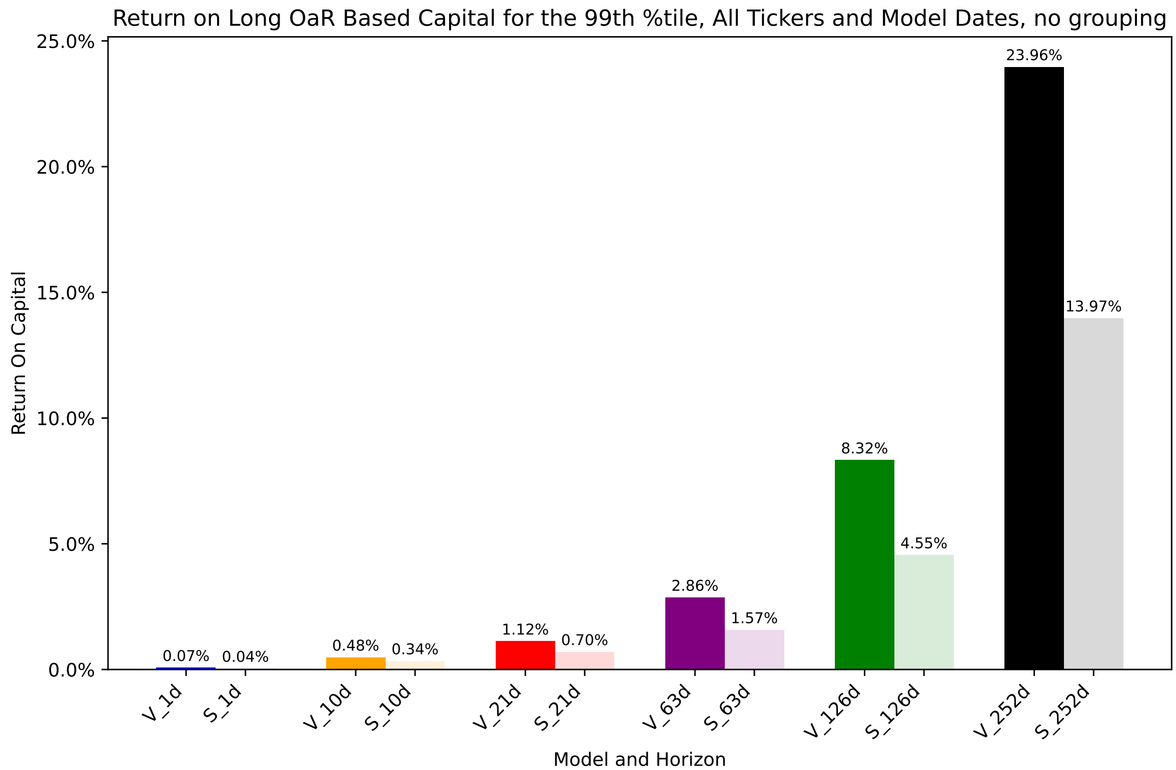
Alpha allows us to isolate ROLOBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROLOBC multiplier for the Vector Model and 1.00x. Alpha across TMD's could be driven by OaR differentials between tickers and / or between dates. Thus we also present average alpha by ticker across model dates. If this cross-date based alpha is positive, at least some of the overall alpha is driven by OaRiation in Vector Mdoel OaR relative to Sigma across time as opposed to OaRiation in Vector Model OaR relative to Sigma between tickers.

Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons > 1d overlap.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-06-27





Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns across TMD's:

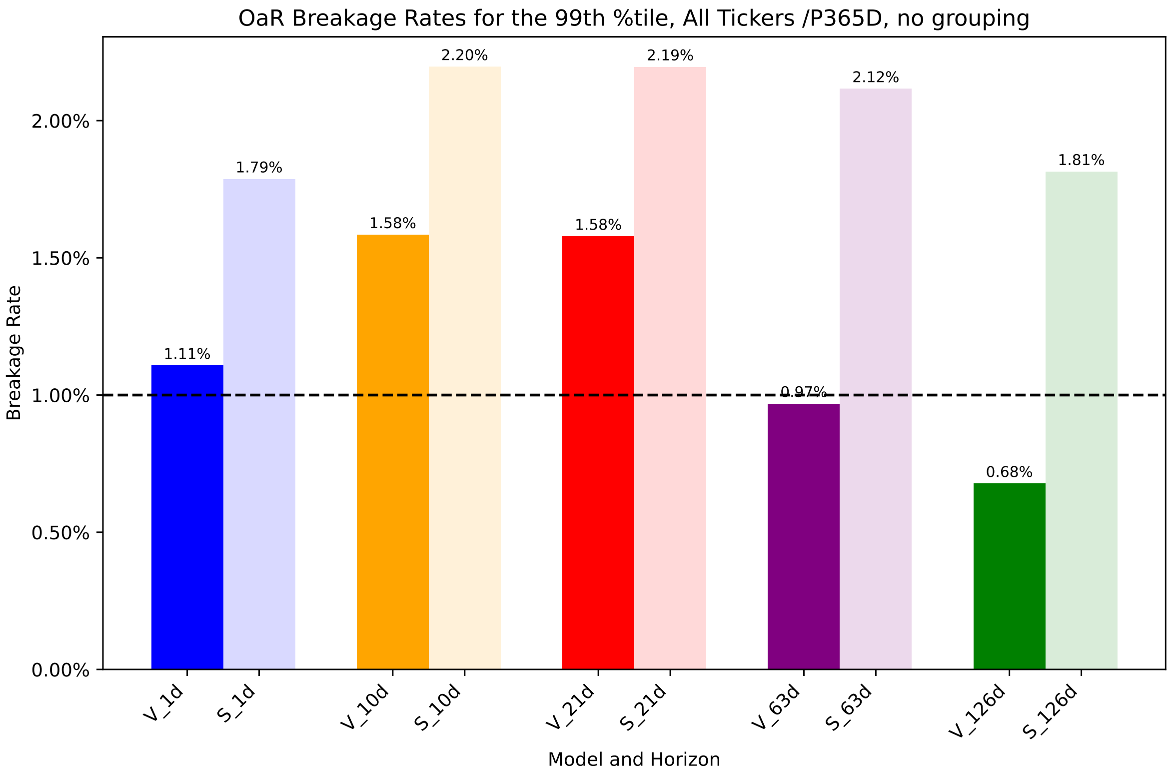
	1d	10d	21d	63d	126d	252d
intercept	0.00%	-0.02%	0.06%	0.26%	0.42%	1.06%
intercept_p_value	71.72%	38.20%	2.59%	0.00%	0.00%	0.00%
slope	178.06%	148.44%	151.50%	165.62%	173.67%	163.92%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

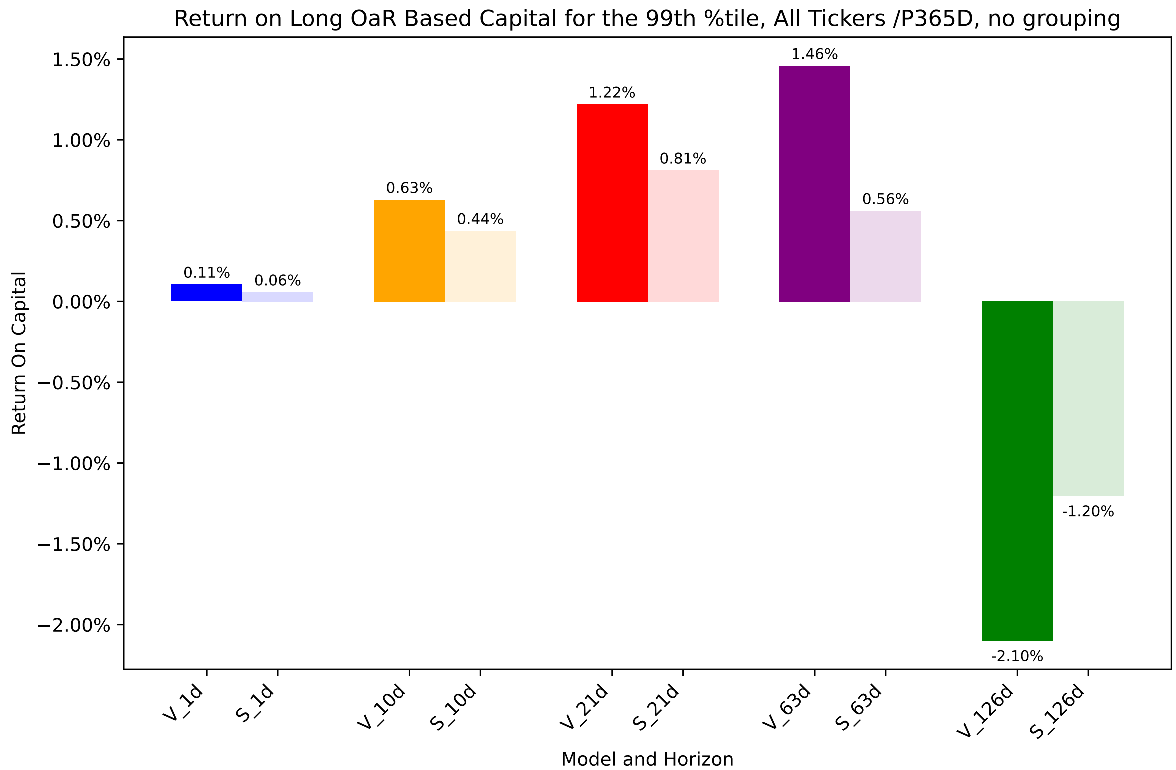
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

	1d	10d	21d	63d	126d	252d
intercept	-0.03%	-0.12%	-0.36%	-1.47%	-3.39%	-4.98%
intercept_p_value	0.03%	5.98%	1.38%	0.18%	0.02%	0.39%
slope	160.75%	146.04%	162.55%	174.72%	174.26%	162.77%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2025-06-27 through 2024-07-02





Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns across P365D:

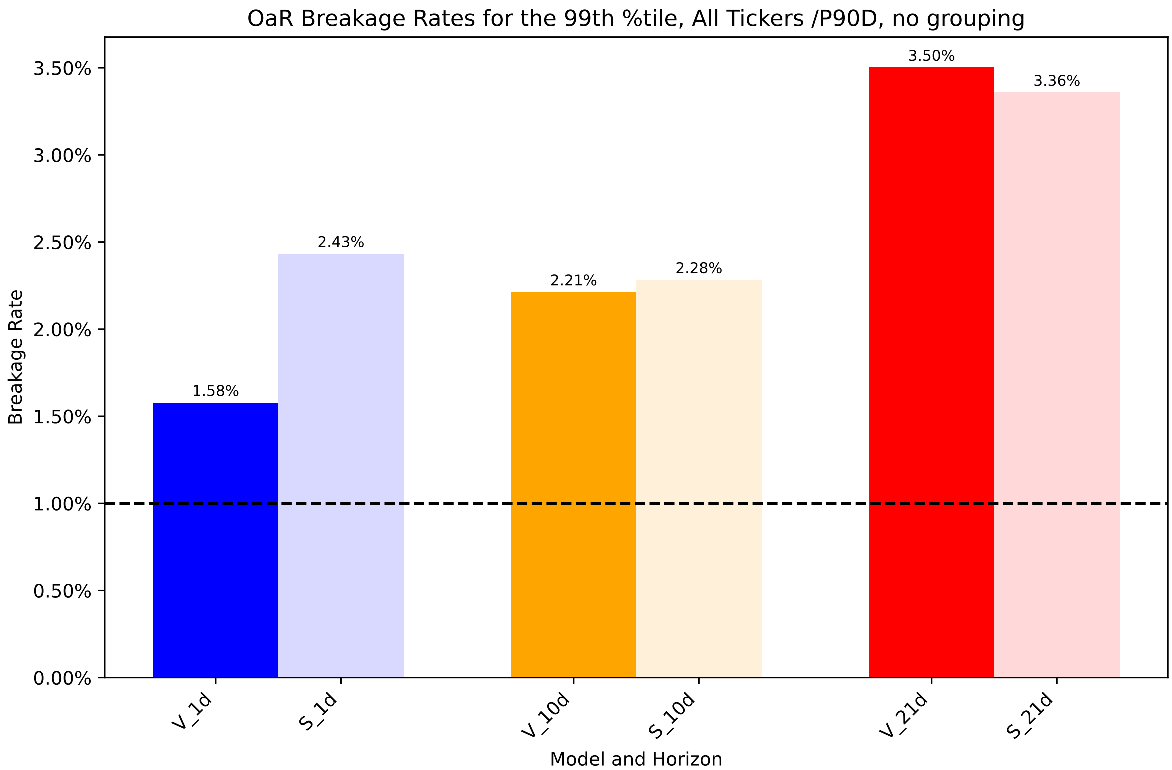
	1d	10d	21d	63d	126d
intercept	-0.00%	-0.11%	-0.14%	0.45%	0.02%
intercept_p_value	78.43%	0.20%	0.51%	0.00%	89.68%
slope	190.13%	168.36%	167.14%	180.01%	175.74%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

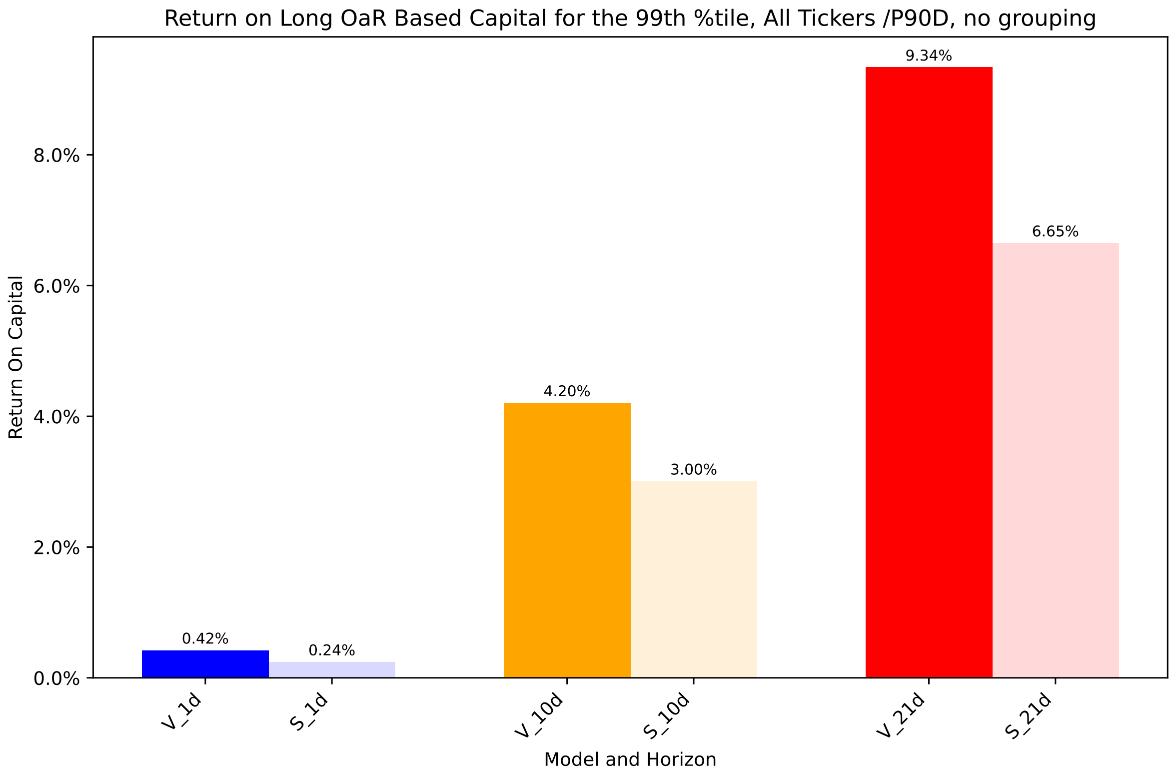
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P365D:

	1d	10d	21d	63d	126d
intercept	0.04%	0.19%	0.30%	0.10%	0.20%
intercept_p_value	0.02%	2.17%	5.78%	75.93%	71.10%
slope	45.78%	100.86%	108.10%	113.27%	114.22%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-06-27 through 2025-04-03





Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns across P90D:

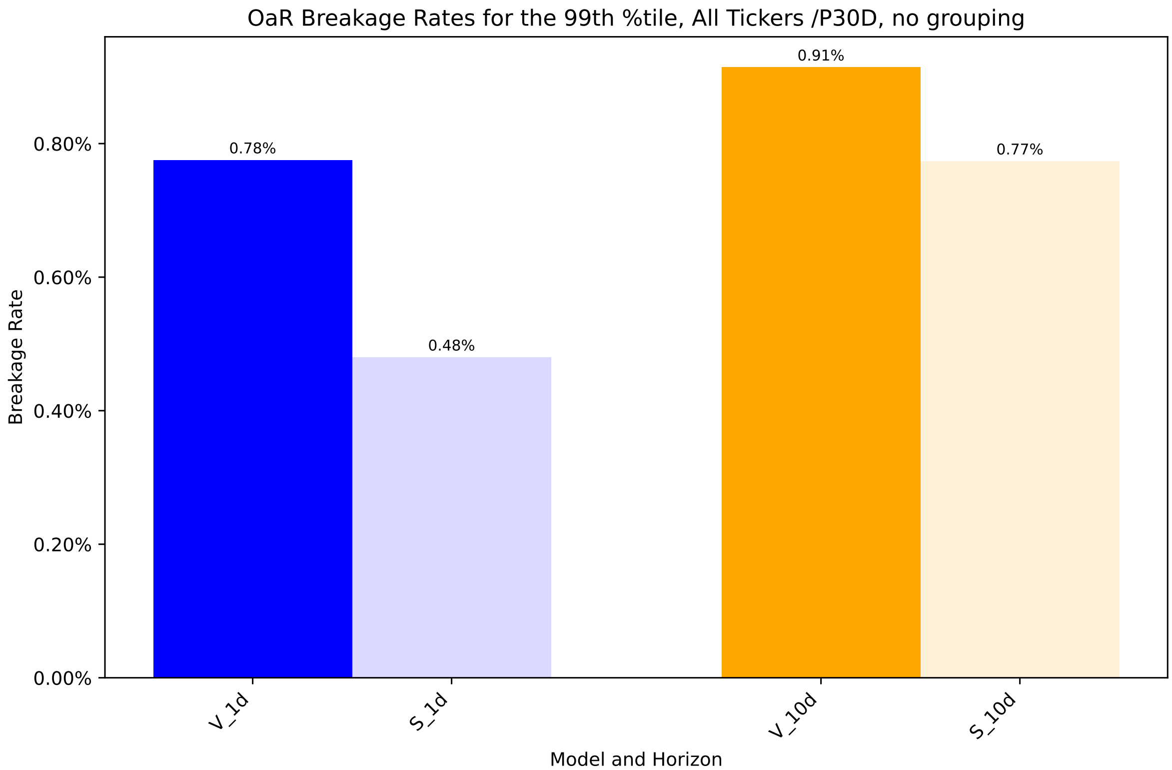
	1d	10d	21d
intercept	-0.02%	-0.06%	-0.01%
intercept_p_value	47.65%	35.85%	92.84%
slope	181.95%	141.93%	140.62%
slope_p_value	0.00%	0.00%	0.00%

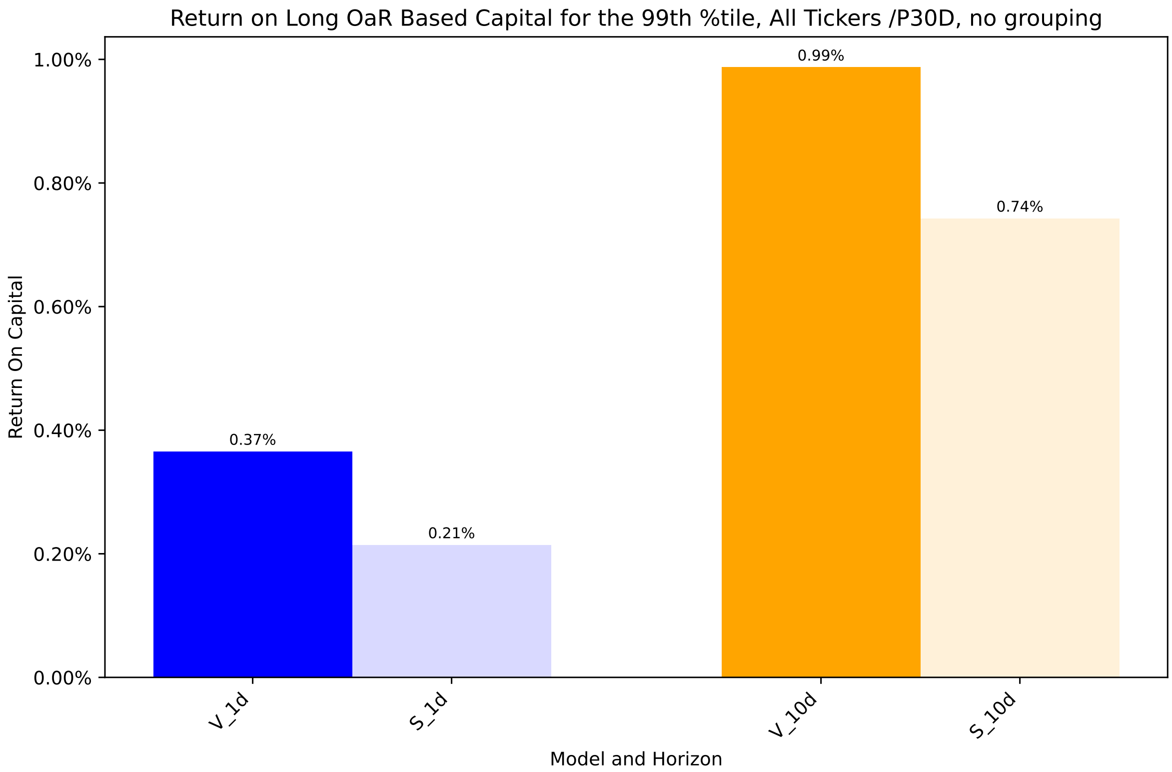
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P90D:

	1d	10d	21d
intercept	0.03%	-0.09%	-0.34%
intercept_p_value	30.60%	73.10%	60.59%
slope	114.18%	133.26%	141.98%
slope_p_value	0.00%	0.00%	0.00%

Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-06-27 through 2025-06-02





Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns across P30D:

	1d	10d
intercept	-0.01%	-0.03%
intercept_p_value	81.38%	79.83%
slope	174.14%	136.35%
slope_p_value	0.00%	0.00%

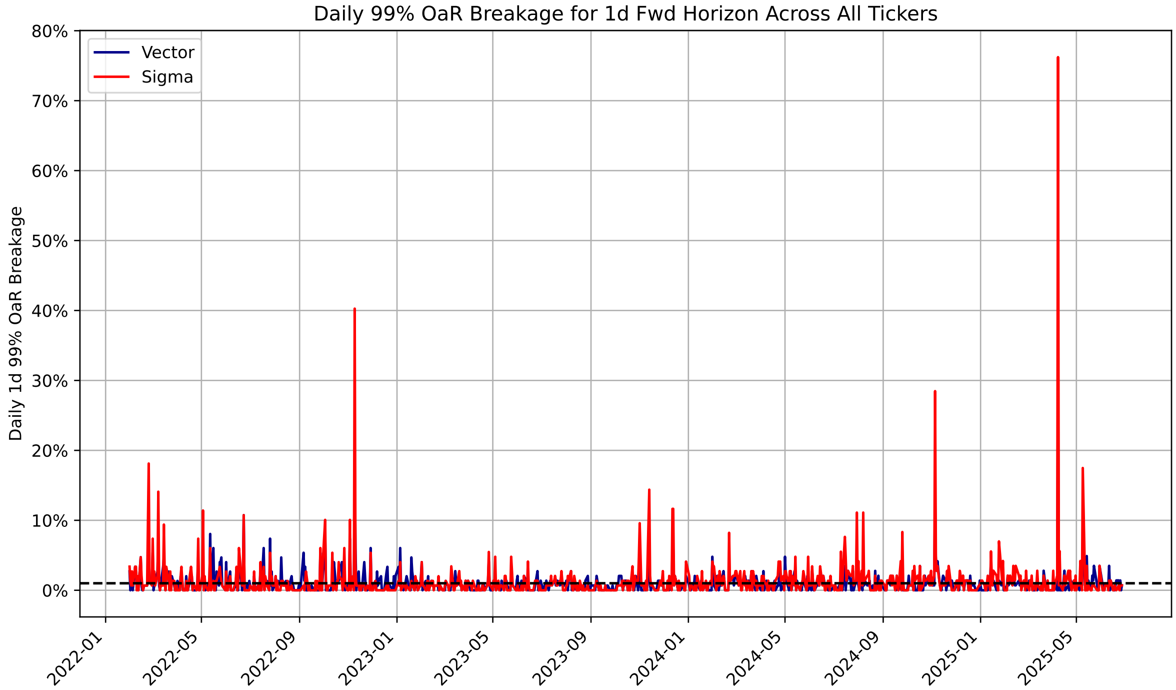
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P30D:

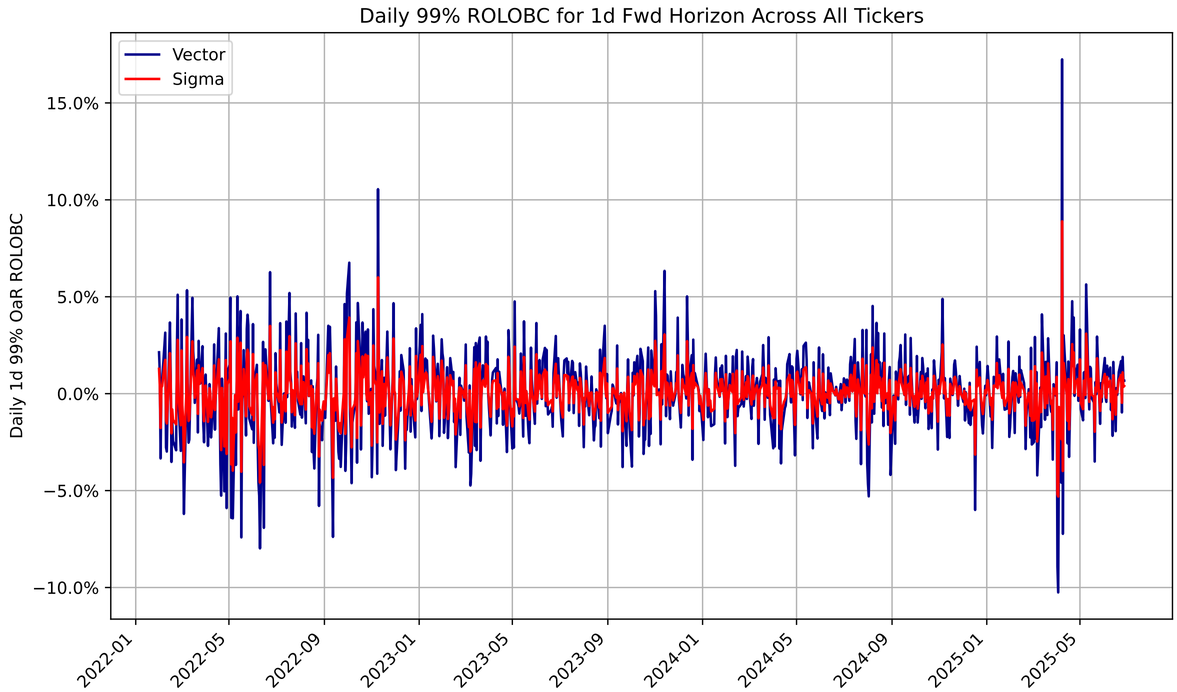
	1d	10d
intercept	-0.04%	-0.12%
intercept_p_value	20.33%	55.51%
slope	131.74%	129.87%
slope_p_value	0.00%	0.00%

Daily Performance

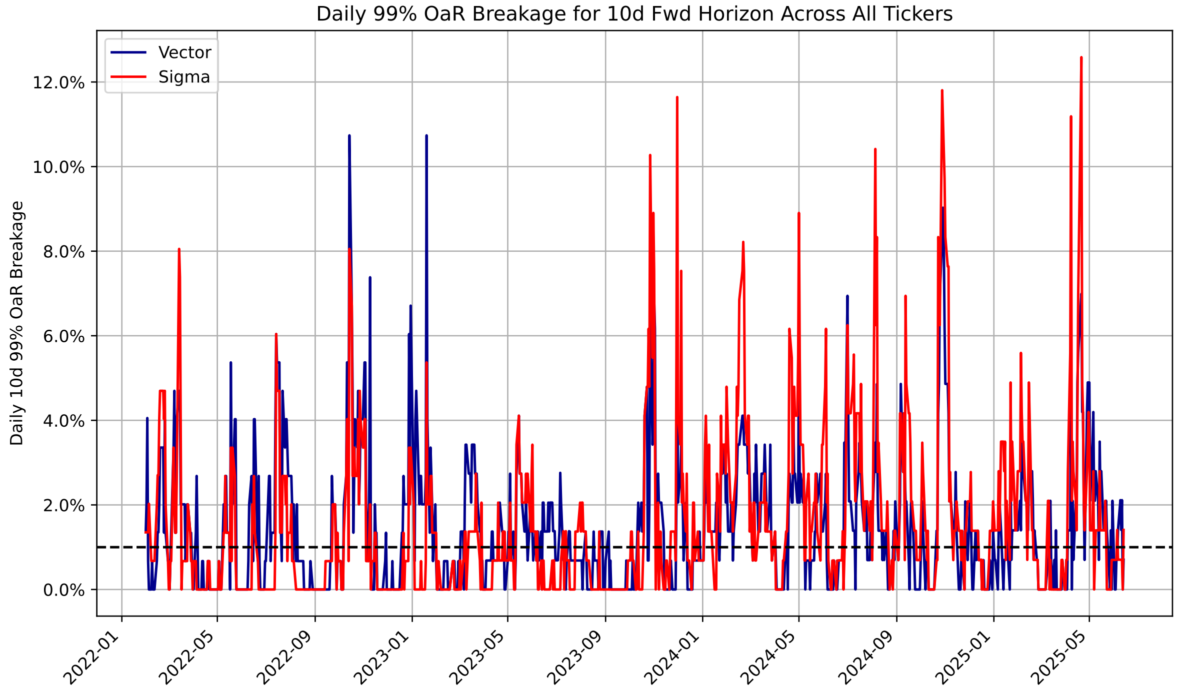
Here we look at the daily breakage and ROLOBC statitics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROLOBC outliers.

1d Horizon

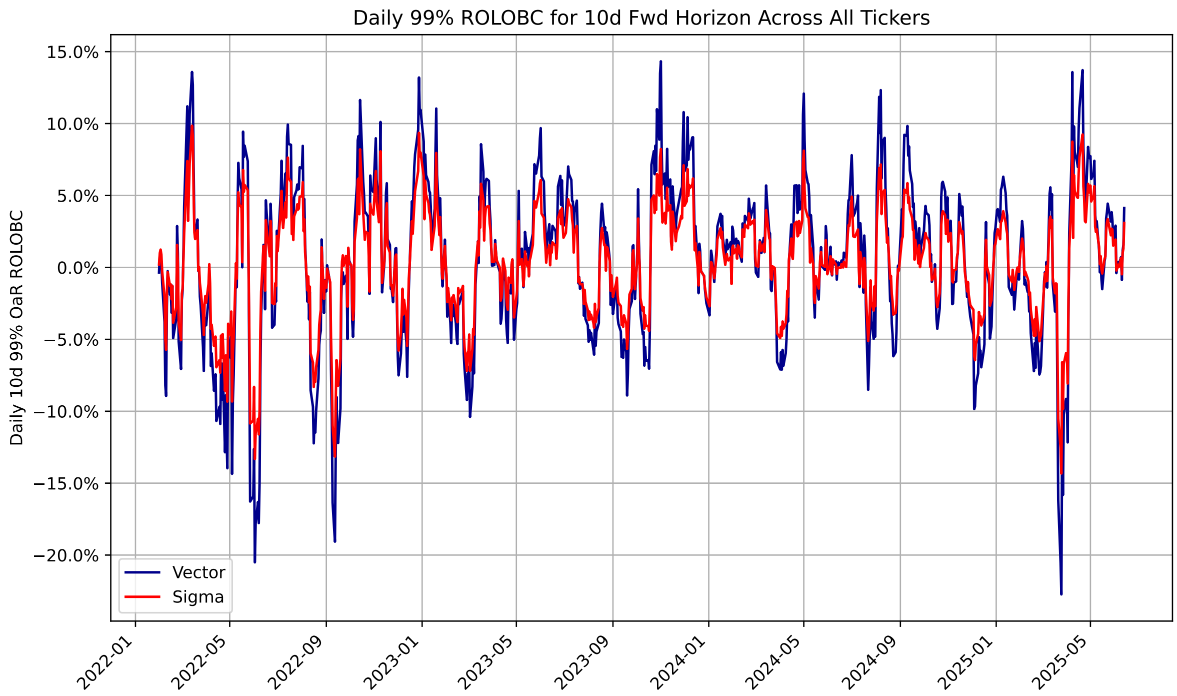



Daily 99% ROLOBC for 1d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 1d 99% OaR ROLOBC
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

10d Horizon

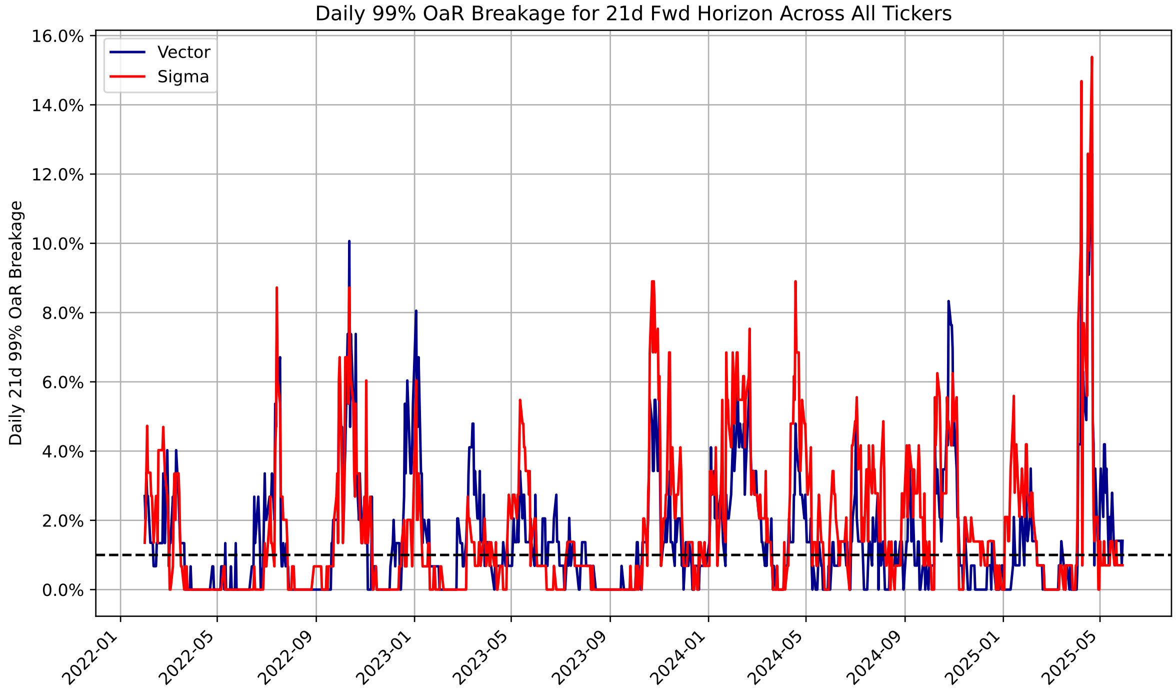


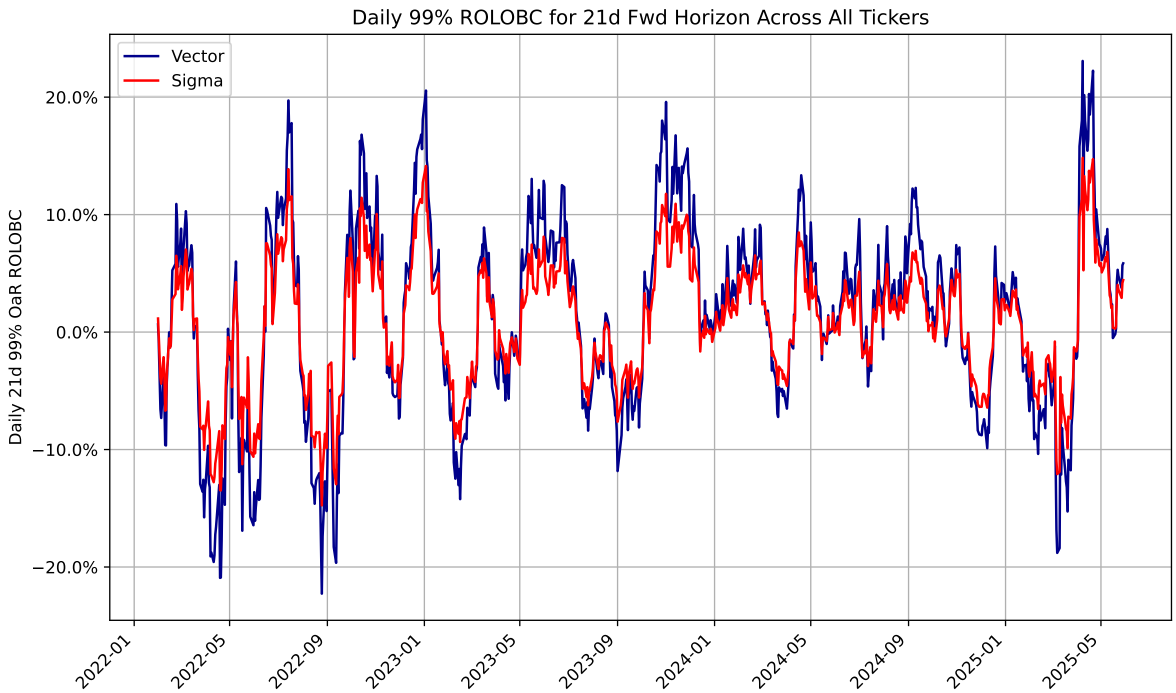
Daily 99% OaR Breakage for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 10d 99% OaR Breakage
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05



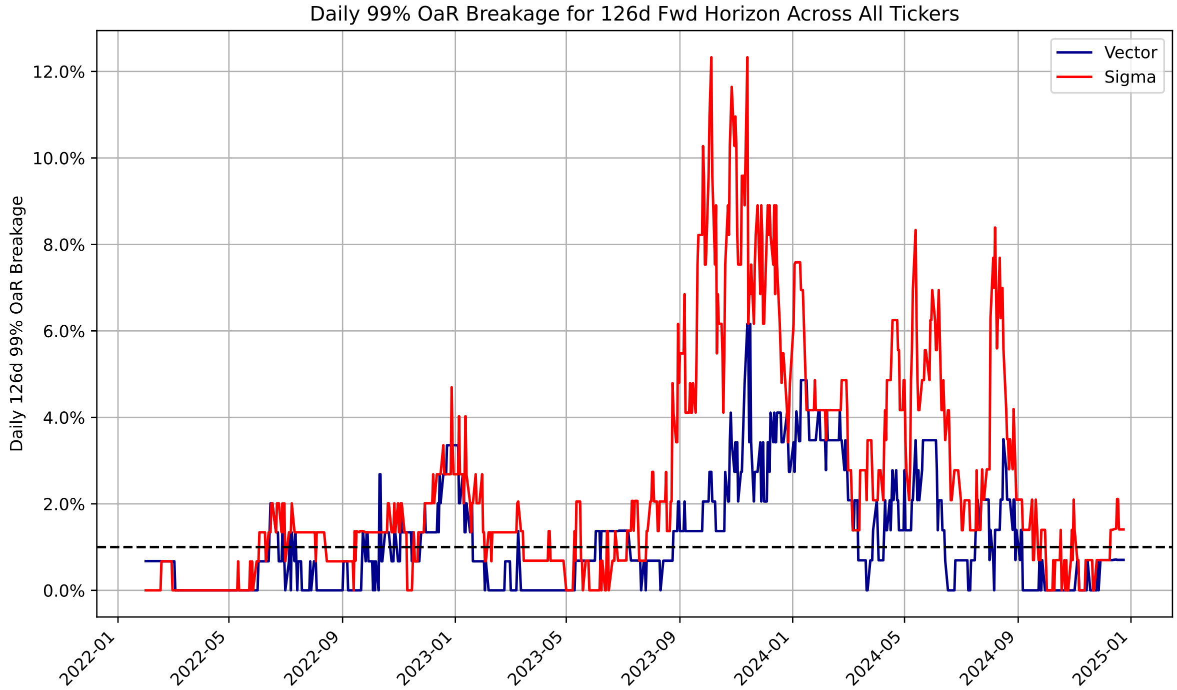
Daily 99% ROLOBC for 10d Fwd Horizon Across All Tickers
Daily 10d 99% OaR ROLOBC
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
−20.0%
Vector
Sigma
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

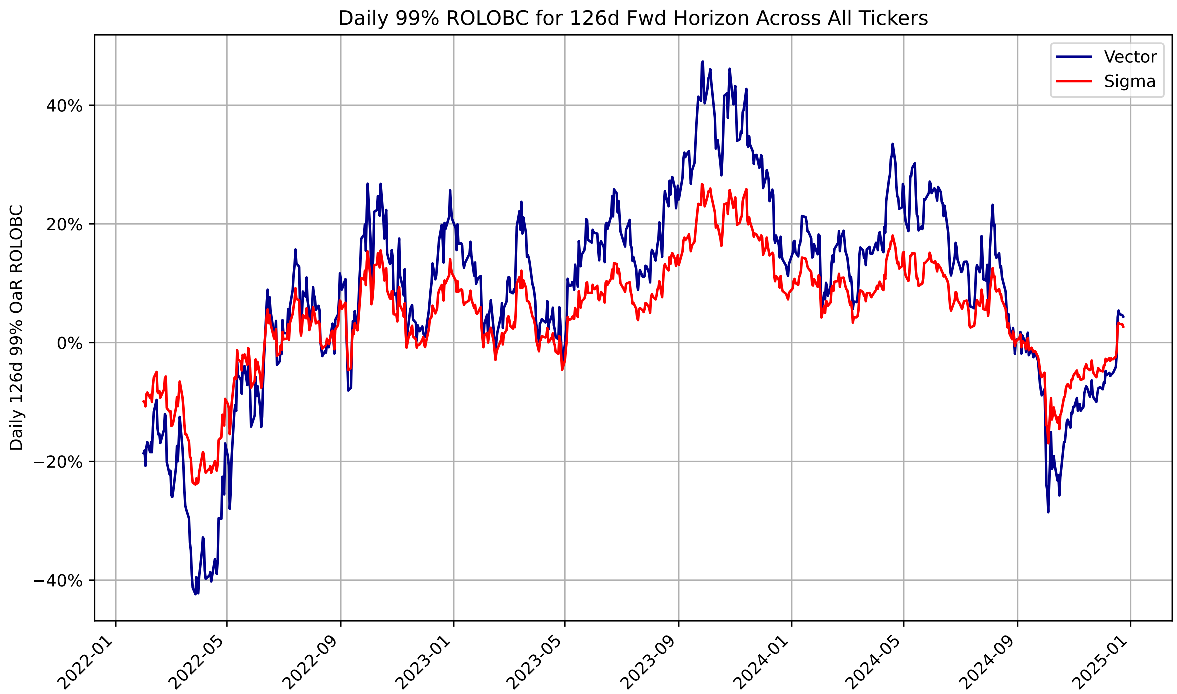
21d Horizon


Daily 99% OaR Breakage for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 21d 99% OaR Breakage
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

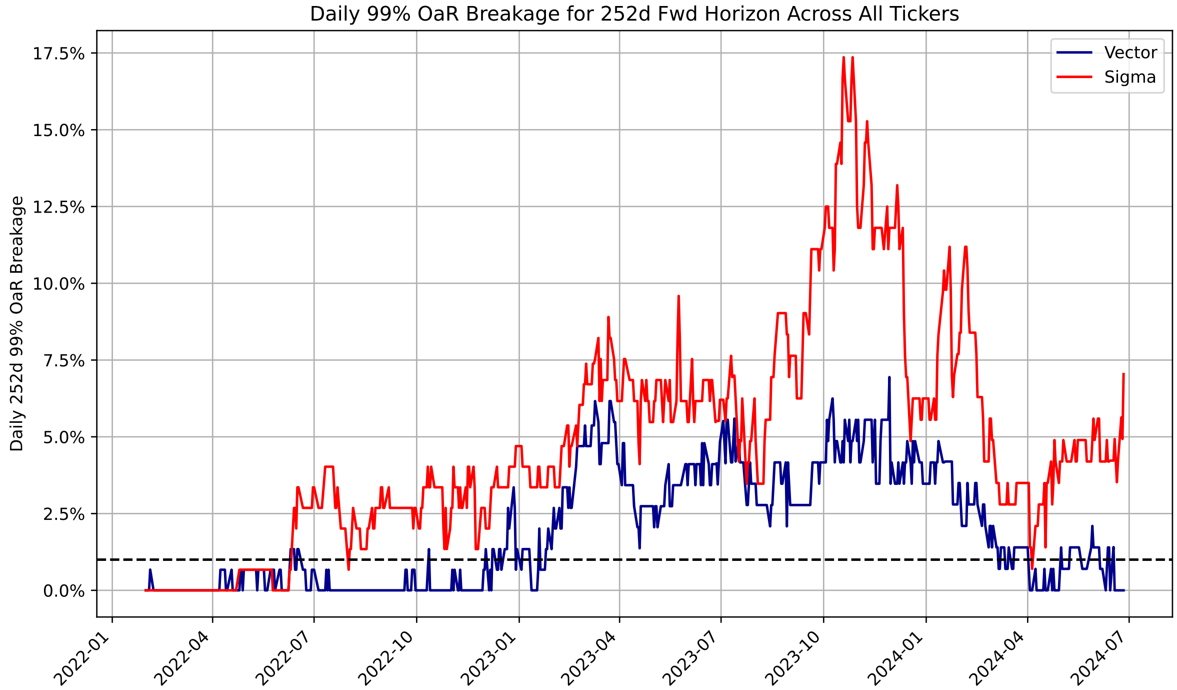

Daily 99% ROLOBC for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 21d 99% OaR ROLOBC
20.0%
10.0%
0.0%
−10.0%
−20.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

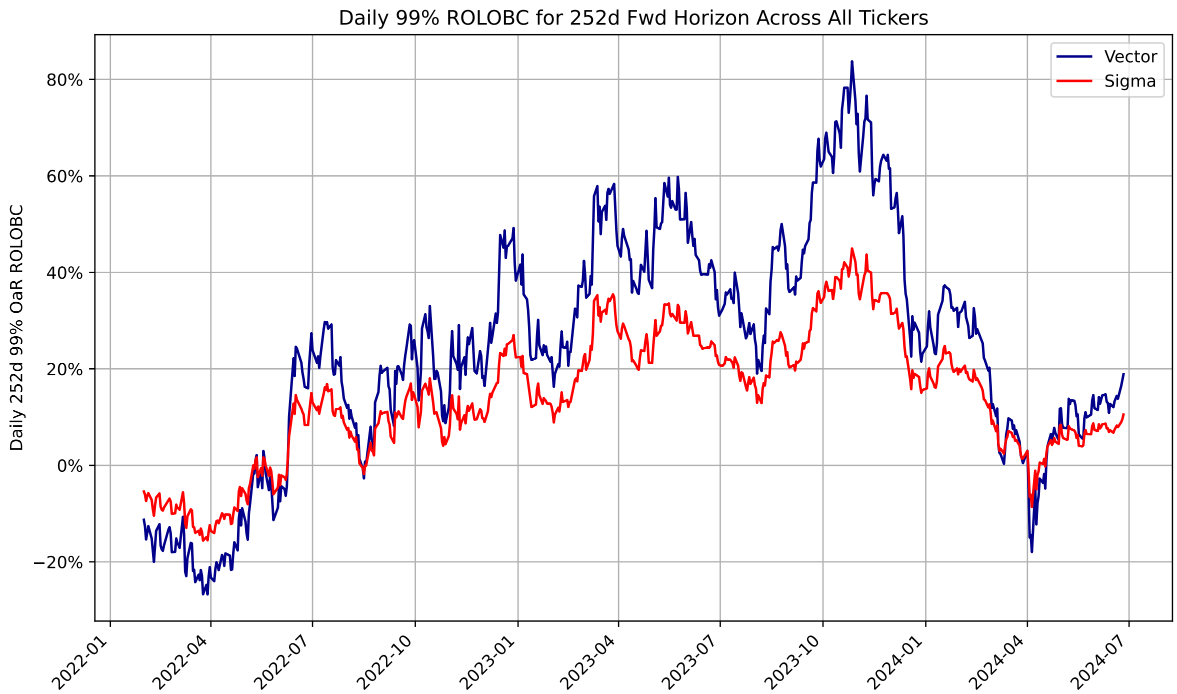
63d Horizon


Daily 99% OaR Breakage for 126d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 126d 99% OaR Breakage
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01


Daily 99% ROLOBC for 126d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 126d 99% OaR ROLOBC
40%
20%
0%
−20%
−40%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

252d Horizon

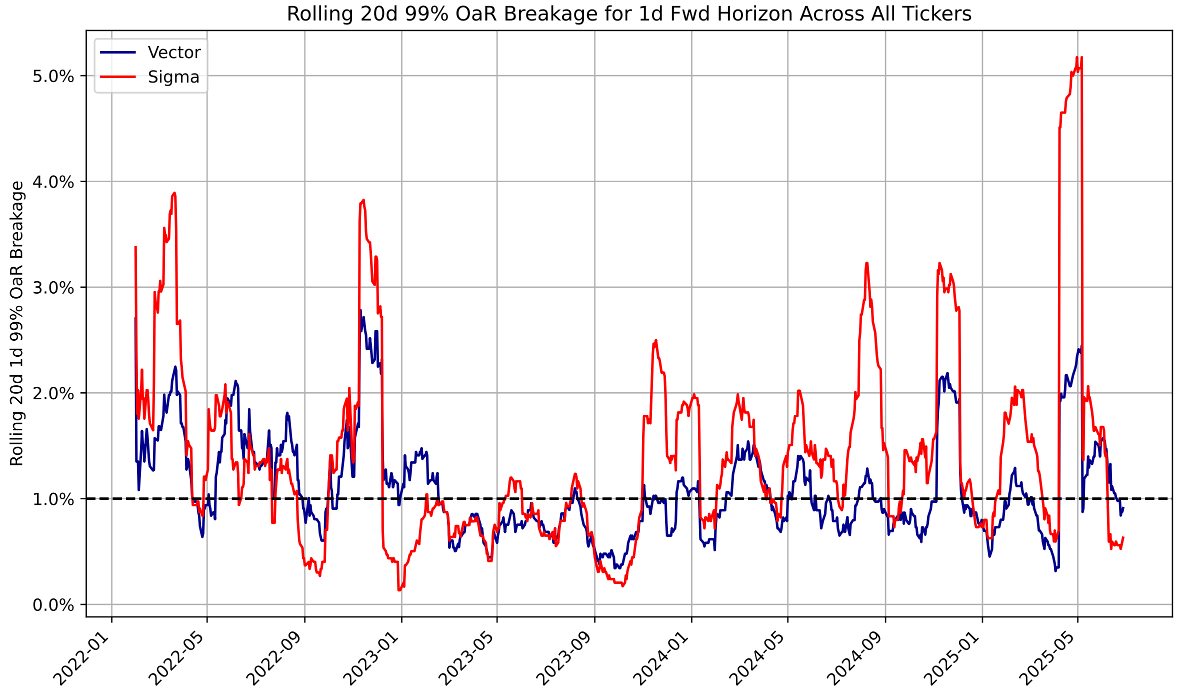


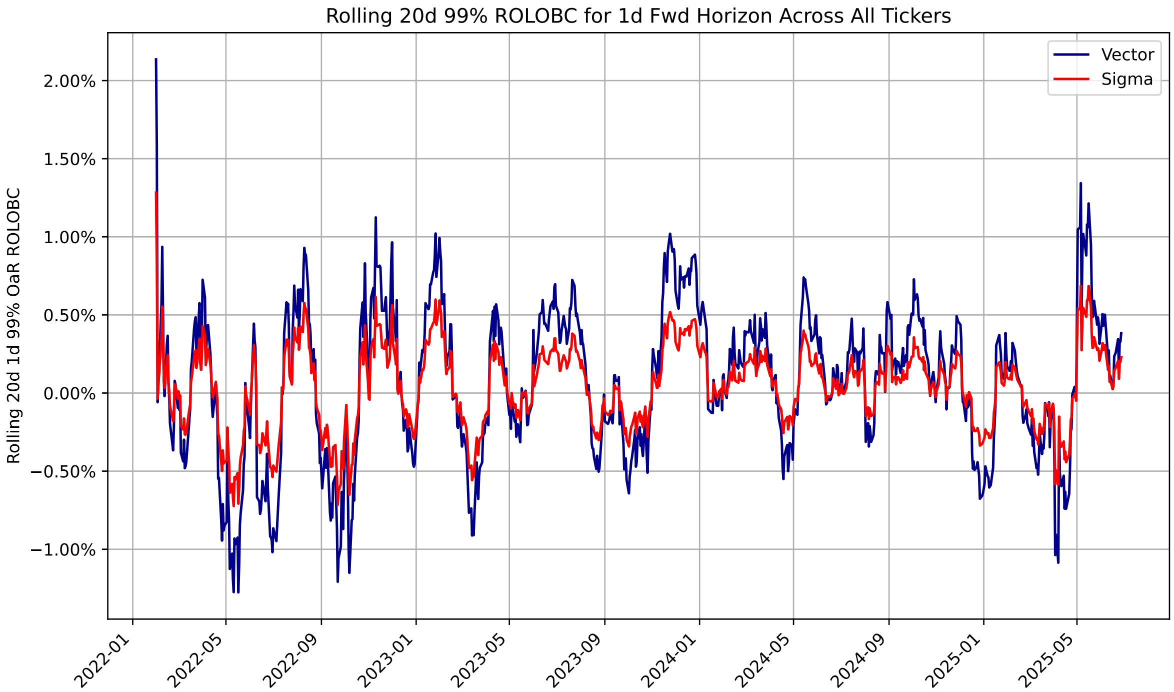


Rolling 20d Performance

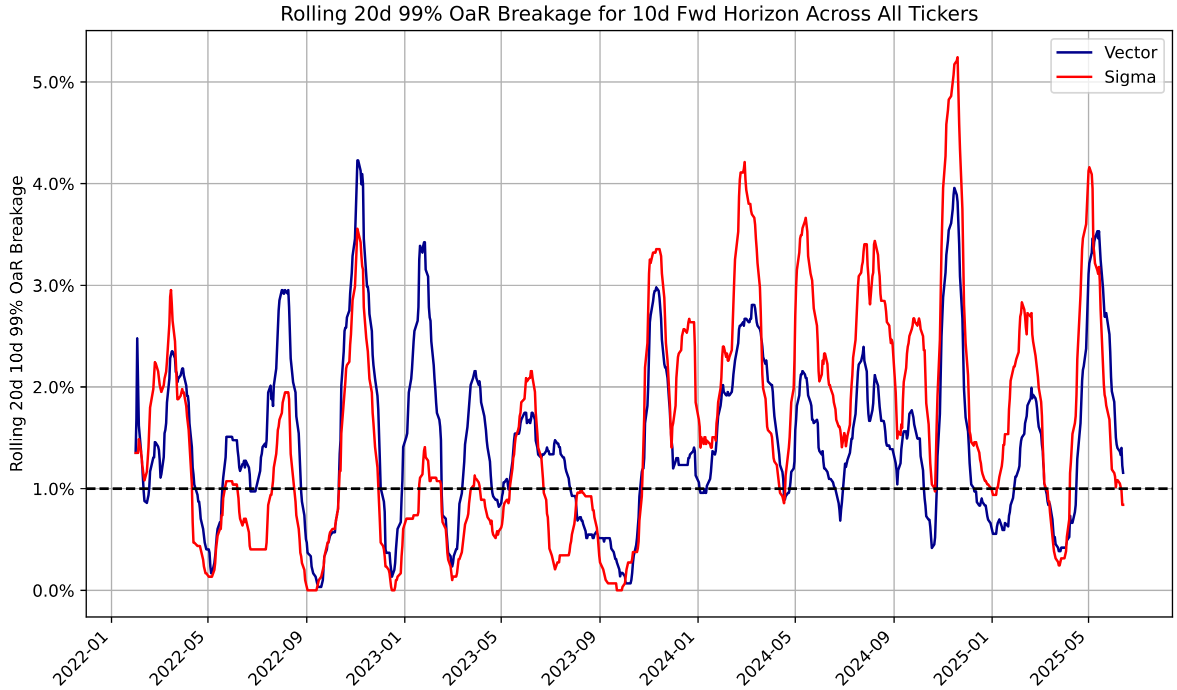
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statitics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

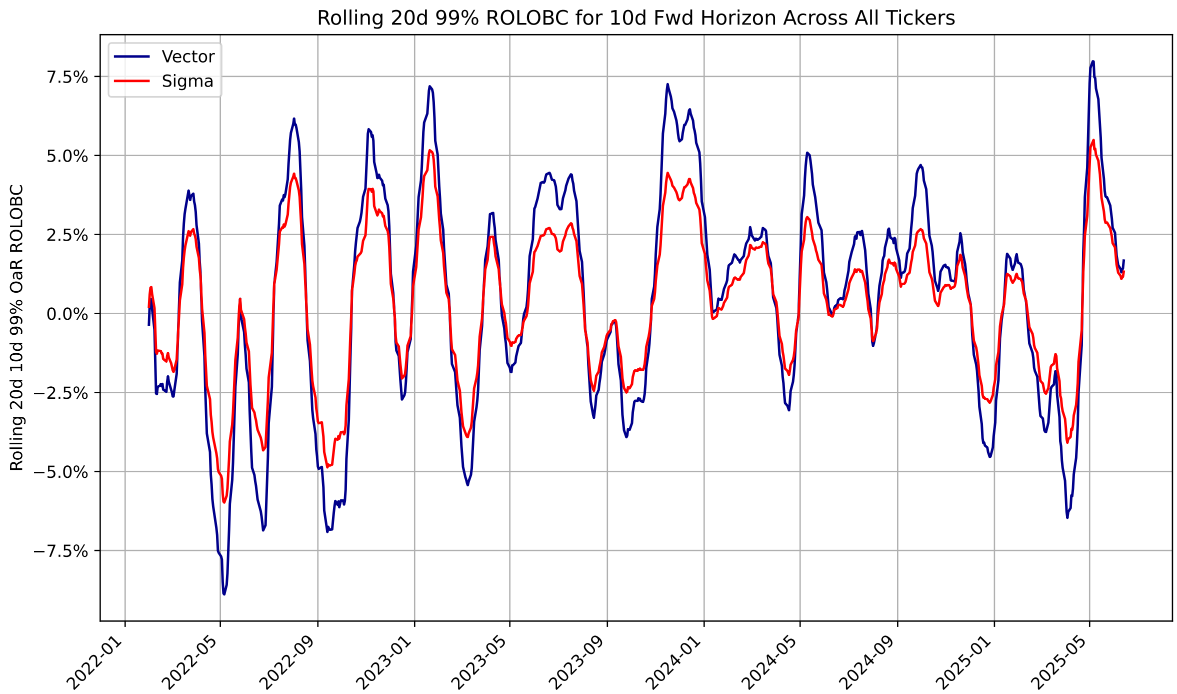
1d Horizon



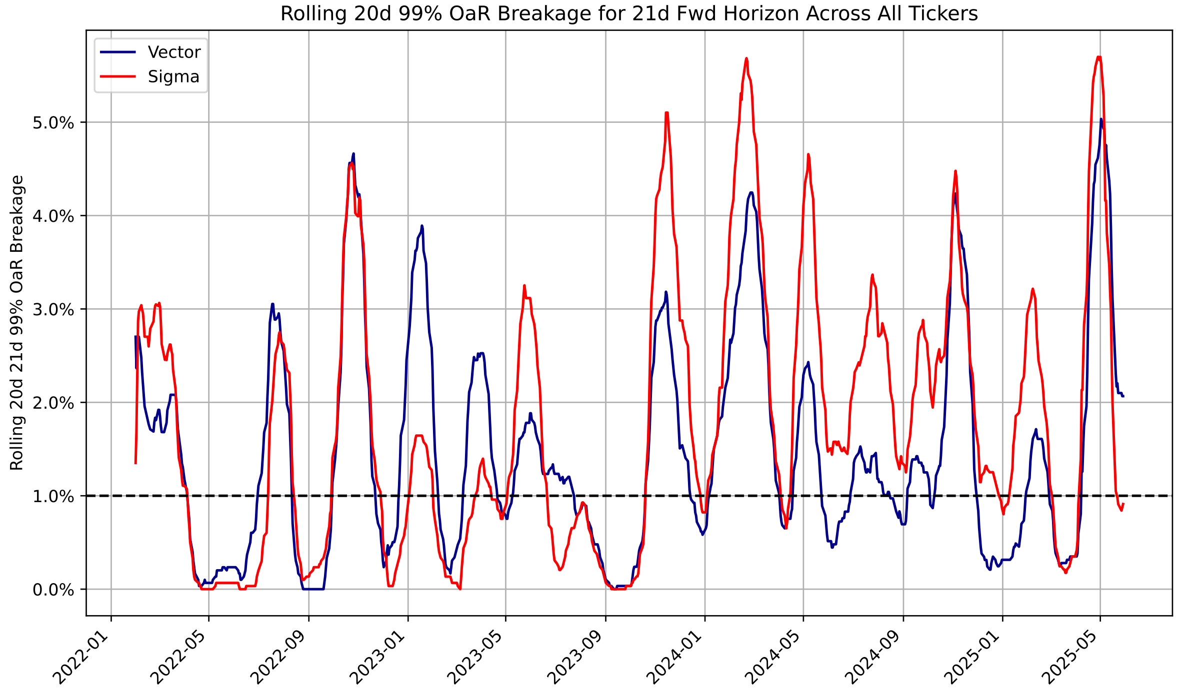

Rolling 20d 99% ROLOBC for 1d Fwd Horizon Across All Tickers
Rolling 20d 1d 99% OaR ROLOBC
Vector
Sigma
2.00%
1.50%
1.00%
0.50%
0.00%
−0.50%
−1.00%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

10d Horizon

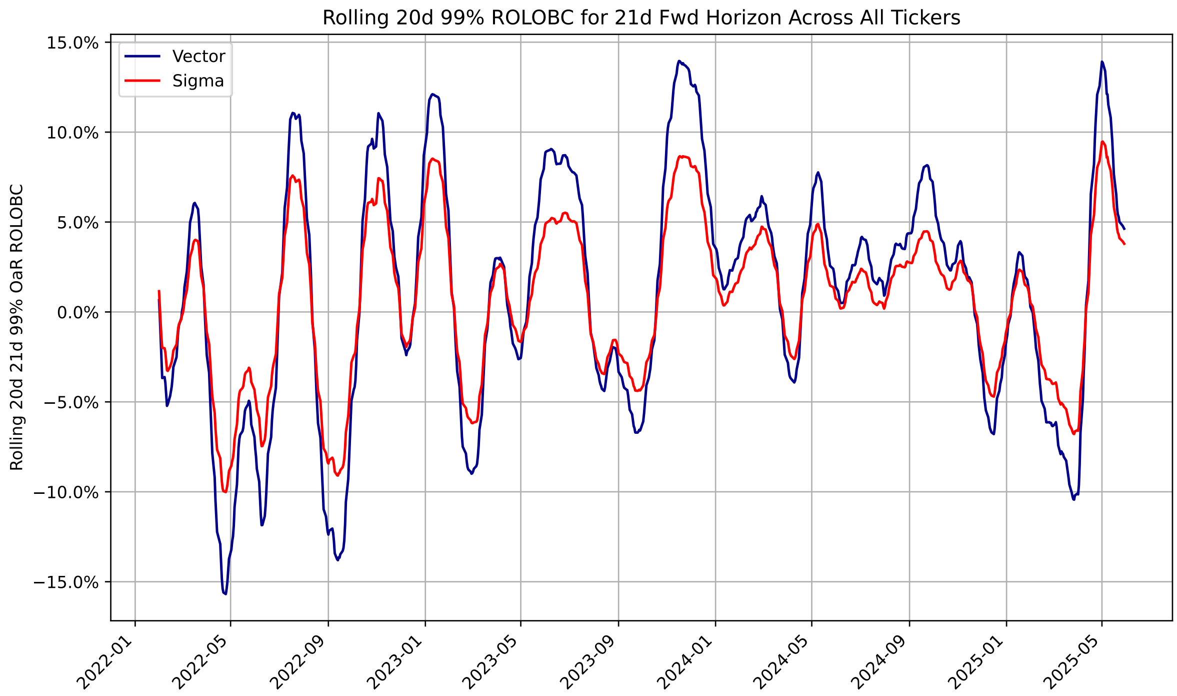

Rolling 20d 99% OaR Breakage for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 99% OaR Breakage
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05


Rolling 20d 99% ROLOBC for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 99% OaR ROLOBC
7.5%
5.0%
2.5%
0.0%
−2.5%
−5.0%
−7.5%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

21d Horizon

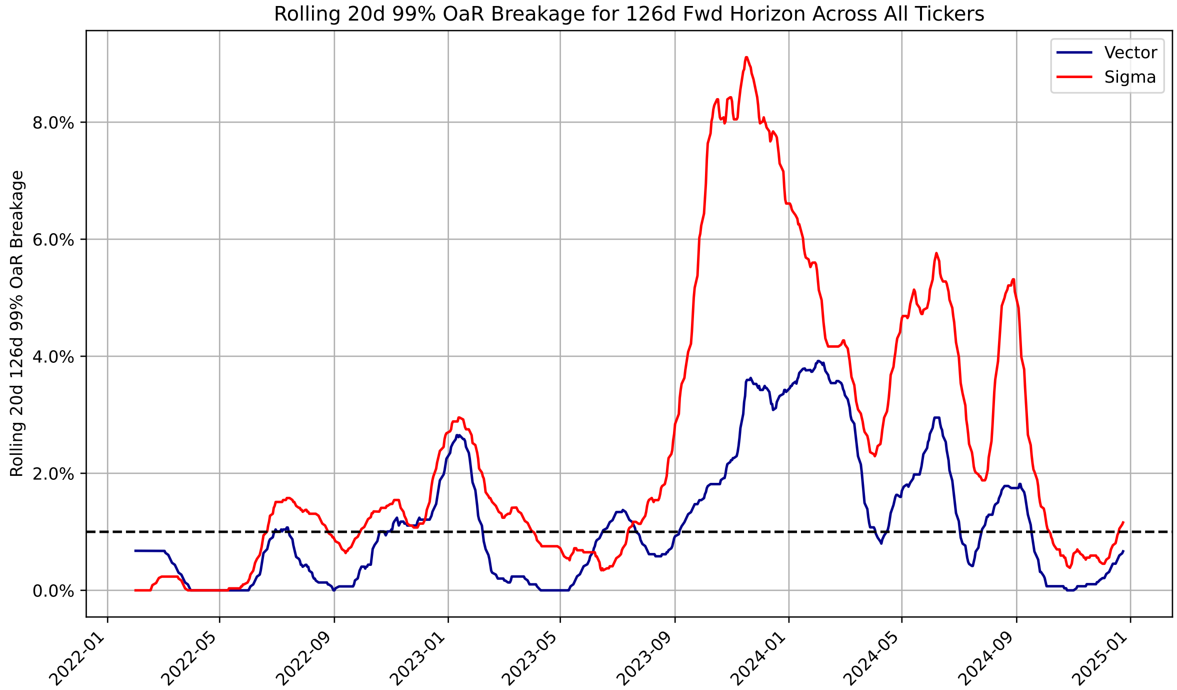


Rolling 20d 99% OaR Breakage for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 21d 99% OaR Breakage
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

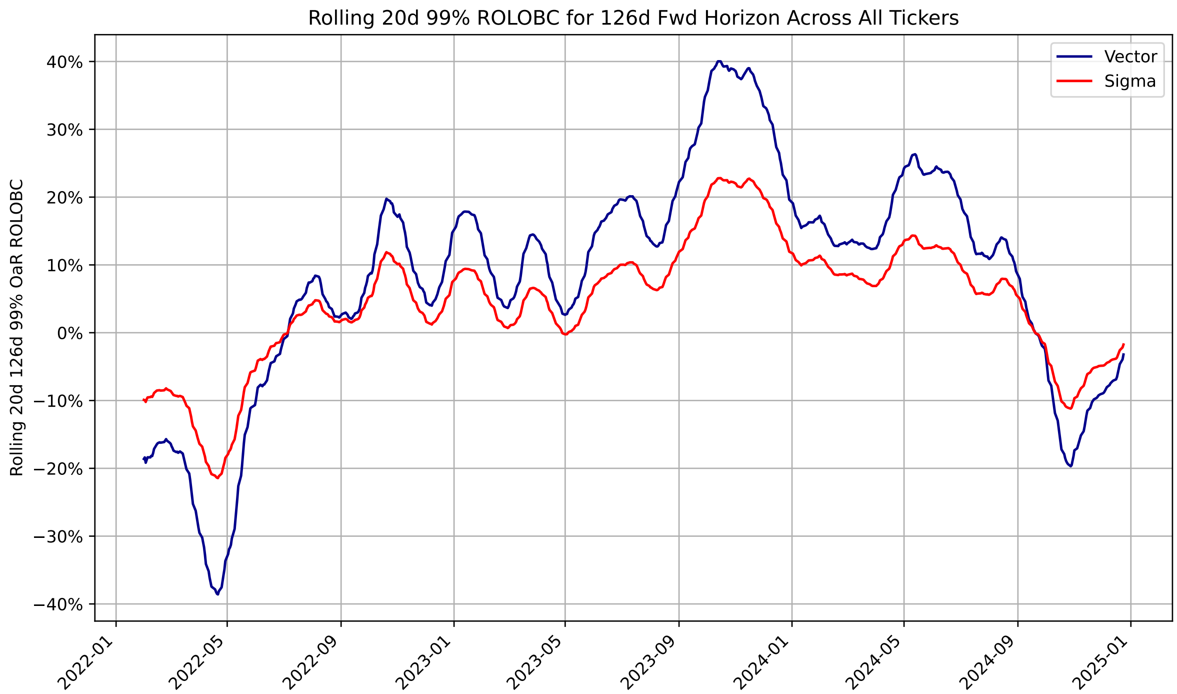


Rolling 20d 99% ROLOBC for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 21d 99% OaR ROLOBC
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

63d Horizon

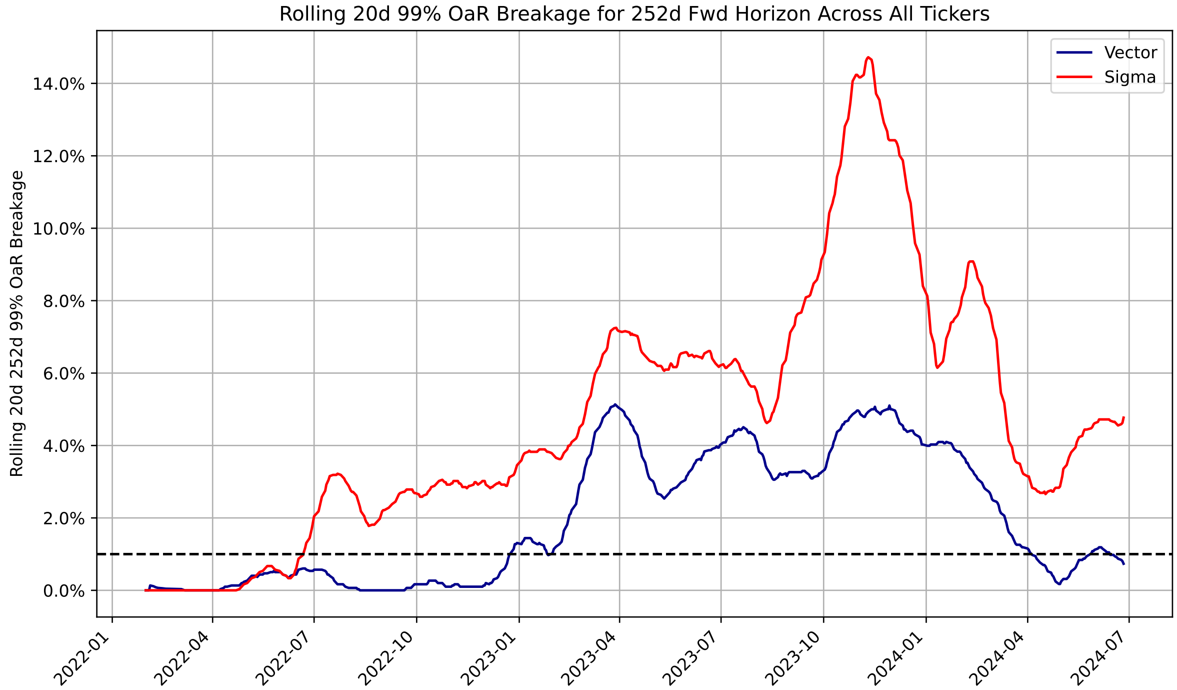


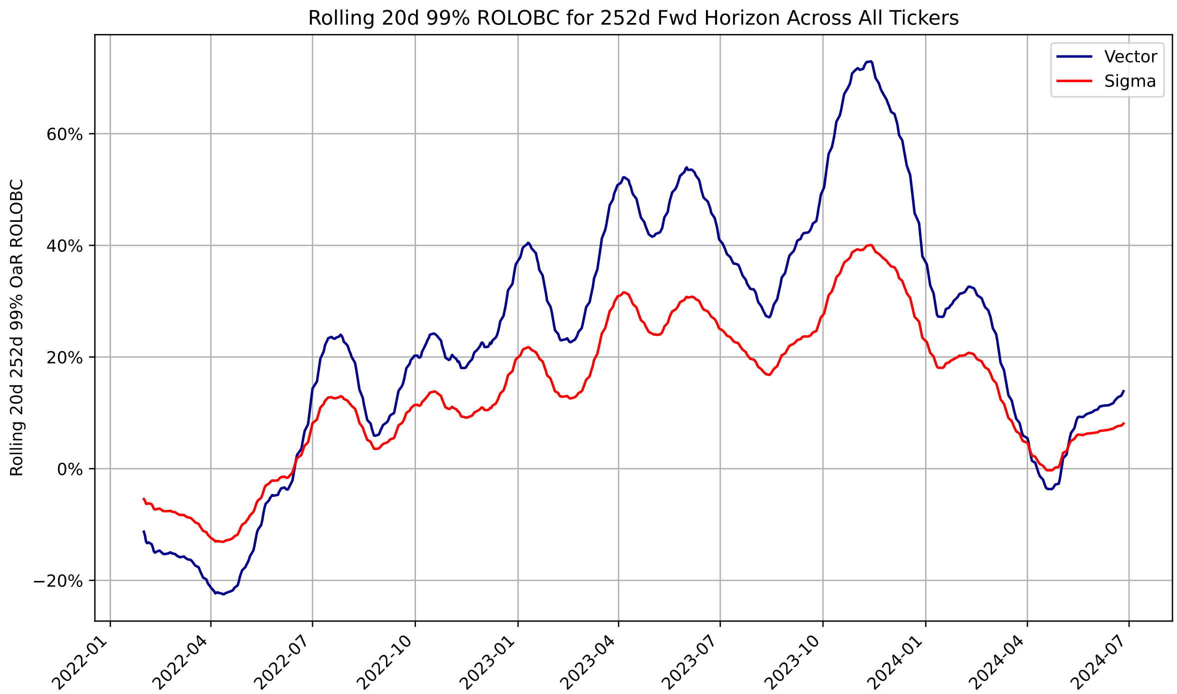
Rolling 20d 99% OaR Breakage for 126d Fwd Horizon Across All Tickers
Rolling 20d 126d 99% OaR Breakage
0.0%
2.0%
4.0%
6.0%
8.0%
Vector
Sigma
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01



Rolling 20d 99% ROLOBC for 126d Fwd Horizon Across All Tickers
Rolling 20d 126d 99% OaR ROLOBC
−40%
−30%
−20%
−10%
0%
10%
20%
30%
40%
Vector
Sigma
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

252d Horizon





Top 30 Tickers By OaR Breakage

All TMD: 1d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SIVBQ	6.83%	VST	4.8%
1.0	GME	6.08%	MSTR	3.39%
1.0	AVGO	5.61%	AVGO	3.04%
1.0	VST	5.03%	NVDA	2.81%
1.0	MSTR	5.03%	SLV	2.69%
1.0	META	3.98%	SIVBQ	2.52%
1.0	B	3.86%	GLD	2.46%
1.0	HLT	3.63%	LLY	2.46%
1.0	FRCB	3.6%	MU	2.34%
1.0	CHTR	3.27%	PWR	2.22%
1.0	ACGL	3.27%	UNH	1.99%
1.0	TEVA	3.27%	WDC	1.99%
1.0	INTU	3.16%	CCL	1.99%
1.0	TSLA	3.16%	GOOGL	1.87%
1.0	SLV	3.04%	ORCL	1.87%
1.0	BALL	3.04%	CMG	1.87%
1.0	OXY	2.69%	BAC	1.87%
1.0	BUD	2.69%	PHM	1.87%
1.0	ZTS	2.57%	IRM	1.87%
1.0	NFLX	2.57%	GBTC	1.87%
1.0	SBNY	2.52%	FRCB	1.8%
1.0	SPY	2.22%	SBNY	1.8%
1.0	CMA	1.99%	HSBC	1.75%
1.0	GWW	1.87%	TMUS	1.75%
1.0	JAZZ	1.87%	TXN	1.75%
1.0	AA	1.87%	THC	1.75%
1.0	ISRG	1.87%	LVS	1.75%
1.0	AMC	1.87%	TEVA	1.75%
1.0	ORCL	1.75%	USB	1.75%
1.0	GILD	1.64%	WYNN	1.75%

All TMD: 10d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	13.36%	VST	8.51%
10.0	SIVBQ	9.93%	NVDA	6.38%
10.0	VST	8.75%	ORCL	4.96%
10.0	AVGO	8.16%	AVGO	4.85%
10.0	META	7.68%	X	4.53%
10.0	GME	7.21%	LLY	4.49%
10.0	CHTR	6.74%	MSTR	4.26%
10.0	GWW	6.03%	TEVA	4.26%
10.0	ORCL	4.73%	GWW	4.14%
10.0	ZTS	4.37%	TRGP	4.02%
10.0	GILD	4.37%	TMUS	4.02%
10.0	IRM	4.26%	GLD	3.9%
10.0	ETRN	3.97%	TSLA	3.66%
10.0	TSLA	3.9%	GBTC	3.66%
10.0	ISRG	3.78%	CAH	3.66%
10.0	B	3.78%	MUB	3.55%
10.0	SBNY	3.68%	IRM	3.43%
10.0	VZ	3.66%	CPRT	3.31%
10.0	TEVA	3.55%	AMGN	3.19%
10.0	XOM	3.31%	DHI	2.96%
10.0	AMC	3.31%	POST	2.84%
10.0	EXPE	3.31%	CMG	2.84%
10.0	CAH	2.96%	PWR	2.84%
10.0	TRGP	2.84%	THC	2.72%
10.0	GNRC	2.84%	GILD	2.72%
10.0	NFLX	2.84%	WFC	2.6%
10.0	HCA	2.84%	ELAN	2.52%
10.0	OXY	2.6%	BUD	2.48%
10.0	SLV	2.6%	NFLX	2.48%
10.0	WFC	2.48%	MU	2.48%

All TMD: 21d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	MSTR	14.13%	VST	10.78%
21.0	SIVBQ	9.63%	NVDA	10.18%
21.0	CHTR	9.58%	MSTR	7.07%
21.0	VST	9.1%	TEVA	6.59%
21.0	GWW	8.62%	GE	6.35%
21.0	AVGO	7.66%	LLY	5.87%
21.0	META	6.95%	CAH	5.39%
21.0	GME	6.59%	GBTC	5.39%
21.0	GILD	5.87%	TSLA	5.39%
21.0	ISRG	4.79%	AVGO	5.39%
21.0	TRGP	4.67%	TRGP	5.27%
21.0	ORCL	4.67%	GILD	4.91%
21.0	B	4.55%	GWW	4.91%
21.0	WFC	4.19%	MOS	4.79%
21.0	TEVA	4.19%	ETRN	4.55%
21.0	NVDA	3.95%	MUB	4.44%
21.0	GNRC	3.71%	AMGN	4.43%
21.0	CAH	3.23%	TMUS	4.43%
21.0	GS	3.11%	ORCL	4.43%
21.0	TSLA	2.87%	X	4.35%
21.0	NEM	2.87%	WFC	3.95%
21.0	KALU	2.87%	PWR	3.95%
21.0	NFLX	2.75%	IRM	3.71%
21.0	ZTS	2.75%	THC	3.59%
21.0	AAPL	2.75%	GS	3.59%
21.0	LW	2.63%	DHI	3.59%
21.0	OXY	2.63%	ACGL	3.47%
21.0	XOM	2.63%	BA	3.47%
21.0	BUD	2.63%	BUD	3.35%
21.0	VZ	2.51%	WYNN	2.99%

All TMD: 63d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	VST	13.24%	NVDA	20.43%
63.0	MSTR	10.09%	VST	19.55%
63.0	SIVBQ	7.78%	MSTR	13.49%
63.0	NVDA	7.06%	GBTC	11.73%
63.0	GME	6.94%	TRGP	10.47%
63.0	AVGO	6.94%	IRM	9.33%
63.0	IRM	6.81%	GILD	8.58%
63.0	TRGP	5.55%	LLY	8.58%
63.0	WFC	5.17%	TMUS	8.2%
63.0	TMUS	4.29%	AVGO	7.19%
63.0	BUD	4.29%	GLD	6.68%
63.0	LW	4.16%	GE	6.43%
63.0	ORCL	3.66%	ETRN	5.99%
63.0	EXPE	3.66%	ACGL	5.93%
63.0	META	3.53%	MUB	5.56%
63.0	CTLT	3.23%	MRK	5.55%
63.0	OXY	2.9%	DHI	5.42%
63.0	TEVA	2.9%	PHM	5.3%
63.0	GILD	2.77%	MU	5.17%
63.0	TSLA	2.65%	THC	5.04%
63.0	MSI	2.65%	TSLA	4.41%
63.0	ACGL	2.02%	META	4.29%
63.0	GWW	2.02%	WFC	4.16%
63.0	GOOGL	1.89%	BUD	3.91%
63.0	RIO	1.51%	CCL	3.78%
63.0	BXP	1.39%	MS	3.66%
63.0	CAH	1.39%	ORCL	3.66%
63.0	CHTR	1.39%	ABBV	3.15%
63.0	HCA	1.26%	CAH	3.03%
63.0	KALU	1.26%	AAPL	2.9%

All TMD: 126d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	31.64%	VST	35.21%
126.0	MSTR	20.82%	NVDA	32.6%
126.0	IRM	16.58%	TRGP	23.15%
126.0	TRGP	12.33%	MSTR	18.77%
126.0	META	11.1%	GE	16.71%
126.0	NVDA	10.0%	THC	16.71%
126.0	MSI	8.36%	TMUS	14.79%
126.0	LW	6.44%	IRM	14.66%
126.0	AVGO	6.3%	LLY	14.25%
126.0	EXPE	5.89%	GBTC	12.74%
126.0	TEVA	5.89%	GILD	12.6%
126.0	ACGL	3.56%	ACGL	12.19%
126.0	CAH	3.29%	MU	10.14%
126.0	OXY	3.15%	GLD	10.0%
126.0	TDG	2.74%	META	9.45%
126.0	TMUS	2.6%	CMG	8.63%
126.0	BUD	2.6%	PHM	7.53%
126.0	GOOGL	2.19%	AVGO	7.53%
126.0	GLD	1.92%	ORCL	5.34%
126.0	THC	1.92%	X	5.26%
126.0	GME	1.78%	MSI	5.21%
126.0	GILD	1.64%	COST	4.66%
126.0	BALL	1.51%	TEVA	4.66%
126.0	VFC	1.51%	CAH	4.25%
126.0	ETRN	1.02%	TSLA	4.25%
126.0	GE	0.96%	TDG	4.25%
126.0	WFC	0.41%	PWR	4.25%
126.0	WDC	0.41%	WFC	3.7%
126.0	ORCL	0.41%	WDC	3.56%
126.0	HCA	0.27%	JPM	3.42%

All TMD: 252d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	VST	51.32%	NVDA	65.23%
252.0	MSTR	45.03%	VST	58.11%
252.0	NVDA	43.71%	AVGO	50.83%
252.0	AVGO	26.49%	MSTR	45.03%
252.0	IRM	25.17%	GE	41.23%
252.0	LLY	16.39%	LLY	40.89%
252.0	GWW	9.77%	GBTC	34.11%
252.0	TEVA	9.77%	PHM	30.63%
252.0	MSI	8.77%	TRGP	28.48%
252.0	TRGP	8.77%	GLD	28.48%
252.0	META	7.78%	TMUS	22.52%
252.0	LW	5.13%	COST	21.69%
252.0	GLD	4.97%	IRM	21.52%
252.0	WFC	2.81%	META	21.36%
252.0	THC	2.48%	ACGL	20.03%
252.0	TMUS	2.48%	MSI	16.89%
252.0	GOOGL	1.99%	TEVA	15.73%
252.0	GILD	1.99%	THC	15.4%
252.0	TDG	1.49%	GS	14.07%
252.0	GE	1.49%	JPM	12.09%
252.0	JPM	1.32%	CAH	11.92%
252.0	GNRC	0.99%	T	9.44%
252.0	ORLY	0.83%	PWR	9.27%
252.0	ORCL	0.83%	NFLX	8.94%
252.0	CMG	0.66%	ETRN	7.18%
252.0	CAH	0.66%	TDG	6.95%
252.0	NFLX	0.5%	ISRG	6.29%
252.0	GBTC	0.33%	WFC	6.13%
252.0	ACGL	0.33%	MU	5.46%
252.0	GS	0.33%	DHI	5.13%

P30D: 1d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	TSLA	21.05%	ORCL	10.53%
1.0	NVS	10.53%	PRGO	5.26%
1.0	AVGO	10.53%	CAH	5.26%
1.0	ON	5.26%	CCL	5.26%
1.0	VZ	5.26%	UAA	5.26%
1.0	NAVI	5.26%	FCX	5.26%
1.0	NEM	5.26%	GT	5.26%
1.0	GILD	5.26%	LVS	5.26%
1.0	SLV	5.26%	AMD	5.26%
1.0	MU	5.26%	ON	5.26%
1.0	CAH	5.26%	T	5.26%
1.0	ORCL	5.26%	BA	5.26%
1.0	AMD	5.26%	NVDA	0.0%
1.0	ADBE	5.26%	NFLX	0.0%
1.0	AAP	5.26%	NWL	0.0%
1.0	JPM	5.26%	NVS	0.0%
1.0	NWL	0.0%	NAVI	0.0%
1.0	ORLY	0.0%	ORLY	0.0%
1.0	OXY	0.0%	OXY	0.0%
1.0	NVDA	0.0%	PCG	0.0%
1.0	NFLX	0.0%	PEP	0.0%
1.0	PCG	0.0%	NEM	0.0%
1.0	MUB	0.0%	AA	0.0%
1.0	AA	0.0%	MUB	0.0%
1.0	MSFT	0.0%	META	0.0%
1.0	MSTR	0.0%	LEN	0.0%
1.0	MSI	0.0%	LLY	0.0%
1.0	PHM	0.0%	LNC	0.0%
1.0	MS	0.0%	LQD	0.0%
1.0	MRK	0.0%	LUMN	0.0%

P30D: 10d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	NEM	40.0%	ORCL	80.0%
10.0	AVGO	40.0%	XOM	10.0%
10.0	MU	20.0%	GS	10.0%
10.0	TSLA	20.0%	CCL	10.0%
10.0	CAH	10.0%	AA	0.0%
10.0	AA	0.0%	NVDA	0.0%
10.0	NVDA	0.0%	MUB	0.0%
10.0	MUB	0.0%	NAVI	0.0%
10.0	NAVI	0.0%	NEM	0.0%
10.0	NFLX	0.0%	NFLX	0.0%
10.0	NVS	0.0%	NWL	0.0%
10.0	NWL	0.0%	NVS	0.0%
10.0	ON	0.0%	MSTR	0.0%
10.0	ORCL	0.0%	ON	0.0%
10.0	ORLY	0.0%	ORLY	0.0%
10.0	OXY	0.0%	OXY	0.0%
10.0	PCG	0.0%	PCG	0.0%
10.0	PEP	0.0%	PEP	0.0%
10.0	MSTR	0.0%	MU	0.0%
10.0	MSI	0.0%	MSFT	0.0%
10.0	POST	0.0%	MSI	0.0%
10.0	LUMN	0.0%	LUMN	0.0%
10.0	KEY	0.0%	KEY	0.0%
10.0	KHC	0.0%	KHC	0.0%
10.0	LEN	0.0%	LEN	0.0%
10.0	LLY	0.0%	LLY	0.0%
10.0	LNC	0.0%	LNC	0.0%
10.0	LQD	0.0%	LQD	0.0%
10.0	LVS	0.0%	LVS	0.0%
10.0	MSFT	0.0%	POST	0.0%

P90D: 1d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	TSLA	11.86%	GLD	11.86%
1.0	NEM	8.47%	LVS	6.78%
1.0	GILD	8.47%	UNH	5.08%
1.0	AVGO	8.47%	CCL	5.08%
1.0	ZTS	6.78%	HLT	5.08%
1.0	AAP	6.78%	HSBC	5.08%
1.0	SLV	6.78%	ORCL	5.08%
1.0	BUD	6.78%	BA	5.08%
1.0	MU	5.08%	B	5.08%
1.0	AMZN	5.08%	TXN	5.08%
1.0	VZ	5.08%	NEM	5.08%
1.0	NVS	5.08%	FIS	5.08%
1.0	META	5.08%	X	3.92%
1.0	INTU	3.39%	QQQ	3.39%
1.0	HON	3.39%	GE	3.39%
1.0	HLT	3.39%	GWW	3.39%
1.0	JPM	3.39%	FRA	3.39%
1.0	HD	3.39%	FITB	3.39%
1.0	ON	3.39%	PRGO	3.39%
1.0	NAVI	3.39%	PHM	3.39%
1.0	ORCL	3.39%	GT	3.39%
1.0	QCOM	3.39%	FCX	3.39%
1.0	THC	3.39%	EXPE	3.39%
1.0	TXN	3.39%	PWR	3.39%
1.0	UNH	3.39%	ZTS	3.39%
1.0	VFC	3.39%	OXY	3.39%
1.0	WDC	3.39%	HD	3.39%
1.0	GLD	3.39%	SBUX	3.39%
1.0	AA	3.39%	HON	3.39%
1.0	ADBE	3.39%	HYG	3.39%

P90D: 10d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	TSLA	24.0%	X	23.81%
10.0	AVGO	24.0%	ORCL	22.0%
10.0	META	20.0%	NFLX	20.0%
10.0	AAP	20.0%	AAP	20.0%
10.0	KALU	18.0%	MSFT	20.0%
10.0	ELAN	18.0%	ELAN	18.0%
10.0	NEM	18.0%	HLT	16.0%
10.0	TXN	16.0%	THC	14.0%
10.0	CHTR	14.0%	HSBC	12.0%
10.0	GILD	12.0%	GLD	10.0%
10.0	WDC	12.0%	CAH	8.0%
10.0	HON	10.0%	LLY	8.0%
10.0	KEY	10.0%	PWR	8.0%
10.0	THC	8.0%	META	8.0%
10.0	HCA	8.0%	FIS	8.0%
10.0	SLV	8.0%	CHTR	8.0%
10.0	WFC	8.0%	CYH	8.0%
10.0	MU	6.0%	NEM	6.0%
10.0	MSFT	6.0%	INTU	6.0%
10.0	GS	6.0%	WYNN	6.0%
10.0	ABBV	6.0%	MOS	6.0%
10.0	X	4.76%	IRM	4.0%
10.0	HSBC	4.0%	CPRT	4.0%
10.0	PWR	4.0%	JAZZ	4.0%
10.0	GLD	4.0%	SPY	4.0%
10.0	ZTS	4.0%	GILD	4.0%
10.0	CAH	4.0%	KALU	4.0%
10.0	MS	4.0%	VICI	4.0%
10.0	AAPL	2.0%	BUD	4.0%
10.0	BUD	2.0%	ABBV	4.0%

P90D: 21d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	AVGO	51.28%	MSFT	35.9%
21.0	TXN	41.03%	AAP	33.33%
21.0	CHTR	35.9%	ORCL	30.77%
21.0	MU	30.77%	MOS	30.77%
21.0	WFC	25.64%	HLT	25.64%
21.0	KALU	23.08%	BA	25.64%
21.0	ZTS	23.08%	PWR	23.08%
21.0	HON	20.51%	THC	23.08%
21.0	KEY	20.51%	ELAN	20.51%
21.0	THC	17.95%	CAH	20.51%
21.0	WDC	17.95%	NFLX	17.95%
21.0	AAP	17.95%	WYNN	17.95%
21.0	GE	15.38%	GE	15.38%
21.0	GILD	15.38%	TXN	10.26%
21.0	TSLA	15.38%	META	10.26%
21.0	META	15.38%	LVS	10.26%
21.0	CAH	12.82%	QQQ	10.26%
21.0	GS	12.82%	CDNS	10.26%
21.0	ELAN	12.82%	HSBC	10.26%
21.0	ORCL	10.26%	KALU	10.26%
21.0	BAC	10.26%	GLD	7.69%
21.0	NEM	10.26%	INTU	7.69%
21.0	MSFT	7.69%	BAC	7.69%
21.0	PWR	7.69%	CHTR	7.69%
21.0	B	5.13%	CYH	7.69%
21.0	SLV	5.13%	IRM	7.69%
21.0	X	3.23%	SPY	7.69%
21.0	GLD	2.56%	X	6.45%
21.0	CSCO	2.56%	GS	5.13%
21.0	AMC	2.56%	HCA	2.56%

P365D: 1d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	AVGO	7.66%	MSTR	4.84%
1.0	VST	6.45%	VST	4.44%
1.0	TSLA	6.05%	GLD	3.63%
1.0	VZ	4.44%	PWR	3.63%
1.0	SLV	4.44%	CCL	3.63%
1.0	MSTR	4.44%	TXN	3.23%
1.0	GILD	4.03%	TEVA	3.23%
1.0	HLT	3.63%	AVGO	3.23%
1.0	B	3.63%	UNH	3.23%
1.0	SBUX	3.23%	WYNN	3.23%
1.0	META	2.82%	ORCL	3.23%
1.0	KEY	2.82%	LVS	3.23%
1.0	UNH	2.82%	T	2.82%
1.0	NFLX	2.82%	GT	2.82%
1.0	IRM	2.82%	PHM	2.82%
1.0	ZTS	2.42%	TMUS	2.82%
1.0	EXPE	2.42%	TRGP	2.82%
1.0	BUD	2.42%	HON	2.82%
1.0	BAC	2.42%	HSBC	2.82%
1.0	CHTR	2.42%	UAA	2.82%
1.0	CMA	2.42%	JAZZ	2.82%
1.0	GME	2.42%	GSK	2.42%
1.0	VFC	2.42%	AMAT	2.42%
1.0	GS	2.02%	B	2.42%
1.0	NEM	2.02%	FCX	2.42%
1.0	MU	2.02%	BMY	2.42%
1.0	NVS	2.02%	TSLA	2.42%
1.0	ORCL	2.02%	WDC	2.42%
1.0	TXN	2.02%	WFC	2.42%
1.0	AAP	1.61%	THC	2.42%

P365D: 10d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	TSLA	12.13%	TRGP	10.46%
10.0	CHTR	11.72%	TMUS	10.04%
10.0	VST	10.46%	ORCL	8.37%
10.0	GILD	10.04%	VST	8.37%
10.0	VZ	10.04%	NFLX	7.95%
10.0	META	9.62%	LUMN	7.11%
10.0	EXPE	8.79%	WFC	6.69%
10.0	AVGO	7.95%	CPRT	6.28%
10.0	MSTR	5.86%	WYNN	5.86%
10.0	SBUX	5.86%	X	5.63%
10.0	TXN	5.86%	MS	5.44%
10.0	GS	5.44%	AVGO	5.44%
10.0	KALU	5.02%	SBUX	5.02%
10.0	WFC	5.02%	CHTR	5.02%
10.0	BUD	4.6%	GS	5.02%
10.0	HON	4.6%	BUD	5.02%
10.0	NEM	4.6%	TSLA	5.02%
10.0	CNC	4.18%	CAH	4.6%
10.0	AAP	4.18%	LVS	4.6%
10.0	CMA	4.18%	MSTR	4.6%
10.0	HCA	3.77%	T	4.6%
10.0	ELAN	3.77%	TEVA	4.18%
10.0	HD	3.35%	THC	4.18%
10.0	SLV	3.35%	DHI	4.18%
10.0	VFC	3.35%	GBTC	4.18%
10.0	ABBV	2.93%	MSFT	4.18%
10.0	TRGP	2.93%	GILD	4.18%
10.0	BXP	2.93%	POST	4.18%
10.0	B	2.93%	HON	4.18%
10.0	WDC	2.51%	UNH	4.18%

P365D: 21d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	CHTR	18.42%	TMUS	15.35%
21.0	GILD	12.72%	VST	13.6%
21.0	AVGO	12.28%	TRGP	13.6%
21.0	MSTR	10.53%	WYNN	10.96%
21.0	TSLA	10.53%	WFC	10.53%
21.0	VST	10.09%	MSTR	10.53%
21.0	WFC	10.09%	LVS	9.65%
21.0	VZ	8.77%	LUMN	9.21%
21.0	META	7.89%	TEVA	8.77%
21.0	GS	7.89%	GILD	8.77%
21.0	TXN	7.02%	ORCL	8.77%
21.0	ORCL	6.58%	SBUX	8.33%
21.0	MU	5.26%	BUD	7.89%
21.0	NEM	4.82%	AVGO	7.89%
21.0	TRGP	4.39%	NFLX	7.46%
21.0	BAC	4.39%	GBTC	7.46%
21.0	HON	3.95%	TSLA	7.02%
21.0	HD	3.95%	ABBV	6.58%
21.0	KALU	3.95%	MSFT	6.14%
21.0	ZTS	3.95%	GS	6.14%
21.0	BUD	3.51%	IRM	5.7%
21.0	ABBV	3.51%	PWR	5.7%
21.0	CPRT	3.51%	T	5.7%
21.0	KEY	3.51%	CAH	5.7%
21.0	THC	3.07%	AAP	5.7%
21.0	WDC	3.07%	MOS	5.26%
21.0	AAP	3.07%	HLT	4.82%
21.0	NFLX	3.07%	COST	4.82%
21.0	CNC	3.07%	BA	4.82%
21.0	CMA	2.63%	MS	4.39%

P365D: 63d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	WFC	18.28%	VST	28.49%
63.0	TMUS	18.28%	TMUS	27.42%
63.0	BUD	18.28%	TRGP	25.27%
63.0	EXPE	12.9%	MSTR	20.97%
63.0	TSLA	11.29%	WFC	17.74%
63.0	GILD	11.29%	TSLA	17.74%
63.0	MSI	9.14%	BUD	16.67%
63.0	ORCL	8.6%	MS	15.59%
63.0	VST	6.99%	CCL	13.98%
63.0	HD	4.84%	GLD	13.98%
63.0	HCA	4.3%	IRM	10.22%
63.0	META	2.15%	ORCL	8.6%
63.0	TRGP	2.15%	CAH	8.06%
63.0	VFC	2.15%	GBTC	5.91%
63.0	CMA	2.15%	CVS	5.91%
63.0	GLD	1.61%	T	5.91%
63.0	BXP	1.61%	HSBC	5.38%
63.0	CVS	1.61%	MSI	4.84%
63.0	MSTR	1.08%	LUMN	4.84%
63.0	AA	0.0%	GILD	4.3%
63.0	NFLX	0.0%	NFLX	3.76%
63.0	NAVI	0.0%	CSCO	3.76%
63.0	NVDA	0.0%	VNO	3.76%
63.0	NVS	0.0%	GWW	3.76%
63.0	NWL	0.0%	CPRT	3.23%
63.0	ON	0.0%	DHI	2.69%
63.0	ORLY	0.0%	PWR	2.69%
63.0	NEM	0.0%	BMY	2.69%
63.0	MSFT	0.0%	PHM	2.69%
63.0	MUB	0.0%	MSFT	2.15%

P365D: 126d

Results reflect ticker level average 99% OaR breakage (OaRBreak) across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	EXPE	19.51%	TMUS	39.84%
126.0	TMUS	15.45%	TRGP	39.02%
126.0	BUD	15.45%	VST	30.08%
126.0	META	14.63%	GLD	29.27%
126.0	TRGP	13.01%	GILD	17.89%
126.0	VFC	8.13%	NFLX	17.89%
126.0	GILD	4.88%	CAH	11.38%
126.0	VST	3.25%	MSTR	10.57%
126.0	MSTR	1.63%	T	10.57%
126.0	GLD	0.81%	WFC	10.57%
126.0	ON	0.0%	MS	8.94%
126.0	NWL	0.0%	CSCO	8.13%
126.0	NVS	0.0%	JPM	7.32%
126.0	NVDA	0.0%	HSBC	5.69%
126.0	NEM	0.0%	CCL	4.88%
126.0	ORCL	0.0%	GS	2.44%
126.0	NAVI	0.0%	BUD	1.63%
126.0	MUB	0.0%	ISRG	0.81%
126.0	MU	0.0%	EXPE	0.81%
126.0	ORLY	0.0%	HLT	0.81%
126.0	NFLX	0.0%	AVGO	0.81%
126.0	AA	0.0%	LVS	0.0%
126.0	MSI	0.0%	OXY	0.0%
126.0	LUMN	0.0%	ORLY	0.0%
126.0	KEY	0.0%	ORCL	0.0%
126.0	KHC	0.0%	ON	0.0%
126.0	LEN	0.0%	NWL	0.0%
126.0	LLY	0.0%	NVS	0.0%
126.0	LNC	0.0%	LNC	0.0%
126.0	LQD	0.0%	NVDA	0.0%

Top 30 Tickers By ROLOBC

All TMD: 1d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NVDA	0.59%	MSTR	0.47%
1.0	GBTC	0.52%	VST	0.31%
1.0	MSTR	0.47%	NVDA	0.28%
1.0	X	0.45%	AVGO	0.22%
1.0	VST	0.44%	GBTC	0.22%
1.0	GE	0.4%	GME	0.2%
1.0	AVGO	0.37%	PWR	0.18%
1.0	PWR	0.36%	NFLX	0.18%
1.0	LLY	0.34%	GE	0.17%
1.0	CCL	0.31%	X	0.17%
1.0	TDG	0.29%	LLY	0.15%
1.0	CAH	0.28%	CAH	0.15%
1.0	TRGP	0.27%	TRGP	0.15%
1.0	NFLX	0.27%	META	0.15%
1.0	TSLA	0.26%	THC	0.15%
1.0	THC	0.24%	ORCL	0.14%
1.0	CDNS	0.24%	TDG	0.12%
1.0	ORCL	0.23%	TEVA	0.12%
1.0	ORLY	0.22%	ETRN	0.12%
1.0	CMG	0.22%	IRM	0.11%
1.0	AZO	0.21%	CCL	0.11%
1.0	GME	0.2%	CDNS	0.11%
1.0	JPM	0.19%	PHM	0.11%
1.0	HLT	0.19%	TMUS	0.1%
1.0	MSFT	0.19%	ISRG	0.1%
1.0	TMUS	0.19%	GWW	0.1%
1.0	WDC	0.18%	GS	0.1%
1.0	IRM	0.18%	ORLY	0.1%
1.0	PHM	0.18%	MU	0.1%
1.0	WYNN	0.18%	CMG	0.1%

All TMD: 10d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	6.18%	MSTR	4.71%
10.0	MSTR	4.92%	VST	3.03%
10.0	GBTC	4.35%	NVDA	2.72%
10.0	LLY	4.01%	AVGO	2.12%
10.0	VST	3.86%	GBTC	2.07%
10.0	AVGO	3.27%	NFLX	1.8%
10.0	TSLA	3.17%	PWR	1.73%
10.0	CCL	3.06%	GME	1.68%
10.0	PWR	2.94%	META	1.63%
10.0	GE	2.6%	GE	1.6%
10.0	THC	2.11%	LLY	1.6%
10.0	X	2.09%	X	1.58%
10.0	AZO	2.07%	CAH	1.48%
10.0	PHM	2.01%	TRGP	1.42%
10.0	CAH	1.99%	ETRN	1.41%
10.0	TEVA	1.94%	ORCL	1.37%
10.0	TDG	1.75%	THC	1.33%
10.0	COST	1.75%	TEVA	1.28%
10.0	TRGP	1.72%	IRM	1.15%
10.0	NFLX	1.72%	TDG	1.13%
10.0	ACGL	1.67%	CDNS	1.05%
10.0	WDC	1.66%	PHM	1.04%
10.0	DHI	1.66%	GWW	1.03%
10.0	JPM	1.53%	TSLA	0.97%
10.0	CDNS	1.52%	ORLY	0.94%
10.0	MSFT	1.51%	MU	0.93%
10.0	GS	1.47%	ISRG	0.92%
10.0	IRM	1.42%	CCL	0.91%
10.0	ORLY	1.41%	COST	0.88%
10.0	TMUS	1.41%	CMG	0.88%

All TMD: 21d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MSTR	12.67%	MSTR	10.57%
21.0	NVDA	12.53%	VST	6.47%
21.0	GBTC	10.22%	NVDA	5.86%
21.0	VST	9.54%	GBTC	4.56%
21.0	TSLA	7.87%	AVGO	4.44%
21.0	ETRN	7.53%	NFLX	3.93%
21.0	CCL	6.55%	PWR	3.65%
21.0	LLY	6.03%	META	3.63%
21.0	PWR	6.03%	GE	3.53%
21.0	AVGO	5.94%	ETRN	3.5%
21.0	GE	5.2%	LLY	3.34%
21.0	CDNS	4.88%	X	3.17%
21.0	X	4.44%	CAH	3.06%
21.0	THC	4.18%	TRGP	2.92%
21.0	AZO	4.17%	GME	2.85%
21.0	CAH	4.17%	TEVA	2.81%
21.0	PHM	3.98%	ORCL	2.8%
21.0	TMUS	3.73%	THC	2.79%
21.0	TDG	3.61%	IRM	2.42%
21.0	NFLX	3.58%	TDG	2.34%
21.0	DHI	3.45%	TSLA	2.33%
21.0	TRGP	3.43%	GWW	2.31%
21.0	TEVA	3.33%	PHM	2.24%
21.0	MSFT	3.32%	CDNS	2.21%
21.0	AMD	3.31%	ISRG	2.07%
21.0	AMAT	3.29%	ORLY	2.01%
21.0	COST	3.24%	CCL	2.0%
21.0	JPM	3.11%	COST	1.97%
21.0	ORCL	2.99%	ACGL	1.92%
21.0	IRM	2.96%	TMUS	1.82%

All TMD: 63d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	46.49%	MSTR	30.78%
63.0	GBTC	41.05%	VST	19.34%
63.0	NVDA	38.63%	NVDA	18.55%
63.0	VST	27.09%	GBTC	14.94%
63.0	PWR	21.64%	NFLX	12.64%
63.0	CCL	20.36%	AVGO	12.24%
63.0	GE	19.98%	META	11.79%
63.0	LLY	19.16%	GE	10.4%
63.0	ETRN	18.76%	ETRN	10.28%
63.0	PHM	17.26%	LLY	9.69%
63.0	NFLX	15.88%	PWR	9.17%
63.0	AVGO	15.21%	CAH	8.56%
63.0	CAH	12.64%	TRGP	8.3%
63.0	META	12.58%	PHM	7.9%
63.0	TSLA	12.23%	THC	7.82%
63.0	THC	11.8%	TDG	7.01%
63.0	TMUS	11.63%	TEVA	6.81%
63.0	JPM	11.22%	ORCL	6.75%
63.0	X	10.99%	GWW	6.63%
63.0	CDNS	10.96%	ISRG	6.41%
63.0	TRGP	10.86%	ACGL	6.13%
63.0	ACGL	10.64%	ORLY	6.04%
63.0	TDG	10.58%	CDNS	6.03%
63.0	COST	10.31%	IRM	5.99%
63.0	PCG	10.22%	X	5.91%
63.0	GILD	9.13%	TMUS	5.74%
63.0	ORLY	9.07%	JPM	5.5%
63.0	T	9.04%	CMG	5.44%
63.0	AZO	8.96%	CPRT	5.42%
63.0	MSFT	8.66%	CCL	5.41%

All TMD: 126d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	GBTC	103.58%	MSTR	73.94%
126.0	NVDA	99.15%	NVDA	49.33%
126.0	MSTR	87.41%	VST	43.95%
126.0	VST	56.87%	GBTC	40.42%
126.0	GE	49.95%	NFLX	30.16%
126.0	NFLX	46.33%	META	29.78%
126.0	LLY	45.34%	AVGO	28.09%
126.0	PHM	45.03%	GE	25.18%
126.0	CCL	44.39%	LLY	21.09%
126.0	THC	38.4%	TRGP	20.47%
126.0	AVGO	37.25%	PHM	19.21%
126.0	PWR	36.23%	THC	19.07%
126.0	META	32.7%	ETRN	18.49%
126.0	ORCL	28.32%	PWR	18.21%
126.0	JPM	28.25%	CAH	17.57%
126.0	TSLA	27.62%	TDG	16.22%
126.0	TRGP	27.56%	ISRG	16.07%
126.0	ACGL	27.23%	TEVA	15.91%
126.0	CAH	26.38%	ORCL	15.87%
126.0	AMZN	26.3%	GWW	14.82%
126.0	DHI	26.23%	ACGL	14.14%
126.0	COST	26.17%	IRM	13.86%
126.0	MU	25.92%	CCL	13.67%
126.0	VNO	25.62%	JPM	13.33%
126.0	X	25.56%	ORLY	13.28%
126.0	ISRG	25.48%	MSI	13.07%
126.0	CMG	25.21%	CMG	13.0%
126.0	TMUS	24.94%	CPRT	12.76%
126.0	TDG	24.39%	COST	12.64%
126.0	ETRN	24.38%	TMUS	12.35%

All TMD: 252d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	GBTC	273.8%	MSTR	226.72%
252.0	MSTR	253.24%	NVDA	146.81%
252.0	NVDA	252.16%	VST	126.5%
252.0	GE	161.2%	GBTC	120.3%
252.0	PHM	142.5%	META	81.19%
252.0	VST	132.89%	AVGO	73.18%
252.0	META	116.78%	NFLX	68.62%
252.0	NFLX	114.58%	GE	61.22%
252.0	THC	114.24%	PHM	56.37%
252.0	CCL	111.36%	LLY	54.67%
252.0	TRGP	102.99%	THC	52.11%
252.0	AVGO	101.41%	TRGP	50.35%
252.0	LLY	85.57%	PWR	42.1%
252.0	ORCL	72.63%	TDG	40.67%
252.0	MU	71.16%	ISRG	39.69%
252.0	PWR	70.41%	TEVA	39.08%
252.0	AMAT	69.71%	ORCL	38.06%
252.0	X	68.34%	IRM	37.42%
252.0	ISRG	65.66%	CCL	36.24%
252.0	ACGL	64.06%	ETRN	35.78%
252.0	DHI	63.54%	DHI	35.23%
252.0	TDG	62.22%	ACGL	34.67%
252.0	VNO	61.94%	GWW	34.43%
252.0	COST	60.5%	CMG	32.73%
252.0	QQQ	59.04%	CAH	32.53%
252.0	CDNS	55.44%	COST	31.56%
252.0	AMZN	55.01%	JPM	31.22%
252.0	JPM	54.64%	CPRT	31.0%
252.0	CAH	53.29%	MSI	30.54%
252.0	TEVA	52.58%	LEN	30.04%

P30D: 1d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	BHC	5.53%	BHC	2.15%
1.0	ORCL	3.04%	ORCL	1.51%
1.0	NVDA	2.25%	MU	1.22%
1.0	LUMN	2.23%	AMD	1.17%
1.0	WDC	2.16%	ON	1.17%
1.0	CCL	1.86%	WDC	1.09%
1.0	GNRC	1.85%	CCL	0.98%
1.0	AMAT	1.52%	GNRC	0.93%
1.0	GS	1.48%	GS	0.89%
1.0	CZR	1.46%	AMAT	0.82%
1.0	MU	1.41%	VST	0.79%
1.0	AMD	1.37%	NVDA	0.75%
1.0	DHI	1.32%	LUMN	0.74%
1.0	CLF	1.29%	INTC	0.72%
1.0	NWL	1.27%	CMG	0.65%
1.0	ON	1.26%	TXN	0.64%
1.0	NFLX	1.23%	AA	0.58%
1.0	MSTR	1.2%	AVGO	0.57%
1.0	PHM	1.12%	ZION	0.55%
1.0	KEY	1.1%	DHI	0.54%
1.0	CMG	1.05%	KEY	0.52%
1.0	ELAN	0.98%	META	0.52%
1.0	LVS	0.98%	NFLX	0.5%
1.0	AA	0.97%	MS	0.49%
1.0	TXN	0.97%	TFC	0.49%
1.0	WYNN	0.9%	CZR	0.49%
1.0	LEN	0.89%	JPM	0.48%
1.0	ZION	0.82%	PWR	0.48%
1.0	CSTM	0.81%	MSTR	0.46%
1.0	BAC	0.76%	QCOM	0.45%

P30D: 10d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	BHC	42.62%	BHC	25.34%
10.0	ORCL	30.39%	ORCL	18.18%
10.0	WDC	17.27%	AMD	14.01%
10.0	AMD	17.01%	MU	13.58%
10.0	NVDA	14.07%	WDC	10.73%
10.0	GS	11.22%	VST	8.84%
10.0	CZR	11.04%	GS	7.83%
10.0	CCL	10.35%	NEM	6.87%
10.0	LUMN	10.05%	INTC	6.47%
10.0	MU	9.96%	ON	6.46%
10.0	GNRC	9.1%	AMAT	6.27%
10.0	WYNN	8.42%	CAH	6.0%
10.0	ON	8.18%	CZR	5.91%
10.0	XOM	7.97%	CCL	5.65%
10.0	BALL	7.7%	WYNN	5.46%
10.0	KEY	7.07%	NVDA	5.39%
10.0	CAH	6.47%	GNRC	5.37%
10.0	CMG	6.36%	JPM	5.21%
10.0	VST	6.21%	CMG	5.07%
10.0	AMAT	5.97%	XOM	5.02%
10.0	BAC	5.61%	CVS	4.6%
10.0	CSCO	5.18%	TXN	4.43%
10.0	LVS	5.15%	BALL	4.37%
10.0	AA	5.1%	CSCO	3.98%
10.0	NFLX	4.75%	MS	3.86%
10.0	B	4.67%	MSFT	3.77%
10.0	X	4.56%	PWR	3.76%
10.0	MS	4.37%	NFLX	3.57%
10.0	PHM	4.31%	LUMN	3.4%
10.0	JPM	4.3%	BAC	3.38%

P90D: 1d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NVDA	2.43%	WDC	1.12%
1.0	CCL	1.88%	VST	1.06%
1.0	CYH	1.88%	AVGO	1.05%
1.0	MOS	1.81%	MU	0.94%
1.0	VST	1.64%	CCL	0.9%
1.0	X	1.61%	ORCL	0.85%
1.0	WDC	1.6%	NVDA	0.81%
1.0	ELAN	1.58%	AMD	0.8%
1.0	CSTM	1.56%	ON	0.77%
1.0	LUMN	1.42%	X	0.76%
1.0	ORCL	1.38%	ELAN	0.75%
1.0	NFLX	1.36%	MSTR	0.72%
1.0	WYNN	1.34%	KALU	0.72%
1.0	AAP	1.31%	PWR	0.72%
1.0	AMD	1.26%	CSTM	0.71%
1.0	MSTR	1.25%	AAP	0.67%
1.0	GE	1.24%	NFLX	0.67%
1.0	CDNS	1.1%	MOS	0.61%
1.0	CZR	1.1%	CYH	0.61%
1.0	AVGO	1.07%	BA	0.6%
1.0	AMAT	1.07%	META	0.6%
1.0	PWR	1.05%	GS	0.58%
1.0	LVS	1.04%	GE	0.57%
1.0	BA	1.02%	AMAT	0.57%
1.0	KALU	1.0%	THC	0.53%
1.0	INTU	0.95%	MSFT	0.51%
1.0	BHC	0.95%	FCX	0.5%
1.0	UAA	0.94%	INTU	0.5%
1.0	GS	0.92%	GBTC	0.49%
1.0	TXN	0.91%	MS	0.48%

P90D: 10d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	MOS	22.79%	WDC	12.53%
10.0	NVDA	22.08%	MU	12.3%
10.0	CSTM	20.46%	VST	11.37%
10.0	LUMN	14.77%	ELAN	10.18%
10.0	X	14.49%	ORCL	10.14%
10.0	MSTR	13.82%	CSTM	10.12%
10.0	ORCL	13.8%	AAP	9.83%
10.0	CYH	13.31%	AVGO	9.33%
10.0	AAP	13.24%	ON	9.02%
10.0	VST	13.05%	AMD	8.72%
10.0	WDC	12.3%	KALU	8.04%
10.0	LVS	12.27%	MOS	7.74%
10.0	AMD	11.83%	CCL	7.68%
10.0	WYNN	11.66%	CYH	7.68%
10.0	CCL	11.47%	NVDA	7.56%
10.0	NFLX	10.64%	PWR	7.46%
10.0	ELAN	10.21%	THC	6.95%
10.0	MU	10.14%	X	6.95%
10.0	PWR	9.99%	NFLX	6.91%
10.0	BA	9.83%	GE	6.64%
10.0	BHC	9.71%	MSTR	6.44%
10.0	ON	9.41%	BHC	6.4%
10.0	IRM	8.98%	BA	6.37%
10.0	GE	8.89%	TSLA	6.3%
10.0	AMAT	8.65%	META	6.26%
10.0	AVGO	8.26%	GS	6.12%
10.0	THC	8.25%	INTU	5.89%
10.0	GBTC	8.13%	TXN	5.89%
10.0	QQQ	7.93%	LVS	5.72%
10.0	GS	7.69%	FCX	5.72%

P90D: 21d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MOS	50.76%	AAP	28.29%
21.0	NVDA	48.79%	MU	28.28%
21.0	CYH	40.46%	WDC	27.21%
21.0	CSTM	37.42%	ELAN	27.09%
21.0	VST	37.34%	VST	25.51%
21.0	LUMN	33.83%	CSTM	24.36%
21.0	AAP	33.47%	AVGO	22.29%
21.0	AMD	31.78%	CYH	22.11%
21.0	ELAN	31.5%	ORCL	21.73%
21.0	LVS	31.13%	ON	19.86%
21.0	ON	30.25%	NVDA	18.97%
21.0	ORCL	26.01%	AMD	18.81%
21.0	WDC	25.69%	CCL	18.12%
21.0	CCL	24.55%	KALU	18.0%
21.0	BA	23.53%	THC	17.66%
21.0	IRM	22.67%	MOS	16.92%
21.0	AMAT	22.6%	PWR	16.76%
21.0	X	20.81%	GE	16.08%
21.0	MSTR	20.06%	META	15.65%
21.0	MU	19.99%	X	14.98%
21.0	QQQ	19.94%	TSLA	14.73%
21.0	PWR	19.84%	INTU	14.67%
21.0	TEVA	19.52%	BA	14.35%
21.0	THC	19.36%	TXN	14.16%
21.0	WYNN	19.3%	MSFT	12.92%
21.0	UAA	18.59%	NFLX	12.85%
21.0	NWL	18.36%	LVS	12.38%
21.0	NFLX	18.34%	GS	11.9%
21.0	GE	18.21%	FCX	11.51%
21.0	VNO	18.15%	LUMN	11.25%

P365D: 1d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	WRK	5.69%	WRK	2.75%
1.0	LUMN	1.42%	MSTR	0.63%
1.0	VST	0.79%	LUMN	0.47%
1.0	CCL	0.65%	VST	0.43%
1.0	NFLX	0.58%	NFLX	0.29%
1.0	T	0.54%	AVGO	0.28%
1.0	AVGO	0.5%	CCL	0.24%
1.0	GE	0.49%	TSLA	0.23%
1.0	VFC	0.49%	CAH	0.23%
1.0	NVDA	0.48%	GBTC	0.23%
1.0	MSTR	0.47%	GE	0.21%
1.0	GBTC	0.47%	X	0.21%
1.0	VNO	0.45%	GILD	0.21%
1.0	TSLA	0.44%	ORCL	0.21%
1.0	CAH	0.43%	PWR	0.21%
1.0	MOS	0.41%	GS	0.19%
1.0	ORCL	0.37%	VNO	0.19%
1.0	X	0.37%	T	0.18%
1.0	MS	0.36%	META	0.18%
1.0	AZO	0.36%	NVDA	0.17%
1.0	CSCO	0.36%	CSCO	0.17%
1.0	TRGP	0.36%	EXPE	0.17%
1.0	HCA	0.33%	NEM	0.16%
1.0	ETRN	0.33%	MS	0.16%
1.0	CYH	0.33%	ETRN	0.16%
1.0	JPM	0.32%	CHTR	0.15%
1.0	WYNN	0.32%	JPM	0.15%
1.0	GILD	0.29%	THC	0.15%
1.0	PWR	0.29%	GLD	0.15%
1.0	BMY	0.29%	HSBC	0.14%

P365D: 10d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	LUMN	18.2%	MSTR	5.86%
10.0	MSTR	10.29%	LUMN	5.74%
10.0	VST	6.39%	VST	4.14%
10.0	T	4.89%	NFLX	2.92%
10.0	CCL	4.73%	GBTC	2.44%
10.0	AVGO	4.7%	AVGO	2.4%
10.0	NFLX	4.45%	CAH	2.4%
10.0	MOS	4.29%	TSLA	2.07%
10.0	GBTC	3.92%	GILD	2.04%
10.0	NVDA	3.69%	ORCL	2.0%
10.0	CAH	3.66%	GE	1.99%
10.0	WYNN	3.07%	CCL	1.94%
10.0	TRGP	3.01%	X	1.91%
10.0	CSCO	2.6%	PWR	1.81%
10.0	WFC	2.54%	T	1.76%
10.0	GE	2.39%	VNO	1.73%
10.0	X	2.39%	CSCO	1.63%
10.0	JPM	2.35%	META	1.62%
10.0	GLD	2.3%	GS	1.59%
10.0	COST	2.28%	HSBC	1.47%
10.0	AZO	2.26%	GLD	1.44%
10.0	BMY	2.19%	EXPE	1.42%
10.0	GT	2.04%	MS	1.41%
10.0	THC	1.98%	JPM	1.4%
10.0	TDG	1.98%	MOS	1.37%
10.0	CVS	1.95%	THC	1.37%
10.0	TMUS	1.9%	NEM	1.36%
10.0	BUD	1.9%	WFC	1.34%
10.0	MS	1.86%	TRGP	1.33%
10.0	LVS	1.82%	CHTR	1.33%

P365D: 21d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	LUMN	30.61%	MSTR	12.07%
21.0	MSTR	21.73%	VST	9.63%
21.0	VST	18.23%	LUMN	9.28%
21.0	T	9.45%	NFLX	6.54%
21.0	NFLX	8.89%	AVGO	5.54%
21.0	NVDA	8.62%	TSLA	4.97%
21.0	AVGO	8.44%	CAH	4.92%
21.0	MOS	8.14%	GBTC	4.89%
21.0	CAH	7.5%	GE	4.32%
21.0	VNO	7.35%	GILD	4.18%
21.0	GBTC	7.16%	CCL	4.06%
21.0	CCL	6.7%	META	3.84%
21.0	TRGP	6.61%	T	3.84%
21.0	MS	6.54%	PWR	3.82%
21.0	TMUS	5.4%	ORCL	3.78%
21.0	LVS	5.34%	VNO	3.54%
21.0	CSCO	5.3%	X	3.33%
21.0	SBUX	4.73%	CSCO	3.29%
21.0	WFC	4.72%	HSBC	3.18%
21.0	COST	4.64%	GLD	3.16%
21.0	UAA	4.59%	EXPE	3.0%
21.0	BUD	4.4%	GS	2.9%
21.0	GLD	4.39%	MS	2.83%
21.0	WYNN	4.12%	TMUS	2.81%
21.0	JPM	4.11%	WFC	2.75%
21.0	GT	3.99%	JPM	2.72%
21.0	X	3.94%	TRGP	2.6%
21.0	GE	3.59%	MOS	2.58%
21.0	GILD	3.58%	THC	2.55%
21.0	PWR	3.55%	SBUX	2.46%

P365D: 63d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	107.21%	MSTR	50.84%
63.0	VST	56.8%	VST	26.69%
63.0	GBTC	35.43%	NFLX	19.65%
63.0	CCL	33.04%	GBTC	19.25%
63.0	T	32.52%	TSLA	17.67%
63.0	NFLX	31.91%	CAH	12.67%
63.0	LUMN	25.54%	AVGO	12.4%
63.0	MS	25.35%	GILD	12.34%
63.0	PWR	20.79%	CCL	11.92%
63.0	CAH	20.36%	T	11.89%
63.0	JPM	19.74%	GLD	10.04%
63.0	HSBC	19.4%	HSBC	9.86%
63.0	MOS	18.07%	WFC	9.63%
63.0	TRGP	18.06%	GE	9.32%
63.0	AVGO	17.98%	TMUS	9.24%
63.0	TSLA	17.84%	EXPE	8.86%
63.0	CSCO	17.44%	PWR	8.57%
63.0	GE	16.36%	CSCO	8.54%
63.0	VNO	15.31%	TRGP	8.1%
63.0	GT	15.3%	MS	7.99%
63.0	GLD	14.84%	MNST	7.87%
63.0	TMUS	13.47%	GME	7.74%
63.0	ORLY	13.29%	ORLY	7.72%
63.0	WFC	12.75%	X	7.29%
63.0	GILD	12.66%	VNO	7.24%
63.0	NVDA	12.61%	JPM	7.01%
63.0	MNST	10.98%	META	7.0%
63.0	GS	9.92%	AZO	6.51%
63.0	X	9.56%	GS	6.5%
63.0	LVS	9.28%	MOS	6.05%

P365D: 126d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	MSTR	102.86%	MSTR	78.08%
126.0	VST	84.74%	VST	44.13%
126.0	GBTC	70.62%	NFLX	40.82%
126.0	T	67.02%	GBTC	34.65%
126.0	NFLX	65.61%	GILD	26.97%
126.0	CCL	55.02%	AVGO	26.92%
126.0	HSBC	50.21%	CAH	24.89%
126.0	JPM	44.48%	HSBC	24.71%
126.0	MS	42.87%	T	24.58%
126.0	CAH	41.89%	TSLA	23.37%
126.0	TRGP	37.51%	WFC	19.91%
126.0	AZO	34.59%	GE	19.65%
126.0	CSCO	33.69%	GLD	19.33%
126.0	AVGO	33.05%	TMUS	18.15%
126.0	GILD	32.94%	TRGP	18.12%
126.0	GE	31.02%	CSCO	17.49%
126.0	TSLA	28.92%	CCL	17.29%
126.0	CTLT	28.27%	EXPE	16.83%
126.0	MOS	28.18%	ORLY	15.74%
126.0	TMUS	27.94%	META	15.68%
126.0	GLD	27.1%	JPM	15.52%
126.0	WFC	25.35%	AZO	14.48%
126.0	GT	25.01%	MS	14.21%
126.0	ORLY	23.43%	GS	13.6%
126.0	BA	23.3%	GME	11.84%
126.0	GS	22.47%	BA	11.58%
126.0	VNO	20.42%	CTLT	10.62%
126.0	CVS	17.35%	MNST	10.46%
126.0	X	16.26%	COST	9.96%
126.0	COST	16.11%	ISRG	9.87%

Bottom 30 Tickers By ROLOBC

All TMD: 1d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SIVBQ	-0.91%	SIVBQ	-0.78%
1.0	IEP	-0.48%	SBNY	-0.45%
1.0	NWL	-0.46%	FRCB	-0.23%
1.0	SBNY	-0.39%	IEP	-0.18%
1.0	LUMN	-0.23%	AMC	-0.14%
1.0	FRCB	-0.19%	VFC	-0.13%
1.0	BIIB	-0.19%	AAP	-0.13%
1.0	INTC	-0.15%	NWL	-0.11%
1.0	CZR	-0.15%	LUMN	-0.08%
1.0	UAA	-0.14%	UAA	-0.06%
1.0	GNRC	-0.14%	BHC	-0.06%
1.0	BXP	-0.13%	CZR	-0.06%
1.0	AAP	-0.12%	TLT	-0.05%
1.0	AMC	-0.12%	BIIB	-0.05%
1.0	BALL	-0.11%	INTC	-0.05%
1.0	FSUGY	-0.09%	BALL	-0.04%
1.0	GT	-0.09%	LNC	-0.04%
1.0	KHC	-0.09%	BXP	-0.04%
1.0	PEP	-0.09%	GSK	-0.03%
1.0	ZTS	-0.08%	CVS	-0.03%
1.0	TLT	-0.08%	CLF	-0.03%
1.0	FIS	-0.07%	UNH	-0.03%
1.0	CTLT	-0.07%	KHC	-0.03%
1.0	VZ	-0.06%	BMY	-0.03%
1.0	LNC	-0.06%	PEP	-0.03%
1.0	BHP	-0.05%	CMCSA	-0.03%
1.0	VFC	-0.05%	ELAN	-0.02%
1.0	UNH	-0.04%	GT	-0.02%
1.0	CHTR	-0.04%	CNC	-0.02%
1.0	RIO	-0.04%	GNRC	-0.02%

All TMD: 10d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SIVBQ	-5.34%	SBNY	-4.05%
10.0	IEP	-3.8%	SIVBQ	-3.9%
10.0	SBNY	-3.67%	FRCB	-2.19%
10.0	NWL	-3.08%	IEP	-1.67%
10.0	CZR	-2.07%	AMC	-1.56%
10.0	CLF	-1.82%	VFC	-1.42%
10.0	AMC	-1.8%	AAP	-1.21%
10.0	FRCB	-1.67%	NWL	-1.18%
10.0	CYH	-1.56%	CZR	-0.78%
10.0	LUMN	-1.5%	UAA	-0.77%
10.0	VFC	-1.46%	LUMN	-0.69%
10.0	AAP	-1.3%	BHC	-0.55%
10.0	GNRC	-1.19%	CLF	-0.51%
10.0	BIIB	-1.18%	TLT	-0.51%
10.0	LNC	-0.91%	BIIB	-0.49%
10.0	BXP	-0.89%	INTC	-0.49%
10.0	UAA	-0.83%	LNC	-0.48%
10.0	BHP	-0.83%	BALL	-0.42%
10.0	RIO	-0.82%	BXP	-0.37%
10.0	VZ	-0.76%	AA	-0.35%
10.0	FSUGY	-0.75%	GNRC	-0.35%
10.0	INTC	-0.56%	ZION	-0.35%
10.0	BALL	-0.53%	CNC	-0.34%
10.0	PEP	-0.49%	ELAN	-0.34%
10.0	GT	-0.47%	CYH	-0.34%
10.0	ZTS	-0.47%	CVS	-0.34%
10.0	BBY	-0.47%	UNH	-0.33%
10.0	KHC	-0.44%	TFC	-0.29%
10.0	HD	-0.44%	GSK	-0.29%
10.0	CNC	-0.41%	CMCSA	-0.29%

All TMD: 21d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SIVBQ	-11.42%	SBNY	-11.16%
21.0	SBNY	-8.31%	SIVBQ	-9.37%
21.0	IEP	-7.32%	FRCB	-6.02%
21.0	NWL	-5.97%	AMC	-3.67%
21.0	CZR	-4.55%	IEP	-3.6%
21.0	FRCB	-4.48%	VFC	-2.92%
21.0	CLF	-3.56%	NWL	-2.58%
21.0	VFC	-3.52%	AAP	-2.35%
21.0	GNRC	-3.33%	CZR	-1.81%
21.0	AAP	-2.8%	BHC	-1.77%
21.0	AMC	-1.83%	UAA	-1.46%
21.0	BALL	-1.82%	LUMN	-1.27%
21.0	KEY	-1.82%	INTC	-1.23%
21.0	LUMN	-1.74%	CLF	-1.23%
21.0	BXP	-1.58%	LNC	-1.13%
21.0	BIIB	-1.57%	AA	-1.09%
21.0	BBY	-1.56%	TLT	-1.07%
21.0	RIO	-1.54%	BALL	-0.93%
21.0	INTC	-1.52%	BIIB	-0.91%
21.0	LNC	-1.39%	GNRC	-0.87%
21.0	FSUGY	-1.36%	BXP	-0.8%
21.0	UAA	-1.27%	CNC	-0.74%
21.0	CYH	-1.16%	CVS	-0.73%
21.0	TLT	-1.14%	UNH	-0.67%
21.0	VZ	-1.13%	KHC	-0.65%
21.0	CVS	-1.04%	TFC	-0.63%
21.0	KHC	-0.99%	BMY	-0.6%
21.0	BHP	-0.97%	ZION	-0.58%
21.0	ZION	-0.91%	CMCSA	-0.57%
21.0	PEP	-0.89%	PEP	-0.54%

All TMD: 63d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	SIVBQ	-51.27%	SBNY	-37.59%
63.0	SBNY	-33.22%	SIVBQ	-33.73%
63.0	IEP	-26.72%	FRCB	-24.04%
63.0	FRCB	-25.04%	AMC	-15.47%
63.0	NWL	-17.87%	IEP	-11.93%
63.0	CLF	-14.85%	AAP	-10.04%
63.0	GNRC	-14.25%	VFC	-8.68%
63.0	BHC	-13.54%	NWL	-8.45%
63.0	AAP	-12.97%	CLF	-6.76%
63.0	VFC	-12.54%	BHC	-6.32%
63.0	AMC	-10.76%	CZR	-6.09%
63.0	UAA	-10.35%	AA	-5.47%
63.0	AA	-8.64%	UAA	-4.84%
63.0	CZR	-8.56%	INTC	-4.54%
63.0	INTC	-8.12%	LUMN	-3.95%
63.0	CYH	-7.95%	ELAN	-3.68%
63.0	BALL	-6.97%	LNC	-3.6%
63.0	CVS	-6.48%	MOS	-3.53%
63.0	BBY	-4.85%	GNRC	-3.34%
63.0	KEY	-4.75%	BALL	-3.2%
63.0	BHP	-4.73%	BXP	-3.14%
63.0	LNC	-4.54%	BIIB	-3.07%
63.0	FSUGY	-4.52%	TLT	-2.94%
63.0	PRGO	-4.27%	CVS	-2.67%
63.0	MOS	-3.96%	CNC	-2.3%
63.0	TLT	-3.89%	BHP	-2.28%
63.0	LUMN	-3.81%	KHC	-2.23%
63.0	ZION	-3.74%	JAZZ	-2.17%
63.0	KHC	-3.54%	BMY	-2.15%
63.0	VZ	-3.11%	PRGO	-2.14%

All TMD: 126d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	FRCB	-125.62%	SIVBQ	-65.15%
126.0	SIVBQ	-88.65%	SBNY	-64.8%
126.0	SBNY	-70.11%	FRCB	-51.17%
126.0	IEP	-50.24%	AMC	-29.49%
126.0	NWL	-38.56%	IEP	-22.85%
126.0	VFC	-30.48%	AAP	-19.78%
126.0	AMC	-29.02%	NWL	-15.88%
126.0	CLF	-27.05%	VFC	-13.17%
126.0	AAP	-25.23%	CLF	-10.97%
126.0	GNRC	-21.0%	MOS	-9.58%
126.0	INTC	-19.21%	CZR	-8.98%
126.0	BHC	-17.81%	AA	-8.06%
126.0	UAA	-16.58%	INTC	-7.41%
126.0	MOS	-15.13%	BHC	-7.36%
126.0	CVS	-12.95%	ELAN	-7.07%
126.0	BALL	-12.92%	CVS	-6.72%
126.0	AA	-12.37%	UAA	-6.57%
126.0	CZR	-11.73%	PRGO	-5.75%
126.0	CTLT	-11.71%	CTLT	-5.69%
126.0	PRGO	-11.04%	LUMN	-5.58%
126.0	CHTR	-9.88%	GNRC	-5.57%
126.0	BHP	-8.33%	LNC	-5.42%
126.0	TLT	-8.2%	TLT	-5.32%
126.0	LNC	-7.83%	BXP	-5.32%
126.0	KHC	-6.72%	BIIB	-4.99%
126.0	CMA	-6.64%	BALL	-4.96%
126.0	KEY	-6.46%	CNC	-4.94%
126.0	GSK	-6.28%	KHC	-4.49%
126.0	VZ	-5.55%	BMY	-4.01%
126.0	BIIB	-5.43%	GSK	-3.91%

All TMD: 252d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	FRCB	-207.06%	SBNY	-95.75%
252.0	SBNY	-152.31%	SIVBQ	-95.29%
252.0	SIVBQ	-151.21%	FRCB	-91.61%
252.0	IEP	-100.59%	AMC	-56.89%
252.0	NWL	-76.12%	IEP	-44.6%
252.0	AAP	-66.83%	AAP	-42.05%
252.0	AMC	-54.91%	NWL	-28.61%
252.0	CLF	-48.2%	VFC	-23.96%
252.0	MOS	-48.06%	MOS	-22.15%
252.0	VFC	-42.65%	CVS	-17.93%
252.0	CVS	-30.3%	CLF	-16.91%
252.0	CZR	-29.29%	CZR	-13.9%
252.0	BHC	-26.24%	PRGO	-12.91%
252.0	GT	-24.5%	UAA	-12.11%
252.0	INTC	-23.1%	AA	-11.72%
252.0	GNRC	-22.96%	BMY	-11.5%
252.0	PRGO	-22.82%	INTC	-10.36%
252.0	UAA	-21.63%	BIIB	-9.93%
252.0	LNC	-19.61%	JAZZ	-9.79%
252.0	CTLT	-19.6%	CNC	-9.77%
252.0	LUMN	-18.3%	BHC	-9.3%
252.0	KHC	-15.41%	TLT	-8.46%
252.0	BMY	-15.1%	KHC	-7.93%
252.0	OXY	-14.85%	GT	-7.69%
252.0	TLT	-14.52%	LUMN	-7.09%
252.0	BIIB	-13.8%	OXY	-7.0%
252.0	JAZZ	-13.8%	CTLT	-6.24%
252.0	CNC	-11.94%	BHP	-5.72%
252.0	AA	-11.82%	LNC	-5.39%
252.0	FSUGY	-11.39%	CHTR	-5.11%

P30D: 1d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	PCG	-2.53%	GME	-1.02%
1.0	CYH	-1.68%	PCG	-0.9%
1.0	GT	-1.04%	CYH	-0.57%
1.0	COST	-1.01%	AMC	-0.53%
1.0	IEP	-0.89%	ZTS	-0.42%
1.0	GME	-0.85%	GSK	-0.42%
1.0	BMY	-0.79%	GT	-0.35%
1.0	TSLA	-0.73%	COST	-0.34%
1.0	LW	-0.73%	AAP	-0.31%
1.0	GSK	-0.71%	TSLA	-0.29%
1.0	ACGL	-0.69%	LW	-0.29%
1.0	BIIB	-0.66%	ACGL	-0.28%
1.0	TEVA	-0.53%	BMY	-0.27%
1.0	KHC	-0.48%	IEP	-0.24%
1.0	BHP	-0.44%	BIIB	-0.22%
1.0	AAP	-0.37%	ADBE	-0.2%
1.0	BUD	-0.33%	BUD	-0.19%
1.0	TMUS	-0.29%	CPRT	-0.18%
1.0	ZTS	-0.28%	VFC	-0.17%
1.0	CPRT	-0.27%	GWW	-0.16%
1.0	VZ	-0.27%	KHC	-0.16%
1.0	RIO	-0.25%	AMGN	-0.16%
1.0	JAZZ	-0.25%	AZN	-0.15%
1.0	GLD	-0.24%	TEVA	-0.13%
1.0	AMC	-0.23%	BHP	-0.13%
1.0	GWW	-0.23%	GLD	-0.11%
1.0	AMGN	-0.22%	RIO	-0.1%
1.0	AZN	-0.21%	JAZZ	-0.1%
1.0	CNC	-0.17%	VZ	-0.09%
1.0	BBY	-0.17%	MNST	-0.09%

P30D: 10d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	PCG	-22.29%	GME	-15.72%
10.0	BIIB	-12.61%	AMC	-8.66%
10.0	GT	-12.5%	PCG	-8.52%
10.0	BHP	-12.07%	GT	-7.22%
10.0	GME	-10.25%	AAP	-6.49%
10.0	CYH	-9.85%	ADBE	-6.41%
10.0	VNO	-8.28%	VFC	-6.26%
10.0	ADBE	-8.15%	GSK	-5.98%
10.0	COST	-7.31%	ZTS	-5.94%
10.0	GSK	-6.52%	CYH	-5.83%
10.0	KHC	-6.3%	BMY	-4.26%
10.0	TMUS	-5.69%	BBY	-4.22%
10.0	FSUGY	-5.54%	BIIB	-4.2%
10.0	BMY	-5.49%	BHP	-4.04%
10.0	TEVA	-5.26%	CPRT	-3.91%
10.0	BA	-5.15%	GWW	-3.89%
10.0	CPRT	-5.09%	TMUS	-3.85%
10.0	ACGL	-4.81%	BA	-3.78%
10.0	GWW	-4.68%	AZN	-3.53%
10.0	CLF	-4.38%	LW	-3.51%
10.0	BBY	-4.37%	EXPE	-3.22%
10.0	LW	-4.18%	SNY	-3.18%
10.0	AZO	-3.91%	COST	-3.12%
10.0	CNC	-3.89%	VZ	-3.08%
10.0	AZN	-3.86%	FSUGY	-2.98%
10.0	ZTS	-3.81%	TEVA	-2.91%
10.0	VFC	-3.78%	KHC	-2.85%
10.0	AMC	-3.71%	ISRG	-2.8%
10.0	VZ	-3.42%	ACGL	-2.8%
10.0	AAP	-3.36%	AMGN	-2.72%

P90D: 1d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	UNH	-1.35%	UNH	-0.81%
1.0	KHC	-0.86%	BMY	-0.36%
1.0	PCG	-0.76%	PCG	-0.34%
1.0	PEP	-0.58%	KHC	-0.29%
1.0	BMY	-0.53%	CNC	-0.26%
1.0	IEP	-0.44%	PEP	-0.22%
1.0	CPRT	-0.39%	CPRT	-0.22%
1.0	VZ	-0.37%	LW	-0.21%
1.0	SNY	-0.34%	SNY	-0.19%
1.0	CNC	-0.31%	JAZZ	-0.18%
1.0	AMGN	-0.31%	TMUS	-0.17%
1.0	JAZZ	-0.3%	AMGN	-0.16%
1.0	TMUS	-0.29%	IEP	-0.15%
1.0	POST	-0.25%	POST	-0.13%
1.0	MSI	-0.23%	MRK	-0.12%
1.0	LLY	-0.21%	ABBV	-0.12%
1.0	AZN	-0.2%	ORLY	-0.1%
1.0	TLT	-0.16%	VZ	-0.08%
1.0	LNC	-0.15%	AZN	-0.08%
1.0	OXY	-0.15%	ACGL	-0.07%
1.0	LW	-0.14%	TLT	-0.06%
1.0	ABBV	-0.13%	XOM	-0.05%
1.0	BIIB	-0.1%	MSI	-0.04%
1.0	MRK	-0.08%	BIIB	-0.04%
1.0	TEVA	-0.06%	AZO	-0.04%
1.0	AA	-0.04%	OXY	-0.03%
1.0	ZTS	-0.03%	TRGP	-0.02%
1.0	GILD	-0.03%	MUB	-0.02%
1.0	ACGL	-0.02%	ZTS	-0.02%
1.0	TRGP	-0.02%	GSK	-0.01%

P90D: 10d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	UNH	-12.02%	UNH	-10.71%
10.0	PCG	-7.27%	PCG	-3.38%
10.0	KHC	-5.33%	CPRT	-3.12%
10.0	PEP	-3.97%	CNC	-2.75%
10.0	CPRT	-3.85%	KHC	-2.4%
10.0	CNC	-3.47%	TMUS	-2.2%
10.0	TMUS	-2.9%	BMY	-2.12%
10.0	BMY	-2.05%	PEP	-2.08%
10.0	CVS	-1.81%	SNY	-1.1%
10.0	GME	-1.37%	POST	-0.89%
10.0	ORLY	-1.1%	LW	-0.61%
10.0	SNY	-1.0%	ORLY	-0.57%
10.0	VZ	-0.94%	VZ	-0.57%
10.0	POST	-0.88%	AMGN	-0.41%
10.0	TLT	-0.48%	TLT	-0.39%
10.0	MSI	-0.18%	GME	-0.17%
10.0	AMGN	-0.17%	MSI	-0.14%
10.0	TRGP	0.03%	AZO	-0.0%
10.0	CLF	0.07%	MRK	0.0%
10.0	GILD	0.13%	ACGL	0.0%
10.0	MUB	0.17%	CVS	0.05%
10.0	LW	0.26%	MUB	0.1%
10.0	VCSH	0.27%	VCSH	0.2%
10.0	HD	0.38%	IEP	0.28%
10.0	LEN	0.38%	LQD	0.37%
10.0	PRGO	0.52%	HD	0.45%
10.0	LQD	0.52%	LEN	0.53%
10.0	AZO	0.52%	CMCSA	0.56%
10.0	MRK	0.54%	TRGP	0.57%
10.0	CMCSA	0.62%	JAZZ	0.61%

P90D: 21d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	UNH	-21.05%	UNH	-20.13%
21.0	PCG	-18.19%	CPRT	-8.51%
21.0	KHC	-9.92%	PCG	-6.99%
21.0	CPRT	-7.9%	KHC	-5.75%
21.0	PEP	-7.11%	CNC	-5.63%
21.0	CNC	-6.03%	TMUS	-4.1%
21.0	TMUS	-5.71%	PEP	-3.86%
21.0	CVS	-5.17%	SNY	-3.2%
21.0	GME	-4.28%	BMY	-2.8%
21.0	SNY	-3.35%	POST	-1.86%
21.0	BMY	-2.8%	TLT	-1.21%
21.0	POST	-1.99%	ORLY	-1.13%
21.0	ORLY	-1.54%	CLF	-1.13%
21.0	MSI	-1.41%	MSI	-0.95%
21.0	TLT	-1.31%	MRK	-0.87%
21.0	MRK	-1.25%	IEP	-0.63%
21.0	IEP	-1.14%	LLY	-0.61%
21.0	VZ	-0.77%	CVS	-0.58%
21.0	TRGP	-0.36%	VZ	-0.38%
21.0	CLF	0.0%	TRGP	-0.34%
21.0	MUB	0.06%	MUB	0.03%
21.0	LLY	0.36%	VCSH	0.27%
21.0	VCSH	0.37%	AZO	0.37%
21.0	AMGN	0.4%	AMGN	0.42%
21.0	LQD	0.78%	AAPL	0.44%
21.0	DHI	0.98%	ACGL	0.55%
21.0	JAZZ	1.0%	JAZZ	0.55%
21.0	RIO	1.19%	RIO	0.55%
21.0	AZO	1.2%	LQD	0.57%
21.0	AAPL	1.25%	DHI	0.72%

P365D: 1d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	IEP	-0.71%	IEP	-0.25%
1.0	BIIB	-0.61%	BIIB	-0.23%
1.0	AMAT	-0.4%	CLF	-0.19%
1.0	MRK	-0.36%	MRK	-0.18%
1.0	NWL	-0.34%	AMC	-0.15%
1.0	FSUGY	-0.34%	UNH	-0.15%
1.0	OXY	-0.33%	OXY	-0.14%
1.0	ADBE	-0.28%	LW	-0.13%
1.0	AMC	-0.28%	ADBE	-0.13%
1.0	LEN	-0.23%	FSUGY	-0.12%
1.0	UNH	-0.23%	LEN	-0.08%
1.0	KHC	-0.22%	PEP	-0.08%
1.0	PEP	-0.21%	KHC	-0.08%
1.0	BHP	-0.2%	AA	-0.08%
1.0	INTC	-0.18%	CSTM	-0.08%
1.0	CSTM	-0.16%	PCG	-0.07%
1.0	AMZN	-0.14%	CZR	-0.07%
1.0	PCG	-0.14%	ON	-0.06%
1.0	AA	-0.13%	AMAT	-0.06%
1.0	RIO	-0.12%	BHP	-0.06%
1.0	ON	-0.12%	CNC	-0.06%
1.0	BBY	-0.12%	QCOM	-0.06%
1.0	TEVA	-0.1%	INTC	-0.05%
1.0	AMD	-0.1%	BBY	-0.04%
1.0	BXP	-0.1%	RIO	-0.04%
1.0	LLY	-0.09%	ZTS	-0.03%
1.0	QCOM	-0.08%	LLY	-0.03%
1.0	CLF	-0.08%	AMGN	-0.03%
1.0	ACGL	-0.06%	CPRT	-0.03%
1.0	MU	-0.06%	AZN	-0.03%

P365D: 10d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	IEP	-6.27%	CLF	-2.51%
10.0	BIIB	-4.54%	IEP	-2.41%
10.0	CLF	-4.02%	BIIB	-2.29%
10.0	AMAT	-3.65%	AMC	-1.89%
10.0	AMC	-3.03%	MRK	-1.8%
10.0	OXY	-2.89%	UNH	-1.57%
10.0	INTC	-2.7%	ADBE	-1.39%
10.0	ON	-2.62%	FSUGY	-1.39%
10.0	FSUGY	-2.57%	LW	-1.25%
10.0	MRK	-2.29%	OXY	-1.17%
10.0	BHP	-2.06%	LEN	-1.16%
10.0	RIO	-1.91%	AMAT	-1.01%
10.0	CNC	-1.89%	ON	-0.99%
10.0	PCG	-1.84%	QCOM	-0.94%
10.0	ADBE	-1.77%	PEP	-0.91%
10.0	QCOM	-1.74%	CZR	-0.9%
10.0	LEN	-1.74%	INTC	-0.9%
10.0	UNH	-1.68%	KHC	-0.85%
10.0	KHC	-1.65%	AA	-0.81%
10.0	PEP	-1.48%	CSTM	-0.78%
10.0	AMD	-1.31%	PCG	-0.77%
10.0	AA	-1.28%	BHP	-0.71%
10.0	CZR	-1.04%	CNC	-0.69%
10.0	MU	-0.95%	BBY	-0.62%
10.0	BBY	-0.93%	AMD	-0.61%
10.0	LW	-0.76%	RIO	-0.54%
10.0	CMG	-0.75%	AMGN	-0.41%
10.0	PRGO	-0.74%	AAPL	-0.4%
10.0	CDNS	-0.73%	FCX	-0.39%
10.0	KALU	-0.62%	LLY	-0.38%

P365D: 21d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	IEP	-14.43%	CLF	-5.84%
21.0	BIIB	-8.06%	IEP	-5.47%
21.0	OXY	-7.75%	BIIB	-4.68%
21.0	CLF	-7.42%	UNH	-3.95%
21.0	FSUGY	-6.27%	MRK	-3.9%
21.0	INTC	-6.25%	AMC	-3.71%
21.0	MRK	-5.66%	LEN	-3.23%
21.0	UNH	-5.48%	OXY	-2.83%
21.0	LEN	-5.2%	FSUGY	-2.68%
21.0	ON	-5.05%	INTC	-2.62%
21.0	AMAT	-4.85%	ON	-2.58%
21.0	AMC	-4.23%	ADBE	-2.52%
21.0	BBY	-4.0%	PEP	-2.16%
21.0	ADBE	-3.84%	CZR	-2.03%
21.0	PCG	-3.79%	AMAT	-1.99%
21.0	QCOM	-3.25%	KHC	-1.92%
21.0	KHC	-3.16%	DHI	-1.89%
21.0	PEP	-3.13%	LW	-1.78%
21.0	AMD	-3.05%	QCOM	-1.76%
21.0	BHP	-2.98%	CNC	-1.63%
21.0	DHI	-2.79%	BBY	-1.43%
21.0	CZR	-2.75%	CSTM	-1.39%
21.0	BHC	-2.24%	PCG	-1.38%
21.0	MU	-2.12%	AMD	-1.37%
21.0	CNC	-2.02%	AA	-1.27%
21.0	RIO	-1.94%	BHP	-1.2%
21.0	CMCSA	-1.79%	PHM	-1.02%
21.0	AA	-1.31%	AMGN	-0.94%
21.0	AAPL	-1.28%	RIO	-0.93%
21.0	PHM	-1.28%	CMCSA	-0.86%

P365D: 63d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	IEP	-41.34%	CLF	-17.47%
63.0	AMD	-27.15%	IEP	-16.49%
63.0	ON	-26.61%	BIIB	-15.78%
63.0	OXY	-23.92%	AMC	-15.25%
63.0	ADBE	-22.5%	ON	-14.68%
63.0	BIIB	-22.41%	LEN	-13.69%
63.0	CLF	-21.74%	MRK	-12.54%
63.0	CYH	-20.72%	CSTM	-11.53%
63.0	AMC	-19.61%	UNH	-11.52%
63.0	UNH	-19.3%	ADBE	-11.13%
63.0	MRK	-17.68%	DHI	-10.4%
63.0	LEN	-16.27%	OXY	-9.58%
63.0	CSTM	-15.77%	AMD	-9.44%
63.0	AMAT	-15.5%	CYH	-9.43%
63.0	WDC	-15.15%	CZR	-9.11%
63.0	CZR	-15.07%	BBY	-8.34%
63.0	DHI	-14.59%	WDC	-8.15%
63.0	FSUGY	-13.5%	AMAT	-7.75%
63.0	BHP	-12.68%	PEP	-7.73%
63.0	BBY	-12.48%	FSUGY	-7.43%
63.0	PEP	-10.8%	CNC	-6.75%
63.0	PCG	-10.69%	KHC	-6.73%
63.0	INTC	-10.61%	PHM	-6.7%
63.0	KHC	-10.51%	BALL	-5.99%
63.0	TEVA	-10.09%	NAVI	-5.76%
63.0	VFC	-10.03%	QCOM	-5.54%
63.0	AAP	-9.91%	AAP	-5.33%
63.0	PHM	-9.21%	ELAN	-4.97%
63.0	ELAN	-8.28%	FCX	-4.93%
63.0	QCOM	-7.91%	ZTS	-4.79%

P365D: 126d

Results reflect ticker level average 99% OaR based ROLOBC across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	IEP	-77.13%	ON	-33.83%
126.0	ON	-65.73%	AMC	-33.44%
126.0	AMC	-62.61%	IEP	-32.07%
126.0	CYH	-55.73%	CLF	-31.61%
126.0	AMD	-54.36%	LEN	-31.38%
126.0	CLF	-47.46%	BIIB	-28.83%
126.0	ADBE	-46.54%	CYH	-27.23%
126.0	UNH	-45.5%	AMD	-24.85%
126.0	PCG	-42.82%	DHI	-24.73%
126.0	BIIB	-42.01%	MRK	-22.29%
126.0	DHI	-41.61%	ADBE	-22.22%
126.0	LEN	-39.74%	CSTM	-22.18%
126.0	IRM	-36.66%	CZR	-21.98%
126.0	CSTM	-36.53%	WDC	-21.71%
126.0	WDC	-36.19%	UNH	-21.39%
126.0	OXY	-32.88%	LW	-20.43%
126.0	UAA	-31.53%	PHM	-18.61%
126.0	BALL	-31.43%	BBY	-16.58%
126.0	MRK	-31.23%	GNRC	-16.29%
126.0	FSUGY	-30.31%	BALL	-16.03%
126.0	VFC	-29.89%	FSUGY	-15.97%
126.0	NWL	-29.56%	PEP	-15.83%
126.0	BBY	-28.68%	OXY	-15.74%
126.0	BHP	-28.56%	PCG	-15.39%
126.0	PHM	-28.01%	AA	-15.37%
126.0	CZR	-26.54%	UAA	-14.97%
126.0	ELAN	-25.22%	AMAT	-14.93%
126.0	BHC	-24.02%	FCX	-14.76%
126.0	LW	-23.86%	KHC	-14.4%
126.0	AMAT	-23.37%	IRM	-14.35%

Appendix 1: Top 25 Ticker Level Differences in VM vs. Sigma 95% and 99% OaR Breakage

All TMD: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	SBNY	12.59%	GME	4.56%
1.0	GME	11.93%	SIVBQ	4.32%
1.0	MSTR	10.53%	META	3.16%
1.0	CHTR	8.65%	AVGO	2.57%
1.0	SIVBQ	7.91%	HLT	2.57%
1.0	META	7.25%	BALL	2.11%
1.0	GNRC	6.2%	B	2.11%
1.0	SLV	6.2%	INTU	1.87%
1.0	FRCB	5.76%	FRCB	1.8%
1.0	NFLX	5.26%	MSTR	1.64%
1.0	B	5.26%	CHTR	1.64%
1.0	ZTS	4.68%	ACGL	1.64%
1.0	FRA	4.68%	TSLA	1.64%
1.0	BALL	4.44%	BUD	1.52%
1.0	AVGO	4.44%	AMC	1.52%
1.0	INTU	4.33%	TEVA	1.52%
1.0	HLT	4.33%	NFLX	1.4%
1.0	ORCL	3.98%	OXY	1.17%
1.0	BUD	3.86%	SPY	1.17%
1.0	CMA	3.74%	ZTS	1.05%
1.0	AMC	3.39%	FRA	0.82%
1.0	AAP	3.16%	SBNY	0.72%
1.0	VFC	2.92%	CMA	0.7%
1.0	HCA	2.81%	ISRG	0.7%
1.0	TEVA	2.81%	AA	0.58%

All TMD: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	META	14.42%	SIVBQ	9.56%
10.0	MSTR	13.48%	MSTR	9.1%
10.0	SIVBQ	12.13%	GME	5.91%
10.0	GME	11.47%	META	5.56%
10.0	SBNY	10.66%	CHTR	5.2%
10.0	HCA	10.05%	ZTS	3.78%
10.0	BALL	9.93%	SBNY	3.68%
10.0	CHTR	9.57%	AVGO	3.31%
10.0	KALU	8.75%	AMC	3.07%
10.0	AVGO	8.27%	VZ	2.84%
10.0	B	8.27%	B	2.72%
10.0	FRCB	8.09%	XOM	2.6%
10.0	TEVA	7.92%	GNRC	2.36%
10.0	GNRC	7.33%	ETRN	2.15%
10.0	HD	6.15%	BALL	2.13%
10.0	CMA	6.03%	CMA	2.01%
10.0	LW	5.91%	ISRG	2.01%
10.0	SLV	5.67%	GWW	1.89%
10.0	ZTS	5.67%	HCA	1.65%
10.0	IRM	5.32%	EXPE	1.65%
10.0	AMC	5.2%	GILD	1.65%
10.0	BXP	5.2%	NEM	1.65%
10.0	INTU	5.2%	KALU	1.54%
10.0	PEP	5.08%	OXY	1.54%
10.0	ISRG	4.96%	FRCB	1.47%

All TMD: 21d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	META	13.77%	SIVBQ	9.26%
21.0	GME	13.29%	CHTR	8.62%
21.0	B	10.78%	MSTR	7.07%
21.0	GNRC	10.3%	GME	4.43%
21.0	CHTR	9.34%	META	4.31%
21.0	FRCB	8.89%	B	4.19%
21.0	ZTS	8.5%	ISRG	3.83%
21.0	SIVBQ	8.15%	GWW	3.71%
21.0	MSTR	8.02%	GNRC	3.71%
21.0	AVGO	7.78%	ZTS	2.75%
21.0	ISRG	7.07%	AVGO	2.28%
21.0	KALU	6.95%	VZ	2.16%
21.0	LW	6.71%	LW	2.16%
21.0	AMC	6.23%	NEM	2.04%
21.0	CMA	6.23%	AMC	1.92%
21.0	TEVA	6.23%	KALU	1.92%
21.0	BALL	6.23%	AAPL	1.92%
21.0	HCA	6.23%	SBNY	1.85%
21.0	SBNY	5.56%	XOM	1.68%
21.0	HD	5.27%	HD	1.68%
21.0	NAVI	5.15%	SNY	1.56%
21.0	VZ	4.91%	ORLY	1.44%
21.0	NEM	4.91%	CMA	1.32%
21.0	IRM	4.19%	BALL	1.2%
21.0	BUD	4.19%	RIO	1.08%

All TMD: 63d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	META	13.75%	SIVBQ	7.78%
63.0	CHTR	13.24%	GME	5.93%
63.0	SIVBQ	11.11%	LW	4.16%
63.0	LW	10.47%	CTLT	3.23%
63.0	MSTR	8.07%	EXPE	2.4%
63.0	GME	7.31%	TEVA	2.27%
63.0	GNRC	7.06%	GOOGL	1.89%
63.0	AVGO	6.81%	BXP	1.39%
63.0	IRM	6.18%	CHTR	1.39%
63.0	BUD	5.55%	RIO	1.26%
63.0	SNY	5.42%	MSI	1.13%
63.0	XOM	5.3%	KALU	1.01%
63.0	NEM	5.17%	WFC	1.01%
63.0	CTLT	4.69%	HD	1.01%
63.0	BALL	4.54%	OXY	1.01%
63.0	EXPE	4.41%	GWW	0.88%
63.0	VFC	3.53%	AMC	0.63%
63.0	KALU	3.4%	XOM	0.63%
63.0	MSI	3.28%	CMA	0.5%
63.0	BXP	3.28%	AZO	0.5%
63.0	CMA	3.03%	VFC	0.5%
63.0	ZTS	2.77%	GNRC	0.5%
63.0	AMC	2.65%	BALL	0.38%
63.0	FRCB	2.22%	SNY	0.38%
63.0	VST	2.02%	KHC	0.38%

All TMD: 126d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	LW	15.48%	LW	6.44%
126.0	VFC	11.1%	EXPE	5.75%
126.0	GME	7.26%	MSI	3.15%
126.0	XOM	6.99%	BUD	2.33%
126.0	MSTR	6.85%	OXY	2.19%
126.0	EXPE	6.44%	GOOGL	2.19%
126.0	BALL	6.44%	MSTR	2.05%
126.0	GOOGL	5.62%	IRM	1.92%
126.0	META	5.48%	META	1.64%
126.0	BXP	5.34%	BALL	1.51%
126.0	CHTR	5.21%	VFC	1.51%
126.0	IRM	5.07%	GME	1.37%
126.0	TEVA	4.11%	TEVA	1.23%
126.0	GNRC	3.42%	ETRN	1.02%
126.0	CMA	1.92%	HCA	0.27%
126.0	CTLT	1.78%	XOM	0.14%
126.0	TMUS	1.64%	HON	0.0%
126.0	HCA	1.51%	MSFT	0.0%
126.0	NWL	1.51%	MRK	0.0%
126.0	AMC	1.1%	MOS	0.0%
126.0	KHC	1.1%	MNST	0.0%
126.0	OXY	0.82%	HYG	0.0%
126.0	BAC	0.68%	IEP	0.0%
126.0	KALU	0.68%	INTU	0.0%
126.0	MSI	0.55%	INTC	0.0%

All TMD: 252d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
252.0	MSTR	7.45%	GWW	5.13%
252.0	GNRC	4.97%	LW	5.13%
252.0	IRM	4.97%	IRM	3.64%
252.0	GME	4.64%	GOOGL	1.99%
252.0	GOOGL	4.14%	GNRC	0.99%
252.0	XOM	3.48%	ORLY	0.83%
252.0	VST	3.31%	XOM	0.17%
252.0	OXY	2.15%	LVS	0.0%
252.0	BA	2.15%	MNST	0.0%
252.0	BALL	1.99%	MOS	0.0%
252.0	EXPE	1.32%	MRK	0.0%
252.0	CHTR	0.83%	MSTR	0.0%
252.0	AAPL	0.5%	MSFT	0.0%
252.0	KHC	0.0%	LQD	0.0%
252.0	MNST	0.0%	MUB	0.0%
252.0	LVS	0.0%	NAVI	0.0%
252.0	GSK	0.0%	NEM	0.0%
252.0	LUMN	0.0%	LUMN	0.0%
252.0	LQD	0.0%	AA	0.0%
252.0	LNC	0.0%	LNC	0.0%
252.0	KEY	0.0%	NVS	0.0%
252.0	HYG	0.0%	KEY	0.0%
252.0	KALU	0.0%	KALU	0.0%
252.0	JAZZ	0.0%	JAZZ	0.0%
252.0	GT	0.0%	AAP	0.0%

P30D: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	AAP	26.32%	TSLA	21.05%
1.0	QQQ	26.32%	NVS	10.53%
1.0	TSLA	21.05%	AVGO	10.53%
1.0	SLV	21.05%	MU	5.26%
1.0	GILD	15.79%	NAVI	5.26%
1.0	CHTR	15.79%	NEM	5.26%
1.0	AVGO	15.79%	SLV	5.26%
1.0	INTU	10.53%	VZ	5.26%
1.0	NVS	10.53%	GILD	5.26%
1.0	ORCL	10.53%	ADBE	5.26%
1.0	NAVI	10.53%	AAP	5.26%
1.0	MSFT	10.53%	JPM	5.26%
1.0	META	10.53%	NWL	0.0%
1.0	NEM	10.53%	MSFT	0.0%
1.0	VST	10.53%	ON	0.0%
1.0	JPM	10.53%	NFLX	0.0%
1.0	VZ	10.53%	ORLY	0.0%
1.0	WFC	10.53%	MUB	0.0%
1.0	MSTR	5.26%	MSTR	0.0%
1.0	PWR	5.26%	MSI	0.0%
1.0	QCOM	5.26%	NVDA	0.0%
1.0	CMA	5.26%	AA	0.0%
1.0	UNH	5.26%	MS	0.0%
1.0	KEY	5.26%	PCG	0.0%
1.0	SNY	5.26%	MRK	0.0%

P30D: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	AVGO	50.0%	NEM	40.0%
10.0	MSFT	40.0%	AVGO	40.0%
10.0	NEM	40.0%	TSLA	20.0%
10.0	MU	30.0%	MU	20.0%
10.0	TSLA	30.0%	CAH	10.0%
10.0	SLV	30.0%	NFLX	0.0%
10.0	VST	30.0%	MSTR	0.0%
10.0	JPM	20.0%	MUB	0.0%
10.0	SBUX	20.0%	NAVI	0.0%
10.0	CAH	20.0%	NVDA	0.0%
10.0	QQQ	10.0%	MSFT	0.0%
10.0	TDG	10.0%	NVS	0.0%
10.0	TXN	10.0%	NWL	0.0%
10.0	GS	10.0%	ON	0.0%
10.0	NFLX	10.0%	ORLY	0.0%
10.0	WFC	10.0%	OXY	0.0%
10.0	KEY	10.0%	PCG	0.0%
10.0	HLT	10.0%	PEP	0.0%
10.0	NAVI	0.0%	MSI	0.0%
10.0	NVDA	0.0%	AA	0.0%
10.0	NVS	0.0%	POST	0.0%
10.0	MUB	0.0%	LQD	0.0%
10.0	NWL	0.0%	KALU	0.0%
10.0	MSTR	0.0%	KEY	0.0%
10.0	AA	0.0%	KHC	0.0%

P90D: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	SLV	20.34%	TSLA	10.17%
1.0	TSLA	15.25%	GILD	6.78%
1.0	AVGO	15.25%	AVGO	6.78%
1.0	NEM	11.86%	BUD	5.08%
1.0	MU	11.86%	AAP	5.08%
1.0	GILD	11.86%	VZ	5.08%
1.0	CHTR	10.17%	SLV	5.08%
1.0	TEVA	8.47%	MU	3.39%
1.0	ORLY	8.47%	NEM	3.39%
1.0	META	8.47%	ZTS	3.39%
1.0	AAP	8.47%	AMC	3.39%
1.0	BUD	8.47%	QCOM	1.69%
1.0	QQQ	6.78%	NAVI	1.69%
1.0	TXN	6.78%	VFC	1.69%
1.0	SNY	6.78%	META	1.69%
1.0	NAVI	6.78%	JPM	1.69%
1.0	VZ	6.78%	WDC	1.69%
1.0	WFC	6.78%	GME	1.69%
1.0	MSFT	5.08%	NVS	1.69%
1.0	MSTR	5.08%	AA	1.69%
1.0	ZTS	5.08%	ADBE	1.69%
1.0	KEY	5.08%	AMZN	1.69%
1.0	AMZN	5.08%	LUMN	0.0%
1.0	INTU	5.08%	LW	0.0%
1.0	AMC	5.08%	GS	0.0%

P90D: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	AVGO	56.0%	AVGO	24.0%
10.0	WDC	44.0%	TSLA	24.0%
10.0	TSLA	28.0%	TXN	14.0%
10.0	NEM	22.0%	KALU	14.0%
10.0	ADBE	22.0%	NEM	12.0%
10.0	MU	22.0%	META	12.0%
10.0	AMC	20.0%	WDC	12.0%
10.0	BUD	20.0%	HON	10.0%
10.0	KALU	20.0%	KEY	10.0%
10.0	INTU	18.0%	SLV	8.0%
10.0	MSTR	18.0%	HCA	8.0%
10.0	HCA	18.0%	GILD	8.0%
10.0	SLV	18.0%	MU	6.0%
10.0	MSFT	18.0%	WFC	6.0%
10.0	AMZN	16.0%	CHTR	6.0%
10.0	KEY	16.0%	MS	4.0%
10.0	TXN	16.0%	ZTS	4.0%
10.0	GE	14.0%	GS	4.0%
10.0	ON	14.0%	UNH	2.0%
10.0	SBUX	14.0%	EXPE	2.0%
10.0	HON	12.0%	ABBV	2.0%
10.0	GOOGL	12.0%	ADBE	2.0%
10.0	CHTR	12.0%	AMC	2.0%
10.0	ISRG	12.0%	GME	2.0%
10.0	FITB	10.0%	LUMN	0.0%

P90D: 21d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	AVGO	64.1%	AVGO	51.28%
21.0	MU	48.72%	TXN	30.77%
21.0	WDC	41.03%	MU	30.77%
21.0	TXN	41.03%	CHTR	28.21%
21.0	ZTS	35.9%	WFC	25.64%
21.0	BUD	35.9%	ZTS	23.08%
21.0	SLV	30.77%	KEY	20.51%
21.0	TSLA	28.21%	HON	17.95%
21.0	NEM	25.64%	WDC	17.95%
21.0	AMC	25.64%	GILD	15.38%
21.0	AMZN	23.08%	TSLA	12.82%
21.0	META	20.51%	KALU	12.82%
21.0	KEY	17.95%	NEM	10.26%
21.0	HCA	17.95%	GS	7.69%
21.0	ADBE	15.38%	B	5.13%
21.0	KALU	15.38%	META	5.13%
21.0	TFC	12.82%	SLV	5.13%
21.0	MSTR	12.82%	AMC	2.56%
21.0	ISRG	12.82%	AMZN	2.56%
21.0	VFC	10.26%	BAC	2.56%
21.0	B	10.26%	MSI	0.0%
21.0	BAC	10.26%	NAVI	0.0%
21.0	BXP	10.26%	MUB	0.0%
21.0	HON	10.26%	NVDA	0.0%
21.0	FITB	10.26%	NWL	0.0%

P365D: 1d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	CHTR	11.29%	AVGO	4.44%
1.0	SLV	9.27%	TSLA	3.63%
1.0	GILD	8.06%	VZ	2.82%
1.0	AVGO	8.06%	SLV	2.82%
1.0	GME	6.45%	GILD	2.42%
1.0	KEY	6.05%	GME	2.42%
1.0	ZTS	5.65%	VST	2.02%
1.0	IRM	5.65%	META	1.61%
1.0	ORLY	5.65%	ZTS	1.21%
1.0	FRA	5.24%	B	1.21%
1.0	META	5.24%	HLT	1.21%
1.0	TSLA	4.84%	IRM	1.21%
1.0	VFC	4.44%	BALL	1.21%
1.0	SBUX	4.44%	AAP	1.21%
1.0	GS	4.03%	KEY	1.21%
1.0	CLF	4.03%	NFLX	1.21%
1.0	B	4.03%	SBUX	1.21%
1.0	VZ	4.03%	AMC	1.21%
1.0	NAVI	3.63%	CMA	1.21%
1.0	VST	3.63%	NEM	0.81%
1.0	NFLX	3.63%	BUD	0.81%
1.0	GNRC	3.63%	EXPE	0.81%
1.0	HON	3.23%	JPM	0.4%
1.0	AAP	3.23%	CHTR	0.4%
1.0	WFC	3.23%	GS	0.4%

P365D: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	AVGO	13.81%	VZ	10.04%
10.0	HCA	12.13%	META	7.95%
10.0	META	11.3%	TSLA	7.11%
10.0	VZ	10.46%	CHTR	6.69%
10.0	NEM	10.46%	GILD	5.86%
10.0	BXP	10.04%	EXPE	5.44%
10.0	SLV	9.62%	TXN	5.02%
10.0	GME	9.21%	CMA	4.18%
10.0	KALU	9.21%	NEM	3.35%
10.0	CHTR	9.21%	BXP	2.93%
10.0	GILD	8.79%	SLV	2.93%
10.0	VFC	8.79%	KALU	2.93%
10.0	EXPE	7.53%	VFC	2.51%
10.0	CMA	7.53%	AVGO	2.51%
10.0	TSLA	6.69%	WDC	2.51%
10.0	WDC	6.69%	HD	2.51%
10.0	MSTR	6.69%	AMGN	2.09%
10.0	GE	6.28%	VST	2.09%
10.0	AAP	5.86%	CNC	1.67%
10.0	IRM	5.86%	HCA	1.67%
10.0	INTU	5.86%	ZTS	1.67%
10.0	GNRC	5.86%	MSTR	1.26%
10.0	B	5.44%	GWW	1.26%
10.0	TXN	5.44%	KEY	1.26%
10.0	ADBE	5.44%	SBUX	0.84%

P365D: 21d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	VZ	21.93%	CHTR	17.11%
21.0	META	14.47%	VZ	7.89%
21.0	AVGO	10.96%	META	5.7%
21.0	CMA	9.21%	MU	5.26%
21.0	EXPE	9.21%	TXN	5.26%
21.0	SLV	9.21%	NEM	4.82%
21.0	BUD	8.77%	AVGO	4.39%
21.0	NEM	8.33%	GILD	3.95%
21.0	ISRG	7.89%	HD	3.95%
21.0	CHTR	7.89%	ZTS	3.95%
21.0	HD	7.46%	KEY	3.51%
21.0	B	7.46%	TSLA	3.51%
21.0	MU	7.46%	BAC	3.07%
21.0	KALU	7.46%	WDC	3.07%
21.0	BXP	7.46%	CMA	2.63%
21.0	TSLA	7.02%	SLV	2.19%
21.0	TXN	7.02%	KALU	2.19%
21.0	WDC	7.02%	HON	2.19%
21.0	VFC	6.58%	BXP	2.19%
21.0	ZTS	6.58%	MSI	1.75%
21.0	GNRC	5.7%	GS	1.75%
21.0	GILD	5.26%	GME	1.75%
21.0	HCA	5.26%	CNC	1.32%
21.0	KEY	5.26%	NVS	0.88%
21.0	BAC	4.82%	EXPE	0.88%

P365D: 63d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	META	15.05%	EXPE	12.9%
63.0	BUD	14.52%	GILD	6.99%
63.0	AVGO	14.52%	HD	4.84%
63.0	EXPE	12.37%	MSI	4.3%
63.0	VFC	9.14%	HCA	3.76%
63.0	CMA	8.6%	CMA	2.15%
63.0	GILD	8.6%	META	2.15%
63.0	CHTR	8.06%	VFC	2.15%
63.0	GSK	6.99%	BXP	1.61%
63.0	NEM	6.99%	BUD	1.61%
63.0	HD	6.45%	WFC	0.54%
63.0	VZ	5.91%	NWL	0.0%
63.0	BXP	4.84%	NVS	0.0%
63.0	AAP	4.3%	MU	0.0%
63.0	SNY	4.3%	NVDA	0.0%
63.0	GE	3.76%	NEM	0.0%
63.0	WDC	3.76%	NAVI	0.0%
63.0	SLV	3.76%	MUB	0.0%
63.0	MSI	2.69%	ON	0.0%
63.0	AA	2.15%	ORCL	0.0%
63.0	GS	1.61%	AA	0.0%
63.0	IRM	1.61%	LW	0.0%
63.0	ZION	1.61%	MRK	0.0%
63.0	KALU	1.61%	OXY	0.0%
63.0	GNRC	1.61%	LQD	0.0%

P365D: 126d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	VFC	32.52%	EXPE	18.7%
126.0	EXPE	27.64%	META	14.63%
126.0	META	24.39%	BUD	13.82%
126.0	MSI	14.63%	VFC	8.13%
126.0	NWL	8.94%	AA	0.0%
126.0	GILD	6.5%	MRK	0.0%
126.0	BUD	3.25%	MSI	0.0%
126.0	NAVI	0.0%	MU	0.0%
126.0	MUB	0.0%	MUB	0.0%
126.0	MU	0.0%	NAVI	0.0%
126.0	MSFT	0.0%	NEM	0.0%
126.0	MRK	0.0%	NVDA	0.0%
126.0	LQD	0.0%	NVS	0.0%
126.0	MNST	0.0%	NWL	0.0%
126.0	LW	0.0%	ON	0.0%
126.0	LVS	0.0%	ORCL	0.0%
126.0	LUMN	0.0%	ORLY	0.0%
126.0	LNC	0.0%	MSFT	0.0%
126.0	NVDA	0.0%	MNST	0.0%
126.0	LLY	0.0%	MOS	0.0%
126.0	LEN	0.0%	PCG	0.0%
126.0	KHC	0.0%	LW	0.0%
126.0	KEY	0.0%	LVS	0.0%
126.0	KALU	0.0%	LUMN	0.0%
126.0	JAZZ	0.0%	LQD	0.0%

Appendix 2: Bottom 25 Ticker Level Differences in VM vs. Sigma 95% and 99% OaR Breakage

All TMD: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	MOS	-4.09%	NVDA	-2.22%
1.0	VCSH	-4.09%	CCL	-1.87%
1.0	EMB	-3.98%	LVS	-1.75%
1.0	HYG	-3.98%	LLY	-1.75%
1.0	GE	-3.86%	WYNN	-1.75%
1.0	ON	-3.86%	MUB	-1.64%
1.0	CCL	-3.39%	GE	-1.64%
1.0	DHI	-3.27%	HYG	-1.64%
1.0	NVDA	-3.27%	HSBC	-1.64%
1.0	HSBC	-3.16%	MNST	-1.52%
1.0	MUB	-3.04%	VCSH	-1.52%
1.0	AZN	-3.04%	MU	-1.4%
1.0	MS	-3.04%	PHM	-1.4%
1.0	PHM	-2.92%	GLD	-1.4%
1.0	VNO	-2.92%	T	-1.4%
1.0	TLT	-2.81%	VNO	-1.4%
1.0	CSCO	-2.81%	PWR	-1.4%
1.0	T	-2.81%	COST	-1.29%
1.0	LVS	-2.81%	MS	-1.29%
1.0	X	-2.72%	USB	-1.29%
1.0	CMG	-2.69%	CMG	-1.29%
1.0	LLY	-2.57%	CDNS	-1.29%
1.0	PCG	-2.57%	MOS	-1.29%
1.0	CAH	-2.57%	CPRT	-1.29%
1.0	MSFT	-2.57%	GSK	-1.17%

All TMD: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	MUB	-7.46%	NVDA	-4.85%
10.0	LLY	-7.09%	LLY	-4.02%
10.0	NVDA	-6.62%	MUB	-3.55%
10.0	CCL	-5.67%	GBTC	-3.43%
10.0	MS	-5.56%	TMUS	-3.43%
10.0	T	-5.2%	X	-3.22%
10.0	CDNS	-5.08%	CPRT	-3.07%
10.0	JPM	-4.49%	DHI	-2.96%
10.0	CYH	-4.26%	GLD	-2.48%
10.0	CSCO	-4.14%	PWR	-2.36%
10.0	COST	-4.02%	PHM	-2.36%
10.0	VCSH	-3.78%	MS	-2.13%
10.0	CPRT	-3.55%	LUMN	-2.01%
10.0	CAH	-3.55%	THC	-2.01%
10.0	GE	-3.43%	GE	-1.89%
10.0	MOS	-3.43%	CDNS	-1.89%
10.0	CMG	-3.43%	T	-1.77%
10.0	AMD	-3.43%	CCL	-1.77%
10.0	GSK	-3.19%	CMG	-1.65%
10.0	VNO	-3.19%	UNH	-1.65%
10.0	FSUGY	-3.07%	MOS	-1.65%
10.0	DHI	-3.07%	COST	-1.65%
10.0	BA	-3.07%	ELAN	-1.44%
10.0	PHM	-3.07%	LEN	-1.42%
10.0	QQQ	-2.96%	WYNN	-1.42%

All TMD: 21d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	MUB	-8.63%	NVDA	-6.23%
21.0	LLY	-8.5%	GE	-5.39%
21.0	MS	-8.14%	GBTC	-5.03%
21.0	CCL	-8.02%	ETRN	-4.38%
21.0	COST	-8.02%	TMUS	-4.07%
21.0	NVDA	-7.78%	MUB	-3.96%
21.0	JPM	-6.95%	LLY	-3.71%
21.0	GLD	-6.71%	PWR	-3.59%
21.0	DHI	-6.47%	DHI	-3.59%
21.0	GE	-6.35%	MOS	-3.47%
21.0	PHM	-5.87%	WYNN	-2.99%
21.0	CDNS	-5.75%	BA	-2.99%
21.0	PWR	-5.39%	X	-2.78%
21.0	GBTC	-5.03%	LUMN	-2.75%
21.0	T	-4.55%	THC	-2.63%
21.0	CAH	-4.55%	TSLA	-2.51%
21.0	CPRT	-4.55%	AMGN	-2.51%
21.0	AZN	-4.55%	TEVA	-2.4%
21.0	CMG	-4.43%	CCL	-2.4%
21.0	VNO	-4.43%	GLD	-2.28%
21.0	TSLA	-4.43%	LVS	-2.28%
21.0	WYNN	-4.31%	PHM	-2.16%
21.0	ELAN	-4.01%	SBUX	-2.16%
21.0	VCSH	-3.83%	CAH	-2.16%
21.0	LEN	-3.83%	ELAN	-1.95%

All TMD: 63d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	NVDA	-19.04%	NVDA	-13.37%
63.0	GBTC	-13.24%	GBTC	-10.72%
63.0	CMG	-12.61%	LLY	-8.58%
63.0	VNO	-11.98%	VST	-6.31%
63.0	DHI	-10.47%	GE	-6.31%
63.0	CCL	-10.21%	GLD	-6.18%
63.0	GE	-9.84%	ETRN	-5.99%
63.0	LLY	-9.58%	GILD	-5.8%
63.0	GLD	-9.33%	MUB	-5.56%
63.0	JPM	-8.83%	DHI	-5.42%
63.0	PHM	-8.7%	MU	-5.17%
63.0	MU	-8.45%	PHM	-5.17%
63.0	T	-7.94%	MRK	-5.04%
63.0	COST	-7.94%	THC	-5.04%
63.0	CPRT	-7.82%	TRGP	-4.92%
63.0	AMD	-7.06%	ACGL	-3.91%
63.0	THC	-7.06%	TMUS	-3.91%
63.0	PWR	-6.68%	CCL	-3.78%
63.0	NFLX	-6.68%	MS	-3.66%
63.0	LUMN	-6.31%	MSTR	-3.4%
63.0	MUB	-6.19%	COST	-2.77%
63.0	VCSH	-6.18%	ABBV	-2.77%
63.0	ABBV	-5.93%	AAPL	-2.77%
63.0	HLT	-5.93%	AMD	-2.65%
63.0	NVS	-5.67%	IRM	-2.52%

All TMD: 126d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	NVDA	-25.89%	NVDA	-22.6%
126.0	PHM	-24.93%	GE	-15.75%
126.0	GE	-23.56%	THC	-14.79%
126.0	GLD	-17.12%	LLY	-14.25%
126.0	COST	-16.99%	GBTC	-12.74%
126.0	JPM	-16.99%	TMUS	-12.19%
126.0	GBTC	-16.58%	GILD	-10.96%
126.0	T	-15.62%	TRGP	-10.82%
126.0	GS	-14.93%	MU	-10.14%
126.0	NFLX	-11.92%	ACGL	-8.63%
126.0	CMG	-11.64%	CMG	-8.63%
126.0	LLY	-11.64%	GLD	-8.08%
126.0	CPRT	-11.51%	PHM	-7.53%
126.0	ORCL	-11.51%	X	-5.26%
126.0	MU	-11.23%	ORCL	-4.93%
126.0	PWR	-11.1%	COST	-4.66%
126.0	HLT	-10.68%	PWR	-4.25%
126.0	AMAT	-10.68%	TSLA	-4.25%
126.0	VNO	-10.68%	VST	-3.56%
126.0	CSCO	-9.86%	JPM	-3.42%
126.0	GILD	-9.73%	WFC	-3.29%
126.0	MRK	-9.45%	WDC	-3.15%
126.0	MS	-9.32%	NFLX	-3.01%
126.0	AVGO	-9.18%	GWW	-2.6%
126.0	HSBC	-8.36%	QCOM	-2.47%

All TMD: 252d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
252.0	GE	-60.43%	GE	-39.74%
252.0	PHM	-54.8%	GBTC	-33.77%
252.0	GBTC	-40.89%	PHM	-30.63%
252.0	COST	-38.41%	LLY	-24.5%
252.0	ACGL	-33.44%	AVGO	-24.34%
252.0	JPM	-30.79%	GLD	-23.51%
252.0	NFLX	-30.63%	COST	-21.69%
252.0	PWR	-28.64%	NVDA	-21.52%
252.0	NVDA	-26.49%	TMUS	-20.03%
252.0	LLY	-25.17%	TRGP	-19.7%
252.0	CPRT	-23.34%	ACGL	-19.7%
252.0	ORCL	-23.01%	GS	-13.74%
252.0	DHI	-22.02%	META	-13.58%
252.0	ISRG	-21.69%	THC	-12.91%
252.0	CMG	-19.54%	CAH	-11.26%
252.0	AVGO	-19.21%	JPM	-10.76%
252.0	GS	-19.21%	T	-9.44%
252.0	TDG	-19.04%	PWR	-9.27%
252.0	TMUS	-17.38%	NFLX	-8.44%
252.0	T	-15.89%	MSI	-8.11%
252.0	LEN	-15.73%	ETRN	-7.18%
252.0	MU	-15.23%	VST	-6.79%
252.0	META	-14.74%	ISRG	-6.29%
252.0	HLT	-14.24%	TEVA	-5.96%
252.0	MS	-13.41%	TDG	-5.46%

P30D: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	GNRC	-10.53%	CCL	-5.26%
1.0	LVS	-10.53%	ORCL	-5.26%
1.0	CSCO	-10.53%	PRGO	-5.26%
1.0	AZO	-10.53%	BA	-5.26%
1.0	CCL	-10.53%	T	-5.26%
1.0	CMG	-10.53%	UAA	-5.26%
1.0	BHC	-10.53%	LVS	-5.26%
1.0	MOS	-10.53%	GT	-5.26%
1.0	X	-9.09%	FCX	-5.26%
1.0	BHP	-5.26%	MSI	0.0%
1.0	GE	-5.26%	MSTR	0.0%
1.0	AA	-5.26%	AA	0.0%
1.0	HSBC	-5.26%	MUB	0.0%
1.0	COST	-5.26%	NFLX	0.0%
1.0	CSTM	-5.26%	NVDA	0.0%
1.0	PCG	-5.26%	NWL	0.0%
1.0	DHI	-5.26%	ON	0.0%
1.0	T	-5.26%	MSFT	0.0%
1.0	RIO	-5.26%	MS	0.0%
1.0	TLT	-5.26%	MNST	0.0%
1.0	NWL	-5.26%	MOS	0.0%
1.0	WYNN	-5.26%	ORLY	0.0%
1.0	B	-5.26%	META	0.0%
1.0	LNC	-5.26%	LW	0.0%
1.0	ACGL	-5.26%	LUMN	0.0%

P30D: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	XOM	-30.0%	ORCL	-80.0%
10.0	BHC	-30.0%	CCL	-10.0%
10.0	ORCL	-20.0%	XOM	-10.0%
10.0	AMD	-10.0%	GS	-10.0%
10.0	CCL	-10.0%	MSI	0.0%
10.0	MOS	0.0%	MSTR	0.0%
10.0	MRK	0.0%	MUB	0.0%
10.0	MS	0.0%	NAVI	0.0%
10.0	MSI	0.0%	NFLX	0.0%
10.0	MSTR	0.0%	AA	0.0%
10.0	AA	0.0%	MSFT	0.0%
10.0	NAVI	0.0%	NVS	0.0%
10.0	NVDA	0.0%	NWL	0.0%
10.0	NVS	0.0%	ON	0.0%
10.0	NWL	0.0%	ORLY	0.0%
10.0	ON	0.0%	OXY	0.0%
10.0	MUB	0.0%	NVDA	0.0%
10.0	MNST	0.0%	MS	0.0%
10.0	LW	0.0%	MRK	0.0%
10.0	LVS	0.0%	MOS	0.0%
10.0	LUMN	0.0%	MNST	0.0%
10.0	LQD	0.0%	META	0.0%
10.0	LNC	0.0%	LW	0.0%
10.0	LLY	0.0%	LVS	0.0%
10.0	LEN	0.0%	LUMN	0.0%

P90D: 1d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	LVS	-10.17%	GLD	-8.47%
1.0	MOS	-10.17%	LVS	-6.78%
1.0	ACGL	-10.17%	HSBC	-5.08%
1.0	HSBC	-10.17%	PHM	-3.39%
1.0	BALL	-10.17%	PRGO	-3.39%
1.0	AZO	-10.17%	HYG	-3.39%
1.0	GWW	-8.47%	CLF	-3.39%
1.0	AZN	-8.47%	CDNS	-3.39%
1.0	CCL	-6.78%	CCL	-3.39%
1.0	CAH	-6.78%	GE	-3.39%
1.0	BIIB	-6.78%	ZION	-3.39%
1.0	GLD	-6.78%	JAZZ	-3.39%
1.0	VCSH	-6.78%	GWW	-3.39%
1.0	AMGN	-6.78%	BIIB	-3.39%
1.0	PCG	-6.78%	GT	-3.39%
1.0	LQD	-5.08%	UAA	-3.39%
1.0	LEN	-5.08%	NFLX	-3.39%
1.0	COST	-5.08%	B	-3.39%
1.0	CSTM	-5.08%	FITB	-3.39%
1.0	EMB	-5.08%	MOS	-3.39%
1.0	NWL	-5.08%	FIS	-3.39%
1.0	RIO	-5.08%	BA	-3.39%
1.0	FSUGY	-5.08%	VICI	-3.39%
1.0	GNRC	-5.08%	WYNN	-3.39%
1.0	GBTC	-5.08%	T	-3.39%

P90D: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	MOS	-34.0%	NFLX	-20.0%
10.0	LVS	-18.0%	ORCL	-20.0%
10.0	BA	-16.0%	X	-19.05%
10.0	GSK	-16.0%	HLT	-16.0%
10.0	CSTM	-12.0%	MSFT	-14.0%
10.0	PWR	-10.0%	LLY	-8.0%
10.0	LLY	-10.0%	FIS	-8.0%
10.0	BHP	-10.0%	HSBC	-8.0%
10.0	HYG	-10.0%	CYH	-8.0%
10.0	CSCO	-10.0%	GLD	-6.0%
10.0	CDNS	-10.0%	WYNN	-6.0%
10.0	CCL	-10.0%	MOS	-6.0%
10.0	VCSH	-8.0%	INTU	-6.0%
10.0	RIO	-8.0%	THC	-6.0%
10.0	JAZZ	-8.0%	CAH	-4.0%
10.0	XOM	-8.0%	CCL	-4.0%
10.0	NVDA	-8.0%	PWR	-4.0%
10.0	HLT	-8.0%	VICI	-4.0%
10.0	QQQ	-6.0%	IRM	-4.0%
10.0	FIS	-6.0%	JAZZ	-4.0%
10.0	VICI	-6.0%	CPRT	-4.0%
10.0	GWW	-6.0%	SPY	-4.0%
10.0	EMB	-6.0%	QQQ	-2.0%
10.0	CAH	-6.0%	CDNS	-2.0%
10.0	ORCL	-6.0%	RIO	-2.0%

P90D: 21d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	MOS	-56.41%	MOS	-30.77%
21.0	QQQ	-25.64%	MSFT	-28.21%
21.0	LVS	-23.08%	HLT	-25.64%
21.0	SPY	-23.08%	BA	-25.64%
21.0	AMD	-23.08%	ORCL	-20.51%
21.0	CDNS	-23.08%	WYNN	-17.95%
21.0	WYNN	-23.08%	NFLX	-17.95%
21.0	HLT	-20.51%	AAP	-15.38%
21.0	CSTM	-20.51%	PWR	-15.38%
21.0	MS	-17.95%	CDNS	-10.26%
21.0	BA	-17.95%	QQQ	-10.26%
21.0	CAH	-17.95%	LVS	-10.26%
21.0	GWW	-15.38%	ELAN	-7.69%
21.0	NVDA	-15.38%	CAH	-7.69%
21.0	VST	-15.38%	IRM	-7.69%
21.0	CSCO	-10.26%	HSBC	-7.69%
21.0	NFLX	-10.26%	CYH	-7.69%
21.0	HYG	-10.26%	INTU	-7.69%
21.0	GBTC	-10.26%	SPY	-7.69%
21.0	IRM	-10.26%	GLD	-5.13%
21.0	BHC	-10.26%	THC	-5.13%
21.0	COST	-7.69%	X	-3.23%
21.0	HSBC	-7.69%	NVS	-2.56%
21.0	FIS	-7.69%	FRA	-2.56%
21.0	BALL	-7.69%	JPM	-2.56%

P365D: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	WRK	-50.0%	CCL	-3.23%
1.0	COST	-6.05%	WYNN	-3.23%
1.0	MOS	-5.65%	LVS	-3.23%
1.0	TDG	-5.65%	JAZZ	-2.82%
1.0	CCL	-5.24%	T	-2.82%
1.0	ACGL	-5.24%	GT	-2.82%
1.0	T	-5.24%	PHM	-2.82%
1.0	HSBC	-4.84%	HSBC	-2.82%
1.0	AZO	-4.84%	TEVA	-2.42%
1.0	NVDA	-4.84%	CDNS	-2.42%
1.0	PCG	-4.84%	GLD	-2.42%
1.0	TRGP	-4.84%	UAA	-2.02%
1.0	SPY	-4.44%	LUMN	-2.02%
1.0	VICI	-4.44%	PEP	-2.02%
1.0	LVS	-4.44%	PWR	-2.02%
1.0	PHM	-4.44%	COST	-2.02%
1.0	LLY	-4.44%	MNST	-2.02%
1.0	RIO	-4.03%	NVDA	-2.02%
1.0	JAZZ	-4.03%	AMAT	-2.02%
1.0	BHP	-4.03%	X	-1.67%
1.0	POST	-4.03%	MUB	-1.62%
1.0	CMG	-3.63%	ORLY	-1.61%
1.0	VCSH	-3.63%	CVS	-1.61%
1.0	GLD	-3.63%	CSCO	-1.61%
1.0	CAH	-3.63%	WDC	-1.61%

P365D: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	T	-13.39%	TMUS	-9.21%
10.0	CSCO	-11.72%	TRGP	-7.53%
10.0	COST	-10.04%	LUMN	-7.11%
10.0	MS	-10.04%	CPRT	-6.28%
10.0	LLY	-10.04%	ORCL	-5.86%
10.0	MOS	-9.62%	NFLX	-5.44%
10.0	CCL	-8.37%	X	-4.76%
10.0	JAZZ	-7.95%	T	-4.6%
10.0	CDNS	-7.53%	LVS	-4.6%
10.0	CAH	-7.53%	MS	-4.6%
10.0	LUMN	-6.69%	WYNN	-4.18%
10.0	TMUS	-6.69%	DHI	-4.18%
10.0	BA	-6.69%	LLY	-4.18%
10.0	JPM	-6.28%	GBTC	-4.18%
10.0	NVDA	-5.86%	CSCO	-3.77%
10.0	LVS	-5.86%	PHM	-3.35%
10.0	BHC	-5.44%	COST	-3.35%
10.0	BHP	-5.02%	HLT	-3.35%
10.0	TRGP	-5.02%	JAZZ	-3.35%
10.0	WYNN	-4.6%	ACGL	-3.35%
10.0	PHM	-4.6%	HSBC	-3.35%
10.0	CVS	-4.18%	CDNS	-2.93%
10.0	QQQ	-4.18%	POST	-2.93%
10.0	SPY	-4.18%	PWR	-2.93%
10.0	CPRT	-4.18%	CCL	-2.93%

P365D: 21d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	MS	-14.47%	TMUS	-14.04%
21.0	COST	-14.04%	WYNN	-10.96%
21.0	CAH	-12.72%	LVS	-9.65%
21.0	T	-12.28%	TRGP	-9.21%
21.0	MOS	-10.09%	LUMN	-9.21%
21.0	CCL	-10.09%	SBUX	-7.89%
21.0	CPRT	-9.21%	GBTC	-7.46%
21.0	WYNN	-8.77%	TEVA	-7.46%
21.0	LVS	-8.77%	T	-5.7%
21.0	BMY	-7.89%	MOS	-5.26%
21.0	WFC	-7.89%	IRM	-5.26%
21.0	GLD	-7.46%	MSFT	-4.82%
21.0	BA	-7.46%	BA	-4.82%
21.0	BHC	-7.46%	HLT	-4.82%
21.0	CDNS	-7.46%	COST	-4.82%
21.0	JPM	-7.02%	NFLX	-4.39%
21.0	NFLX	-7.02%	MS	-4.39%
21.0	MNST	-6.14%	PWR	-4.39%
21.0	LLY	-6.14%	BUD	-4.39%
21.0	TMUS	-6.14%	GLD	-3.95%
21.0	TRGP	-5.7%	VST	-3.51%
21.0	CSCO	-5.7%	CAH	-3.51%
21.0	SBUX	-5.7%	ACGL	-3.51%
21.0	AZN	-5.7%	CDNS	-3.51%
21.0	HLT	-5.7%	ABBV	-3.07%

P365D: 63d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	NFLX	-34.41%	TRGP	-23.12%
63.0	T	-29.03%	VST	-21.51%
63.0	GLD	-24.73%	MSTR	-19.89%
63.0	CCL	-23.66%	MS	-15.59%
63.0	TRGP	-23.12%	CCL	-13.98%
63.0	GBTC	-18.82%	GLD	-12.37%
63.0	VNO	-18.28%	IRM	-10.22%
63.0	CSCO	-17.2%	TMUS	-9.14%
63.0	MSTR	-16.67%	CAH	-8.06%
63.0	LVS	-16.13%	TSLA	-6.45%
63.0	MS	-15.05%	T	-5.91%
63.0	SBUX	-13.44%	GBTC	-5.91%
63.0	ORCL	-12.37%	HSBC	-5.38%
63.0	GWW	-12.37%	LUMN	-4.84%
63.0	LUMN	-11.83%	CVS	-4.3%
63.0	MOS	-11.29%	VNO	-3.76%
63.0	AMZN	-11.29%	CSCO	-3.76%
63.0	BMY	-10.75%	GWW	-3.76%
63.0	HSBC	-10.75%	NFLX	-3.76%
63.0	TMUS	-10.22%	CPRT	-3.23%
63.0	HLT	-10.22%	PWR	-2.69%
63.0	WFC	-10.22%	PHM	-2.69%
63.0	JPM	-9.68%	DHI	-2.69%
63.0	CPRT	-9.14%	BMY	-2.69%
63.0	MNST	-9.14%	MSFT	-2.15%

P365D: 126d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model OaR Breakage exceeds Sigma OaR breakage for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	T	-60.16%	GLD	-28.46%
126.0	HSBC	-55.28%	VST	-26.83%
126.0	NFLX	-50.41%	TRGP	-26.02%
126.0	GLD	-44.72%	TMUS	-24.39%
126.0	CSCO	-39.02%	NFLX	-17.89%
126.0	TRGP	-25.2%	GILD	-13.01%
126.0	MS	-22.76%	CAH	-11.38%
126.0	CAH	-20.33%	WFC	-10.57%
126.0	GS	-19.51%	T	-10.57%
126.0	JPM	-19.51%	MSTR	-8.94%
126.0	MSTR	-17.07%	MS	-8.94%
126.0	CCL	-16.26%	CSCO	-8.13%
126.0	VST	-14.63%	JPM	-7.32%
126.0	BMY	-13.82%	HSBC	-5.69%
126.0	WFC	-13.01%	CCL	-4.88%
126.0	TSLA	-13.01%	GS	-2.44%
126.0	HLT	-10.57%	AVGO	-0.81%
126.0	SBUX	-8.94%	HLT	-0.81%
126.0	COST	-8.13%	ISRG	-0.81%
126.0	ISRG	-8.13%	NVDA	0.0%
126.0	AMZN	-7.32%	NAVI	0.0%
126.0	GBTC	-6.5%	MUB	0.0%
126.0	VNO	-5.69%	MU	0.0%
126.0	PWR	-4.07%	NVS	0.0%
126.0	TEVA	-4.07%	NWL	0.0%

Appendix 3: Top 25 Ticker Level Differences in VM vs. Sigma 95% and 99% ROLOBC

All TMD: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	CCL	0.25%	NVDA	0.31%
1.0	X	0.21%	GBTC	0.3%
1.0	TSLA	0.21%	X	0.29%
1.0	NVDA	0.21%	GE	0.24%
1.0	GBTC	0.2%	CCL	0.2%
1.0	GE	0.17%	PWR	0.19%
1.0	B	0.13%	LLY	0.18%
1.0	TDG	0.12%	TSLA	0.18%
1.0	AVGO	0.12%	TDG	0.16%
1.0	MOS	0.1%	AVGO	0.15%
1.0	ON	0.1%	CAH	0.14%
1.0	CMG	0.1%	CDNS	0.13%
1.0	MSFT	0.1%	VST	0.13%
1.0	DHI	0.09%	WYNN	0.13%
1.0	VST	0.09%	TRGP	0.13%
1.0	LLY	0.09%	AZO	0.13%
1.0	CYH	0.09%	ORLY	0.13%
1.0	JAZZ	0.09%	CMG	0.12%
1.0	VNO	0.08%	ON	0.12%
1.0	AZO	0.08%	MSFT	0.12%
1.0	BHC	0.08%	WDC	0.11%
1.0	THC	0.08%	JAZZ	0.11%
1.0	KEY	0.07%	HLT	0.1%
1.0	SBNY	0.07%	JPM	0.1%
1.0	COST	0.07%	HCA	0.1%

All TMD: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	NVDA	2.82%	NVDA	3.46%
10.0	TSLA	2.48%	LLY	2.41%
10.0	CCL	2.09%	GBTC	2.28%
10.0	SBNY	1.86%	TSLA	2.2%
10.0	LLY	1.69%	CCL	2.16%
10.0	GBTC	1.18%	AZO	1.26%
10.0	AVGO	1.16%	PWR	1.21%
10.0	MSFT	0.97%	AVGO	1.15%
10.0	AZO	0.94%	T	1.09%
10.0	FRCB	0.93%	DHI	1.01%
10.0	BHC	0.92%	GE	1.0%
10.0	GT	0.85%	WDC	0.99%
10.0	PWR	0.78%	PHM	0.97%
10.0	CDNS	0.65%	COST	0.87%
10.0	GE	0.64%	WYNN	0.86%
10.0	T	0.64%	PCG	0.85%
10.0	LVS	0.62%	MSFT	0.84%
10.0	HLT	0.61%	VST	0.83%
10.0	QQQ	0.59%	ACGL	0.8%
10.0	AMC	0.57%	THC	0.78%
10.0	WYNN	0.56%	BHC	0.71%
10.0	DHI	0.55%	JPM	0.68%
10.0	AMD	0.54%	TEVA	0.66%
10.0	COST	0.54%	CSTM	0.64%
10.0	ORLY	0.51%	TDG	0.62%

All TMD: 21d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	TSLA	6.24%	NVDA	6.67%
21.0	NVDA	5.56%	GBTC	5.66%
21.0	SBNY	5.03%	TSLA	5.55%
21.0	CCL	4.27%	CCL	4.55%
21.0	GBTC	3.28%	ETRN	4.03%
21.0	LLY	2.5%	VST	3.08%
21.0	AZO	2.36%	SBNY	2.85%
21.0	FRCB	2.24%	LLY	2.7%
21.0	PCG	2.22%	CDNS	2.67%
21.0	PWR	1.9%	PWR	2.38%
21.0	ELAN	1.78%	AZO	2.37%
21.0	DHI	1.71%	AA	2.37%
21.0	MSFT	1.69%	MSTR	2.1%
21.0	CDNS	1.68%	AMAT	2.08%
21.0	AMC	1.58%	DHI	2.08%
21.0	QQQ	1.56%	AMD	2.07%
21.0	WYNN	1.39%	PCG	2.06%
21.0	VNO	1.38%	TMUS	1.91%
21.0	VST	1.26%	MSFT	1.89%
21.0	COST	1.18%	ELAN	1.87%
21.0	GE	1.18%	AMC	1.84%
21.0	ORLY	1.13%	PHM	1.74%
21.0	JPM	1.12%	GE	1.67%
21.0	PHM	1.1%	FRCB	1.54%
21.0	AMAT	1.05%	AVGO	1.5%

All TMD: 63d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	CCL	15.58%	GBTC	26.11%
63.0	NVDA	15.33%	NVDA	20.08%
63.0	MSTR	15.27%	MSTR	15.71%
63.0	SBNY	13.02%	CCL	14.94%
63.0	GBTC	10.57%	PWR	12.47%
63.0	TSLA	8.35%	GE	9.57%
63.0	AMC	6.88%	LLY	9.46%
63.0	PWR	6.86%	PHM	9.36%
63.0	VNO	6.49%	ETRN	8.48%
63.0	ELAN	6.4%	VST	7.76%
63.0	LLY	6.14%	TSLA	7.42%
63.0	PCG	6.11%	PCG	6.84%
63.0	FRCB	5.84%	T	6.66%
63.0	MSFT	5.34%	TMUS	5.89%
63.0	DHI	5.06%	JPM	5.71%
63.0	QQQ	4.94%	VNO	5.46%
63.0	AZO	4.79%	MS	5.22%
63.0	AMZN	4.46%	X	5.07%
63.0	PHM	4.17%	QQQ	5.03%
63.0	AMD	3.95%	COST	5.0%
63.0	MU	3.92%	MSFT	4.94%
63.0	AMAT	3.91%	CDNS	4.94%
63.0	CDNS	3.87%	ELAN	4.93%
63.0	JPM	3.32%	AMD	4.77%
63.0	T	3.29%	AMC	4.71%

All TMD: 126d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	NVDA	42.57%	GBTC	63.16%
126.0	GBTC	29.06%	NVDA	49.82%
126.0	CCL	23.61%	CCL	30.72%
126.0	VNO	19.2%	PHM	25.82%
126.0	SBNY	19.0%	GE	24.78%
126.0	PHM	18.71%	LLY	24.25%
126.0	AMZN	17.05%	THC	19.34%
126.0	MU	16.72%	VNO	18.06%
126.0	PCG	15.33%	PWR	18.02%
126.0	TSLA	14.61%	TSLA	17.64%
126.0	GE	14.04%	MU	17.36%
126.0	PWR	13.94%	NFLX	16.17%
126.0	QQQ	13.93%	PCG	15.98%
126.0	NFLX	13.7%	AMZN	15.89%
126.0	AMAT	13.63%	JPM	14.93%
126.0	DHI	13.3%	MS	14.61%
126.0	AMD	12.05%	DHI	13.96%
126.0	THC	10.98%	COST	13.53%
126.0	MSFT	10.66%	MSTR	13.47%
126.0	AMC	10.57%	X	13.25%
126.0	AZO	10.5%	T	13.15%
126.0	MS	10.36%	ACGL	13.09%
126.0	COST	9.04%	VST	12.93%
126.0	ACGL	8.93%	TMUS	12.58%
126.0	ELAN	8.89%	AZO	12.53%

All TMD: 252d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
252.0	NVDA	138.82%	GBTC	153.49%
252.0	GBTC	122.18%	NVDA	105.35%
252.0	PHM	66.57%	GE	99.98%
252.0	NFLX	63.96%	PHM	86.13%
252.0	GE	61.26%	CCL	75.12%
252.0	CCL	54.54%	THC	62.13%
252.0	LLY	52.2%	TRGP	52.64%
252.0	VNO	50.75%	NFLX	45.95%
252.0	AMZN	48.85%	MU	44.29%
252.0	PWR	45.52%	X	41.64%
252.0	DHI	43.95%	AMAT	40.41%
252.0	MU	43.45%	VNO	38.65%
252.0	QQQ	39.42%	META	35.58%
252.0	CDNS	39.32%	QQQ	34.98%
252.0	ACGL	39.23%	ORCL	34.58%
252.0	COST	38.8%	PCG	33.74%
252.0	MSFT	38.16%	LLY	30.9%
252.0	INTU	36.21%	MS	29.46%
252.0	ISRG	36.05%	ACGL	29.4%
252.0	PCG	33.54%	COST	28.94%
252.0	AMD	33.49%	T	28.75%
252.0	THC	30.8%	DHI	28.31%
252.0	AMAT	30.31%	PWR	28.3%
252.0	MS	26.67%	AVGO	28.23%
252.0	LEN	26.12%	MSFT	28.18%

P30D: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	LUMN	1.49%	BHC	3.38%
1.0	BHC	1.25%	ORCL	1.54%
1.0	NVDA	1.15%	NVDA	1.5%
1.0	NWL	0.99%	LUMN	1.48%
1.0	CCL	0.89%	WDC	1.08%
1.0	GNRC	0.7%	CZR	0.97%
1.0	LVS	0.63%	GNRC	0.93%
1.0	ELAN	0.53%	CLF	0.91%
1.0	UAA	0.49%	CCL	0.88%
1.0	CZR	0.47%	NWL	0.85%
1.0	BALL	0.45%	DHI	0.78%
1.0	DHI	0.44%	MSTR	0.74%
1.0	WDC	0.41%	NFLX	0.73%
1.0	PHM	0.37%	AMAT	0.7%
1.0	AMAT	0.37%	PHM	0.69%
1.0	CSTM	0.35%	LVS	0.66%
1.0	WYNN	0.34%	ELAN	0.64%
1.0	IRM	0.34%	GS	0.59%
1.0	AMD	0.32%	LEN	0.59%
1.0	AMC	0.32%	KEY	0.57%
1.0	CMG	0.3%	WYNN	0.54%
1.0	AA	0.26%	XOM	0.49%
1.0	TSLA	0.24%	MRK	0.45%
1.0	GS	0.24%	UAA	0.41%
1.0	ZTS	0.23%	CSTM	0.41%

P30D: 10d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	GME	6.69%	BHC	17.28%
10.0	LUMN	6.11%	ORCL	12.21%
10.0	NVDA	5.8%	NVDA	8.68%
10.0	AMC	5.66%	LUMN	6.65%
10.0	BHC	4.72%	WDC	6.53%
10.0	CZR	4.23%	GME	5.47%
10.0	AAP	3.47%	CZR	5.13%
10.0	VFC	2.93%	AMC	4.94%
10.0	AMD	2.93%	CCL	4.7%
10.0	PHM	2.74%	KEY	3.91%
10.0	ADBE	2.38%	GNRC	3.74%
10.0	ZTS	2.38%	GS	3.39%
10.0	CYH	2.22%	BALL	3.33%
10.0	BALL	2.06%	AAP	3.13%
10.0	XOM	1.77%	AMD	3.0%
10.0	ISRG	1.77%	WYNN	2.96%
10.0	LVS	1.68%	XOM	2.96%
10.0	BXP	1.48%	PHM	2.77%
10.0	MOS	1.28%	AA	2.64%
10.0	GNRC	1.12%	VFC	2.49%
10.0	WYNN	1.1%	X	2.32%
10.0	EXPE	1.01%	BAC	2.23%
10.0	CCL	0.99%	ZTS	2.12%
10.0	VICI	0.96%	MOS	2.12%
10.0	GILD	0.95%	LVS	1.93%

P90D: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	NVDA	1.37%	NVDA	1.62%
1.0	MOS	1.13%	CYH	1.27%
1.0	LUMN	0.94%	MOS	1.2%
1.0	CCL	0.73%	CCL	0.99%
1.0	LVS	0.7%	LUMN	0.95%
1.0	VST	0.66%	WYNN	0.87%
1.0	WYNN	0.65%	CSTM	0.85%
1.0	CYH	0.65%	X	0.84%
1.0	CSTM	0.57%	ELAN	0.83%
1.0	CLF	0.56%	CZR	0.73%
1.0	AMD	0.56%	CDNS	0.7%
1.0	UAA	0.52%	NFLX	0.7%
1.0	ELAN	0.45%	LVS	0.7%
1.0	BA	0.43%	GE	0.67%
1.0	B	0.42%	VFC	0.67%
1.0	IRM	0.42%	AAP	0.64%
1.0	BHC	0.39%	CLF	0.62%
1.0	CZR	0.38%	VST	0.58%
1.0	GBTC	0.33%	BHC	0.58%
1.0	TDG	0.3%	ORCL	0.53%
1.0	NWL	0.28%	MSTR	0.53%
1.0	GNRC	0.27%	AMAT	0.5%
1.0	VNO	0.26%	WDC	0.49%
1.0	INTU	0.26%	QQQ	0.47%
1.0	CDNS	0.23%	AMD	0.46%

P90D: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	NVDA	13.18%	MOS	15.05%
10.0	MOS	9.84%	NVDA	14.52%
10.0	LUMN	8.23%	CSTM	10.34%
10.0	LVS	6.53%	LUMN	9.94%
10.0	CSTM	5.32%	X	7.54%
10.0	NWL	3.71%	MSTR	7.38%
10.0	CYH	3.66%	WYNN	6.62%
10.0	GT	3.49%	LVS	6.54%
10.0	WYNN	3.12%	CYH	5.63%
10.0	VST	2.95%	NWL	5.09%
10.0	AAP	2.65%	LLY	4.72%
10.0	QQQ	2.56%	IRM	4.14%
10.0	PHM	2.39%	QQQ	3.96%
10.0	HLT	2.27%	CCL	3.79%
10.0	CLF	2.25%	NFLX	3.73%
10.0	LLY	2.18%	ORCL	3.66%
10.0	AMD	1.99%	BA	3.46%
10.0	CDNS	1.77%	AAP	3.41%
10.0	BA	1.66%	AMAT	3.35%
10.0	IRM	1.63%	BHC	3.31%
10.0	COST	1.53%	AMD	3.12%
10.0	BALL	1.42%	BALL	2.91%
10.0	GWW	1.4%	PHM	2.88%
10.0	CZR	1.37%	BIIB	2.88%
10.0	HSBC	1.32%	SPY	2.78%

P90D: 21d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	NVDA	31.85%	MOS	33.84%
21.0	MOS	25.97%	NVDA	29.82%
21.0	LVS	13.29%	LUMN	22.59%
21.0	LUMN	11.83%	LVS	18.75%
21.0	CSTM	10.99%	CYH	18.35%
21.0	NWL	10.48%	CSTM	13.07%
21.0	QQQ	10.09%	AMD	12.97%
21.0	WYNN	9.64%	NWL	12.44%
21.0	BA	8.36%	IRM	11.88%
21.0	AMD	8.05%	AMAT	11.84%
21.0	BIIB	7.9%	VST	11.83%
21.0	VST	6.88%	QQQ	10.87%
21.0	SPY	6.36%	VNO	10.45%
21.0	HLT	5.75%	ON	10.39%
21.0	BALL	4.83%	WYNN	9.97%
21.0	IRM	4.73%	BIIB	9.69%
21.0	AMAT	4.46%	BA	9.18%
21.0	VNO	4.45%	GT	9.04%
21.0	CDNS	4.28%	MSTR	9.02%
21.0	GT	3.96%	TEVA	8.31%
21.0	PHM	3.83%	UAA	7.92%
21.0	MSFT	3.58%	SPY	7.88%
21.0	UNH	3.58%	BHC	6.5%
21.0	AAP	3.57%	CDNS	6.48%
21.0	CYH	3.56%	CCL	6.43%

P365D: 1d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	WRK	1.62%	WRK	2.94%
1.0	LUMN	0.8%	LUMN	0.95%
1.0	CCL	0.39%	CCL	0.41%
1.0	MOS	0.33%	VFC	0.41%
1.0	VST	0.32%	VST	0.36%
1.0	NVDA	0.31%	T	0.35%
1.0	VNO	0.29%	NVDA	0.31%
1.0	BMY	0.23%	AAP	0.29%
1.0	AAP	0.22%	NFLX	0.28%
1.0	T	0.22%	GE	0.28%
1.0	GT	0.22%	MOS	0.27%
1.0	TRGP	0.18%	VNO	0.26%
1.0	MS	0.18%	WYNN	0.25%
1.0	AVGO	0.17%	CYH	0.25%
1.0	TDG	0.17%	AZO	0.25%
1.0	CYH	0.17%	HCA	0.24%
1.0	LVS	0.16%	GBTC	0.24%
1.0	WYNN	0.16%	AVGO	0.22%
1.0	GE	0.15%	BMY	0.22%
1.0	ETRN	0.14%	TRGP	0.22%
1.0	B	0.14%	TSLA	0.21%
1.0	PRGO	0.13%	JAZZ	0.21%
1.0	CLF	0.13%	CAH	0.2%
1.0	COST	0.13%	MS	0.2%
1.0	CAH	0.13%	PRGO	0.2%

P365D: 10d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	LUMN	9.75%	LUMN	12.46%
10.0	NVDA	3.06%	MSTR	4.43%
10.0	GT	2.37%	T	3.13%
10.0	T	2.05%	MOS	2.93%
10.0	COST	1.99%	CCL	2.79%
10.0	VST	1.91%	NVDA	2.55%
10.0	MOS	1.81%	WYNN	2.41%
10.0	WYNN	1.71%	AVGO	2.3%
10.0	AAP	1.63%	VST	2.24%
10.0	CCL	1.6%	GT	1.69%
10.0	LVS	1.55%	TRGP	1.68%
10.0	BMY	1.55%	COST	1.62%
10.0	CYH	1.19%	NFLX	1.53%
10.0	JAZZ	1.18%	GBTC	1.48%
10.0	CAH	1.08%	WDC	1.46%
10.0	CDNS	1.02%	BMY	1.38%
10.0	LLY	0.98%	LVS	1.37%
10.0	LW	0.93%	TDG	1.3%
10.0	AVGO	0.87%	CSTM	1.28%
10.0	CSCO	0.86%	CAH	1.26%
10.0	NFLX	0.81%	AZO	1.25%
10.0	NWL	0.7%	WFC	1.2%
10.0	VNO	0.68%	AAP	1.16%
10.0	CSTM	0.64%	BUD	1.11%
10.0	TDG	0.58%	UAA	1.02%

P365D: 21d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	LUMN	8.39%	LUMN	21.34%
21.0	NVDA	6.51%	MSTR	9.65%
21.0	VST	4.99%	VST	8.6%
21.0	MOS	4.31%	NVDA	6.19%
21.0	WYNN	3.94%	T	5.61%
21.0	T	3.71%	MOS	5.56%
21.0	COST	3.64%	LVS	4.22%
21.0	LVS	3.19%	TRGP	4.01%
21.0	AAP	2.7%	VNO	3.8%
21.0	CCL	2.12%	MS	3.7%
21.0	BMY	1.99%	GT	3.69%
21.0	NWL	1.98%	UAA	3.67%
21.0	GT	1.97%	AVGO	2.9%
21.0	CDNS	1.95%	COST	2.82%
21.0	SBUX	1.9%	WYNN	2.81%
21.0	NFLX	1.87%	CCL	2.64%
21.0	CYH	1.82%	TMUS	2.6%
21.0	MSTR	1.73%	CAH	2.58%
21.0	CAH	1.68%	BUD	2.52%
21.0	LW	1.61%	NFLX	2.35%
21.0	CSCO	1.47%	SBUX	2.27%
21.0	CSTM	1.43%	GBTC	2.27%
21.0	AZO	1.32%	CDNS	2.15%
21.0	HLT	1.31%	BMY	2.02%
21.0	AMC	1.27%	CSCO	2.01%

P365D: 63d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	MSTR	66.59%	MSTR	56.37%
63.0	VST	20.38%	VST	30.1%
63.0	CCL	15.13%	CCL	21.12%
63.0	T	14.31%	LUMN	20.64%
63.0	MOS	13.15%	T	20.63%
63.0	NFLX	11.2%	MS	17.36%
63.0	GT	11.13%	GBTC	16.19%
63.0	GOOGL	9.04%	JPM	12.73%
63.0	LUMN	8.55%	NFLX	12.26%
63.0	GBTC	8.5%	PWR	12.23%
63.0	CSCO	8.07%	MOS	12.02%
63.0	LVS	7.98%	TRGP	9.95%
63.0	NVDA	7.9%	HSBC	9.54%
63.0	MS	7.1%	GT	9.42%
63.0	VNO	6.54%	NVDA	9.07%
63.0	TRGP	6.5%	LVS	8.92%
63.0	NWL	5.67%	CSCO	8.9%
63.0	QQQ	5.52%	NWL	8.51%
63.0	CDNS	4.76%	VNO	8.07%
63.0	COST	4.44%	CAH	7.69%
63.0	AMZN	4.37%	GE	7.04%
63.0	GWW	4.29%	GOOGL	7.02%
63.0	PWR	3.72%	B	6.98%
63.0	MNST	3.6%	WYNN	5.91%
63.0	JPM	3.59%	AVGO	5.58%

P365D: 126d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	VST	43.39%	T	42.44%
126.0	T	34.33%	VST	40.6%
126.0	MSTR	24.18%	CCL	37.72%
126.0	MS	22.32%	GBTC	35.96%
126.0	CCL	22.21%	JPM	28.97%
126.0	NFLX	22.16%	MS	28.66%
126.0	MOS	18.65%	HSBC	25.5%
126.0	GBTC	16.46%	NFLX	24.79%
126.0	GT	16.04%	MSTR	24.78%
126.0	CSCO	15.19%	AZO	20.11%
126.0	TRGP	12.21%	TRGP	19.39%
126.0	BA	9.89%	MOS	18.91%
126.0	HSBC	9.68%	CTLT	17.65%
126.0	JPM	8.85%	CAH	16.99%
126.0	AMZN	8.84%	GT	16.92%
126.0	GLD	8.62%	CSCO	16.2%
126.0	AZO	8.52%	VNO	12.33%
126.0	COST	8.15%	BA	11.71%
126.0	CAH	7.78%	GE	11.37%
126.0	TDG	7.4%	TMUS	9.78%
126.0	LW	7.15%	GS	8.86%
126.0	VNO	6.92%	BMY	8.61%
126.0	X	6.81%	TDG	8.36%
126.0	MNST	6.51%	CVS	7.86%
126.0	BMY	6.35%	GLD	7.78%

Appendix 4: Bottom 25 Ticker Level Differences in VM vs. Sigma 95% and 99% ROLOBC

All TMD: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	IEP	-0.29%	NWL	-0.35%
1.0	MSTR	-0.22%	IEP	-0.31%
1.0	LUMN	-0.2%	LUMN	-0.15%
1.0	NWL	-0.19%	SIVBQ	-0.14%
1.0	CZR	-0.15%	BIIB	-0.14%
1.0	UAA	-0.14%	GNRC	-0.12%
1.0	BIIB	-0.13%	INTC	-0.1%
1.0	GNRC	-0.12%	TEVA	-0.1%
1.0	TEVA	-0.11%	BXP	-0.1%
1.0	LNC	-0.1%	CZR	-0.09%
1.0	META	-0.09%	FSUGY	-0.08%
1.0	BXP	-0.09%	UAA	-0.08%
1.0	GT	-0.07%	META	-0.08%
1.0	NFLX	-0.07%	ZTS	-0.07%
1.0	OXY	-0.06%	BALL	-0.06%
1.0	AAPL	-0.06%	GT	-0.06%
1.0	AA	-0.06%	PEP	-0.06%
1.0	ORCL	-0.05%	KHC	-0.06%
1.0	BA	-0.05%	INTU	-0.06%
1.0	TLT	-0.05%	CTLT	-0.06%
1.0	FSUGY	-0.05%	FIS	-0.05%
1.0	BALL	-0.05%	OXY	-0.05%
1.0	SBUX	-0.04%	VZ	-0.05%
1.0	HD	-0.04%	AAPL	-0.04%
1.0	BHP	-0.04%	BHP	-0.04%

All TMD: 10d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	LUMN	-1.61%	IEP	-2.12%
10.0	IEP	-1.55%	NWL	-1.9%
10.0	CZR	-1.54%	SIVBQ	-1.44%
10.0	MSTR	-1.37%	CLF	-1.31%
10.0	NWL	-1.05%	CZR	-1.29%
10.0	META	-0.78%	CYH	-1.23%
10.0	GNRC	-0.73%	GME	-0.96%
10.0	INTU	-0.73%	GNRC	-0.83%
10.0	BIIB	-0.62%	LUMN	-0.81%
10.0	SIVBQ	-0.56%	INTU	-0.8%
10.0	NFLX	-0.55%	BIIB	-0.69%
10.0	MS	-0.51%	RIO	-0.67%
10.0	ORCL	-0.51%	META	-0.66%
10.0	GOOGL	-0.45%	BHP	-0.61%
10.0	AA	-0.42%	OXY	-0.6%
10.0	FSUGY	-0.4%	VZ	-0.58%
10.0	OXY	-0.39%	FSUGY	-0.57%
10.0	LNC	-0.35%	ETRN	-0.55%
10.0	BXP	-0.35%	HD	-0.53%
10.0	CLF	-0.33%	BXP	-0.52%
10.0	GME	-0.32%	BAC	-0.44%
10.0	TEVA	-0.3%	LNC	-0.43%
10.0	BALL	-0.27%	ORCL	-0.38%
10.0	AAPL	-0.26%	ON	-0.35%
10.0	SLV	-0.25%	ZTS	-0.32%

All TMD: 21d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	CZR	-4.02%	IEP	-3.72%
21.0	IEP	-3.83%	NWL	-3.39%
21.0	LUMN	-3.37%	GME	-3.03%
21.0	GME	-2.06%	CZR	-2.74%
21.0	GNRC	-1.89%	GNRC	-2.46%
21.0	NWL	-1.81%	CLF	-2.33%
21.0	MSTR	-1.73%	SIVBQ	-2.05%
21.0	INTU	-1.6%	INTU	-1.68%
21.0	META	-1.55%	KEY	-1.36%
21.0	CLF	-1.5%	RIO	-1.17%
21.0	FSUGY	-0.97%	BBY	-1.17%
21.0	OXY	-0.88%	BAC	-1.12%
21.0	VZ	-0.82%	META	-1.1%
21.0	CYH	-0.79%	FSUGY	-1.04%
21.0	ADBE	-0.7%	ADBE	-0.92%
21.0	ORCL	-0.67%	BALL	-0.9%
21.0	BAC	-0.63%	HD	-0.9%
21.0	SIVBQ	-0.6%	OXY	-0.88%
21.0	BHP	-0.57%	FITB	-0.84%
21.0	BALL	-0.57%	CYH	-0.84%
21.0	KALU	-0.55%	BXP	-0.78%
21.0	KHC	-0.52%	VZ	-0.78%
21.0	AAPL	-0.49%	BIIB	-0.66%
21.0	RIO	-0.48%	VFC	-0.6%
21.0	HD	-0.42%	BHP	-0.5%

All TMD: 63d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	IEP	-13.13%	SIVBQ	-17.54%
63.0	GNRC	-9.86%	IEP	-14.79%
63.0	NWL	-7.36%	GNRC	-10.91%
63.0	META	-5.94%	NWL	-9.42%
63.0	LUMN	-4.32%	CLF	-8.09%
63.0	GME	-4.1%	BHC	-7.22%
63.0	CZR	-3.59%	CYH	-6.9%
63.0	BALL	-3.27%	UAA	-5.51%
63.0	SIVBQ	-2.85%	GME	-5.44%
63.0	VFC	-2.72%	VFC	-3.87%
63.0	CYH	-2.7%	CVS	-3.81%
63.0	CLF	-2.5%	BALL	-3.77%
63.0	UAA	-2.41%	INTC	-3.58%
63.0	BHP	-2.4%	KEY	-3.45%
63.0	OXY	-2.26%	AA	-3.17%
63.0	ON	-2.2%	BBY	-3.13%
63.0	ADBE	-1.82%	FSUGY	-3.06%
63.0	VZ	-1.72%	ZION	-3.03%
63.0	AA	-1.55%	AAP	-2.93%
63.0	BBY	-1.53%	CZR	-2.47%
63.0	INTU	-1.37%	BHP	-2.45%
63.0	FITB	-1.35%	OXY	-2.32%
63.0	IRM	-1.31%	PRGO	-2.13%
63.0	FSUGY	-1.29%	VZ	-2.09%
63.0	HD	-1.28%	FRA	-1.62%

All TMD: 126d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	IEP	-26.51%	FRCB	-74.45%
126.0	NWL	-22.86%	IEP	-27.39%
126.0	GNRC	-16.56%	SIVBQ	-23.49%
126.0	SIVBQ	-14.35%	NWL	-22.68%
126.0	LUMN	-11.58%	VFC	-17.31%
126.0	VFC	-11.31%	CLF	-16.08%
126.0	FRCB	-7.86%	GNRC	-15.43%
126.0	BALL	-5.66%	INTC	-11.79%
126.0	CLF	-5.34%	BHC	-10.45%
126.0	ON	-4.96%	UAA	-10.01%
126.0	CVS	-4.63%	GME	-8.52%
126.0	GME	-4.51%	BALL	-7.95%
126.0	VZ	-4.33%	CHTR	-7.01%
126.0	IRM	-4.23%	CVS	-6.22%
126.0	CYH	-4.12%	CTLT	-6.01%
126.0	CHTR	-3.91%	KEY	-5.98%
126.0	BHP	-3.82%	MOS	-5.54%
126.0	MOS	-3.78%	AAP	-5.45%
126.0	TEVA	-3.21%	SBNY	-5.31%
126.0	AA	-3.1%	PRGO	-5.29%
126.0	BBY	-3.05%	BHP	-4.49%
126.0	PRGO	-2.63%	AA	-4.32%
126.0	FSUGY	-2.6%	CMA	-3.58%
126.0	GSK	-2.58%	BBY	-3.42%
126.0	KEY	-2.55%	VZ	-3.39%

All TMD: 252d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2022-01-31 through 2025-06-27

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
252.0	FRCB	-115.88%	FRCB	-115.45%
252.0	SIVBQ	-81.22%	SBNY	-56.56%
252.0	IEP	-49.49%	IEP	-55.99%
252.0	NWL	-46.09%	SIVBQ	-55.92%
252.0	GNRC	-26.35%	NWL	-47.52%
252.0	CLF	-20.94%	CLF	-31.29%
252.0	CVS	-18.8%	MOS	-25.91%
252.0	MOS	-14.94%	AAP	-24.77%
252.0	SBNY	-13.3%	GNRC	-20.88%
252.0	AA	-12.96%	VFC	-18.69%
252.0	CZR	-12.37%	BHC	-16.94%
252.0	AAP	-11.68%	GT	-16.8%
252.0	GT	-11.03%	CZR	-15.39%
252.0	KEY	-10.89%	LNC	-14.22%
252.0	VFC	-10.72%	CTLT	-13.37%
252.0	VST	-9.23%	INTC	-12.74%
252.0	BA	-8.62%	CVS	-12.38%
252.0	BHC	-8.56%	KEY	-11.81%
252.0	MSTR	-7.92%	LUMN	-11.21%
252.0	BALL	-7.41%	PRGO	-9.91%
252.0	GME	-7.26%	CSTM	-9.55%
252.0	UAA	-6.56%	UAA	-9.53%
252.0	CMA	-6.31%	FSUGY	-9.25%
252.0	PRGO	-5.63%	OXY	-7.85%
252.0	IRM	-5.53%	KHC	-7.47%

P30D: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	PCG	-1.74%	PCG	-1.63%
1.0	CYH	-1.12%	CYH	-1.1%
1.0	COST	-0.52%	GT	-0.68%
1.0	GT	-0.51%	COST	-0.67%
1.0	TEVA	-0.38%	IEP	-0.65%
1.0	BIIB	-0.36%	BMY	-0.53%
1.0	VST	-0.33%	TSLA	-0.44%
1.0	BMY	-0.33%	BIIB	-0.44%
1.0	ORCL	-0.32%	LW	-0.44%
1.0	INTC	-0.3%	ACGL	-0.41%
1.0	KHC	-0.3%	TEVA	-0.39%
1.0	LLY	-0.24%	VST	-0.38%
1.0	LW	-0.23%	KHC	-0.32%
1.0	SLV	-0.2%	BHP	-0.31%
1.0	NEM	-0.19%	GSK	-0.3%
1.0	ON	-0.18%	TMUS	-0.2%
1.0	QQQ	-0.17%	INTC	-0.18%
1.0	MSTR	-0.16%	VZ	-0.17%
1.0	PRGO	-0.15%	JAZZ	-0.15%
1.0	TXN	-0.14%	RIO	-0.15%
1.0	ACGL	-0.14%	BUD	-0.15%
1.0	NAVI	-0.14%	AVGO	-0.14%
1.0	GSK	-0.13%	NAVI	-0.13%
1.0	PWR	-0.13%	MOS	-0.13%
1.0	TMUS	-0.13%	GLD	-0.13%

P30D: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-06-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	BIIB	-7.58%	PCG	-13.78%
10.0	KHC	-3.8%	BIIB	-8.41%
10.0	PCG	-3.8%	BHP	-8.02%
10.0	GT	-3.77%	VNO	-5.88%
10.0	NEM	-3.76%	GT	-5.28%
10.0	COST	-3.54%	COST	-4.19%
10.0	BHP	-2.97%	CYH	-4.03%
10.0	MU	-2.96%	MU	-3.62%
10.0	INTC	-2.83%	KHC	-3.45%
10.0	TMUS	-2.79%	TSLA	-3.16%
10.0	VST	-2.69%	NEM	-2.63%
10.0	TSLA	-2.39%	VST	-2.63%
10.0	AVGO	-2.18%	INTC	-2.58%
10.0	BMY	-2.1%	FSUGY	-2.56%
10.0	FSUGY	-1.88%	CLF	-2.4%
10.0	VNO	-1.84%	TEVA	-2.35%
10.0	MSFT	-1.75%	AVGO	-2.2%
10.0	CVS	-1.74%	ACGL	-2.01%
10.0	TXN	-1.72%	CNC	-2.0%
10.0	AZO	-1.64%	TMUS	-1.84%
10.0	JPM	-1.23%	ADBE	-1.74%
10.0	ACGL	-1.18%	BA	-1.36%
10.0	TEVA	-1.15%	MSFT	-1.32%
10.0	BA	-1.08%	AZO	-1.3%
10.0	SBUX	-1.01%	BMY	-1.23%

P90D: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	UNH	-0.58%	KHC	-0.57%
1.0	LLY	-0.57%	UNH	-0.54%
1.0	LNC	-0.53%	PCG	-0.42%
1.0	KHC	-0.52%	AMZN	-0.39%
1.0	MSTR	-0.47%	PEP	-0.36%
1.0	PCG	-0.46%	TEVA	-0.32%
1.0	TEVA	-0.36%	IEP	-0.3%
1.0	AA	-0.31%	VZ	-0.29%
1.0	MU	-0.27%	LNC	-0.27%
1.0	AMC	-0.26%	AMC	-0.26%
1.0	ON	-0.26%	LLY	-0.25%
1.0	T	-0.24%	AA	-0.24%
1.0	CMCSA	-0.21%	MSI	-0.19%
1.0	ORCL	-0.2%	CPRT	-0.17%
1.0	GME	-0.2%	BMY	-0.17%
1.0	PEP	-0.19%	MU	-0.16%
1.0	FIS	-0.18%	AMGN	-0.16%
1.0	NEM	-0.17%	SNY	-0.15%
1.0	AZN	-0.17%	GME	-0.13%
1.0	TMUS	-0.17%	BUD	-0.13%
1.0	MSI	-0.16%	POST	-0.13%
1.0	BMY	-0.16%	OXY	-0.12%
1.0	AMZN	-0.16%	JAZZ	-0.12%
1.0	TXN	-0.15%	AZN	-0.12%
1.0	SLV	-0.14%	TMUS	-0.12%

P90D: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	WDC	-4.87%	TSLA	-4.21%
10.0	MSTR	-3.81%	PCG	-3.89%
10.0	MU	-3.76%	KHC	-2.92%
10.0	AVGO	-3.63%	KALU	-2.56%
10.0	TSLA	-3.56%	MU	-2.15%
10.0	KALU	-3.2%	PEP	-1.89%
10.0	ON	-2.41%	CVS	-1.86%
10.0	TXN	-1.98%	AMC	-1.6%
10.0	KHC	-1.9%	TXN	-1.36%
10.0	META	-1.63%	UNH	-1.31%
10.0	AMC	-1.54%	GME	-1.2%
10.0	ELAN	-1.41%	META	-1.19%
10.0	CHTR	-1.35%	AVGO	-1.07%
10.0	NEM	-1.33%	NEM	-0.97%
10.0	KEY	-1.32%	CLF	-0.86%
10.0	AMZN	-1.31%	INTC	-0.78%
10.0	SLV	-1.18%	BBY	-0.78%
10.0	TMUS	-0.98%	CPRT	-0.73%
10.0	TEVA	-0.91%	CNC	-0.72%
10.0	HCA	-0.87%	TMUS	-0.7%
10.0	SBUX	-0.81%	SLV	-0.62%
10.0	GE	-0.78%	HON	-0.61%
10.0	INTC	-0.76%	QCOM	-0.56%
10.0	HON	-0.74%	ORLY	-0.53%
10.0	PEP	-0.74%	TRGP	-0.53%

P90D: 21d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	WDC	-11.21%	PCG	-11.2%
21.0	MU	-9.89%	MU	-8.29%
21.0	AVGO	-9.77%	AMC	-6.26%
21.0	KALU	-7.11%	GME	-5.19%
21.0	AMC	-6.27%	TXN	-5.15%
21.0	TXN	-5.16%	CVS	-4.59%
21.0	TSLA	-4.58%	AVGO	-4.32%
21.0	ELAN	-3.69%	KHC	-4.16%
21.0	MSTR	-3.69%	TSLA	-3.96%
21.0	CHTR	-3.1%	PEP	-3.25%
21.0	META	-3.02%	KALU	-2.39%
21.0	KEY	-2.89%	CHTR	-2.38%
21.0	GE	-2.87%	B	-2.24%
21.0	KHC	-2.76%	KEY	-2.18%
21.0	SLV	-2.25%	ZTS	-2.13%
21.0	HON	-2.12%	WFC	-1.98%
21.0	GME	-1.97%	HON	-1.68%
21.0	BUD	-1.88%	TMUS	-1.61%
21.0	NEM	-1.85%	WDC	-1.52%
21.0	WFC	-1.83%	SLV	-1.21%
21.0	B	-1.82%	TDG	-0.95%
21.0	SBUX	-1.78%	NEM	-0.93%
21.0	PEP	-1.77%	UNH	-0.92%
21.0	BXP	-1.69%	GILD	-0.88%
21.0	ZTS	-1.67%	INTC	-0.69%

P365D: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	MSTR	-0.51%	IEP	-0.46%
1.0	IEP	-0.42%	NWL	-0.39%
1.0	BIIB	-0.4%	BIIB	-0.38%
1.0	AMAT	-0.25%	AMAT	-0.34%
1.0	LNC	-0.22%	FSUGY	-0.22%
1.0	NWL	-0.21%	OXY	-0.2%
1.0	TEVA	-0.2%	AMZN	-0.2%
1.0	UAA	-0.19%	MRK	-0.19%
1.0	AMZN	-0.18%	MSTR	-0.16%
1.0	BXP	-0.17%	BXP	-0.15%
1.0	PCG	-0.16%	TEVA	-0.15%
1.0	PWR	-0.15%	ADBE	-0.15%
1.0	OXY	-0.14%	KHC	-0.14%
1.0	FSUGY	-0.14%	BHP	-0.14%
1.0	LEN	-0.13%	LEN	-0.14%
1.0	BHP	-0.12%	PEP	-0.13%
1.0	ON	-0.11%	INTC	-0.13%
1.0	ORCL	-0.11%	AMC	-0.13%
1.0	BHC	-0.11%	MU	-0.11%
1.0	KHC	-0.1%	GME	-0.11%
1.0	RIO	-0.09%	AMD	-0.1%
1.0	UNH	-0.09%	LNC	-0.1%
1.0	LLY	-0.08%	CSTM	-0.08%
1.0	AZN	-0.08%	RIO	-0.08%
1.0	GME	-0.08%	UNH	-0.08%

P365D: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	IEP	-3.19%	IEP	-3.86%
10.0	BIIB	-2.18%	AMAT	-2.65%
10.0	AMAT	-2.03%	BIIB	-2.25%
10.0	MU	-1.39%	INTC	-1.8%
10.0	INTC	-1.28%	OXY	-1.72%
10.0	LNC	-1.19%	ON	-1.64%
10.0	BXP	-0.95%	MU	-1.51%
10.0	FSUGY	-0.86%	CLF	-1.5%
10.0	ON	-0.8%	TSLA	-1.5%
10.0	FIS	-0.79%	RIO	-1.37%
10.0	OXY	-0.76%	BHP	-1.35%
10.0	AMD	-0.71%	CNC	-1.2%
10.0	BHC	-0.68%	FSUGY	-1.18%
10.0	TSLA	-0.67%	BXP	-1.16%
10.0	META	-0.66%	AMC	-1.15%
10.0	ORCL	-0.64%	LNC	-1.1%
10.0	KHC	-0.63%	PCG	-1.06%
10.0	UAA	-0.6%	CYH	-0.92%
10.0	RIO	-0.56%	PRGO	-0.9%
10.0	AMZN	-0.56%	CDNS	-0.85%
10.0	X	-0.56%	BHC	-0.82%
10.0	GOOGL	-0.52%	KHC	-0.81%
10.0	LEN	-0.52%	QCOM	-0.8%
10.0	PWR	-0.5%	GME	-0.73%
10.0	GME	-0.5%	AMD	-0.7%

P365D: 21d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	IEP	-8.23%	IEP	-8.96%
21.0	INTC	-3.46%	OXY	-4.92%
21.0	MU	-3.22%	INTC	-3.63%
21.0	BIIB	-3.18%	FSUGY	-3.6%
21.0	AMAT	-2.94%	BIIB	-3.38%
21.0	OXY	-2.26%	MU	-3.13%
21.0	BHC	-1.88%	AMAT	-2.86%
21.0	ON	-1.88%	BBY	-2.57%
21.0	LNC	-1.76%	ON	-2.48%
21.0	GME	-1.59%	PCG	-2.41%
21.0	PWR	-1.56%	GME	-2.25%
21.0	LEN	-1.47%	TSLA	-2.15%
21.0	BHP	-1.38%	LNC	-2.0%
21.0	CMA	-1.35%	LEN	-1.96%
21.0	META	-1.33%	BHC	-1.85%
21.0	ADBE	-1.31%	BHP	-1.77%
21.0	FSUGY	-1.23%	MRK	-1.76%
21.0	DHI	-1.16%	EXPE	-1.7%
21.0	WDC	-1.14%	AMD	-1.68%
21.0	KHC	-1.1%	CLF	-1.58%
21.0	ORCL	-1.08%	UNH	-1.53%
21.0	RIO	-1.07%	BAC	-1.51%
21.0	CHTR	-1.04%	QCOM	-1.49%
21.0	AMD	-0.99%	ADBE	-1.32%
21.0	TSLA	-0.93%	ORCL	-1.3%

P365D: 63d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	IEP	-26.31%	IEP	-24.85%
63.0	OXY	-12.3%	AMD	-17.71%
63.0	ON	-12.01%	OXY	-14.33%
63.0	AMD	-10.63%	ON	-11.93%
63.0	BIIB	-9.12%	ADBE	-11.36%
63.0	AMAT	-8.78%	CYH	-11.29%
63.0	PCG	-7.54%	TEVA	-8.7%
63.0	ADBE	-7.36%	BHP	-8.34%
63.0	GME	-6.66%	UNH	-7.78%
63.0	BHP	-4.84%	AMAT	-7.75%
63.0	VFC	-4.54%	PCG	-7.03%
63.0	DHI	-4.49%	WDC	-7.01%
63.0	INTC	-4.48%	INTC	-6.79%
63.0	ZION	-4.47%	VFC	-6.75%
63.0	LEN	-4.46%	BIIB	-6.63%
63.0	CSTM	-3.96%	FIS	-6.27%
63.0	BBY	-3.9%	FSUGY	-6.07%
63.0	PHM	-3.87%	CZR	-5.97%
63.0	UNH	-3.69%	MRK	-5.14%
63.0	EXPE	-3.68%	GME	-4.81%
63.0	MRK	-3.3%	AAP	-4.58%
63.0	FSUGY	-3.27%	AMC	-4.36%
63.0	CZR	-3.15%	CLF	-4.26%
63.0	CYH	-2.88%	CSTM	-4.24%
63.0	MSI	-2.63%	DHI	-4.19%

P365D: 126d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model ROLOBC exceeds Sigma ROLOBC for the given ticker across all model dates for which actual results for the stated horizon are known (periods for all horizons > 1d overlap).

Period examined: All model dates from 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	IEP	-47.61%	IEP	-45.06%
126.0	ON	-42.94%	ON	-31.89%
126.0	PCG	-23.75%	AMD	-29.51%
126.0	ADBE	-22.9%	AMC	-29.17%
126.0	AMD	-22.58%	CYH	-28.5%
126.0	UNH	-21.53%	VFC	-27.76%
126.0	NWL	-16.82%	PCG	-27.43%
126.0	BHP	-15.0%	ADBE	-24.32%
126.0	WDC	-14.97%	UNH	-24.11%
126.0	VFC	-13.03%	IRM	-22.31%
126.0	CLF	-12.46%	BHP	-17.9%
126.0	OXY	-12.38%	OXY	-17.14%
126.0	FSUGY	-12.09%	DHI	-16.88%
126.0	ELAN	-11.23%	NWL	-16.57%
126.0	BBY	-10.91%	UAA	-16.56%
126.0	AMAT	-10.83%	CLF	-15.86%
126.0	PHM	-10.6%	BALL	-15.4%
126.0	DHI	-9.86%	WDC	-14.48%
126.0	MRK	-9.57%	CSTM	-14.34%
126.0	FITB	-9.57%	FSUGY	-14.33%
126.0	CSTM	-9.53%	BIIB	-13.18%
126.0	IRM	-9.33%	FITB	-12.44%
126.0	BIIB	-9.24%	BBY	-12.1%
126.0	CZR	-8.72%	BHC	-11.09%
126.0	BHC	-8.06%	ELAN	-10.97%

Appendix 5: Kupiec and Christoferson Tests for Sigma

The Kupiec Proportion of Failures test statistic (listed as OaR_kStat in the table below), and its probability (OaR_pValK) are used to test the null hypothesis that the OaR model breakage is consistent with expectations. The test statistic is calculated by comparing the number of OaR breaks experienced to the expected number of breaks given the total number of observations and the specified probability level. Breakage was measured at the individual ticker-model date level. The probabilty of the Kupiec statistic occuring is obtained from the chi-squared distribution. The lower the statitic, the higher the p-Value, and the more likely that Sigma's OaR breakage is consistent with expectations.

The Christoferson OaR Violation Indepence test statistic (listed as OaR_chrStat in the table below) and its probabilty (OaR_pValChr) are used to test the null hypothesis that the OaR model violations are independent. The test statistic focuses on consecutive breakages over time. We measure breakage at the portfolio level, with portfolio breakage for a given period defined as equally weighted ticker level breakage for that period being beyond expecataion given the specified probability level. The probabilty of the Christoferson statistic occuring is obtained from the chi-squared distribution. The lower the statitic, the higher the p-Value, and the more likely that Sigma OaR breakage is independent.

Kupiec and Christoferson results for the Vector Model can be found in the Report Card section.

Period examined: 2022-01-31 through 2025-06-27. Note that for horizon periods greater than 1d we exclude enough model dates to assure no overlap between observation periods.

Model	Pctile	Horizon	OaR_kStat	OaR_pValK	OaR_chrStat	OaR_pValChr
Sigma	95	1	257.61	0	6.42	0.01
Sigma	95	10	6.37	0.01	2.7	0.1
Sigma	95	21	10.05	0	0.18	0.68
Sigma	95	63	6.86	0.01	0.75	0.39
Sigma	95	126	0.03	0.87	-0	1
Sigma	95	252	11.36	0	nan	0
Sigma	99	1	182.87	0	9.96	0
Sigma	99	10	24.95	0	0.66	0.42
Sigma	99	21	19.31	0	0.38	0.54
Sigma	99	63	19.28	0	nan	0
Sigma	99	126	8.99	0	nan	0
Sigma	99	252	23.94	0	nan	0