VecViz Opportunity At Risk (OaR) Performance Report

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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.

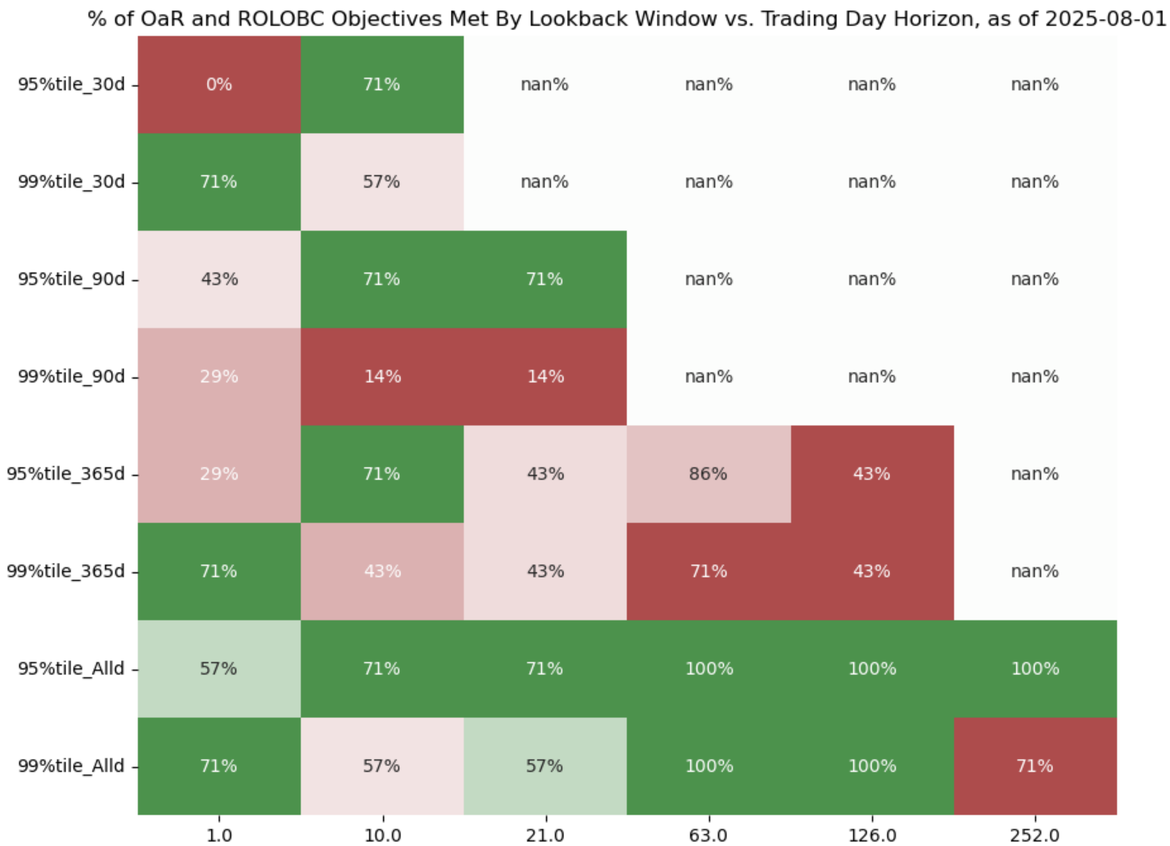
8) Note that OaR for both the Vector Model and Sigma as presented in this report assumes that prices are floored at $0.01. Since the coverage universe for this report includes only listed equities, that assumption is likely appropriate. However, if the Vector Model were applied to commodities or perhaps 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 2025-07-31 while 365D /90D/ 30D include the 365/90/30 days ended 2025-07-31, 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 2025-07-31. 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	164.35	0	1.53	0.22
Vector	95	10	13.93	0	3.61	0.06
Vector	95	21	19.45	0	0.01	0.93
Vector	95	63	0.96	0.33	0.29	0.59
Vector	95	126	9.58	0	nan	0
Vector	95	252	0.05	0.83	nan	0
Vector	99	1	10.66	0	0.86	0.35
Vector	99	10	21.62	0	3.26	0.07
Vector	99	21	8.21	0	5.15	0.02
Vector	99	63	0.96	0.33	0.93	0.33
Vector	99	126	1.27	0.26	0.6	0.44
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 2025-07-31.

OaR and ROLOBC Criteria	Average Score(%)
1. Closer to Target OaR Breakage Than Sigma	59.38
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	78.12
3. Less Volatile OaR Breakage Across Tickers Than Sigma	34.38
4. Higher ROLOBC Than Sigma	87.5
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	46.88
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	59.38
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	59.38
Overall Comparison to Sigma Average	60.71
Kupiec Test of VaR Proximity to Target	41.6667
Christoferson Test of OaR Date Independence	66.6667

OaR and ROLOBC Criteria By Fwd Hzn	1D	10D	21D	63D	126D	252D
1. Closer to Target OaR Breakage Than Sigma	62.5	50	16.67	100	100	50
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	87.5	50	66.67	100	100	100
3. Less Volatile OaR Breakage Across Tickers Than Sigma	0	0	16.67	100	100	100
4. Higher ROLOBC Than Sigma	75	100	100	100	50	100
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	12.5	62.5	50	75	50	50
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	37.5	62.5	50	100	50	100
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	50	75	50	50	50	100
TotalScore	46.43	57.14	50	89.29	71.43	85.71

OaR and ROLOBC Criteria Across Lookback Window	30D	90D	365D	AllD
1. Closer to Target OaR Breakage Than Sigma	50	50	60	66.67
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	25	33.33	100	100
3. Less Volatile OaR Breakage Across Tickers Than Sigma	0	0	50	50
4. Higher ROLOBC Than Sigma	50	100	80	100
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	75	33.33	30	58.33
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	75	33.33	40	83.33

OaR and ROLOBC Criteria Across Lookback Window	30D	90D	365D	AllD
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	75	33.33	20	100
TotalScore	50	40.48	54.29	79.76

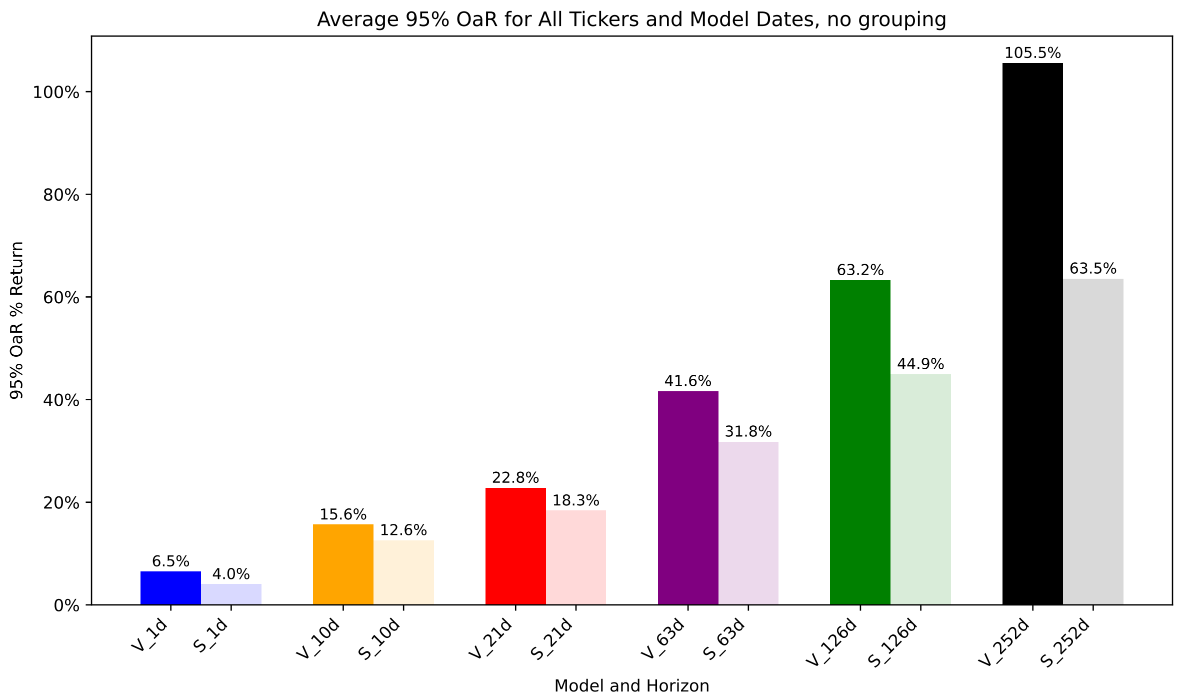
95% Opportunity At Risk (OaR)

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.

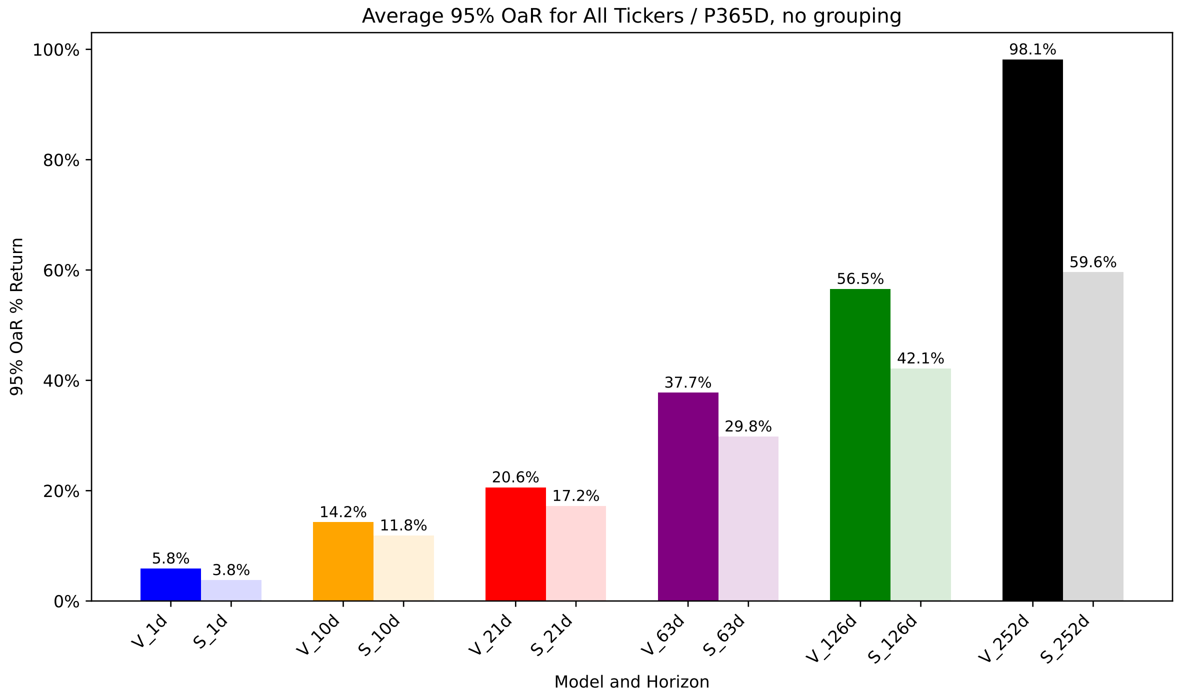
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-07-31



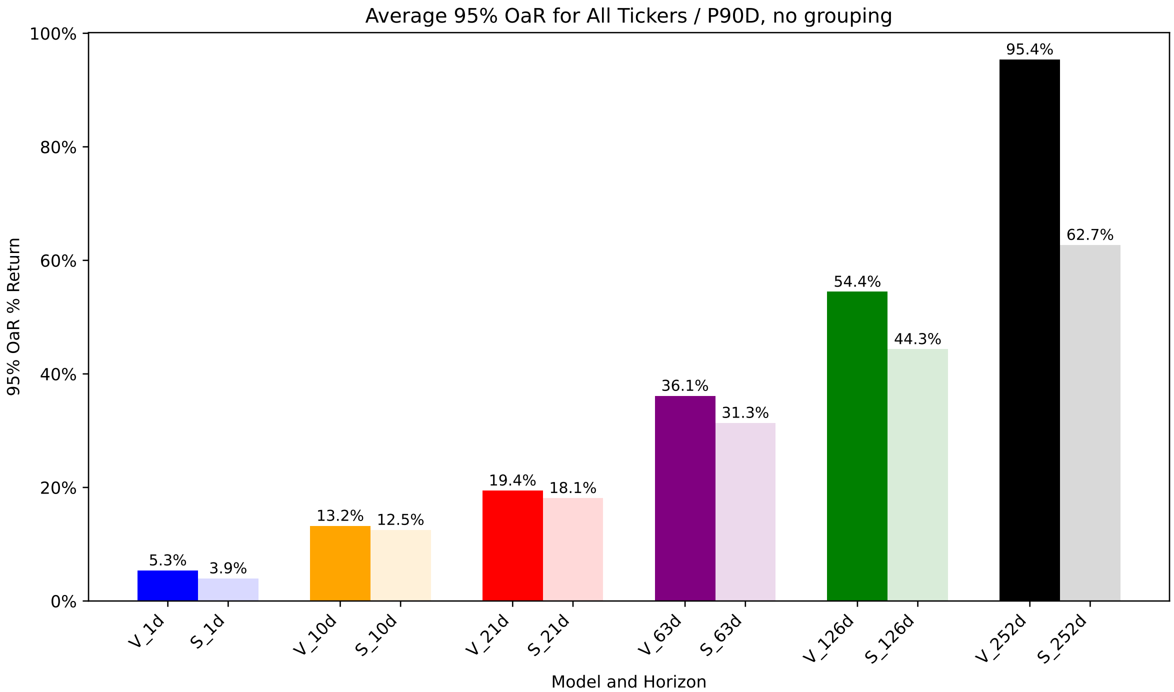
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2025-07-31 through 2024-08-02



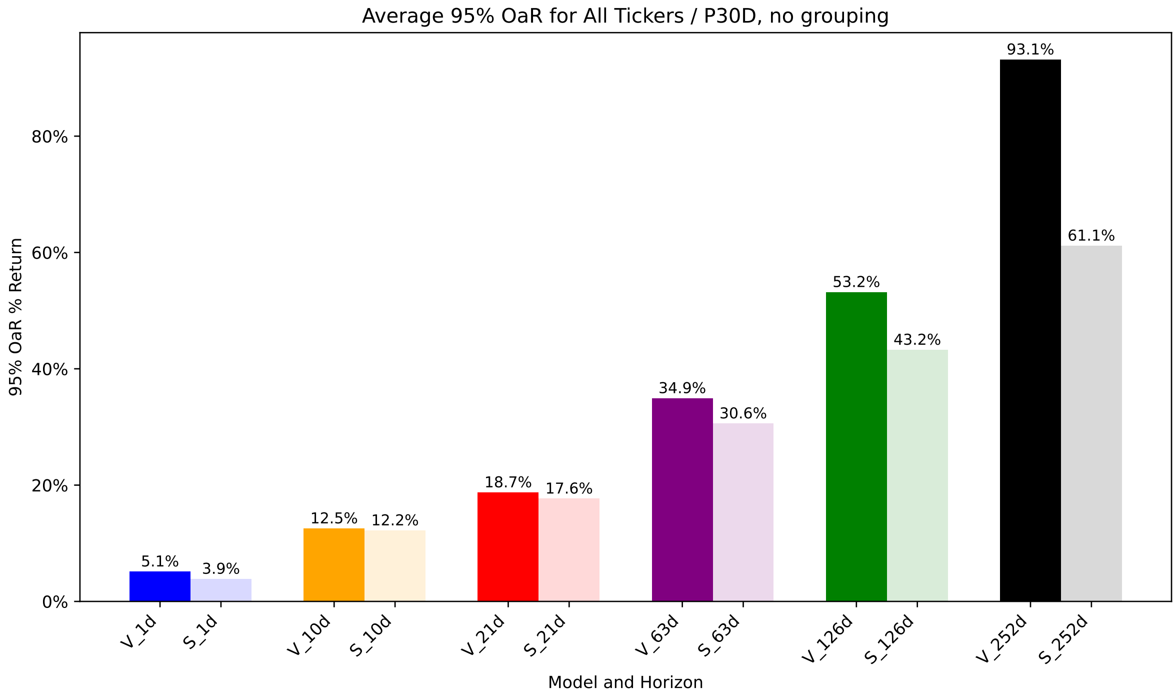
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-07-31 through 2025-05-05



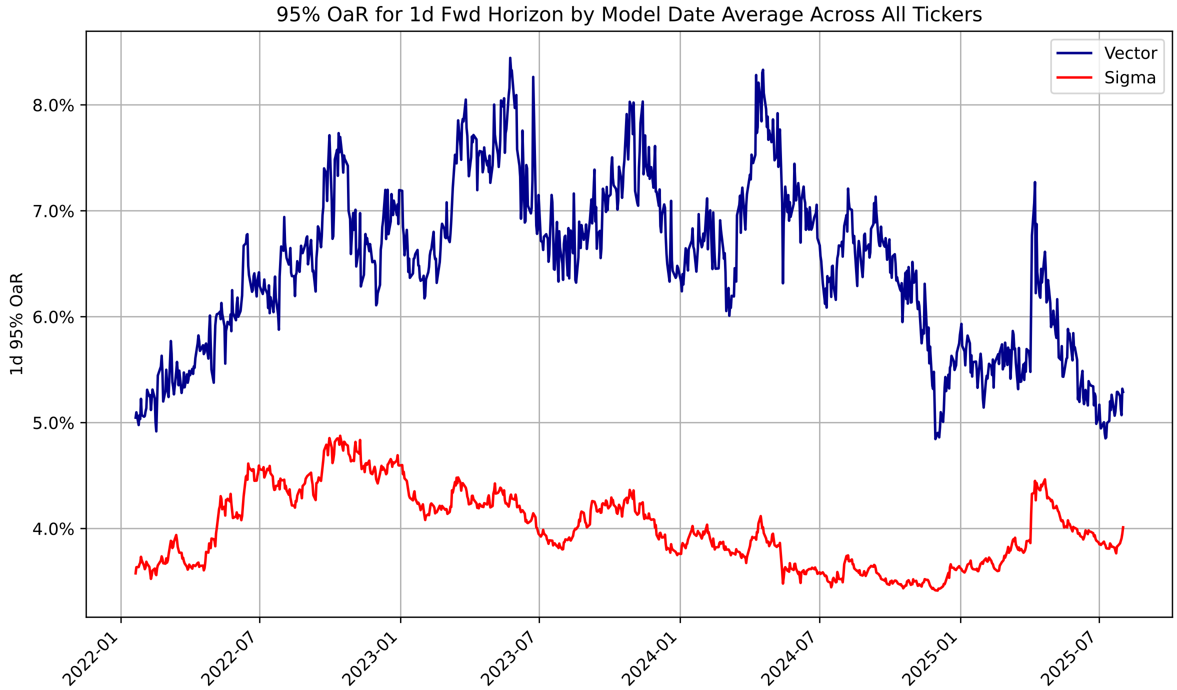
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-07-31 through 2025-07-03

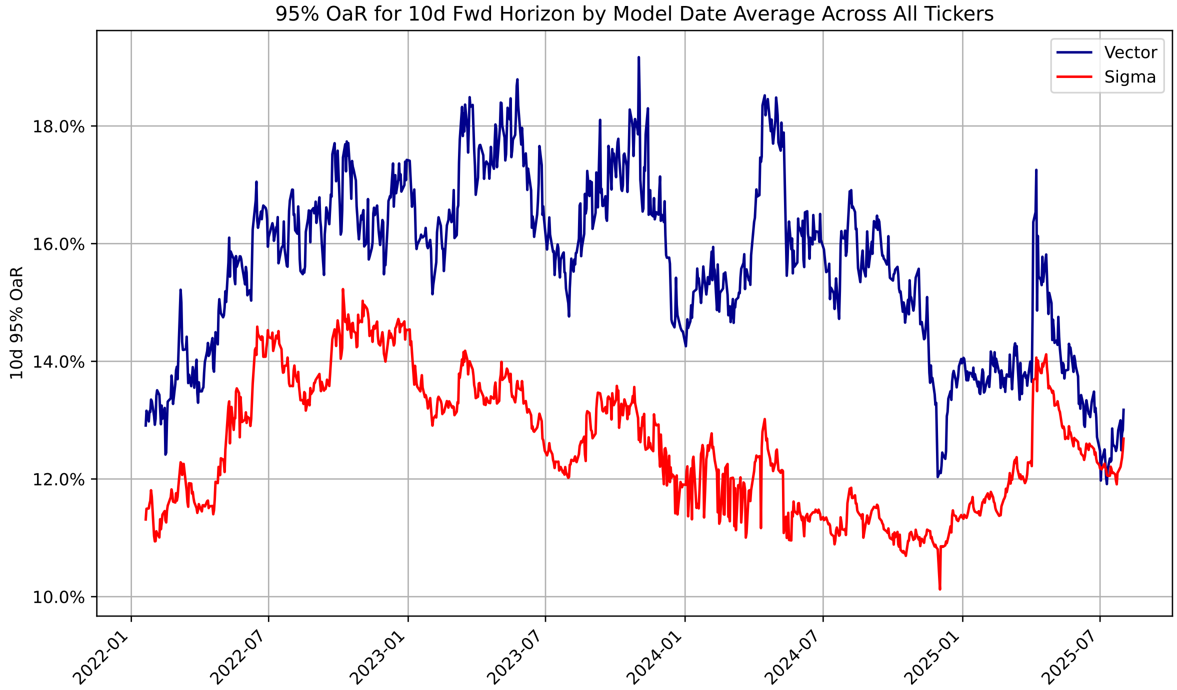


Daily Levels

1d Horizon

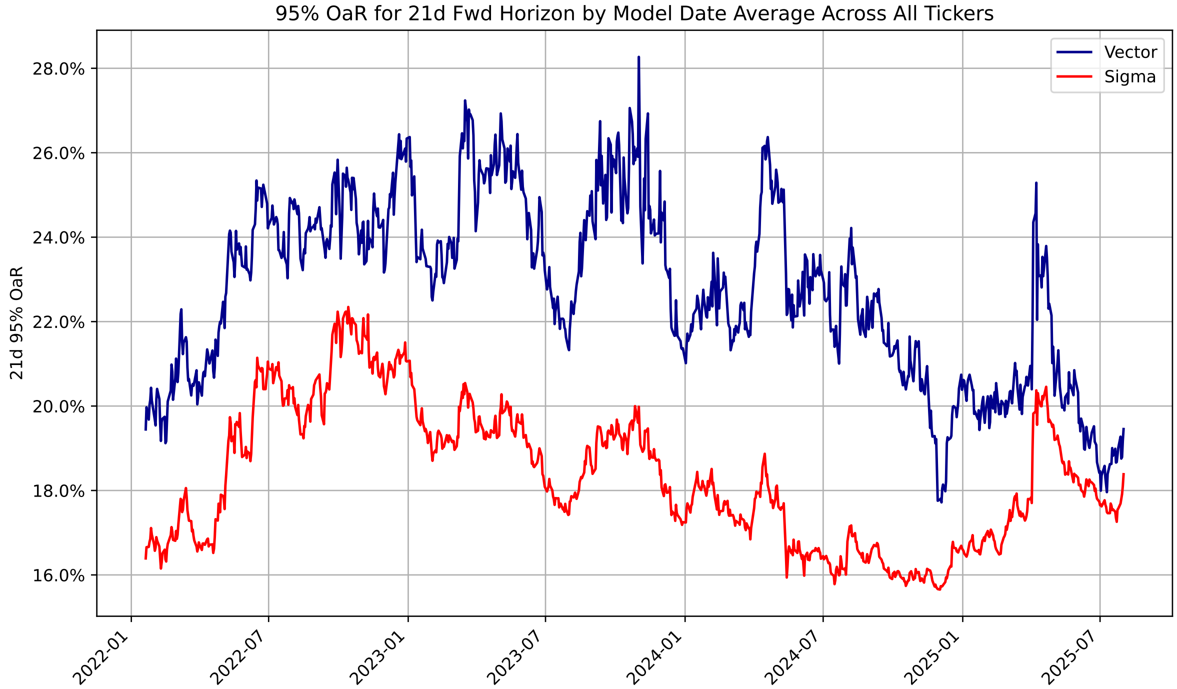


10d Horizon

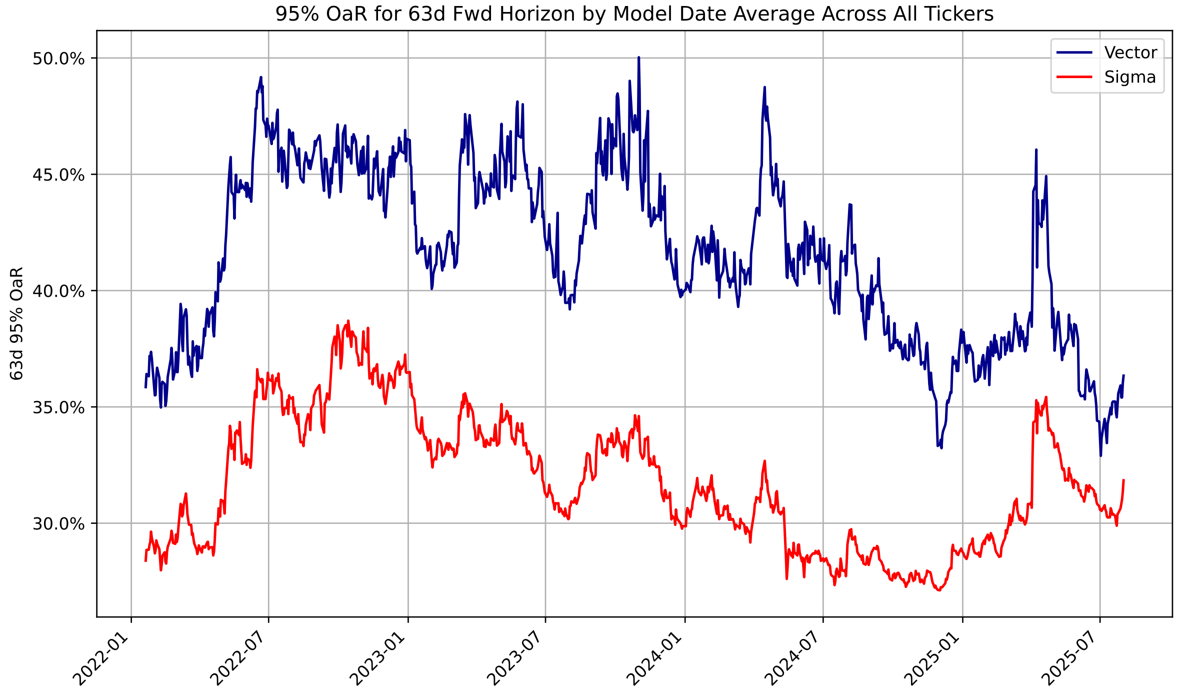


95% OaR for 10d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
10d 95% OaR
18.0%
16.0%
14.0%
12.0%
10.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

21d Horizon

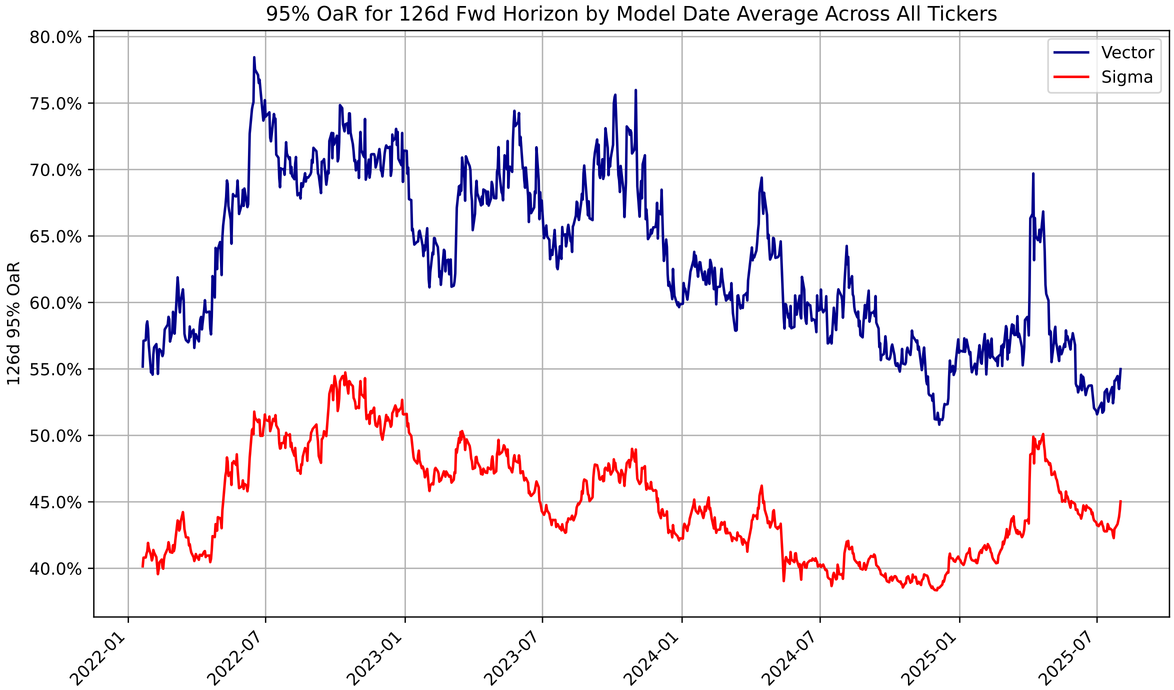

95% OaR for 21d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
21d 95% OaR
28.0%
26.0%
24.0%
22.0%
20.0%
18.0%
16.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

63d Horizon

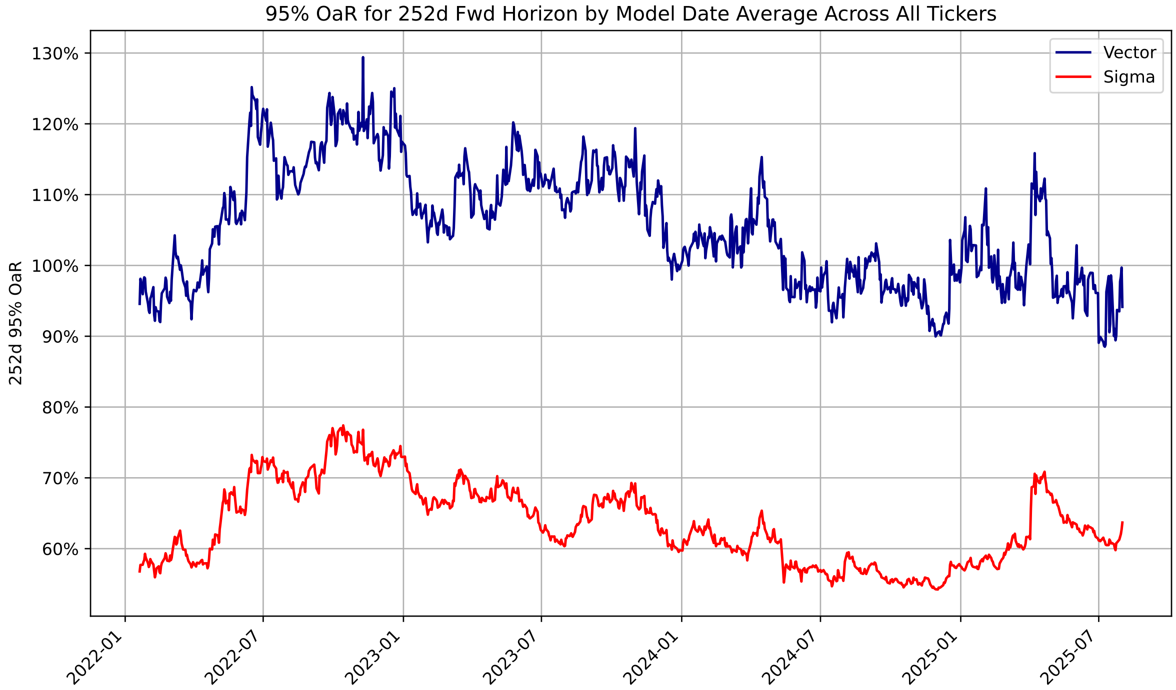


95% OaR for 63d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
63d 95% OaR
50.0%
45.0%
40.0%
35.0%
30.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

126d Horizon



252d Horizon



Performance Summary

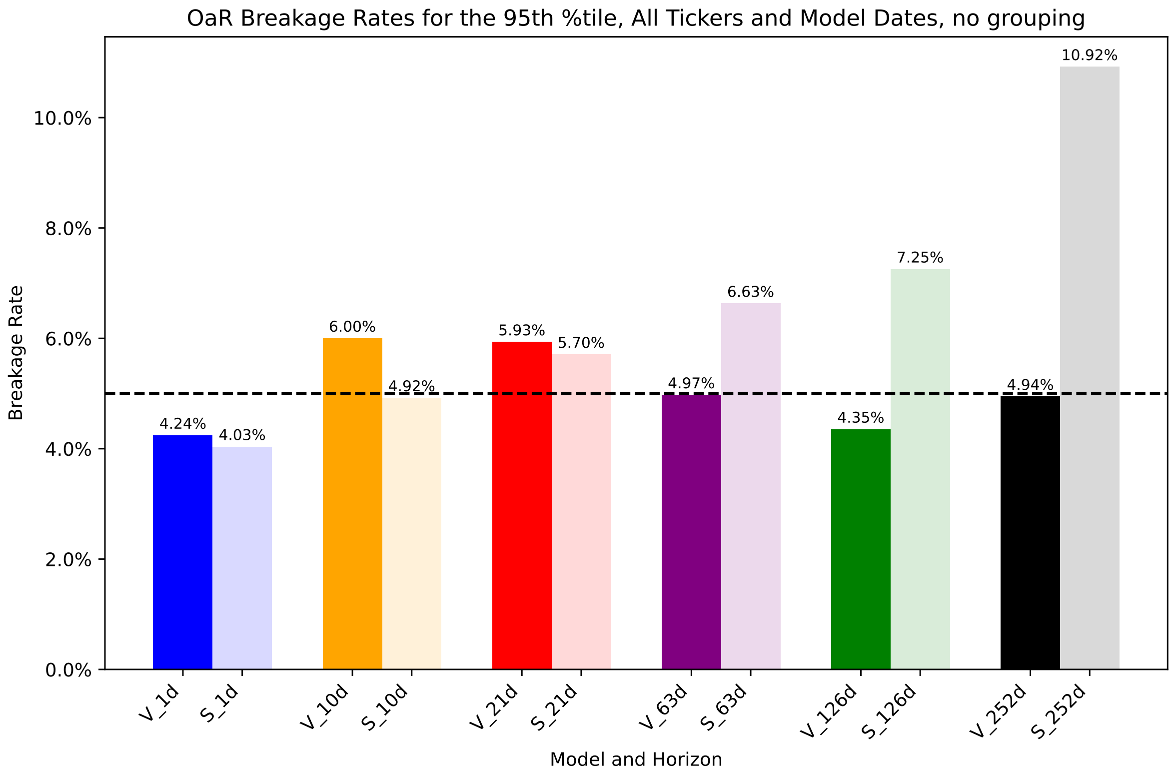
Here we compare the performance of 95% OaR estimates generated by the Vector Model ("V", presented with dark shading) with those generated by Sigma ("S", presented with light shading). This comparison is made on the basis of breakage rates and Return on Long OaR based Capital (ROLOBC), presenting the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

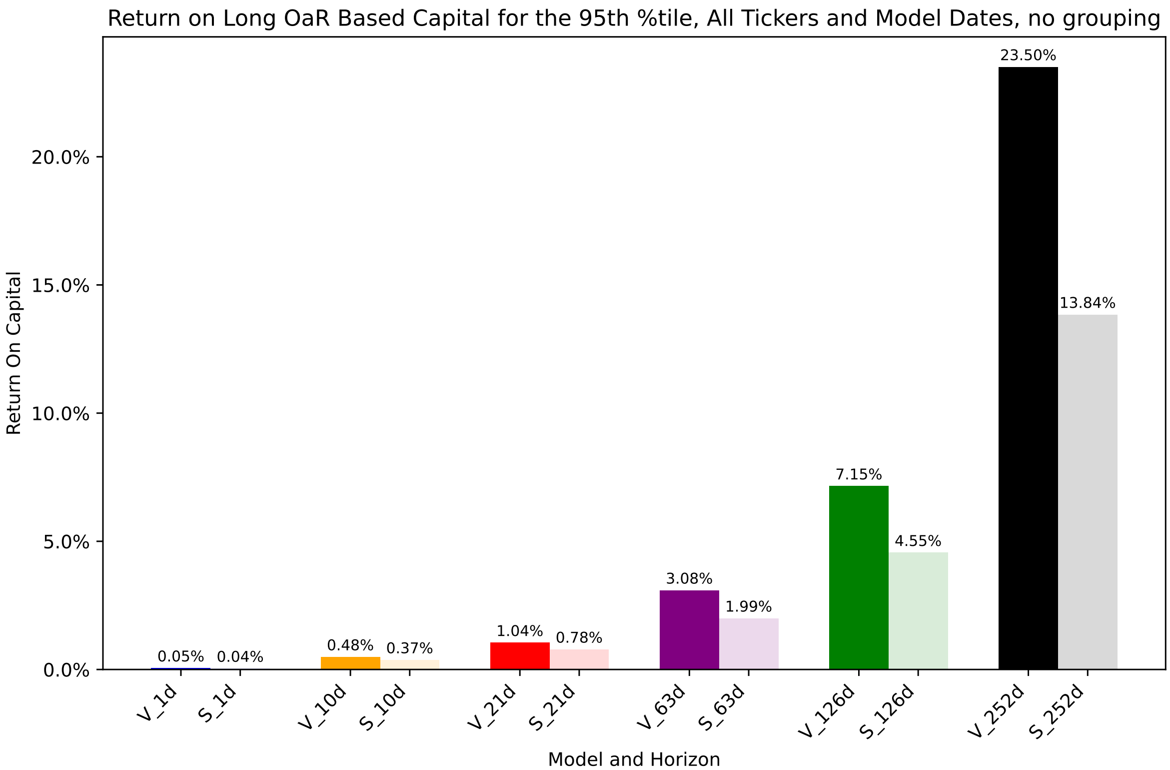
ROLOBC comparisons are made on the basis of outright ROLOBC and the alpha of Vector Model ROLOBC to underlying ticker returns (the proxy for Sigma ROLOBC). As discussed in the Introduction, ROLOBC for Sigma is presumed to be the return of the underlying ticker, and for the Vector Model it is based on 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 2025-07-31





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

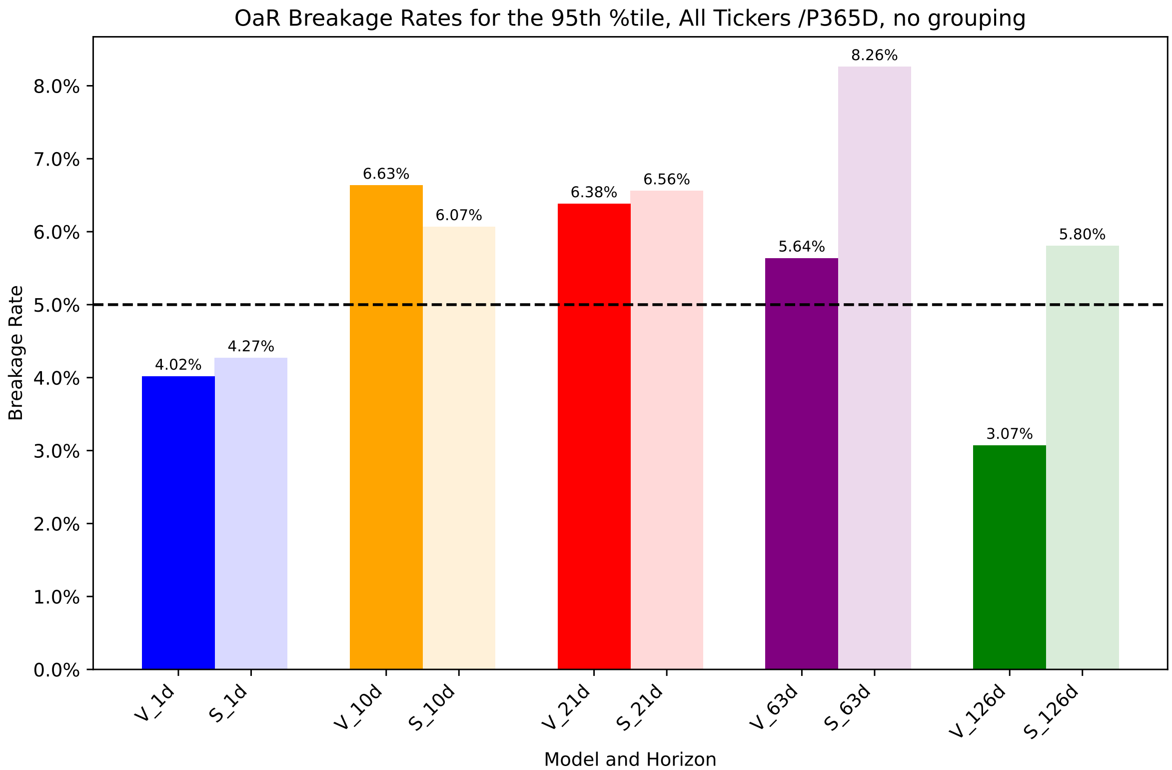
	1d	10d	21d	63d	126d	252d
intercept	-0.00%	0.04%	0.09%	0.37%	0.66%	2.50%
intercept_p_value	81.36%	0.59%	0.00%	0.00%	0.00%	0.00%
slope	145.50%	120.12%	121.97%	136.26%	142.48%	151.72%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

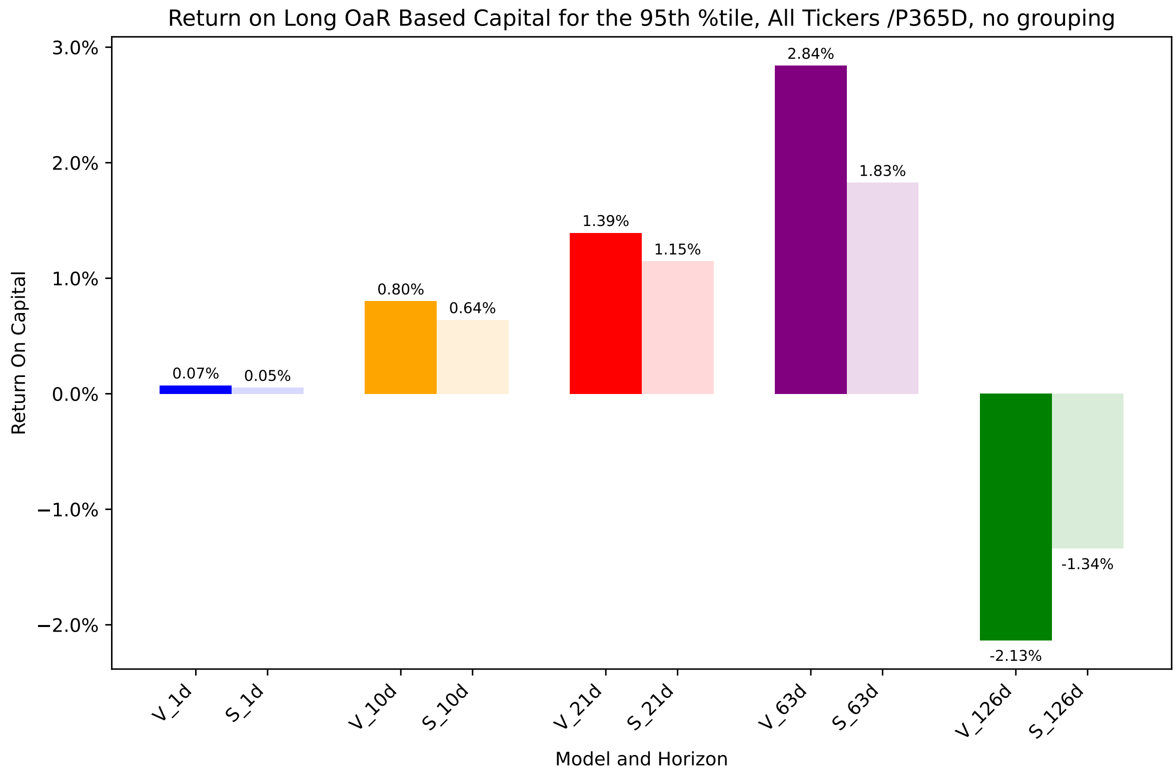
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

	1d	10d	21d	63d	126d	252d
intercept	-0.03%	-0.14%	-0.40%	-1.61%	-3.41%	-5.00%
intercept_p_value	0.02%	3.49%	0.58%	0.07%	0.01%	0.33%
slope	162.00%	147.06%	163.13%	174.87%	174.84%	162.60%
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 2025-07-31 through 2024-08-02





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

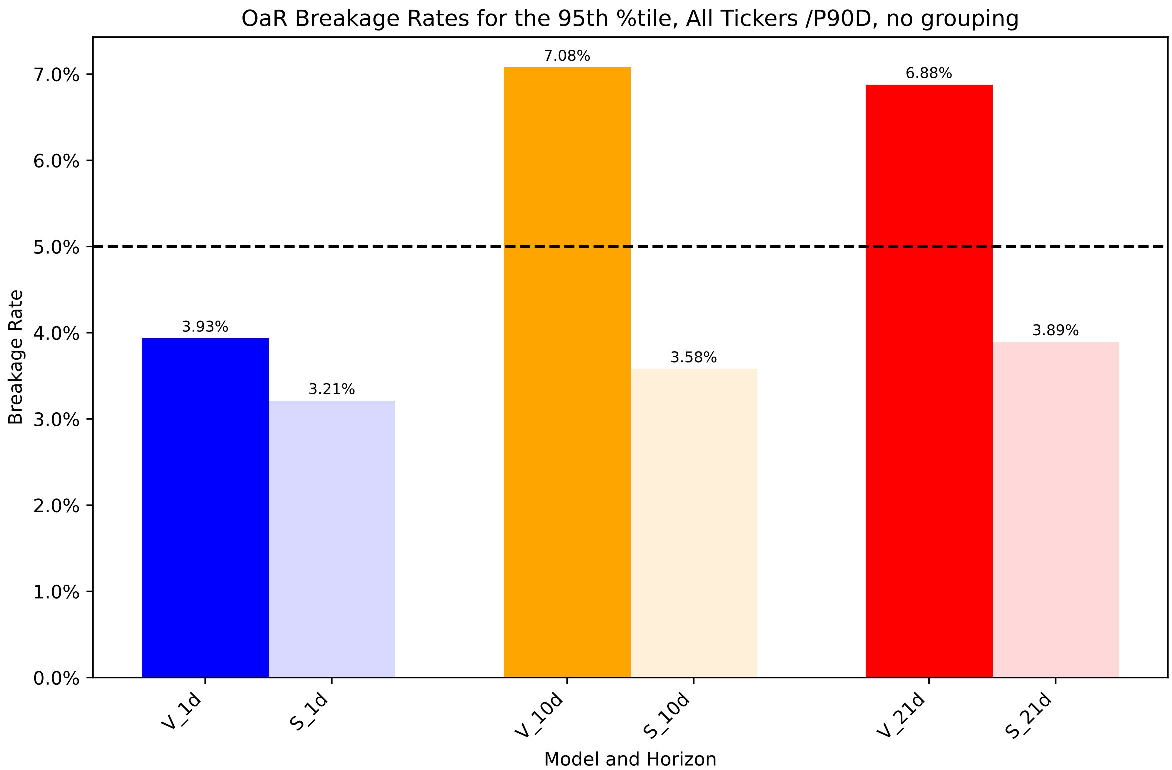
	1d	10d	21d	63d	126d
intercept	-0.01%	0.02%	-0.01%	0.19%	-0.15%
intercept_p_value	58.91%	32.60%	74.60%	2.16%	7.14%
slope	149.67%	121.49%	122.45%	145.20%	147.71%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

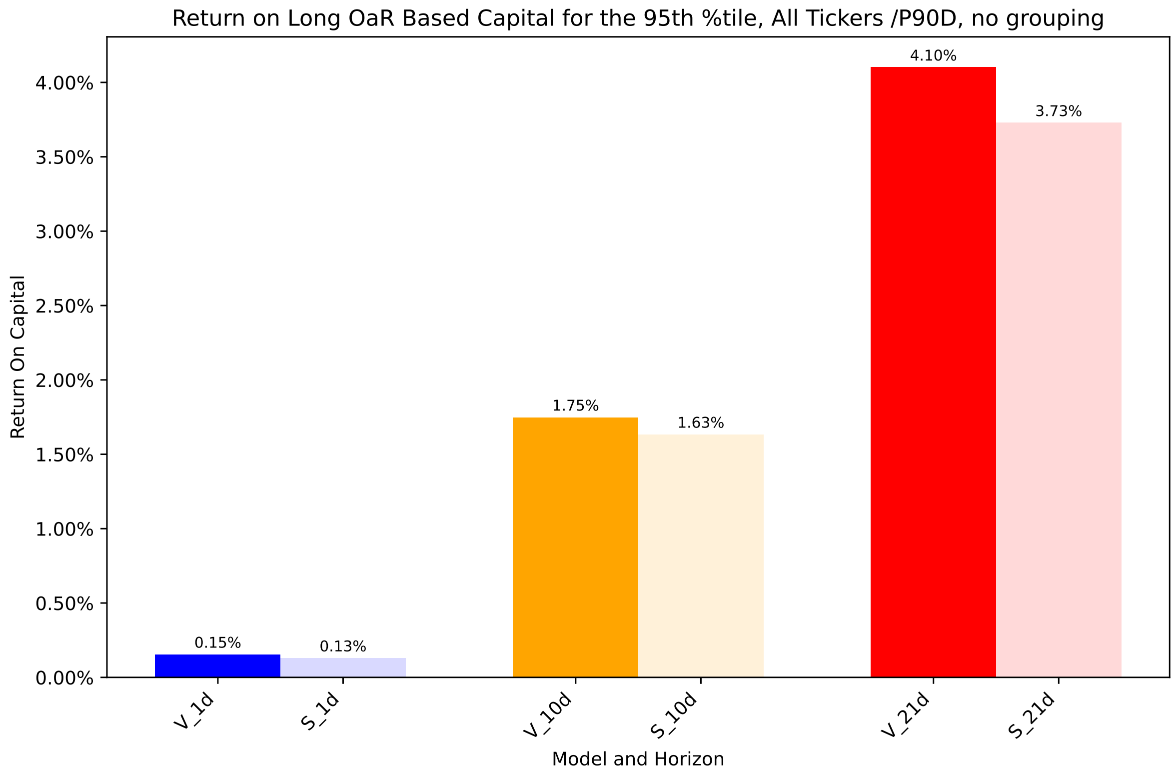
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P365D:

	1d	10d	21d	63d	126d
intercept	0.01%	0.12%	0.25%	0.74%	0.15%
intercept_p_value	59.92%	12.10%	13.34%	5.93%	76.14%
slope	97.67%	110.95%	117.44%	113.55%	114.04%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-07-31 through 2025-05-05





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

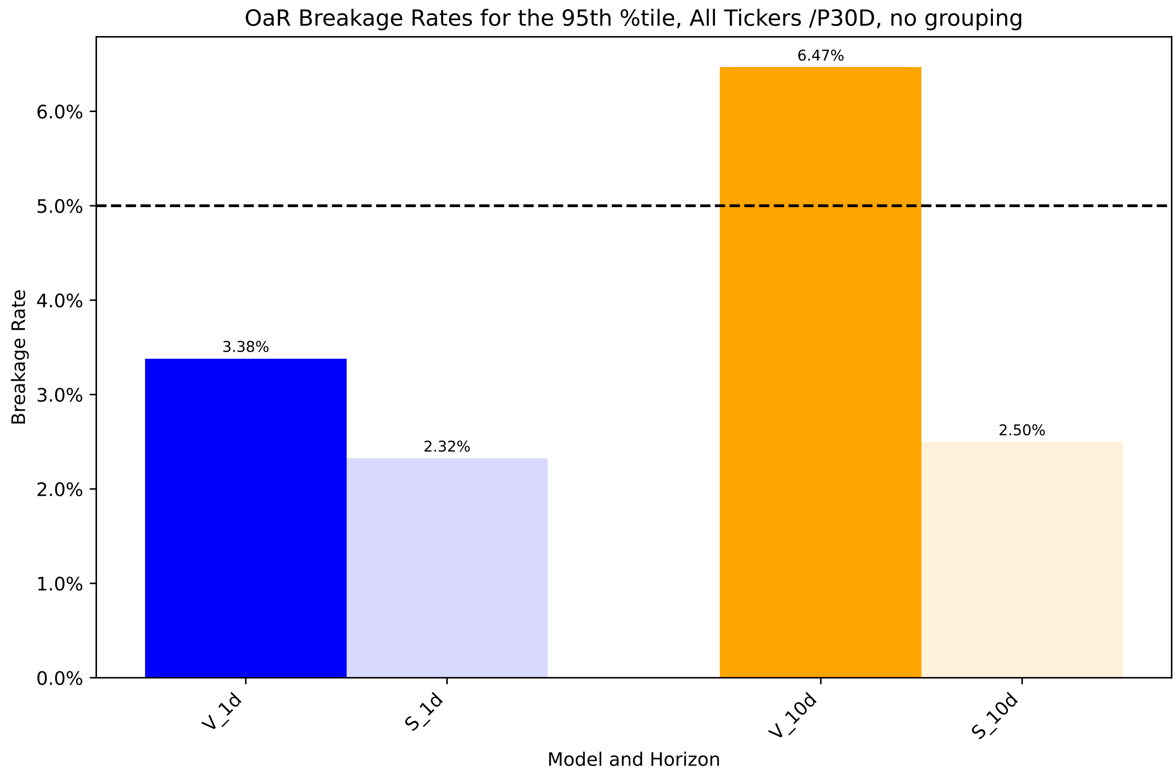
	1d	10d	21d
intercept	-0.03%	0.05%	0.02%
intercept_p_value	10.15%	19.39%	70.43%
slope	142.32%	103.99%	109.42%
slope_p_value	0.00%	0.00%	0.00%

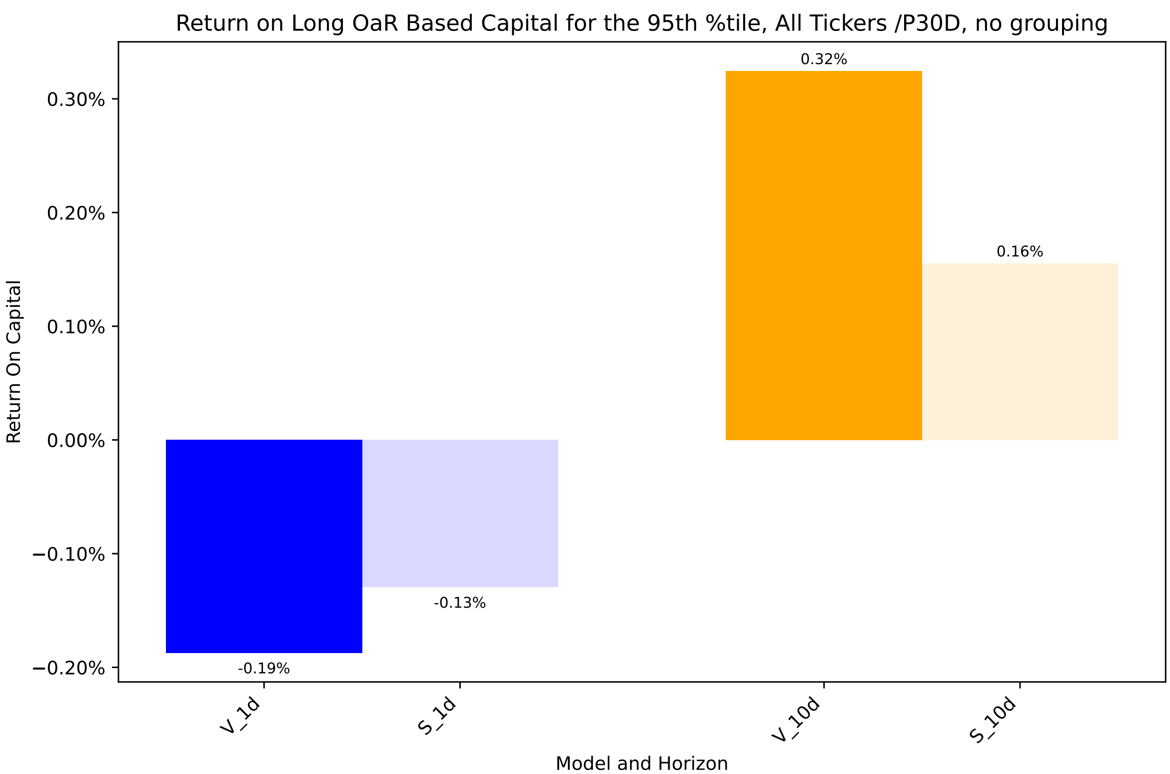
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P90D:

	1d	10d	21d
intercept	-0.02%	0.01%	-0.11%
intercept_p_value	33.80%	96.75%	73.57%
slope	129.55%	129.50%	129.01%
slope_p_value	0.00%	0.00%	0.00%

Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-07-31 through 2025-07-03





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

	1d	10d
intercept	-0.00%	0.18%
intercept_p_value	88.42%	1.04%
slope	141.00%	91.89%
slope_p_value	0.00%	0.00%

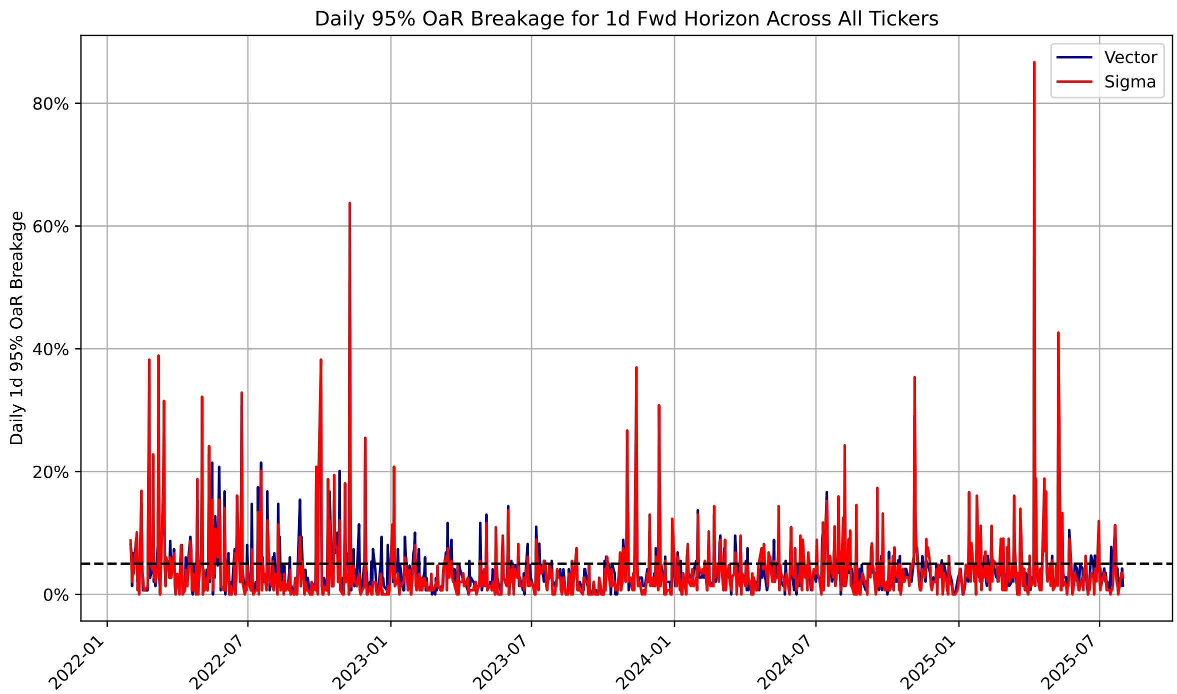
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P30D:

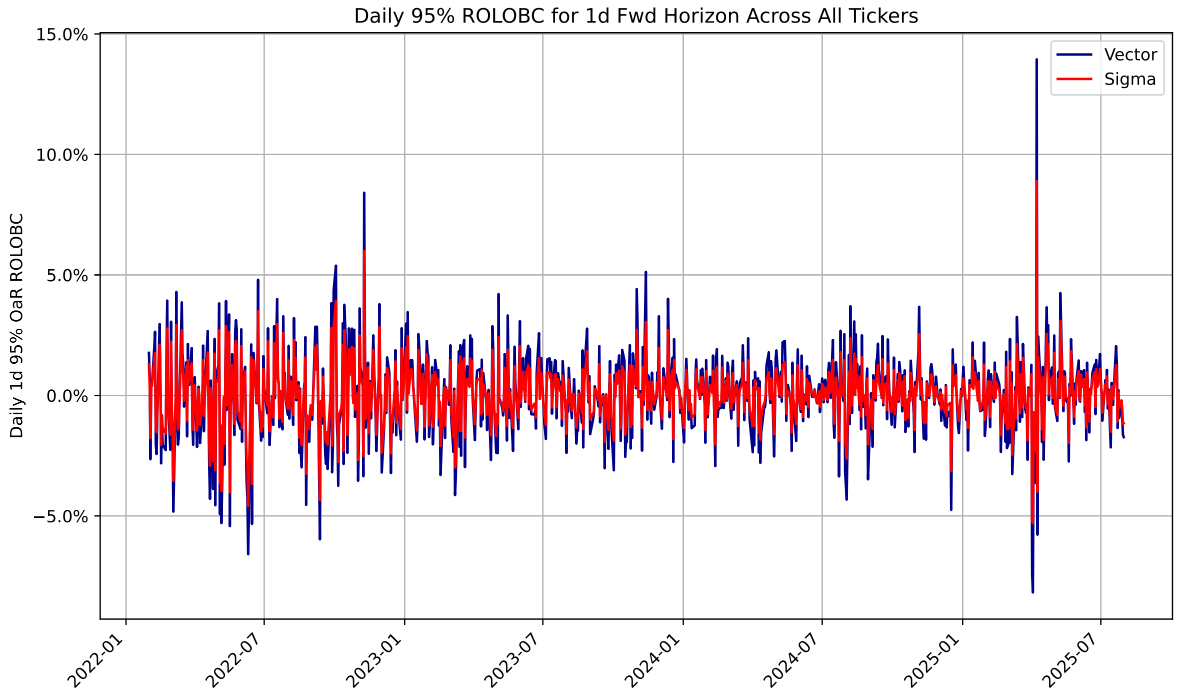
	1d	10d
intercept	-0.02%	0.11%
intercept_p_value	50.85%	62.80%
slope	113.20%	121.43%
slope_p_value	0.00%	0.00%

Daily Performance

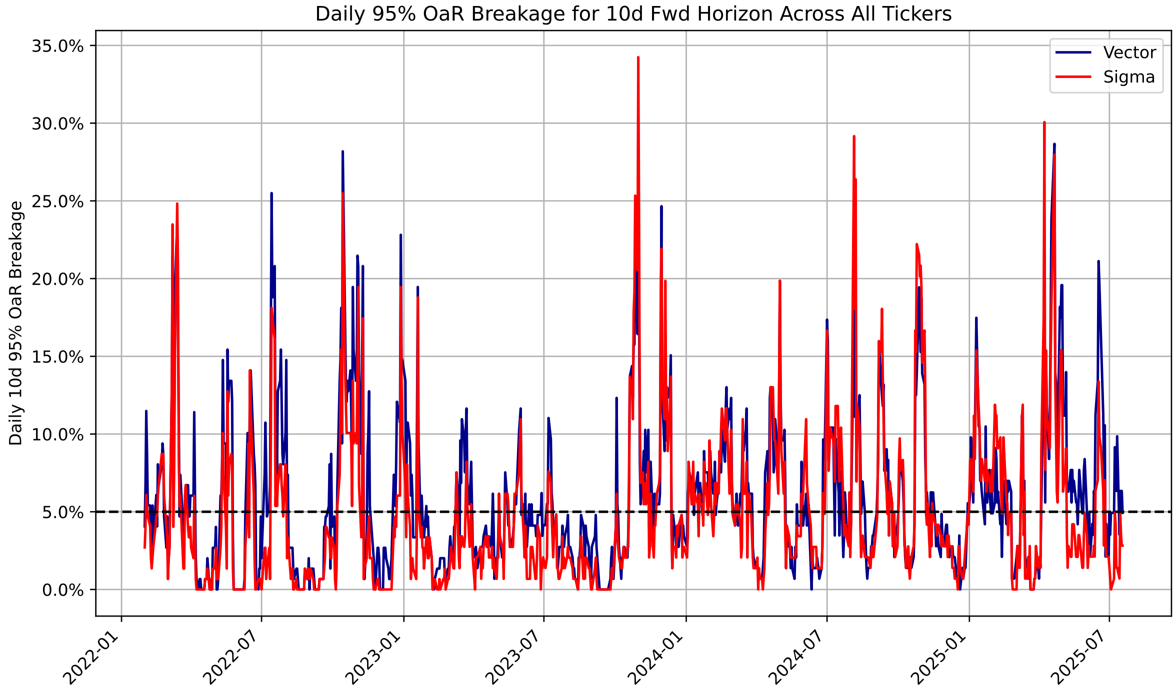
Here we look at the daily breakage and ROLOBC statitics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROLOBC outliers.

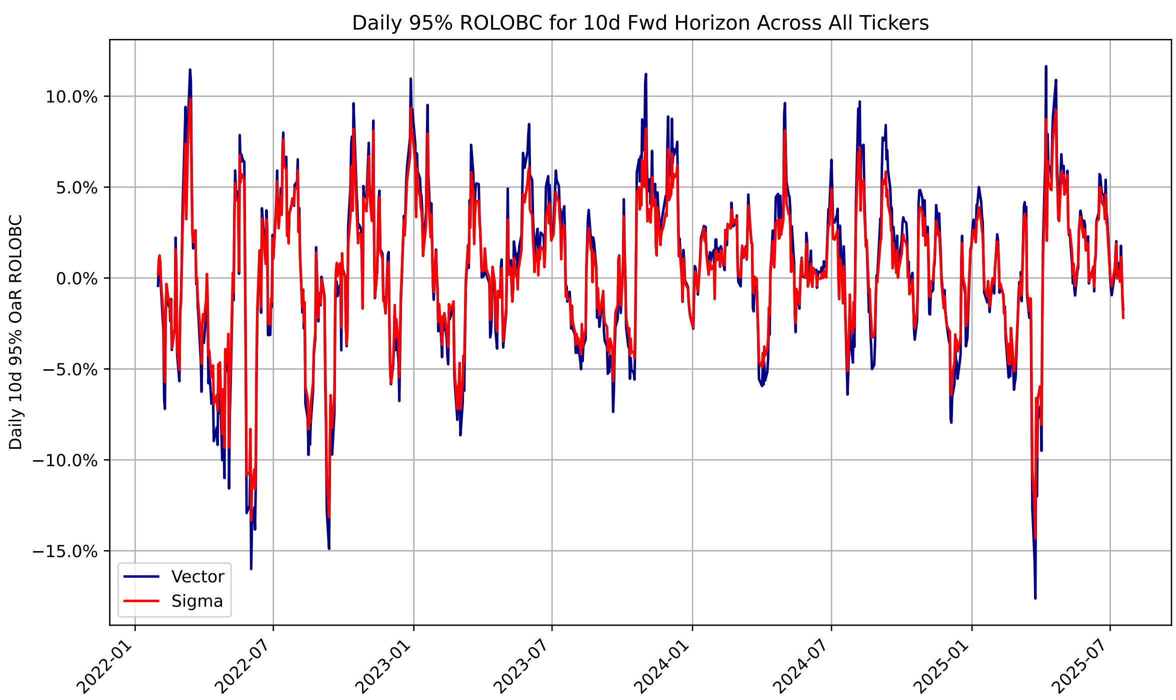
1d Horizon



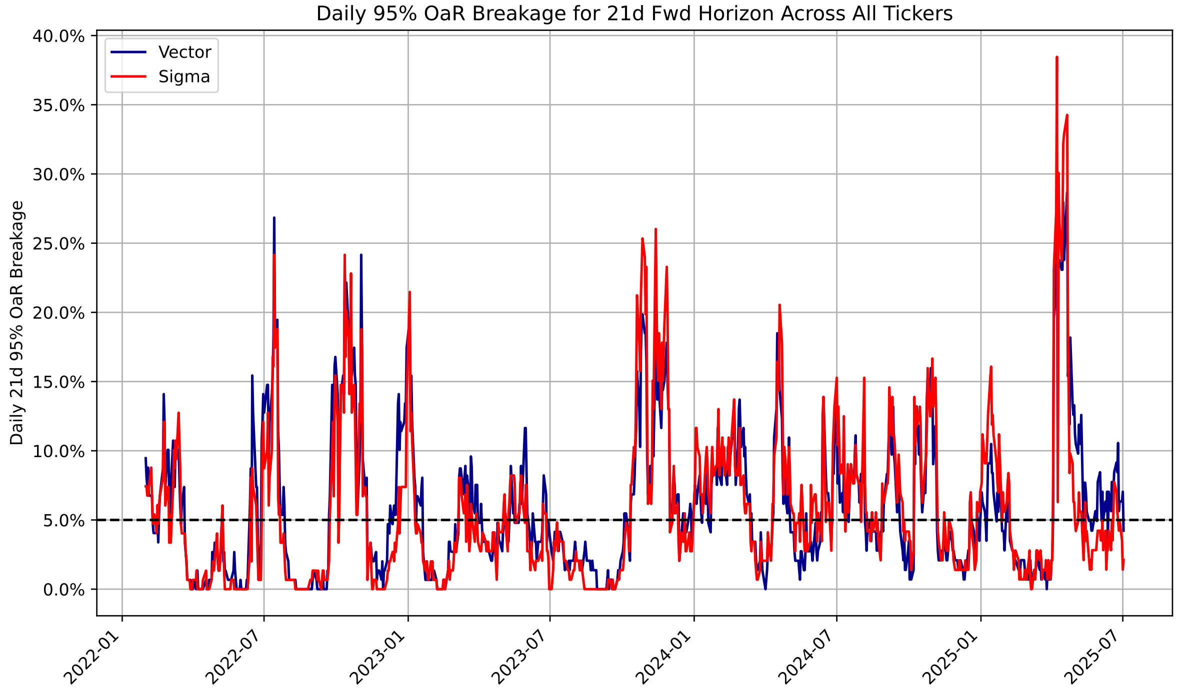

Daily 95% ROLOBC for 1d Fwd Horizon Across All Tickers
Daily 1d 95% OaR ROLOBC
15.0%
10.0%
5.0%
0.0%
−5.0%
Vector
Sigma
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

10d Horizon

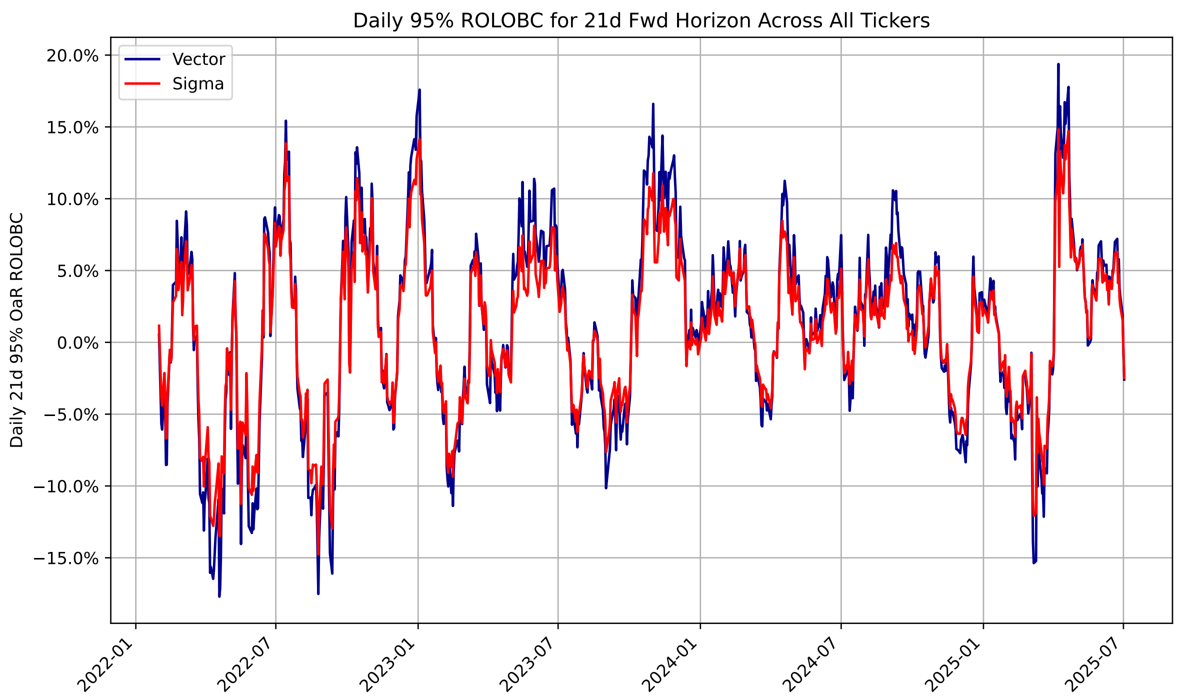

Daily 95% OaR Breakage for 10d Fwd Horizon Across All Tickers
Daily 10d 95% OaR Breakage
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07
Vector
Sigma


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%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07
Vector
Sigma

21d Horizon

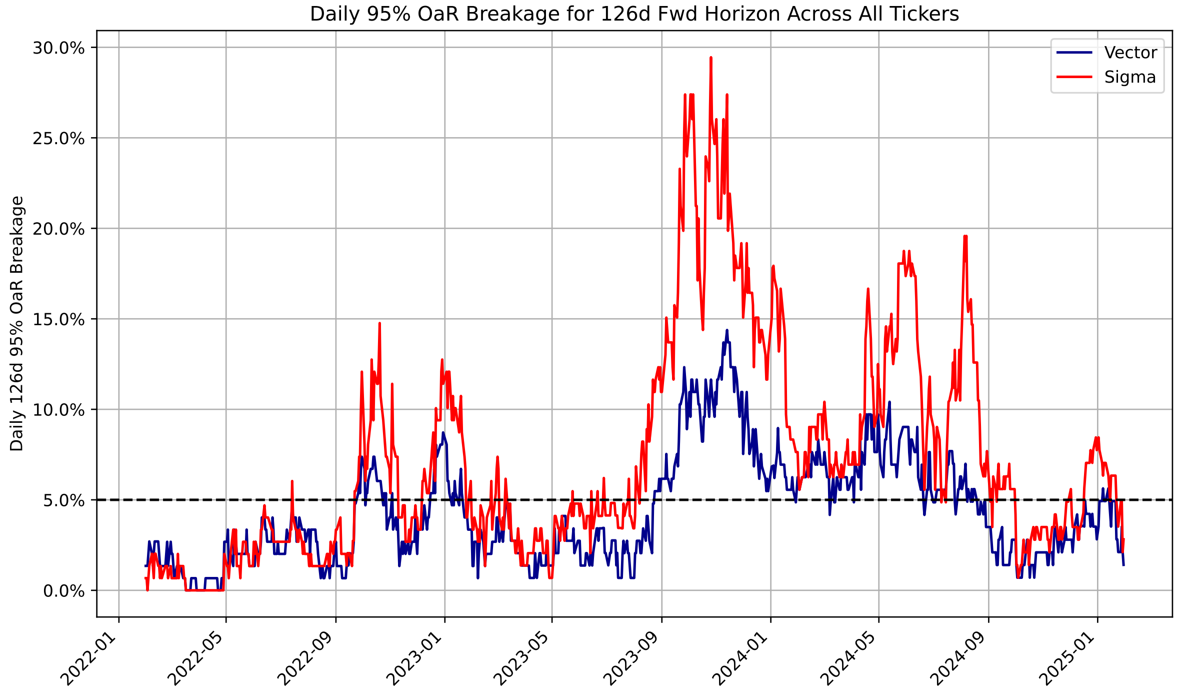


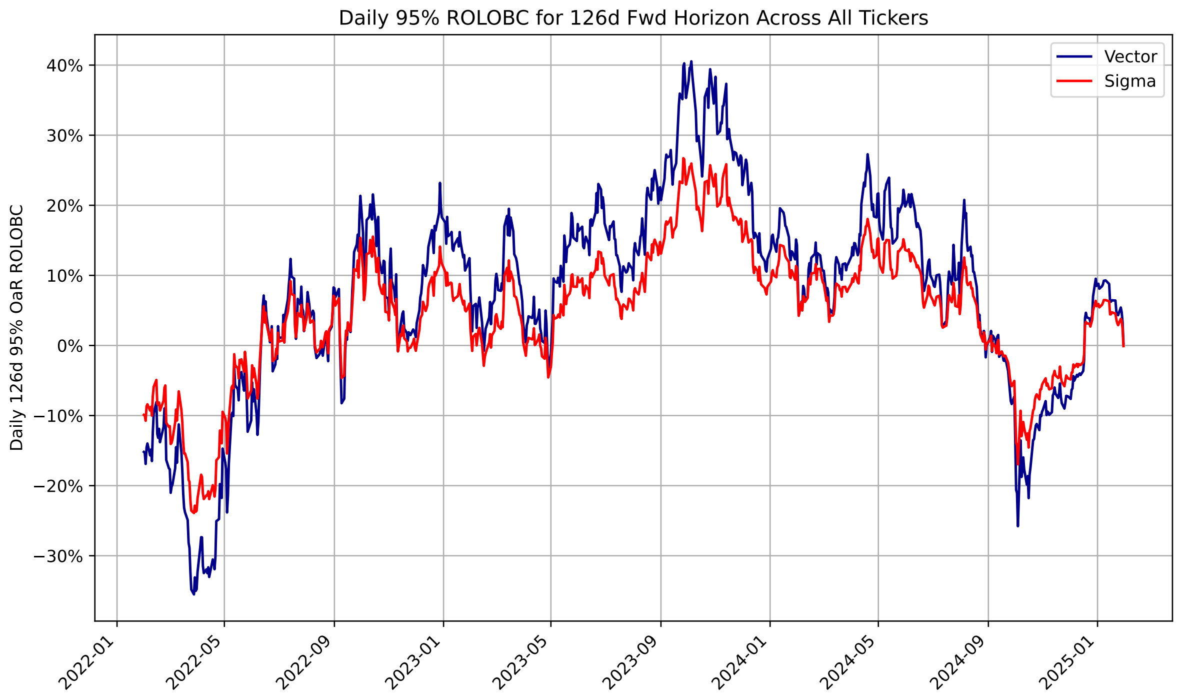
Daily 95% OaR Breakage for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 21d 95% OaR Breakage
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07



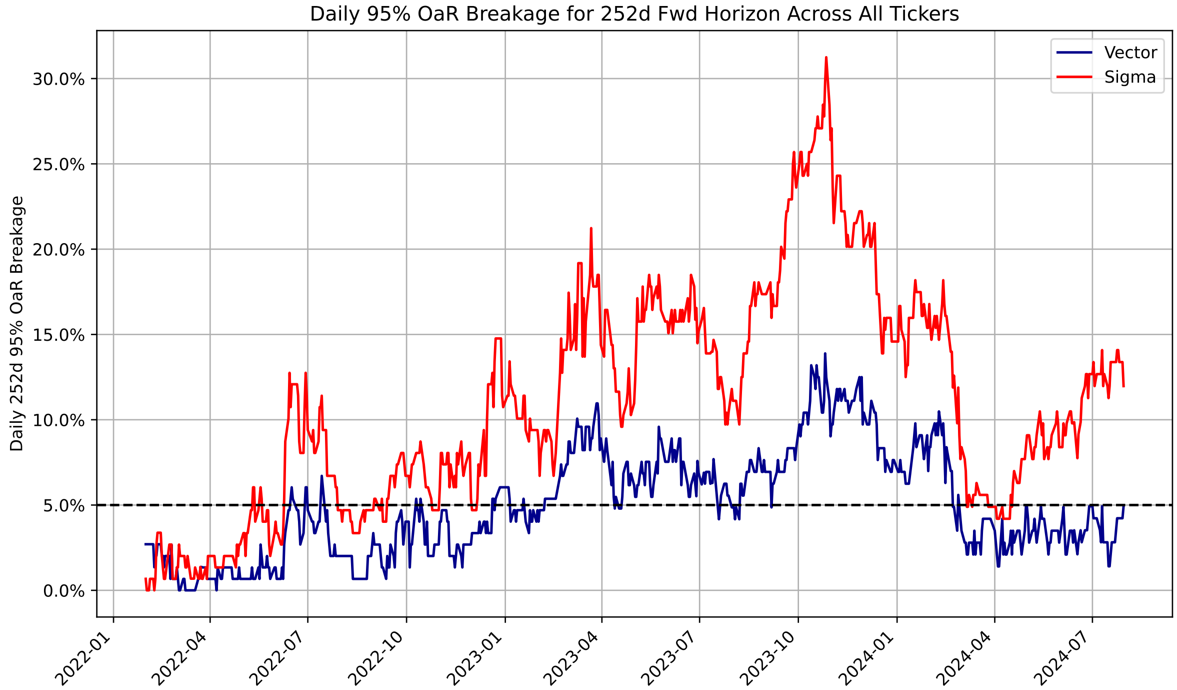
Daily 95% ROLOBC for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 21d 95% OaR ROLOBC
20.0%
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

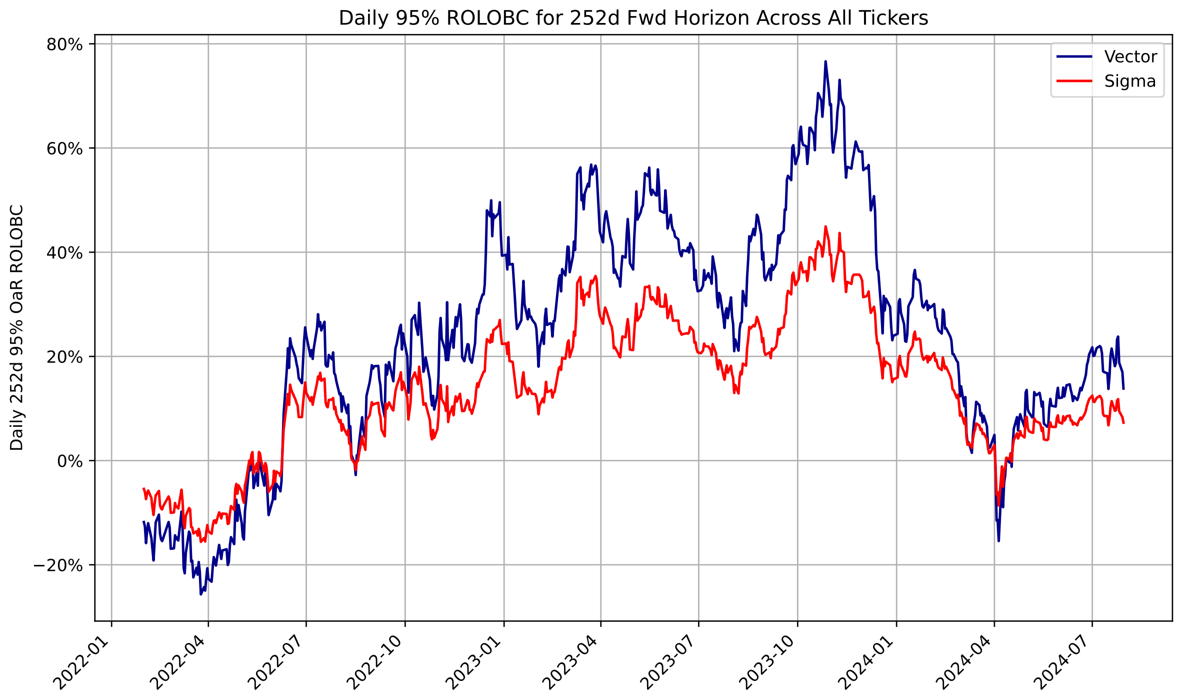
63d Horizon


Daily 95% OaR Breakage for 126d Fwd Horizon Across All Tickers
Vector
Sigma
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


Daily 95% ROLOBC for 126d Fwd Horizon Across All Tickers
Vector
Sigma
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

252d Horizon

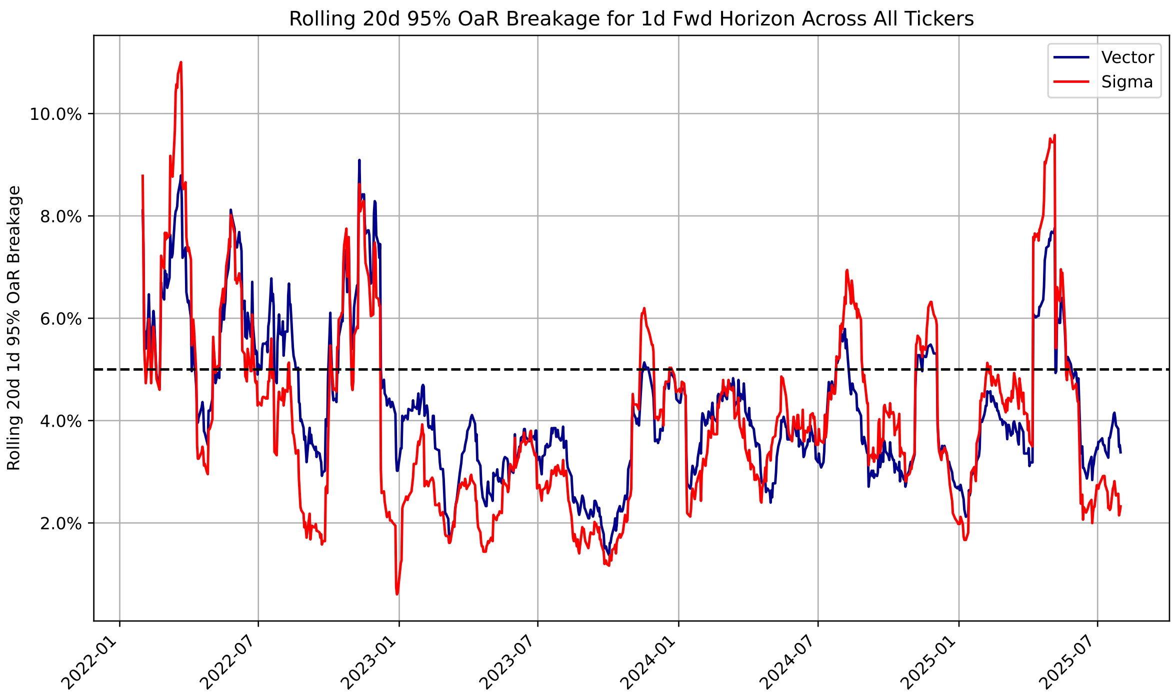


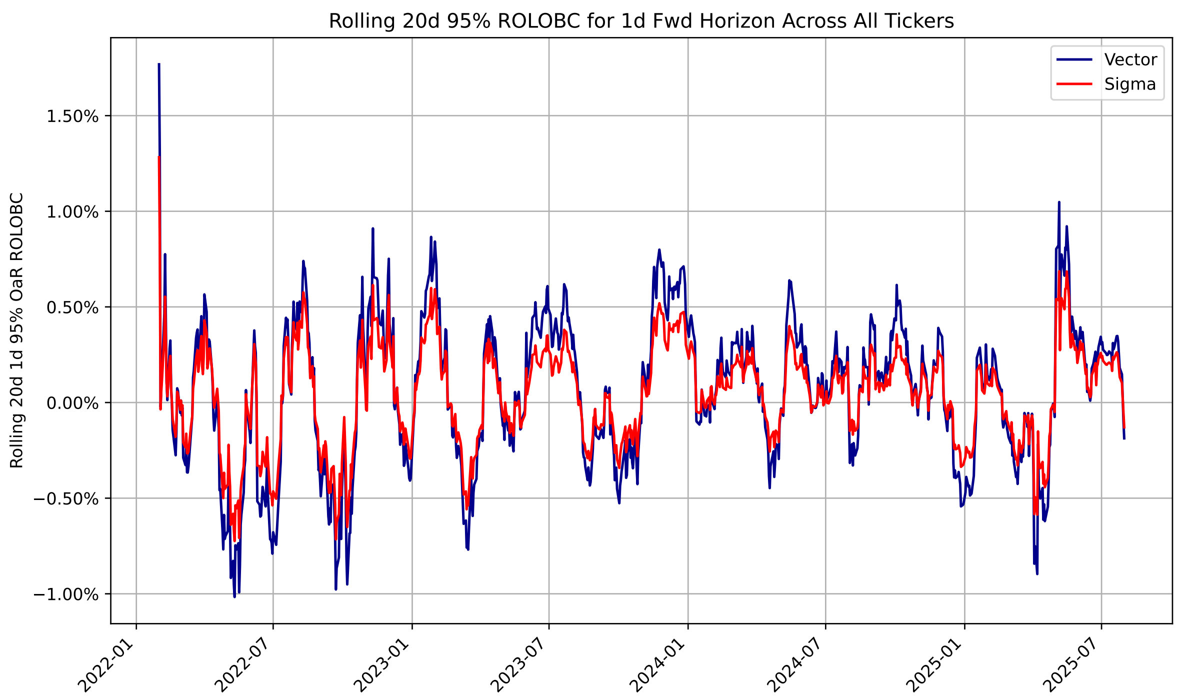


Rolling 20d Performance

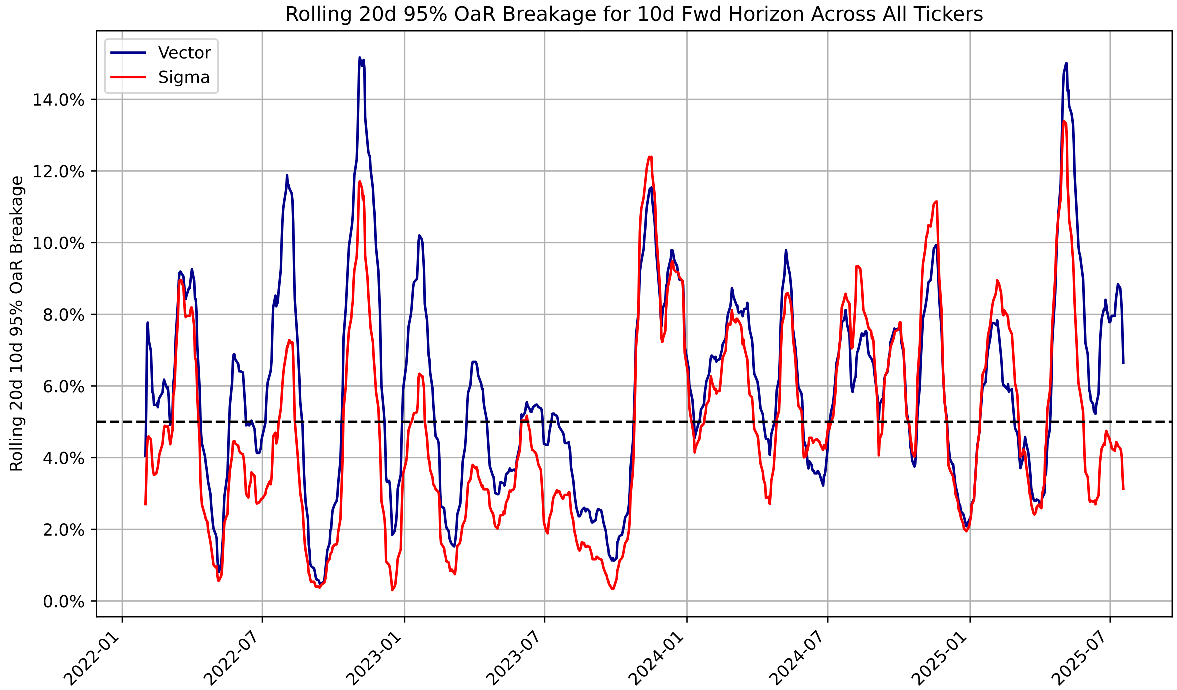
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statitics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

1d Horizon

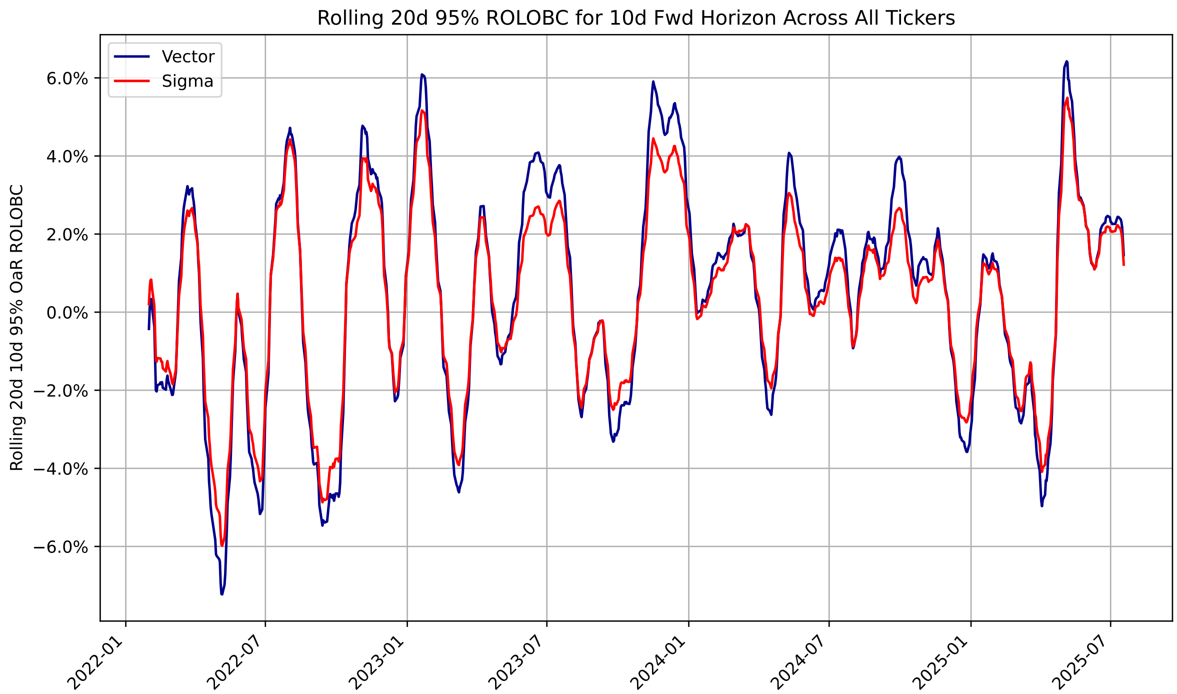



Rolling 20d 95% ROLOBC for 1d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 1d 95% OaR ROLOBC
1.50%
1.00%
0.50%
0.00%
−0.50%
−1.00%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

10d Horizon

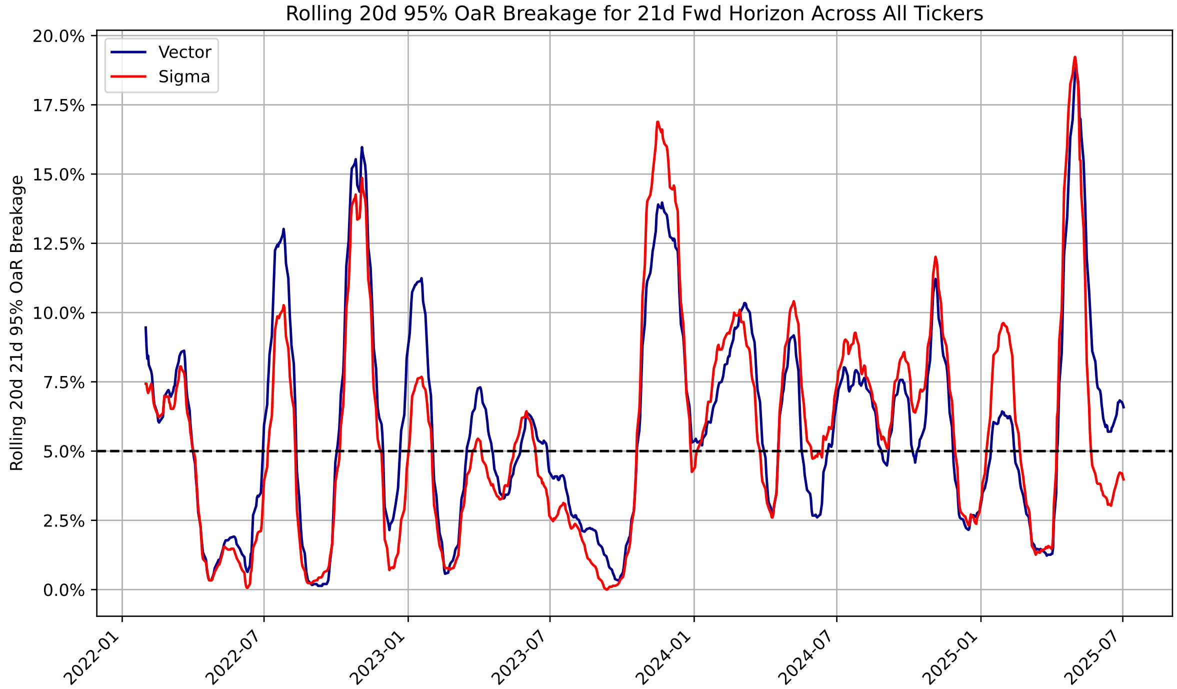


Rolling 20d 95% OaR Breakage for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 95% OaR Breakage
0.0%
2.0%
4.0%
6.0%
8.0%
10.0%
12.0%
14.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

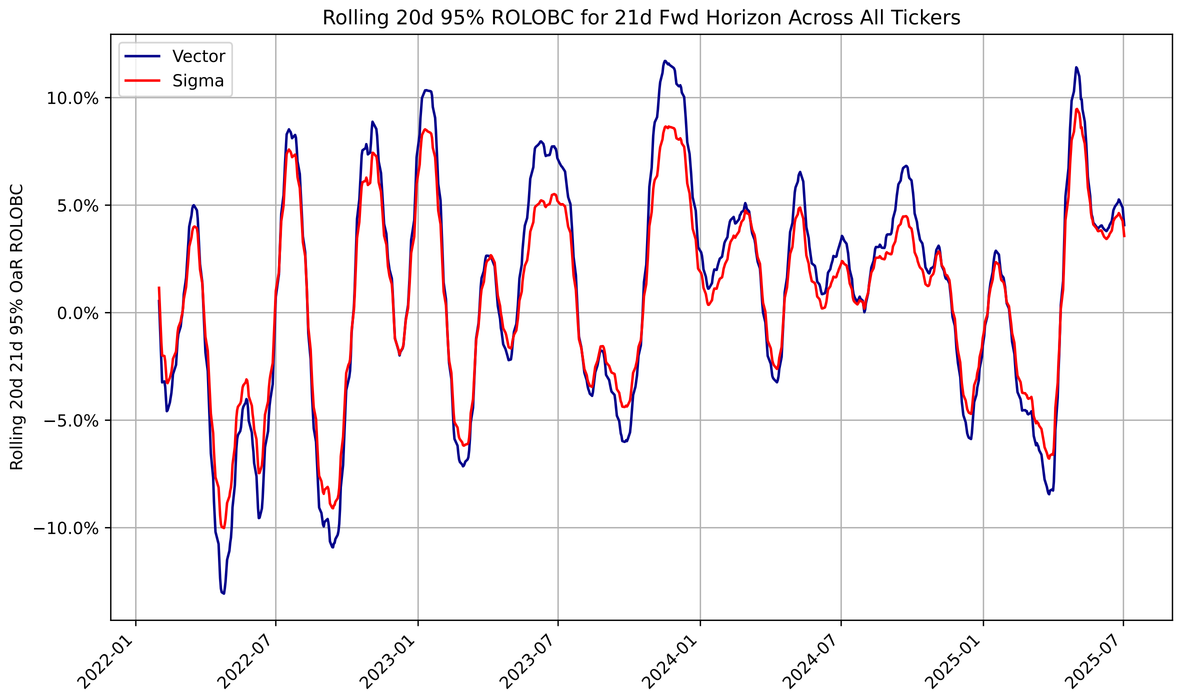


Rolling 20d 95% ROLOBC for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 95% OaR ROLOBC
−6.0%
−4.0%
−2.0%
0.0%
2.0%
4.0%
6.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

21d Horizon

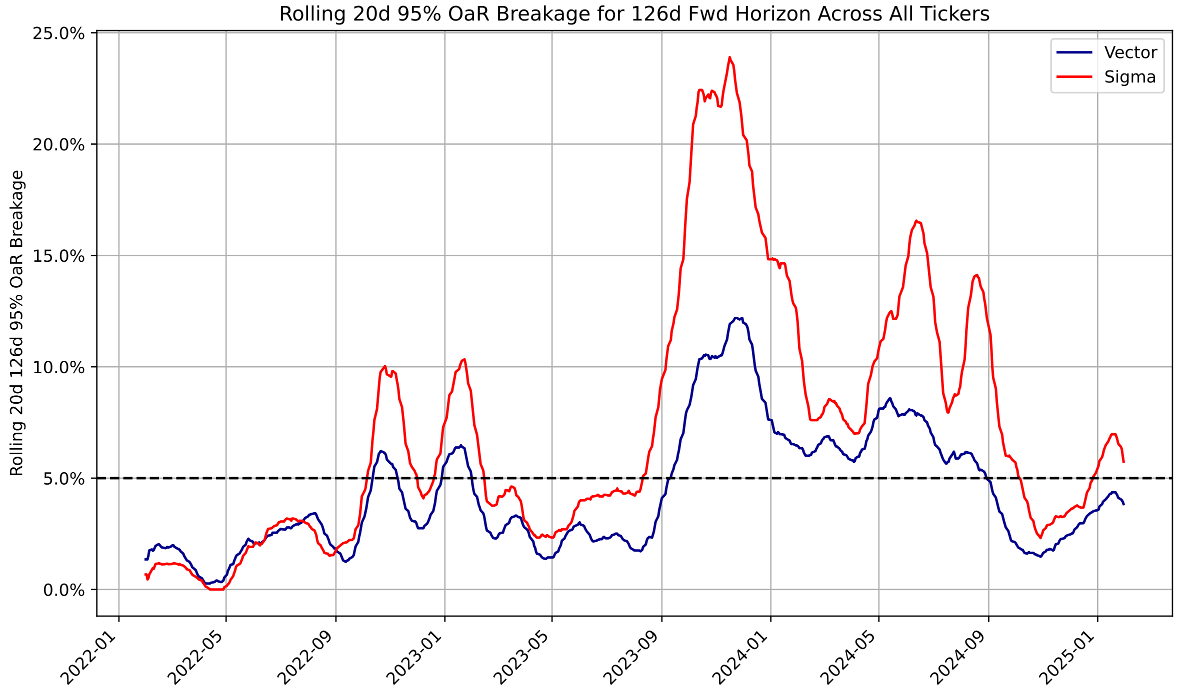


Rolling 20d 95% OaR Breakage for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 21d 95% OaR Breakage
20.0%
17.5%
15.0%
12.5%
10.0%
7.5%
5.0%
2.5%
0.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

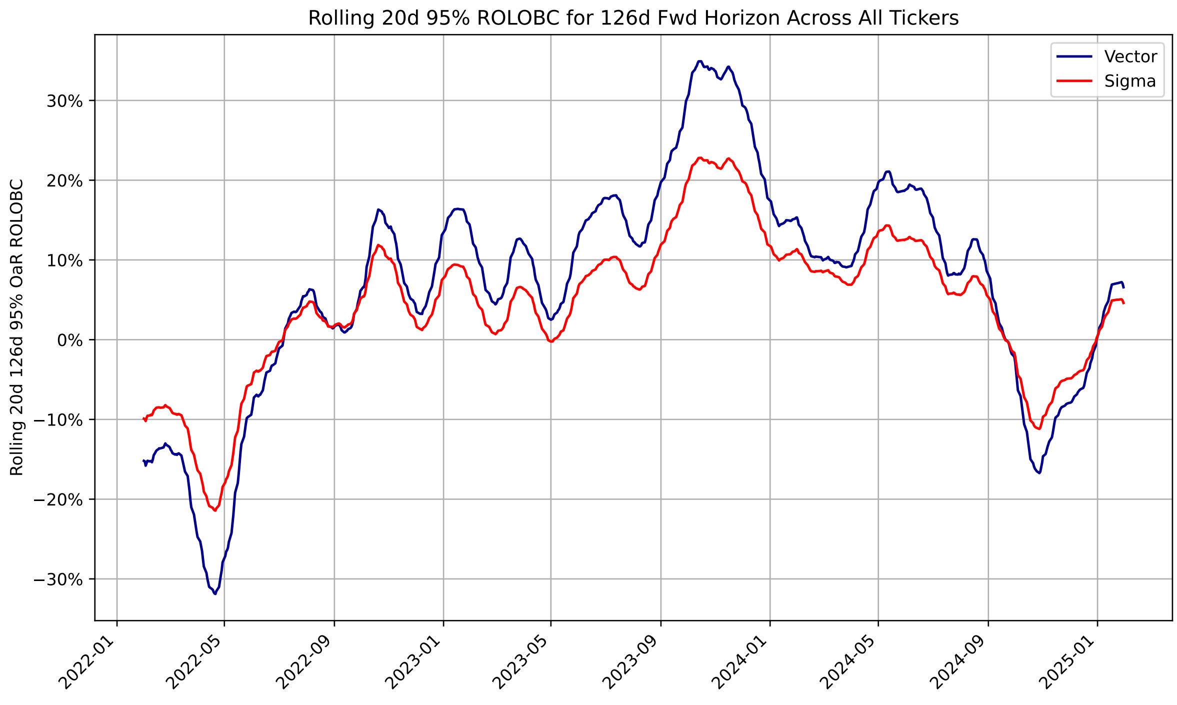


Rolling 20d 95% ROLOBC for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 21d 95% OaR ROLOBC
10.0%
5.0%
0.0%
−5.0%
−10.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

63d Horizon

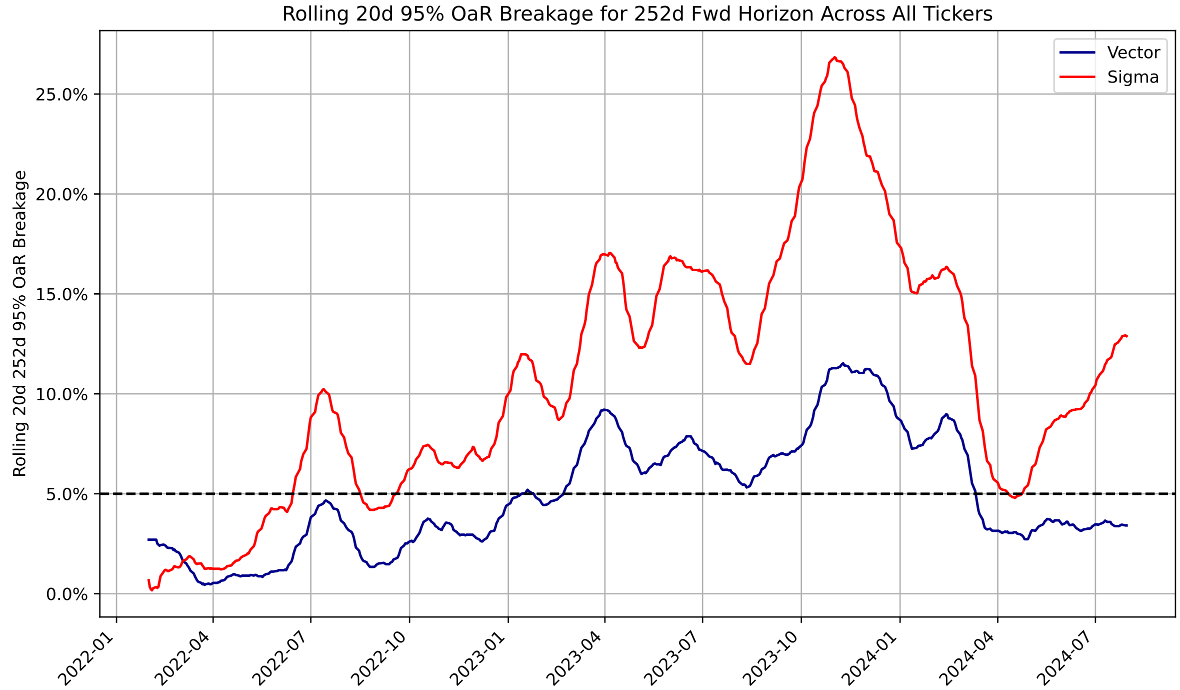


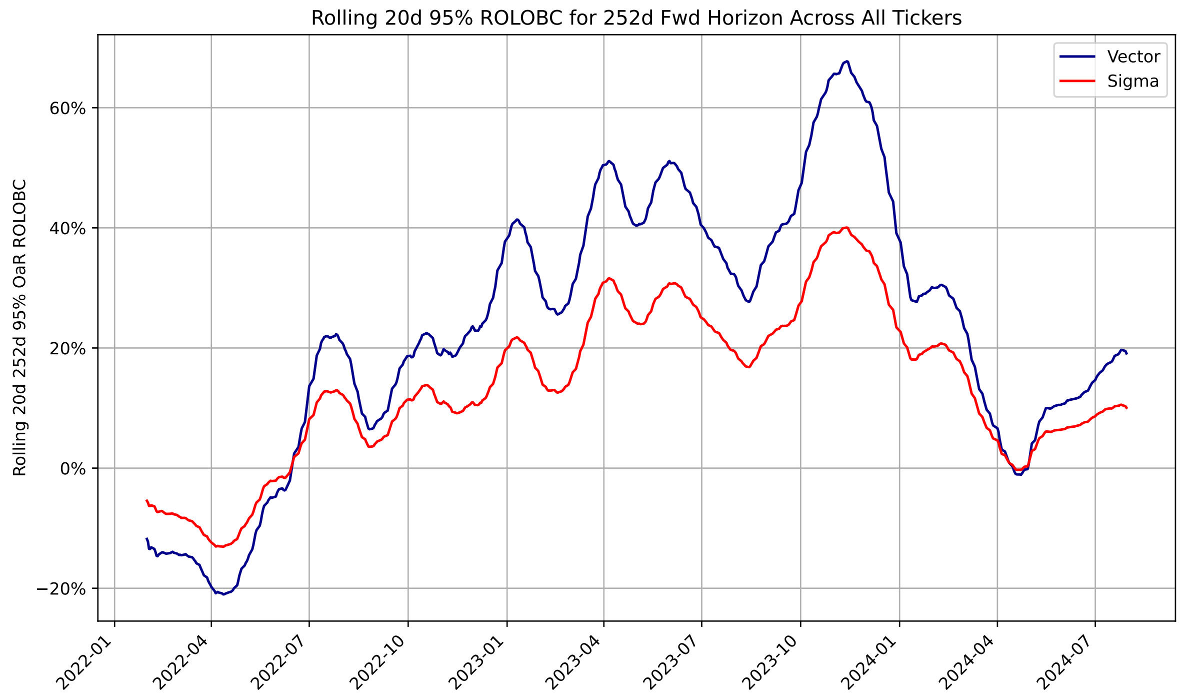
Rolling 20d 95% OaR Breakage for 126d Fwd Horizon Across All Tickers
Rolling 20d 126d 95% OaR Breakage
Vector
Sigma
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01



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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	MSTR	17.77%	VST	10.14%
1.0	SBNY	16.55%	MSTR	7.52%
1.0	GME	13.55%	NVDA	7.18%
1.0	SIVBQ	12.95%	GLD	7.18%
1.0	CHTR	11.73%	AVGO	7.06%
1.0	SLV	11.73%	ACGL	6.15%
1.0	AVGO	11.5%	GBTC	6.04%
1.0	VST	11.16%	TRGP	6.04%
1.0	FRCB	10.07%	MU	5.92%
1.0	META	10.02%	ON	5.69%
1.0	GNRC	9.79%	PWR	5.69%
1.0	B	9.57%	CAH	5.69%
1.0	HLT	9.23%	FCX	5.58%
1.0	ZTS	8.77%	PHM	5.47%
1.0	ACGL	8.31%	TEVA	5.47%
1.0	TEVA	8.2%	WDC	5.47%
1.0	ORCL	8.09%	SLV	5.47%
1.0	NFLX	7.97%	CDNS	5.47%
1.0	INTU	7.97%	TXN	5.35%
1.0	BUD	7.86%	DHI	5.24%
1.0	CMA	7.63%	TSLA	5.24%
1.0	BALL	7.52%	LLY	5.24%
1.0	FRA	7.52%	IRM	5.24%
1.0	GILD	7.06%	AMGN	5.24%
1.0	XOM	7.06%	AMAT	5.24%

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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	22.32%	VST	13.81%
10.0	META	19.33%	NVDA	12.08%
10.0	VST	18.07%	CAH	11.62%
10.0	AVGO	17.49%	LLY	10.93%
10.0	TEVA	15.88%	ORCL	10.82%
10.0	GME	15.07%	GS	10.36%
10.0	CHTR	14.73%	GLD	9.44%
10.0	IRM	14.04%	MSTR	9.21%
10.0	SIVBQ	13.97%	TRGP	9.21%
10.0	HCA	13.92%	IRM	8.86%
10.0	KALU	13.58%	GE	8.75%
10.0	SLV	13.58%	NVS	8.63%
10.0	B	13.35%	ABBV	8.29%
10.0	ORCL	12.66%	TEVA	8.17%
10.0	TRGP	12.43%	AVGO	8.17%
10.0	GILD	12.08%	TSLA	8.17%
10.0	GWW	11.97%	MUB	7.95%
10.0	SBNY	10.66%	GBTC	7.83%
10.0	GNRC	10.59%	CPRT	7.83%
10.0	BALL	10.47%	GWW	7.71%
10.0	HD	10.36%	MS	7.71%
10.0	INTU	10.24%	SLV	7.71%
10.0	NEM	10.13%	PWR	7.59%
10.0	BUD	9.55%	CMG	7.48%
10.0	ABBV	9.55%	CCL	7.36%

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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	MSTR	23.19%	CAH	15.97%
21.0	AVGO	22.73%	MSTR	15.38%
21.0	META	20.16%	VST	15.03%
21.0	VST	19.46%	NVDA	14.57%
21.0	TRGP	16.67%	GLD	14.1%
21.0	TEVA	16.55%	TRGP	13.87%
21.0	CHTR	16.43%	GE	13.75%
21.0	ORCL	15.73%	LLY	13.75%
21.0	IRM	15.5%	GS	12.94%
21.0	GME	15.38%	ORCL	12.94%
21.0	ISRG	13.75%	AVGO	12.59%
21.0	B	13.52%	TSLA	11.77%
21.0	GWW	13.17%	GWW	11.54%
21.0	KALU	12.7%	IRM	11.42%
21.0	GILD	12.35%	GBTC	11.42%
21.0	ETRN	12.14%	CCL	11.19%
21.0	BUD	12.12%	TEVA	10.49%
21.0	HCA	11.89%	X	10.4%
21.0	SIVBQ	11.85%	NVS	10.37%
21.0	GNRC	11.77%	CMG	10.37%
21.0	CAH	11.54%	PWR	10.37%
21.0	GS	11.42%	MUB	10.27%
21.0	NEM	10.96%	MS	10.26%
21.0	FRCB	10.37%	AMGN	10.26%
21.0	NVS	10.14%	JPM	10.02%

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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	VST	30.15%	NVDA	31.37%
63.0	AVGO	29.66%	VST	30.02%
63.0	META	28.92%	AVGO	22.92%
63.0	MSTR	25.98%	GBTC	22.67%
63.0	IRM	18.38%	TRGP	21.69%
63.0	TRGP	17.65%	CAH	20.59%
63.0	CAH	17.4%	LLY	19.98%
63.0	GILD	17.03%	GE	19.73%
63.0	ETRN	16.7%	GLD	19.49%
63.0	CHTR	15.69%	THC	18.87%
63.0	TEVA	15.32%	MSTR	18.01%
63.0	BUD	15.32%	CMG	16.3%
63.0	WFC	14.95%	ETRN	16.15%
63.0	MSI	12.99%	ORCL	16.05%
63.0	LW	12.13%	GILD	16.05%
63.0	ORCL	11.64%	META	15.44%
63.0	TMUS	11.64%	TMUS	14.71%
63.0	EXPE	11.64%	PHM	14.34%
63.0	GME	11.52%	TEVA	13.97%
63.0	SIVBQ	11.11%	WFC	13.85%
63.0	LLY	10.66%	PWR	13.48%
63.0	HCA	10.66%	CCL	13.48%
63.0	NVDA	10.54%	GS	12.75%
63.0	THC	10.54%	IRM	12.38%
63.0	GE	10.42%	JPM	12.25%
63.0	GLD	10.42%	VNO	11.64%
63.0	KALU	9.8%	ACGL	11.52%
63.0	GBTC	9.44%	MRK	11.03%
63.0	GWW	9.19%	ABBV	11.03%
63.0	ACGL	8.95%	TSLA	10.78%

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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	46.22%	NVDA	46.35%
126.0	MSTR	38.25%	VST	45.68%
126.0	TRGP	29.88%	GLD	36.92%
126.0	IRM	27.36%	GE	36.92%
126.0	META	27.36%	AVGO	33.47%
126.0	AVGO	26.96%	MSTR	31.61%
126.0	TMUS	23.24%	TRGP	31.47%
126.0	TEVA	22.44%	LLY	29.08%
126.0	LW	21.25%	GILD	28.29%
126.0	NVDA	21.25%	PHM	27.22%
126.0	CAH	20.72%	CAH	25.5%
126.0	GILD	20.32%	GBTC	22.84%
126.0	GLD	19.26%	IRM	22.44%
126.0	MSI	18.59%	META	22.05%
126.0	LLY	17.8%	TMUS	21.65%
126.0	WFC	13.28%	THC	20.19%
126.0	GE	13.28%	ORCL	20.05%
126.0	THC	12.08%	ACGL	19.65%
126.0	ACGL	11.55%	TEVA	18.46%
126.0	EXPE	11.42%	GS	18.33%
126.0	VFC	10.76%	MSI	18.06%
126.0	ETRN	8.81%	NFLX	17.0%
126.0	WDC	7.84%	T	17.0%
126.0	GME	7.44%	JPM	16.73%
126.0	BUD	7.44%	COST	16.6%
126.0	GOOGL	7.17%	CMG	16.6%
126.0	TDG	7.04%	WFC	15.41%
126.0	HCA	7.04%	TDG	15.01%
126.0	XOM	7.04%	GWW	14.08%
126.0	GBTC	6.77%	HSBC	13.15%

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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	VST	68.26%	AVGO	75.92%
252.0	MSTR	58.37%	GE	73.05%
252.0	AVGO	56.14%	NVDA	69.7%
252.0	NVDA	44.02%	VST	65.07%
252.0	TRGP	41.31%	PHM	57.42%
252.0	IRM	37.48%	LLY	54.07%
252.0	META	36.36%	MSTR	53.27%
252.0	GLD	31.42%	META	49.92%
252.0	LLY	29.82%	GBTC	47.05%
252.0	TEVA	28.23%	TRGP	46.25%
252.0	TDG	20.73%	COST	41.15%
252.0	TMUS	20.1%	ACGL	40.67%
252.0	GWW	19.46%	GLD	40.51%
252.0	CAH	17.38%	JPM	40.03%
252.0	THC	15.63%	TMUS	39.39%
252.0	GILD	15.47%	TDG	39.07%
252.0	LW	13.4%	NFLX	35.09%
252.0	GE	12.44%	ORCL	33.33%
252.0	MSI	12.12%	GS	32.85%
252.0	GS	11.16%	IRM	32.7%
252.0	WFC	9.89%	PWR	31.26%
252.0	ACGL	8.45%	TEVA	29.03%
252.0	ETRN	8.01%	GWW	28.39%
252.0	ORCL	7.97%	THC	27.91%
252.0	WDC	7.81%	CPRT	27.43%
252.0	GBTC	6.86%	CAH	26.16%
252.0	JPM	6.7%	CMG	25.52%
252.0	CMG	6.7%	ISRG	24.56%
252.0	GOOGL	6.06%	MSI	22.97%
252.0	HLT	5.42%	DHI	21.21%

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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	BUD	25.0%	AZN	20.0%
1.0	CMA	25.0%	DHI	15.0%
1.0	VZ	20.0%	GILD	10.0%
1.0	NVDA	20.0%	BIIB	10.0%
1.0	AZN	20.0%	VICI	10.0%
1.0	GILD	20.0%	LEN	10.0%
1.0	JPM	15.0%	ORLY	10.0%
1.0	VST	15.0%	BHP	10.0%
1.0	SPY	15.0%	GNRC	10.0%
1.0	AMC	15.0%	PHM	10.0%
1.0	QQQ	15.0%	PEP	10.0%
1.0	ORLY	15.0%	CLF	10.0%
1.0	CLF	10.0%	CSTM	5.0%
1.0	ORCL	10.0%	NEM	5.0%
1.0	PWR	10.0%	CVS	5.0%
1.0	CDNS	10.0%	INTC	5.0%
1.0	TMUS	10.0%	CZR	5.0%
1.0	GNRC	10.0%	NAVI	5.0%
1.0	TDG	10.0%	SNY	5.0%
1.0	SLV	10.0%	SLV	5.0%
1.0	DHI	10.0%	NVS	5.0%
1.0	NAVI	10.0%	MOS	5.0%
1.0	ABBV	10.0%	TMUS	5.0%
1.0	AMGN	10.0%	SBUX	5.0%
1.0	LW	5.0%	RIO	5.0%
1.0	PHM	5.0%	FSUGY	5.0%
1.0	LNC	5.0%	GLD	5.0%
1.0	SBUX	5.0%	POST	5.0%
1.0	EXPE	5.0%	GSK	5.0%
1.0	LEN	5.0%	GT	5.0%

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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	CMA	81.82%	ORLY	45.45%
10.0	NVDA	63.64%	CDNS	36.36%
10.0	AVGO	54.55%	PEP	27.27%
10.0	ORLY	54.55%	KHC	27.27%
10.0	JPM	45.45%	GNRC	27.27%
10.0	KALU	36.36%	DHI	27.27%
10.0	BUD	36.36%	AMD	18.18%
10.0	TSLA	36.36%	LW	18.18%
10.0	AAP	36.36%	RIO	18.18%
10.0	CDNS	36.36%	BHP	18.18%
10.0	VZ	36.36%	CMA	18.18%
10.0	AMC	36.36%	CLF	18.18%
10.0	NEM	36.36%	AZN	9.09%
10.0	VST	27.27%	NEM	9.09%
10.0	GNRC	27.27%	PHM	9.09%
10.0	INTU	27.27%	SLV	9.09%
10.0	DHI	27.27%	FSUGY	9.09%
10.0	TDG	27.27%	WDC	9.09%
10.0	GILD	27.27%	NVS	0.0%
10.0	QQQ	27.27%	OXY	0.0%
10.0	WDC	18.18%	NWL	0.0%
10.0	SLV	18.18%	NVDA	0.0%
10.0	GOOGL	18.18%	ORCL	0.0%
10.0	CLF	9.09%	PCG	0.0%
10.0	RIO	9.09%	ON	0.0%
10.0	HD	9.09%	AA	0.0%
10.0	PWR	9.09%	NFLX	0.0%
10.0	CYH	9.09%	MNST	0.0%
10.0	AZN	9.09%	LLY	0.0%
10.0	AMD	9.09%	LNC	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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SLV	24.59%	LVS	9.84%
1.0	GILD	21.31%	AZO	9.84%
1.0	TSLA	19.67%	AZN	9.84%
1.0	QQQ	18.03%	GILD	9.84%
1.0	AVGO	18.03%	GLD	8.2%
1.0	AAP	18.03%	MOS	8.2%
1.0	NEM	16.39%	BIIB	8.2%
1.0	CMA	14.75%	DHI	8.2%
1.0	NAVI	13.11%	AMGN	8.2%
1.0	BUD	13.11%	GNRC	8.2%
1.0	VST	13.11%	X	6.67%
1.0	ZTS	13.11%	NEM	6.56%
1.0	ORCL	11.48%	ORCL	6.56%
1.0	NVS	11.48%	CCL	6.56%
1.0	VZ	11.48%	CSCO	6.56%
1.0	WFC	9.84%	OXY	6.56%
1.0	SPY	9.84%	BHP	6.56%
1.0	UNH	9.84%	NVS	6.56%
1.0	AZN	8.2%	PEP	6.56%
1.0	AMC	8.2%	BALL	6.56%
1.0	CHTR	8.2%	LEN	6.56%
1.0	SBUX	8.2%	ACGL	6.56%
1.0	BXP	8.2%	WYNN	6.56%
1.0	MSFT	8.2%	PHM	6.56%
1.0	JPM	8.2%	CMG	4.92%
1.0	AMGN	6.56%	LNC	4.92%
1.0	MU	6.56%	CYH	4.92%
1.0	ORLY	6.56%	KALU	4.92%
1.0	VFC	6.56%	CSTM	4.92%
1.0	NVDA	6.56%	GT	4.92%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	AVGO	61.54%	X	47.62%
10.0	AAP	48.08%	AAP	30.77%
10.0	X	47.62%	ORCL	25.0%
10.0	AMC	30.77%	WYNN	21.15%
10.0	NEM	30.77%	CCL	19.23%
10.0	SLV	30.77%	INTU	19.23%
10.0	KALU	28.85%	LVS	17.31%
10.0	TSLA	26.92%	BHC	15.38%
10.0	CMA	26.92%	GNRC	15.38%
10.0	INTU	25.0%	SLV	13.46%
10.0	ORCL	25.0%	HLT	13.46%
10.0	TXN	25.0%	GS	11.54%
10.0	JPM	25.0%	AMD	11.54%
10.0	GILD	25.0%	MU	11.54%
10.0	BUD	23.08%	GILD	11.54%
10.0	QQQ	21.15%	XOM	9.62%
10.0	WYNN	21.15%	KEY	9.62%
10.0	TDG	19.23%	ORLY	9.62%
10.0	NVS	19.23%	TFC	9.62%
10.0	MU	19.23%	ON	7.69%
10.0	NAVI	17.31%	CAH	7.69%
10.0	KEY	15.38%	CMA	7.69%
10.0	HLT	15.38%	CLF	7.69%
10.0	HON	15.38%	CDNS	7.69%
10.0	NVDA	15.38%	DHI	7.69%
10.0	MSFT	15.38%	ZION	7.69%
10.0	VZ	15.38%	WFC	7.69%
10.0	ON	15.38%	GE	7.69%
10.0	GNRC	13.46%	KHC	5.77%
10.0	AMZN	13.46%	USB	5.77%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	X	100.0%	X	100.0%
21.0	AVGO	97.56%	ORCL	53.66%
21.0	ORCL	82.93%	WYNN	43.9%
21.0	AAP	68.29%	CCL	39.02%
21.0	WYNN	48.78%	AAP	34.15%
21.0	NEM	46.34%	AMD	26.83%
21.0	TXN	43.9%	BHC	26.83%
21.0	MU	39.02%	LVS	26.83%
21.0	SLV	36.59%	INTU	24.39%
21.0	TDG	34.15%	GS	19.51%
21.0	KALU	31.71%	GNRC	17.07%
21.0	JPM	26.83%	PEP	17.07%
21.0	CMA	24.39%	CLF	17.07%
21.0	GILD	21.95%	MU	17.07%
21.0	NAVI	19.51%	ORLY	14.63%
21.0	QQQ	19.51%	FSUGY	9.76%
21.0	AMZN	17.07%	CMA	9.76%
21.0	B	17.07%	GILD	9.76%
21.0	ORLY	17.07%	GE	9.76%
21.0	WDC	14.63%	SLV	7.32%
21.0	HON	14.63%	GOOGL	7.32%
21.0	BUD	14.63%	KALU	7.32%
21.0	AMC	14.63%	GSK	7.32%
21.0	NVS	12.2%	BHP	7.32%
21.0	MSFT	12.2%	B	7.32%
21.0	BHC	12.2%	NVS	4.88%
21.0	BXP	9.76%	TXN	4.88%
21.0	INTU	9.76%	NEM	4.88%
21.0	GS	9.76%	CDNS	4.88%
21.0	KEY	9.76%	CSCO	4.88%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	VST	16.47%	VST	10.44%
1.0	GILD	14.86%	MSTR	10.04%
1.0	SLV	14.46%	TRGP	10.04%
1.0	AVGO	14.06%	GLD	9.24%
1.0	CHTR	13.25%	TMUS	7.23%
1.0	MSTR	12.45%	AZO	7.23%
1.0	TSLA	12.45%	HLT	6.83%
1.0	ORLY	10.04%	TXN	6.83%
1.0	META	9.64%	GILD	6.43%
1.0	VZ	9.24%	MS	6.43%
1.0	GS	9.24%	CCL	6.43%
1.0	ZTS	8.84%	TSLA	6.43%
1.0	WFC	8.43%	ACGL	6.43%
1.0	TXN	8.43%	PWR	6.43%
1.0	PWR	8.43%	PHM	6.02%
1.0	B	8.03%	GBTC	6.02%
1.0	HLT	8.03%	COST	6.02%
1.0	VFC	8.03%	POST	6.02%
1.0	ORCL	8.03%	T	6.02%
1.0	IRM	8.03%	WYNN	5.62%
1.0	BUD	8.03%	LVS	5.62%
1.0	GNRC	7.63%	AVGO	5.62%
1.0	FRA	7.63%	HSBC	5.62%
1.0	SBUX	7.63%	SPY	5.62%
1.0	HON	7.63%	HD	5.62%
1.0	KEY	7.63%	MOS	5.62%
1.0	HD	7.23%	CAH	5.62%
1.0	CMA	7.23%	X	5.5%
1.0	NAVI	6.83%	META	5.22%
1.0	NEM	6.83%	DHI	5.22%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	AVGO	27.08%	TRGP	17.92%
10.0	GILD	21.67%	VST	17.08%
10.0	WFC	21.25%	WFC	16.67%
10.0	TSLA	18.75%	ORCL	15.83%
10.0	NEM	18.75%	GS	15.42%
10.0	META	18.75%	MS	15.42%
10.0	VZ	18.75%	WYNN	15.0%
10.0	KALU	18.75%	CCL	15.0%
10.0	VST	18.33%	CAH	15.0%
10.0	GS	17.92%	TMUS	14.17%
10.0	SLV	17.5%	LVS	14.17%
10.0	ORCL	17.08%	JPM	13.75%
10.0	CHTR	16.67%	T	13.75%
10.0	HCA	16.25%	CSCO	13.33%
10.0	MSTR	16.25%	NFLX	13.33%
10.0	INTU	15.83%	HLT	12.08%
10.0	GE	15.83%	CPRT	11.67%
10.0	AAP	15.42%	GILD	11.67%
10.0	EXPE	15.0%	BAC	10.42%
10.0	BUD	15.0%	AMZN	10.42%
10.0	TXN	14.17%	BA	10.42%
10.0	CMA	14.17%	CDNS	10.42%
10.0	AMZN	13.75%	CVS	10.0%
10.0	HON	13.75%	NVS	10.0%
10.0	HD	12.92%	TSLA	10.0%
10.0	NFLX	12.92%	ABBV	10.0%
10.0	TRGP	12.5%	META	9.58%
10.0	MU	12.5%	MOS	9.58%
10.0	BAC	12.08%	GE	9.58%
10.0	PWR	12.08%	BHC	9.58%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	AVGO	37.12%	WFC	24.02%
21.0	VZ	24.89%	TMUS	23.14%
21.0	ORCL	24.45%	CCL	22.71%
21.0	TSLA	24.02%	ORCL	22.27%
21.0	BUD	21.83%	MS	21.83%
21.0	META	21.4%	MSTR	20.96%
21.0	VST	20.96%	GS	20.96%
21.0	GILD	20.09%	WYNN	20.96%
21.0	GS	20.09%	TRGP	20.52%
21.0	AAP	19.65%	VST	20.09%
21.0	GE	19.21%	NFLX	19.65%
21.0	KALU	19.21%	LVS	17.9%
21.0	TMUS	17.47%	CAH	17.03%
21.0	CHTR	17.47%	JPM	17.03%
21.0	WFC	16.16%	TSLA	17.03%
21.0	MSTR	15.72%	GE	16.59%
21.0	MU	15.28%	GLD	16.59%
21.0	NEM	15.28%	AVGO	16.59%
21.0	BAC	15.28%	T	16.16%
21.0	PWR	14.85%	GILD	15.72%
21.0	TXN	14.85%	CPRT	13.97%
21.0	CMA	14.41%	BUD	13.1%
21.0	JPM	13.97%	COST	12.66%
21.0	EXPE	13.54%	HLT	12.66%
21.0	WYNN	13.1%	GBTC	12.23%
21.0	TRGP	12.66%	META	11.79%
21.0	HON	12.66%	CHTR	11.79%
21.0	HD	12.23%	HSBC	11.79%
21.0	ISRG	12.23%	TEVA	11.35%
21.0	SLV	12.23%	PWR	11.35%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	BUD	42.78%	NFLX	42.78%
63.0	AVGO	39.04%	CCL	38.5%
63.0	GS	34.22%	WFC	37.97%
63.0	WFC	31.55%	GLD	36.9%
63.0	TSLA	31.02%	TRGP	34.22%
63.0	GILD	27.81%	VST	34.22%
63.0	VST	27.81%	GS	33.69%
63.0	CAH	26.2%	ORCL	32.62%
63.0	ORCL	24.06%	CAH	32.62%
63.0	EXPE	21.93%	MS	32.09%
63.0	PWR	20.86%	GBTC	32.09%
63.0	TMUS	20.32%	TSLA	31.02%
63.0	META	19.25%	PWR	31.02%
63.0	GE	18.72%	TMUS	30.48%
63.0	GLD	17.11%	MSTR	30.48%
63.0	WDC	16.58%	BUD	27.27%
63.0	AAP	15.51%	T	26.74%
63.0	TRGP	14.97%	HSBC	25.13%
63.0	CCL	14.97%	HLT	24.06%
63.0	MS	14.44%	AVGO	24.06%
63.0	MSFT	14.44%	LVS	22.99%
63.0	MSTR	14.44%	MSFT	21.93%
63.0	KALU	13.37%	CSCO	20.32%
63.0	CMA	12.3%	GILD	20.32%
63.0	GBTC	11.76%	MOS	19.79%
63.0	CHTR	11.23%	INTU	19.79%
63.0	NEM	11.23%	JPM	18.18%
63.0	MSI	10.7%	AMZN	17.11%
63.0	KEY	10.7%	BA	14.44%
63.0	CVS	10.16%	THC	14.44%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	GILD	58.06%	GLD	88.71%
126.0	CAH	46.77%	HSBC	75.81%
126.0	TMUS	41.94%	NFLX	68.55%
126.0	BUD	39.52%	T	66.94%
126.0	GLD	37.9%	CAH	57.26%
126.0	AVGO	25.0%	TMUS	42.74%
126.0	NEM	24.19%	GILD	37.1%
126.0	GE	21.77%	BUD	36.29%
126.0	EXPE	20.97%	TRGP	31.45%
126.0	META	20.16%	GE	29.84%
126.0	MSTR	18.55%	MSTR	26.61%
126.0	WFC	17.74%	WFC	25.81%
126.0	NFLX	14.52%	NEM	23.39%
126.0	VFC	14.52%	VST	20.97%
126.0	VST	9.68%	CSCO	20.97%
126.0	TRGP	6.45%	ORCL	16.94%
126.0	HSBC	5.65%	MS	13.71%
126.0	ORLY	4.03%	NVS	12.1%
126.0	AAP	4.03%	GS	11.29%
126.0	MS	3.23%	CCL	11.29%
126.0	GS	2.42%	JPM	10.48%
126.0	SLV	0.81%	AVGO	10.48%
126.0	LUMN	0.0%	HLT	9.68%
126.0	ORCL	0.0%	EXPE	9.68%
126.0	ON	0.0%	TSLA	8.06%
126.0	NWL	0.0%	AMZN	7.26%
126.0	NVS	0.0%	COST	7.26%
126.0	NVDA	0.0%	CVS	6.45%
126.0	LNC	0.0%	ORLY	6.45%
126.0	LQD	0.0%	SBUX	5.65%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NVDA	0.48%	MSTR	0.45%
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	GE	0.34%	GME	0.19%
1.0	AVGO	0.34%	PWR	0.18%
1.0	TSLA	0.28%	GE	0.17%
1.0	TDG	0.24%	X	0.17%
1.0	LLY	0.23%	NFLX	0.16%
1.0	MSTR	0.21%	ORCL	0.15%
1.0	THC	0.2%	LLY	0.15%
1.0	PWR	0.2%	META	0.15%
1.0	TRGP	0.19%	TRGP	0.14%
1.0	AMD	0.18%	CAH	0.14%
1.0	PHM	0.18%	THC	0.13%
1.0	CAH	0.18%	CDNS	0.12%
1.0	AZO	0.18%	TDG	0.12%
1.0	CDNS	0.17%	ETRN	0.12%
1.0	DHI	0.17%	PHM	0.12%
1.0	ORLY	0.17%	CCL	0.11%
1.0	MSFT	0.17%	TEVA	0.11%
1.0	B	0.16%	ORLY	0.1%
1.0	GME	0.16%	AMD	0.1%
1.0	JPM	0.15%	TMUS	0.1%
1.0	COST	0.15%	IRM	0.1%
1.0	ON	0.15%	GS	0.09%
1.0	WDC	0.14%	JPM	0.09%
1.0	ETRN	0.14%	WDC	0.09%
1.0	CMG	0.14%	AZO	0.09%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	5.61%	MSTR	4.67%
10.0	VST	3.4%	VST	3.03%
10.0	MSTR	3.39%	NVDA	2.83%
10.0	TSLA	3.34%	AVGO	2.19%
10.0	GBTC	3.33%	GBTC	2.14%
10.0	AVGO	3.25%	PWR	1.8%
10.0	LLY	3.19%	NFLX	1.67%
10.0	CCL	3.19%	GE	1.66%
10.0	PWR	2.52%	GME	1.62%
10.0	GE	2.28%	META	1.6%
10.0	AZO	1.82%	X	1.58%
10.0	CDNS	1.8%	LLY	1.55%
10.0	PHM	1.75%	ORCL	1.52%
10.0	CAH	1.67%	ETRN	1.41%
10.0	X	1.67%	CAH	1.38%
10.0	MSFT	1.64%	TRGP	1.35%
10.0	ETRN	1.52%	THC	1.22%
10.0	ORLY	1.52%	TDG	1.21%
10.0	AMD	1.47%	TEVA	1.2%
10.0	TDG	1.47%	CDNS	1.18%
10.0	HLT	1.43%	PHM	1.15%
10.0	THC	1.4%	CCL	1.1%
10.0	DHI	1.35%	IRM	1.07%
10.0	GME	1.32%	ORLY	1.02%
10.0	JPM	1.28%	GWW	1.0%
10.0	COST	1.25%	GS	0.96%
10.0	GS	1.19%	TSLA	0.92%
10.0	TRGP	1.17%	JPM	0.9%
10.0	QQQ	1.16%	AMD	0.89%
10.0	NFLX	1.16%	TMUS	0.89%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	11.77%	MSTR	10.52%
21.0	MSTR	8.99%	VST	6.54%
21.0	TSLA	8.28%	NVDA	6.11%
21.0	GBTC	7.87%	GBTC	4.66%
21.0	VST	7.69%	AVGO	4.6%
21.0	CCL	6.82%	PWR	3.79%
21.0	LLY	5.68%	NFLX	3.79%
21.0	PWR	5.57%	META	3.61%
21.0	AVGO	5.18%	GE	3.59%
21.0	GE	4.74%	ETRN	3.5%
21.0	AZO	4.17%	ORCL	3.34%
21.0	CDNS	4.03%	LLY	3.25%
21.0	PHM	3.92%	X	3.17%
21.0	CAH	3.58%	CAH	2.98%
21.0	NFLX	3.57%	TRGP	2.85%
21.0	X	3.55%	THC	2.69%
21.0	DHI	3.42%	TEVA	2.62%
21.0	ETRN	3.28%	GME	2.54%
21.0	ORLY	3.16%	TDG	2.48%
21.0	MSFT	3.14%	CCL	2.47%
21.0	THC	3.13%	PHM	2.45%
21.0	TDG	3.03%	CDNS	2.4%
21.0	JPM	2.92%	IRM	2.28%
21.0	AMD	2.87%	GWW	2.2%
21.0	COST	2.83%	TSLA	2.2%
21.0	QQQ	2.8%	GS	2.08%
21.0	PCG	2.75%	ORLY	2.07%
21.0	HLT	2.73%	ISRG	1.91%
21.0	ORCL	2.73%	JPM	1.89%
21.0	GS	2.58%	AZO	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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	46.09%	MSTR	30.81%
63.0	NVDA	36.75%	VST	20.68%
63.0	GBTC	25.91%	NVDA	19.7%
63.0	VST	23.45%	GBTC	15.44%
63.0	CCL	21.99%	AVGO	13.64%
63.0	PWR	17.29%	NFLX	13.02%
63.0	NFLX	15.43%	META	12.42%
63.0	LLY	15.33%	GE	11.19%
63.0	GE	14.07%	ETRN	10.28%
63.0	AVGO	13.92%	PWR	10.22%
63.0	TSLA	13.32%	LLY	9.37%
63.0	PHM	12.56%	CAH	8.86%
63.0	THC	12.02%	ORCL	8.76%
63.0	CAH	10.56%	THC	8.52%
63.0	CDNS	10.55%	PHM	8.09%
63.0	ORCL	10.51%	TRGP	7.99%
63.0	DHI	10.31%	TDG	7.29%
63.0	TDG	10.25%	TEVA	7.04%
63.0	MSFT	10.23%	CCL	7.02%
63.0	AZO	9.85%	GWW	6.59%
63.0	QQQ	9.8%	CDNS	6.54%
63.0	JPM	9.68%	ISRG	6.34%
63.0	ETRN	9.32%	IRM	6.31%
63.0	AMD	9.22%	JPM	6.03%
63.0	AMAT	9.01%	ORLY	5.92%
63.0	VNO	8.93%	X	5.91%
63.0	TRGP	8.84%	GS	5.89%
63.0	AMZN	8.81%	ACGL	5.85%
63.0	GWW	8.27%	CMG	5.43%
63.0	PCG	8.23%	TMUS	5.36%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	NVDA	90.31%	MSTR	72.31%
126.0	MSTR	77.33%	NVDA	48.54%
126.0	GBTC	67.8%	VST	43.23%
126.0	VST	50.96%	GBTC	39.65%
126.0	NFLX	44.75%	NFLX	30.36%
126.0	GE	39.49%	META	29.34%
126.0	CCL	36.9%	AVGO	27.95%
126.0	PHM	36.77%	GE	25.76%
126.0	PWR	32.2%	LLY	20.46%
126.0	AVGO	31.57%	TRGP	19.42%
126.0	THC	30.52%	THC	19.33%
126.0	LLY	27.89%	PHM	18.63%
126.0	META	27.02%	ETRN	18.49%
126.0	AMZN	26.62%	PWR	18.32%
126.0	ORCL	26.27%	CAH	17.93%
126.0	VNO	25.63%	ORCL	16.74%
126.0	MU	25.47%	TDG	16.34%
126.0	DHI	24.63%	ISRG	15.33%
126.0	TDG	23.78%	TEVA	14.72%
126.0	ISRG	23.55%	GWW	14.22%
126.0	AMAT	23.02%	CCL	13.76%
126.0	TSLA	22.84%	ACGL	13.55%
126.0	QQQ	22.65%	JPM	13.41%
126.0	ACGL	22.1%	ORLY	13.34%
126.0	JPM	21.89%	IRM	13.26%
126.0	CAH	21.55%	MSI	12.4%
126.0	COST	21.17%	COST	12.32%
126.0	AZO	20.91%	X	12.31%
126.0	TRGP	20.83%	CMG	12.26%
126.0	PCG	20.74%	CDNS	12.22%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	NVDA	278.22%	MSTR	224.9%
252.0	GBTC	237.36%	NVDA	142.83%
252.0	MSTR	219.15%	VST	126.9%
252.0	NFLX	133.29%	GBTC	118.26%
252.0	VST	123.04%	META	79.88%
252.0	GE	120.68%	AVGO	73.22%
252.0	PHM	118.27%	NFLX	69.3%
252.0	LLY	102.0%	GE	61.18%
252.0	AVGO	98.3%	PHM	54.19%
252.0	META	96.48%	LLY	52.22%
252.0	CCL	92.68%	THC	51.02%
252.0	PWR	87.23%	TRGP	49.48%
252.0	THC	81.56%	PWR	42.53%
252.0	AMZN	76.32%	TDG	40.08%
252.0	DHI	75.64%	ORCL	39.22%
252.0	VNO	74.61%	ISRG	38.83%
252.0	ISRG	73.88%	TEVA	37.59%
252.0	ACGL	70.21%	CCL	37.26%
252.0	COST	69.21%	IRM	36.16%
252.0	TRGP	68.17%	ETRN	35.78%
252.0	MU	67.36%	CAH	33.77%
252.0	CDNS	67.32%	GWW	33.57%
252.0	QQQ	62.91%	DHI	33.55%
252.0	TDG	62.49%	ACGL	33.04%
252.0	ORCL	61.74%	JPM	31.54%
252.0	MSFT	61.37%	CMG	31.21%
252.0	AMD	60.27%	COST	30.88%
252.0	JPM	57.54%	MSI	29.72%
252.0	INTU	56.82%	CPRT	29.43%
252.0	AMAT	56.68%	CDNS	28.71%

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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	AMD	2.03%	GNRC	1.31%
1.0	GNRC	1.87%	AMD	1.11%
1.0	FSUGY	1.49%	WDC	0.79%
1.0	PHM	1.28%	CLF	0.77%
1.0	LW	1.11%	DHI	0.75%
1.0	CLF	1.1%	CDNS	0.72%
1.0	WDC	0.89%	ORLY	0.53%
1.0	DHI	0.72%	NVDA	0.51%
1.0	LVS	0.71%	FSUGY	0.47%
1.0	KHC	0.56%	GE	0.44%
1.0	ORLY	0.56%	VST	0.43%
1.0	GE	0.56%	LVS	0.41%
1.0	CDNS	0.54%	LW	0.41%
1.0	PEP	0.47%	PHM	0.38%
1.0	LEN	0.46%	AVGO	0.35%
1.0	LNC	0.45%	LNC	0.34%
1.0	VST	0.45%	MSFT	0.33%
1.0	AZO	0.4%	LEN	0.3%
1.0	META	0.37%	GOOGL	0.29%
1.0	AAP	0.31%	META	0.29%
1.0	BA	0.3%	IEP	0.28%
1.0	MSFT	0.27%	JAZZ	0.26%
1.0	JAZZ	0.26%	NEM	0.26%
1.0	EXPE	0.26%	CMA	0.24%
1.0	GBTC	0.24%	EXPE	0.22%
1.0	RIO	0.23%	AZN	0.22%
1.0	WYNN	0.23%	TDG	0.2%
1.0	GOOGL	0.22%	GBTC	0.18%
1.0	NEM	0.19%	AAP	0.17%
1.0	ABBV	0.18%	ABBV	0.17%

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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	CLF	17.2%	CLF	16.98%
10.0	AMD	16.97%	AMD	13.37%
10.0	LW	12.95%	LW	9.63%
10.0	FSUGY	11.7%	GNRC	8.78%
10.0	PHM	10.39%	DHI	7.85%
10.0	KHC	9.92%	FSUGY	7.33%
10.0	GNRC	8.51%	WDC	6.9%
10.0	DHI	8.44%	GOOGL	6.52%
10.0	PCG	7.24%	CDNS	6.31%
10.0	PEP	6.8%	CMA	6.24%
10.0	BHP	6.34%	ORLY	5.59%
10.0	WDC	6.16%	NEM	5.28%
10.0	RIO	5.75%	NVDA	5.18%
10.0	ORLY	5.58%	PWR	4.89%
10.0	GOOGL	5.16%	AVGO	4.55%
10.0	NWL	4.79%	GE	4.48%
10.0	CDNS	4.76%	PEP	4.42%
10.0	GE	4.47%	RIO	4.31%
10.0	LVS	3.85%	KHC	4.3%
10.0	NEM	3.84%	PHM	4.09%
10.0	LNC	3.68%	JAZZ	3.87%
10.0	JAZZ	3.54%	ORCL	3.81%
10.0	HSBC	3.45%	BHP	3.69%
10.0	AZO	3.37%	VST	3.22%
10.0	LEN	3.33%	LVS	3.21%
10.0	GBTC	3.27%	EXPE	3.15%
10.0	AZN	3.27%	TMUS	3.08%
10.0	PWR	3.26%	AMC	3.03%
10.0	VNO	3.24%	TSLA	3.0%
10.0	ORCL	3.2%	PCG	2.98%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	AAP	1.48%	AAP	1.09%
1.0	AMD	1.43%	AMD	0.91%
1.0	GNRC	1.39%	X	0.9%
1.0	NVDA	1.34%	WDC	0.89%
1.0	CCL	1.32%	GNRC	0.88%
1.0	LVS	1.24%	ORCL	0.84%
1.0	X	1.24%	NVDA	0.71%
1.0	WDC	1.12%	ON	0.69%
1.0	CLF	1.1%	VST	0.69%
1.0	ELAN	1.1%	CCL	0.68%
1.0	ORCL	0.82%	ELAN	0.65%
1.0	MOS	0.74%	AVGO	0.62%
1.0	WYNN	0.71%	LVS	0.53%
1.0	CSTM	0.67%	MU	0.46%
1.0	FSUGY	0.61%	WYNN	0.46%
1.0	GE	0.61%	GE	0.43%
1.0	GBTC	0.6%	GS	0.4%
1.0	LW	0.58%	CLF	0.39%
1.0	BHC	0.58%	META	0.39%
1.0	VST	0.58%	INTU	0.35%
1.0	BA	0.57%	PWR	0.34%
1.0	ON	0.55%	DHI	0.34%
1.0	PHM	0.55%	CSTM	0.33%
1.0	GS	0.53%	GBTC	0.31%
1.0	INTU	0.5%	CMA	0.31%
1.0	BIIB	0.48%	MSFT	0.31%
1.0	DHI	0.46%	NEM	0.3%
1.0	B	0.46%	BA	0.3%
1.0	META	0.43%	BHC	0.28%
1.0	AMAT	0.41%	AMAT	0.27%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	X	15.86%	AAP	14.08%
10.0	AAP	13.95%	X	13.61%
10.0	NVDA	13.56%	ORCL	9.53%
10.0	CLF	11.34%	AMD	9.14%
10.0	AMD	10.94%	WDC	8.45%
10.0	BHC	8.72%	CLF	7.91%
10.0	CCL	8.71%	BHC	7.06%
10.0	ORCL	8.66%	CCL	6.99%
10.0	WDC	7.41%	NVDA	6.9%
10.0	LVS	6.42%	ON	6.84%
10.0	GNRC	6.4%	VST	6.12%
10.0	ON	6.12%	AVGO	5.9%
10.0	PHM	5.64%	GNRC	5.89%
10.0	CSTM	4.98%	MU	4.79%
10.0	MOS	4.81%	LVS	4.6%
10.0	VST	4.61%	GS	4.22%
10.0	ELAN	4.49%	GE	4.14%
10.0	WYNN	4.47%	ELAN	4.06%
10.0	GS	4.46%	PWR	4.0%
10.0	BA	4.46%	WYNN	3.99%
10.0	MU	4.39%	CSTM	3.91%
10.0	GBTC	4.33%	INTU	3.82%
10.0	GE	4.18%	KALU	3.81%
10.0	INTU	4.05%	NEM	3.78%
10.0	FSUGY	3.76%	AMC	3.73%
10.0	DHI	3.63%	GOOGL	3.69%
10.0	ZION	3.35%	CMA	3.35%
10.0	PWR	3.21%	DHI	3.22%
10.0	NWL	3.21%	BA	3.16%
10.0	AA	3.2%	SLV	3.13%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	X	29.23%	X	28.78%
21.0	CLF	27.7%	AAP	26.65%
21.0	NVDA	27.64%	ORCL	24.32%
21.0	BHC	26.96%	BHC	20.86%
21.0	AMD	24.1%	CLF	20.11%
21.0	AAP	22.85%	AMD	19.82%
21.0	ORCL	22.7%	WDC	18.62%
21.0	CCL	21.48%	ON	17.57%
21.0	ON	19.14%	CCL	16.06%
21.0	GNRC	17.94%	NVDA	14.78%
21.0	LVS	17.63%	VST	13.09%
21.0	WDC	15.73%	MU	12.94%
21.0	PHM	15.4%	GNRC	12.92%
21.0	VST	11.65%	AVGO	12.07%
21.0	GS	11.15%	LVS	11.3%
21.0	CSTM	10.85%	WYNN	10.66%
21.0	MU	10.71%	KALU	10.12%
21.0	LUMN	10.58%	GS	9.96%
21.0	DHI	10.18%	CSTM	9.0%
21.0	ZION	9.98%	AMAT	8.96%
21.0	WYNN	9.63%	PWR	8.62%
21.0	TFC	9.21%	ELAN	8.45%
21.0	AMAT	9.08%	ZION	8.27%
21.0	ELAN	8.98%	NEM	7.86%
21.0	MOS	8.66%	KEY	7.65%
21.0	BA	8.21%	FCX	7.53%
21.0	BALL	7.27%	DHI	7.25%
21.0	FSUGY	7.14%	SLV	7.21%
21.0	KEY	7.1%	GE	7.17%
21.0	KALU	6.99%	CMA	7.12%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	VST	1.02%	MSTR	0.55%
1.0	CCL	0.76%	VST	0.53%
1.0	NVDA	0.67%	AVGO	0.35%
1.0	AVGO	0.57%	CCL	0.32%
1.0	MOS	0.44%	GBTC	0.28%
1.0	LVS	0.44%	ORCL	0.28%
1.0	GBTC	0.43%	NFLX	0.28%
1.0	WYNN	0.42%	TSLA	0.25%
1.0	TSLA	0.38%	NVDA	0.25%
1.0	VNO	0.38%	PWR	0.23%
1.0	MS	0.37%	GE	0.23%
1.0	NFLX	0.36%	EXPE	0.21%
1.0	GE	0.36%	X	0.21%
1.0	CDNS	0.33%	META	0.2%
1.0	GT	0.32%	GS	0.19%
1.0	T	0.32%	CAH	0.18%
1.0	TDG	0.32%	WDC	0.18%
1.0	WDC	0.28%	CDNS	0.18%
1.0	TRGP	0.28%	WFC	0.17%
1.0	JPM	0.27%	MS	0.17%
1.0	HSBC	0.26%	HSBC	0.17%
1.0	CSCO	0.26%	WYNN	0.17%
1.0	HLT	0.25%	GILD	0.17%
1.0	AMD	0.25%	JPM	0.17%
1.0	AAP	0.25%	GNRC	0.16%
1.0	GNRC	0.24%	AMD	0.16%
1.0	CAH	0.24%	LVS	0.16%
1.0	B	0.23%	CSCO	0.16%
1.0	ELAN	0.22%	T	0.16%
1.0	INTU	0.21%	VNO	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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	VST	7.39%	MSTR	6.05%
10.0	NVDA	6.59%	VST	4.98%
10.0	CCL	5.97%	CCL	3.46%
10.0	MSTR	5.86%	AVGO	3.42%
10.0	GT	4.25%	GBTC	3.25%
10.0	WYNN	3.97%	ORCL	3.0%
10.0	AVGO	3.81%	NFLX	2.88%
10.0	NFLX	3.69%	TSLA	2.82%
10.0	GBTC	3.69%	NVDA	2.44%
10.0	LVS	3.62%	GE	2.27%
10.0	MOS	3.48%	PWR	2.24%
10.0	T	3.35%	WFC	2.07%
10.0	TSLA	2.73%	EXPE	2.06%
10.0	CSCO	2.73%	WYNN	2.02%
10.0	CDNS	2.68%	CAH	1.92%
10.0	CAH	2.65%	HSBC	1.92%
10.0	WFC	2.32%	GS	1.92%
10.0	COST	2.28%	MS	1.9%
10.0	HSBC	2.19%	GILD	1.86%
10.0	ORCL	2.18%	X	1.83%
10.0	MS	2.17%	CSCO	1.77%
10.0	NWL	2.09%	JPM	1.7%
10.0	JPM	2.08%	META	1.7%
10.0	AAP	2.05%	BA	1.62%
10.0	BHC	2.05%	BHC	1.59%
10.0	WDC	2.04%	LVS	1.57%
10.0	BA	1.98%	T	1.57%
10.0	HLT	1.94%	GT	1.52%
10.0	GE	1.86%	WDC	1.51%
10.0	VNO	1.79%	MOS	1.5%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MSTR	16.79%	MSTR	13.84%
21.0	VST	15.25%	VST	10.58%
21.0	CCL	12.02%	CCL	7.21%
21.0	NVDA	11.09%	GBTC	6.99%
21.0	GBTC	8.65%	AVGO	6.84%
21.0	WYNN	8.56%	ORCL	6.43%
21.0	NFLX	8.35%	NFLX	6.22%
21.0	MOS	7.99%	TSLA	5.92%
21.0	LVS	7.81%	GE	4.61%
21.0	T	6.62%	PWR	4.47%
21.0	GT	6.38%	WYNN	4.37%
21.0	AVGO	6.11%	WFC	4.19%
21.0	ORCL	5.5%	NVDA	4.18%
21.0	TSLA	5.29%	CAH	3.98%
21.0	MS	4.95%	GS	3.91%
21.0	CAH	4.79%	GILD	3.89%
21.0	CSCO	4.75%	MS	3.86%
21.0	WFC	4.71%	HSBC	3.81%
21.0	CDNS	4.63%	EXPE	3.71%
21.0	BA	4.35%	META	3.6%
21.0	HSBC	4.33%	X	3.54%
21.0	HLT	4.14%	CSCO	3.43%
21.0	AAP	4.08%	T	3.38%
21.0	COST	3.95%	JPM	3.28%
21.0	GE	3.95%	LVS	3.26%
21.0	JPM	3.85%	BA	3.18%
21.0	GLD	3.81%	BHC	3.11%
21.0	BHC	3.69%	MOS	3.04%
21.0	GS	3.69%	AMZN	2.91%
21.0	GOOGL	3.6%	GT	2.85%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	112.82%	MSTR	50.46%
63.0	VST	45.17%	VST	27.94%
63.0	MOS	34.18%	GBTC	23.71%
63.0	GBTC	33.5%	NFLX	21.27%
63.0	NFLX	32.95%	TSLA	20.42%
63.0	CCL	30.29%	AVGO	18.81%
63.0	GT	25.07%	CCL	17.86%
63.0	NVDA	24.49%	CAH	13.12%
63.0	T	21.77%	GE	12.41%
63.0	MS	17.76%	ORCL	12.12%
63.0	TSLA	17.43%	WFC	12.0%
63.0	BA	17.38%	PWR	11.9%
63.0	AVGO	17.21%	HSBC	11.65%
63.0	PWR	16.89%	MOS	11.42%
63.0	HSBC	15.59%	BA	10.95%
63.0	CSCO	15.25%	GILD	10.6%
63.0	CAH	15.16%	GS	10.5%
63.0	WFC	14.77%	GT	10.33%
63.0	JPM	14.5%	MS	10.27%
63.0	GOOGL	14.5%	T	10.19%
63.0	QQQ	13.99%	JPM	9.46%
63.0	CDNS	12.92%	NVDA	9.45%
63.0	LVS	12.83%	CSCO	9.1%
63.0	ORCL	12.64%	GLD	9.07%
63.0	AMZN	12.38%	X	9.05%
63.0	GLD	12.24%	META	8.96%
63.0	MNST	11.22%	EXPE	8.7%
63.0	TRGP	11.07%	GME	8.25%
63.0	X	11.04%	AAP	8.24%
63.0	GE	10.33%	MNST	7.82%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	MSTR	78.55%	MSTR	58.42%
126.0	NFLX	63.91%	NFLX	40.26%
126.0	T	60.06%	GBTC	29.24%
126.0	MOS	52.84%	VST	28.75%
126.0	VST	51.09%	HSBC	26.15%
126.0	GT	40.38%	GILD	25.5%
126.0	GBTC	40.04%	GE	25.43%
126.0	HSBC	36.81%	CAH	25.04%
126.0	BA	34.03%	T	24.82%
126.0	GLD	30.54%	AVGO	23.86%
126.0	CCL	28.28%	GLD	21.32%
126.0	CAH	27.75%	BA	18.05%
126.0	GE	26.43%	MOS	17.61%
126.0	CSCO	25.38%	WFC	17.1%
126.0	JPM	24.64%	CVS	16.88%
126.0	X	24.56%	GT	15.7%
126.0	GILD	24.39%	ORLY	15.45%
126.0	MS	24.21%	TMUS	15.33%
126.0	AZO	23.14%	CSCO	15.21%
126.0	MNST	22.97%	AZO	15.1%
126.0	AVGO	22.22%	NEM	14.82%
126.0	WFC	21.5%	JPM	14.52%
126.0	TDG	20.71%	MNST	14.19%
126.0	CVS	19.9%	X	13.74%
126.0	ORCL	18.35%	META	13.24%
126.0	ORLY	16.65%	BUD	13.04%
126.0	GS	16.43%	GS	12.54%
126.0	TRGP	15.69%	CCL	12.42%
126.0	COST	15.01%	SLV	11.78%
126.0	NEM	13.67%	MS	10.59%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SIVBQ	-0.8%	SIVBQ	-0.78%
1.0	IEP	-0.45%	SBNY	-0.45%
1.0	SBNY	-0.38%	FRCB	-0.23%
1.0	NWL	-0.33%	IEP	-0.16%
1.0	LUMN	-0.32%	AMC	-0.15%
1.0	CZR	-0.22%	VFC	-0.13%
1.0	UAA	-0.2%	NWL	-0.12%
1.0	FRCB	-0.17%	AAP	-0.11%
1.0	BIIB	-0.16%	LUMN	-0.1%
1.0	BXP	-0.12%	CNC	-0.09%
1.0	LNC	-0.12%	BHC	-0.07%
1.0	CNC	-0.11%	CZR	-0.07%
1.0	GT	-0.11%	UAA	-0.06%
1.0	TLT	-0.1%	CHTR	-0.06%
1.0	INTC	-0.09%	INTC	-0.06%
1.0	AMC	-0.09%	UNH	-0.06%
1.0	AAP	-0.09%	TLT	-0.05%
1.0	BALL	-0.08%	CVS	-0.04%
1.0	VFC	-0.08%	BALL	-0.04%
1.0	GNRC	-0.08%	BIIB	-0.04%
1.0	CHTR	-0.07%	BXP	-0.04%
1.0	AA	-0.07%	CYH	-0.04%
1.0	UNH	-0.06%	CMCSA	-0.03%
1.0	ZTS	-0.05%	GSK	-0.03%
1.0	BHP	-0.04%	BMY	-0.03%
1.0	FIS	-0.03%	LNC	-0.03%
1.0	SBUX	-0.03%	ELAN	-0.03%
1.0	CTLT	-0.03%	GT	-0.03%
1.0	CMA	-0.03%	FIS	-0.02%
1.0	KHC	-0.03%	ADBE	-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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SIVBQ	-4.46%	SBNY	-4.05%
10.0	IEP	-3.01%	SIVBQ	-3.9%
10.0	CZR	-2.21%	FRCB	-2.19%
10.0	SBNY	-2.19%	IEP	-1.49%
10.0	LUMN	-2.1%	AMC	-1.45%
10.0	NWL	-1.95%	VFC	-1.3%
10.0	FRCB	-1.26%	NWL	-1.04%
10.0	VFC	-1.06%	CNC	-0.98%
10.0	BIIB	-1.02%	AAP	-0.91%
10.0	AMC	-0.95%	CZR	-0.74%
10.0	UAA	-0.89%	UAA	-0.69%
10.0	CNC	-0.86%	LUMN	-0.62%
10.0	GNRC	-0.79%	TLT	-0.5%
10.0	LNC	-0.73%	INTC	-0.49%
10.0	BXP	-0.7%	BHC	-0.48%
10.0	AAP	-0.68%	BIIB	-0.46%
10.0	AA	-0.64%	UNH	-0.45%
10.0	BALL	-0.61%	CVS	-0.44%
10.0	INTC	-0.59%	CYH	-0.43%
10.0	TLT	-0.5%	CHTR	-0.41%
10.0	UNH	-0.46%	LNC	-0.4%
10.0	CVS	-0.41%	BXP	-0.37%
10.0	VZ	-0.4%	BALL	-0.36%
10.0	CYH	-0.39%	GSK	-0.32%
10.0	FIS	-0.38%	CMCSA	-0.31%
10.0	CHTR	-0.3%	BMY	-0.28%
10.0	ZTS	-0.29%	ELAN	-0.27%
10.0	ADBE	-0.27%	AA	-0.26%
10.0	CMA	-0.25%	GT	-0.23%
10.0	CMCSA	-0.24%	BBY	-0.23%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SIVBQ	-9.97%	SBNY	-11.16%
21.0	IEP	-6.95%	SIVBQ	-9.37%
21.0	SBNY	-6.13%	FRCB	-6.02%
21.0	CZR	-5.34%	AMC	-3.58%
21.0	LUMN	-4.11%	IEP	-3.26%
21.0	NWL	-3.93%	VFC	-2.78%
21.0	FRCB	-3.78%	NWL	-2.33%
21.0	VFC	-2.64%	CNC	-1.87%
21.0	CNC	-2.11%	AAP	-1.82%
21.0	AMC	-2.04%	CZR	-1.57%
21.0	GNRC	-2.01%	UAA	-1.32%
21.0	CLF	-1.44%	BHC	-1.23%
21.0	AAP	-1.37%	LUMN	-1.05%
21.0	BIIB	-1.26%	INTC	-1.05%
21.0	UAA	-1.26%	TLT	-1.05%
21.0	BALL	-1.25%	LNC	-0.99%
21.0	TLT	-1.21%	AA	-0.88%
21.0	INTC	-1.21%	BIIB	-0.87%
21.0	VZ	-1.17%	BXP	-0.83%
21.0	BXP	-1.16%	CVS	-0.81%
21.0	AA	-1.16%	UNH	-0.81%
21.0	CYH	-1.12%	BALL	-0.75%
21.0	LNC	-1.0%	CHTR	-0.64%
21.0	CVS	-0.87%	BMY	-0.63%
21.0	KHC	-0.84%	CMCSA	-0.57%
21.0	FSUGY	-0.8%	GSK	-0.56%
21.0	BHP	-0.77%	KHC	-0.49%
21.0	UNH	-0.71%	CYH	-0.44%
21.0	ADBE	-0.68%	BBY	-0.41%
21.0	RIO	-0.67%	VZ	-0.38%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	SIVBQ	-36.58%	SBNY	-37.59%
63.0	SBNY	-24.57%	SIVBQ	-33.73%
63.0	IEP	-23.76%	FRCB	-24.04%
63.0	FRCB	-18.2%	AMC	-14.66%
63.0	NWL	-14.31%	IEP	-11.41%
63.0	GNRC	-11.44%	VFC	-8.25%
63.0	VFC	-10.92%	NWL	-7.79%
63.0	CZR	-8.92%	AAP	-7.65%
63.0	AMC	-8.22%	CLF	-5.74%
63.0	AAP	-7.94%	CZR	-5.51%
63.0	CLF	-7.88%	BHC	-5.37%
63.0	LUMN	-6.38%	AA	-4.76%
63.0	AA	-6.26%	INTC	-4.13%
63.0	UAA	-6.04%	UAA	-4.04%
63.0	BALL	-5.52%	CNC	-3.64%
63.0	BHC	-4.77%	LNC	-3.2%
63.0	INTC	-4.71%	LUMN	-3.04%
63.0	BHP	-3.95%	TLT	-2.93%
63.0	CVS	-3.7%	BXP	-2.79%
63.0	BIIB	-3.23%	BIIB	-2.75%
63.0	TLT	-3.22%	CVS	-2.74%
63.0	KHC	-3.14%	UNH	-2.6%
63.0	BBY	-2.94%	BALL	-2.58%
63.0	VZ	-2.73%	MOS	-2.41%
63.0	CYH	-2.68%	BMY	-2.34%
63.0	CHTR	-2.57%	KHC	-2.34%
63.0	LNC	-2.56%	GNRC	-2.19%
63.0	CNC	-2.54%	JAZZ	-2.0%
63.0	PRGO	-2.52%	BHP	-1.9%
63.0	OXY	-2.45%	PRGO	-1.88%

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 2025-07-31

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	-47.98%	FRCB	-51.17%
126.0	SBNY	-45.8%	AMC	-29.0%
126.0	NWL	-39.48%	IEP	-22.23%
126.0	VFC	-26.21%	AAP	-18.41%
126.0	GNRC	-21.47%	NWL	-16.71%
126.0	AAP	-19.24%	VFC	-14.2%
126.0	AMC	-18.54%	CLF	-10.65%
126.0	LUMN	-17.53%	CZR	-9.08%
126.0	CLF	-15.83%	AA	-8.35%
126.0	AA	-11.22%	MOS	-8.1%
126.0	CZR	-10.36%	BHC	-7.59%
126.0	BALL	-10.11%	INTC	-6.88%
126.0	CVS	-10.04%	UAA	-6.85%
126.0	BHC	-9.83%	CNC	-6.35%
126.0	MOS	-9.38%	ELAN	-6.16%
126.0	UAA	-8.74%	LUMN	-5.98%
126.0	PRGO	-7.71%	CTLT	-5.69%
126.0	BHP	-7.07%	CVS	-5.66%
126.0	TLT	-6.9%	GNRC	-5.42%
126.0	LNC	-6.7%	BXP	-5.29%
126.0	CTLT	-6.66%	PRGO	-5.26%
126.0	CHTR	-6.49%	BIIB	-5.19%
126.0	KHC	-6.43%	TLT	-5.18%
126.0	VZ	-6.1%	LNC	-5.04%
126.0	GSK	-5.75%	BALL	-4.6%
126.0	CNC	-5.47%	KHC	-4.56%
126.0	ON	-5.26%	BMY	-4.43%
126.0	BIIB	-5.01%	JAZZ	-3.7%

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 2025-07-31

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	-93.85%	AMC	-56.25%
252.0	NWL	-72.75%	IEP	-44.68%
252.0	AAP	-51.9%	AAP	-40.67%
252.0	AMC	-42.9%	NWL	-27.96%
252.0	CLF	-39.47%	VFC	-23.59%
252.0	CVS	-35.03%	MOS	-20.33%
252.0	VFC	-33.69%	CLF	-17.62%
252.0	MOS	-33.33%	CVS	-16.97%
252.0	GNRC	-27.25%	CZR	-14.16%
252.0	CZR	-26.45%	PRGO	-12.39%
252.0	AA	-24.41%	AA	-11.95%
252.0	GT	-18.59%	UAA	-11.51%
252.0	PRGO	-17.82%	CNC	-11.41%
252.0	BHC	-17.65%	INTC	-11.15%
252.0	UAA	-17.58%	BIIB	-11.12%
252.0	CNC	-13.51%	BMY	-10.68%
252.0	TLT	-13.26%	JAZZ	-9.19%
252.0	JAZZ	-13.09%	BHC	-9.17%
252.0	BMY	-12.89%	TLT	-8.4%
252.0	BIIB	-11.99%	KHC	-8.21%
252.0	KHC	-11.8%	OXY	-7.78%
252.0	INTC	-11.77%	GT	-7.6%
252.0	CTLT	-10.5%	CTLT	-6.24%
252.0	BALL	-10.15%	BHP	-5.85%
252.0	BHP	-9.98%	LNC	-4.87%
252.0	CHTR	-9.4%	PEP	-4.29%
252.0	CMA	-9.21%	CHTR	-4.28%

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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	CYH	-4.26%	CHTR	-2.09%
1.0	LUMN	-2.89%	CYH	-1.42%
1.0	NWL	-2.73%	CMG	-1.41%
1.0	CMG	-2.17%	UNH	-1.26%
1.0	CNC	-1.83%	CNC	-1.19%
1.0	CHTR	-1.73%	BHC	-1.02%
1.0	BHC	-1.47%	NWL	-0.98%
1.0	CZR	-1.31%	LUMN	-0.97%
1.0	FCX	-1.1%	BUD	-0.88%
1.0	GT	-1.08%	TXN	-0.82%
1.0	MSTR	-1.06%	MU	-0.71%
1.0	GWW	-1.0%	NAVI	-0.71%
1.0	MU	-0.99%	CZR	-0.68%
1.0	IRM	-0.92%	FCX	-0.63%
1.0	UAA	-0.88%	KALU	-0.62%
1.0	ISRG	-0.84%	INTC	-0.58%
1.0	BMY	-0.82%	BBY	-0.57%
1.0	CMCSA	-0.71%	GWW	-0.56%
1.0	UNH	-0.69%	ISRG	-0.55%
1.0	CAH	-0.66%	NFLX	-0.5%
1.0	NAVI	-0.64%	TEVA	-0.48%
1.0	CPRT	-0.62%	CMCSA	-0.47%
1.0	QCOM	-0.62%	HON	-0.46%
1.0	TEVA	-0.59%	CSTM	-0.44%
1.0	BUD	-0.58%	GT	-0.44%
1.0	MOS	-0.57%	QCOM	-0.43%
1.0	KALU	-0.55%	USB	-0.43%
1.0	INTC	-0.54%	AA	-0.42%
1.0	TFC	-0.53%	ADBE	-0.41%
1.0	TXN	-0.53%	MSTR	-0.41%

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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	CNC	-16.38%	CHTR	-16.6%
10.0	CMG	-14.11%	CYH	-14.45%
10.0	CHTR	-11.48%	CMG	-13.86%
10.0	CZR	-7.82%	CNC	-13.3%
10.0	CYH	-7.74%	TXN	-10.67%
10.0	THC	-7.45%	UNH	-8.71%
10.0	COST	-7.45%	NAVI	-8.46%
10.0	LUMN	-7.32%	THC	-8.01%
10.0	NAVI	-6.69%	MU	-7.3%
10.0	UNH	-5.75%	NFLX	-6.28%
10.0	BIIB	-5.52%	INTC	-6.25%
10.0	FCX	-5.45%	HCA	-5.99%
10.0	GT	-5.14%	CVS	-5.94%
10.0	ISRG	-5.0%	BBY	-5.17%
10.0	TXN	-4.9%	FCX	-4.6%
10.0	NFLX	-4.78%	CZR	-4.54%
10.0	AMAT	-4.67%	ISRG	-4.48%
10.0	BBY	-4.59%	MSTR	-4.31%
10.0	CAH	-4.51%	HON	-4.2%
10.0	HCA	-4.25%	AMAT	-3.82%
10.0	CVS	-4.2%	KALU	-3.41%
10.0	MSTR	-4.18%	CMCSA	-3.38%
10.0	INTC	-4.13%	NVS	-3.27%
10.0	CMCSA	-3.71%	COST	-3.25%
10.0	MU	-3.5%	ZTS	-3.22%
10.0	HON	-2.77%	CAH	-3.12%
10.0	CPRT	-2.7%	GT	-2.85%
10.0	XOM	-2.58%	TRGP	-2.76%
10.0	BHC	-2.5%	LUMN	-2.7%
10.0	KALU	-2.31%	CPRT	-2.36%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	CNC	-2.17%	CNC	-1.15%
1.0	UNH	-1.25%	UNH	-0.8%
1.0	PCG	-0.76%	CHTR	-0.6%
1.0	CYH	-0.73%	CPRT	-0.46%
1.0	CPRT	-0.67%	PCG	-0.28%
1.0	MSTR	-0.54%	SNY	-0.24%
1.0	CHTR	-0.52%	CMG	-0.23%
1.0	BMY	-0.44%	BUD	-0.21%
1.0	LUMN	-0.44%	GME	-0.21%
1.0	CMG	-0.39%	GWW	-0.2%
1.0	GT	-0.38%	BMY	-0.18%
1.0	TEVA	-0.34%	ISRG	-0.15%
1.0	GWW	-0.33%	LUMN	-0.15%
1.0	SNY	-0.3%	ADBE	-0.14%
1.0	LLY	-0.3%	POST	-0.11%
1.0	GME	-0.28%	GT	-0.11%
1.0	COST	-0.22%	CYH	-0.1%
1.0	ISRG	-0.22%	LLY	-0.1%
1.0	BUD	-0.2%	ZTS	-0.1%
1.0	CMCSA	-0.19%	CVS	-0.1%
1.0	TMUS	-0.16%	COST	-0.1%
1.0	IEP	-0.16%	CMCSA	-0.09%
1.0	FIS	-0.15%	CZR	-0.08%
1.0	IRM	-0.15%	ACGL	-0.07%
1.0	CZR	-0.14%	TEVA	-0.07%
1.0	ADBE	-0.14%	TMUS	-0.06%
1.0	INTC	-0.13%	BBY	-0.06%
1.0	T	-0.11%	KHC	-0.06%
1.0	JAZZ	-0.1%	MRK	-0.05%
1.0	MRK	-0.09%	IRM	-0.04%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	CNC	-14.11%	CNC	-13.09%
10.0	CPRT	-5.6%	CPRT	-5.26%
10.0	UNH	-4.89%	UNH	-4.37%
10.0	PCG	-3.54%	CHTR	-3.92%
10.0	COST	-2.96%	PCG	-3.77%
10.0	CHTR	-2.57%	GME	-2.49%
10.0	GME	-1.98%	CYH	-2.49%
10.0	ACGL	-1.89%	ISRG	-1.8%
10.0	TEVA	-1.62%	VFC	-1.48%
10.0	TMUS	-1.55%	CMG	-1.36%
10.0	CMG	-1.43%	COST	-1.35%
10.0	IEP	-1.36%	ACGL	-1.24%
10.0	ISRG	-1.31%	ADBE	-1.22%
10.0	BBY	-0.99%	BBY	-1.0%
10.0	SNY	-0.92%	SNY	-0.98%
10.0	TSLA	-0.67%	ZTS	-0.96%
10.0	CMCSA	-0.62%	TEVA	-0.91%
10.0	CVS	-0.62%	CVS	-0.84%
10.0	HCA	-0.62%	HCA	-0.7%
10.0	ADBE	-0.57%	POST	-0.62%
10.0	VFC	-0.56%	GWW	-0.51%
10.0	ZTS	-0.53%	CMCSA	-0.36%
10.0	GWW	-0.49%	TMUS	-0.33%
10.0	MNST	-0.46%	MNST	-0.29%
10.0	BUD	-0.43%	GT	-0.26%
10.0	VZ	-0.41%	VZ	-0.25%
10.0	POST	-0.4%	MUB	-0.11%
10.0	MSTR	-0.17%	BUD	-0.01%
10.0	NAVI	-0.16%	TLT	0.0%
10.0	MUB	-0.14%	BMY	0.03%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	CNC	-35.99%	CNC	-27.94%
21.0	PCG	-12.97%	CPRT	-10.66%
21.0	CPRT	-11.14%	PCG	-10.65%
21.0	GME	-6.94%	GME	-9.71%
21.0	UNH	-6.35%	UNH	-5.8%
21.0	COST	-6.3%	CYH	-5.62%
21.0	ACGL	-4.83%	CHTR	-5.5%
21.0	CHTR	-3.15%	ADBE	-4.4%
21.0	ADBE	-2.84%	ISRG	-3.73%
21.0	TEVA	-2.74%	COST	-3.23%
21.0	TMUS	-2.65%	ACGL	-3.08%
21.0	TSLA	-2.65%	VFC	-3.0%
21.0	SNY	-2.5%	ZTS	-2.93%
21.0	GWW	-2.39%	SNY	-2.77%
21.0	CYH	-2.21%	TEVA	-2.26%
21.0	ISRG	-1.89%	TSLA	-1.92%
21.0	MNST	-1.85%	MNST	-1.84%
21.0	ZTS	-1.71%	TMUS	-1.76%
21.0	BUD	-1.41%	GWW	-1.71%
21.0	VFC	-1.29%	HCA	-1.46%
21.0	VZ	-1.16%	POST	-1.42%
21.0	POST	-1.16%	VZ	-1.42%
21.0	HCA	-1.11%	BBY	-1.13%
21.0	BBY	-1.08%	BUD	-0.69%
21.0	GT	-0.78%	GT	-0.52%
21.0	CMCSA	-0.43%	GSK	-0.46%
21.0	IEP	-0.2%	MUB	-0.13%
21.0	MUB	-0.18%	CMCSA	-0.12%
21.0	GSK	-0.18%	BMY	-0.12%
21.0	HD	-0.02%	HD	-0.02%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	IEP	-0.7%	CNC	-0.37%
1.0	CNC	-0.59%	UNH	-0.32%
1.0	BIIB	-0.48%	IEP	-0.21%
1.0	UNH	-0.44%	CYH	-0.19%
1.0	CYH	-0.38%	AMC	-0.16%
1.0	LEN	-0.32%	BIIB	-0.16%
1.0	PCG	-0.25%	ADBE	-0.14%
1.0	NWL	-0.23%	LEN	-0.14%
1.0	AMC	-0.21%	MRK	-0.14%
1.0	TEVA	-0.2%	NWL	-0.13%
1.0	ADBE	-0.2%	CHTR	-0.1%
1.0	OXY	-0.2%	KHC	-0.1%
1.0	CMCSA	-0.17%	PCG	-0.09%
1.0	MRK	-0.15%	PEP	-0.09%
1.0	CZR	-0.14%	OXY	-0.09%
1.0	BXP	-0.13%	CZR	-0.09%
1.0	KHC	-0.13%	ZTS	-0.07%
1.0	AZN	-0.13%	CMCSA	-0.07%
1.0	ON	-0.11%	BBY	-0.06%
1.0	PEP	-0.1%	CMG	-0.06%
1.0	TLT	-0.1%	LUMN	-0.06%
1.0	AMAT	-0.09%	NAVI	-0.05%
1.0	BBY	-0.08%	TLT	-0.04%
1.0	RIO	-0.08%	DHI	-0.04%
1.0	DHI	-0.07%	SNY	-0.04%
1.0	LNC	-0.07%	BALL	-0.04%
1.0	CMG	-0.07%	CPRT	-0.04%
1.0	BHP	-0.07%	AMGN	-0.03%
1.0	PHM	-0.07%	ACGL	-0.03%
1.0	ZTS	-0.07%	IRM	-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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	IEP	-4.83%	CNC	-3.65%
10.0	BIIB	-3.81%	UNH	-2.6%
10.0	CNC	-3.79%	IEP	-1.8%
10.0	UNH	-2.7%	BIIB	-1.71%
10.0	LEN	-2.16%	LEN	-1.49%
10.0	ADBE	-1.61%	AMC	-1.44%
10.0	OXY	-1.58%	ADBE	-1.3%
10.0	AMAT	-1.52%	MRK	-1.21%
10.0	PCG	-1.1%	CYH	-1.09%
10.0	MRK	-1.08%	PCG	-0.92%
10.0	DHI	-1.03%	OXY	-0.83%
10.0	KHC	-0.98%	KHC	-0.8%
10.0	ON	-0.97%	ZTS	-0.75%
10.0	AMC	-0.97%	PEP	-0.73%
10.0	BBY	-0.88%	BBY	-0.58%
10.0	CMCSA	-0.74%	DHI	-0.57%
10.0	CMG	-0.7%	CZR	-0.5%
10.0	PEP	-0.69%	CMCSA	-0.5%
10.0	ZTS	-0.6%	TLT	-0.44%
10.0	TLT	-0.59%	CMG	-0.4%
10.0	UAA	-0.5%	ACGL	-0.39%
10.0	BXP	-0.49%	AZN	-0.35%
10.0	FIS	-0.48%	ON	-0.34%
10.0	ACGL	-0.45%	VFC	-0.34%
10.0	CYH	-0.29%	NWL	-0.25%
10.0	HCA	-0.25%	SNY	-0.2%
10.0	CZR	-0.24%	BALL	-0.18%
10.0	MUB	-0.24%	AMGN	-0.18%
10.0	RIO	-0.2%	CPRT	-0.18%
10.0	AAPL	-0.11%	IRM	-0.18%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	IEP	-10.17%	CNC	-7.19%
21.0	CNC	-8.35%	UNH	-5.26%
21.0	BIIB	-6.75%	BIIB	-3.76%
21.0	UNH	-5.47%	IEP	-3.74%
21.0	LEN	-5.4%	LEN	-3.65%
21.0	OXY	-4.24%	AMC	-3.37%
21.0	ADBE	-4.07%	ADBE	-3.06%
21.0	DHI	-4.06%	MRK	-2.82%
21.0	PCG	-3.81%	PCG	-2.34%
21.0	MRK	-2.91%	KHC	-2.04%
21.0	KHC	-2.89%	DHI	-2.01%
21.0	ON	-2.8%	OXY	-1.98%
21.0	AMAT	-2.33%	PEP	-1.87%
21.0	BBY	-2.11%	CYH	-1.8%
21.0	PEP	-2.07%	BBY	-1.51%
21.0	AMC	-1.84%	ZTS	-1.5%
21.0	CMCSA	-1.65%	ACGL	-1.25%
21.0	ACGL	-1.52%	AZN	-1.19%
21.0	TLT	-1.36%	ON	-1.14%
21.0	AZN	-1.25%	VFC	-1.1%
21.0	ZTS	-1.21%	CZR	-1.06%
21.0	LLY	-1.15%	TLT	-1.06%
21.0	POST	-0.82%	CMCSA	-1.04%
21.0	NAVI	-0.78%	CLF	-1.0%
21.0	CZR	-0.77%	LLY	-0.93%
21.0	HCA	-0.71%	SNY	-0.72%
21.0	RIO	-0.7%	NWL	-0.66%
21.0	BHP	-0.69%	PHM	-0.65%
21.0	UAA	-0.65%	IRM	-0.57%
21.0	VFC	-0.65%	GSK	-0.56%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	IEP	-34.15%	UNH	-17.47%
63.0	UNH	-21.21%	LEN	-14.36%
63.0	BIIB	-19.77%	IEP	-13.62%
63.0	PCG	-19.08%	BIIB	-12.74%
63.0	LEN	-18.98%	CNC	-12.65%
63.0	OXY	-18.47%	CLF	-11.99%
63.0	ON	-17.62%	AMC	-11.48%
63.0	DHI	-16.14%	MRK	-10.85%
63.0	ADBE	-15.22%	DHI	-10.71%
63.0	CYH	-14.04%	CYH	-9.81%
63.0	MRK	-13.63%	CZR	-9.45%
63.0	CZR	-13.47%	ADBE	-9.44%
63.0	BBY	-13.09%	BBY	-8.72%
63.0	PHM	-11.23%	PEP	-8.22%
63.0	CNC	-10.66%	KHC	-8.21%
63.0	PEP	-10.36%	PCG	-7.49%
63.0	CLF	-10.05%	LUMN	-7.2%
63.0	AMC	-9.85%	PHM	-6.95%
63.0	KHC	-9.6%	ON	-6.9%
63.0	VFC	-9.56%	OXY	-6.69%
63.0	AMD	-9.05%	VFC	-6.15%
63.0	LUMN	-8.55%	ZTS	-5.38%
63.0	BHP	-7.23%	ACGL	-5.37%
63.0	FSUGY	-6.56%	LW	-4.86%
63.0	ACGL	-6.55%	FSUGY	-4.71%
63.0	UAA	-5.97%	LLY	-4.68%
63.0	CMCSA	-5.89%	CMCSA	-4.49%
63.0	LLY	-5.78%	BALL	-4.38%
63.0	ZTS	-4.7%	UAA	-3.88%
63.0	TLT	-4.43%	NWL	-3.81%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	ON	-65.74%	LEN	-31.18%
126.0	IEP	-60.83%	LUMN	-30.98%
126.0	UNH	-55.26%	AMC	-30.01%
126.0	NWL	-51.58%	NWL	-29.94%
126.0	PCG	-48.15%	UNH	-29.25%
126.0	LUMN	-41.6%	ON	-29.2%
126.0	ADBE	-41.45%	CLF	-25.2%
126.0	VFC	-36.72%	BIIB	-24.6%
126.0	BIIB	-36.72%	IEP	-24.29%
126.0	LEN	-34.98%	DHI	-23.11%
126.0	CLF	-34.17%	CZR	-22.52%
126.0	AMC	-33.67%	CYH	-22.2%
126.0	DHI	-33.0%	UAA	-21.97%
126.0	BBY	-32.51%	MRK	-21.57%
126.0	CZR	-31.63%	VFC	-21.53%
126.0	WDC	-31.18%	ADBE	-20.75%
126.0	AMD	-30.7%	LW	-20.56%
126.0	MRK	-30.69%	CNC	-19.77%
126.0	OXY	-30.67%	BBY	-19.58%
126.0	BHC	-30.03%	PCG	-18.97%
126.0	UAA	-28.03%	AA	-18.69%
126.0	PHM	-27.46%	WDC	-18.39%
126.0	CYH	-27.37%	BHC	-17.56%
126.0	IRM	-27.12%	PHM	-17.52%
126.0	FSUGY	-20.39%	GNRC	-16.97%
126.0	FITB	-20.2%	IRM	-16.72%
126.0	CMG	-19.24%	AMD	-15.06%
126.0	PEP	-18.67%	PEP	-14.84%
126.0	KHC	-18.17%	OXY	-14.63%
126.0	TEVA	-17.63%	KHC	-13.75%

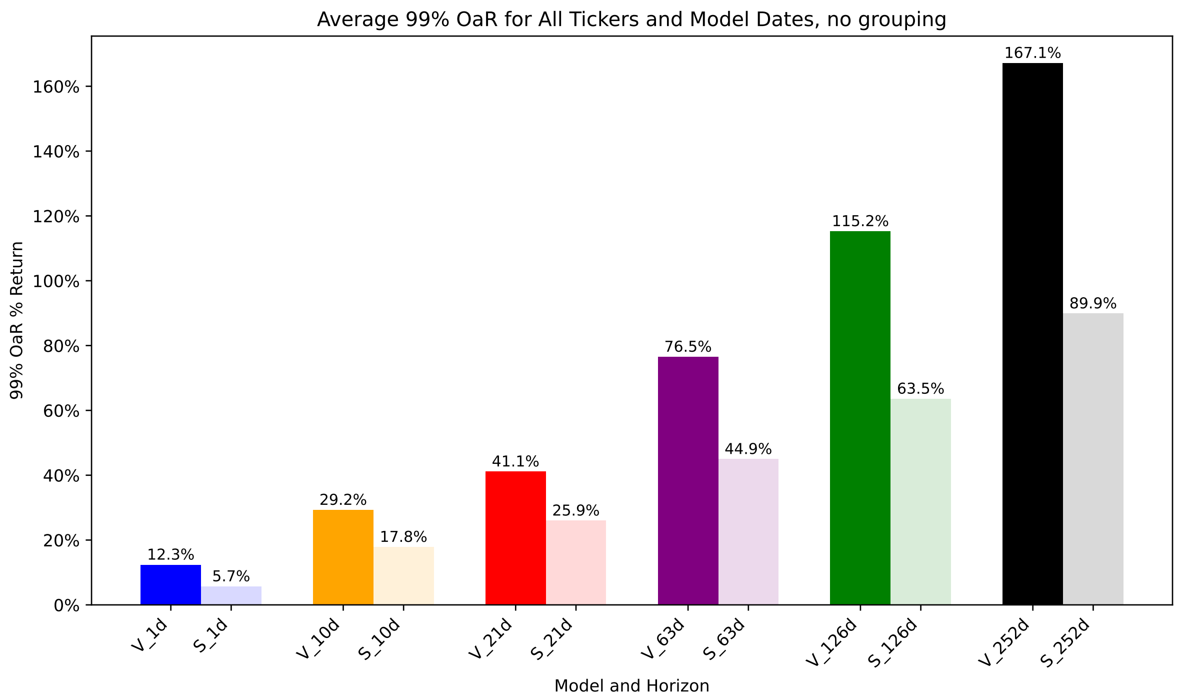
99% Opportunity At Risk (OaR)

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.

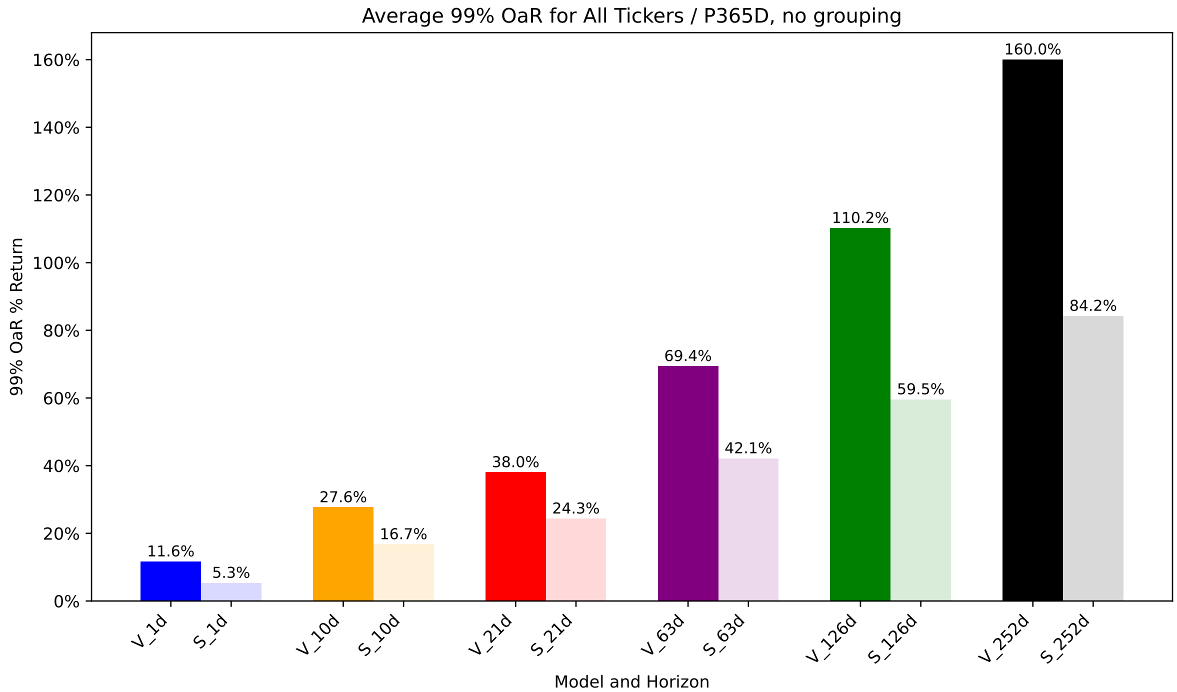
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-07-31



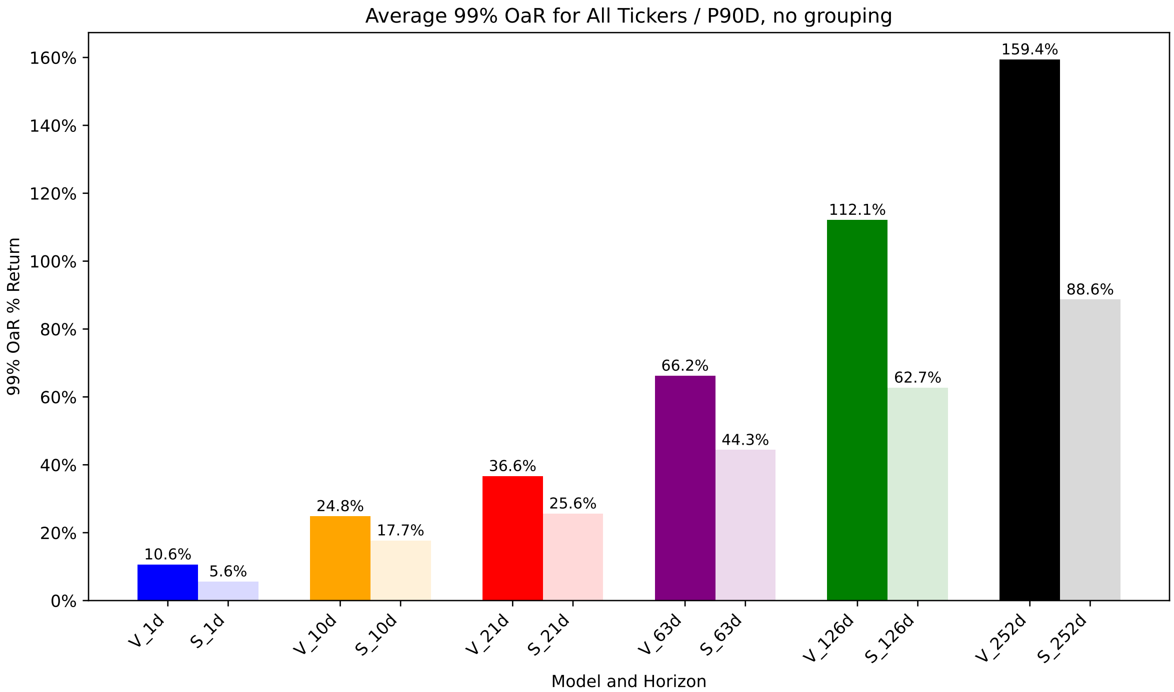
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2025-07-31 through 2024-08-02



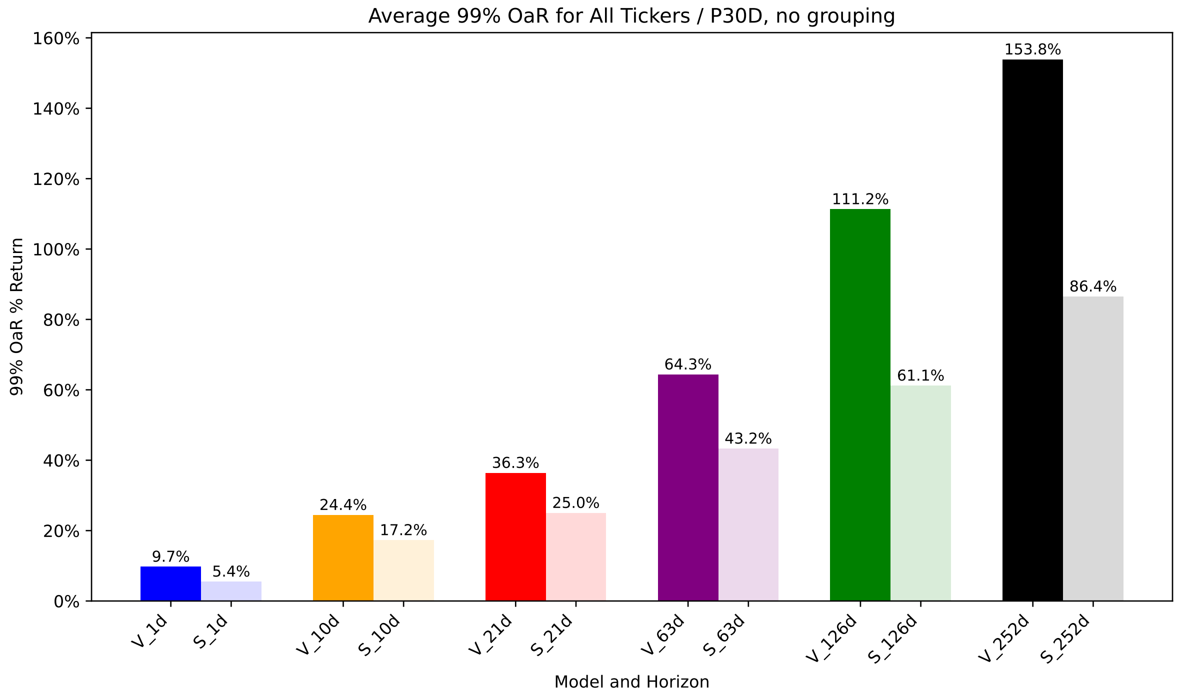
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-07-31 through 2025-05-05



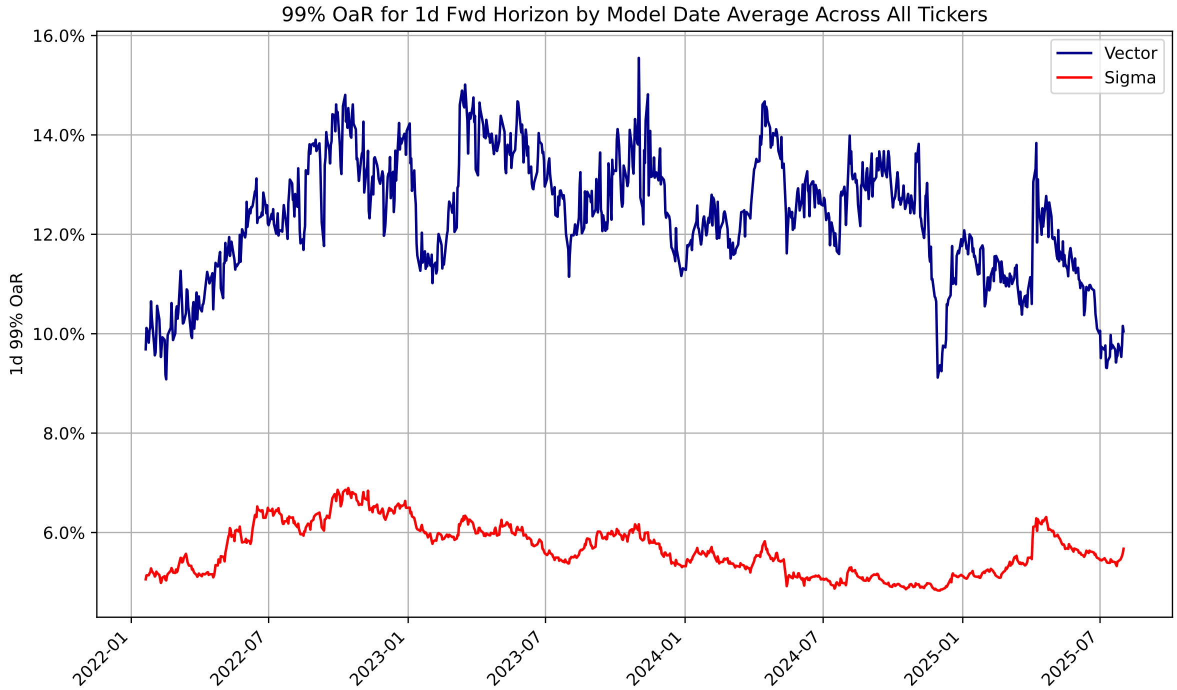
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-07-31 through 2025-07-03

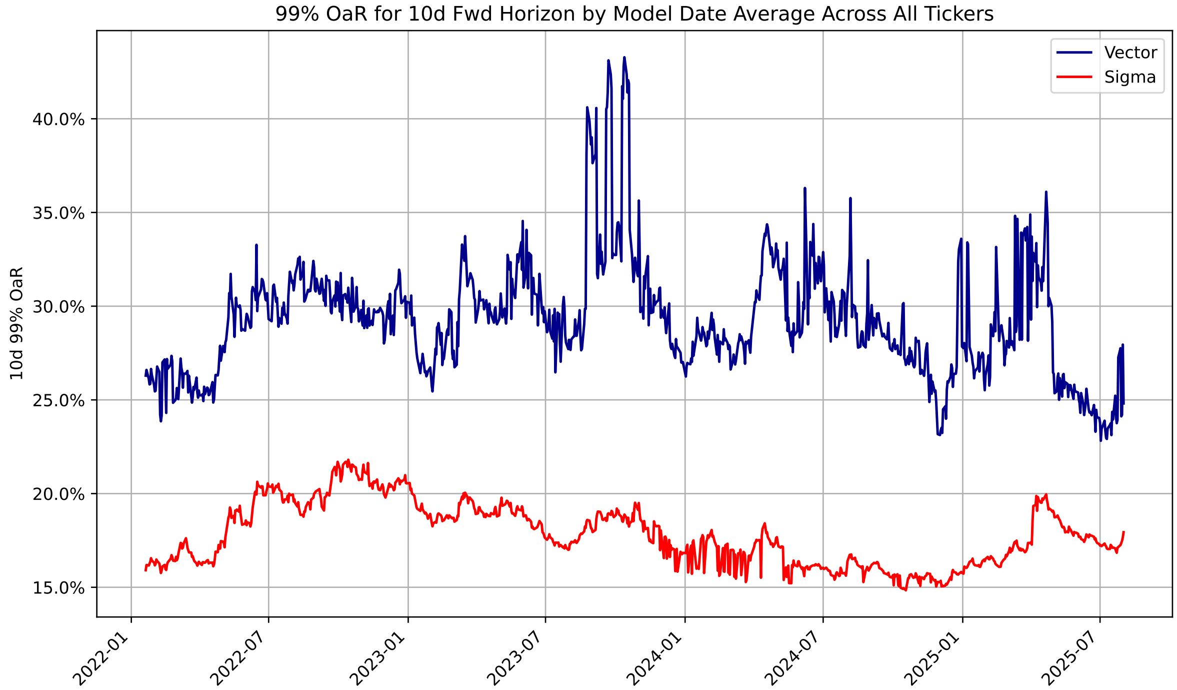


Daily Levels

1d Horizon

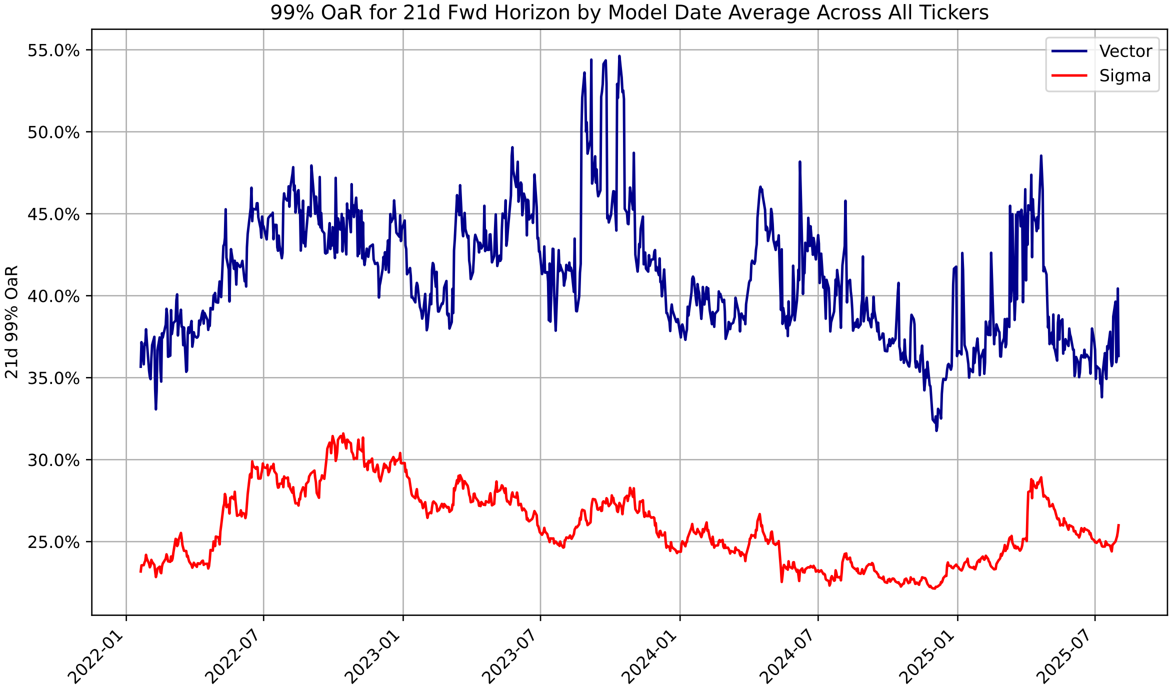


10d Horizon

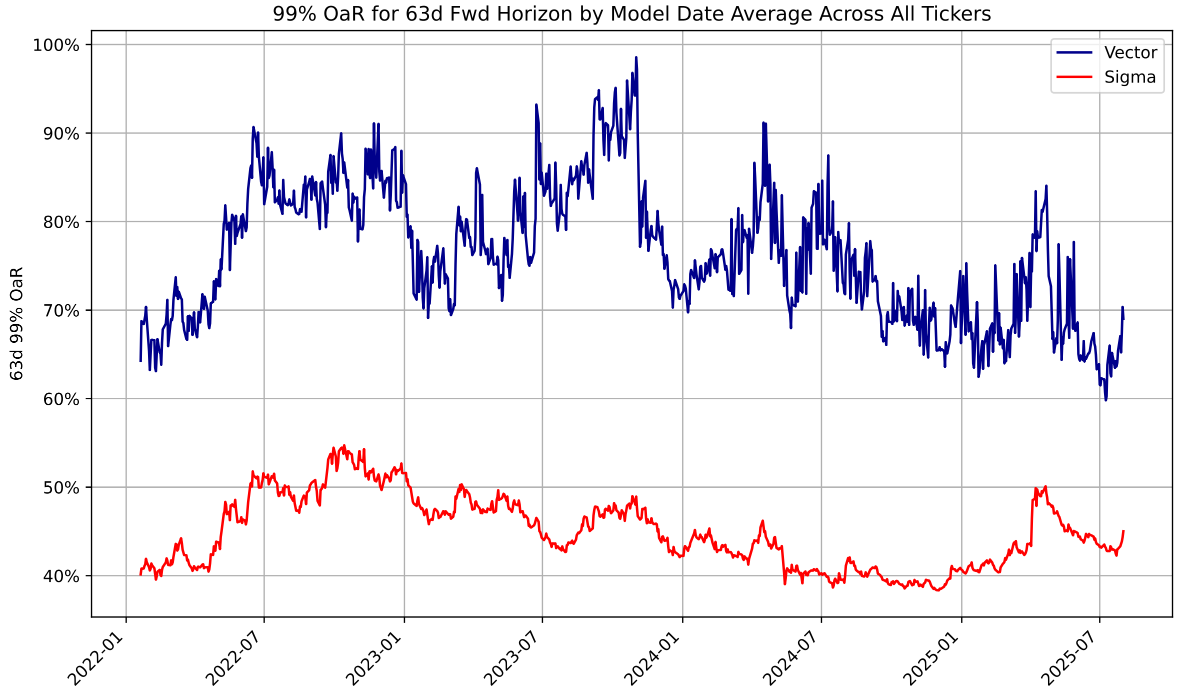


99% OaR for 10d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
10d 99% OaR
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

21d Horizon

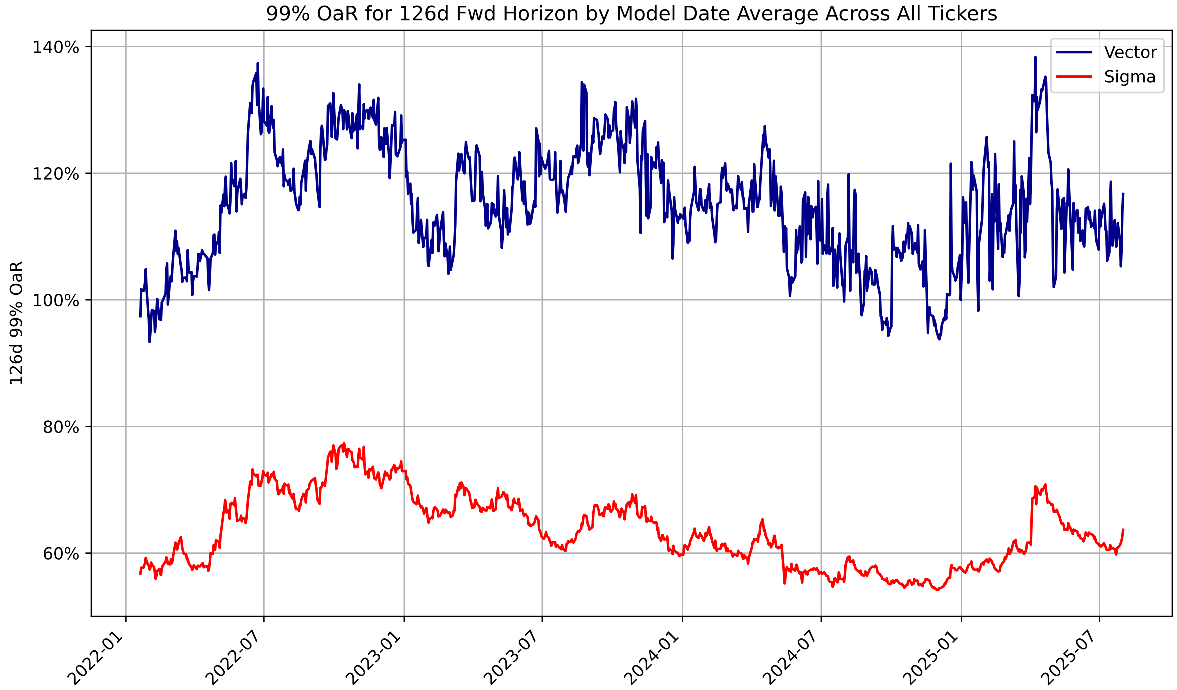

99% OaR for 21d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
21d 99% OaR
55.0%
50.0%
45.0%
40.0%
35.0%
30.0%
25.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

63d Horizon

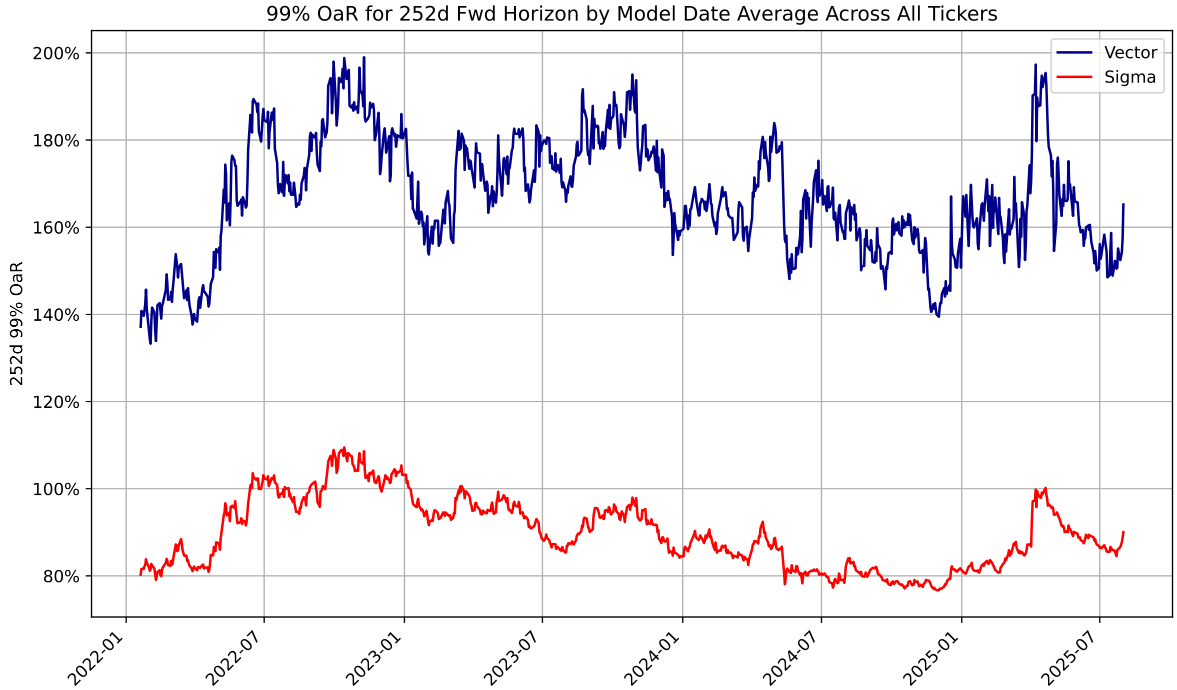


99% OaR for 63d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
63d 99% OaR
100%
90%
80%
70%
60%
50%
40%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

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.

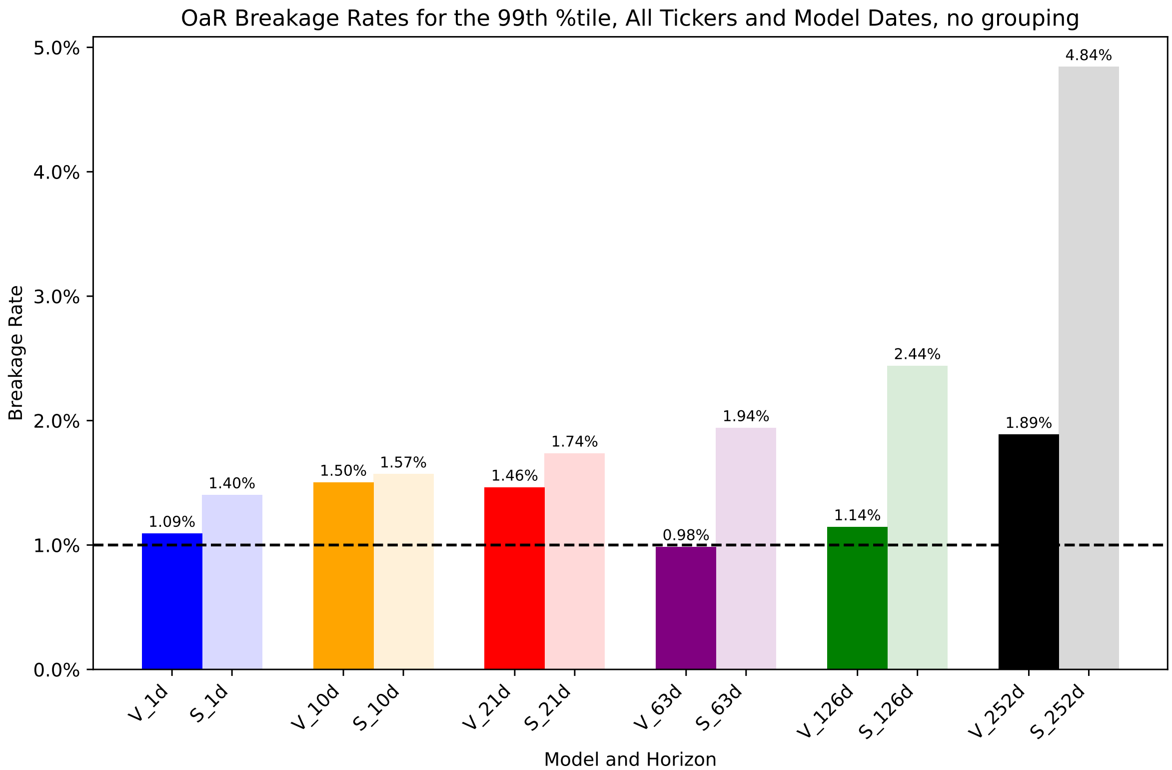
Vector Model ROLOBC can be evalauated on the basis of outright levels relative to Sigma and alpha relative to Sigma ROLOBC (which, as discussed previously, is assigned the underlying ticker price returns). We advise keeping proximity of OaR breakage rates to targetted levels in mind when comparing outright 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.

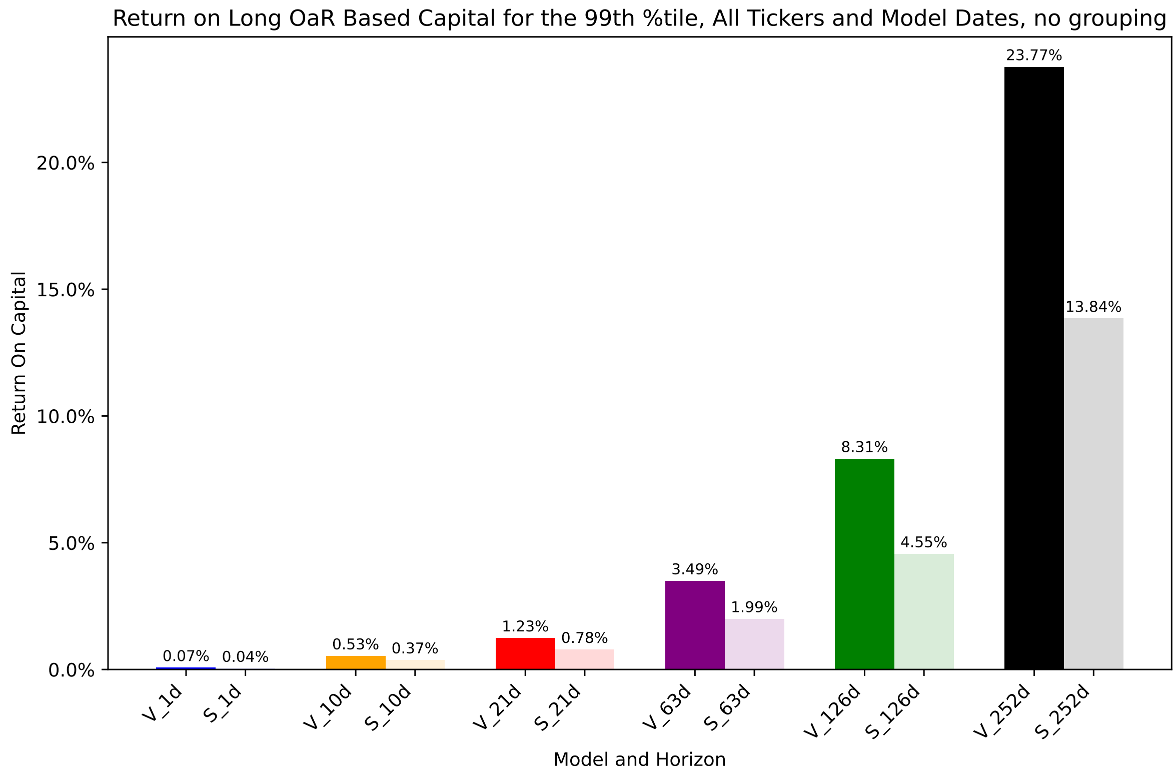
Alpha allows us to isolate ROLOBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROLOBC multiplier for the Vector Model and 1.00x. Alpha across TMD's could be driven by OaR differentials between tickers and / or between dates. Thus we also 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 2025-07-31





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

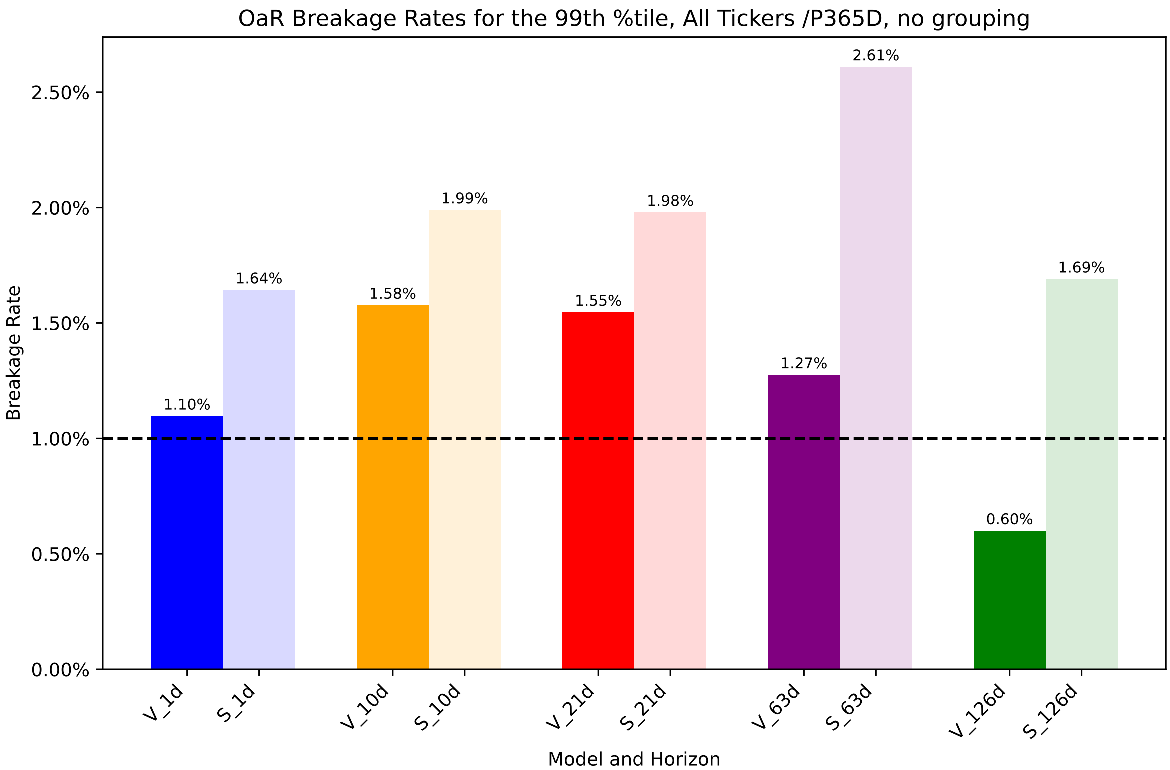
	1d	10d	21d	63d	126d	252d
intercept	0.00%	-0.02%	0.05%	0.21%	0.39%	1.06%
intercept_p_value	68.81%	28.73%	4.81%	0.00%	0.00%	0.00%
slope	178.22%	148.27%	151.36%	164.30%	173.84%	164.08%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

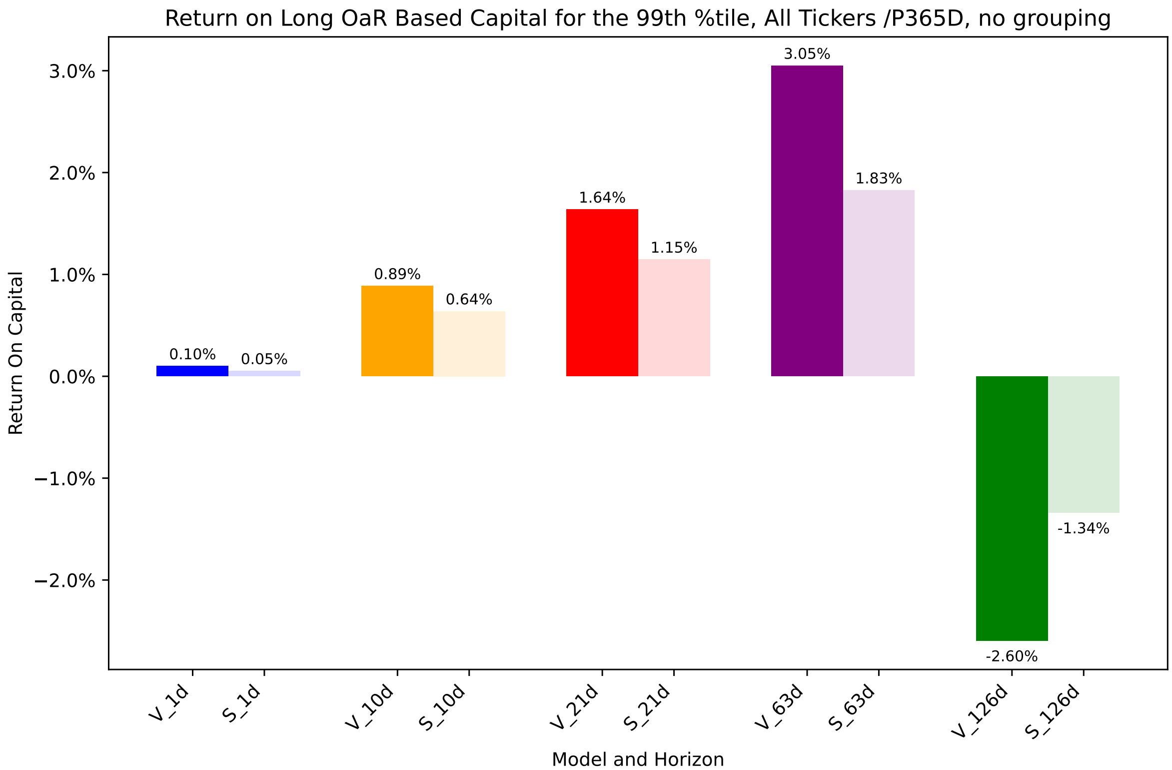
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

	1d	10d	21d	63d	126d	252d
intercept	-0.03%	-0.14%	-0.40%	-1.61%	-3.41%	-5.00%
intercept_p_value	0.02%	3.49%	0.58%	0.07%	0.01%	0.33%
slope	162.00%	147.06%	163.13%	174.87%	174.84%	162.60%
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 2025-07-31 through 2024-08-02





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

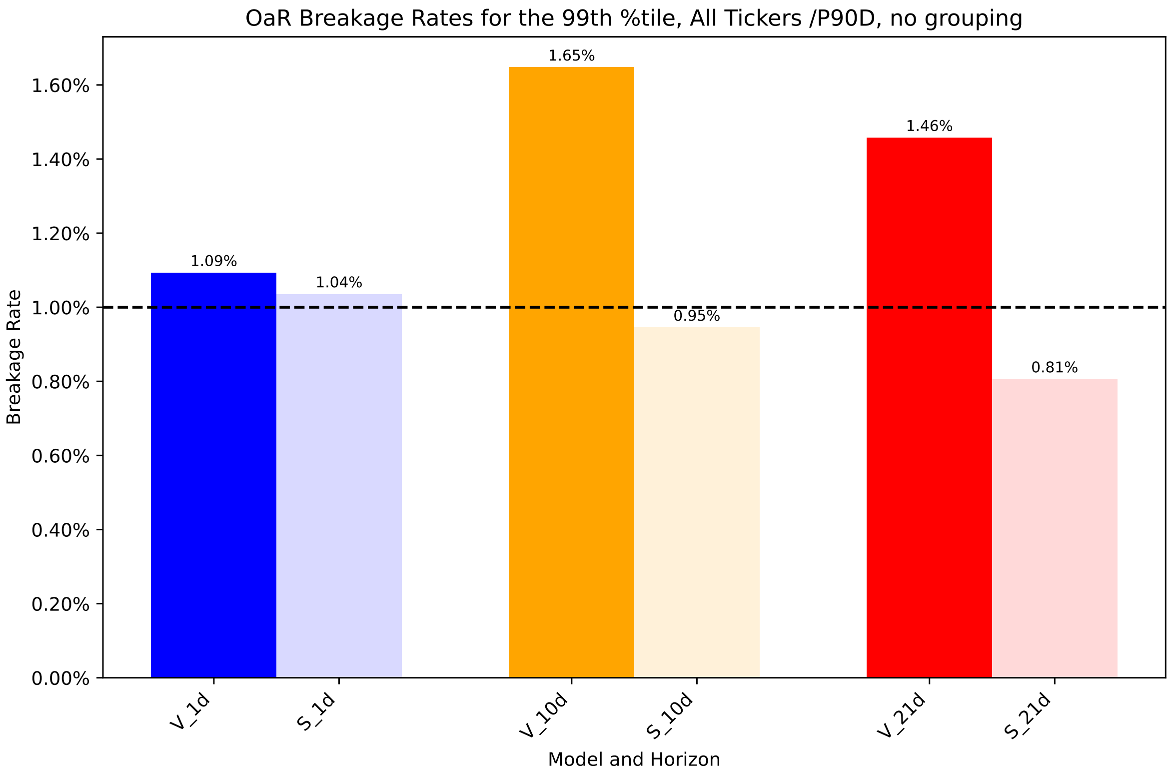
	1d	10d	21d	63d	126d
intercept	0.00%	-0.11%	-0.12%	0.03%	-0.27%
intercept_p_value	94.67%	0.02%	0.24%	69.18%	0.94%
slope	188.51%	155.71%	153.70%	165.17%	173.36%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

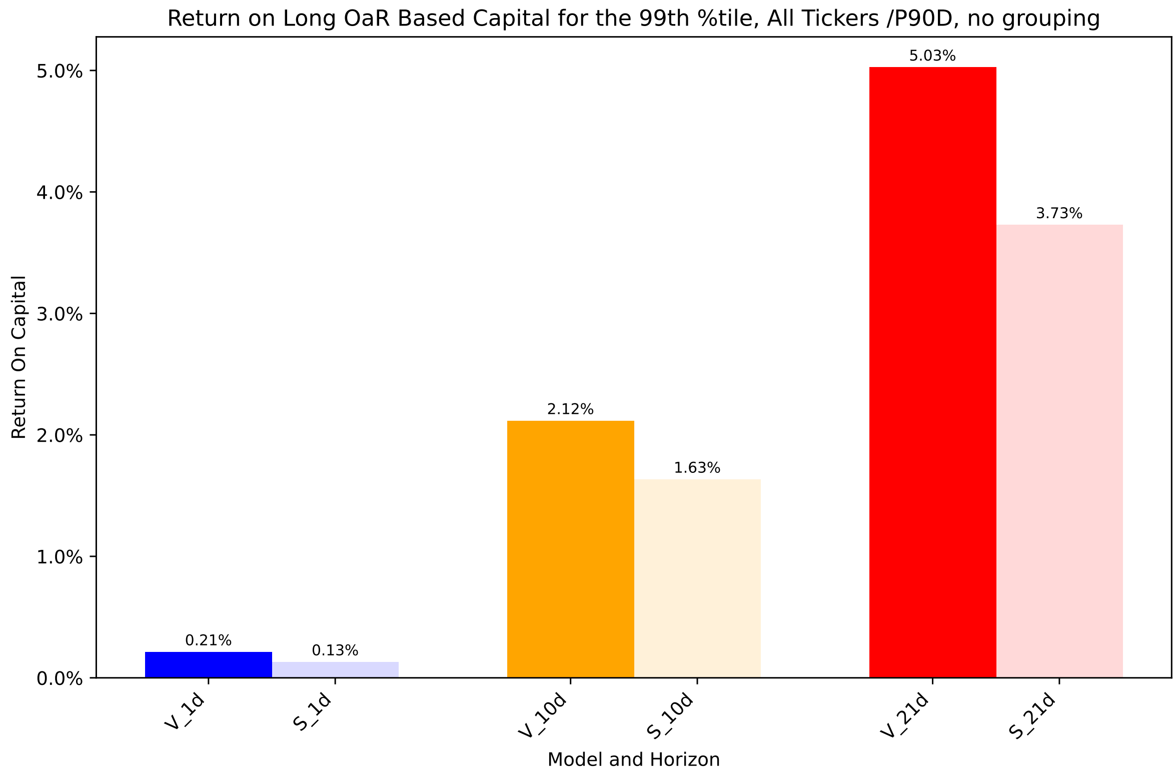
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P365D:

	1d	10d	21d	63d	126d
intercept	0.01%	0.12%	0.25%	0.74%	0.15%
intercept_p_value	59.92%	12.10%	13.34%	5.93%	76.14%
slope	97.67%	110.95%	117.44%	113.55%	114.04%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-07-31 through 2025-05-05





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

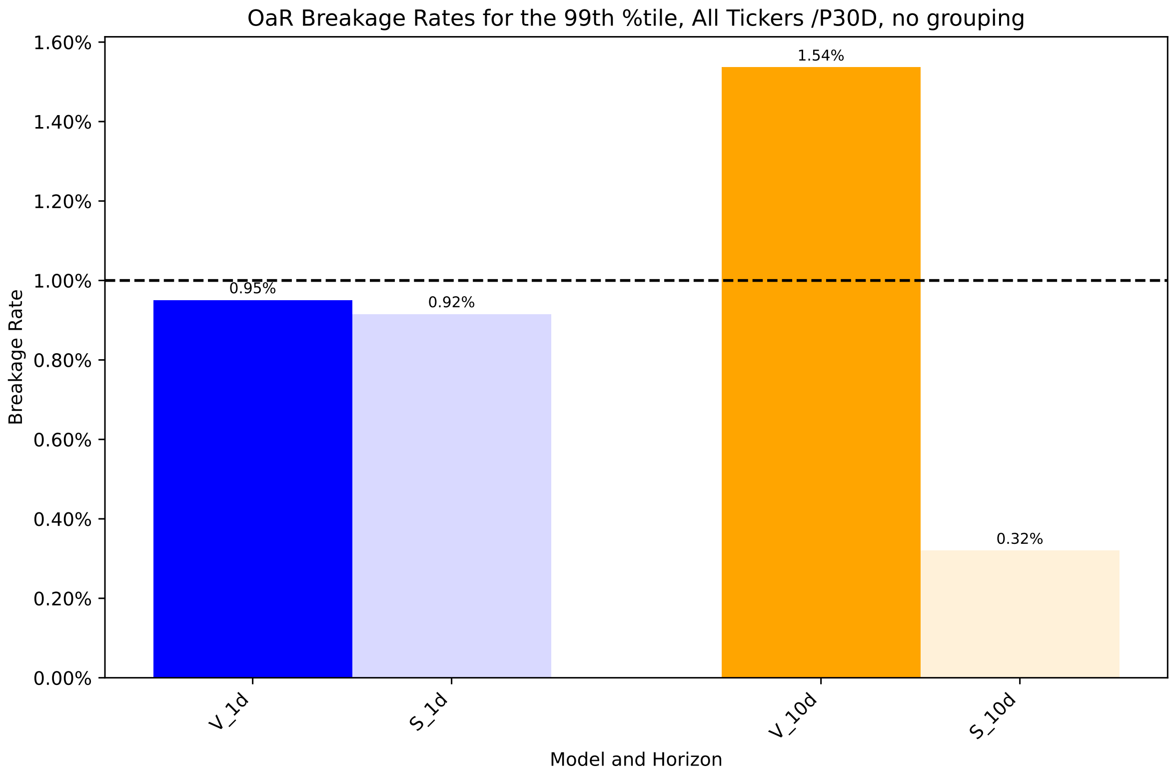
	1d	10d	21d
intercept	-0.02%	-0.13%	-0.18%
intercept_p_value	35.41%	0.99%	2.03%
slope	179.15%	137.71%	139.70%
slope_p_value	0.00%	0.00%	0.00%

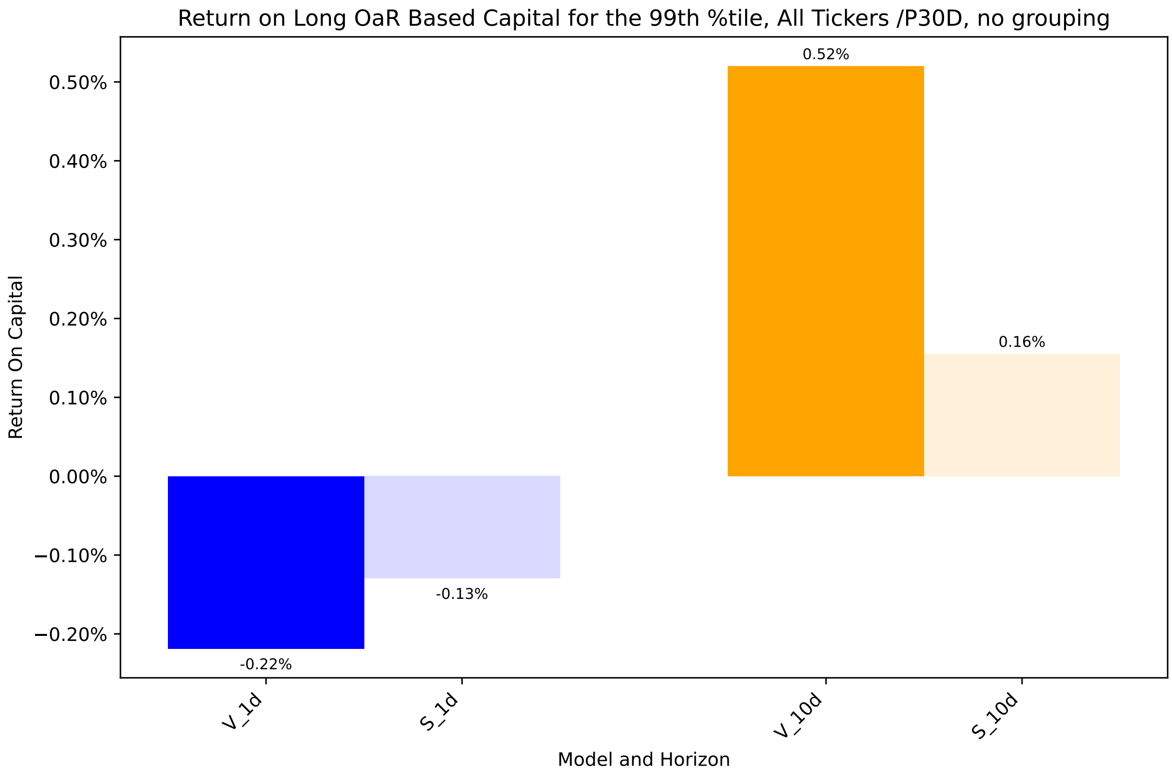
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P90D:

	1d	10d	21d
intercept	-0.02%	0.01%	-0.11%
intercept_p_value	33.80%	96.75%	73.57%
slope	129.55%	129.50%	129.01%
slope_p_value	0.00%	0.00%	0.00%

Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-07-31 through 2025-07-03





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

	1d	10d
intercept	0.01%	0.33%
intercept_p_value	85.12%	0.05%
slope	173.99%	119.90%
slope_p_value	0.00%	0.00%

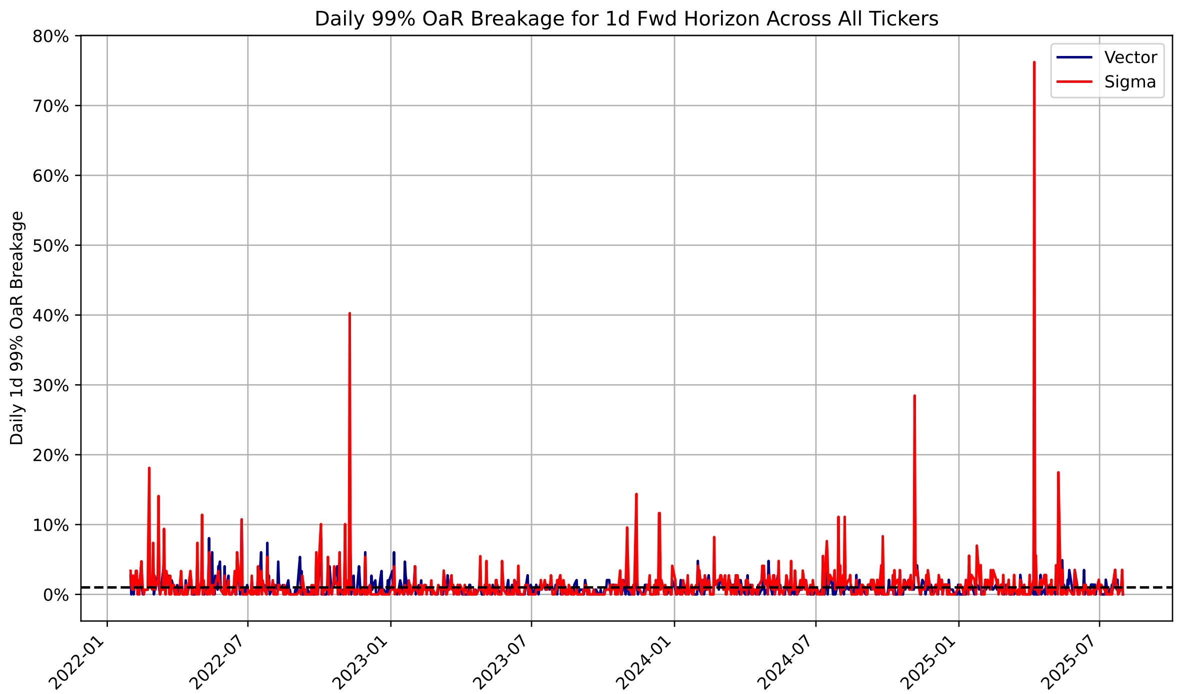
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P30D:

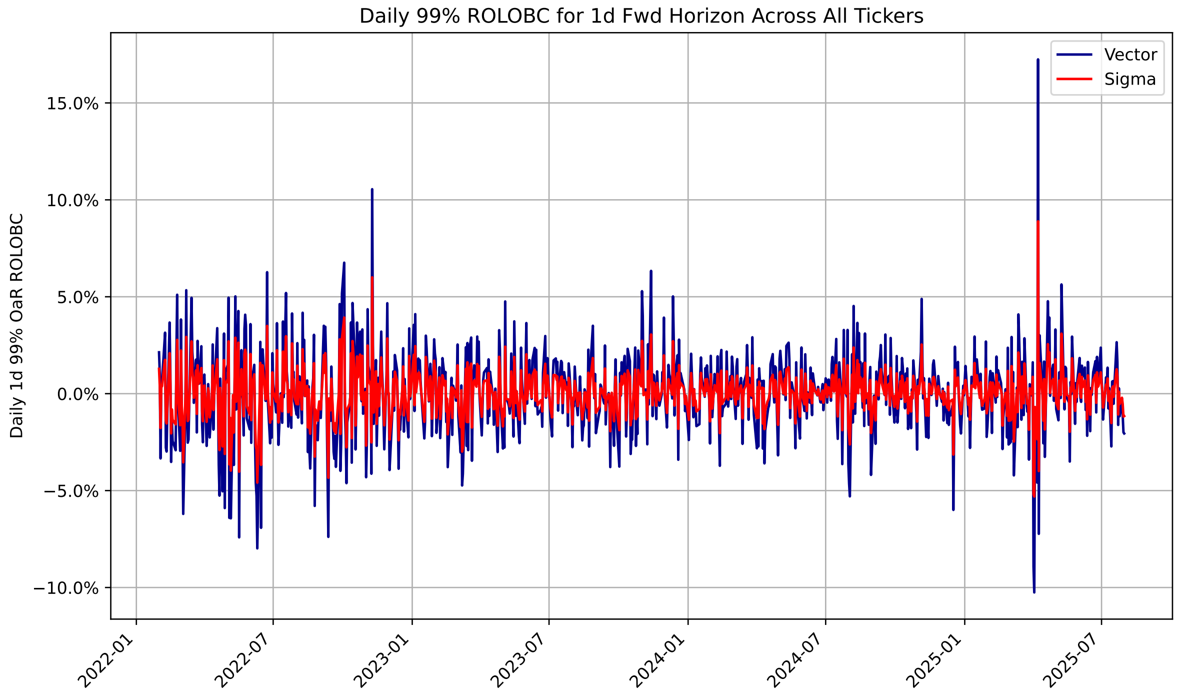
	1d	10d
intercept	-0.02%	0.11%
intercept_p_value	50.85%	62.80%
slope	113.20%	121.43%
slope_p_value	0.00%	0.00%

Daily Performance

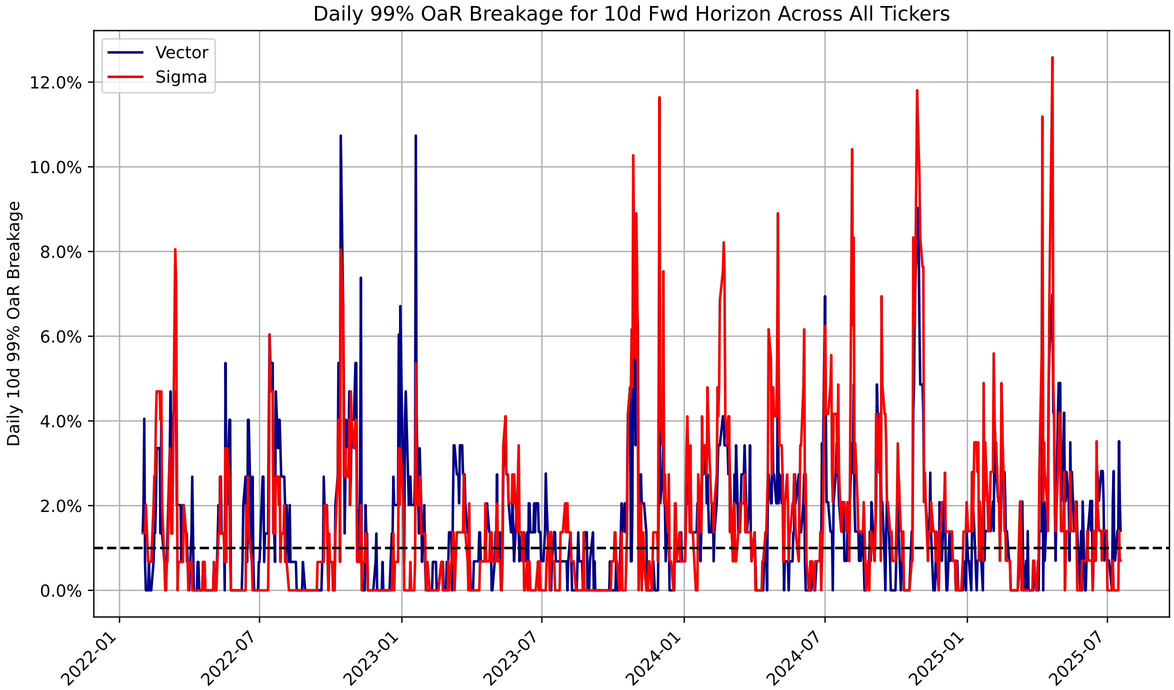
Here we look at the daily breakage and ROLOBC statitics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROLOBC outliers.

1d Horizon

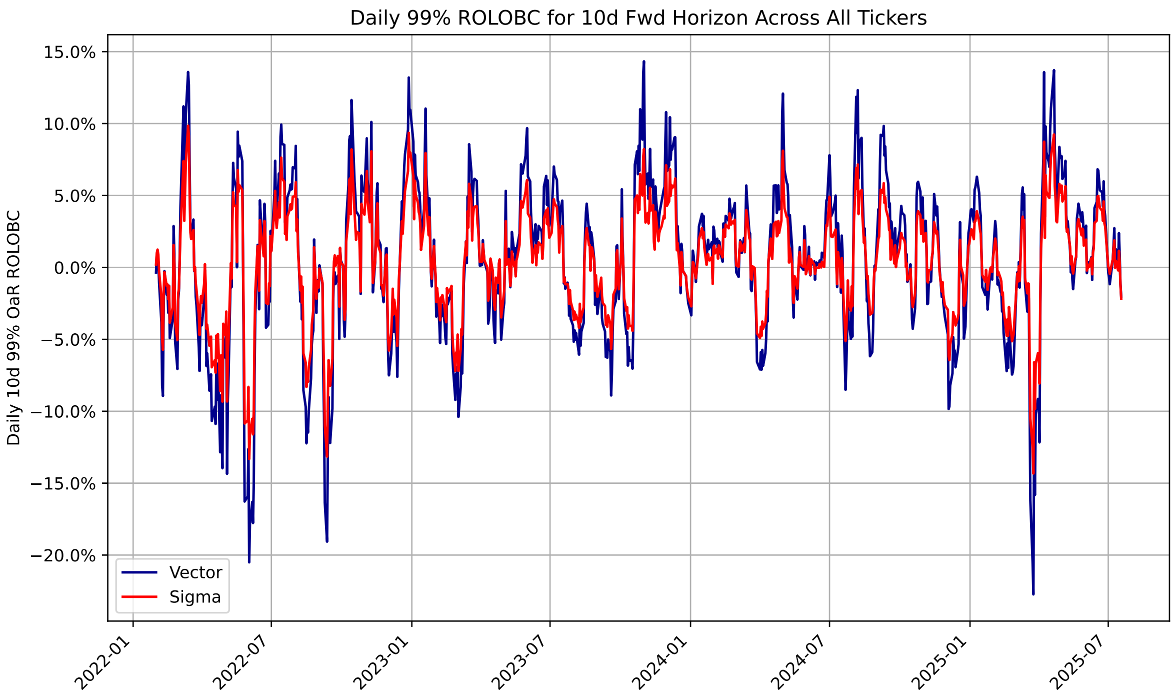



Daily 99% ROLOBC for 1d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 1d 99% OaR ROLOBC
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

10d Horizon

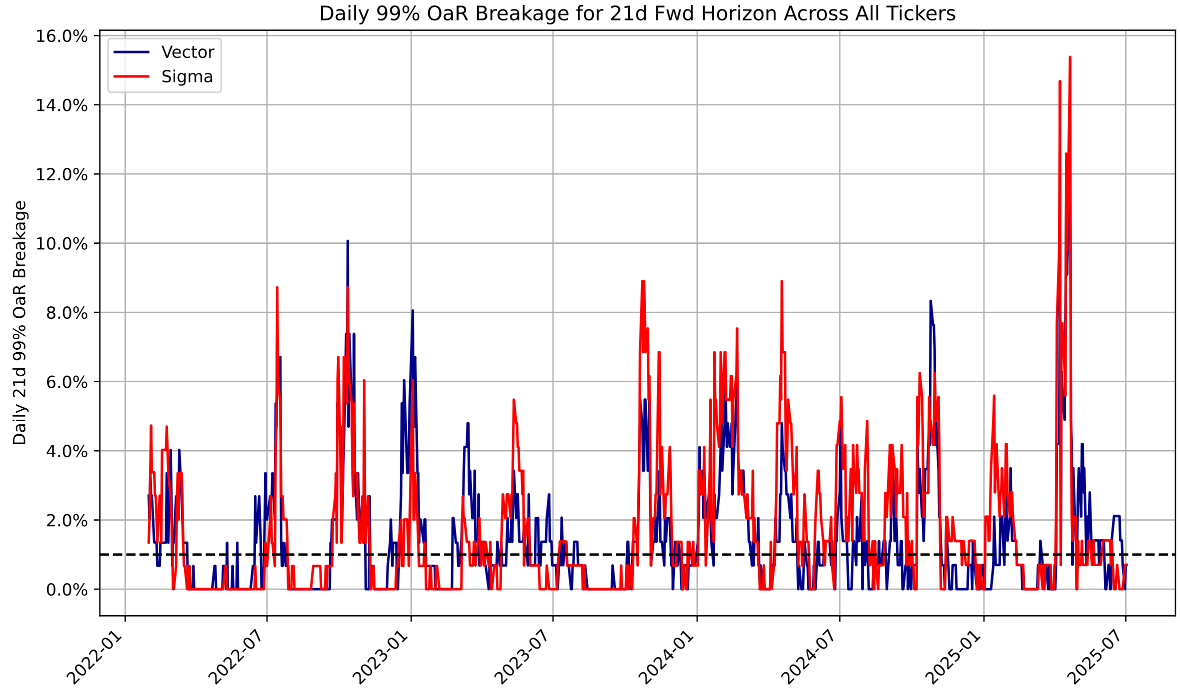


Daily 99% OaR Breakage for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 10d 99% OaR Breakage
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

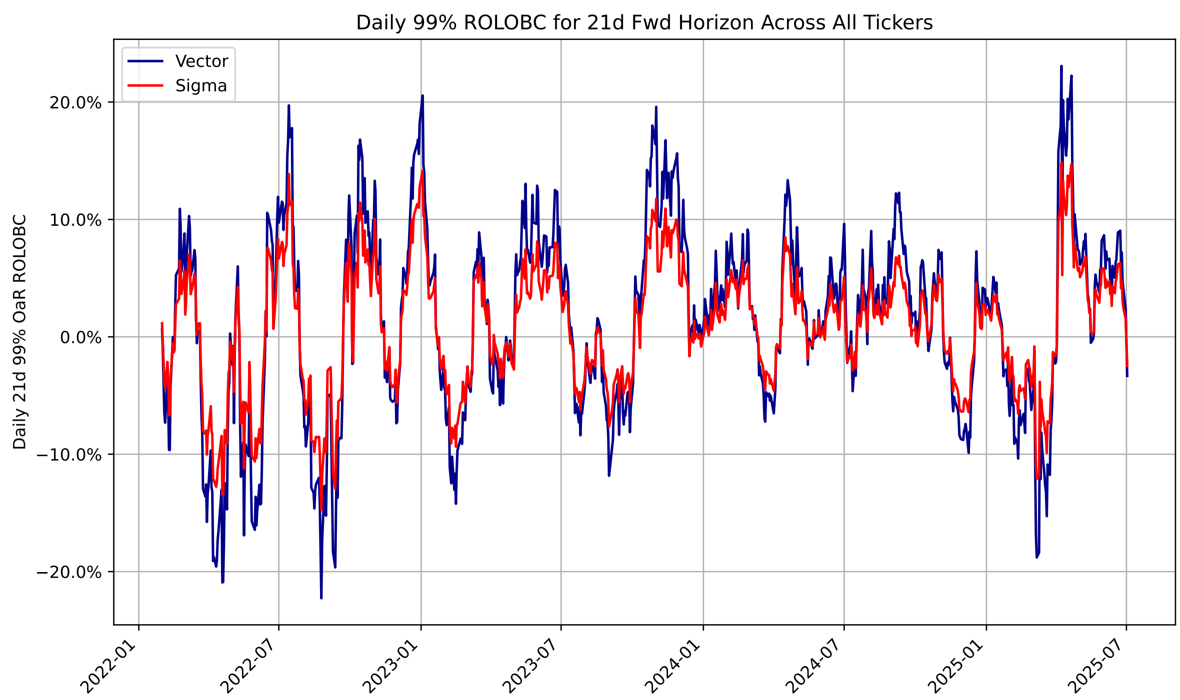


Daily 99% ROLOBC for 10d Fwd Horizon Across All Tickers
Daily 10d 99% OaR ROLOBC
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
−20.0%
Vector
Sigma
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

21d Horizon

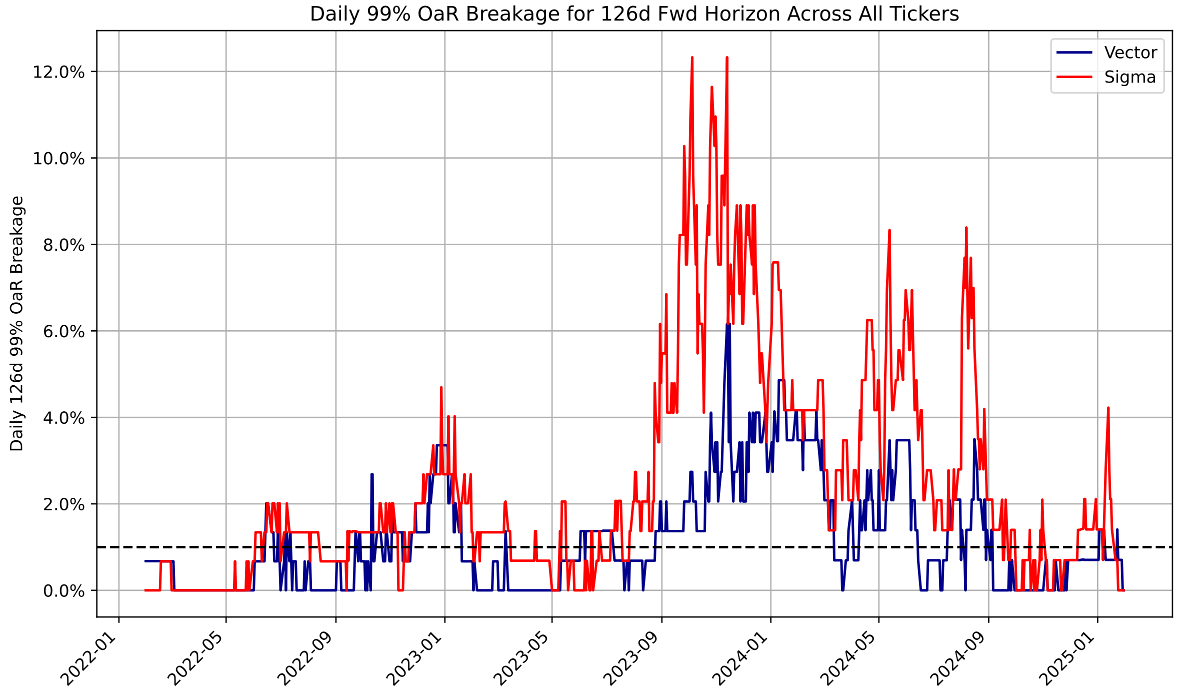


Daily 99% OaR Breakage for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 21d 99% OaR Breakage
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

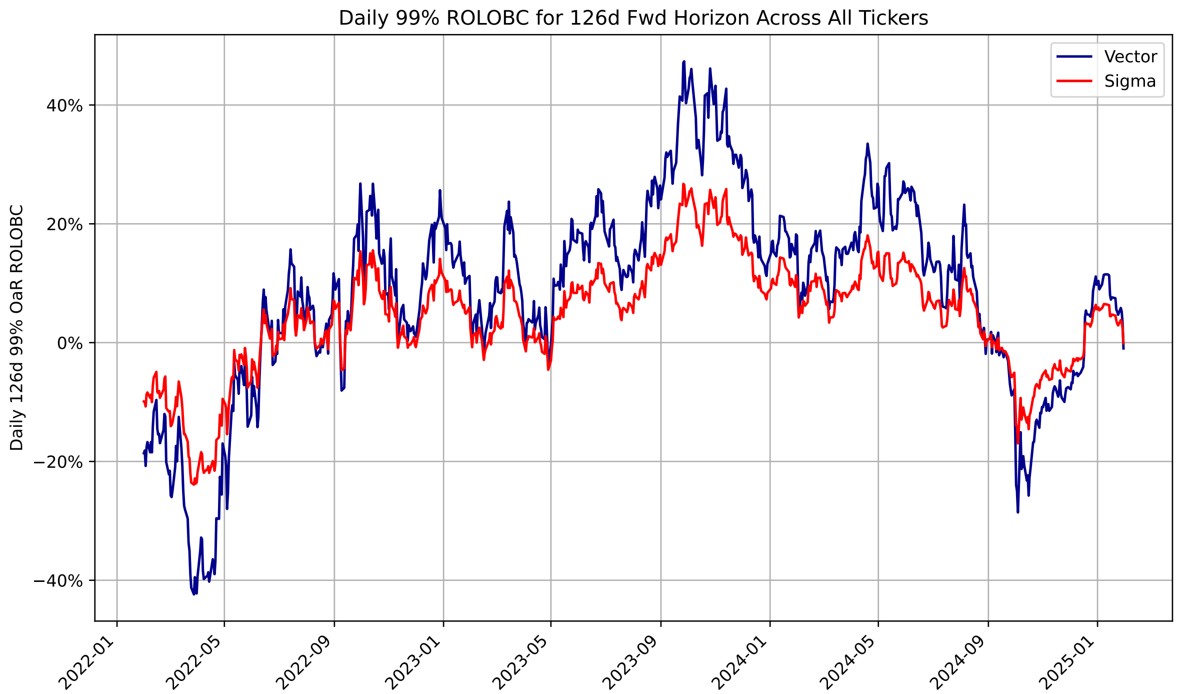


Daily 99% ROLOBC for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 21d 99% OaR ROLOBC
20.0%
10.0%
0.0%
−10.0%
−20.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

63d Horizon

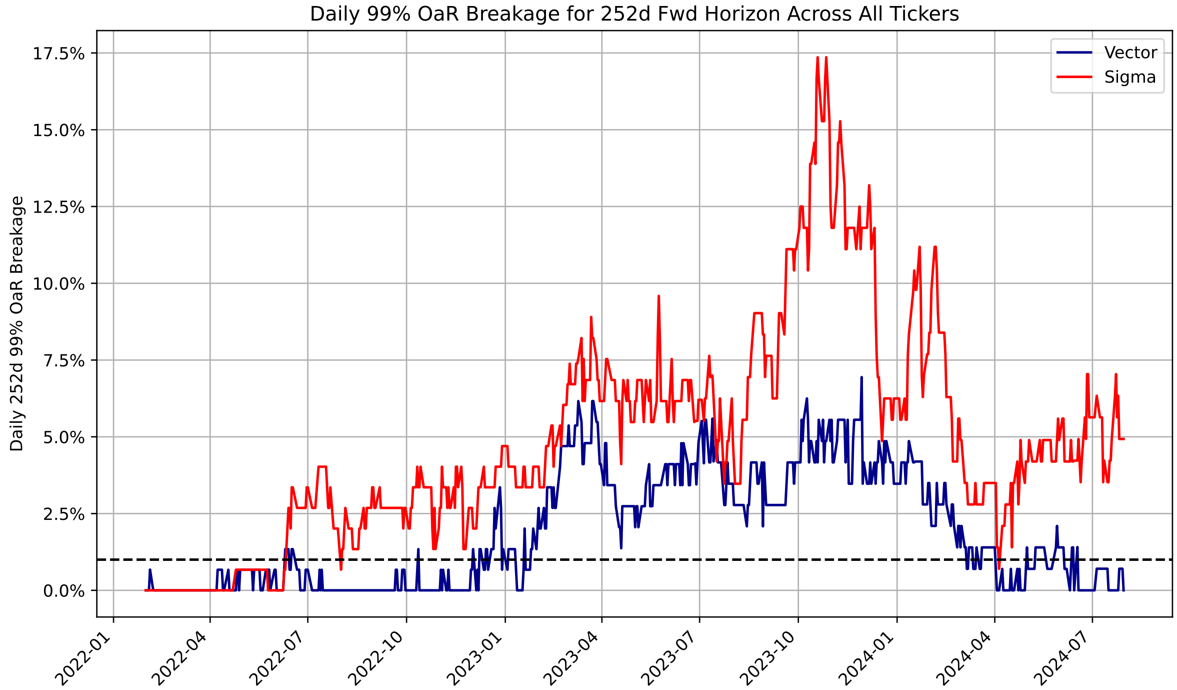


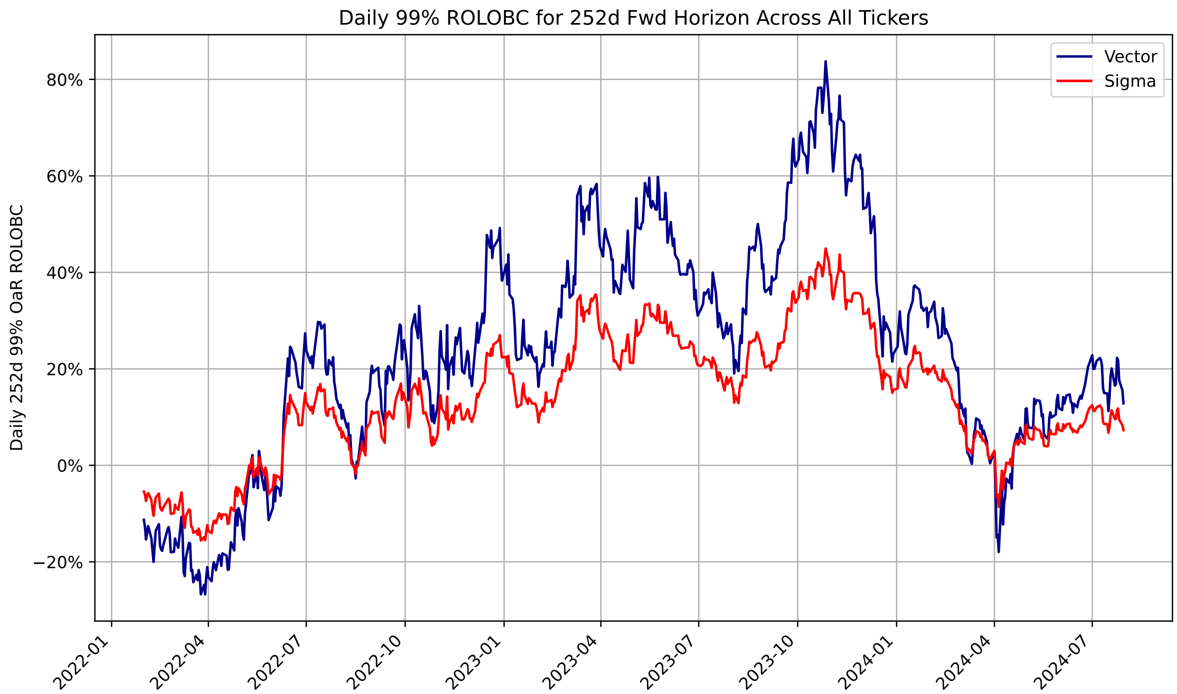
Daily 99% OaR Breakage for 126d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 126d 99% OaR Breakage
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01



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

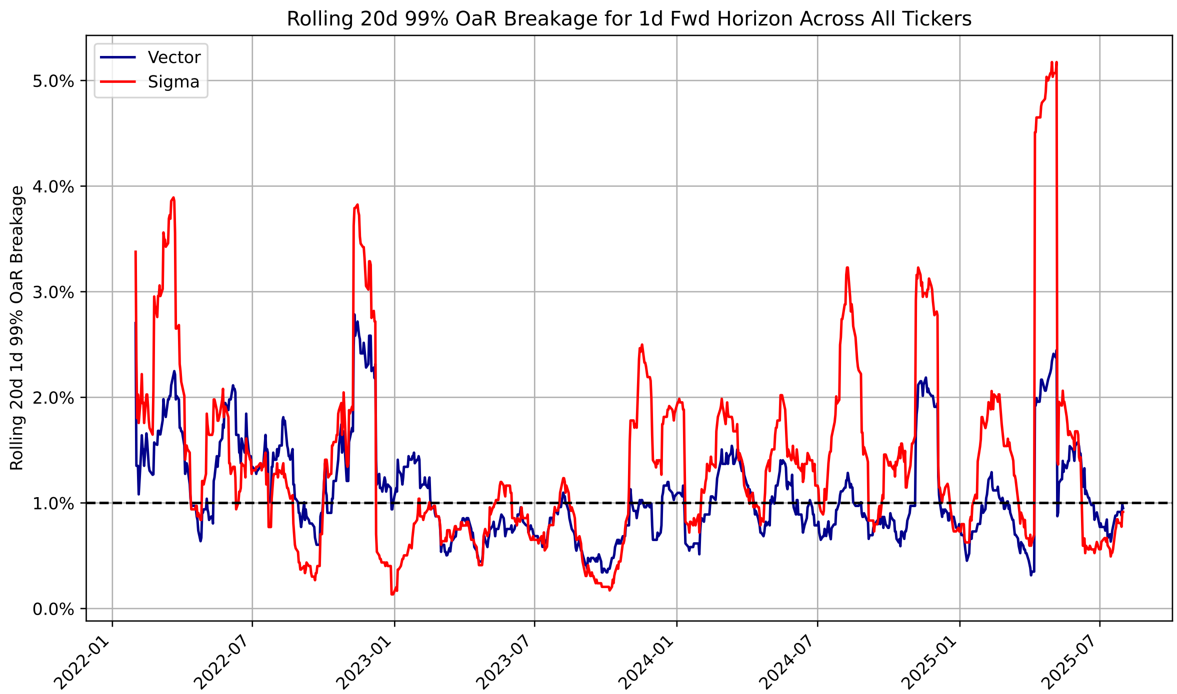


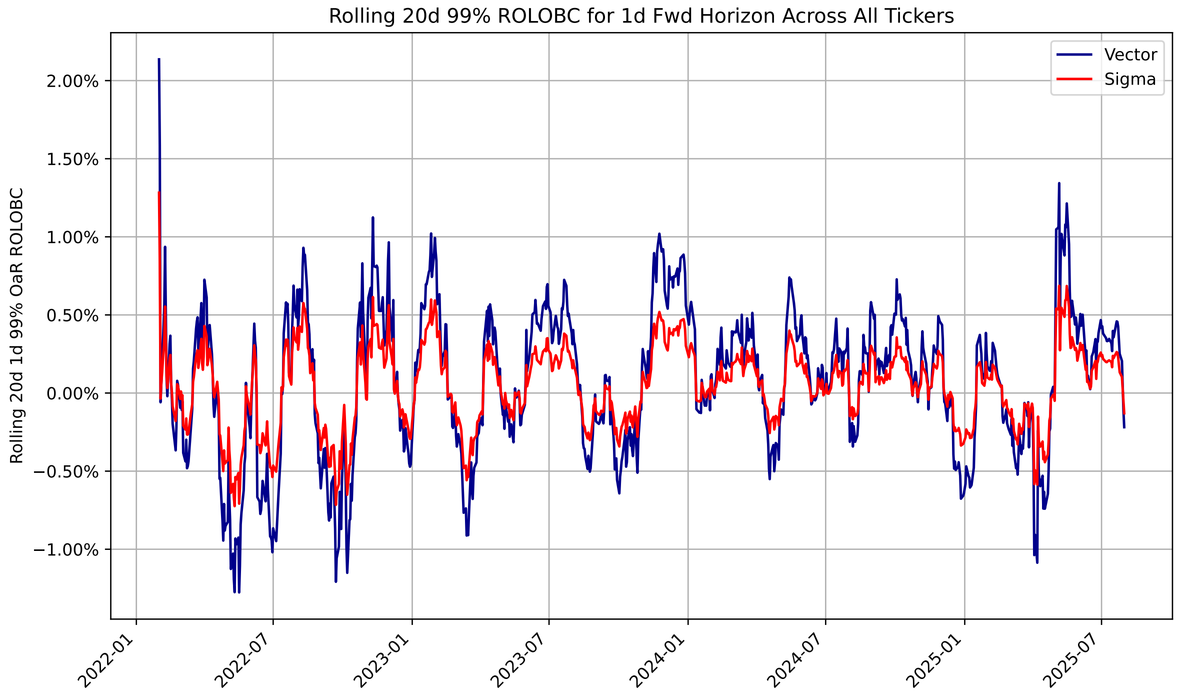


Rolling 20d Performance

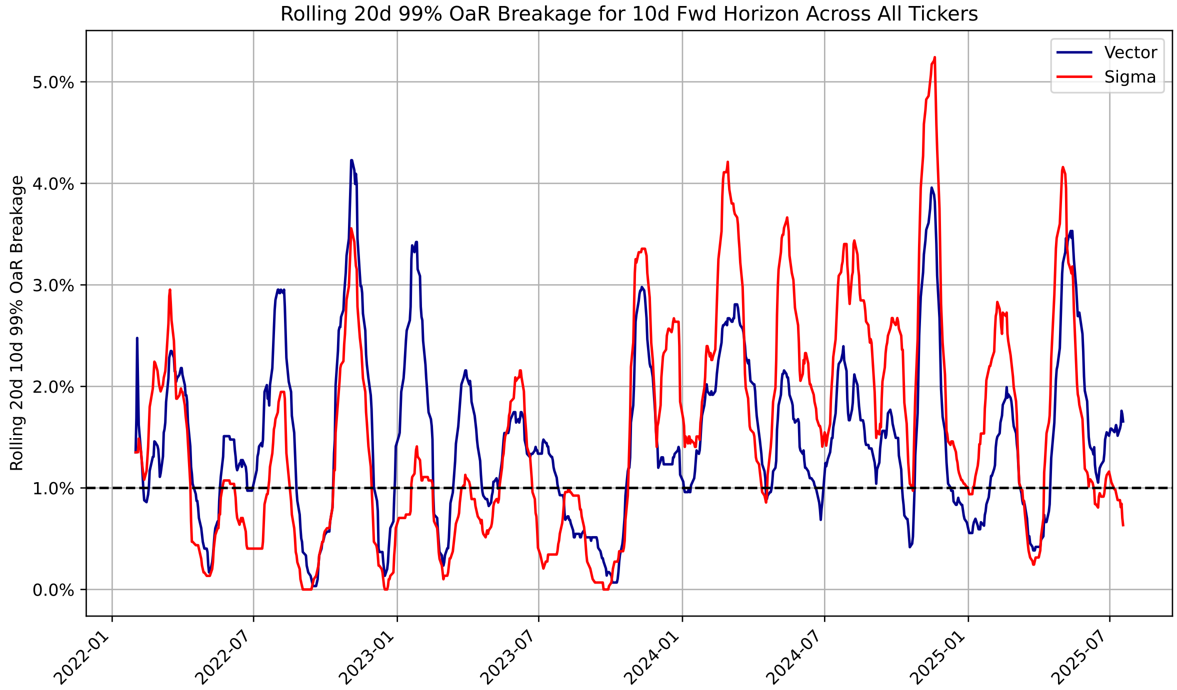
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statitics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

1d Horizon

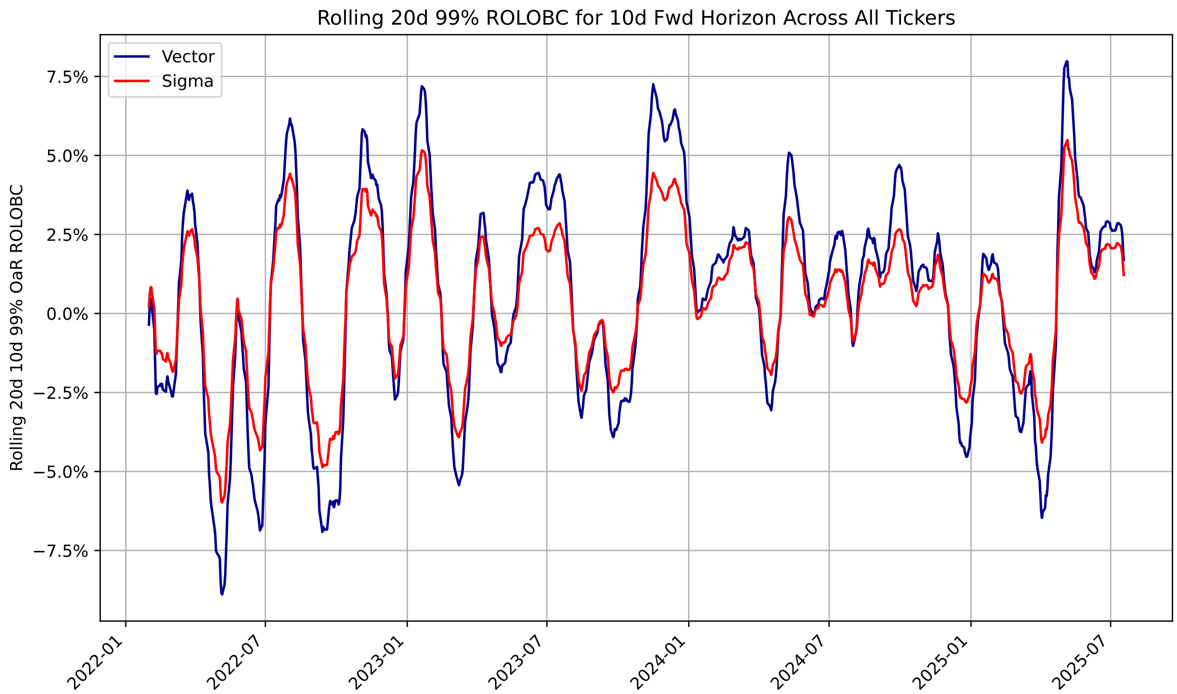



Rolling 20d 99% ROLOBC for 1d Fwd Horizon Across All Tickers
Rolling 20d 1d 99% OaR ROLOBC
2.00%
1.50%
1.00%
0.50%
0.00%
−0.50%
−1.00%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07
Vector
Sigma

10d Horizon

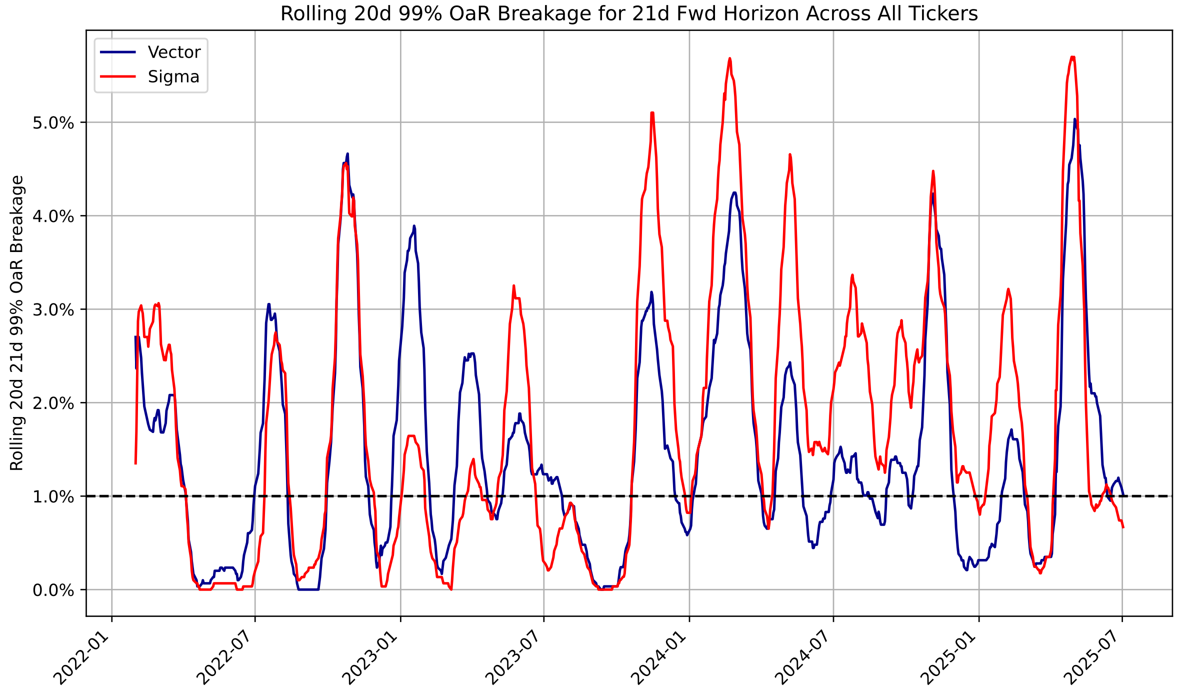


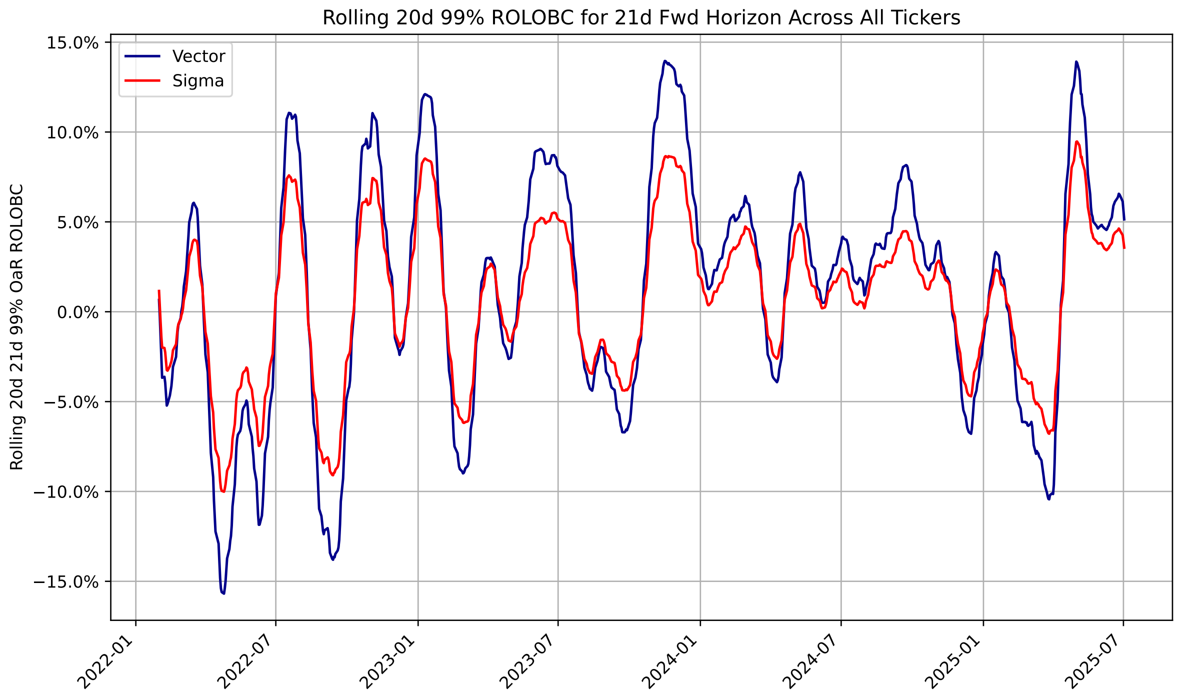
Rolling 20d 99% OaR Breakage for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 99% OaR Breakage
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07



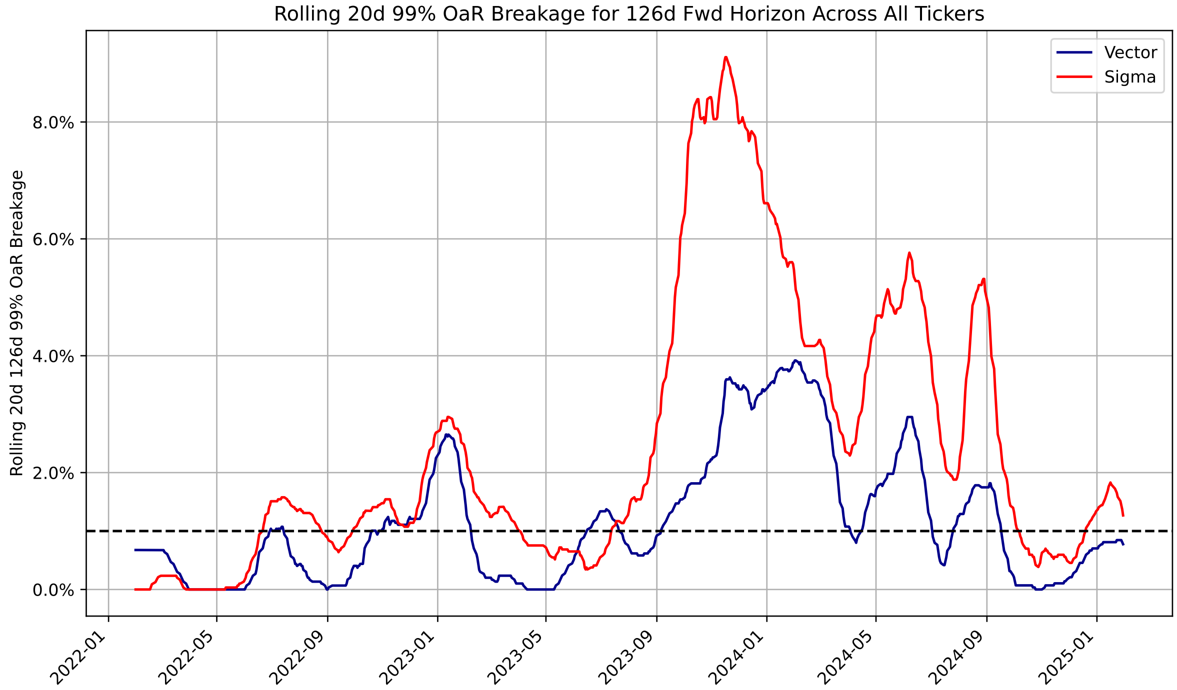
Rolling 20d 99% ROLOBC for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 99% OaR ROLOBC
7.5%
5.0%
2.5%
0.0%
−2.5%
−5.0%
−7.5%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

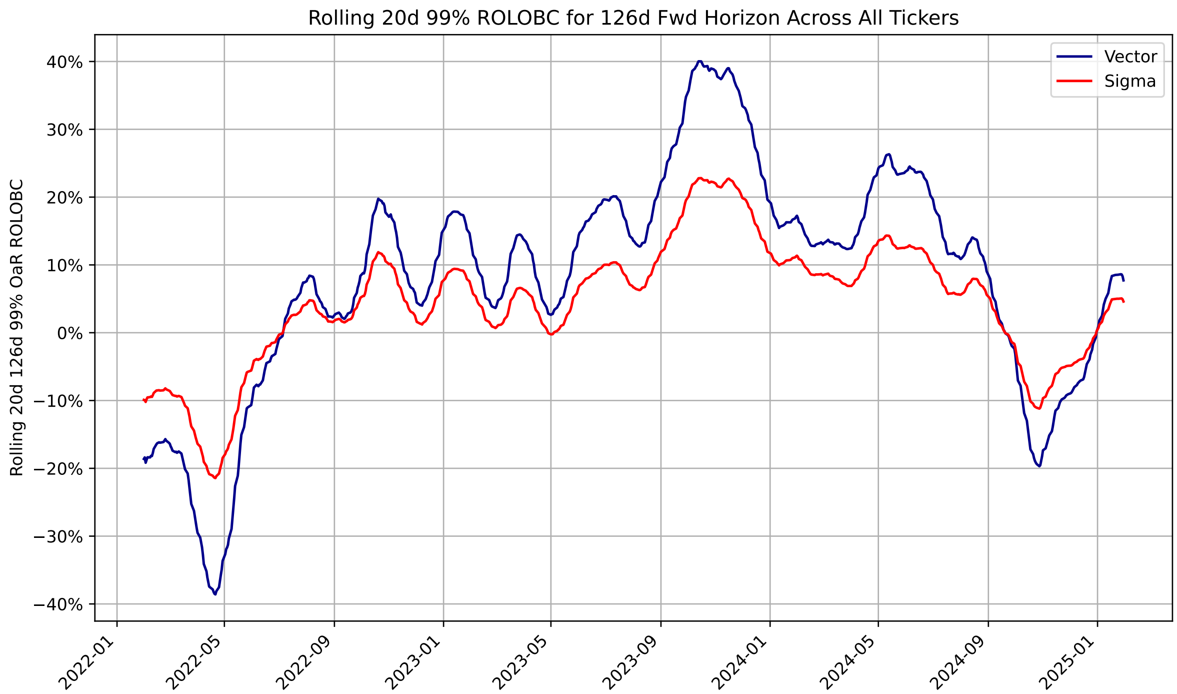
21d Horizon


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
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

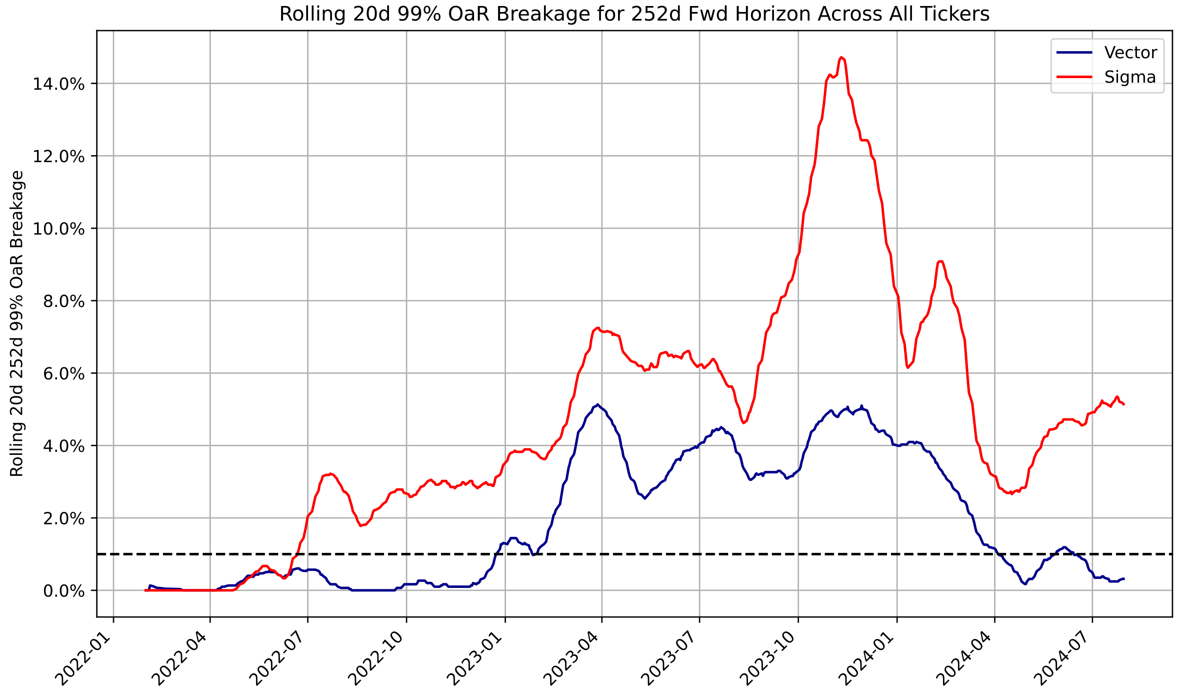

Rolling 20d 99% ROLOBC for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 21d 99% OaR ROLOBC
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

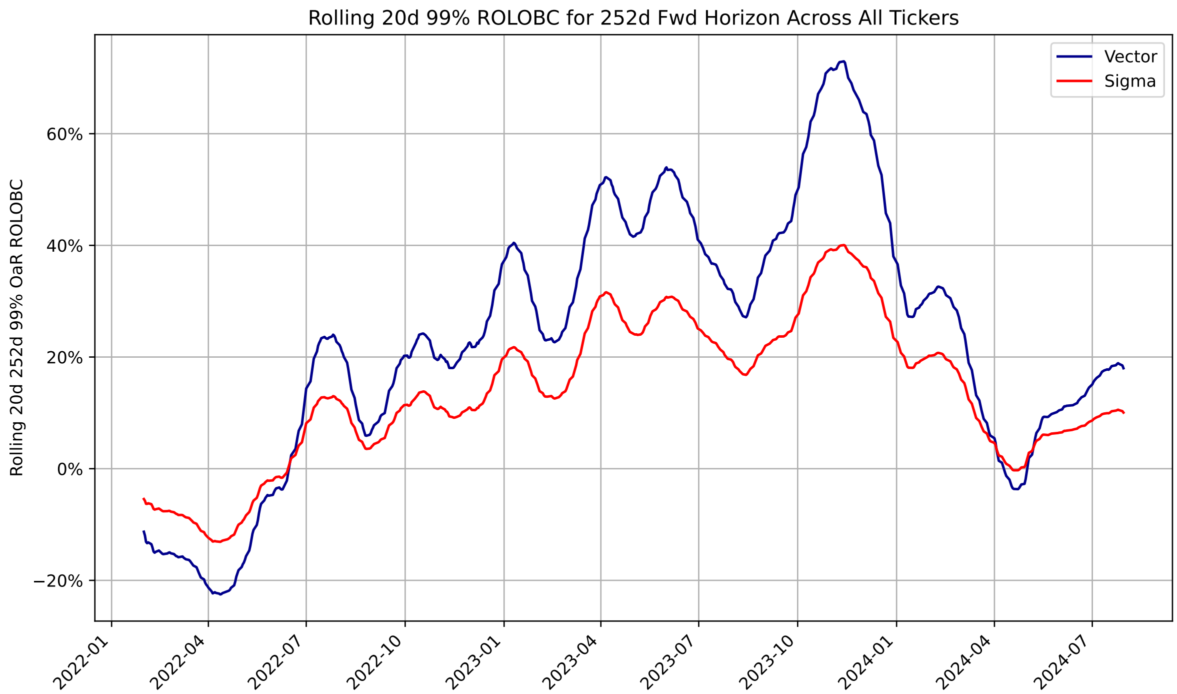
63d Horizon


Rolling 20d 99% OaR Breakage for 126d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 126d 99% OaR Breakage
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


Rolling 20d 99% ROLOBC for 126d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 126d 99% OaR ROLOBC
40%
30%
20%
10%
0%
−10%
−20%
−30%
−40%
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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SIVBQ	6.83%	VST	4.67%
1.0	GME	5.92%	MSTR	3.3%
1.0	AVGO	5.47%	AVGO	2.96%
1.0	VST	5.13%	SLV	2.73%
1.0	MSTR	4.9%	NVDA	2.73%
1.0	META	3.99%	SIVBQ	2.52%
1.0	B	3.76%	GLD	2.39%
1.0	FRCB	3.6%	LLY	2.39%
1.0	HLT	3.53%	MU	2.28%
1.0	TSLA	3.3%	PWR	2.16%
1.0	CHTR	3.19%	WDC	2.05%
1.0	ACGL	3.19%	UNH	1.94%
1.0	TEVA	3.19%	PHM	1.94%
1.0	INTU	3.08%	CCL	1.94%
1.0	SLV	3.08%	WYNN	1.82%
1.0	BALL	2.96%	TMUS	1.82%
1.0	OXY	2.62%	BAC	1.82%
1.0	BUD	2.62%	ORCL	1.82%
1.0	SBNY	2.52%	IRM	1.82%
1.0	ZTS	2.51%	GBTC	1.82%
1.0	NFLX	2.51%	AMGN	1.82%
1.0	CMA	2.28%	CMG	1.82%
1.0	SPY	2.16%	LVS	1.82%
1.0	AMC	2.05%	GOOGL	1.82%
1.0	GWW	1.82%	FRCB	1.8%
1.0	JAZZ	1.82%	SBNY	1.8%
1.0	GILD	1.82%	B	1.71%
1.0	AA	1.82%	THC	1.71%
1.0	ISRG	1.82%	TEVA	1.71%
1.0	ORCL	1.71%	GE	1.71%

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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	13.0%	VST	8.29%
10.0	SIVBQ	9.93%	NVDA	6.21%
10.0	VST	8.86%	ORCL	4.83%
10.0	AVGO	8.86%	AVGO	4.72%
10.0	META	7.48%	X	4.53%
10.0	GME	7.02%	LLY	4.37%
10.0	CHTR	6.56%	TEVA	4.14%
10.0	GWW	5.87%	MSTR	4.14%
10.0	ORCL	4.6%	GWW	4.03%
10.0	ZTS	4.26%	TRGP	3.91%
10.0	GILD	4.26%	TMUS	3.91%
10.0	IRM	4.14%	GLD	3.8%
10.0	TSLA	4.03%	TSLA	3.57%
10.0	ETRN	3.97%	CAH	3.57%
10.0	ISRG	3.68%	GBTC	3.57%
10.0	B	3.68%	MUB	3.46%
10.0	SBNY	3.68%	IRM	3.34%
10.0	VZ	3.57%	CPRT	3.22%
10.0	TEVA	3.45%	AMGN	3.11%
10.0	XOM	3.22%	DHI	2.99%
10.0	AMC	3.22%	WYNN	2.88%
10.0	EXPE	3.22%	POST	2.76%
10.0	GNRC	3.11%	PWR	2.76%
10.0	CMA	3.11%	CMG	2.76%
10.0	CAH	2.88%	WFC	2.65%
10.0	HCA	2.76%	THC	2.65%
10.0	NFLX	2.76%	GILD	2.65%
10.0	TRGP	2.76%	ELAN	2.45%
10.0	OXY	2.53%	BUD	2.42%
10.0	SLV	2.53%	MU	2.42%

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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	MSTR	13.75%	VST	10.49%
21.0	SIVBQ	9.63%	NVDA	9.91%
21.0	CHTR	9.32%	MSTR	6.88%
21.0	VST	8.86%	TEVA	6.41%
21.0	GWW	8.39%	GE	6.18%
21.0	AVGO	8.39%	LLY	5.71%
21.0	META	6.76%	ORCL	5.36%
21.0	GME	6.41%	CAH	5.24%
21.0	GILD	5.71%	AVGO	5.24%
21.0	ORCL	4.9%	GBTC	5.24%
21.0	ISRG	4.66%	TSLA	5.24%
21.0	TRGP	4.55%	TRGP	5.13%
21.0	B	4.43%	GWW	4.78%
21.0	WFC	4.08%	GILD	4.78%
21.0	TEVA	4.08%	MOS	4.66%
21.0	GNRC	3.85%	ETRN	4.55%
21.0	NVDA	3.85%	X	4.35%
21.0	KALU	3.26%	MUB	4.32%
21.0	CAH	3.15%	AMGN	4.31%
21.0	GS	3.03%	TMUS	4.31%
21.0	TSLA	2.8%	WYNN	3.85%
21.0	NEM	2.8%	WFC	3.85%
21.0	NFLX	2.68%	PWR	3.85%
21.0	ZTS	2.68%	IRM	3.61%
21.0	AAPL	2.68%	DHI	3.61%
21.0	LW	2.56%	THC	3.5%
21.0	XOM	2.56%	GS	3.5%
21.0	BUD	2.56%	ACGL	3.38%
21.0	OXY	2.56%	BA	3.38%
21.0	VZ	2.45%	BUD	3.26%

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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	VST	12.87%	NVDA	20.34%
63.0	MSTR	9.8%	VST	19.36%
63.0	AVGO	8.82%	MSTR	13.11%
63.0	SIVBQ	7.78%	GBTC	11.4%
63.0	NVDA	6.86%	TRGP	10.17%
63.0	GME	6.74%	IRM	9.07%
63.0	IRM	6.62%	GILD	8.33%
63.0	ORCL	6.25%	LLY	8.33%
63.0	WFC	5.76%	TMUS	7.97%
63.0	TRGP	5.39%	AVGO	7.48%
63.0	META	4.41%	GE	7.23%
63.0	TMUS	4.17%	GLD	6.5%
63.0	BUD	4.17%	ORCL	6.37%
63.0	LW	4.04%	CCL	6.0%
63.0	EXPE	3.55%	ETRN	5.99%
63.0	CTLT	3.23%	ACGL	5.76%
63.0	KALU	3.19%	MUB	5.4%
63.0	OXY	2.82%	MRK	5.39%
63.0	TEVA	2.82%	MU	5.27%
63.0	GILD	2.7%	DHI	5.27%
63.0	MSI	2.57%	PHM	5.15%
63.0	TSLA	2.57%	THC	4.9%
63.0	WDC	2.45%	META	4.66%
63.0	ACGL	1.96%	TSLA	4.29%
63.0	GWW	1.96%	AMD	4.17%
63.0	GOOGL	1.84%	WFC	4.04%
63.0	RIO	1.47%	MS	3.92%
63.0	CCL	1.47%	BUD	3.8%
63.0	CAH	1.35%	CAH	3.55%
63.0	BXP	1.35%	MSFT	3.19%

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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	30.68%	VST	34.13%
126.0	MSTR	20.19%	NVDA	31.61%
126.0	IRM	16.07%	TRGP	22.44%
126.0	TRGP	11.95%	MSTR	18.19%
126.0	META	10.76%	GE	16.33%
126.0	NVDA	9.69%	THC	16.2%
126.0	MSI	8.1%	TMUS	14.34%
126.0	LW	6.24%	IRM	14.21%
126.0	AVGO	6.11%	LLY	13.81%
126.0	EXPE	5.71%	GBTC	12.35%
126.0	TEVA	5.71%	GILD	12.22%
126.0	BUD	5.18%	ACGL	11.82%
126.0	ACGL	3.45%	GLD	11.69%
126.0	CAH	3.19%	MU	9.83%
126.0	OXY	3.05%	META	9.16%
126.0	TDG	2.66%	CMG	8.37%
126.0	TMUS	2.52%	PHM	7.3%
126.0	GILD	2.26%	AVGO	7.3%
126.0	GOOGL	2.12%	ORCL	5.84%
126.0	GLD	1.86%	X	5.26%
126.0	THC	1.86%	CAH	5.18%
126.0	GME	1.73%	MSI	5.05%
126.0	VFC	1.46%	TEVA	4.52%
126.0	BALL	1.46%	COST	4.52%
126.0	ETRN	1.02%	TDG	4.12%
126.0	GE	0.93%	PWR	4.12%
126.0	ORCL	0.4%	TSLA	4.12%
126.0	WDC	0.4%	WFC	3.59%
126.0	WFC	0.4%	WDC	3.45%
126.0	HCA	0.27%	JPM	3.32%

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 2025-07-31

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	VST	49.44%	NVDA	62.84%
252.0	MSTR	44.5%	VST	59.65%
252.0	NVDA	42.11%	AVGO	50.24%
252.0	AVGO	25.52%	MSTR	44.34%
252.0	IRM	24.24%	GE	39.71%
252.0	LLY	15.79%	LLY	39.39%
252.0	GWW	9.41%	GBTC	32.85%
252.0	TEVA	9.41%	GLD	31.1%
252.0	MSI	8.45%	PHM	29.51%
252.0	TRGP	8.45%	TRGP	27.43%
252.0	META	7.5%	TMUS	23.13%
252.0	LW	4.94%	COST	20.89%
252.0	GLD	4.78%	IRM	20.73%
252.0	WFC	2.71%	META	20.57%
252.0	THC	2.39%	ACGL	19.3%
252.0	TMUS	2.39%	MSI	16.27%
252.0	GOOGL	1.91%	GS	15.15%
252.0	GILD	1.91%	CAH	15.15%
252.0	TDG	1.44%	TEVA	15.15%
252.0	GE	1.44%	THC	14.83%
252.0	JPM	1.28%	NFLX	12.28%
252.0	ORCL	1.12%	JPM	12.12%
252.0	GNRC	0.96%	T	10.21%
252.0	ORLY	0.8%	PWR	8.93%
252.0	CMG	0.64%	ETRN	7.18%
252.0	CAH	0.64%	TDG	6.7%
252.0	NFLX	0.48%	GILD	6.54%
252.0	GBTC	0.32%	ISRG	6.06%
252.0	ACGL	0.32%	WFC	5.9%
252.0	GS	0.32%	MU	5.26%

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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	CMA	15.0%	DHI	10.0%
1.0	GNRC	10.0%	AZN	10.0%
1.0	JPM	10.0%	GNRC	10.0%
1.0	AMC	10.0%	ORLY	10.0%
1.0	VST	10.0%	NEM	5.0%
1.0	GILD	10.0%	NAVI	5.0%
1.0	META	5.0%	CLF	5.0%
1.0	NAVI	5.0%	SLV	5.0%
1.0	MSFT	5.0%	TMUS	5.0%
1.0	SLV	5.0%	MSFT	5.0%
1.0	TMUS	5.0%	RIO	5.0%
1.0	SBUX	5.0%	META	5.0%
1.0	TSLA	5.0%	CDNS	5.0%
1.0	NEM	5.0%	LW	5.0%
1.0	NVDA	5.0%	OXY	5.0%
1.0	CDNS	5.0%	PHM	5.0%
1.0	VZ	5.0%	VZ	5.0%
1.0	WDC	5.0%	WDC	5.0%
1.0	AAP	5.0%	LNC	5.0%
1.0	DHI	5.0%	PEP	5.0%
1.0	NFLX	0.0%	LEN	5.0%
1.0	NVS	0.0%	KHC	5.0%
1.0	NWL	0.0%	NFLX	0.0%
1.0	ON	0.0%	ON	0.0%
1.0	ORCL	0.0%	NWL	0.0%
1.0	MUB	0.0%	NVS	0.0%
1.0	AA	0.0%	NVDA	0.0%
1.0	MS	0.0%	ORCL	0.0%
1.0	MU	0.0%	AA	0.0%
1.0	MSTR	0.0%	MUB	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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	CMA	72.73%	GNRC	27.27%
10.0	VST	27.27%	DHI	9.09%
10.0	AVGO	27.27%	CDNS	9.09%
10.0	GNRC	27.27%	OXY	0.0%
10.0	JPM	18.18%	PCG	0.0%
10.0	TSLA	18.18%	ORLY	0.0%
10.0	AAP	18.18%	ORCL	0.0%
10.0	BUD	9.09%	ON	0.0%
10.0	NWL	0.0%	NWL	0.0%
10.0	NVS	0.0%	MSTR	0.0%
10.0	ON	0.0%	NVS	0.0%
10.0	ORCL	0.0%	NVDA	0.0%
10.0	ORLY	0.0%	NFLX	0.0%
10.0	NFLX	0.0%	NEM	0.0%
10.0	NEM	0.0%	NAVI	0.0%
10.0	NAVI	0.0%	MUB	0.0%
10.0	MUB	0.0%	MU	0.0%
10.0	MU	0.0%	AA	0.0%
10.0	OXY	0.0%	MSI	0.0%
10.0	MSTR	0.0%	PHM	0.0%
10.0	NVDA	0.0%	LUMN	0.0%
10.0	MS	0.0%	KEY	0.0%
10.0	MSI	0.0%	KHC	0.0%
10.0	LUMN	0.0%	LEN	0.0%
10.0	KEY	0.0%	LLY	0.0%
10.0	KHC	0.0%	LNC	0.0%
10.0	LEN	0.0%	LQD	0.0%
10.0	LLY	0.0%	LVS	0.0%
10.0	LNC	0.0%	MSFT	0.0%
10.0	LQD	0.0%	LW	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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	TSLA	13.11%	LVS	4.92%
1.0	AAP	11.48%	ORLY	4.92%
1.0	SLV	8.2%	X	3.33%
1.0	GILD	8.2%	GLD	3.28%
1.0	AMC	6.56%	CLF	3.28%
1.0	NEM	6.56%	OXY	3.28%
1.0	AVGO	6.56%	GNRC	3.28%
1.0	ZTS	4.92%	ORCL	3.28%
1.0	VZ	4.92%	PRGO	3.28%
1.0	JPM	4.92%	AZN	3.28%
1.0	NAVI	4.92%	CCL	3.28%
1.0	CMA	4.92%	SLV	3.28%
1.0	X	3.33%	META	3.28%
1.0	NVS	3.28%	WYNN	3.28%
1.0	GNRC	3.28%	DHI	3.28%
1.0	UNH	3.28%	T	3.28%
1.0	MU	3.28%	NEM	3.28%
1.0	BUD	3.28%	GILD	1.64%
1.0	META	3.28%	SBUX	1.64%
1.0	ADBE	3.28%	RIO	1.64%
1.0	VFC	3.28%	QQQ	1.64%
1.0	VST	3.28%	SPY	1.64%
1.0	NVDA	1.64%	GT	1.64%
1.0	B	1.64%	HCA	1.64%
1.0	ELAN	1.64%	HD	1.64%
1.0	SBUX	1.64%	HLT	1.64%
1.0	INTU	1.64%	ZTS	1.64%
1.0	AMD	1.64%	AAP	1.64%
1.0	HON	1.64%	HYG	1.64%
1.0	ORCL	1.64%	LNC	1.64%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	AVGO	36.54%	X	47.62%
10.0	AAP	36.54%	AAP	25.0%
10.0	TSLA	19.23%	ORCL	19.23%
10.0	CMA	17.31%	WYNN	17.31%
10.0	NEM	13.46%	CCL	11.54%
10.0	GILD	11.54%	GNRC	9.62%
10.0	WYNN	9.62%	INTU	5.77%
10.0	NAVI	9.62%	GILD	3.85%
10.0	X	9.52%	ELAN	3.85%
10.0	JPM	7.69%	CYH	3.85%
10.0	KALU	7.69%	XOM	1.92%
10.0	SLV	7.69%	DHI	1.92%
10.0	TXN	5.77%	GS	1.92%
10.0	VST	5.77%	CDNS	1.92%
10.0	GNRC	5.77%	WFC	1.92%
10.0	ELAN	3.85%	MOS	1.92%
10.0	HCA	3.85%	TFC	1.92%
10.0	MU	3.85%	LVS	1.92%
10.0	HON	3.85%	NEM	0.0%
10.0	ZTS	3.85%	NFLX	0.0%
10.0	BUD	3.85%	NVS	0.0%
10.0	AMC	1.92%	NVDA	0.0%
10.0	ORCL	1.92%	NWL	0.0%
10.0	CAH	1.92%	ON	0.0%
10.0	UNH	1.92%	OXY	0.0%
10.0	NVS	1.92%	PCG	0.0%
10.0	GME	1.92%	ORLY	0.0%
10.0	ADBE	1.92%	AA	0.0%
10.0	MS	0.0%	NAVI	0.0%
10.0	ON	0.0%	MUB	0.0%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	AVGO	63.41%	ORCL	48.78%
21.0	AAP	34.15%	X	20.0%
21.0	TXN	19.51%	WYNN	19.51%
21.0	ORCL	17.07%	AAP	19.51%
21.0	GILD	14.63%	GNRC	7.32%
21.0	CMA	14.63%	BHC	4.88%
21.0	X	10.0%	AMD	2.44%
21.0	KALU	9.76%	NVS	2.44%
21.0	MU	7.32%	DHI	2.44%
21.0	B	4.88%	INTU	2.44%
21.0	GNRC	4.88%	OXY	0.0%
21.0	NEM	4.88%	ORLY	0.0%
21.0	SLV	4.88%	MSTR	0.0%
21.0	ZTS	4.88%	ON	0.0%
21.0	VFC	0.0%	PCG	0.0%
21.0	VZ	0.0%	NVDA	0.0%
21.0	NWL	0.0%	NFLX	0.0%
21.0	NVS	0.0%	NEM	0.0%
21.0	NVDA	0.0%	NAVI	0.0%
21.0	NFLX	0.0%	MUB	0.0%
21.0	WDC	0.0%	MU	0.0%
21.0	WFC	0.0%	NWL	0.0%
21.0	NAVI	0.0%	AA	0.0%
21.0	MUB	0.0%	MSI	0.0%
21.0	WYNN	0.0%	MSFT	0.0%
21.0	XOM	0.0%	PHM	0.0%
21.0	MSTR	0.0%	MS	0.0%
21.0	MSI	0.0%	MRK	0.0%
21.0	MSFT	0.0%	MOS	0.0%
21.0	MS	0.0%	MNST	0.0%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	AVGO	7.63%	MSTR	4.02%
1.0	VST	6.83%	VST	4.02%
1.0	TSLA	6.83%	LVS	3.61%
1.0	VZ	4.82%	WYNN	3.61%
1.0	GILD	4.82%	CCL	3.61%
1.0	MSTR	4.42%	ORCL	3.21%
1.0	SLV	4.02%	GLD	3.21%
1.0	HLT	3.61%	JAZZ	2.81%
1.0	CMA	3.61%	UAA	2.81%
1.0	SBUX	3.21%	TXN	2.81%
1.0	B	3.21%	TRGP	2.81%
1.0	UNH	2.81%	AVGO	2.81%
1.0	KEY	2.81%	GT	2.81%
1.0	AAP	2.81%	PWR	2.81%
1.0	ZTS	2.41%	HON	2.81%
1.0	JPM	2.41%	TSLA	2.41%
1.0	GME	2.41%	TEVA	2.41%
1.0	GNRC	2.41%	TMUS	2.41%
1.0	META	2.41%	GSK	2.41%
1.0	BAC	2.41%	T	2.41%
1.0	NEM	2.41%	GNRC	2.41%
1.0	NFLX	2.41%	HLT	2.41%
1.0	VFC	2.41%	HSBC	2.41%
1.0	MU	2.01%	PHM	2.41%
1.0	EXPE	2.01%	ORLY	2.41%
1.0	BUD	2.01%	CDNS	2.41%
1.0	ORCL	2.01%	FCX	2.41%
1.0	TMUS	2.01%	UNH	2.41%
1.0	CHTR	2.01%	X	2.29%
1.0	AMC	2.01%	WDC	2.01%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	TSLA	12.92%	TRGP	10.42%
10.0	VST	11.67%	WYNN	9.58%
10.0	AVGO	11.25%	ORCL	8.33%
10.0	GILD	10.0%	VST	8.33%
10.0	VZ	10.0%	NFLX	7.92%
10.0	EXPE	8.75%	WFC	7.08%
10.0	AAP	7.92%	TMUS	7.08%
10.0	CMA	7.92%	CPRT	6.25%
10.0	META	7.5%	X	6.22%
10.0	CHTR	7.5%	AVGO	5.42%
10.0	KALU	6.67%	AAP	5.42%
10.0	MSTR	5.83%	MS	5.42%
10.0	TXN	5.83%	LVS	5.0%
10.0	HON	5.42%	TSLA	5.0%
10.0	GS	5.42%	GS	5.0%
10.0	WFC	5.0%	BUD	5.0%
10.0	BUD	5.0%	CCL	5.0%
10.0	SBUX	4.58%	MSTR	4.58%
10.0	NEM	4.17%	CAH	4.58%
10.0	ELAN	3.75%	CHTR	4.58%
10.0	WYNN	3.75%	T	4.58%
10.0	SLV	3.33%	TEVA	4.17%
10.0	VFC	3.33%	HON	4.17%
10.0	TRGP	2.92%	HSBC	4.17%
10.0	B	2.5%	GBTC	4.17%
10.0	UNH	2.5%	MSFT	4.17%
10.0	WDC	2.5%	POST	4.17%
10.0	ORCL	2.5%	GILD	4.17%
10.0	ABBV	2.5%	PWR	3.75%
10.0	NFLX	2.5%	HLT	3.75%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	AVGO	15.72%	WYNN	14.41%
21.0	CHTR	15.28%	TRGP	13.54%
21.0	GILD	12.66%	VST	13.54%
21.0	TSLA	10.48%	ORCL	12.66%
21.0	MSTR	10.48%	TMUS	12.23%
21.0	WFC	10.04%	MSTR	10.48%
21.0	VST	10.04%	WFC	10.48%
21.0	VZ	8.73%	LVS	9.61%
21.0	TXN	8.3%	GILD	8.73%
21.0	GS	7.86%	TEVA	8.73%
21.0	ORCL	7.86%	BUD	7.86%
21.0	AAP	6.99%	AVGO	7.86%
21.0	META	6.55%	GBTC	7.42%
21.0	KALU	5.68%	NFLX	7.42%
21.0	CMA	5.24%	TSLA	6.99%
21.0	MU	5.24%	MSFT	6.11%
21.0	NEM	4.37%	GS	6.11%
21.0	BAC	4.37%	AAP	5.68%
21.0	HON	3.93%	T	5.68%
21.0	ZTS	3.93%	PWR	5.68%
21.0	HD	3.93%	MOS	5.24%
21.0	TRGP	3.93%	COST	4.8%
21.0	BUD	3.49%	HLT	4.8%
21.0	KEY	3.49%	BA	4.8%
21.0	CPRT	3.49%	CAH	4.37%
21.0	THC	3.06%	GLD	4.37%
21.0	WDC	3.06%	MS	4.37%
21.0	GE	2.62%	HSBC	3.93%
21.0	ABBV	2.62%	CPRT	3.93%
21.0	HSBC	2.18%	THC	3.93%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	WFC	21.39%	CCL	24.06%
63.0	ORCL	20.32%	ORCL	20.86%
63.0	BUD	18.18%	TRGP	20.86%
63.0	TMUS	13.37%	MSTR	20.86%
63.0	EXPE	12.83%	VST	19.79%
63.0	GILD	11.23%	TMUS	18.18%
63.0	TSLA	11.23%	TSLA	17.65%
63.0	WDC	9.09%	WFC	17.65%
63.0	AVGO	9.09%	MS	17.11%
63.0	KALU	8.56%	BUD	16.58%
63.0	VST	6.95%	MSFT	13.9%
63.0	CCL	6.42%	GLD	13.9%
63.0	TXN	5.35%	CAH	10.7%
63.0	META	4.81%	PWR	9.09%
63.0	MU	2.67%	NFLX	7.49%
63.0	HD	2.67%	HSBC	6.95%
63.0	GS	2.67%	AMD	6.95%
63.0	HON	2.67%	GS	6.42%
63.0	AAP	2.14%	KALU	6.42%
63.0	CMA	2.14%	T	5.88%
63.0	GLD	1.6%	GBTC	5.88%
63.0	BAC	1.6%	CVS	5.88%
63.0	CVS	1.6%	AAP	5.35%
63.0	MSTR	1.07%	CSCO	5.35%
63.0	GNRC	1.07%	BA	5.35%
63.0	TRGP	0.53%	MOS	4.81%
63.0	MSFT	0.53%	LVS	4.81%
63.0	KEY	0.53%	HLT	4.81%
63.0	NVDA	0.0%	GILD	4.28%
63.0	NVS	0.0%	GE	4.28%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	BUD	31.45%	GLD	41.13%
126.0	TMUS	15.32%	TMUS	34.68%
126.0	EXPE	13.71%	TRGP	20.97%
126.0	META	10.48%	GILD	17.74%
126.0	GILD	8.87%	CAH	17.74%
126.0	VFC	2.42%	NFLX	16.94%
126.0	MSTR	1.61%	VST	12.1%
126.0	GLD	0.81%	BUD	10.48%
126.0	TRGP	0.81%	WFC	10.48%
126.0	NVDA	0.0%	T	10.48%
126.0	MU	0.0%	MS	8.87%
126.0	NFLX	0.0%	JPM	7.26%
126.0	ORLY	0.0%	MSTR	6.45%
126.0	NEM	0.0%	CSCO	6.45%
126.0	NAVI	0.0%	HSBC	5.65%
126.0	NVS	0.0%	CCL	4.84%
126.0	NWL	0.0%	ORCL	4.03%
126.0	OXY	0.0%	GS	2.42%
126.0	ON	0.0%	HLT	0.81%
126.0	MUB	0.0%	GE	0.81%
126.0	ORCL	0.0%	EXPE	0.81%
126.0	AA	0.0%	NEM	0.0%
126.0	PEP	0.0%	NVDA	0.0%
126.0	MSI	0.0%	NVS	0.0%
126.0	MSFT	0.0%	NWL	0.0%
126.0	MS	0.0%	ON	0.0%
126.0	MRK	0.0%	ORLY	0.0%
126.0	MOS	0.0%	OXY	0.0%
126.0	MNST	0.0%	AA	0.0%
126.0	LW	0.0%	NAVI	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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NVDA	0.58%	MSTR	0.45%
1.0	GBTC	0.51%	VST	0.31%
1.0	X	0.45%	NVDA	0.28%
1.0	MSTR	0.44%	AVGO	0.22%
1.0	VST	0.44%	GBTC	0.22%
1.0	GE	0.4%	GME	0.19%
1.0	AVGO	0.37%	PWR	0.18%
1.0	PWR	0.36%	GE	0.17%
1.0	LLY	0.32%	X	0.17%
1.0	CCL	0.3%	NFLX	0.16%
1.0	TDG	0.28%	ORCL	0.15%
1.0	TRGP	0.26%	LLY	0.15%
1.0	CAH	0.26%	META	0.15%
1.0	CDNS	0.25%	TRGP	0.14%
1.0	TSLA	0.25%	CAH	0.14%
1.0	ORCL	0.25%	THC	0.13%
1.0	NFLX	0.24%	CDNS	0.12%
1.0	ORLY	0.23%	TDG	0.12%
1.0	THC	0.22%	ETRN	0.12%
1.0	PHM	0.22%	PHM	0.12%
1.0	AZO	0.22%	CCL	0.11%
1.0	WDC	0.21%	TEVA	0.11%
1.0	WYNN	0.2%	ORLY	0.1%
1.0	MSFT	0.19%	AMD	0.1%
1.0	GME	0.19%	TMUS	0.1%
1.0	DHI	0.19%	IRM	0.1%
1.0	JPM	0.18%	GS	0.09%
1.0	HLT	0.18%	JPM	0.09%
1.0	TMUS	0.18%	WDC	0.09%
1.0	ETRN	0.17%	AZO	0.09%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	6.34%	MSTR	4.67%
10.0	MSTR	4.96%	VST	3.03%
10.0	GBTC	4.39%	NVDA	2.83%
10.0	LLY	3.89%	AVGO	2.19%
10.0	VST	3.79%	GBTC	2.14%
10.0	CCL	3.38%	PWR	1.8%
10.0	AVGO	3.23%	NFLX	1.67%
10.0	TSLA	3.05%	GE	1.66%
10.0	PWR	2.97%	GME	1.62%
10.0	GE	2.68%	META	1.6%
10.0	PHM	2.27%	X	1.58%
10.0	AZO	2.13%	LLY	1.55%
10.0	X	2.09%	ORCL	1.52%
10.0	THC	1.98%	ETRN	1.41%
10.0	CAH	1.86%	CAH	1.38%
10.0	DHI	1.84%	TRGP	1.35%
10.0	WDC	1.81%	THC	1.22%
10.0	TEVA	1.79%	TDG	1.21%
10.0	CDNS	1.79%	TEVA	1.2%
10.0	TDG	1.78%	CDNS	1.18%
10.0	TRGP	1.62%	PHM	1.15%
10.0	COST	1.59%	CCL	1.1%
10.0	GS	1.56%	IRM	1.07%
10.0	JPM	1.53%	ORLY	1.02%
10.0	ORLY	1.53%	GWW	1.0%
10.0	ACGL	1.53%	GS	0.96%
10.0	MSFT	1.52%	TSLA	0.92%
10.0	NFLX	1.5%	JPM	0.9%
10.0	WYNN	1.48%	AMD	0.89%
10.0	HLT	1.42%	TMUS	0.89%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	12.89%	MSTR	10.52%
21.0	MSTR	12.81%	VST	6.54%
21.0	GBTC	10.23%	NVDA	6.11%
21.0	VST	9.44%	GBTC	4.66%
21.0	TSLA	7.56%	AVGO	4.6%
21.0	ETRN	7.53%	PWR	3.79%
21.0	CCL	7.23%	NFLX	3.79%
21.0	PWR	6.06%	META	3.61%
21.0	AVGO	5.9%	GE	3.59%
21.0	LLY	5.88%	ETRN	3.5%
21.0	GE	5.24%	ORCL	3.34%
21.0	CDNS	5.16%	LLY	3.25%
21.0	PHM	4.47%	X	3.17%
21.0	X	4.44%	CAH	2.98%
21.0	AZO	4.18%	TRGP	2.85%
21.0	AMD	4.07%	THC	2.69%
21.0	CAH	4.06%	TEVA	2.62%
21.0	THC	4.06%	GME	2.54%
21.0	ORCL	3.77%	TDG	2.48%
21.0	DHI	3.75%	CCL	2.47%
21.0	TDG	3.67%	PHM	2.45%
21.0	TMUS	3.64%	CDNS	2.4%
21.0	AMAT	3.5%	IRM	2.28%
21.0	NFLX	3.42%	GWW	2.2%
21.0	TRGP	3.35%	TSLA	2.2%
21.0	MSFT	3.33%	GS	2.08%
21.0	JPM	3.19%	ORLY	2.07%
21.0	GS	3.07%	ISRG	1.91%
21.0	HLT	3.07%	JPM	1.89%
21.0	TEVA	2.99%	AZO	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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	47.16%	MSTR	30.81%
63.0	NVDA	41.34%	VST	20.68%
63.0	GBTC	41.04%	NVDA	19.7%
63.0	VST	28.91%	GBTC	15.44%
63.0	PWR	23.09%	AVGO	13.64%
63.0	CCL	21.71%	NFLX	13.02%
63.0	GE	21.02%	META	12.42%
63.0	ETRN	18.76%	GE	11.19%
63.0	LLY	18.44%	ETRN	10.28%
63.0	PHM	17.65%	PWR	10.22%
63.0	NFLX	16.61%	LLY	9.37%
63.0	AVGO	16.32%	CAH	8.86%
63.0	META	13.2%	ORCL	8.76%
63.0	CAH	13.07%	THC	8.52%
63.0	THC	12.79%	PHM	8.09%
63.0	JPM	12.54%	TRGP	7.99%
63.0	TSLA	12.53%	TDG	7.29%
63.0	CDNS	12.13%	TEVA	7.04%
63.0	TMUS	11.04%	CCL	7.02%
63.0	X	10.99%	GWW	6.59%
63.0	AMD	10.98%	CDNS	6.54%
63.0	ORCL	10.69%	ISRG	6.34%
63.0	TDG	10.67%	IRM	6.31%
63.0	TRGP	10.44%	JPM	6.03%
63.0	MSFT	10.32%	ORLY	5.92%
63.0	MS	10.3%	X	5.91%
63.0	ACGL	10.15%	GS	5.89%
63.0	COST	10.01%	ACGL	5.85%
63.0	QQQ	9.76%	CMG	5.43%
63.0	AMAT	9.5%	TMUS	5.36%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	GBTC	101.28%	MSTR	72.31%
126.0	NVDA	97.35%	NVDA	48.54%
126.0	MSTR	85.61%	VST	43.23%
126.0	VST	55.87%	GBTC	39.65%
126.0	GE	50.91%	NFLX	30.36%
126.0	NFLX	47.79%	META	29.34%
126.0	LLY	44.0%	AVGO	27.95%
126.0	CCL	43.84%	GE	25.76%
126.0	PHM	43.67%	LLY	20.46%
126.0	THC	39.66%	TRGP	19.42%
126.0	PWR	36.68%	THC	19.33%
126.0	AVGO	36.47%	PHM	18.63%
126.0	META	32.15%	ETRN	18.49%
126.0	ORCL	30.96%	PWR	18.32%
126.0	JPM	28.84%	CAH	17.93%
126.0	CAH	26.95%	ORCL	16.74%
126.0	ACGL	26.18%	TDG	16.34%
126.0	MU	26.15%	ISRG	15.33%
126.0	TRGP	25.96%	TEVA	14.72%
126.0	TSLA	25.78%	GWW	14.22%
126.0	X	25.56%	CCL	13.76%
126.0	TDG	25.51%	ACGL	13.55%
126.0	COST	25.5%	JPM	13.41%
126.0	AMZN	25.48%	ORLY	13.34%
126.0	DHI	25.29%	IRM	13.26%
126.0	TMUS	24.57%	MSI	12.4%
126.0	VNO	24.47%	COST	12.32%
126.0	ETRN	24.38%	X	12.31%
126.0	ISRG	24.34%	CMG	12.26%
126.0	CMG	23.77%	CDNS	12.22%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	GBTC	268.63%	MSTR	224.9%
252.0	MSTR	249.88%	NVDA	142.83%
252.0	NVDA	245.09%	VST	126.9%
252.0	GE	157.97%	GBTC	118.26%
252.0	VST	137.99%	META	79.88%
252.0	PHM	137.1%	AVGO	73.22%
252.0	NFLX	115.6%	NFLX	69.3%
252.0	META	114.57%	GE	61.18%
252.0	CCL	113.99%	PHM	54.19%
252.0	THC	112.2%	LLY	52.22%
252.0	TRGP	102.0%	THC	51.02%
252.0	AVGO	100.69%	TRGP	49.48%
252.0	LLY	81.74%	PWR	42.53%
252.0	ORCL	73.5%	TDG	40.08%
252.0	PWR	71.45%	ORCL	39.22%
252.0	X	68.34%	ISRG	38.83%
252.0	MU	68.2%	TEVA	37.59%
252.0	AMAT	66.36%	CCL	37.26%
252.0	ISRG	63.97%	IRM	36.16%
252.0	VNO	62.99%	ETRN	35.78%
252.0	TDG	61.81%	CAH	33.77%
252.0	ACGL	60.91%	GWW	33.57%
252.0	DHI	60.76%	DHI	33.55%
252.0	COST	59.51%	ACGL	33.04%
252.0	QQQ	58.38%	JPM	31.54%
252.0	JPM	56.27%	CMG	31.21%
252.0	CAH	55.42%	COST	30.88%
252.0	CDNS	54.49%	MSI	29.72%
252.0	AMZN	54.02%	CPRT	29.43%
252.0	MSFT	51.46%	CDNS	28.71%

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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	AMD	1.91%	GNRC	1.31%
1.0	CLF	1.9%	AMD	1.11%
1.0	GNRC	1.83%	WDC	0.79%
1.0	DHI	1.49%	CLF	0.77%
1.0	FSUGY	1.39%	DHI	0.75%
1.0	PHM	1.36%	CDNS	0.72%
1.0	LW	1.26%	ORLY	0.53%
1.0	LVS	1.07%	NVDA	0.51%
1.0	WDC	1.04%	FSUGY	0.47%
1.0	LEN	0.97%	GE	0.44%
1.0	ORLY	0.88%	VST	0.43%
1.0	CDNS	0.83%	LVS	0.41%
1.0	ABBV	0.63%	LW	0.41%
1.0	LNC	0.59%	PHM	0.38%
1.0	GE	0.54%	AVGO	0.35%
1.0	META	0.53%	LNC	0.34%
1.0	VST	0.52%	MSFT	0.33%
1.0	JAZZ	0.48%	LEN	0.3%
1.0	PEP	0.47%	GOOGL	0.29%
1.0	EXPE	0.47%	META	0.29%
1.0	IEP	0.46%	IEP	0.28%
1.0	AZN	0.35%	JAZZ	0.26%
1.0	GBTC	0.34%	NEM	0.26%
1.0	BA	0.33%	CMA	0.24%
1.0	GOOGL	0.33%	EXPE	0.22%
1.0	MSFT	0.32%	AZN	0.22%
1.0	NEM	0.3%	TDG	0.2%
1.0	AAP	0.29%	GBTC	0.18%
1.0	AZO	0.27%	AAP	0.17%
1.0	KHC	0.25%	ABBV	0.17%

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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	CLF	31.69%	CLF	16.98%
10.0	LW	18.65%	AMD	13.37%
10.0	AMD	16.42%	LW	9.63%
10.0	FSUGY	13.09%	GNRC	8.78%
10.0	CDNS	11.72%	DHI	7.85%
10.0	DHI	11.03%	FSUGY	7.33%
10.0	BHP	10.99%	WDC	6.9%
10.0	GOOGL	10.64%	GOOGL	6.52%
10.0	KHC	9.4%	CDNS	6.31%
10.0	PHM	9.33%	CMA	6.24%
10.0	GNRC	9.09%	ORLY	5.59%
10.0	PCG	8.93%	NEM	5.28%
10.0	ORLY	7.48%	NVDA	5.18%
10.0	PEP	7.42%	PWR	4.89%
10.0	LNC	7.07%	AVGO	4.55%
10.0	GE	6.68%	GE	4.48%
10.0	NEM	6.45%	PEP	4.42%
10.0	NWL	5.79%	RIO	4.31%
10.0	WDC	5.76%	KHC	4.3%
10.0	RIO	5.7%	PHM	4.09%
10.0	LEN	5.25%	JAZZ	3.87%
10.0	LVS	5.19%	ORCL	3.81%
10.0	IEP	4.96%	BHP	3.69%
10.0	MSI	4.91%	VST	3.22%
10.0	NVDA	4.83%	LVS	3.21%
10.0	AA	4.68%	EXPE	3.15%
10.0	JAZZ	4.11%	TMUS	3.08%
10.0	PWR	3.98%	AMC	3.03%
10.0	AZN	3.89%	TSLA	3.0%
10.0	VNO	3.83%	PCG	2.98%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	AAP	1.88%	AAP	1.09%
1.0	X	1.76%	AMD	0.91%
1.0	NVDA	1.7%	X	0.9%
1.0	ORCL	1.59%	WDC	0.89%
1.0	WDC	1.58%	GNRC	0.88%
1.0	LVS	1.53%	ORCL	0.84%
1.0	CCL	1.47%	NVDA	0.71%
1.0	ELAN	1.45%	ON	0.69%
1.0	GNRC	1.43%	VST	0.69%
1.0	AMD	1.38%	CCL	0.68%
1.0	CLF	1.16%	ELAN	0.65%
1.0	WYNN	0.96%	AVGO	0.62%
1.0	DHI	0.81%	LVS	0.53%
1.0	GS	0.78%	MU	0.46%
1.0	INTU	0.76%	WYNN	0.46%
1.0	MOS	0.74%	GE	0.43%
1.0	BHC	0.73%	GS	0.4%
1.0	CSTM	0.7%	CLF	0.39%
1.0	PHM	0.7%	META	0.39%
1.0	LW	0.67%	INTU	0.35%
1.0	ON	0.65%	PWR	0.34%
1.0	GE	0.63%	DHI	0.34%
1.0	VST	0.61%	CSTM	0.33%
1.0	GBTC	0.6%	GBTC	0.31%
1.0	AMAT	0.59%	CMA	0.31%
1.0	FSUGY	0.58%	MSFT	0.31%
1.0	BA	0.57%	NEM	0.3%
1.0	META	0.56%	BA	0.3%
1.0	CSCO	0.51%	BHC	0.28%
1.0	LEN	0.51%	AMAT	0.27%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	X	27.19%	AAP	14.08%
10.0	NVDA	16.37%	X	13.61%
10.0	CLF	15.42%	ORCL	9.53%
10.0	AAP	14.8%	AMD	9.14%
10.0	CCL	12.62%	WDC	8.45%
10.0	BHC	12.42%	CLF	7.91%
10.0	ORCL	12.14%	BHC	7.06%
10.0	AMD	11.5%	CCL	6.99%
10.0	WDC	11.0%	NVDA	6.9%
10.0	GNRC	8.29%	ON	6.84%
10.0	ON	7.67%	VST	6.12%
10.0	LVS	7.2%	AVGO	5.9%
10.0	CSTM	6.68%	GNRC	5.89%
10.0	MOS	6.21%	MU	4.79%
10.0	GOOGL	6.16%	LVS	4.6%
10.0	KEY	5.85%	GS	4.22%
10.0	GS	5.85%	GE	4.14%
10.0	GE	5.82%	ELAN	4.06%
10.0	WYNN	5.72%	PWR	4.0%
10.0	PHM	5.59%	WYNN	3.99%
10.0	AA	5.56%	CSTM	3.91%
10.0	ELAN	5.41%	INTU	3.82%
10.0	BA	4.92%	KALU	3.81%
10.0	INTU	4.82%	NEM	3.78%
10.0	MU	4.68%	AMC	3.73%
10.0	VST	4.52%	GOOGL	3.69%
10.0	DHI	4.39%	CMA	3.35%
10.0	GBTC	4.38%	DHI	3.22%
10.0	PWR	4.38%	BA	3.16%
10.0	LW	4.17%	SLV	3.13%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	BHC	41.66%	X	28.78%
21.0	CLF	41.31%	AAP	26.65%
21.0	X	40.84%	ORCL	24.32%
21.0	ORCL	31.37%	BHC	20.86%
21.0	NVDA	28.46%	CLF	20.11%
21.0	ON	27.91%	AMD	19.82%
21.0	CCL	27.23%	WDC	18.62%
21.0	AMD	26.93%	ON	17.57%
21.0	AAP	25.56%	CCL	16.06%
21.0	LVS	23.99%	NVDA	14.78%
21.0	WDC	23.09%	VST	13.09%
21.0	GNRC	22.15%	MU	12.94%
21.0	WYNN	15.01%	GNRC	12.92%
21.0	LUMN	14.29%	AVGO	12.07%
21.0	PHM	13.9%	LVS	11.3%
21.0	GS	13.07%	WYNN	10.66%
21.0	CSTM	12.86%	KALU	10.12%
21.0	VST	12.48%	GS	9.96%
21.0	GOOGL	11.93%	CSTM	9.0%
21.0	ELAN	11.66%	AMAT	8.96%
21.0	KEY	11.62%	PWR	8.62%
21.0	ZION	10.81%	ELAN	8.45%
21.0	AMAT	10.33%	ZION	8.27%
21.0	MU	10.07%	NEM	7.86%
21.0	TFC	9.49%	KEY	7.65%
21.0	DHI	9.48%	FCX	7.53%
21.0	BA	9.41%	DHI	7.25%
21.0	PEP	9.37%	SLV	7.21%
21.0	BAC	9.3%	GE	7.17%
21.0	MOS	9.27%	CMA	7.12%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	VST	1.04%	MSTR	0.55%
1.0	CCL	0.8%	VST	0.53%
1.0	NVDA	0.65%	AVGO	0.35%
1.0	GBTC	0.6%	CCL	0.32%
1.0	WYNN	0.54%	GBTC	0.28%
1.0	AVGO	0.53%	ORCL	0.28%
1.0	NFLX	0.52%	NFLX	0.28%
1.0	TSLA	0.5%	TSLA	0.25%
1.0	GE	0.49%	NVDA	0.25%
1.0	CDNS	0.48%	PWR	0.23%
1.0	LVS	0.48%	GE	0.23%
1.0	ORCL	0.46%	EXPE	0.21%
1.0	T	0.44%	X	0.21%
1.0	MS	0.4%	META	0.2%
1.0	WDC	0.38%	GS	0.19%
1.0	MOS	0.38%	CAH	0.18%
1.0	JPM	0.38%	WDC	0.18%
1.0	VNO	0.36%	CDNS	0.18%
1.0	CSCO	0.35%	WFC	0.17%
1.0	WFC	0.33%	MS	0.17%
1.0	X	0.33%	HSBC	0.17%
1.0	VFC	0.33%	WYNN	0.17%
1.0	EXPE	0.33%	GILD	0.17%
1.0	AAP	0.32%	JPM	0.17%
1.0	CLF	0.32%	GNRC	0.16%
1.0	TRGP	0.32%	AMD	0.16%
1.0	TDG	0.32%	LVS	0.16%
1.0	CAH	0.32%	CSCO	0.16%
1.0	AZO	0.31%	T	0.16%
1.0	HSBC	0.31%	VNO	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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	MSTR	10.46%	MSTR	6.05%
10.0	CCL	8.1%	VST	4.98%
10.0	VST	8.06%	CCL	3.46%
10.0	NVDA	6.52%	AVGO	3.42%
10.0	GBTC	5.37%	GBTC	3.25%
10.0	AVGO	5.2%	ORCL	3.0%
10.0	WYNN	4.83%	NFLX	2.88%
10.0	MOS	4.59%	TSLA	2.82%
10.0	T	4.39%	NVDA	2.44%
10.0	NFLX	4.07%	GE	2.27%
10.0	WDC	3.95%	PWR	2.24%
10.0	LVS	3.64%	WFC	2.07%
10.0	GT	3.54%	EXPE	2.06%
10.0	WFC	3.32%	WYNN	2.02%
10.0	BHC	2.92%	CAH	1.92%
10.0	GE	2.89%	HSBC	1.92%
10.0	MS	2.84%	GS	1.92%
10.0	CSCO	2.83%	MS	1.9%
10.0	TRGP	2.78%	GILD	1.86%
10.0	CAH	2.72%	X	1.83%
10.0	JPM	2.64%	CSCO	1.77%
10.0	BA	2.49%	JPM	1.7%
10.0	CDNS	2.48%	META	1.7%
10.0	ORCL	2.46%	BA	1.62%
10.0	TDG	2.36%	BHC	1.59%
10.0	GS	2.2%	LVS	1.57%
10.0	GLD	2.19%	T	1.57%
10.0	GOOGL	2.14%	GT	1.52%
10.0	HSBC	2.03%	WDC	1.51%
10.0	HLT	1.93%	MOS	1.5%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MSTR	25.34%	MSTR	13.84%
21.0	VST	18.69%	VST	10.58%
21.0	CCL	13.27%	CCL	7.21%
21.0	NVDA	10.92%	GBTC	6.99%
21.0	GBTC	10.54%	AVGO	6.84%
21.0	LVS	9.85%	ORCL	6.43%
21.0	WYNN	9.36%	NFLX	6.22%
21.0	MOS	9.32%	TSLA	5.92%
21.0	AVGO	8.91%	GE	4.61%
21.0	NFLX	8.85%	PWR	4.47%
21.0	GT	8.33%	WYNN	4.37%
21.0	MS	8.27%	WFC	4.19%
21.0	T	8.17%	NVDA	4.18%
21.0	TRGP	6.28%	CAH	3.98%
21.0	CDNS	6.27%	GS	3.91%
21.0	WFC	6.16%	GILD	3.89%
21.0	ORCL	6.15%	MS	3.86%
21.0	BHC	6.08%	HSBC	3.81%
21.0	CSCO	5.39%	EXPE	3.71%
21.0	CAH	5.31%	META	3.6%
21.0	BA	4.9%	X	3.54%
21.0	GOOGL	4.76%	CSCO	3.43%
21.0	JPM	4.58%	T	3.38%
21.0	GS	4.53%	JPM	3.28%
21.0	HSBC	4.18%	LVS	3.26%
21.0	HLT	4.03%	BA	3.18%
21.0	GLD	4.02%	BHC	3.11%
21.0	PWR	3.98%	MOS	3.04%
21.0	VNO	3.98%	AMZN	2.91%
21.0	GE	3.98%	GT	2.85%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	107.95%	MSTR	50.46%
63.0	VST	50.3%	VST	27.94%
63.0	GBTC	41.7%	GBTC	23.71%
63.0	CCL	36.44%	NFLX	21.27%
63.0	NFLX	34.67%	TSLA	20.42%
63.0	MOS	33.63%	AVGO	18.81%
63.0	MS	31.37%	CCL	17.86%
63.0	T	27.21%	CAH	13.12%
63.0	JPM	25.35%	GE	12.41%
63.0	GT	25.21%	ORCL	12.12%
63.0	NVDA	25.15%	WFC	12.0%
63.0	HSBC	23.22%	PWR	11.9%
63.0	AVGO	22.94%	HSBC	11.65%
63.0	PWR	22.83%	MOS	11.42%
63.0	GE	21.52%	BA	10.95%
63.0	TSLA	20.5%	GILD	10.6%
63.0	CAH	19.96%	GS	10.5%
63.0	BA	17.84%	GT	10.33%
63.0	CSCO	15.9%	MS	10.27%
63.0	CDNS	15.84%	T	10.19%
63.0	TRGP	14.77%	JPM	9.46%
63.0	WFC	14.68%	NVDA	9.45%
63.0	GS	14.55%	CSCO	9.1%
63.0	LVS	13.9%	GLD	9.07%
63.0	GLD	13.12%	X	9.05%
63.0	X	12.66%	META	8.96%
63.0	GOOGL	12.66%	EXPE	8.7%
63.0	QQQ	12.62%	GME	8.25%
63.0	MSFT	12.4%	AAP	8.24%
63.0	ORCL	12.26%	MNST	7.82%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	MSTR	78.11%	MSTR	58.42%
126.0	NFLX	72.19%	NFLX	40.26%
126.0	T	67.11%	GBTC	29.24%
126.0	HSBC	55.08%	VST	28.75%
126.0	GBTC	54.03%	HSBC	26.15%
126.0	MOS	52.84%	GILD	25.5%
126.0	VST	48.01%	GE	25.43%
126.0	GE	42.67%	CAH	25.04%
126.0	JPM	41.44%	T	24.82%
126.0	GT	39.85%	AVGO	23.86%
126.0	BA	39.75%	GLD	21.32%
126.0	CAH	39.06%	BA	18.05%
126.0	CCL	37.21%	MOS	17.61%
126.0	AZO	37.03%	WFC	17.1%
126.0	MS	31.85%	CVS	16.88%
126.0	GILD	29.5%	GT	15.7%
126.0	GLD	29.3%	ORLY	15.45%
126.0	CVS	29.08%	TMUS	15.33%
126.0	CSCO	27.67%	CSCO	15.21%
126.0	X	25.61%	AZO	15.1%
126.0	AVGO	25.6%	NEM	14.82%
126.0	TDG	23.04%	JPM	14.52%
126.0	ORLY	22.44%	MNST	14.19%
126.0	TRGP	21.54%	X	13.74%
126.0	WFC	21.47%	META	13.24%
126.0	MNST	21.26%	BUD	13.04%
126.0	TMUS	20.49%	GS	12.54%
126.0	GS	19.82%	CCL	12.42%
126.0	ORCL	19.71%	SLV	11.78%
126.0	SLV	18.67%	MS	10.59%

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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SIVBQ	-0.91%	SIVBQ	-0.78%
1.0	NWL	-0.48%	SBNY	-0.45%
1.0	IEP	-0.44%	FRCB	-0.23%
1.0	SBNY	-0.39%	IEP	-0.16%
1.0	LUMN	-0.27%	AMC	-0.15%
1.0	FRCB	-0.19%	VFC	-0.13%
1.0	CZR	-0.17%	NWL	-0.12%
1.0	BIIB	-0.16%	AAP	-0.11%
1.0	INTC	-0.16%	LUMN	-0.1%
1.0	UAA	-0.15%	CNC	-0.09%
1.0	BXP	-0.13%	BHC	-0.07%
1.0	CNC	-0.13%	CZR	-0.07%
1.0	AMC	-0.12%	UAA	-0.06%
1.0	AAP	-0.11%	CHTR	-0.06%
1.0	BALL	-0.1%	INTC	-0.06%
1.0	CHTR	-0.09%	UNH	-0.06%
1.0	GT	-0.09%	TLT	-0.05%
1.0	ZTS	-0.09%	CVS	-0.04%
1.0	GNRC	-0.08%	BALL	-0.04%
1.0	FIS	-0.08%	BIIB	-0.04%
1.0	TLT	-0.08%	BXP	-0.04%
1.0	CTLT	-0.07%	CYH	-0.04%
1.0	UNH	-0.07%	CMCSA	-0.03%
1.0	KHC	-0.06%	GSK	-0.03%
1.0	PEP	-0.06%	BMY	-0.03%
1.0	VZ	-0.06%	LNC	-0.03%
1.0	ADBE	-0.04%	ELAN	-0.03%
1.0	USB	-0.04%	GT	-0.03%
1.0	VFC	-0.04%	FIS	-0.02%
1.0	LNC	-0.04%	ADBE	-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 2025-07-31

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SIVBQ	-5.34%	SBNY	-4.05%
10.0	SBNY	-3.67%	SIVBQ	-3.9%
10.0	IEP	-3.44%	FRCB	-2.19%
10.0	NWL	-2.74%	IEP	-1.49%
10.0	CZR	-1.96%	AMC	-1.45%
10.0	AMC	-1.73%	VFC	-1.3%
10.0	CNC	-1.69%	NWL	-1.04%
10.0	FRCB	-1.67%	CNC	-0.98%
10.0	CYH	-1.62%	AAP	-0.91%
10.0	VFC	-1.36%	CZR	-0.74%
10.0	LUMN	-1.31%	UAA	-0.69%
10.0	AAP	-1.14%	LUMN	-0.62%
10.0	BIIB	-1.09%	TLT	-0.5%
10.0	BXP	-0.88%	INTC	-0.49%
10.0	GNRC	-0.82%	BHC	-0.48%
10.0	UAA	-0.76%	BIIB	-0.46%
10.0	LNC	-0.76%	UNH	-0.45%
10.0	VZ	-0.74%	CVS	-0.44%
10.0	CLF	-0.71%	CYH	-0.43%
10.0	RIO	-0.68%	CHTR	-0.41%
10.0	INTC	-0.56%	LNC	-0.4%
10.0	BHP	-0.5%	BXP	-0.37%
10.0	ZTS	-0.49%	BALL	-0.36%
10.0	BBY	-0.49%	GSK	-0.32%
10.0	BALL	-0.45%	CMCSA	-0.31%
10.0	GT	-0.42%	BMY	-0.28%
10.0	TLT	-0.4%	ELAN	-0.27%
10.0	HD	-0.39%	AA	-0.26%
10.0	UNH	-0.37%	GT	-0.23%
10.0	FSUGY	-0.36%	BBY	-0.23%

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 2025-07-31

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	-6.62%	FRCB	-6.02%
21.0	NWL	-5.4%	AMC	-3.58%
21.0	FRCB	-4.48%	IEP	-3.26%
21.0	CZR	-4.14%	VFC	-2.78%
21.0	VFC	-3.38%	NWL	-2.33%
21.0	AAP	-2.48%	CNC	-1.87%
21.0	GNRC	-2.41%	AAP	-1.82%
21.0	CNC	-2.3%	CZR	-1.57%
21.0	AMC	-1.78%	UAA	-1.32%
21.0	CLF	-1.62%	BHC	-1.23%
21.0	BXP	-1.59%	LUMN	-1.05%
21.0	BALL	-1.57%	INTC	-1.05%
21.0	BBY	-1.55%	TLT	-1.05%
21.0	BIIB	-1.5%	LNC	-0.99%
21.0	RIO	-1.36%	AA	-0.88%
21.0	INTC	-1.35%	BIIB	-0.87%
21.0	KEY	-1.3%	BXP	-0.83%
21.0	CYH	-1.23%	CVS	-0.81%
21.0	CVS	-1.2%	UNH	-0.81%
21.0	VZ	-1.14%	BALL	-0.75%
21.0	LUMN	-1.12%	CHTR	-0.64%
21.0	TLT	-1.12%	BMY	-0.63%
21.0	UAA	-1.07%	CMCSA	-0.57%
21.0	LNC	-1.03%	GSK	-0.56%
21.0	ADBE	-0.94%	KHC	-0.49%
21.0	UNH	-0.88%	CYH	-0.44%
21.0	CHTR	-0.84%	BBY	-0.41%
21.0	FSUGY	-0.77%	VZ	-0.38%

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 2025-07-31

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	-25.38%	FRCB	-24.04%
63.0	FRCB	-25.04%	AMC	-14.66%
63.0	NWL	-16.1%	IEP	-11.41%
63.0	CLF	-13.08%	VFC	-8.25%
63.0	GNRC	-12.56%	NWL	-7.79%
63.0	VFC	-12.03%	AAP	-7.65%
63.0	BHC	-11.94%	CLF	-5.74%
63.0	AMC	-10.33%	CZR	-5.51%
63.0	AAP	-10.33%	BHC	-5.37%
63.0	UAA	-9.14%	AA	-4.76%
63.0	AA	-7.82%	INTC	-4.13%
63.0	CZR	-7.69%	UAA	-4.04%
63.0	INTC	-7.55%	CNC	-3.64%
63.0	CVS	-6.64%	LNC	-3.2%
63.0	CYH	-6.14%	LUMN	-3.04%
63.0	BALL	-6.01%	TLT	-2.93%
63.0	BBY	-4.45%	BXP	-2.79%
63.0	KEY	-4.06%	BIIB	-2.75%
63.0	PRGO	-3.91%	CVS	-2.74%
63.0	TLT	-3.9%	UNH	-2.6%
63.0	LNC	-3.88%	BALL	-2.58%
63.0	BHP	-3.86%	MOS	-2.41%
63.0	KHC	-3.71%	BMY	-2.34%
63.0	FSUGY	-3.6%	KHC	-2.34%
63.0	UNH	-3.11%	GNRC	-2.19%
63.0	VZ	-3.11%	JAZZ	-2.0%
63.0	CNC	-2.9%	BHP	-1.9%
63.0	BMY	-2.9%	PRGO	-1.88%

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 2025-07-31

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	-48.86%	AMC	-29.0%
126.0	NWL	-39.33%	IEP	-22.23%
126.0	VFC	-32.63%	AAP	-18.41%
126.0	AMC	-28.87%	NWL	-16.71%
126.0	CLF	-26.25%	VFC	-14.2%
126.0	AAP	-23.75%	CLF	-10.65%
126.0	GNRC	-20.37%	CZR	-9.08%
126.0	BHC	-18.25%	AA	-8.35%
126.0	INTC	-18.17%	MOS	-8.1%
126.0	UAA	-17.1%	BHC	-7.59%
126.0	AA	-12.48%	INTC	-6.88%
126.0	BALL	-12.33%	UAA	-6.85%
126.0	CZR	-12.08%	CNC	-6.35%
126.0	CTLT	-11.71%	ELAN	-6.16%
126.0	CVS	-11.6%	LUMN	-5.98%
126.0	MOS	-11.08%	CTLT	-5.69%
126.0	PRGO	-9.89%	CVS	-5.66%
126.0	CHTR	-9.45%	GNRC	-5.42%
126.0	CNC	-8.52%	BXP	-5.29%
126.0	TLT	-8.02%	PRGO	-5.26%
126.0	BHP	-7.64%	BIIB	-5.19%
126.0	LNC	-7.19%	TLT	-5.18%
126.0	KHC	-6.77%	LNC	-5.04%
126.0	CMA	-6.36%	BALL	-4.6%
126.0	BIIB	-6.11%	KHC	-4.56%
126.0	KEY	-6.06%	BMY	-4.43%
126.0	OXY	-5.68%	JAZZ	-3.7%

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 2025-07-31

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	-100.18%	AMC	-56.25%
252.0	NWL	-74.39%	IEP	-44.68%
252.0	AAP	-64.66%	AAP	-40.67%
252.0	AMC	-56.33%	NWL	-27.96%
252.0	CLF	-49.59%	VFC	-23.59%
252.0	MOS	-43.3%	MOS	-20.33%
252.0	VFC	-41.41%	CLF	-17.62%
252.0	CZR	-29.96%	CVS	-16.97%
252.0	CVS	-28.56%	CZR	-14.16%
252.0	BHC	-25.82%	PRGO	-12.39%
252.0	INTC	-25.35%	AA	-11.95%
252.0	GT	-24.16%	UAA	-11.51%
252.0	GNRC	-22.02%	CNC	-11.41%
252.0	PRGO	-21.96%	INTC	-11.15%
252.0	UAA	-20.41%	BIIB	-11.12%
252.0	CTLT	-19.6%	BMY	-10.68%
252.0	LNC	-18.29%	JAZZ	-9.19%
252.0	OXY	-16.74%	BHC	-9.17%
252.0	BIIB	-15.91%	TLT	-8.4%
252.0	KHC	-15.56%	KHC	-8.21%
252.0	CNC	-14.87%	OXY	-7.78%
252.0	TLT	-14.36%	GT	-7.6%
252.0	BMY	-13.42%	CTLT	-6.24%
252.0	FSUGY	-13.11%	BHP	-5.85%
252.0	AA	-13.04%	LNC	-4.87%
252.0	JAZZ	-12.92%	PEP	-4.29%
252.0	BHP	-10.62%	CHTR	-4.28%

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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	CYH	-4.65%	CHTR	-2.09%
1.0	NWL	-2.93%	CYH	-1.42%
1.0	LUMN	-2.91%	CMG	-1.41%
1.0	BHC	-2.75%	UNH	-1.26%
1.0	CMG	-2.37%	CNC	-1.19%
1.0	CHTR	-2.34%	BHC	-1.02%
1.0	CZR	-2.03%	NWL	-0.98%
1.0	CNC	-2.03%	LUMN	-0.97%
1.0	GT	-1.35%	BUD	-0.88%
1.0	ISRG	-1.27%	TXN	-0.82%
1.0	MU	-1.26%	MU	-0.71%
1.0	GWW	-1.18%	NAVI	-0.71%
1.0	CMCSA	-1.12%	CZR	-0.68%
1.0	TEVA	-1.04%	FCX	-0.63%
1.0	BUD	-1.01%	KALU	-0.62%
1.0	IRM	-0.97%	INTC	-0.58%
1.0	FCX	-0.95%	BBY	-0.57%
1.0	UNH	-0.94%	GWW	-0.56%
1.0	MSTR	-0.86%	ISRG	-0.55%
1.0	UAA	-0.85%	NFLX	-0.5%
1.0	NAVI	-0.84%	TEVA	-0.48%
1.0	BMY	-0.81%	CMCSA	-0.47%
1.0	CPRT	-0.73%	HON	-0.46%
1.0	TXN	-0.7%	CSTM	-0.44%
1.0	QCOM	-0.7%	GT	-0.44%
1.0	KALU	-0.7%	QCOM	-0.43%
1.0	BBY	-0.67%	USB	-0.43%
1.0	FIS	-0.66%	AA	-0.42%
1.0	NFLX	-0.65%	ADBE	-0.41%
1.0	CAH	-0.63%	MSTR	-0.41%

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 2025-07-31 through 2025-07-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	CNC	-20.76%	CHTR	-16.6%
10.0	CMG	-18.39%	CYH	-14.45%
10.0	CYH	-13.45%	CMG	-13.86%
10.0	NFLX	-12.67%	CNC	-13.3%
10.0	UNH	-12.24%	TXN	-10.67%
10.0	CHTR	-11.27%	UNH	-8.71%
10.0	THC	-8.83%	NAVI	-8.46%
10.0	CZR	-8.19%	THC	-8.01%
10.0	LUMN	-8.09%	MU	-7.3%
10.0	GT	-7.29%	NFLX	-6.28%
10.0	NAVI	-7.18%	INTC	-6.25%
10.0	ISRG	-7.03%	HCA	-5.99%
10.0	COST	-6.79%	CVS	-5.94%
10.0	MSTR	-6.69%	BBY	-5.17%
10.0	BIIB	-5.81%	FCX	-4.6%
10.0	AMAT	-5.77%	CZR	-4.54%
10.0	MU	-5.35%	ISRG	-4.48%
10.0	CAH	-5.1%	MSTR	-4.31%
10.0	HCA	-5.08%	HON	-4.2%
10.0	BBY	-5.05%	AMAT	-3.82%
10.0	INTC	-5.05%	KALU	-3.41%
10.0	CVS	-4.79%	CMCSA	-3.38%
10.0	CMCSA	-4.66%	NVS	-3.27%
10.0	FCX	-4.6%	COST	-3.25%
10.0	TXN	-3.98%	ZTS	-3.22%
10.0	KALU	-3.73%	CAH	-3.12%
10.0	TRGP	-3.56%	GT	-2.85%
10.0	HON	-3.36%	TRGP	-2.76%
10.0	BHC	-3.16%	LUMN	-2.7%
10.0	XOM	-2.97%	CPRT	-2.36%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	CNC	-2.82%	CNC	-1.15%
1.0	UNH	-1.32%	UNH	-0.8%
1.0	CPRT	-0.86%	CHTR	-0.6%
1.0	CHTR	-0.73%	CPRT	-0.46%
1.0	PCG	-0.7%	PCG	-0.28%
1.0	CYH	-0.56%	SNY	-0.24%
1.0	TEVA	-0.46%	CMG	-0.23%
1.0	SNY	-0.44%	BUD	-0.21%
1.0	LUMN	-0.44%	GME	-0.21%
1.0	BMY	-0.42%	GWW	-0.2%
1.0	CMG	-0.4%	BMY	-0.18%
1.0	GWW	-0.38%	ISRG	-0.15%
1.0	LLY	-0.37%	LUMN	-0.15%
1.0	GT	-0.36%	ADBE	-0.14%
1.0	ISRG	-0.34%	POST	-0.11%
1.0	BUD	-0.32%	GT	-0.11%
1.0	COST	-0.3%	CYH	-0.1%
1.0	CMCSA	-0.26%	LLY	-0.1%
1.0	CZR	-0.24%	ZTS	-0.1%
1.0	GME	-0.23%	CVS	-0.1%
1.0	TMUS	-0.21%	COST	-0.1%
1.0	TSLA	-0.2%	CMCSA	-0.09%
1.0	KHC	-0.17%	CZR	-0.08%
1.0	POST	-0.15%	ACGL	-0.07%
1.0	VZ	-0.13%	TEVA	-0.07%
1.0	ADBE	-0.12%	TMUS	-0.06%
1.0	IRM	-0.11%	BBY	-0.06%
1.0	ACGL	-0.11%	KHC	-0.06%
1.0	BBY	-0.11%	MRK	-0.05%
1.0	INTC	-0.11%	IRM	-0.04%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	CNC	-24.59%	CNC	-13.09%
10.0	PCG	-8.73%	CPRT	-5.26%
10.0	CPRT	-6.2%	UNH	-4.37%
10.0	UNH	-5.82%	CHTR	-3.92%
10.0	COST	-2.95%	PCG	-3.77%
10.0	CYH	-2.7%	GME	-2.49%
10.0	CHTR	-2.59%	CYH	-2.49%
10.0	GME	-2.49%	ISRG	-1.8%
10.0	ACGL	-2.37%	VFC	-1.48%
10.0	ISRG	-2.04%	CMG	-1.36%
10.0	CMG	-1.95%	COST	-1.35%
10.0	TSLA	-1.85%	ACGL	-1.24%
10.0	TEVA	-1.76%	ADBE	-1.22%
10.0	CVS	-1.59%	BBY	-1.0%
10.0	BBY	-1.35%	SNY	-0.98%
10.0	TMUS	-1.05%	ZTS	-0.96%
10.0	SNY	-0.97%	TEVA	-0.91%
10.0	GT	-0.96%	CVS	-0.84%
10.0	VFC	-0.8%	HCA	-0.7%
10.0	ADBE	-0.78%	POST	-0.62%
10.0	HCA	-0.77%	GWW	-0.51%
10.0	VNO	-0.76%	CMCSA	-0.36%
10.0	VZ	-0.65%	TMUS	-0.33%
10.0	ZTS	-0.62%	MNST	-0.29%
10.0	MNST	-0.57%	GT	-0.26%
10.0	CMCSA	-0.56%	VZ	-0.25%
10.0	GWW	-0.52%	MUB	-0.11%
10.0	POST	-0.51%	BUD	-0.01%
10.0	BUD	-0.25%	TLT	0.0%
10.0	MUB	-0.15%	BMY	0.03%

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 2025-07-31 through 2025-05-05

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	CNC	-39.9%	CNC	-27.94%
21.0	PCG	-28.94%	CPRT	-10.66%
21.0	CPRT	-10.86%	PCG	-10.65%
21.0	GME	-10.8%	GME	-9.71%
21.0	UNH	-6.89%	UNH	-5.8%
21.0	CYH	-5.95%	CYH	-5.62%
21.0	COST	-5.92%	CHTR	-5.5%
21.0	ACGL	-5.14%	ADBE	-4.4%
21.0	ISRG	-5.05%	ISRG	-3.73%
21.0	TEVA	-4.88%	COST	-3.23%
21.0	TSLA	-4.29%	ACGL	-3.08%
21.0	ADBE	-3.57%	VFC	-3.0%
21.0	SNY	-3.1%	ZTS	-2.93%
21.0	CHTR	-3.02%	SNY	-2.77%
21.0	GWW	-3.01%	TEVA	-2.26%
21.0	TMUS	-2.95%	TSLA	-1.92%
21.0	CVS	-2.6%	MNST	-1.84%
21.0	MNST	-2.2%	TMUS	-1.76%
21.0	VFC	-2.12%	GWW	-1.71%
21.0	POST	-1.61%	HCA	-1.46%
21.0	HCA	-1.49%	POST	-1.42%
21.0	VZ	-1.49%	VZ	-1.42%
21.0	ZTS	-1.45%	BBY	-1.13%
21.0	CMG	-1.43%	BUD	-0.69%
21.0	BBY	-1.2%	GT	-0.52%
21.0	T	-0.4%	GSK	-0.46%
21.0	CMCSA	-0.36%	MUB	-0.13%
21.0	MUB	-0.15%	CMCSA	-0.12%
21.0	BMY	-0.08%	BMY	-0.12%
21.0	GSK	-0.05%	HD	-0.02%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	CNC	-0.67%	CNC	-0.37%
1.0	IEP	-0.65%	UNH	-0.32%
1.0	UNH	-0.45%	IEP	-0.21%
1.0	BIIB	-0.44%	CYH	-0.19%
1.0	CYH	-0.43%	AMC	-0.16%
1.0	NWL	-0.39%	BIIB	-0.16%
1.0	LEN	-0.33%	ADBE	-0.14%
1.0	KHC	-0.29%	LEN	-0.14%
1.0	AMC	-0.26%	MRK	-0.14%
1.0	OXY	-0.26%	NWL	-0.13%
1.0	ADBE	-0.25%	CHTR	-0.1%
1.0	MRK	-0.25%	KHC	-0.1%
1.0	PCG	-0.21%	PCG	-0.09%
1.0	TEVA	-0.21%	PEP	-0.09%
1.0	PEP	-0.18%	OXY	-0.09%
1.0	CMCSA	-0.17%	CZR	-0.09%
1.0	DHI	-0.15%	ZTS	-0.07%
1.0	NAVI	-0.14%	CMCSA	-0.07%
1.0	BBY	-0.13%	BBY	-0.06%
1.0	TLT	-0.13%	CMG	-0.06%
1.0	CMG	-0.13%	LUMN	-0.06%
1.0	BXP	-0.12%	NAVI	-0.05%
1.0	AMAT	-0.12%	TLT	-0.04%
1.0	CHTR	-0.12%	DHI	-0.04%
1.0	PHM	-0.11%	SNY	-0.04%
1.0	LUMN	-0.1%	BALL	-0.04%
1.0	CZR	-0.1%	CPRT	-0.04%
1.0	ZTS	-0.09%	AMGN	-0.03%
1.0	ON	-0.08%	ACGL	-0.03%
1.0	AZN	-0.07%	IRM	-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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	CNC	-6.85%	CNC	-3.65%
10.0	IEP	-5.01%	UNH	-2.6%
10.0	CYH	-3.68%	IEP	-1.8%
10.0	BIIB	-3.64%	BIIB	-1.71%
10.0	UNH	-3.3%	LEN	-1.49%
10.0	AMC	-2.54%	AMC	-1.44%
10.0	OXY	-2.31%	ADBE	-1.3%
10.0	PCG	-2.26%	MRK	-1.21%
10.0	LEN	-2.26%	CYH	-1.09%
10.0	ON	-1.56%	PCG	-0.92%
10.0	KHC	-1.45%	OXY	-0.83%
10.0	DHI	-1.32%	KHC	-0.8%
10.0	AMAT	-1.3%	ZTS	-0.75%
10.0	ADBE	-1.29%	PEP	-0.73%
10.0	MRK	-1.23%	BBY	-0.58%
10.0	PEP	-1.07%	DHI	-0.57%
10.0	CMG	-0.91%	CZR	-0.5%
10.0	BBY	-0.89%	CMCSA	-0.5%
10.0	CMCSA	-0.81%	TLT	-0.44%
10.0	BXP	-0.79%	CMG	-0.4%
10.0	RIO	-0.78%	ACGL	-0.39%
10.0	ZTS	-0.62%	AZN	-0.35%
10.0	TLT	-0.61%	ON	-0.34%
10.0	TEVA	-0.58%	VFC	-0.34%
10.0	VFC	-0.55%	NWL	-0.25%
10.0	PRGO	-0.48%	SNY	-0.2%
10.0	NAVI	-0.47%	BALL	-0.18%
10.0	HCA	-0.37%	AMGN	-0.18%
10.0	QCOM	-0.37%	CPRT	-0.18%
10.0	ACGL	-0.31%	IRM	-0.18%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	IEP	-10.08%	CNC	-7.19%
21.0	CNC	-9.54%	UNH	-5.26%
21.0	UNH	-7.19%	BIIB	-3.76%
21.0	BIIB	-6.7%	IEP	-3.74%
21.0	PCG	-6.56%	LEN	-3.65%
21.0	OXY	-5.8%	AMC	-3.37%
21.0	LEN	-5.7%	ADBE	-3.06%
21.0	ADBE	-4.26%	MRK	-2.82%
21.0	BBY	-4.0%	PCG	-2.34%
21.0	MRK	-3.84%	KHC	-2.04%
21.0	DHI	-3.65%	DHI	-2.01%
21.0	AMC	-3.43%	OXY	-1.98%
21.0	KHC	-3.2%	PEP	-1.87%
21.0	ON	-2.72%	CYH	-1.8%
21.0	CYH	-2.58%	BBY	-1.51%
21.0	CMCSA	-2.05%	ZTS	-1.5%
21.0	AMAT	-1.9%	ACGL	-1.25%
21.0	PEP	-1.79%	AZN	-1.19%
21.0	VFC	-1.78%	ON	-1.14%
21.0	ACGL	-1.49%	VFC	-1.1%
21.0	CZR	-1.28%	CZR	-1.06%
21.0	ZTS	-1.16%	TLT	-1.06%
21.0	LLY	-1.1%	CMCSA	-1.04%
21.0	GME	-1.03%	CLF	-1.0%
21.0	FIS	-1.01%	LLY	-0.93%
21.0	QCOM	-1.0%	SNY	-0.72%
21.0	AZN	-0.99%	NWL	-0.66%
21.0	BXP	-0.91%	PHM	-0.65%
21.0	GSK	-0.91%	IRM	-0.57%
21.0	TLT	-0.91%	GSK	-0.56%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	IEP	-33.16%	UNH	-17.47%
63.0	UNH	-26.46%	LEN	-14.36%
63.0	CYH	-21.44%	IEP	-13.62%
63.0	PCG	-21.43%	BIIB	-12.74%
63.0	ADBE	-18.86%	CNC	-12.65%
63.0	OXY	-17.64%	CLF	-11.99%
63.0	BIIB	-17.57%	AMC	-11.48%
63.0	LEN	-16.89%	MRK	-10.85%
63.0	ON	-16.88%	DHI	-10.71%
63.0	AMC	-16.05%	CYH	-9.81%
63.0	CZR	-15.5%	CZR	-9.45%
63.0	MRK	-15.45%	ADBE	-9.44%
63.0	DHI	-15.17%	BBY	-8.72%
63.0	BBY	-13.27%	PEP	-8.22%
63.0	KHC	-12.65%	KHC	-8.21%
63.0	CLF	-12.48%	PCG	-7.49%
63.0	CNC	-12.41%	LUMN	-7.2%
63.0	AMD	-12.01%	PHM	-6.95%
63.0	VFC	-11.75%	ON	-6.9%
63.0	PEP	-11.44%	OXY	-6.69%
63.0	LUMN	-11.43%	VFC	-6.15%
63.0	BHP	-10.36%	ZTS	-5.38%
63.0	PHM	-9.48%	ACGL	-5.37%
63.0	UAA	-9.23%	LW	-4.86%
63.0	LLY	-8.13%	FSUGY	-4.71%
63.0	CMCSA	-8.03%	LLY	-4.68%
63.0	BHC	-8.01%	CMCSA	-4.49%
63.0	FSUGY	-7.81%	BALL	-4.38%
63.0	FIS	-6.38%	UAA	-3.88%
63.0	ACGL	-5.88%	NWL	-3.81%

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 2025-07-31 through 2024-08-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	NWL	-67.39%	LEN	-31.18%
126.0	LUMN	-64.04%	LUMN	-30.98%
126.0	UNH	-63.75%	AMC	-30.01%
126.0	AMC	-58.17%	NWL	-29.94%
126.0	IEP	-57.94%	UNH	-29.25%
126.0	ON	-56.7%	ON	-29.2%
126.0	VFC	-54.9%	CLF	-25.2%
126.0	PCG	-53.63%	BIIB	-24.6%
126.0	UAA	-50.01%	IEP	-24.29%
126.0	CYH	-45.17%	DHI	-23.11%
126.0	ADBE	-44.39%	CZR	-22.52%
126.0	IRM	-41.04%	CYH	-22.2%
126.0	BIIB	-40.99%	UAA	-21.97%
126.0	LEN	-40.65%	MRK	-21.57%
126.0	DHI	-39.44%	VFC	-21.53%
126.0	CLF	-36.77%	ADBE	-20.75%
126.0	CNC	-36.08%	LW	-20.56%
126.0	OXY	-35.27%	CNC	-19.77%
126.0	BHC	-34.48%	BBY	-19.58%
126.0	AMD	-34.45%	PCG	-18.97%
126.0	BBY	-33.87%	AA	-18.69%
126.0	WDC	-30.45%	WDC	-18.39%
126.0	MRK	-30.03%	BHC	-17.56%
126.0	CZR	-28.64%	PHM	-17.52%
126.0	BALL	-28.41%	GNRC	-16.97%
126.0	PHM	-26.34%	IRM	-16.72%
126.0	LW	-24.92%	AMD	-15.06%
126.0	TEVA	-24.09%	PEP	-14.84%
126.0	FITB	-24.02%	OXY	-14.63%
126.0	CMG	-22.41%	KHC	-13.75%

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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	SBNY	12.59%	GME	4.44%
1.0	GME	11.62%	SIVBQ	4.32%
1.0	MSTR	10.25%	META	3.08%
1.0	CHTR	8.54%	HLT	2.51%
1.0	SIVBQ	7.91%	AVGO	2.51%
1.0	META	7.06%	B	2.05%
1.0	SLV	6.26%	BALL	2.05%
1.0	GNRC	6.04%	TSLA	1.82%
1.0	FRCB	5.76%	INTU	1.82%
1.0	B	5.13%	FRCB	1.8%
1.0	NFLX	5.13%	AMC	1.71%
1.0	ZTS	4.78%	MSTR	1.59%
1.0	FRA	4.56%	ACGL	1.59%
1.0	AVGO	4.44%	CHTR	1.59%
1.0	BUD	4.33%	BUD	1.48%
1.0	CMA	4.33%	TEVA	1.48%
1.0	INTU	4.21%	NFLX	1.37%
1.0	HLT	4.21%	SPY	1.14%
1.0	ORCL	4.1%	OXY	1.03%
1.0	BALL	4.1%	CMA	1.03%
1.0	AMC	3.64%	ZTS	1.03%
1.0	AAP	3.42%	AAP	0.8%
1.0	VFC	2.96%	FRA	0.8%
1.0	TEVA	2.73%	SBNY	0.72%
1.0	HCA	2.62%	ISRG	0.68%

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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	META	14.15%	SIVBQ	9.56%
10.0	MSTR	13.12%	MSTR	8.86%
10.0	SIVBQ	12.13%	GME	5.75%
10.0	GME	11.16%	META	5.41%
10.0	SBNY	10.66%	CHTR	5.06%
10.0	KALU	10.01%	AVGO	4.14%
10.0	HCA	9.78%	ZTS	3.68%
10.0	BALL	9.67%	SBNY	3.68%
10.0	CHTR	9.67%	AMC	2.99%
10.0	AVGO	9.32%	CMA	2.99%
10.0	FRCB	8.09%	VZ	2.76%
10.0	B	8.06%	B	2.65%
10.0	TEVA	7.71%	XOM	2.53%
10.0	GNRC	7.02%	ETRN	2.15%
10.0	CMA	7.02%	BALL	2.07%
10.0	HD	6.44%	GNRC	2.07%
10.0	SLV	5.87%	KALU	1.96%
10.0	AMC	5.75%	ISRG	1.96%
10.0	LW	5.52%	GWW	1.84%
10.0	ZTS	5.52%	GILD	1.61%
10.0	INTU	5.41%	HCA	1.61%
10.0	IRM	5.18%	NEM	1.61%
10.0	GILD	5.18%	EXPE	1.61%
10.0	BXP	5.06%	OXY	1.5%
10.0	TDG	4.95%	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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	META	13.4%	SIVBQ	9.26%
21.0	GME	12.94%	CHTR	8.39%
21.0	B	10.49%	MSTR	6.88%
21.0	AVGO	10.14%	GME	4.31%
21.0	GNRC	9.56%	META	4.2%
21.0	CHTR	9.09%	B	4.08%
21.0	FRCB	8.89%	ISRG	3.73%
21.0	ZTS	8.28%	GWW	3.61%
21.0	SIVBQ	8.15%	GNRC	3.5%
21.0	KALU	7.93%	AVGO	3.15%
21.0	MSTR	7.81%	ZTS	2.68%
21.0	ISRG	6.88%	KALU	2.33%
21.0	CMA	6.76%	LW	2.1%
21.0	LW	6.53%	VZ	2.1%
21.0	AMC	6.29%	CMA	1.98%
21.0	TEVA	6.06%	NEM	1.98%
21.0	HCA	6.06%	AMC	1.86%
21.0	BALL	6.06%	AAPL	1.86%
21.0	NAVI	5.94%	SBNY	1.85%
21.0	NEM	5.59%	XOM	1.63%
21.0	SBNY	5.56%	HD	1.63%
21.0	HD	5.13%	SNY	1.52%
21.0	VZ	4.9%	ORLY	1.4%
21.0	VST	4.43%	BALL	1.17%
21.0	TDG	4.2%	RIO	1.05%

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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	CHTR	13.6%	SIVBQ	7.78%
63.0	META	13.48%	GME	5.76%
63.0	SIVBQ	11.11%	LW	4.04%
63.0	LW	10.17%	CTLT	3.23%
63.0	MSTR	7.97%	EXPE	2.33%
63.0	GME	7.11%	TEVA	2.21%
63.0	AVGO	6.74%	GOOGL	1.84%
63.0	IRM	6.0%	WFC	1.72%
63.0	GNRC	6.0%	KALU	1.47%
63.0	BUD	5.64%	AVGO	1.35%
63.0	NEM	5.51%	CHTR	1.35%
63.0	SNY	5.27%	BXP	1.35%
63.0	XOM	5.15%	RIO	1.23%
63.0	CTLT	4.69%	MSI	1.1%
63.0	EXPE	4.41%	OXY	0.98%
63.0	KALU	4.04%	HD	0.98%
63.0	BALL	4.04%	GWW	0.86%
63.0	CMA	3.8%	AMC	0.61%
63.0	VFC	3.43%	XOM	0.61%
63.0	BXP	3.19%	CMA	0.49%
63.0	MSI	3.19%	AZO	0.49%
63.0	ZTS	2.7%	TXN	0.49%
63.0	AMC	2.57%	WDC	0.49%
63.0	FRCB	2.22%	VFC	0.49%
63.0	WRK	2.01%	BUD	0.37%

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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	LW	15.01%	LW	6.24%
126.0	VFC	10.76%	EXPE	5.58%
126.0	GME	7.04%	BUD	3.45%
126.0	XOM	6.77%	MSI	3.05%
126.0	MSTR	6.64%	OXY	2.12%
126.0	BALL	6.24%	GOOGL	2.12%
126.0	EXPE	6.24%	MSTR	1.99%
126.0	GOOGL	5.44%	IRM	1.86%
126.0	META	5.31%	META	1.59%
126.0	BXP	5.18%	BALL	1.46%
126.0	CHTR	5.05%	VFC	1.46%
126.0	IRM	4.91%	GME	1.33%
126.0	TEVA	3.98%	TEVA	1.2%
126.0	GNRC	3.32%	ETRN	1.02%
126.0	CMA	1.86%	HCA	0.27%
126.0	CTLT	1.78%	XOM	0.13%
126.0	TMUS	1.59%	HON	0.0%
126.0	NWL	1.46%	MSFT	0.0%
126.0	HCA	1.46%	MRK	0.0%
126.0	AMC	1.06%	MOS	0.0%
126.0	KHC	1.06%	MNST	0.0%
126.0	OXY	0.8%	HYG	0.0%
126.0	AAP	0.66%	IEP	0.0%
126.0	KALU	0.66%	INTU	0.0%
126.0	BAC	0.66%	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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
252.0	MSTR	5.1%	GWW	4.94%
252.0	GNRC	4.78%	LW	4.94%
252.0	IRM	4.78%	IRM	3.51%
252.0	GME	4.47%	GOOGL	1.91%
252.0	GOOGL	3.99%	GNRC	0.96%
252.0	XOM	3.35%	ORLY	0.8%
252.0	VST	3.19%	MSTR	0.16%
252.0	OXY	2.07%	XOM	0.16%
252.0	BA	2.07%	NAVI	0.0%
252.0	EXPE	1.91%	MUB	0.0%
252.0	BALL	1.91%	LQD	0.0%
252.0	CHTR	0.8%	MSFT	0.0%
252.0	AAPL	0.48%	NEM	0.0%
252.0	KHC	0.0%	MRK	0.0%
252.0	MNST	0.0%	MOS	0.0%
252.0	LVS	0.0%	MNST	0.0%
252.0	GSK	0.0%	LVS	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 2025-07-31 through 2025-07-03

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	BUD	25.0%	CMA	15.0%
1.0	NVDA	20.0%	JPM	10.0%
1.0	CMA	20.0%	VST	10.0%
1.0	JPM	15.0%	AMC	10.0%
1.0	VZ	15.0%	GILD	10.0%
1.0	AMC	15.0%	AAP	5.0%
1.0	VST	15.0%	SBUX	5.0%
1.0	SPY	15.0%	NVDA	5.0%
1.0	QQQ	15.0%	TSLA	5.0%
1.0	GILD	10.0%	NWL	0.0%
1.0	TDG	10.0%	NVS	0.0%
1.0	ORCL	10.0%	ON	0.0%
1.0	PWR	10.0%	MSFT	0.0%
1.0	ZTS	5.0%	NFLX	0.0%
1.0	CMCSA	5.0%	NEM	0.0%
1.0	CDNS	5.0%	NAVI	0.0%
1.0	CYH	5.0%	MUB	0.0%
1.0	SLV	5.0%	MU	0.0%
1.0	AAP	5.0%	MSTR	0.0%
1.0	ORLY	5.0%	MSI	0.0%
1.0	EXPE	5.0%	AA	0.0%
1.0	NAVI	5.0%	MS	0.0%
1.0	BXP	5.0%	PCG	0.0%
1.0	VFC	5.0%	MRK	0.0%
1.0	ZION	5.0%	MOS	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 2025-07-31 through 2025-07-03

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	CMA	63.64%	CMA	72.73%
10.0	NVDA	63.64%	VST	27.27%
10.0	AVGO	54.55%	AVGO	27.27%
10.0	JPM	45.45%	AAP	18.18%
10.0	TSLA	36.36%	JPM	18.18%
10.0	AMC	36.36%	TSLA	18.18%
10.0	VZ	36.36%	BUD	9.09%
10.0	AAP	36.36%	NVDA	0.0%
10.0	BUD	36.36%	MU	0.0%
10.0	KALU	36.36%	MUB	0.0%
10.0	TDG	27.27%	NAVI	0.0%
10.0	VST	27.27%	NEM	0.0%
10.0	NEM	27.27%	NFLX	0.0%
10.0	INTU	27.27%	AA	0.0%
10.0	GILD	27.27%	MSTR	0.0%
10.0	QQQ	27.27%	NWL	0.0%
10.0	GOOGL	18.18%	ON	0.0%
10.0	ORLY	9.09%	ORCL	0.0%
10.0	SLV	9.09%	ORLY	0.0%
10.0	META	9.09%	OXY	0.0%
10.0	PWR	9.09%	NVS	0.0%
10.0	HD	9.09%	MS	0.0%
10.0	SPY	9.09%	MSI	0.0%
10.0	CYH	9.09%	LUMN	0.0%
10.0	WDC	9.09%	KEY	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 2025-07-31 through 2025-05-05

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	SLV	19.67%	TSLA	13.11%
1.0	TSLA	18.03%	AAP	9.84%
1.0	QQQ	16.39%	AVGO	6.56%
1.0	AVGO	16.39%	GILD	6.56%
1.0	AAP	14.75%	AMC	6.56%
1.0	GILD	11.48%	SLV	4.92%
1.0	VST	11.48%	JPM	4.92%
1.0	BUD	11.48%	CMA	4.92%
1.0	CMA	11.48%	NEM	3.28%
1.0	NAVI	9.84%	VFC	3.28%
1.0	NEM	9.84%	NAVI	3.28%
1.0	VZ	8.2%	ZTS	3.28%
1.0	CHTR	8.2%	BUD	3.28%
1.0	JPM	8.2%	VST	3.28%
1.0	ZTS	8.2%	VZ	3.28%
1.0	AMC	8.2%	ADBE	3.28%
1.0	UNH	6.56%	MU	3.28%
1.0	MSFT	6.56%	NVDA	1.64%
1.0	NVDA	6.56%	NVS	1.64%
1.0	WFC	6.56%	GME	1.64%
1.0	SPY	6.56%	HON	1.64%
1.0	MU	4.92%	UNH	1.64%
1.0	ADBE	4.92%	WFC	1.64%
1.0	NVS	4.92%	THC	0.0%
1.0	ORCL	4.92%	WDC	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 2025-07-31 through 2025-05-05

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	AVGO	61.54%	AVGO	36.54%
10.0	AMC	30.77%	TSLA	19.23%
10.0	NEM	26.92%	CMA	17.31%
10.0	TSLA	25.0%	NEM	13.46%
10.0	KALU	25.0%	AAP	11.54%
10.0	BUD	23.08%	NAVI	9.62%
10.0	JPM	21.15%	KALU	7.69%
10.0	TXN	19.23%	GILD	7.69%
10.0	QQQ	19.23%	JPM	7.69%
10.0	TDG	19.23%	SLV	7.69%
10.0	CMA	19.23%	TXN	5.77%
10.0	AAP	17.31%	VST	5.77%
10.0	SLV	17.31%	HON	3.85%
10.0	VZ	15.38%	HCA	3.85%
10.0	MSFT	15.38%	MU	3.85%
10.0	NVS	13.46%	BUD	3.85%
10.0	NVDA	13.46%	ZTS	3.85%
10.0	NAVI	13.46%	NVS	1.92%
10.0	AMZN	13.46%	AMC	1.92%
10.0	SPY	13.46%	UNH	1.92%
10.0	GILD	13.46%	ADBE	1.92%
10.0	VST	11.54%	CAH	1.92%
10.0	SBUX	11.54%	GME	1.92%
10.0	GOOGL	9.62%	MNST	0.0%
10.0	FCX	9.62%	VICI	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 2025-07-31 through 2025-05-05

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	AVGO	92.68%	AVGO	63.41%
21.0	NEM	41.46%	TXN	19.51%
21.0	TXN	39.02%	AAP	14.63%
21.0	TDG	34.15%	GILD	14.63%
21.0	AAP	34.15%	CMA	14.63%
21.0	SLV	29.27%	KALU	9.76%
21.0	ORCL	29.27%	MU	7.32%
21.0	JPM	26.83%	NEM	4.88%
21.0	KALU	24.39%	SLV	4.88%
21.0	MU	21.95%	B	4.88%
21.0	QQQ	19.51%	ZTS	4.88%
21.0	NAVI	19.51%	VFC	0.0%
21.0	AMZN	17.07%	ORLY	0.0%
21.0	CMA	14.63%	NWL	0.0%
21.0	AMC	14.63%	NVDA	0.0%
21.0	HON	14.63%	NFLX	0.0%
21.0	BUD	14.63%	WDC	0.0%
21.0	WDC	14.63%	NAVI	0.0%
21.0	MSFT	12.2%	MUB	0.0%
21.0	GILD	12.2%	WFC	0.0%
21.0	B	9.76%	MSTR	0.0%
21.0	VST	9.76%	XOM	0.0%
21.0	SBUX	9.76%	MSI	0.0%
21.0	BXP	9.76%	MSFT	0.0%
21.0	NVS	7.32%	MS	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 2025-07-31 through 2024-08-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	CHTR	11.24%	AVGO	4.82%
1.0	SLV	9.24%	TSLA	4.42%
1.0	GILD	8.43%	GILD	3.61%
1.0	AVGO	8.43%	VZ	2.81%
1.0	GME	6.43%	VST	2.81%
1.0	TSLA	6.02%	CMA	2.81%
1.0	ZTS	6.02%	GME	2.41%
1.0	VST	6.02%	AAP	2.41%
1.0	ORLY	5.62%	AMC	2.01%
1.0	VZ	5.22%	SLV	2.01%
1.0	BUD	5.22%	SBUX	1.61%
1.0	CMA	4.82%	ZTS	1.2%
1.0	FRA	4.82%	META	1.2%
1.0	SBUX	4.82%	HLT	1.2%
1.0	KEY	4.82%	JPM	1.2%
1.0	AAP	4.42%	KEY	1.2%
1.0	META	4.42%	B	1.2%
1.0	GS	4.42%	BALL	0.8%
1.0	IRM	4.02%	BAC	0.8%
1.0	B	4.02%	NEM	0.8%
1.0	NAVI	4.02%	BUD	0.8%
1.0	AMC	3.61%	NFLX	0.8%
1.0	VFC	3.61%	VFC	0.8%
1.0	WFC	3.61%	MSTR	0.4%
1.0	CLF	2.81%	MU	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 2025-07-31 through 2024-08-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	AVGO	18.75%	VZ	10.0%
10.0	KALU	13.75%	CMA	7.92%
10.0	VZ	13.33%	TSLA	7.92%
10.0	HCA	12.08%	AVGO	5.83%
10.0	NEM	12.08%	META	5.83%
10.0	CMA	11.25%	GILD	5.83%
10.0	SLV	10.83%	EXPE	5.42%
10.0	GILD	10.0%	TXN	5.0%
10.0	META	9.17%	KALU	4.58%
10.0	GME	9.17%	VST	3.33%
10.0	TSLA	8.75%	NEM	2.92%
10.0	AAP	8.75%	CHTR	2.92%
10.0	CHTR	8.75%	SLV	2.92%
10.0	BXP	7.92%	WDC	2.5%
10.0	MSTR	7.92%	VFC	2.5%
10.0	EXPE	7.5%	AAP	2.5%
10.0	WDC	7.08%	NAVI	2.08%
10.0	INTU	7.08%	HD	2.08%
10.0	TXN	6.67%	HCA	2.08%
10.0	AMC	6.67%	UNH	1.67%
10.0	HD	6.67%	ZTS	1.67%
10.0	GE	6.25%	GWW	1.25%
10.0	BUD	6.25%	MSTR	1.25%
10.0	VFC	5.83%	KEY	1.25%
10.0	B	5.42%	HON	1.25%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	VZ	22.27%	CHTR	13.97%
21.0	AVGO	20.52%	AVGO	7.86%
21.0	KALU	11.79%	VZ	7.86%
21.0	CMA	11.79%	TXN	6.55%
21.0	TXN	10.04%	MU	5.24%
21.0	SLV	10.04%	CMA	5.24%
21.0	NEM	10.04%	META	4.37%
21.0	AAP	10.04%	NEM	4.37%
21.0	META	9.61%	ZTS	3.93%
21.0	EXPE	9.17%	GILD	3.93%
21.0	BUD	8.73%	KALU	3.93%
21.0	ISRG	7.86%	HD	3.93%
21.0	WDC	7.86%	TSLA	3.49%
21.0	MU	7.86%	KEY	3.49%
21.0	HD	7.42%	BAC	3.06%
21.0	TSLA	6.99%	WDC	3.06%
21.0	ZTS	6.55%	SLV	2.18%
21.0	KEY	6.11%	HON	2.18%
21.0	CHTR	5.68%	GS	1.75%
21.0	TDG	5.68%	GME	1.75%
21.0	AMC	5.24%	AAP	1.31%
21.0	UNH	5.24%	MSI	0.87%
21.0	BAC	4.8%	EXPE	0.87%
21.0	BXP	4.8%	AA	0.87%
21.0	B	4.8%	B	0.87%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	BUD	15.51%	EXPE	12.83%
63.0	AVGO	14.97%	GILD	6.95%
63.0	CMA	12.3%	WDC	5.88%
63.0	CHTR	11.23%	AVGO	5.88%
63.0	META	9.63%	WFC	3.74%
63.0	EXPE	8.02%	META	2.67%
63.0	GILD	7.49%	HD	2.67%
63.0	KEY	7.49%	CMA	2.14%
63.0	GSK	6.95%	TXN	2.14%
63.0	HD	6.42%	KALU	2.14%
63.0	AAP	5.88%	HON	1.6%
63.0	SLV	5.88%	MU	1.6%
63.0	VZ	5.88%	BUD	1.6%
63.0	NEM	5.88%	BAC	1.07%
63.0	GE	4.81%	KEY	0.53%
63.0	KALU	4.81%	NAVI	0.0%
63.0	SNY	4.28%	MUB	0.0%
63.0	VFC	3.74%	NEM	0.0%
63.0	WDC	3.74%	NVS	0.0%
63.0	MU	2.67%	MRK	0.0%
63.0	TFC	2.67%	NWL	0.0%
63.0	TXN	2.67%	LLY	0.0%
63.0	MSI	2.14%	LW	0.0%
63.0	AA	2.14%	LUMN	0.0%
63.0	ZION	1.6%	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 2025-07-31 through 2024-08-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	GILD	20.97%	BUD	20.97%
126.0	META	17.74%	EXPE	12.9%
126.0	AVGO	14.52%	META	10.48%
126.0	VFC	14.52%	VFC	2.42%
126.0	EXPE	11.29%	MOS	0.0%
126.0	AAP	4.03%	MSFT	0.0%
126.0	BUD	3.23%	MSI	0.0%
126.0	SLV	0.81%	MU	0.0%
126.0	NEM	0.81%	MUB	0.0%
126.0	MNST	0.0%	AA	0.0%
126.0	AA	0.0%	NAVI	0.0%
126.0	MRK	0.0%	NEM	0.0%
126.0	LW	0.0%	NVDA	0.0%
126.0	MU	0.0%	NVS	0.0%
126.0	MUB	0.0%	NWL	0.0%
126.0	NAVI	0.0%	ON	0.0%
126.0	NVDA	0.0%	ORLY	0.0%
126.0	MSI	0.0%	MRK	0.0%
126.0	LQD	0.0%	MNST	0.0%
126.0	LVS	0.0%	PCG	0.0%
126.0	LUMN	0.0%	LW	0.0%
126.0	ON	0.0%	LVS	0.0%
126.0	LNC	0.0%	LUMN	0.0%
126.0	LLY	0.0%	LQD	0.0%
126.0	LEN	0.0%	LNC	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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	MOS	-4.1%	NVDA	-2.05%
1.0	VCSH	-3.99%	CCL	-1.82%
1.0	EMB	-3.88%	WYNN	-1.82%
1.0	HYG	-3.87%	LVS	-1.82%
1.0	GE	-3.76%	LLY	-1.71%
1.0	ON	-3.76%	MUB	-1.6%
1.0	DHI	-3.42%	HYG	-1.59%
1.0	CCL	-3.3%	GE	-1.59%
1.0	HSBC	-3.08%	HSBC	-1.59%
1.0	PHM	-3.08%	VCSH	-1.48%
1.0	MUB	-2.96%	PHM	-1.48%
1.0	AZN	-2.96%	MNST	-1.48%
1.0	MS	-2.96%	PWR	-1.37%
1.0	LVS	-2.85%	T	-1.37%
1.0	VNO	-2.85%	GLD	-1.37%
1.0	TLT	-2.85%	VNO	-1.37%
1.0	T	-2.73%	MU	-1.37%
1.0	CMG	-2.73%	MOS	-1.25%
1.0	NVDA	-2.73%	USB	-1.25%
1.0	CSCO	-2.73%	MS	-1.25%
1.0	X	-2.72%	COST	-1.25%
1.0	BHP	-2.62%	CDNS	-1.25%
1.0	WYNN	-2.51%	CMG	-1.25%
1.0	MSFT	-2.51%	CPRT	-1.25%
1.0	LLY	-2.51%	GSK	-1.14%

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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	MUB	-7.26%	NVDA	-4.72%
10.0	LLY	-6.9%	LLY	-3.91%
10.0	CCL	-5.64%	MUB	-3.46%
10.0	NVDA	-5.52%	GBTC	-3.34%
10.0	MS	-5.18%	TMUS	-3.34%
10.0	T	-5.06%	X	-3.22%
10.0	CDNS	-4.95%	DHI	-2.99%
10.0	CSCO	-4.03%	CPRT	-2.99%
10.0	CYH	-4.03%	GLD	-2.42%
10.0	COST	-3.91%	PWR	-2.3%
10.0	VCSH	-3.68%	CCL	-2.3%
10.0	CPRT	-3.45%	PHM	-2.3%
10.0	AMD	-3.45%	MS	-2.07%
10.0	CAH	-3.45%	LUMN	-1.96%
10.0	MOS	-3.34%	THC	-1.96%
10.0	JPM	-3.34%	CDNS	-1.96%
10.0	GE	-3.34%	WYNN	-1.84%
10.0	BA	-3.34%	GE	-1.84%
10.0	CMG	-3.22%	T	-1.73%
10.0	PHM	-3.22%	MOS	-1.61%
10.0	FSUGY	-3.11%	COST	-1.61%
10.0	VNO	-3.11%	CMG	-1.61%
10.0	GSK	-3.11%	UNH	-1.61%
10.0	DHI	-3.11%	ELAN	-1.4%
10.0	LUMN	-2.88%	MU	-1.38%

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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	CCL	-9.21%	NVDA	-6.06%
21.0	MUB	-8.4%	GE	-5.24%
21.0	LLY	-8.28%	GBTC	-4.9%
21.0	MS	-7.93%	ETRN	-4.38%
21.0	COST	-7.81%	TMUS	-3.96%
21.0	NVDA	-7.46%	MUB	-3.85%
21.0	GLD	-6.53%	WYNN	-3.85%
21.0	DHI	-6.41%	DHI	-3.61%
21.0	GE	-6.18%	LLY	-3.61%
21.0	PHM	-5.83%	PWR	-3.5%
21.0	JPM	-5.71%	MOS	-3.38%
21.0	CDNS	-5.48%	BA	-2.91%
21.0	PWR	-5.13%	X	-2.78%
21.0	GBTC	-4.9%	LUMN	-2.68%
21.0	AZN	-4.43%	THC	-2.56%
21.0	T	-4.43%	AMGN	-2.45%
21.0	CPRT	-4.43%	TSLA	-2.45%
21.0	CMG	-4.43%	CCL	-2.33%
21.0	CAH	-4.43%	TEVA	-2.33%
21.0	VNO	-4.31%	GLD	-2.21%
21.0	TSLA	-4.31%	LVS	-2.21%
21.0	WYNN	-3.96%	CAH	-2.1%
21.0	ELAN	-3.91%	PHM	-2.1%
21.0	LEN	-3.73%	SBUX	-2.1%
21.0	VCSH	-3.73%	ELAN	-1.89%

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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	NVDA	-20.83%	NVDA	-13.48%
63.0	GBTC	-13.24%	GBTC	-10.42%
63.0	CMG	-12.25%	LLY	-8.33%
63.0	VNO	-11.64%	GE	-7.11%
63.0	DHI	-10.17%	VST	-6.5%
63.0	JPM	-10.05%	GLD	-6.0%
63.0	CCL	-10.05%	ETRN	-5.99%
63.0	GE	-9.31%	GILD	-5.64%
63.0	LLY	-9.31%	MUB	-5.4%
63.0	GLD	-9.07%	DHI	-5.27%
63.0	PHM	-8.58%	PHM	-5.02%
63.0	THC	-8.33%	THC	-4.9%
63.0	HLT	-8.09%	MRK	-4.9%
63.0	COST	-7.72%	TRGP	-4.78%
63.0	T	-7.72%	MU	-4.66%
63.0	CPRT	-7.6%	CCL	-4.53%
63.0	MU	-7.6%	AMD	-4.17%
63.0	LVS	-7.35%	MS	-3.92%
63.0	AMD	-7.35%	ACGL	-3.8%
63.0	NFLX	-7.23%	TMUS	-3.8%
63.0	PWR	-7.11%	MSTR	-3.31%
63.0	LUMN	-6.13%	MSFT	-3.06%
63.0	MUB	-6.01%	AAPL	-2.7%
63.0	VCSH	-6.0%	COST	-2.7%
63.0	ABBV	-5.76%	ABBV	-2.7%

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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	NVDA	-25.1%	NVDA	-21.91%
126.0	PHM	-24.17%	GE	-15.41%
126.0	GE	-23.64%	THC	-14.34%
126.0	GLD	-17.66%	LLY	-13.81%
126.0	T	-17.0%	GBTC	-12.35%
126.0	JPM	-16.47%	TMUS	-11.82%
126.0	COST	-16.47%	TRGP	-10.49%
126.0	GBTC	-16.07%	GILD	-9.96%
126.0	GS	-14.48%	MU	-9.83%
126.0	ORCL	-13.68%	GLD	-9.83%
126.0	NFLX	-13.41%	ACGL	-8.37%
126.0	LLY	-11.29%	CMG	-8.37%
126.0	CMG	-11.29%	PHM	-7.3%
126.0	CPRT	-11.16%	ORCL	-5.44%
126.0	MU	-10.89%	X	-5.26%
126.0	PWR	-10.76%	COST	-4.52%
126.0	HSBC	-10.62%	PWR	-4.12%
126.0	HLT	-10.36%	TSLA	-4.12%
126.0	AMAT	-10.36%	VST	-3.45%
126.0	VNO	-10.36%	NFLX	-3.32%
126.0	CSCO	-9.56%	JPM	-3.32%
126.0	MRK	-9.16%	WFC	-3.19%
126.0	MS	-9.03%	WDC	-3.05%
126.0	THC	-8.1%	GWW	-2.52%
126.0	ACGL	-8.1%	QCOM	-2.39%

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 2025-07-31

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
252.0	GE	-60.61%	GE	-38.28%
252.0	PHM	-52.79%	GBTC	-32.54%
252.0	GBTC	-40.19%	PHM	-29.51%
252.0	COST	-37.0%	GLD	-26.32%
252.0	JPM	-33.33%	AVGO	-24.72%
252.0	ACGL	-32.22%	LLY	-23.6%
252.0	NFLX	-32.22%	COST	-20.89%
252.0	PWR	-30.94%	NVDA	-20.73%
252.0	NVDA	-25.68%	TMUS	-20.73%
252.0	ORCL	-25.36%	ACGL	-18.98%
252.0	LLY	-24.24%	TRGP	-18.98%
252.0	CPRT	-22.49%	GS	-14.83%
252.0	GS	-21.69%	CAH	-14.51%
252.0	DHI	-21.21%	META	-13.08%
252.0	ISRG	-20.89%	THC	-12.44%
252.0	AVGO	-19.78%	NFLX	-11.8%
252.0	TMUS	-19.3%	JPM	-10.85%
252.0	T	-18.98%	VST	-10.21%
252.0	CMG	-18.82%	T	-10.21%
252.0	TDG	-18.34%	PWR	-8.93%
252.0	MS	-15.47%	MSI	-7.81%
252.0	LEN	-15.15%	ETRN	-7.18%
252.0	MU	-14.67%	ISRG	-6.06%
252.0	HLT	-13.72%	TEVA	-5.74%
252.0	META	-13.56%	TDG	-5.26%

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 2025-07-31 through 2025-07-03

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	BHP	-10.0%	ORLY	-10.0%
1.0	VICI	-10.0%	AZN	-10.0%
1.0	BIIB	-10.0%	PEP	-5.0%
1.0	CVS	-5.0%	PHM	-5.0%
1.0	MOS	-5.0%	CLF	-5.0%
1.0	FSUGY	-5.0%	DHI	-5.0%
1.0	PEP	-5.0%	RIO	-5.0%
1.0	PHM	-5.0%	LW	-5.0%
1.0	POST	-5.0%	OXY	-5.0%
1.0	LVS	-5.0%	LNC	-5.0%
1.0	GLD	-5.0%	LEN	-5.0%
1.0	RIO	-5.0%	KHC	-5.0%
1.0	SNY	-5.0%	LUMN	0.0%
1.0	CZR	-5.0%	JAZZ	0.0%
1.0	BALL	-5.0%	ORCL	0.0%
1.0	DHI	-5.0%	ON	0.0%
1.0	HCA	-5.0%	NWL	0.0%
1.0	TLT	-5.0%	KALU	0.0%
1.0	XOM	-5.0%	KEY	0.0%
1.0	AZO	-5.0%	NVS	0.0%
1.0	GT	-5.0%	NFLX	0.0%
1.0	LEN	-5.0%	NEM	0.0%
1.0	ACGL	-5.0%	NAVI	0.0%
1.0	WYNN	-5.0%	MUB	0.0%
1.0	KHC	-5.0%	MU	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 2025-07-31 through 2025-07-03

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	PEP	-27.27%	DHI	-9.09%
10.0	KHC	-27.27%	CDNS	-9.09%
10.0	LW	-18.18%	AA	0.0%
10.0	BHP	-18.18%	MSTR	0.0%
10.0	FSUGY	-9.09%	MU	0.0%
10.0	RIO	-9.09%	MUB	0.0%
10.0	AMD	-9.09%	NAVI	0.0%
10.0	PHM	-9.09%	NEM	0.0%
10.0	CLF	-9.09%	NFLX	0.0%
10.0	MRK	0.0%	NVDA	0.0%
10.0	MSTR	0.0%	NVS	0.0%
10.0	MSI	0.0%	NWL	0.0%
10.0	MSFT	0.0%	ON	0.0%
10.0	MS	0.0%	ORCL	0.0%
10.0	MUB	0.0%	ORLY	0.0%
10.0	NAVI	0.0%	MSI	0.0%
10.0	MU	0.0%	OXY	0.0%
10.0	MOS	0.0%	MSFT	0.0%
10.0	AA	0.0%	MRK	0.0%
10.0	NFLX	0.0%	JAZZ	0.0%
10.0	LVS	0.0%	KALU	0.0%
10.0	LUMN	0.0%	KEY	0.0%
10.0	LQD	0.0%	KHC	0.0%
10.0	LNC	0.0%	LEN	0.0%
10.0	LLY	0.0%	LLY	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 2025-07-31 through 2025-05-05

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	AZO	-9.84%	ORLY	-4.92%
1.0	LVS	-8.2%	LVS	-4.92%
1.0	BIIB	-8.2%	CLF	-3.28%
1.0	MOS	-8.2%	GLD	-3.28%
1.0	GLD	-6.56%	AZN	-3.28%
1.0	BHP	-6.56%	OXY	-3.28%
1.0	BALL	-6.56%	PRGO	-3.28%
1.0	CCL	-6.56%	T	-3.28%
1.0	ACGL	-6.56%	WYNN	-3.28%
1.0	PHM	-4.92%	CCL	-3.28%
1.0	DHI	-4.92%	FCX	-1.64%
1.0	LEN	-4.92%	PEP	-1.64%
1.0	PEP	-4.92%	DHI	-1.64%
1.0	CMG	-4.92%	CSCO	-1.64%
1.0	RIO	-4.92%	EXPE	-1.64%
1.0	GNRC	-4.92%	CNC	-1.64%
1.0	X	-3.33%	KHC	-1.64%
1.0	CZR	-3.28%	PHM	-1.64%
1.0	COST	-3.28%	ORCL	-1.64%
1.0	GE	-3.28%	NWL	-1.64%
1.0	POST	-3.28%	MRK	-1.64%
1.0	CSTM	-3.28%	GT	-1.64%
1.0	T	-3.28%	HD	-1.64%
1.0	NWL	-3.28%	LW	-1.64%
1.0	CNC	-3.28%	HYG	-1.64%

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 2025-07-31 through 2025-05-05

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	LVS	-13.46%	X	-38.1%
10.0	BHC	-7.69%	ORCL	-17.31%
10.0	XOM	-7.69%	CCL	-11.54%
10.0	CCL	-7.69%	WYNN	-7.69%
10.0	PEP	-5.77%	INTU	-5.77%
10.0	BHP	-5.77%	CYH	-3.85%
10.0	MOS	-5.77%	GNRC	-3.85%
10.0	ZION	-5.77%	GS	-1.92%
10.0	USB	-5.77%	WFC	-1.92%
10.0	BA	-5.77%	DHI	-1.92%
10.0	CLF	-5.77%	XOM	-1.92%
10.0	KHC	-5.77%	TFC	-1.92%
10.0	TFC	-3.85%	LVS	-1.92%
10.0	LW	-3.85%	MOS	-1.92%
10.0	AMD	-3.85%	CDNS	-1.92%
10.0	GSK	-3.85%	MSI	0.0%
10.0	PHM	-3.85%	ZION	0.0%
10.0	GNRC	-1.92%	MUB	0.0%
10.0	AMGN	-1.92%	NFLX	0.0%
10.0	BAC	-1.92%	NVDA	0.0%
10.0	GE	-1.92%	NWL	0.0%
10.0	BIIB	-1.92%	MSTR	0.0%
10.0	FSUGY	-1.92%	MSFT	0.0%
10.0	RIO	-1.92%	MNST	0.0%
10.0	DHI	-1.92%	MRK	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 2025-07-31 through 2025-05-05

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	CCL	-34.15%	ORCL	-31.71%
21.0	LVS	-26.83%	WYNN	-19.51%
21.0	AMD	-21.95%	X	-10.0%
21.0	PEP	-17.07%	BHC	-4.88%
21.0	INTU	-14.63%	INTU	-2.44%
21.0	BHC	-14.63%	DHI	-2.44%
21.0	CLF	-12.2%	GNRC	-2.44%
21.0	GNRC	-9.76%	AMD	-2.44%
21.0	FSUGY	-9.76%	NVS	-2.44%
21.0	GS	-9.76%	AA	0.0%
21.0	BHP	-7.32%	MSFT	0.0%
21.0	GSK	-4.88%	MSI	0.0%
21.0	MOS	-4.88%	MSTR	0.0%
21.0	RIO	-4.88%	NVDA	0.0%
21.0	CSCO	-4.88%	NAVI	0.0%
21.0	PHM	-2.44%	NFLX	0.0%
21.0	HLT	-2.44%	NWL	0.0%
21.0	DHI	-2.44%	ON	0.0%
21.0	CMG	-2.44%	ORLY	0.0%
21.0	ZION	-2.44%	MUB	0.0%
21.0	XOM	-2.44%	MS	0.0%
21.0	AZN	-2.44%	MOS	0.0%
21.0	AMGN	-2.44%	MNST	0.0%
21.0	MS	0.0%	META	0.0%
21.0	MRK	0.0%	LW	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 2025-07-31 through 2024-08-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	TRGP	-6.02%	WYNN	-3.61%
1.0	ACGL	-5.62%	LVS	-3.61%
1.0	AZO	-5.62%	CCL	-3.21%
1.0	MOS	-5.62%	JAZZ	-2.81%
1.0	COST	-5.62%	GT	-2.81%
1.0	BHP	-4.82%	PHM	-2.41%
1.0	PCG	-4.82%	T	-2.41%
1.0	VICI	-4.82%	HSBC	-2.41%
1.0	CCL	-4.82%	RIO	-2.01%
1.0	LVS	-4.82%	PEP	-2.01%
1.0	HSBC	-4.82%	PWR	-2.01%
1.0	T	-4.82%	CDNS	-2.01%
1.0	RIO	-4.42%	UAA	-2.01%
1.0	PHM	-4.42%	BHP	-2.01%
1.0	POST	-4.42%	COST	-2.01%
1.0	GLD	-4.02%	GLD	-2.01%
1.0	XOM	-4.02%	ORLY	-2.01%
1.0	LLY	-4.02%	MNST	-2.01%
1.0	X	-3.67%	X	-1.83%
1.0	MS	-3.61%	TEVA	-1.61%
1.0	LUMN	-3.61%	NWL	-1.61%
1.0	DHI	-3.61%	CSCO	-1.61%
1.0	OXY	-3.61%	AAPL	-1.61%
1.0	PEP	-3.61%	PCG	-1.61%
1.0	BIIB	-3.61%	ACGL	-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 2025-07-31 through 2024-08-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	T	-13.33%	TRGP	-7.5%
10.0	CSCO	-11.67%	CPRT	-6.25%
10.0	MOS	-9.58%	TMUS	-6.25%
10.0	MS	-9.17%	WYNN	-5.83%
10.0	COST	-9.17%	ORCL	-5.83%
10.0	CCL	-8.75%	NFLX	-5.42%
10.0	LVS	-8.75%	X	-5.26%
10.0	JAZZ	-7.92%	CCL	-5.0%
10.0	LLY	-7.92%	LVS	-5.0%
10.0	BA	-7.92%	MS	-4.58%
10.0	CDNS	-7.5%	T	-4.58%
10.0	CAH	-7.08%	GBTC	-4.17%
10.0	BHP	-6.25%	CSCO	-3.75%
10.0	BHC	-5.83%	COST	-3.33%
10.0	TRGP	-5.42%	CDNS	-3.33%
10.0	ZION	-5.0%	HSBC	-3.33%
10.0	WYNN	-4.58%	HLT	-3.33%
10.0	LUMN	-4.58%	ACGL	-3.33%
10.0	CPRT	-4.17%	JAZZ	-3.33%
10.0	GSK	-4.17%	LLY	-3.33%
10.0	RIO	-4.17%	LUMN	-2.92%
10.0	CVS	-4.17%	MSFT	-2.92%
10.0	TMUS	-4.17%	POST	-2.92%
10.0	VNO	-3.75%	PWR	-2.92%
10.0	XOM	-3.75%	RIO	-2.92%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	CCL	-15.28%	WYNN	-14.41%
21.0	MS	-14.41%	TMUS	-11.35%
21.0	LVS	-13.54%	TRGP	-9.61%
21.0	COST	-12.66%	LVS	-9.61%
21.0	T	-12.23%	GBTC	-7.42%
21.0	NFLX	-10.92%	NFLX	-7.42%
21.0	MOS	-10.04%	TEVA	-7.42%
21.0	CPRT	-9.17%	T	-5.68%
21.0	BHC	-8.3%	MOS	-5.24%
21.0	TRGP	-7.86%	HLT	-4.8%
21.0	WYNN	-7.86%	BA	-4.8%
21.0	WFC	-7.86%	COST	-4.8%
21.0	GLD	-7.42%	MSFT	-4.8%
21.0	CAH	-7.42%	ORCL	-4.8%
21.0	BA	-7.42%	MS	-4.37%
21.0	CDNS	-6.99%	PWR	-4.37%
21.0	AMD	-6.99%	BUD	-4.37%
21.0	HLT	-6.11%	GLD	-3.93%
21.0	MNST	-6.11%	VST	-3.49%
21.0	TMUS	-5.68%	CDNS	-3.49%
21.0	CSCO	-5.68%	SBUX	-2.62%
21.0	MSTR	-5.24%	CAH	-2.18%
21.0	JAZZ	-5.24%	QQQ	-1.75%
21.0	HSBC	-4.8%	HSBC	-1.75%
21.0	BHP	-4.8%	BBY	-1.75%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	NFLX	-37.43%	TRGP	-20.32%
63.0	T	-26.2%	MSTR	-19.79%
63.0	CCL	-23.53%	CCL	-17.65%
63.0	LVS	-22.99%	MS	-17.11%
63.0	HLT	-20.32%	MSFT	-13.37%
63.0	GBTC	-20.32%	VST	-12.83%
63.0	MOS	-19.79%	GLD	-12.3%
63.0	GLD	-19.79%	CAH	-10.7%
63.0	TRGP	-19.25%	PWR	-9.09%
63.0	MS	-17.65%	NFLX	-7.49%
63.0	CSCO	-16.58%	HSBC	-6.95%
63.0	HSBC	-16.04%	AMD	-6.95%
63.0	MSTR	-16.04%	TSLA	-6.42%
63.0	JPM	-16.04%	T	-5.88%
63.0	THC	-13.9%	GBTC	-5.88%
63.0	AMZN	-13.37%	BA	-5.35%
63.0	NVDA	-12.83%	CSCO	-5.35%
63.0	GWW	-12.3%	LVS	-4.81%
63.0	INTU	-11.23%	MOS	-4.81%
63.0	SPY	-10.7%	TMUS	-4.81%
63.0	BA	-10.16%	HLT	-4.81%
63.0	PWR	-10.16%	CVS	-4.28%
63.0	TMUS	-10.16%	GE	-4.28%
63.0	QQQ	-9.63%	GS	-3.74%
63.0	MNST	-9.09%	GWW	-3.74%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	HSBC	-70.16%	GLD	-40.32%
126.0	T	-66.94%	TRGP	-20.16%
126.0	NFLX	-54.03%	TMUS	-19.35%
126.0	GLD	-50.81%	CAH	-17.74%
126.0	TRGP	-25.0%	NFLX	-16.94%
126.0	CSCO	-20.97%	VST	-12.1%
126.0	ORCL	-16.94%	WFC	-10.48%
126.0	NVS	-12.1%	T	-10.48%
126.0	CCL	-11.29%	GILD	-8.87%
126.0	VST	-11.29%	MS	-8.87%
126.0	CAH	-10.48%	JPM	-7.26%
126.0	MS	-10.48%	CSCO	-6.45%
126.0	JPM	-10.48%	HSBC	-5.65%
126.0	HLT	-9.68%	CCL	-4.84%
126.0	GS	-8.87%	MSTR	-4.84%
126.0	MSTR	-8.06%	ORCL	-4.03%
126.0	WFC	-8.06%	GS	-2.42%
126.0	GE	-8.06%	HLT	-0.81%
126.0	TSLA	-8.06%	GE	-0.81%
126.0	COST	-7.26%	MOS	0.0%
126.0	AMZN	-7.26%	NWL	0.0%
126.0	CVS	-6.45%	KHC	0.0%
126.0	MOS	-5.65%	LEN	0.0%
126.0	SBUX	-5.65%	NVS	0.0%
126.0	AZO	-4.03%	NVDA	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 2025-07-31

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	CCL	0.25%	NVDA	0.3%
1.0	X	0.21%	GBTC	0.3%
1.0	TSLA	0.21%	X	0.29%
1.0	GBTC	0.2%	GE	0.23%
1.0	NVDA	0.19%	CCL	0.19%
1.0	GE	0.17%	PWR	0.18%
1.0	B	0.13%	TSLA	0.18%
1.0	TDG	0.12%	LLY	0.17%
1.0	AVGO	0.12%	TDG	0.16%
1.0	ON	0.1%	AVGO	0.15%
1.0	MOS	0.09%	WYNN	0.13%
1.0	MSFT	0.09%	CDNS	0.13%
1.0	DHI	0.09%	VST	0.13%
1.0	VST	0.09%	AZO	0.13%
1.0	AZO	0.09%	ORLY	0.13%
1.0	JAZZ	0.09%	CAH	0.12%
1.0	AMD	0.08%	TRGP	0.12%
1.0	LLY	0.08%	WDC	0.12%
1.0	CMG	0.08%	JAZZ	0.11%
1.0	VNO	0.08%	MSFT	0.11%
1.0	KEY	0.08%	ON	0.11%
1.0	BHC	0.07%	LVS	0.11%
1.0	THC	0.07%	PHM	0.1%
1.0	SBNY	0.07%	DHI	0.1%
1.0	LVS	0.07%	HLT	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 2025-07-31

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	NVDA	2.78%	NVDA	3.51%
10.0	TSLA	2.42%	LLY	2.34%
10.0	CCL	2.09%	CCL	2.28%
10.0	SBNY	1.86%	GBTC	2.25%
10.0	LLY	1.64%	TSLA	2.13%
10.0	GBTC	1.19%	AZO	1.28%
10.0	AVGO	1.05%	PWR	1.17%
10.0	AZO	0.97%	PHM	1.12%
10.0	FRCB	0.93%	T	1.05%
10.0	BHC	0.92%	DHI	1.04%
10.0	MSFT	0.92%	AVGO	1.04%
10.0	GT	0.86%	GE	1.02%
10.0	PWR	0.72%	WDC	0.97%
10.0	LVS	0.68%	WYNN	0.89%
10.0	GE	0.62%	PCG	0.83%
10.0	CDNS	0.61%	MSFT	0.79%
10.0	T	0.6%	COST	0.79%
10.0	PHM	0.6%	VST	0.76%
10.0	HLT	0.59%	THC	0.76%
10.0	AMD	0.58%	BHC	0.74%
10.0	DHI	0.55%	ACGL	0.72%
10.0	QQQ	0.54%	CSTM	0.64%
10.0	WYNN	0.54%	JPM	0.63%
10.0	AMC	0.51%	CDNS	0.6%
10.0	ORLY	0.5%	GS	0.6%

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 2025-07-31

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	TSLA	6.08%	NVDA	6.78%
21.0	NVDA	5.65%	GBTC	5.56%
21.0	SBNY	5.03%	TSLA	5.37%
21.0	CCL	4.35%	CCL	4.77%
21.0	GBTC	3.21%	ETRN	4.03%
21.0	LLY	2.43%	VST	2.91%
21.0	AZO	2.35%	SBNY	2.85%
21.0	FRCB	2.24%	CDNS	2.76%
21.0	PCG	2.06%	LLY	2.63%
21.0	DHI	1.79%	AA	2.44%
21.0	PWR	1.78%	AZO	2.36%
21.0	ELAN	1.73%	MSTR	2.29%
21.0	CDNS	1.63%	PWR	2.27%
21.0	MSFT	1.6%	AMD	2.26%
21.0	AMC	1.55%	DHI	2.11%
21.0	PHM	1.47%	AMAT	2.05%
21.0	QQQ	1.46%	PHM	2.02%
21.0	VNO	1.32%	ELAN	1.88%
21.0	WYNN	1.29%	TMUS	1.87%
21.0	GE	1.15%	AMC	1.8%
21.0	VST	1.15%	MSFT	1.79%
21.0	ORLY	1.09%	PCG	1.7%
21.0	AMD	1.06%	GE	1.65%
21.0	COST	1.04%	BHC	1.56%
21.0	JPM	1.03%	FRCB	1.54%

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 2025-07-31

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	NVDA	17.06%	GBTC	25.61%
63.0	MSTR	15.28%	NVDA	21.65%
63.0	CCL	14.97%	MSTR	16.36%
63.0	SBNY	13.02%	CCL	14.69%
63.0	GBTC	10.47%	PWR	12.87%
63.0	TSLA	8.01%	GE	9.83%
63.0	PWR	7.06%	PHM	9.57%
63.0	VNO	6.53%	LLY	9.07%
63.0	AMC	6.43%	ETRN	8.48%
63.0	ELAN	6.08%	VST	8.23%
63.0	LLY	5.97%	TSLA	7.22%
63.0	QQQ	5.84%	T	6.51%
63.0	FRCB	5.84%	JPM	6.51%
63.0	MSFT	5.67%	MS	6.49%
63.0	PCG	5.49%	AMD	6.34%
63.0	DHI	5.05%	QQQ	5.8%
63.0	AMAT	5.02%	MSFT	5.77%
63.0	AZO	4.68%	PCG	5.73%
63.0	AMD	4.59%	TMUS	5.68%
63.0	AMZN	4.53%	ELAN	5.66%
63.0	PHM	4.47%	CDNS	5.59%
63.0	CDNS	4.0%	VNO	5.55%
63.0	LVS	3.7%	AMAT	5.51%
63.0	JPM	3.65%	X	5.07%
63.0	THC	3.51%	COST	4.87%

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 2025-07-31

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	NVDA	41.77%	GBTC	61.62%
126.0	GBTC	28.15%	NVDA	48.81%
126.0	CCL	23.14%	CCL	30.08%
126.0	SBNY	19.0%	GE	25.15%
126.0	VNO	18.49%	PHM	25.04%
126.0	PHM	18.14%	LLY	23.54%
126.0	AMZN	16.53%	THC	20.33%
126.0	MU	16.52%	PWR	18.35%
126.0	NFLX	14.39%	NFLX	17.43%
126.0	PWR	13.88%	VNO	17.33%
126.0	TSLA	13.87%	MU	17.2%
126.0	PCG	13.81%	TSLA	16.8%
126.0	QQQ	13.78%	JPM	15.43%
126.0	GE	13.73%	AMZN	15.39%
126.0	AMAT	13.65%	MS	14.65%
126.0	DHI	12.81%	ORCL	14.22%
126.0	AMD	12.4%	PCG	14.11%
126.0	THC	11.19%	T	13.98%
126.0	MSFT	10.55%	DHI	13.47%
126.0	AMC	10.46%	MSTR	13.3%
126.0	AZO	10.33%	X	13.25%
126.0	MS	10.31%	COST	13.18%
126.0	ORCL	9.52%	VST	12.64%
126.0	ELAN	9.04%	AZO	12.64%
126.0	COST	8.84%	ACGL	12.63%

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 2025-07-31

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
252.0	NVDA	135.4%	GBTC	150.37%
252.0	GBTC	119.1%	NVDA	102.26%
252.0	PHM	64.08%	GE	96.8%
252.0	NFLX	63.99%	PHM	82.91%
252.0	GE	59.5%	CCL	76.73%
252.0	CCL	55.42%	THC	61.18%
252.0	VNO	50.76%	TRGP	52.52%
252.0	LLY	49.77%	NFLX	46.3%
252.0	AMZN	47.84%	MU	42.51%
252.0	PWR	44.7%	X	41.64%
252.0	DHI	42.09%	VNO	39.13%
252.0	MU	41.68%	AMAT	38.75%
252.0	QQQ	39.14%	META	34.69%
252.0	CDNS	38.61%	QQQ	34.61%
252.0	COST	38.33%	ORCL	34.28%
252.0	MSFT	37.72%	MS	31.24%
252.0	ACGL	37.16%	T	31.12%
252.0	INTU	36.2%	PCG	30.87%
252.0	ISRG	35.06%	LLY	29.52%
252.0	AMD	32.5%	PWR	28.92%
252.0	PCG	30.72%	COST	28.64%
252.0	THC	30.54%	ACGL	27.86%
252.0	AMAT	29.07%	MSFT	27.81%
252.0	MS	28.54%	AVGO	27.48%
252.0	JPM	26.0%	DHI	27.2%

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 2025-07-31 through 2025-07-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	FSUGY	1.03%	CLF	1.13%
1.0	AMD	0.92%	PHM	0.98%
1.0	PHM	0.9%	FSUGY	0.92%
1.0	LW	0.7%	LW	0.86%
1.0	UNH	0.57%	AMD	0.8%
1.0	GNRC	0.56%	DHI	0.74%
1.0	KHC	0.48%	LEN	0.68%
1.0	VFC	0.37%	LVS	0.66%
1.0	CHTR	0.35%	GNRC	0.52%
1.0	PEP	0.35%	ABBV	0.46%
1.0	CLF	0.33%	ORLY	0.35%
1.0	BUD	0.3%	PEP	0.35%
1.0	LVS	0.29%	VFC	0.33%
1.0	TXN	0.29%	UNH	0.32%
1.0	AZO	0.27%	EXPE	0.25%
1.0	CVS	0.23%	LNC	0.25%
1.0	TSLA	0.22%	WDC	0.25%
1.0	HON	0.2%	META	0.24%
1.0	ELAN	0.17%	INTU	0.23%
1.0	LEN	0.16%	JAZZ	0.22%
1.0	CSTM	0.16%	TSLA	0.21%
1.0	RIO	0.16%	BAC	0.21%
1.0	INTU	0.15%	IEP	0.18%
1.0	BA	0.15%	BA	0.18%
1.0	AAP	0.14%	KHC	0.17%

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 2025-07-31 through 2025-07-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	CYH	6.71%	CLF	14.72%
10.0	PHM	6.3%	LW	9.03%
10.0	TXN	5.76%	BHP	7.3%
10.0	KHC	5.62%	TXN	6.69%
10.0	CHTR	5.12%	PCG	5.95%
10.0	FSUGY	4.37%	FSUGY	5.76%
10.0	PCG	4.26%	CDNS	5.42%
10.0	MU	3.8%	CHTR	5.33%
10.0	AMD	3.6%	PHM	5.24%
10.0	LW	3.32%	KHC	5.1%
10.0	UNH	2.96%	LNC	4.48%
10.0	BHP	2.65%	GOOGL	4.11%
10.0	PEP	2.38%	DHI	3.19%
10.0	NWL	2.16%	NWL	3.16%
10.0	INTC	2.11%	AMD	3.05%
10.0	NAVI	1.77%	PEP	3.0%
10.0	HCA	1.74%	AA	2.68%
10.0	CVS	1.74%	LEN	2.65%
10.0	ZTS	1.52%	MSI	2.44%
10.0	NVS	1.52%	IEP	2.26%
10.0	NFLX	1.5%	GE	2.2%
10.0	HON	1.44%	PRGO	2.17%
10.0	RIO	1.44%	LVS	1.98%
10.0	AZO	1.4%	MU	1.95%
10.0	VNO	1.13%	ORLY	1.89%

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 2025-07-31 through 2025-05-05

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	LVS	0.71%	LVS	1.0%
1.0	CLF	0.71%	NVDA	0.99%
1.0	CCL	0.63%	X	0.85%
1.0	NVDA	0.63%	ELAN	0.8%
1.0	AMD	0.51%	AAP	0.79%
1.0	GNRC	0.51%	CCL	0.78%
1.0	MOS	0.49%	CLF	0.77%
1.0	ELAN	0.44%	ORCL	0.75%
1.0	FSUGY	0.42%	WDC	0.69%
1.0	LW	0.4%	GNRC	0.54%
1.0	AAP	0.39%	WYNN	0.5%
1.0	X	0.34%	LW	0.49%
1.0	CSTM	0.34%	MOS	0.49%
1.0	BIIB	0.33%	PHM	0.47%
1.0	PHM	0.32%	DHI	0.47%
1.0	BHC	0.29%	AMD	0.46%
1.0	GBTC	0.29%	BHC	0.44%
1.0	BA	0.27%	INTU	0.4%
1.0	WYNN	0.26%	GS	0.38%
1.0	AZO	0.24%	FSUGY	0.38%
1.0	PEP	0.23%	LEN	0.38%
1.0	WDC	0.22%	CSTM	0.37%
1.0	B	0.22%	AMAT	0.32%
1.0	BALL	0.2%	CSCO	0.3%
1.0	OXY	0.19%	EXPE	0.3%

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 2025-07-31 through 2025-05-05

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	NVDA	6.66%	X	13.59%
10.0	CLF	3.43%	NVDA	9.47%
10.0	PHM	3.33%	CLF	7.51%
10.0	MOS	2.68%	CCL	5.63%
10.0	CYH	2.66%	BHC	5.36%
10.0	X	2.25%	MOS	4.08%
10.0	LUMN	2.0%	PHM	3.27%
10.0	LVS	1.82%	KEY	3.05%
10.0	AMD	1.8%	AA	2.86%
10.0	NWL	1.77%	CSTM	2.77%
10.0	CCL	1.72%	BIIB	2.7%
10.0	BHC	1.66%	LVS	2.6%
10.0	FSUGY	1.58%	ORCL	2.6%
10.0	CHTR	1.35%	WDC	2.54%
10.0	BA	1.3%	NWL	2.49%
10.0	GBTC	1.29%	GOOGL	2.48%
10.0	MRK	1.2%	GNRC	2.4%
10.0	CSTM	1.08%	AMD	2.36%
10.0	PEP	1.04%	LW	2.21%
10.0	USB	1.02%	CDNS	1.84%
10.0	BIIB	0.99%	FSUGY	1.76%
10.0	KHC	0.95%	BA	1.76%
10.0	BHP	0.95%	WYNN	1.74%
10.0	VFC	0.92%	GE	1.68%
10.0	AZO	0.89%	BHP	1.66%

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 2025-07-31 through 2025-05-05

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	NVDA	12.85%	CLF	21.2%
21.0	PHM	9.37%	BHC	20.8%
21.0	CLF	7.6%	NVDA	13.68%
21.0	LVS	6.33%	LVS	12.69%
21.0	BHC	6.1%	X	12.07%
21.0	LUMN	5.89%	CCL	11.17%
21.0	MOS	5.52%	ON	10.34%
21.0	CCL	5.42%	LUMN	9.6%
21.0	GNRC	5.03%	GNRC	9.23%
21.0	AMD	4.28%	PHM	7.88%
21.0	BIIB	3.75%	AMD	7.11%
21.0	CYH	3.41%	ORCL	7.05%
21.0	PEP	3.08%	MOS	6.14%
21.0	DHI	2.93%	PEP	5.99%
21.0	NWL	2.83%	GOOGL	5.51%
21.0	TFC	2.81%	BAC	4.61%
21.0	GME	2.78%	WDC	4.46%
21.0	CHTR	2.35%	WYNN	4.35%
21.0	MRK	2.24%	BIIB	4.32%
21.0	FSUGY	2.22%	NWL	4.1%
21.0	BALL	2.05%	MSTR	4.06%
21.0	KHC	2.0%	KEY	3.97%
21.0	MSTR	1.99%	CSTM	3.86%
21.0	CSTM	1.85%	FSUGY	3.8%
21.0	ISRG	1.84%	LNC	3.61%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	VST	0.49%	VST	0.51%
1.0	CCL	0.44%	CCL	0.49%
1.0	NVDA	0.41%	NVDA	0.39%
1.0	MOS	0.31%	WYNN	0.37%
1.0	LVS	0.28%	VFC	0.35%
1.0	WYNN	0.25%	CLF	0.35%
1.0	VNO	0.24%	LVS	0.32%
1.0	GT	0.23%	GBTC	0.32%
1.0	CLF	0.22%	CDNS	0.3%
1.0	AVGO	0.22%	T	0.28%
1.0	MS	0.2%	AAP	0.27%
1.0	TDG	0.19%	GE	0.26%
1.0	AAP	0.19%	MOS	0.25%
1.0	T	0.17%	TSLA	0.24%
1.0	TRGP	0.16%	NFLX	0.24%
1.0	LW	0.16%	MS	0.23%
1.0	CDNS	0.15%	AZO	0.23%
1.0	HLT	0.14%	HCA	0.22%
1.0	GBTC	0.14%	LW	0.22%
1.0	B	0.13%	VNO	0.21%
1.0	TSLA	0.13%	JPM	0.21%
1.0	GE	0.13%	TRGP	0.21%
1.0	ELAN	0.12%	WDC	0.2%
1.0	PRGO	0.12%	TDG	0.2%
1.0	COST	0.12%	CSCO	0.19%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	NVDA	4.15%	CCL	4.64%
10.0	GT	2.73%	MSTR	4.41%
10.0	CCL	2.51%	NVDA	4.08%
10.0	VST	2.41%	MOS	3.1%
10.0	NWL	2.34%	VST	3.08%
10.0	LVS	2.05%	T	2.82%
10.0	MOS	1.98%	WYNN	2.82%
10.0	WYNN	1.95%	WDC	2.43%
10.0	T	1.77%	GBTC	2.12%
10.0	COST	1.72%	LVS	2.07%
10.0	LUMN	1.61%	GT	2.01%
10.0	CDNS	1.3%	AVGO	1.79%
10.0	CLF	1.17%	TRGP	1.65%
10.0	AAP	1.04%	CSTM	1.6%
10.0	CSCO	0.96%	BHC	1.33%
10.0	JAZZ	0.91%	COST	1.32%
10.0	NFLX	0.8%	GOOGL	1.27%
10.0	CYH	0.8%	WFC	1.24%
10.0	CSTM	0.74%	TDG	1.19%
10.0	CAH	0.73%	NFLX	1.19%
10.0	AZO	0.7%	NWL	1.15%
10.0	HLT	0.67%	LUMN	1.15%
10.0	WDC	0.52%	BUD	1.12%
10.0	BALL	0.51%	CDNS	1.1%
10.0	VFC	0.5%	CSCO	1.06%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	NVDA	6.9%	MSTR	11.5%
21.0	MOS	4.95%	VST	8.11%
21.0	CCL	4.81%	NVDA	6.74%
21.0	VST	4.67%	LVS	6.59%
21.0	LVS	4.55%	MOS	6.28%
21.0	WYNN	4.19%	CCL	6.05%
21.0	GT	3.52%	GT	5.47%
21.0	T	3.24%	WYNN	4.99%
21.0	MSTR	2.95%	T	4.79%
21.0	COST	2.78%	MS	4.41%
21.0	NWL	2.59%	TRGP	4.07%
21.0	CDNS	2.21%	CDNS	3.85%
21.0	NFLX	2.13%	GBTC	3.55%
21.0	GOOGL	2.11%	GOOGL	3.27%
21.0	CSTM	1.81%	BHC	2.97%
21.0	GBTC	1.66%	CLF	2.91%
21.0	AMC	1.53%	NFLX	2.63%
21.0	QQQ	1.52%	BUD	2.48%
21.0	CYH	1.5%	LUMN	2.23%
21.0	HLT	1.46%	AVGO	2.07%
21.0	GNRC	1.46%	COST	2.06%
21.0	AAP	1.37%	WFC	1.97%
21.0	BALL	1.34%	CSCO	1.96%
21.0	CSCO	1.33%	NWL	1.95%
21.0	CLF	1.2%	VNO	1.85%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	MSTR	62.37%	MSTR	57.49%
63.0	MOS	22.75%	VST	22.35%
63.0	VST	17.22%	MOS	22.21%
63.0	NVDA	15.04%	MS	21.1%
63.0	GT	14.73%	CCL	18.59%
63.0	CCL	12.44%	GBTC	17.99%
63.0	NFLX	11.67%	T	17.02%
63.0	T	11.57%	JPM	15.89%
63.0	GOOGL	10.97%	NVDA	15.69%
63.0	LVS	10.09%	GT	14.88%
63.0	GBTC	9.79%	NFLX	13.4%
63.0	QQQ	9.49%	HSBC	11.57%
63.0	NWL	7.85%	LVS	11.17%
63.0	MS	7.49%	PWR	10.93%
63.0	BA	6.43%	TRGP	9.52%
63.0	CDNS	6.23%	CDNS	9.14%
63.0	CSCO	6.15%	GOOGL	9.12%
63.0	TRGP	5.82%	GE	9.12%
63.0	AMZN	5.28%	NWL	8.7%
63.0	JPM	5.04%	QQQ	8.11%
63.0	PWR	4.99%	B	7.2%
63.0	SPY	4.75%	BA	6.89%
63.0	HSBC	3.94%	CAH	6.84%
63.0	COST	3.8%	CSCO	6.8%
63.0	MNST	3.4%	MSFT	6.78%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	T	35.24%	T	42.29%
126.0	MOS	35.22%	MOS	35.23%
126.0	GT	24.68%	NFLX	31.93%
126.0	NFLX	23.65%	HSBC	28.93%
126.0	VST	22.34%	JPM	26.92%
126.0	MSTR	20.14%	GBTC	24.78%
126.0	BA	15.98%	CCL	24.78%
126.0	CCL	15.85%	GT	24.16%
126.0	MS	13.62%	AZO	21.93%
126.0	TDG	13.03%	BA	21.7%
126.0	ORCL	10.87%	MS	21.26%
126.0	X	10.82%	MSTR	19.7%
126.0	GBTC	10.8%	VST	19.26%
126.0	HSBC	10.66%	GE	17.24%
126.0	CSCO	10.17%	TDG	15.36%
126.0	JPM	10.12%	TRGP	14.87%
126.0	GLD	9.22%	CAH	14.03%
126.0	TRGP	9.02%	CSCO	12.46%
126.0	MNST	8.78%	ORCL	12.23%
126.0	AZO	8.04%	CVS	12.19%
126.0	LW	7.5%	X	11.87%
126.0	COST	6.72%	B	10.24%
126.0	GNRC	5.9%	GLD	7.98%
126.0	AMZN	5.7%	PWR	7.45%
126.0	QQQ	4.75%	GS	7.28%

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 2025-07-31

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	IEP	-0.29%	NWL	-0.37%
1.0	MSTR	-0.24%	IEP	-0.29%
1.0	LUMN	-0.22%	LUMN	-0.18%
1.0	NWL	-0.21%	SIVBQ	-0.14%
1.0	CZR	-0.16%	BIIB	-0.12%
1.0	UAA	-0.14%	TEVA	-0.11%
1.0	BIIB	-0.12%	CZR	-0.11%
1.0	TEVA	-0.11%	INTC	-0.1%
1.0	GNRC	-0.1%	GNRC	-0.1%
1.0	LNC	-0.09%	BXP	-0.09%
1.0	META	-0.09%	UAA	-0.09%
1.0	BXP	-0.08%	META	-0.07%
1.0	GT	-0.08%	ZTS	-0.07%
1.0	NFLX	-0.07%	GT	-0.07%
1.0	AAPL	-0.06%	FIS	-0.06%
1.0	OXY	-0.05%	BALL	-0.06%
1.0	AA	-0.05%	CTLT	-0.06%
1.0	ORCL	-0.05%	INTU	-0.05%
1.0	TLT	-0.05%	OXY	-0.05%
1.0	BA	-0.04%	FSUGY	-0.05%
1.0	BALL	-0.04%	VZ	-0.05%
1.0	SBUX	-0.04%	AAPL	-0.04%
1.0	HD	-0.04%	PEP	-0.04%
1.0	CMA	-0.03%	KHC	-0.04%
1.0	BHP	-0.03%	CNC	-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 2025-07-31

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	IEP	-1.52%	IEP	-1.94%
10.0	LUMN	-1.48%	NWL	-1.71%
10.0	CZR	-1.47%	SIVBQ	-1.44%
10.0	MSTR	-1.28%	CZR	-1.22%
10.0	NWL	-0.91%	CYH	-1.18%
10.0	META	-0.76%	GME	-0.93%
10.0	INTU	-0.71%	INTU	-0.78%
10.0	GNRC	-0.69%	CLF	-0.73%
10.0	SIVBQ	-0.56%	GNRC	-0.73%
10.0	BIIB	-0.56%	CNC	-0.71%
10.0	NFLX	-0.52%	LUMN	-0.69%
10.0	ORCL	-0.51%	META	-0.64%
10.0	MS	-0.51%	BIIB	-0.63%
10.0	GOOGL	-0.47%	RIO	-0.62%
10.0	OXY	-0.4%	OXY	-0.6%
10.0	AA	-0.38%	VZ	-0.58%
10.0	BXP	-0.33%	ETRN	-0.55%
10.0	LNC	-0.32%	HD	-0.53%
10.0	TEVA	-0.32%	BXP	-0.51%
10.0	GME	-0.3%	BHP	-0.41%
10.0	AAPL	-0.27%	BAC	-0.4%
10.0	SLV	-0.26%	FSUGY	-0.39%
10.0	FSUGY	-0.25%	ORCL	-0.38%
10.0	BALL	-0.25%	LNC	-0.35%
10.0	VZ	-0.24%	ON	-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 2025-07-31

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	CZR	-3.77%	IEP	-3.35%
21.0	IEP	-3.68%	NWL	-3.07%
21.0	LUMN	-3.06%	GME	-2.89%
21.0	GME	-1.92%	CZR	-2.58%
21.0	GNRC	-1.65%	SIVBQ	-2.05%
21.0	NWL	-1.6%	GNRC	-2.05%
21.0	INTU	-1.57%	INTU	-1.64%
21.0	MSTR	-1.53%	CLF	-1.34%
21.0	META	-1.52%	KEY	-1.16%
21.0	CLF	-1.16%	BBY	-1.14%
21.0	OXY	-0.85%	RIO	-1.11%
21.0	FSUGY	-0.81%	META	-1.08%
21.0	VZ	-0.79%	BAC	-0.91%
21.0	CYH	-0.68%	ADBE	-0.9%
21.0	KALU	-0.64%	HD	-0.87%
21.0	ADBE	-0.64%	OXY	-0.82%
21.0	ORCL	-0.61%	BALL	-0.82%
21.0	BAC	-0.61%	FITB	-0.8%
21.0	SIVBQ	-0.6%	CYH	-0.79%
21.0	BALL	-0.5%	FSUGY	-0.78%
21.0	AAPL	-0.5%	BXP	-0.76%
21.0	BHP	-0.47%	VZ	-0.76%
21.0	RIO	-0.42%	AAP	-0.66%
21.0	HD	-0.41%	BIIB	-0.62%
21.0	BIIB	-0.39%	VFC	-0.6%

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 2025-07-31

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	IEP	-12.35%	SIVBQ	-17.54%
63.0	GNRC	-9.25%	IEP	-13.97%
63.0	NWL	-6.52%	GNRC	-10.37%
63.0	META	-6.01%	NWL	-8.31%
63.0	GME	-3.87%	CLF	-7.34%
63.0	CZR	-3.41%	BHC	-6.57%
63.0	LUMN	-3.34%	CYH	-5.95%
63.0	BALL	-2.94%	GME	-5.21%
63.0	SIVBQ	-2.85%	UAA	-5.09%
63.0	VFC	-2.68%	CVS	-3.9%
63.0	CYH	-2.5%	VFC	-3.78%
63.0	CLF	-2.15%	KEY	-3.55%
63.0	OXY	-2.06%	BALL	-3.43%
63.0	BHP	-2.06%	INTC	-3.42%
63.0	ON	-2.03%	AA	-3.06%
63.0	UAA	-2.0%	BBY	-2.98%
63.0	ADBE	-1.77%	AAP	-2.67%
63.0	VZ	-1.67%	FSUGY	-2.62%
63.0	AA	-1.5%	ZION	-2.39%
63.0	BBY	-1.48%	CZR	-2.18%
63.0	FITB	-1.26%	VZ	-2.05%
63.0	BAC	-1.25%	PRGO	-2.03%
63.0	HD	-1.24%	BHP	-1.97%
63.0	CHTR	-1.2%	OXY	-1.71%
63.0	INTU	-1.2%	FRA	-1.57%

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 2025-07-31

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	IEP	-25.75%	FRCB	-74.45%
126.0	NWL	-22.77%	IEP	-26.63%
126.0	GNRC	-16.05%	SIVBQ	-23.49%
126.0	SIVBQ	-14.35%	NWL	-22.62%
126.0	VFC	-12.01%	VFC	-18.43%
126.0	LUMN	-11.55%	CLF	-15.59%
126.0	FRCB	-7.86%	GNRC	-14.95%
126.0	BALL	-5.51%	INTC	-11.3%
126.0	CLF	-5.18%	BHC	-10.66%
126.0	ON	-4.81%	UAA	-10.25%
126.0	CVS	-4.38%	GME	-8.06%
126.0	VZ	-4.25%	BALL	-7.72%
126.0	GME	-4.24%	CHTR	-6.82%
126.0	IRM	-4.14%	CTLT	-6.01%
126.0	CYH	-3.99%	CVS	-5.94%
126.0	CHTR	-3.86%	KEY	-5.75%
126.0	TEVA	-3.56%	AAP	-5.34%
126.0	BHP	-3.5%	SBNY	-5.31%
126.0	BBY	-3.35%	PRGO	-4.64%
126.0	AA	-2.87%	AA	-4.13%
126.0	FSUGY	-2.56%	BHP	-4.07%
126.0	KEY	-2.45%	BBY	-3.74%
126.0	PRGO	-2.45%	CMA	-3.47%
126.0	GSK	-2.32%	ZION	-3.28%
126.0	META	-2.32%	IRM	-3.28%

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 2025-07-31

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	-49.17%	SIVBQ	-55.92%
252.0	NWL	-44.79%	IEP	-55.5%
252.0	GNRC	-25.43%	NWL	-46.43%
252.0	CLF	-21.85%	CLF	-31.97%
252.0	CVS	-18.06%	AAP	-23.99%
252.0	SBNY	-13.3%	MOS	-22.97%
252.0	MOS	-13.0%	GNRC	-20.19%
252.0	AA	-12.46%	VFC	-17.82%
252.0	CZR	-12.28%	BHC	-16.65%
252.0	AAP	-11.23%	GT	-16.56%
252.0	GT	-10.99%	CZR	-15.8%
252.0	VFC	-10.1%	INTC	-14.2%
252.0	KEY	-10.02%	LNC	-13.41%
252.0	BHC	-8.47%	CTLT	-13.37%
252.0	BALL	-7.14%	CVS	-11.59%
252.0	GME	-6.98%	KEY	-10.86%
252.0	BA	-6.74%	FSUGY	-10.25%
252.0	UAA	-6.07%	CSTM	-9.79%
252.0	CMA	-5.83%	PRGO	-9.57%
252.0	MSTR	-5.75%	OXY	-8.96%
252.0	FSUGY	-5.55%	UAA	-8.9%
252.0	PRGO	-5.43%	KHC	-7.35%
252.0	IRM	-5.24%	TLT	-5.96%

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 2025-07-31 through 2025-07-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	CYH	-2.84%	CYH	-3.22%
1.0	LUMN	-1.92%	NWL	-1.96%
1.0	NWL	-1.75%	LUMN	-1.94%
1.0	CMG	-0.77%	BHC	-1.74%
1.0	MSTR	-0.65%	CZR	-1.35%
1.0	CNC	-0.64%	CMG	-0.96%
1.0	GT	-0.64%	GT	-0.91%
1.0	CZR	-0.64%	CNC	-0.84%
1.0	IRM	-0.59%	ISRG	-0.72%
1.0	BMY	-0.55%	CMCSA	-0.65%
1.0	UAA	-0.51%	IRM	-0.64%
1.0	FCX	-0.47%	GWW	-0.61%
1.0	BHC	-0.45%	TEVA	-0.56%
1.0	GWW	-0.44%	MU	-0.55%
1.0	NVDA	-0.43%	BMY	-0.54%
1.0	CAH	-0.39%	UAA	-0.48%
1.0	IEP	-0.35%	FIS	-0.45%
1.0	MOS	-0.32%	MSTR	-0.45%
1.0	ISRG	-0.28%	MOS	-0.36%
1.0	MU	-0.27%	CAH	-0.36%
1.0	CPRT	-0.25%	CPRT	-0.36%
1.0	TFC	-0.25%	T	-0.33%
1.0	CMCSA	-0.24%	NVDA	-0.32%
1.0	FIS	-0.24%	FCX	-0.32%
1.0	AMZN	-0.23%	COST	-0.3%

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 2025-07-31 through 2025-07-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	LUMN	-4.63%	CNC	-7.46%
10.0	COST	-4.2%	NFLX	-6.39%
10.0	CMA	-3.77%	LUMN	-5.39%
10.0	BIIB	-3.59%	CMG	-4.52%
10.0	CZR	-3.28%	GT	-4.45%
10.0	CNC	-3.08%	BIIB	-3.87%
10.0	NVDA	-3.01%	CMA	-3.69%
10.0	AVGO	-2.58%	CZR	-3.66%
10.0	GT	-2.29%	COST	-3.54%
10.0	AMC	-2.07%	UNH	-3.53%
10.0	VST	-2.05%	AVGO	-2.59%
10.0	TSLA	-1.97%	ISRG	-2.56%
10.0	PWR	-1.63%	MSTR	-2.38%
10.0	CDNS	-1.55%	AMC	-2.24%
10.0	TDG	-1.49%	VST	-2.12%
10.0	JPM	-1.49%	CAH	-1.98%
10.0	NEM	-1.44%	AMAT	-1.95%
10.0	CAH	-1.39%	TSLA	-1.9%
10.0	GOOGL	-1.36%	BHC	-1.6%
10.0	AMZN	-1.16%	CMCSA	-1.28%
10.0	VZ	-1.02%	TEVA	-1.27%
10.0	QQQ	-0.98%	ACGL	-1.2%
10.0	EXPE	-0.95%	WDC	-1.14%
10.0	BHC	-0.93%	VZ	-1.09%
10.0	AMAT	-0.85%	JPM	-1.08%

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 2025-07-31 through 2025-05-05

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	CNC	-1.02%	CNC	-1.67%
1.0	CYH	-0.62%	UNH	-0.53%
1.0	MSTR	-0.5%	CYH	-0.45%
1.0	PCG	-0.48%	PCG	-0.42%
1.0	UNH	-0.46%	CPRT	-0.4%
1.0	LUMN	-0.29%	TSLA	-0.4%
1.0	TEVA	-0.27%	TEVA	-0.39%
1.0	MU	-0.27%	LUMN	-0.29%
1.0	GT	-0.26%	LLY	-0.27%
1.0	BMY	-0.26%	GT	-0.25%
1.0	AVGO	-0.24%	BMY	-0.24%
1.0	AMC	-0.22%	AMC	-0.24%
1.0	CPRT	-0.21%	SNY	-0.21%
1.0	IEP	-0.21%	MU	-0.21%
1.0	LLY	-0.2%	COST	-0.2%
1.0	FCX	-0.18%	AVGO	-0.19%
1.0	FIS	-0.16%	ISRG	-0.19%
1.0	CMG	-0.16%	GWW	-0.18%
1.0	TSLA	-0.16%	CMCSA	-0.17%
1.0	NEM	-0.15%	CMG	-0.17%
1.0	AZN	-0.15%	CZR	-0.16%
1.0	ON	-0.14%	TMUS	-0.15%
1.0	T	-0.14%	CHTR	-0.12%
1.0	CAH	-0.13%	KHC	-0.11%
1.0	GWW	-0.13%	VZ	-0.11%

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 2025-07-31 through 2025-05-05

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	AVGO	-3.6%	CNC	-11.5%
10.0	AMC	-2.52%	PCG	-4.96%
10.0	IEP	-2.08%	AVGO	-3.46%
10.0	NEM	-1.73%	TSLA	-2.9%
10.0	TSLA	-1.73%	AMC	-2.64%
10.0	COST	-1.61%	COST	-1.61%
10.0	VST	-1.51%	VST	-1.6%
10.0	AMZN	-1.38%	UNH	-1.45%
10.0	MSFT	-1.26%	KALU	-1.3%
10.0	TMUS	-1.22%	CMA	-1.13%
10.0	SLV	-1.11%	ACGL	-1.13%
10.0	CMA	-1.08%	VNO	-0.99%
10.0	QQQ	-1.05%	MSFT	-0.98%
10.0	WDC	-1.04%	CPRT	-0.94%
10.0	TDG	-1.02%	TEVA	-0.84%
10.0	CNC	-1.02%	TDG	-0.82%
10.0	GOOGL	-0.98%	IEP	-0.8%
10.0	FCX	-0.92%	NEM	-0.78%
10.0	KALU	-0.9%	CVS	-0.76%
10.0	ORCL	-0.87%	SLV	-0.72%
10.0	SBUX	-0.85%	TMUS	-0.72%
10.0	NAVI	-0.82%	NFLX	-0.72%
10.0	PWR	-0.78%	GT	-0.7%
10.0	GILD	-0.72%	NAVI	-0.68%
10.0	ON	-0.71%	EXPE	-0.61%

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 2025-07-31 through 2025-05-05

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	CNC	-8.05%	PCG	-18.29%
21.0	AVGO	-7.76%	CNC	-11.95%
21.0	AAP	-3.81%	AVGO	-7.24%
21.0	NEM	-3.55%	TXN	-3.28%
21.0	TXN	-3.14%	MU	-2.86%
21.0	KALU	-3.13%	CVS	-2.73%
21.0	COST	-3.06%	COST	-2.68%
21.0	IEP	-2.91%	TEVA	-2.61%
21.0	WDC	-2.9%	KALU	-2.61%
21.0	AMZN	-2.6%	CMA	-2.47%
21.0	CMA	-2.38%	TSLA	-2.37%
21.0	PCG	-2.32%	CMG	-2.11%
21.0	MU	-2.23%	ACGL	-2.06%
21.0	PWR	-2.12%	AMC	-1.99%
21.0	SBUX	-2.06%	MSFT	-1.85%
21.0	NAVI	-2.06%	QQQ	-1.61%
21.0	AMC	-2.05%	TDG	-1.56%
21.0	QQQ	-2.03%	SLV	-1.5%
21.0	SLV	-1.94%	ISRG	-1.32%
21.0	TDG	-1.84%	GWW	-1.3%
21.0	MSFT	-1.84%	TMUS	-1.19%
21.0	ACGL	-1.75%	AMZN	-1.19%
21.0	ORCL	-1.62%	NEM	-1.18%
21.0	INTC	-1.59%	HON	-1.17%
21.0	EXPE	-1.5%	GILD	-1.13%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	MSTR	-0.6%	IEP	-0.44%
1.0	IEP	-0.48%	CNC	-0.3%
1.0	BIIB	-0.32%	BIIB	-0.28%
1.0	CNC	-0.22%	NWL	-0.25%
1.0	TEVA	-0.21%	MSTR	-0.25%
1.0	CYH	-0.19%	CYH	-0.24%
1.0	LNC	-0.19%	TEVA	-0.21%
1.0	LEN	-0.18%	KHC	-0.19%
1.0	PWR	-0.18%	LEN	-0.18%
1.0	PCG	-0.16%	OXY	-0.17%
1.0	BXP	-0.13%	AMAT	-0.16%
1.0	AMAT	-0.13%	GME	-0.13%
1.0	UNH	-0.12%	UNH	-0.13%
1.0	UAA	-0.12%	BXP	-0.13%
1.0	AMZN	-0.11%	PCG	-0.12%
1.0	ORCL	-0.11%	AMZN	-0.12%
1.0	OXY	-0.11%	MRK	-0.11%
1.0	GME	-0.1%	ADBE	-0.11%
1.0	ON	-0.1%	DHI	-0.11%
1.0	CMCSA	-0.1%	CMCSA	-0.11%
1.0	AZN	-0.1%	AMC	-0.1%
1.0	NWL	-0.09%	PHM	-0.1%
1.0	CMA	-0.09%	NAVI	-0.09%
1.0	LLY	-0.07%	PEP	-0.09%
1.0	RIO	-0.06%	TLT	-0.09%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	IEP	-3.02%	IEP	-3.2%
10.0	BIIB	-2.1%	CNC	-3.2%
10.0	AMAT	-1.71%	CYH	-2.59%
10.0	LNC	-1.05%	BIIB	-1.92%
10.0	GME	-0.87%	OXY	-1.49%
10.0	X	-0.84%	AMAT	-1.48%
10.0	FIS	-0.83%	PCG	-1.34%
10.0	ORCL	-0.82%	ON	-1.22%
10.0	UAA	-0.79%	TSLA	-1.19%
10.0	OXY	-0.76%	GME	-1.1%
10.0	BXP	-0.72%	AMC	-1.09%
10.0	CMA	-0.69%	BXP	-1.02%
10.0	LEN	-0.68%	CMA	-0.88%
10.0	PWR	-0.64%	RIO	-0.85%
10.0	ON	-0.63%	TEVA	-0.78%
10.0	KALU	-0.63%	KALU	-0.77%
10.0	META	-0.59%	LEN	-0.77%
10.0	SLV	-0.57%	DHI	-0.74%
10.0	EXPE	-0.5%	MU	-0.73%
10.0	DHI	-0.46%	UNH	-0.7%
10.0	MU	-0.45%	PRGO	-0.66%
10.0	NEM	-0.42%	KHC	-0.65%
10.0	GE	-0.41%	EXPE	-0.56%
10.0	GILD	-0.39%	VZ	-0.55%
10.0	AMD	-0.37%	ORCL	-0.54%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	IEP	-6.43%	IEP	-6.33%
21.0	BIIB	-3.0%	PCG	-4.22%
21.0	AMAT	-2.58%	OXY	-3.82%
21.0	OXY	-2.26%	BIIB	-2.94%
21.0	GME	-2.05%	GME	-2.72%
21.0	DHI	-2.04%	BBY	-2.49%
21.0	MU	-1.92%	CNC	-2.35%
21.0	PWR	-1.83%	TSLA	-2.29%
21.0	LEN	-1.75%	AMAT	-2.15%
21.0	CMA	-1.73%	LEN	-2.05%
21.0	ON	-1.66%	MU	-2.01%
21.0	KALU	-1.51%	UNH	-1.93%
21.0	PCG	-1.47%	EXPE	-1.72%
21.0	LNC	-1.36%	DHI	-1.64%
21.0	CNC	-1.16%	CMA	-1.62%
21.0	WDC	-1.11%	ON	-1.58%
21.0	META	-1.07%	AAP	-1.46%
21.0	FIS	-1.04%	FIS	-1.46%
21.0	ADBE	-1.01%	ADBE	-1.2%
21.0	X	-0.99%	KHC	-1.16%
21.0	ORCL	-0.94%	KALU	-1.1%
21.0	EXPE	-0.85%	BXP	-1.04%
21.0	KHC	-0.85%	MRK	-1.02%
21.0	SLV	-0.84%	CMCSA	-1.01%
21.0	GILD	-0.75%	LNC	-0.96%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	IEP	-20.54%	IEP	-19.54%
63.0	OXY	-11.78%	PCG	-13.93%
63.0	PCG	-11.58%	CYH	-11.63%
63.0	ON	-10.72%	OXY	-10.95%
63.0	AMD	-7.85%	AMD	-10.81%
63.0	BIIB	-7.03%	ON	-9.98%
63.0	GME	-6.74%	ADBE	-9.42%
63.0	WDC	-5.94%	UNH	-8.99%
63.0	ADBE	-5.78%	WDC	-7.81%
63.0	DHI	-5.43%	BHP	-7.14%
63.0	LEN	-4.62%	CZR	-6.05%
63.0	BBY	-4.36%	CVS	-5.98%
63.0	PHM	-4.28%	FIS	-5.7%
63.0	CYH	-4.23%	VFC	-5.6%
63.0	CZR	-4.02%	TEVA	-5.43%
63.0	BHP	-4.01%	UAA	-5.35%
63.0	UNH	-3.74%	BHC	-5.23%
63.0	VFC	-3.41%	BIIB	-4.83%
63.0	FITB	-3.12%	GME	-4.79%
63.0	TSLA	-2.98%	MRK	-4.6%
63.0	EXPE	-2.83%	AMC	-4.57%
63.0	MRK	-2.78%	BBY	-4.55%
63.0	ZION	-2.63%	DHI	-4.47%
63.0	MU	-2.55%	KHC	-4.45%
63.0	AMAT	-2.46%	LUMN	-4.24%

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 2025-07-31 through 2024-08-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	IEP	-36.54%	NWL	-37.45%
126.0	ON	-36.54%	PCG	-34.66%
126.0	PCG	-29.18%	UNH	-34.5%
126.0	UNH	-26.01%	IEP	-33.66%
126.0	NWL	-21.64%	VFC	-33.37%
126.0	ADBE	-20.7%	LUMN	-33.05%
126.0	OXY	-16.03%	AMC	-28.16%
126.0	AMD	-15.64%	UAA	-28.04%
126.0	VFC	-15.19%	ON	-27.49%
126.0	BBY	-12.93%	IRM	-24.32%
126.0	WDC	-12.79%	ADBE	-23.64%
126.0	BHC	-12.47%	CYH	-22.97%
126.0	BIIB	-12.12%	OXY	-20.63%
126.0	FITB	-11.99%	AMD	-19.39%
126.0	LUMN	-10.61%	BHC	-16.91%
126.0	IRM	-10.41%	BIIB	-16.39%
126.0	BHP	-10.2%	DHI	-16.33%
126.0	PHM	-9.94%	CNC	-16.31%
126.0	DHI	-9.88%	FITB	-15.82%
126.0	MRK	-9.12%	BALL	-15.74%
126.0	CZR	-9.11%	BBY	-14.28%
126.0	CLF	-8.97%	TEVA	-12.28%
126.0	CMG	-8.21%	WDC	-12.06%
126.0	AMAT	-7.26%	BHP	-11.99%
126.0	FSUGY	-7.07%	CLF	-11.57%

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 2025-07-31. 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	269.27	0	7.11	0.01
Sigma	95	10	4.73	0.03	1.99	0.16
Sigma	95	21	9.54	0	0.14	0.71
Sigma	95	63	11.32	0	1.18	0.28
Sigma	95	126	0.02	0.89	0.2	0.66
Sigma	95	252	11.36	0	nan	0
Sigma	99	1	185.7	0	10.33	0
Sigma	99	10	25.36	0	0.35	0.55
Sigma	99	21	17.76	0	0.77	0.38
Sigma	99	63	20.62	0	nan	0
Sigma	99	126	6.1	0.01	0.6	0.44
Sigma	99	252	23.94	0	nan	0