VecViz Opportunity At Risk (OaR) Performance Report

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1 April 2025

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Introduction

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

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

Evaluation of OaR Estimates

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

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

OaR Breakage Ratios

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

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

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

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

ROLOBC and its drivers

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

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

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

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

Addressing The Tradeoff Between OaR Breakage and ROLOBC

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

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

Determining the drivers of ROLOBC alpha

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

ROLOBC Beta

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

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

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

Vector Model Input and Calculation Details

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

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

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

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

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

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

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

Sigma Details

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

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

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

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

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

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

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

Using this report

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

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

1) Past performance is no guarantee of future results. None of the content in this report is investment advice or an offer to buy or sell securities. VecViz is not a SEC investment advisor or broker-dealer. The staff of VecViz actively transacts in securities tied to many of the tickers discussed in this report.
   See VecViz's Terms and Conditions for more context and detail at https://vecviz.com/terms-and-conditions/
2) Read ""Let me warn you..." of the limitations of VecViz's Analytics.", a blog entry on vecviz.com (https://vecviz.com/let-me-warn-you-of-the-limitations-of-vecvizs-analytics/)
3) There are many volatility models that the Vector Model could be compared to beyond Sigma. Thus, even if this report causes you to conclude that the Vector Model's OaR outperforms Sigma OaR, you should not necessarily conclude that Vector Model OaR is the best volatility model for your purposes. See the discussion of some of the other types of volatility models in this blog for more detail: https://vecviz.com/an-llms-comparison-of-vecviz-to-established-vol-models/
4) All breakage rate and ROLOBC performance statistics are as of the end of the horizon only. All interim price movement is ignored. In other words, a stock with a 10d OaR of -15% may have declined 99% the day after the OaR estimate of -15% was calculated, but if it reverts to being only down 14.99% on the 10th day then no breakage occurred as calculated in this report, and its ROLOBC performance will be based on a -14.99% price return.
5) Clearly, all horizons > 1d overlap when considered on a daily basis (except for those utilized in the Kupiec and Christoferson tests). Please note that the volatility of overlapping periodic returns is understated, because each observation shares return experience with other observations for such time horizons.
   Thus, we advise against considering any perceived volatility or volatility related metrics for multi-day horizons in isolation,, including p-values for alpha and beta statistics. However, we do believe that their use is valid for comparing the Vector Model to Sigma, whose multi-day horizon OaR breakage and ROLOBC returns are calculated similarly.

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

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

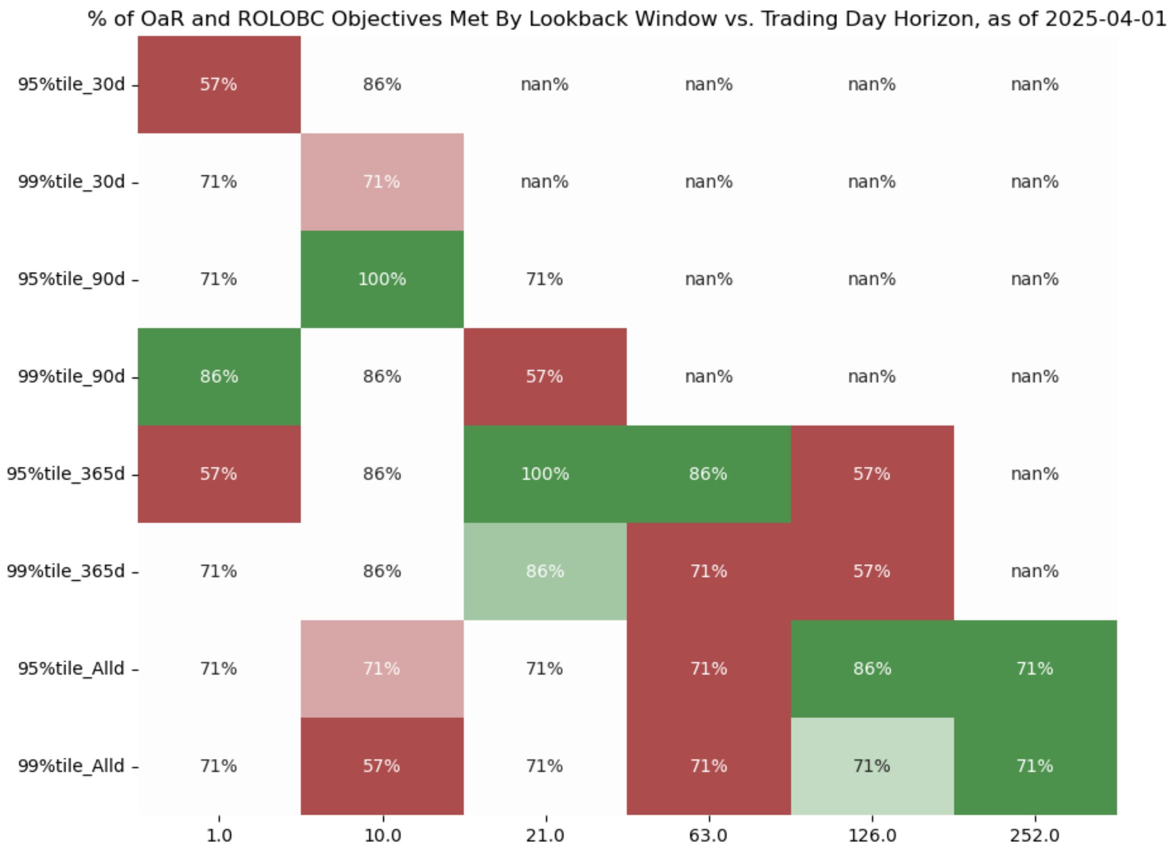
8) Note that OaR for both the Vector Model and Sigma as presented in this report assumes that prices are floored at $0.01. Since the coverage universe for this report includes only listed equities, that assumption is likely appropriate. However, if the Vector Model were applied to commodities or perhaps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

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

Opportunity at Risk (OaR) Report Cards

Period examined: AllD = 2022-01-31 through 2025-03-28 while 365D /90D/ 30D include the 365/90/30 days ended 2025-03-28, 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 2025-03-28. 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	124	0	0.34	0.56
Vector	95	10	15.84	0	1.32	0.25
Vector	95	21	14.35	0	0.24	0.62
Vector	95	63	0.31	0.58	0.17	0.68
Vector	95	126	6.14	0.01	nan	0
Vector	95	252	0.01	0.9	nan	0
Vector	99	1	8.54	0	1.81	0.18
Vector	99	10	21.91	0	0.81	0.37
Vector	99	21	8.55	0	5.8	0.02
Vector	99	63	0.8	0.37	1.19	0.27
Vector	99	126	2	0.16	nan	0
Vector	99	252	2.58	0.11	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 2025-03-28.

OaR and ROLOBC Criteria	Average Score(%)
1. Closer to Target OaR Breakage Than Sigma	81.25
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	100
3. Less Volatile OaR Breakage Across Tickers Than Sigma	53.12
4. Higher ROLOBC Than Sigma	84.38
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	84.38
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	68.75
Overall Comparison to Sigma Average	74.11
Kupiec Test of VaR Proximity to Target	41.6667
Christoferson Test of OaR Date Independence	58.3333

Observations as of 2025-03-28

1. The Vector Model compared favorably to Sigma in 74% of all OaR and ROLOBC evaluation criteria, on average, across all 16 lookback periods and forward time horizons, supportive of investor consideration of Vector Model OaR alongside or perhaps in place of Sigma OaR.

2. Performance relative to Sigma has been strong over the last 90 days, particulalry for the 1d and 10d time horizons.

3. The 95%tile's OaR criteria scores are slightly stronger than the 99%tile scores for most lookback windows, though they are both strong.

4. Scores for return related criteria (ROLOBC) were similarly as strong as those tied to accuracy related criteria (breakage).
5. ROLOBC alpha across tickers and model dates was moderately stronger than average alpha by ticker across model dates, suggesting alpha was driven by both ticker selection and timing.
6. The Kupiec Test indicates that Vector Model OaR breakage was consistent with expectations, with 95% certainty, in 42% of the horizon and percentile combinations studied. The 63d and 252d horizon was well specified at both the 95 and 99 percentile level, whereas the 126d horizon was found to be well specified at only the 99% level.
7. The Christoferson Test indicates that Vector Model OaR breakage was independent across model dates, with 95% certainty, in 58% of the horizon and percentile combinations studied. The 1d through 63d time horizons were found to have independent VaR breakage for both the 95th and 99th percentiles, with the exception of the 21d horizon for the 99%tile.

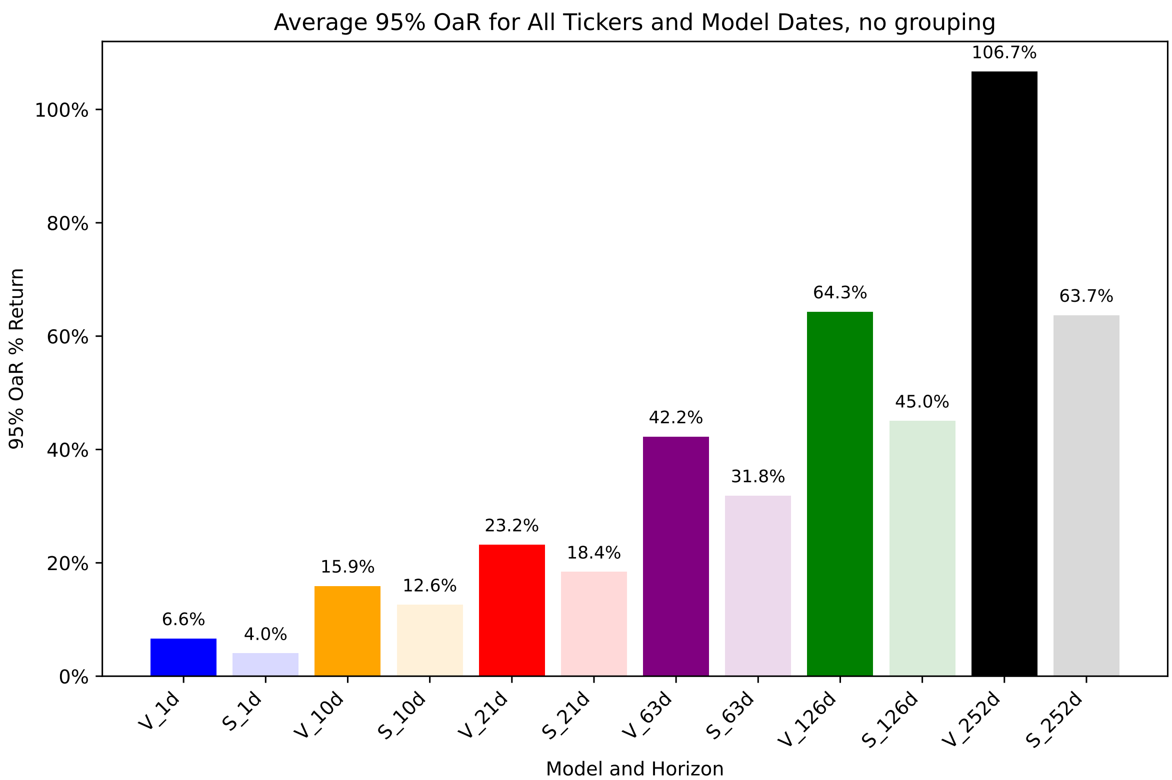
95% Opportunity At Risk (OaR)

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.

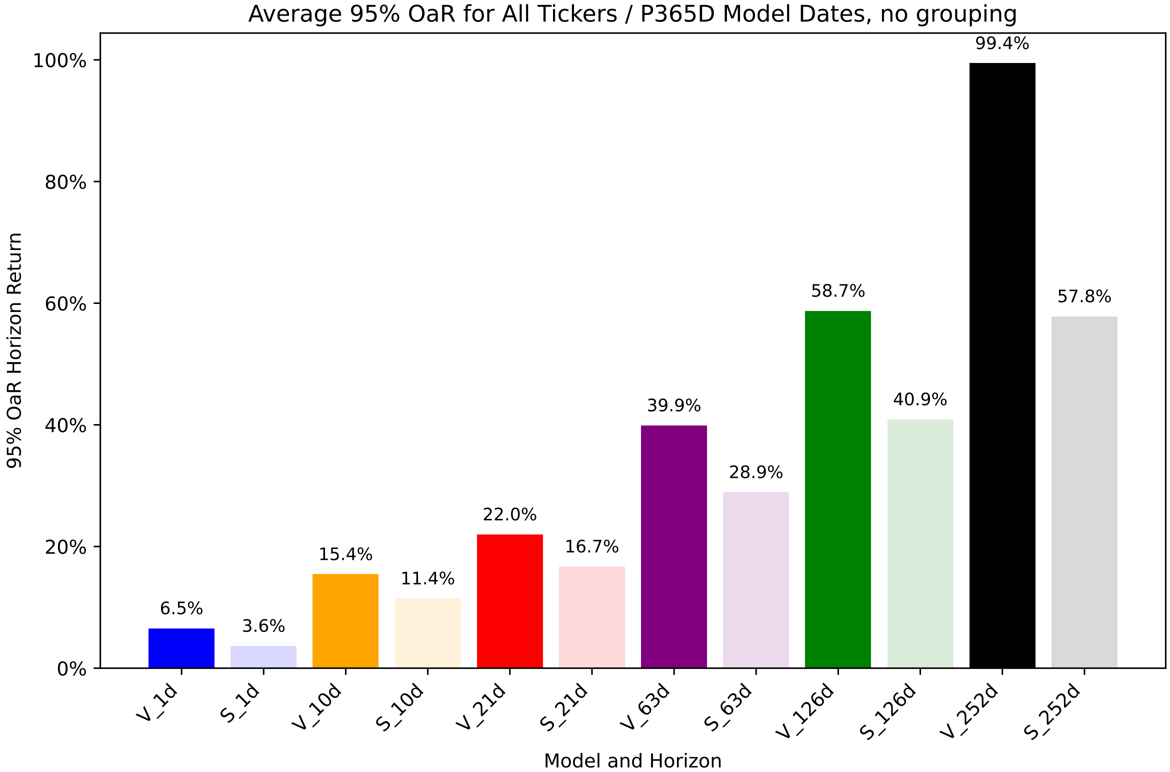
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28



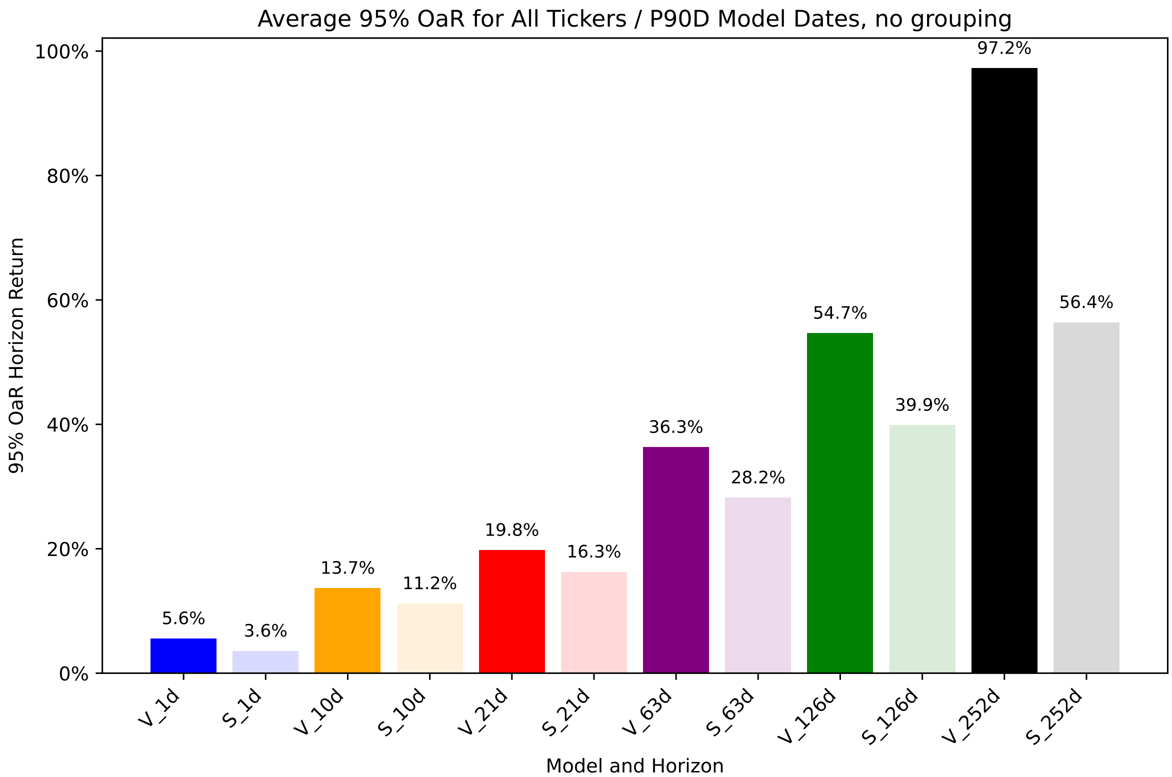
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2024-04-02 through 2025-03-28



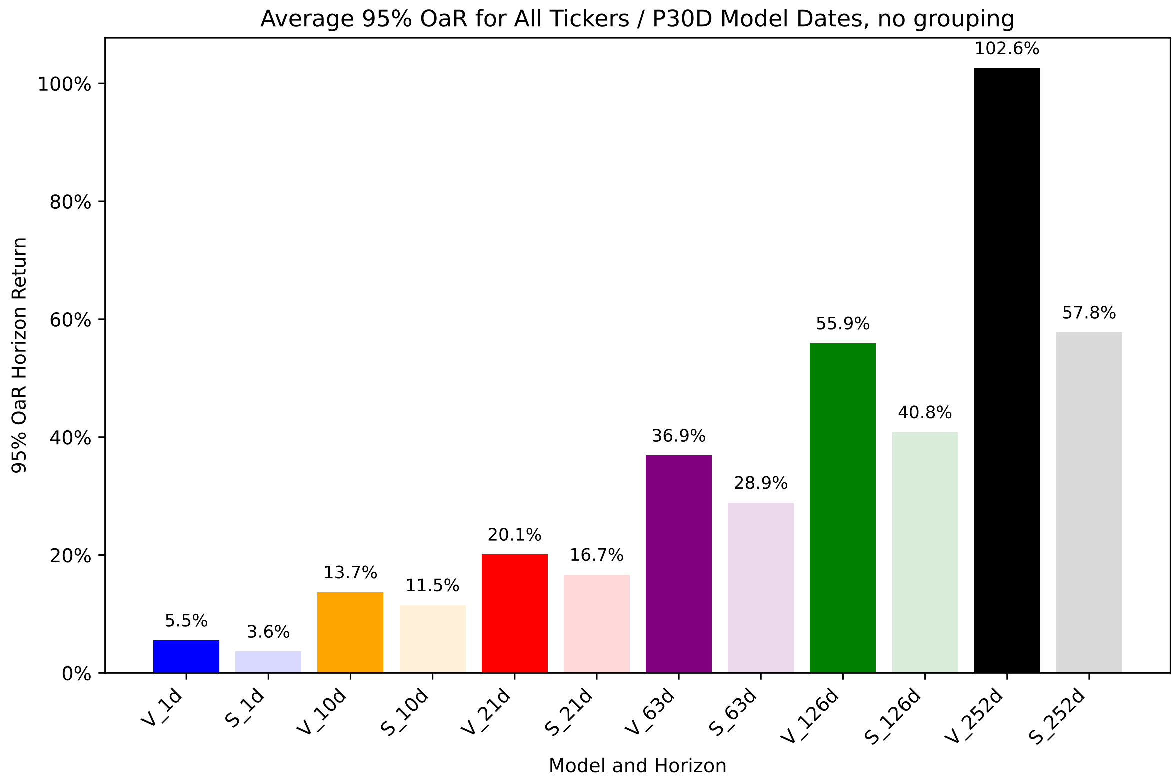
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-01-02 through 2025-03-28



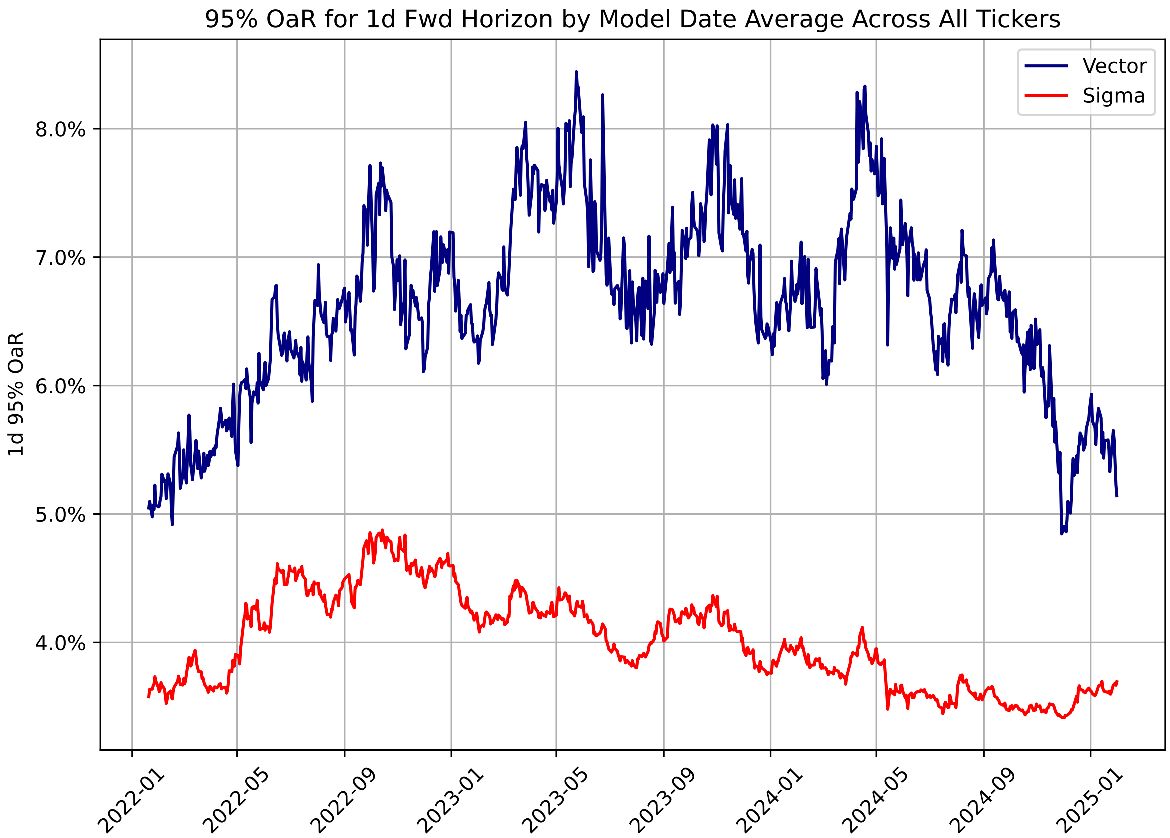
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-03-03 through 2025-03-28

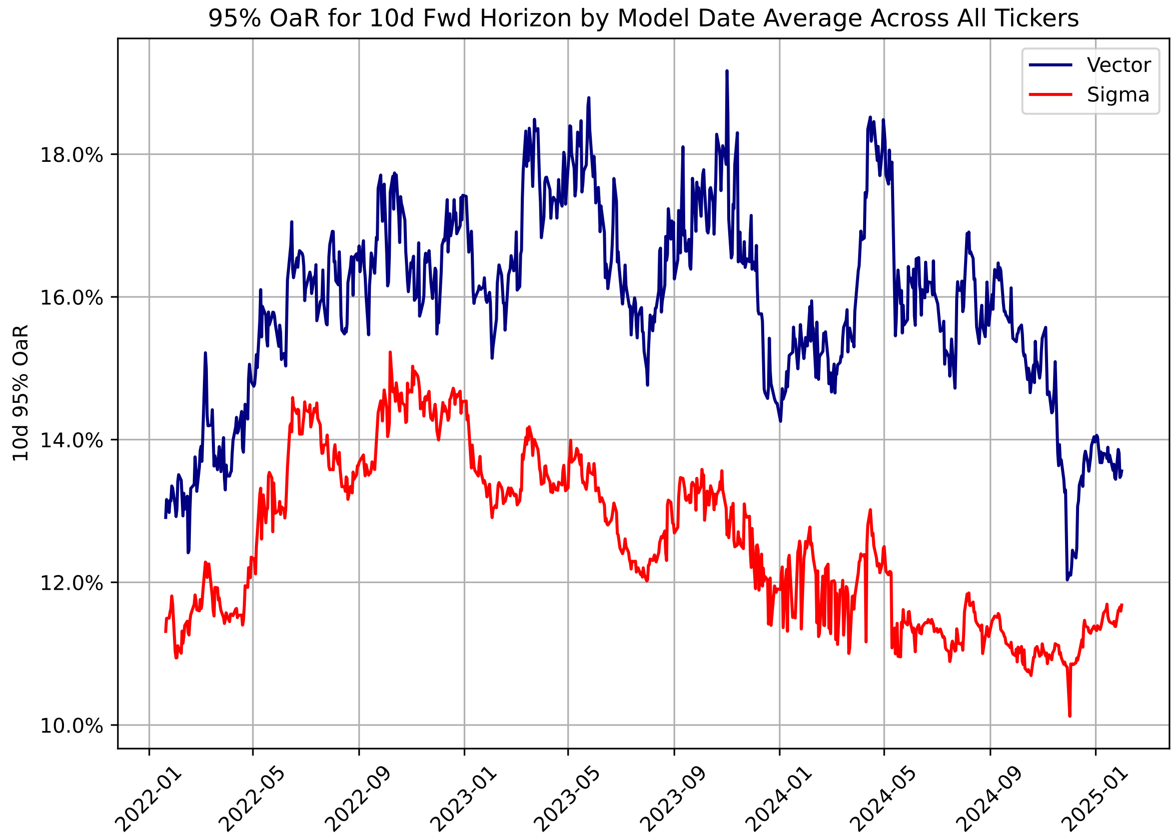


Daily Levels

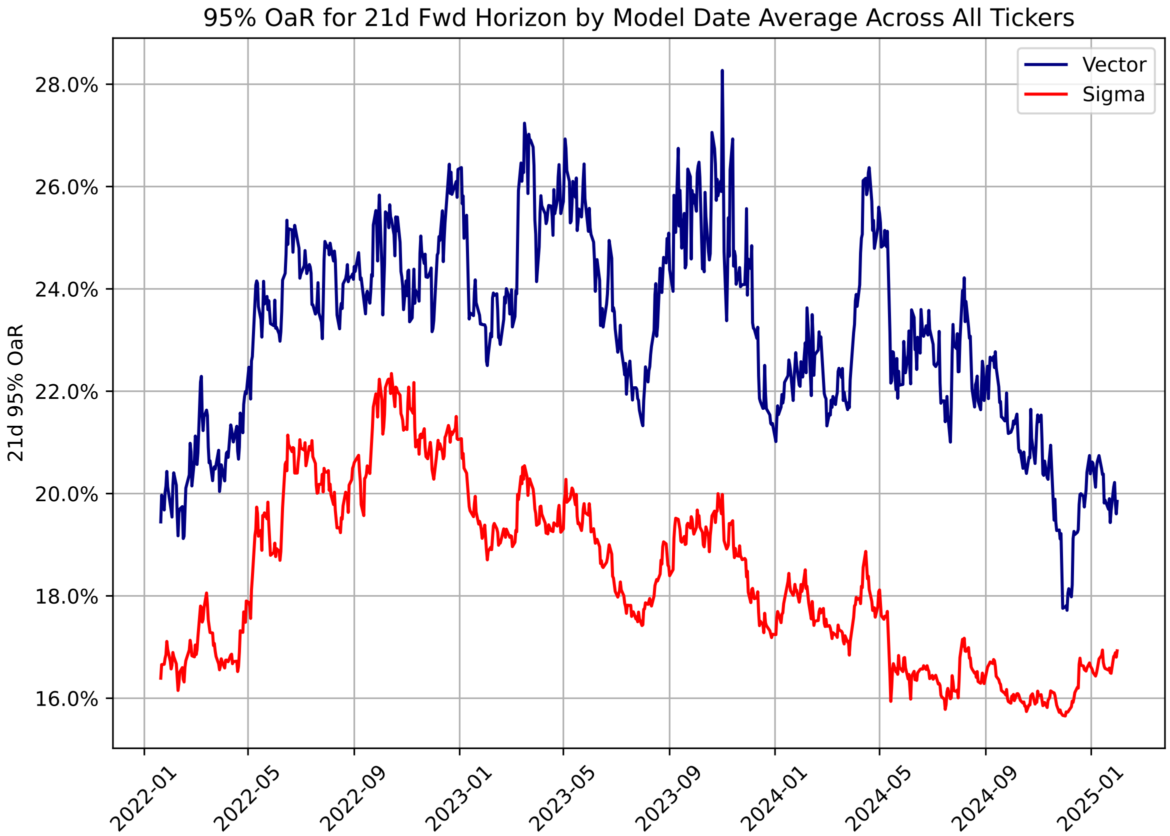
1d Horizon



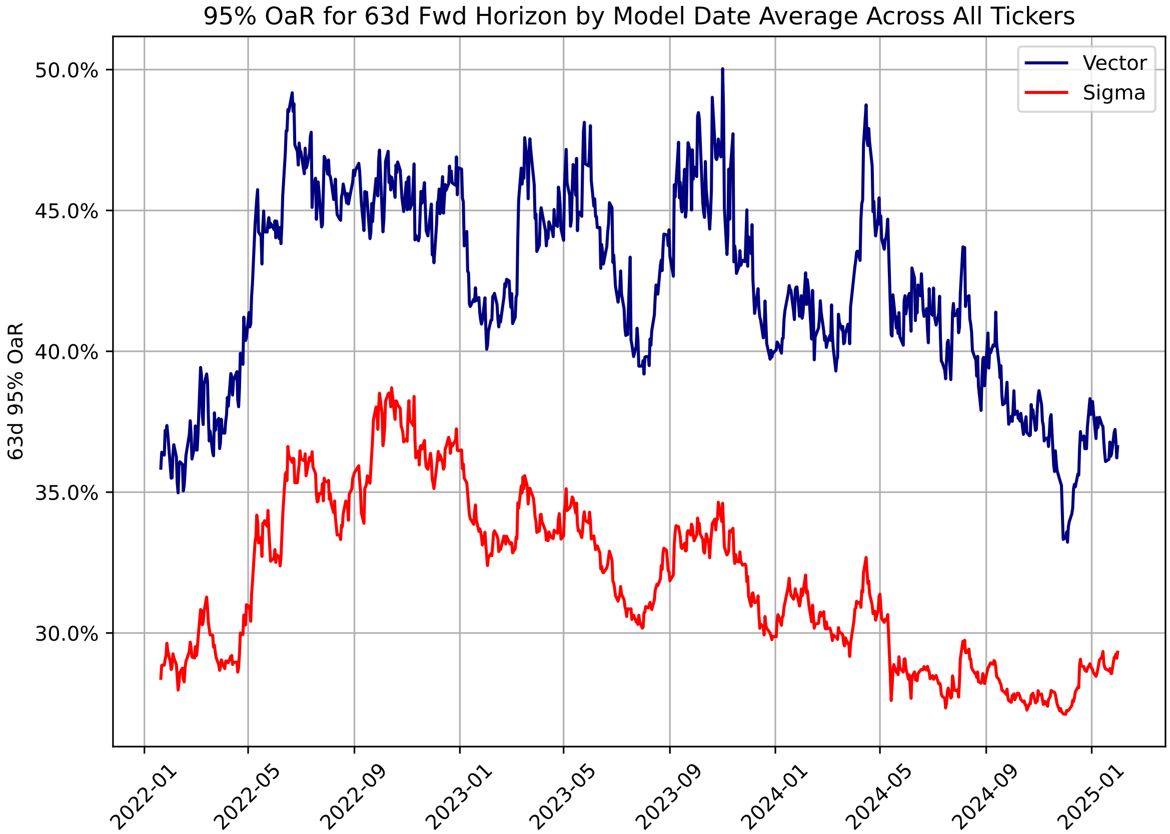
10d Horizon


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
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

21d Horizon

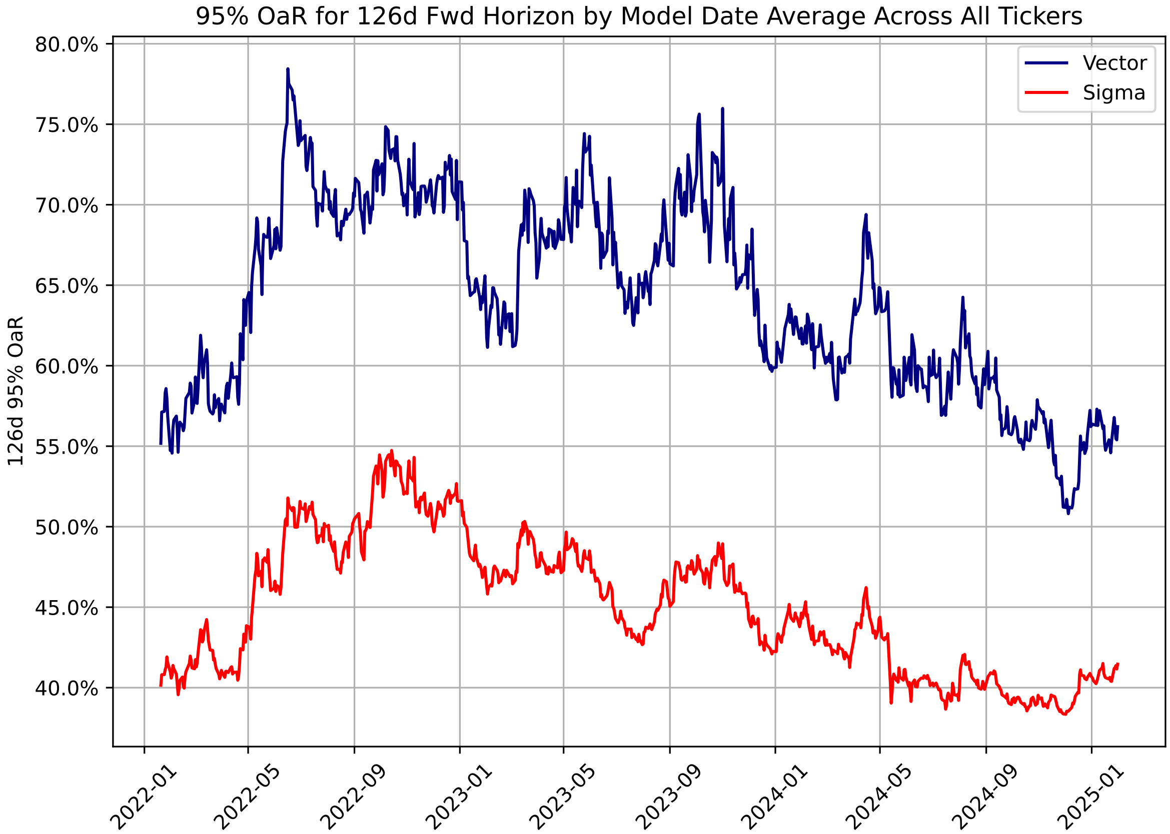

95% OaR for 21d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
21d 95% OaR
28.0%
26.0%
24.0%
22.0%
20.0%
18.0%
16.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

63d Horizon

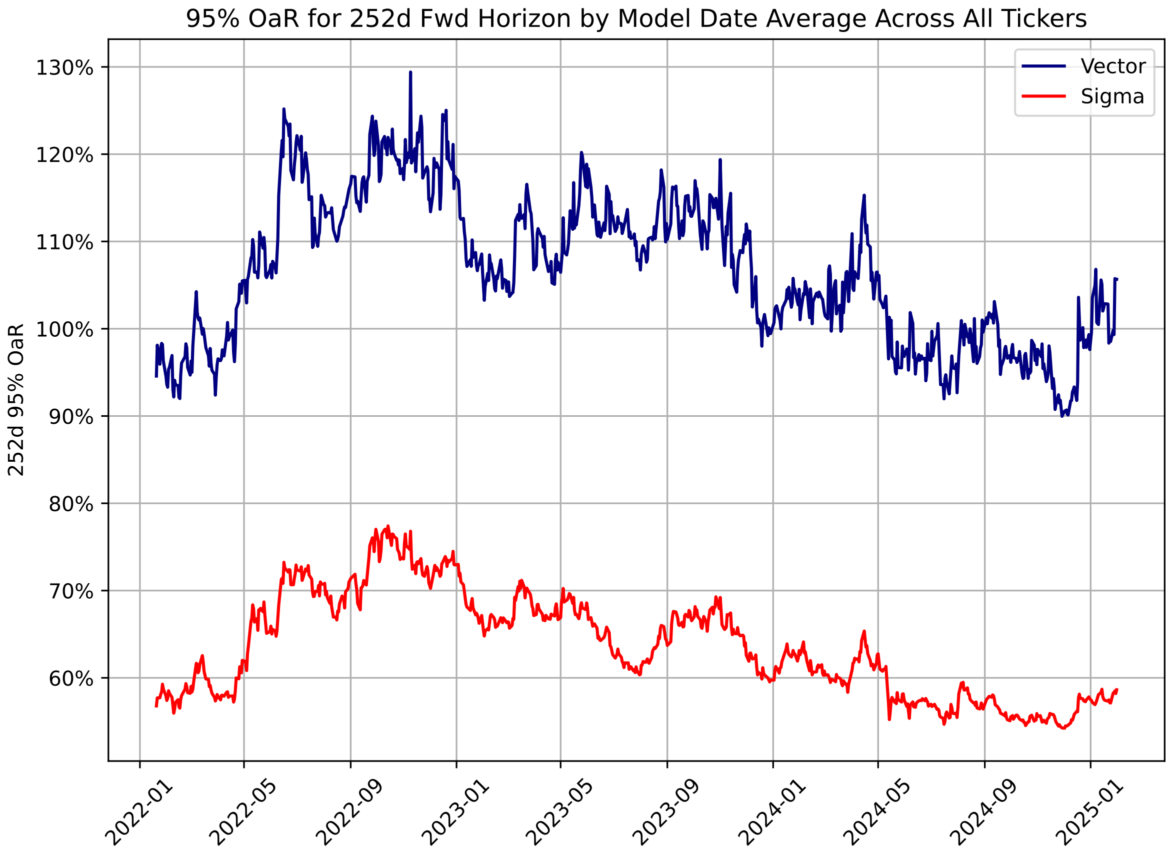


95% OaR for 63d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
63d 95% OaR
50.0%
45.0%
40.0%
35.0%
30.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

126d Horizon



252d Horizon



Performance Summary

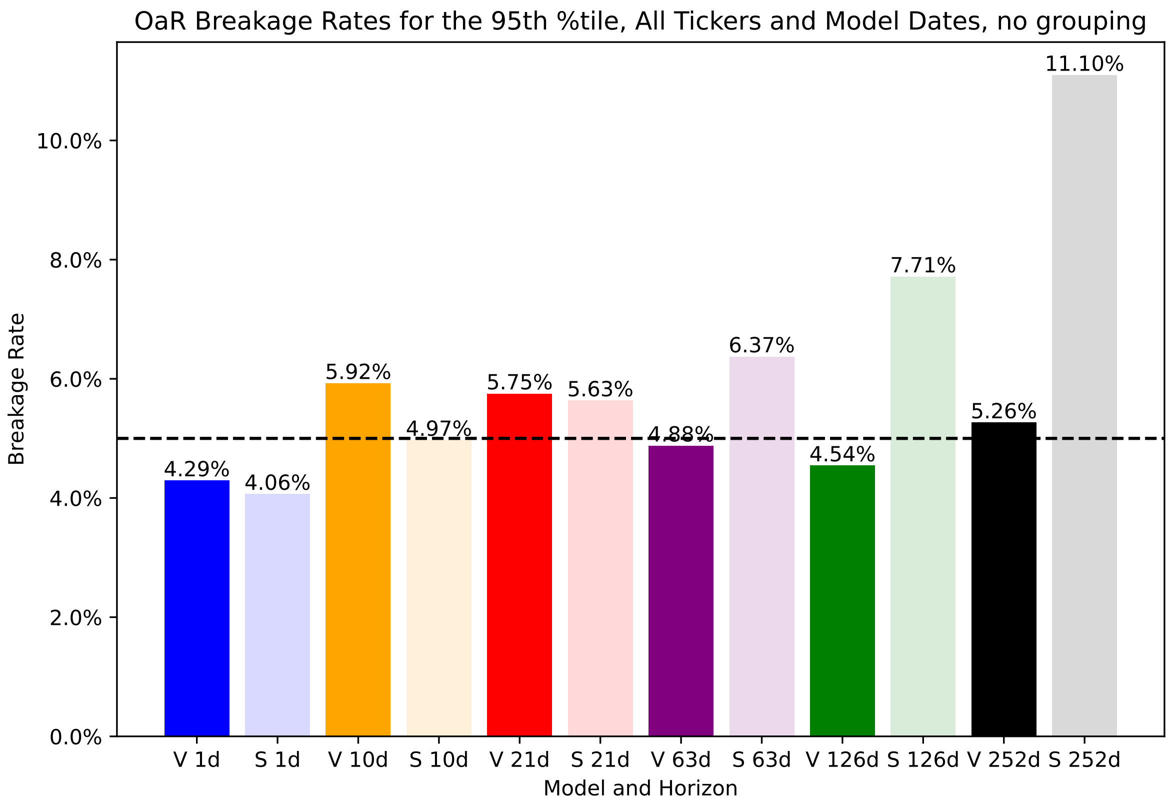
Here we compare the performance of 95% OaR estimates generated by the Vector Model ("V", presented with dark shading) with those generated by Sigma ("S", presented with light shading). This comparison is made on the basis of breakage rates and Return on Long OaR based Capital (ROLOBC), presenting the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

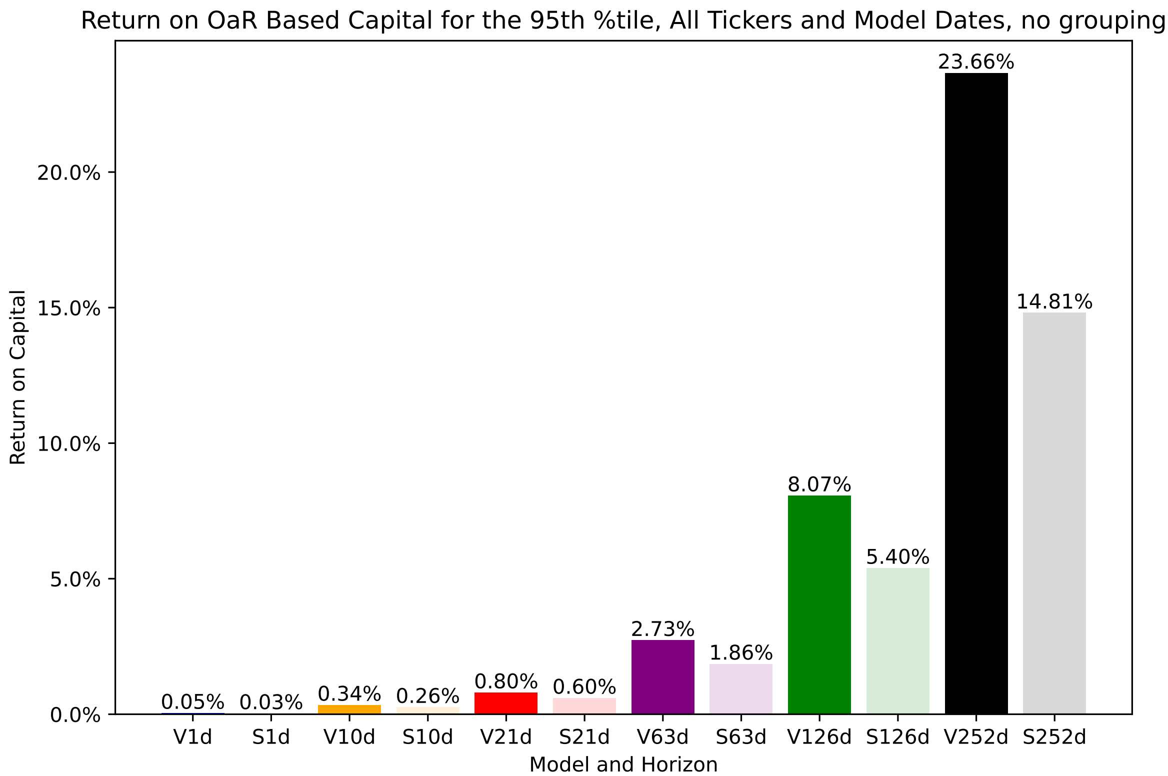
ROLOBC comparisons are made on the basis of outright ROLOBC and the alpha of Vector Model ROLOBC to underlying ticker returns (the proxy for Sigma ROLOBC). As discussed in the Introduction, ROLOBC for Sigma is presumed to be the return of the underlying ticker, and for the Vector Model it is based on 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 2025-03-28


OaR Breakage Rates for the 95th %tile, All Tickers and Model Dates, no grouping
Breakage Rate
Model and Horizon
0.0%
2.0%
4.0%
6.0%
8.0%
10.0%
4.29%
4.06%
5.92%
4.97%
5.75%
5.63%
4.88%
6.37%
4.54%
7.71%
5.26%
11.10%
V 1d
S 1d
V 10d
S 10d
V 21d
S 21d
V 63d
S 63d
V 126d
S 126d
V 252d
S 252d



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

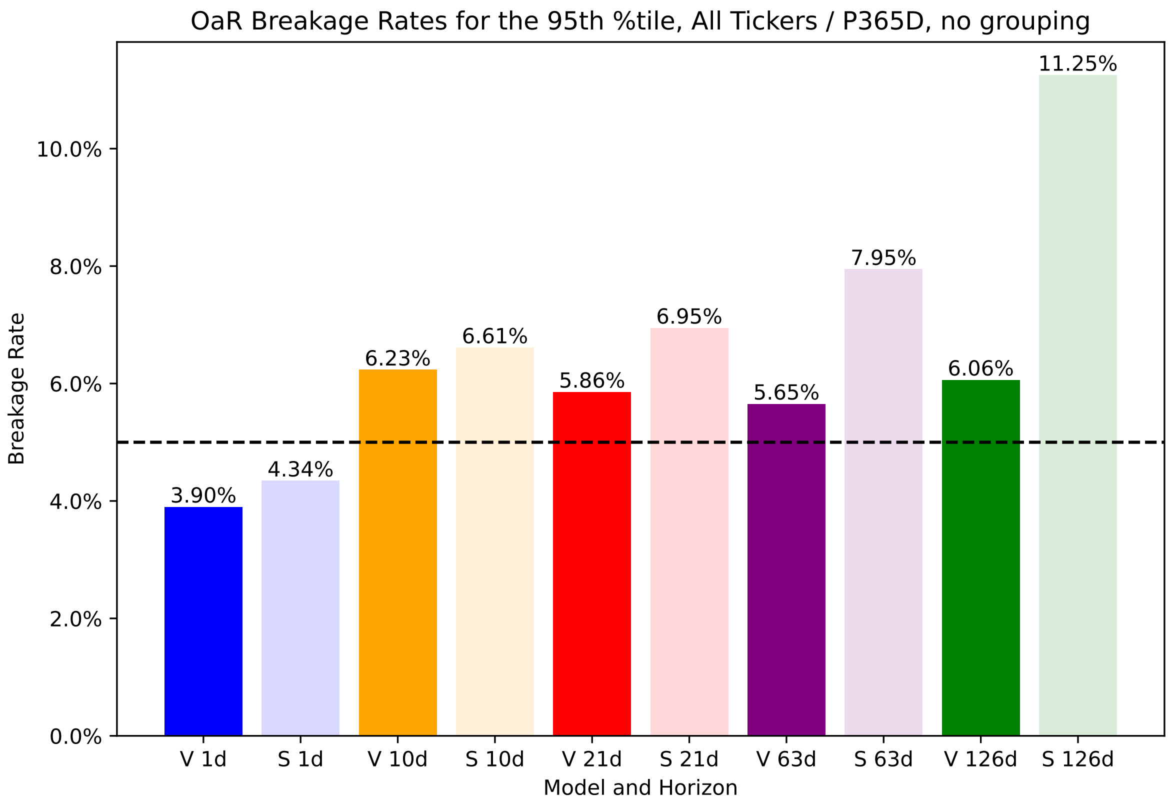
	1d	10d	21d	63d	126d	252d
intercept	0.00%	0.08%	0.14%	0.42%	0.91%	2.87%
intercept_p_value	69.46%	0.00%	0.00%	0.00%	0.00%	0.00%
slope	145.30%	118.59%	121.51%	135.72%	141.73%	150.67%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

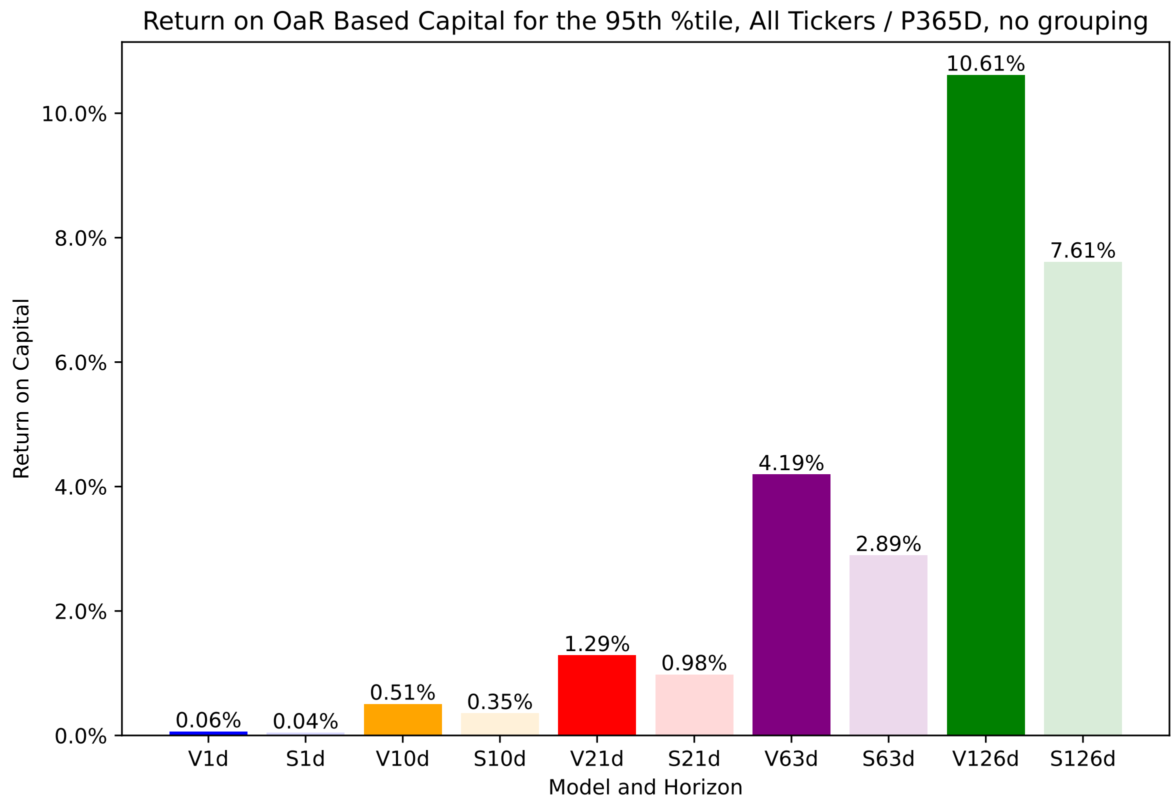
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

	1d	10d	21d	63d	126d	252d
intercept	0.00%	0.05%	0.03%	-0.09%	-1.18%	-1.83%
intercept_p_value	49.70%	21.87%	13.75%	9.69%	8.34%	11.59%
slope	148.45%	123.45%	126.80%	132.96%	144.26%	166.10%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.07%

Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2024-04-02 through 2025-03-28





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

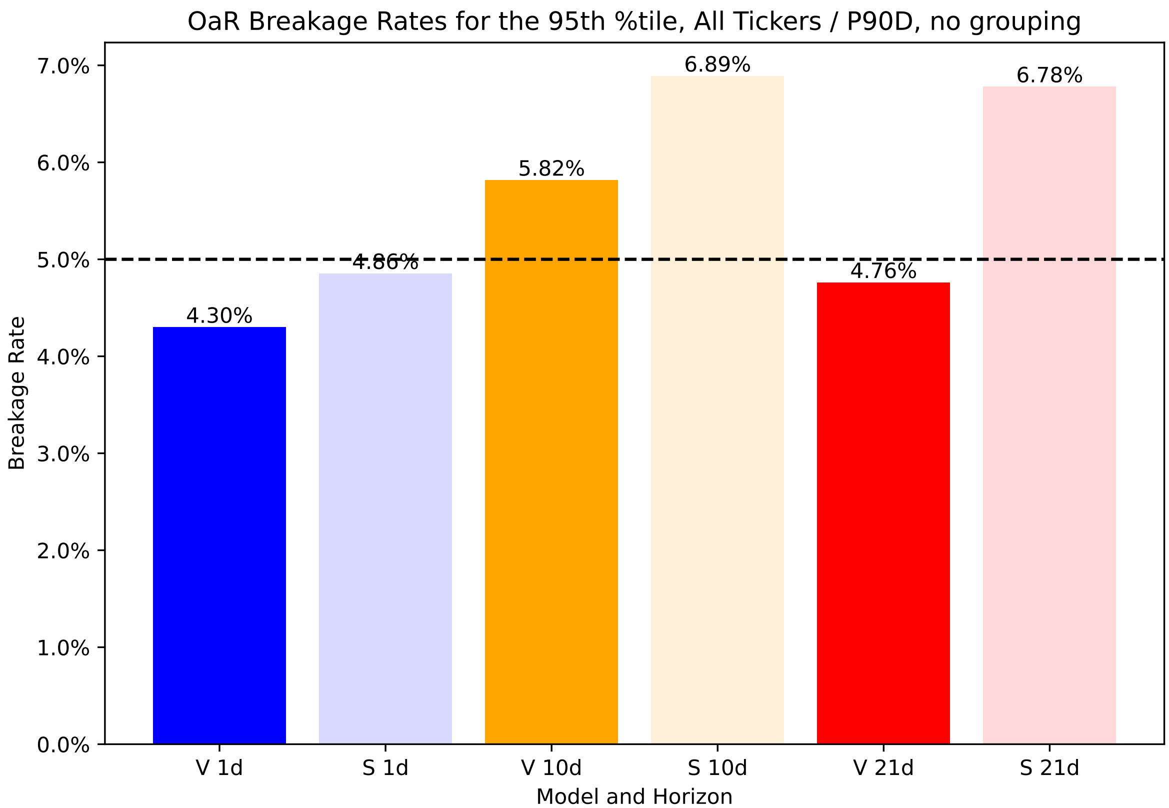
	1d	10d	21d	63d	126d
intercept	0.01%	0.12%	0.14%	-0.04%	-0.49%
intercept_p_value	52.89%	0.03%	0.09%	61.63%	0.01%
slope	152.78%	131.47%	130.26%	159.32%	156.67%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

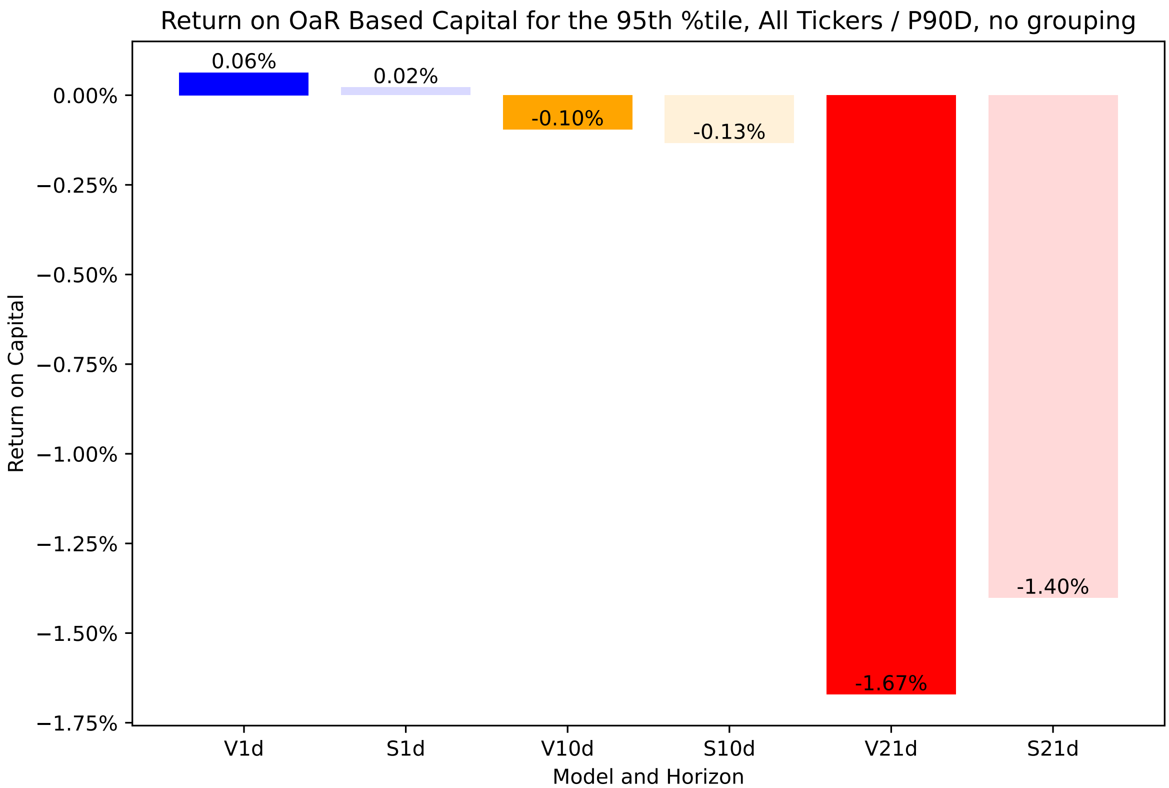
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

	1d	10d	21d	63d	126d
intercept	0.01%	0.13%	0.20%	0.48%	-0.62%
intercept_p_value	44.30%	20.43%	15.29%	14.58%	19.92%
slope	157.94%	133.16%	134.26%	139.95%	151.57%
slope_p_value	0.00%	0.00%	0.00%	0.02%	0.00%

Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-01-02 through 2025-03-28





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

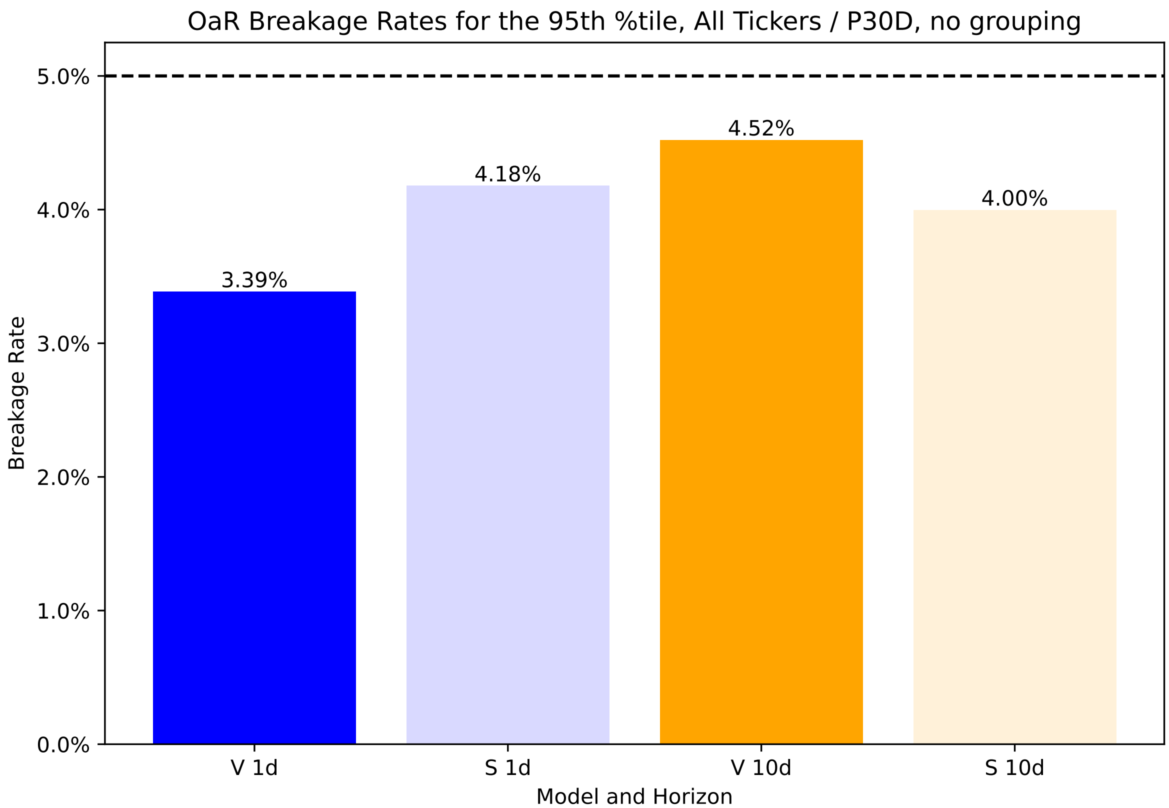
	1d	10d	21d
intercept	0.03%	0.06%	0.00%
intercept_p_value	13.74%	22.83%	98.05%
slope	146.26%	119.98%	122.70%
slope_p_value	0.00%	0.00%	0.00%

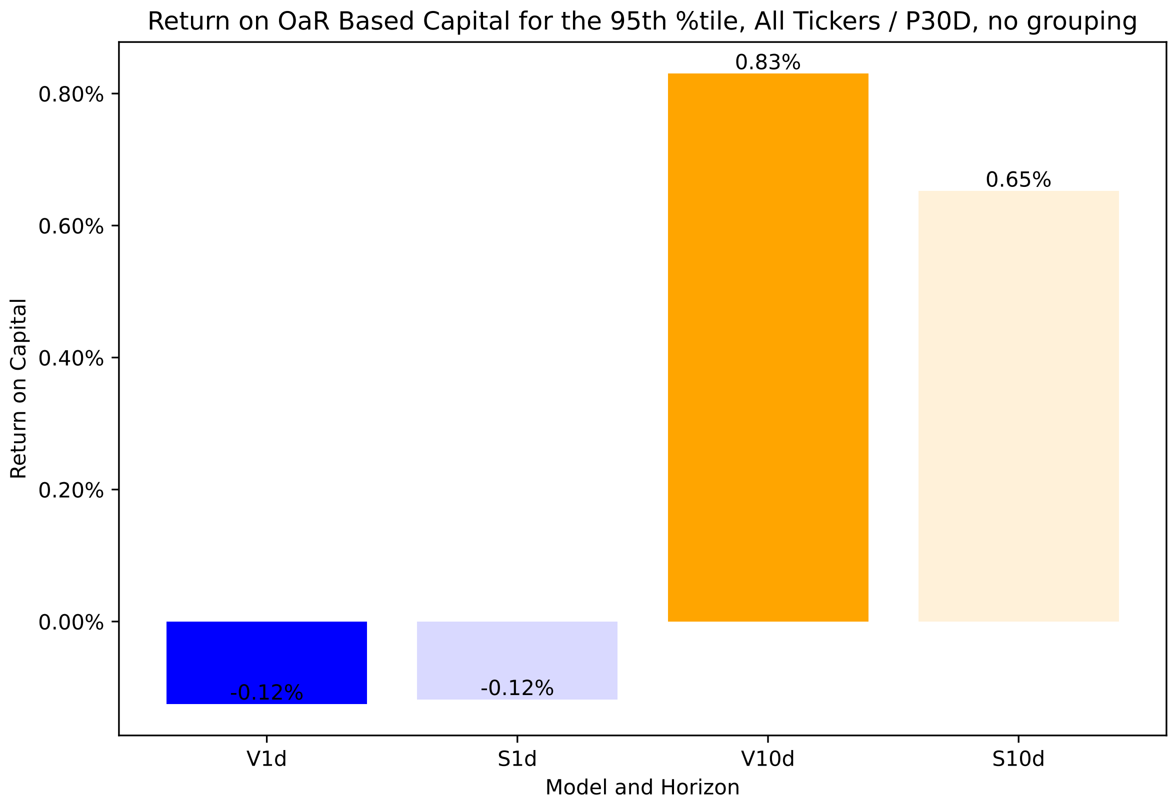
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

	1d	10d	21d
intercept	0.03%	0.04%	0.16%
intercept_p_value	44.88%	24.27%	26.68%
slope	156.45%	128.90%	132.67%
slope_p_value	0.00%	0.00%	0.00%

Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-03-03 through 2025-03-28





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

	1d	10d
intercept	0.04%	0.05%
intercept_p_value	18.94%	58.46%
slope	142.54%	118.35%
slope_p_value	0.00%	0.00%

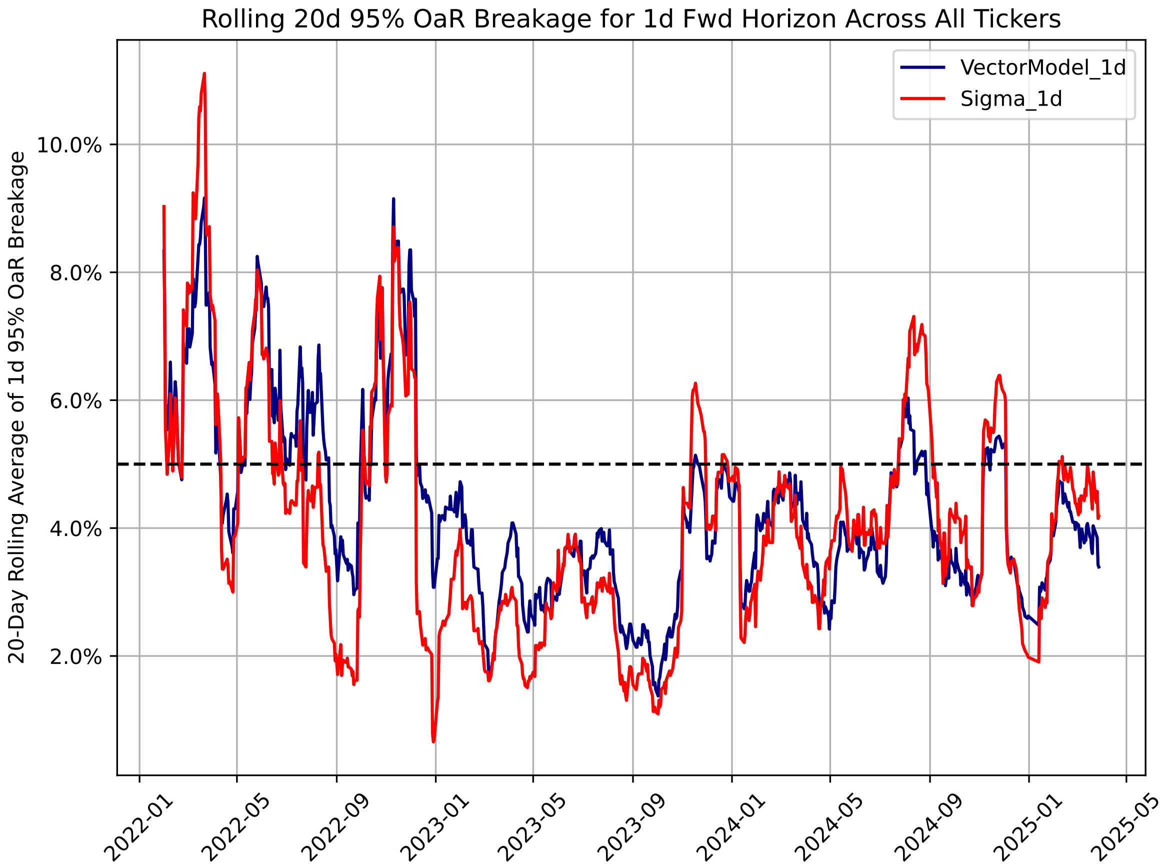
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

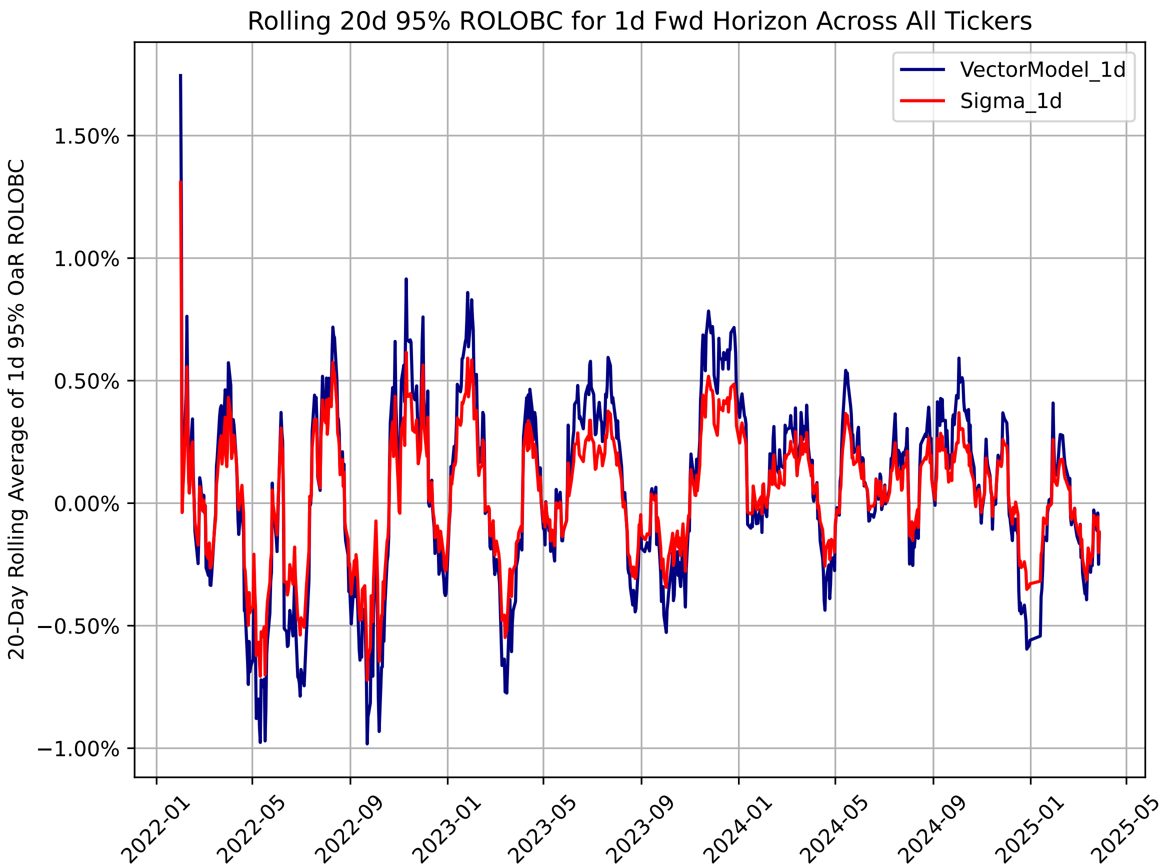
	1d	10d
intercept	0.04%	0.03%
intercept_p_value	46.95%	35.64%
slope	153.34%	126.29%
slope_p_value	0.00%	0.00%

Rolling Performance

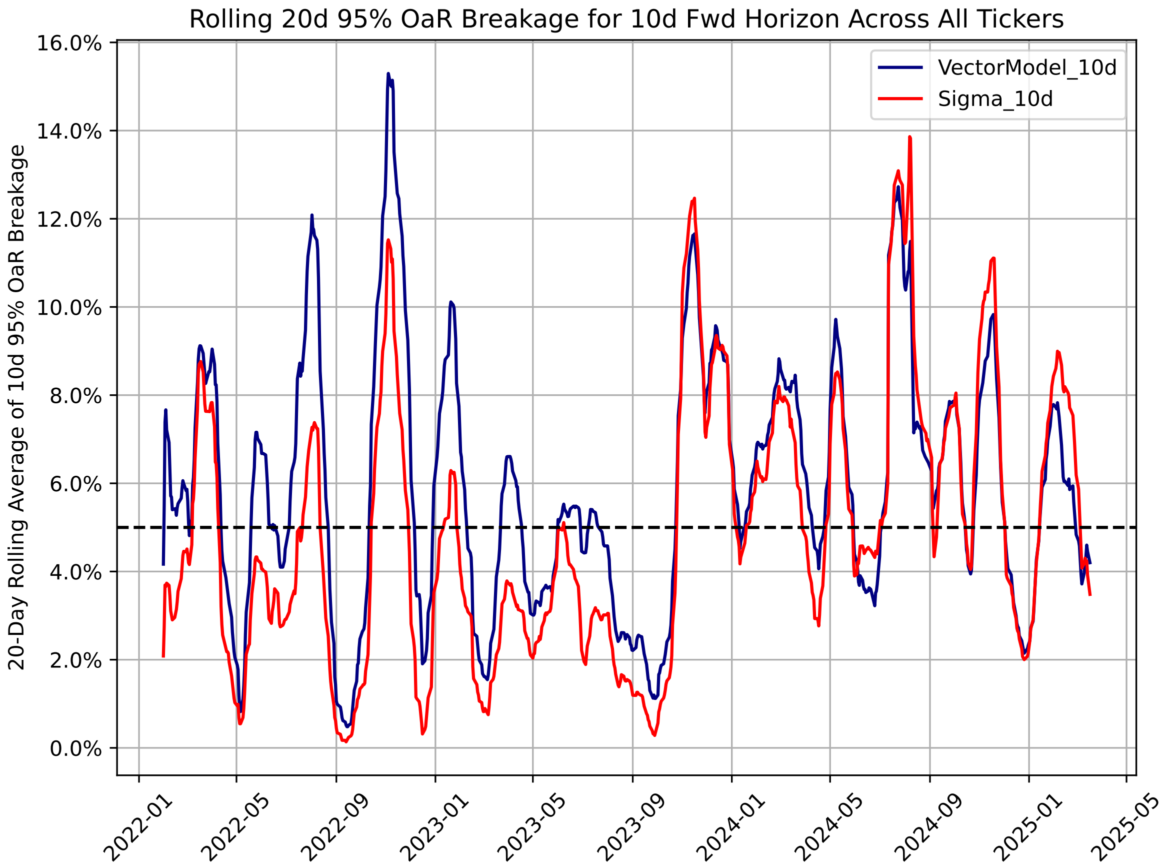
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statitics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

1d Horizon

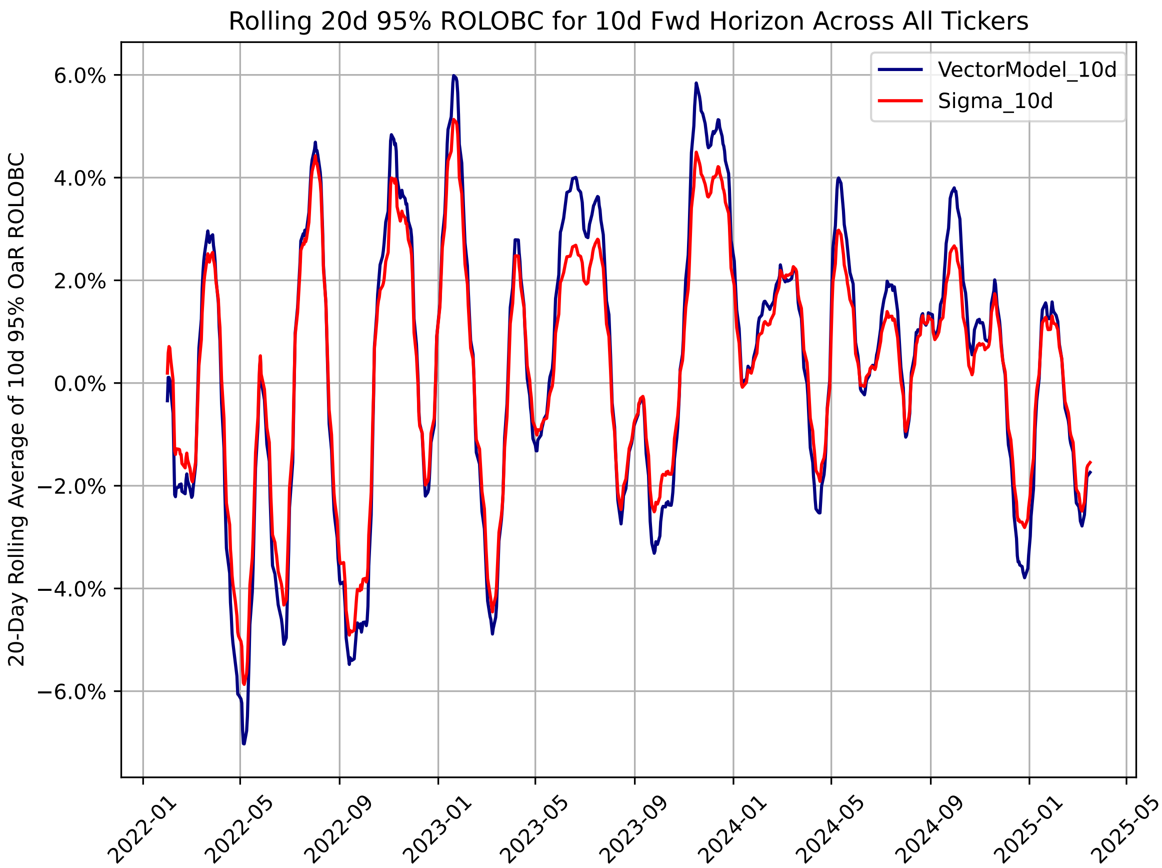



Rolling 20d 95% ROLOBC for 1d Fwd Horizon Across All Tickers
VectorModel_1d
Sigma_1d
20-Day Rolling Average of 1d 95% OaR ROLOBC
1.50%
1.00%
0.50%
0.00%
−0.50%
−1.00%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

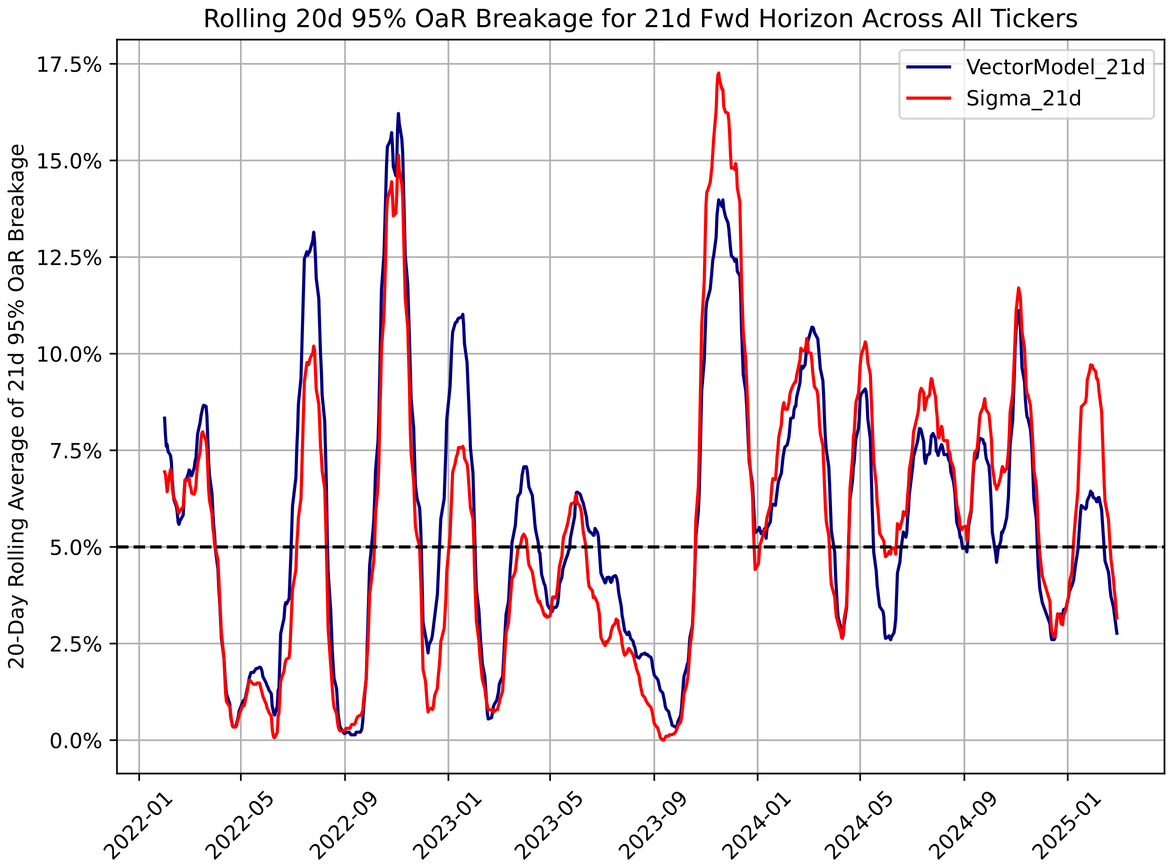
10d Horizon

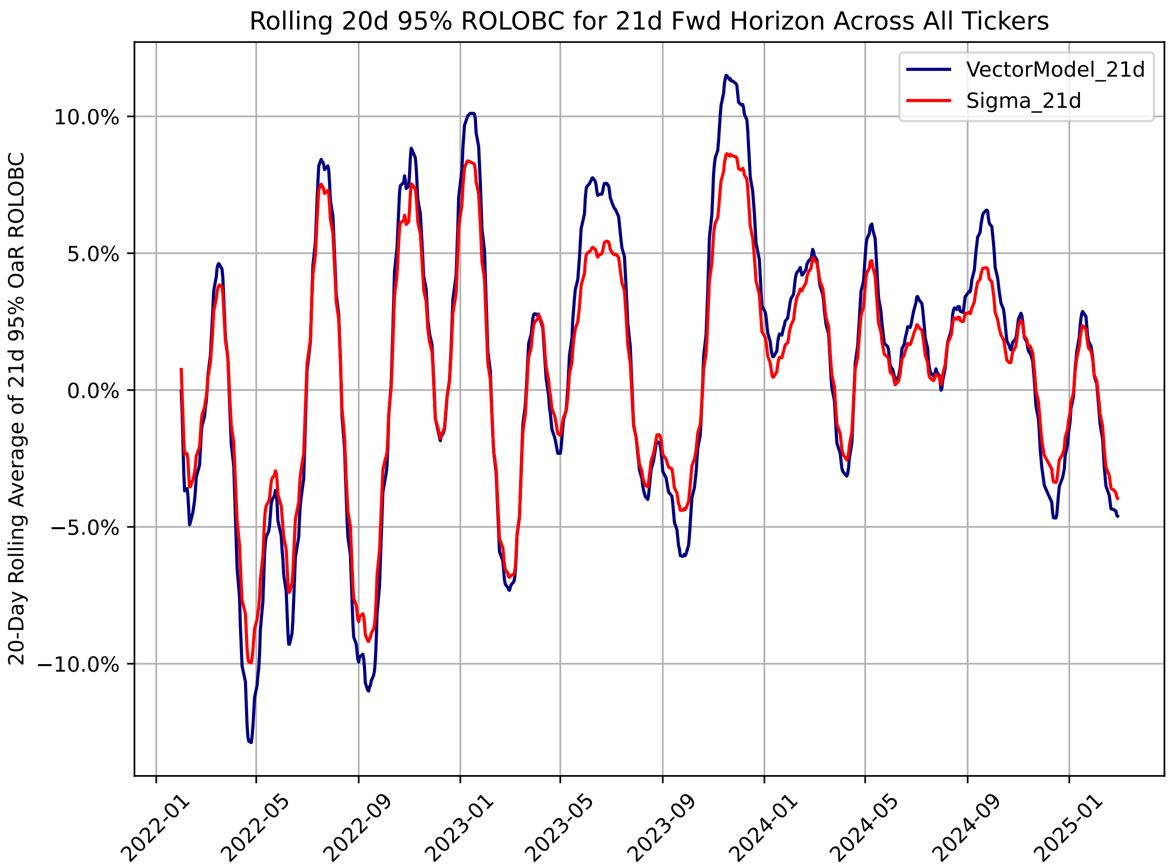


Rolling 20d 95% OaR Breakage for 10d Fwd Horizon Across All Tickers
VectorModel_10d
Sigma_10d
20-Day Rolling Average of 10d 95% OaR Breakage
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

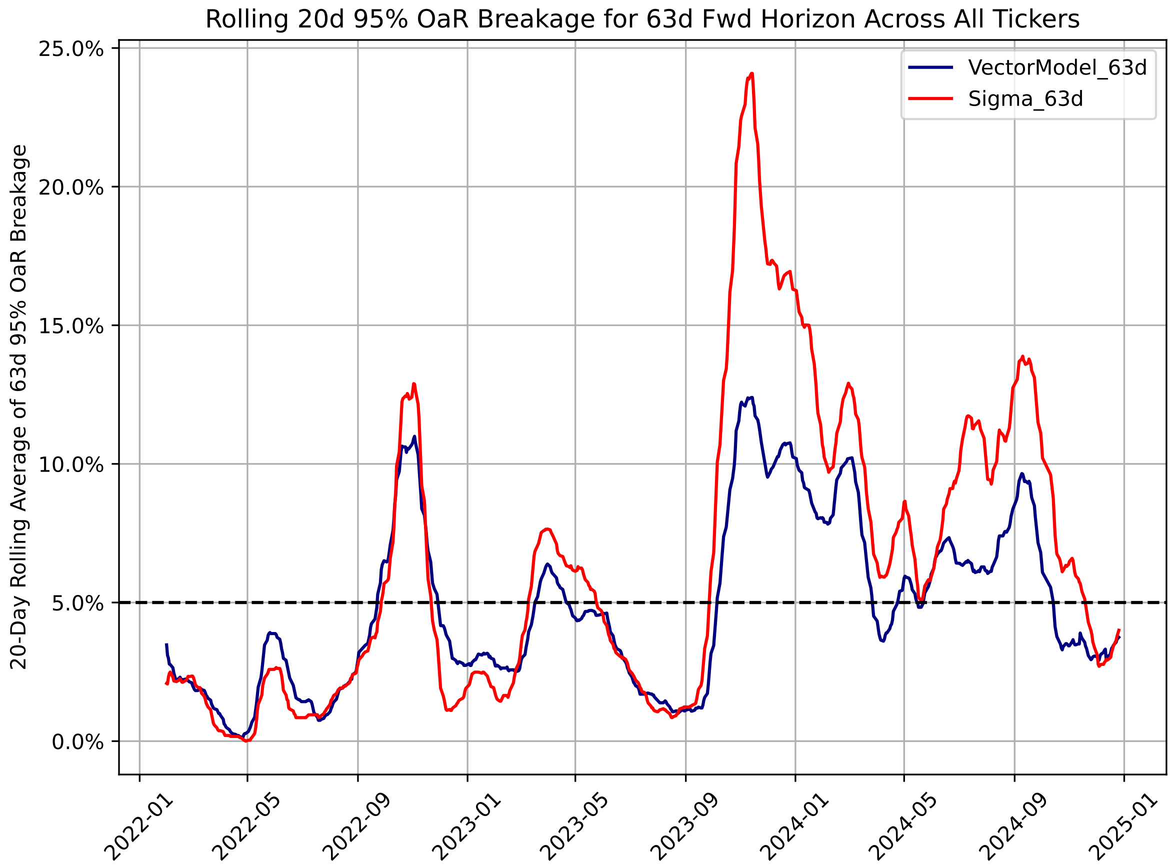

Rolling 20d 95% ROLOBC for 10d Fwd Horizon Across All Tickers
VectorModel_10d
Sigma_10d
20-Day Rolling Average of 10d 95% OaR ROLOBC
6.0%
4.0%
2.0%
0.0%
−2.0%
−4.0%
−6.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

21d Horizon

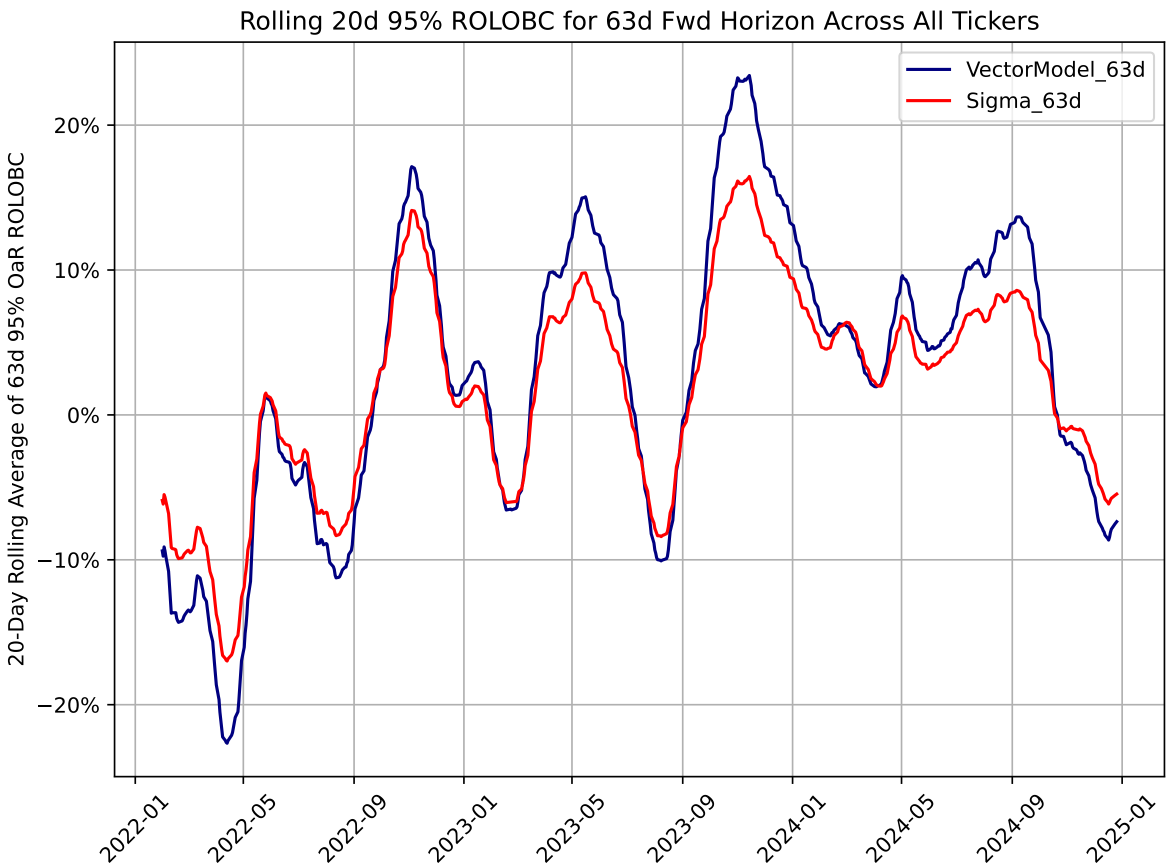

Rolling 20d 95% OaR Breakage for 21d Fwd Horizon Across All Tickers
20-Day Rolling Average of 21d 95% OaR Breakage
17.5%
15.0%
12.5%
10.0%
7.5%
5.0%
2.5%
0.0%
VectorModel_21d
Sigma_21d
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01


Rolling 20d 95% ROLOBC for 21d Fwd Horizon Across All Tickers
VectorModel_21d
Sigma_21d
20-Day Rolling Average of 21d 95% OaR ROLOBC
10.0%
5.0%
0.0%
−5.0%
−10.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

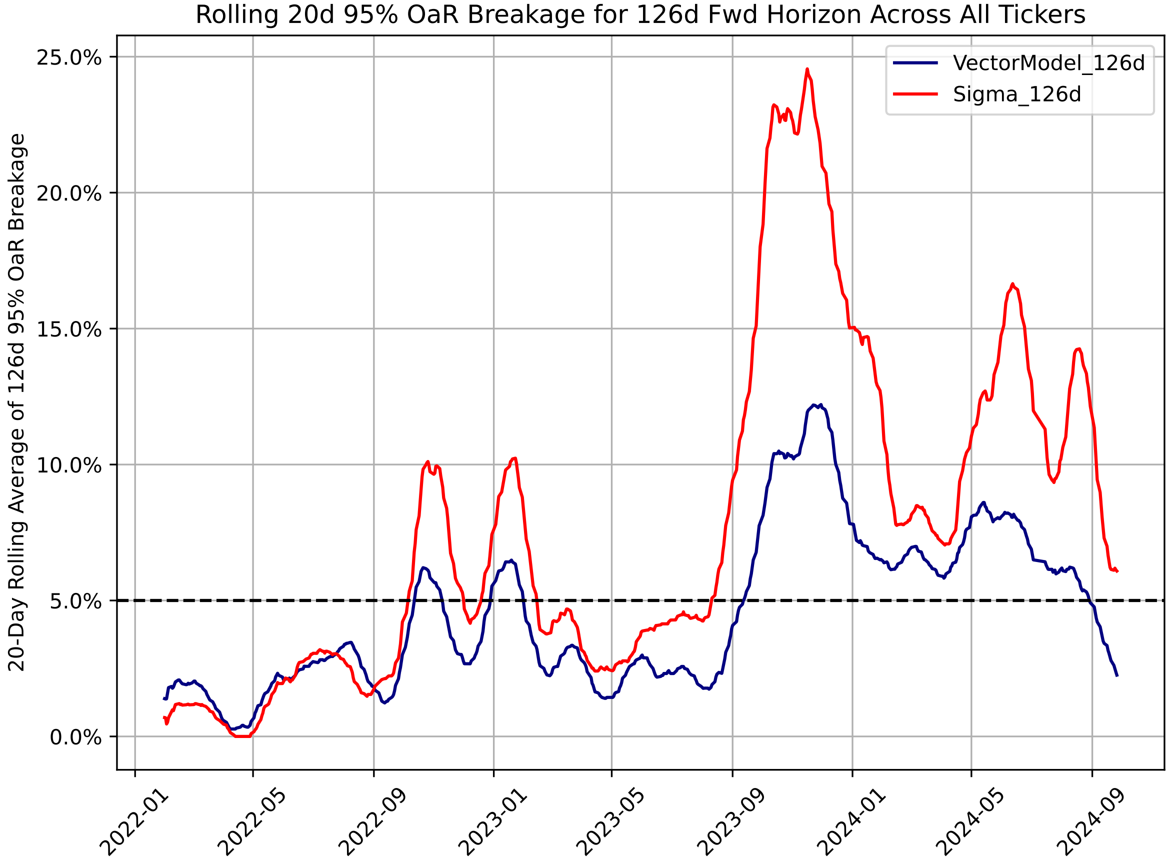
63d Horizon

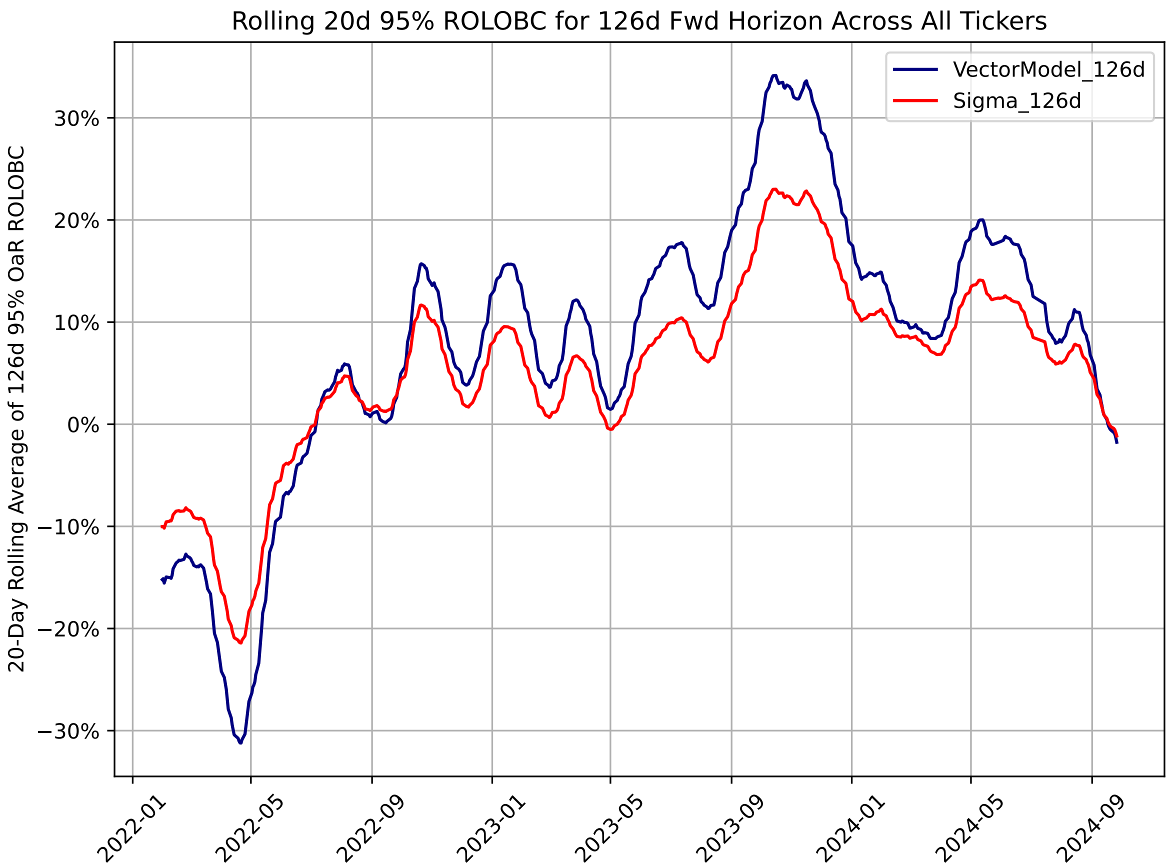


Rolling 20d 95% OaR Breakage for 63d Fwd Horizon Across All Tickers
20-Day Rolling Average of 63d 95% OaR Breakage
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
VectorModel_63d
Sigma_63d
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01


Rolling 20d 95% ROLOBC for 63d Fwd Horizon Across All Tickers
VectorModel_63d
Sigma_63d
20-Day Rolling Average of 63d 95% OaR ROLOBC
20%
10%
0%
−10%
−20%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

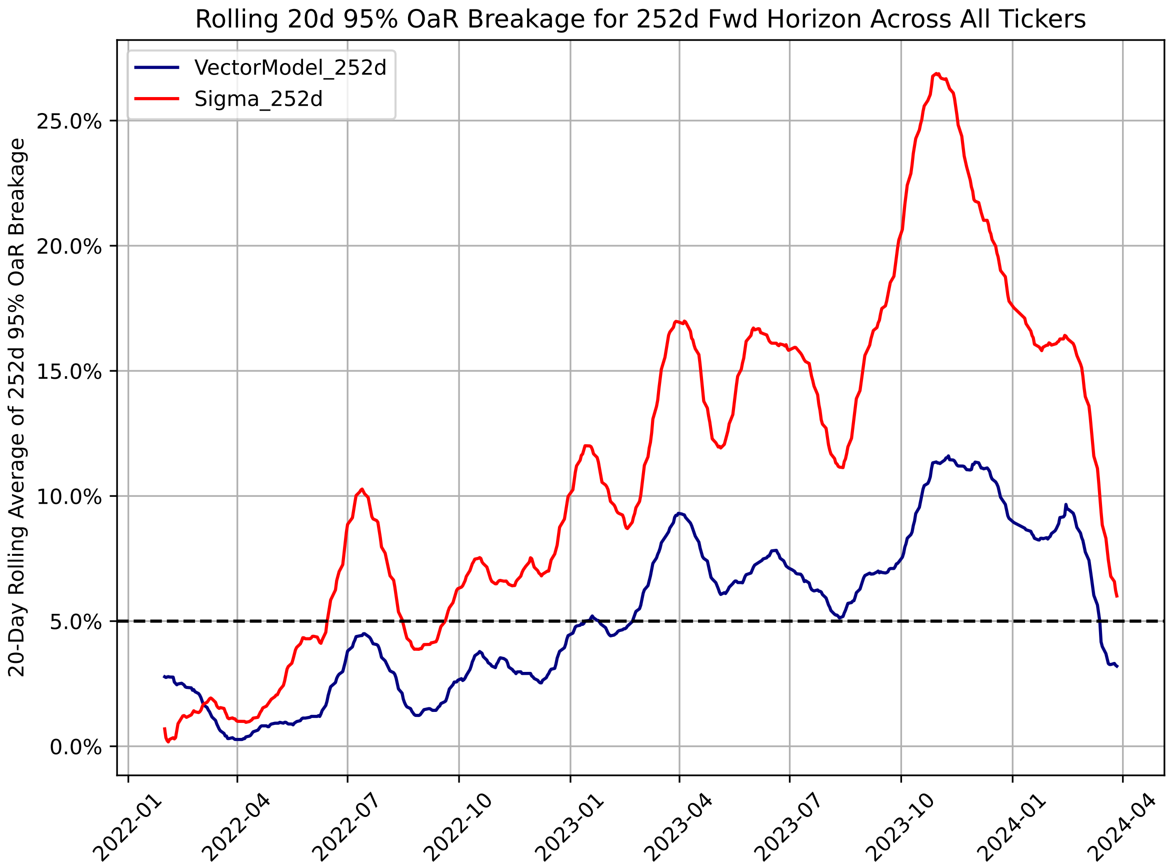
126d Horizon

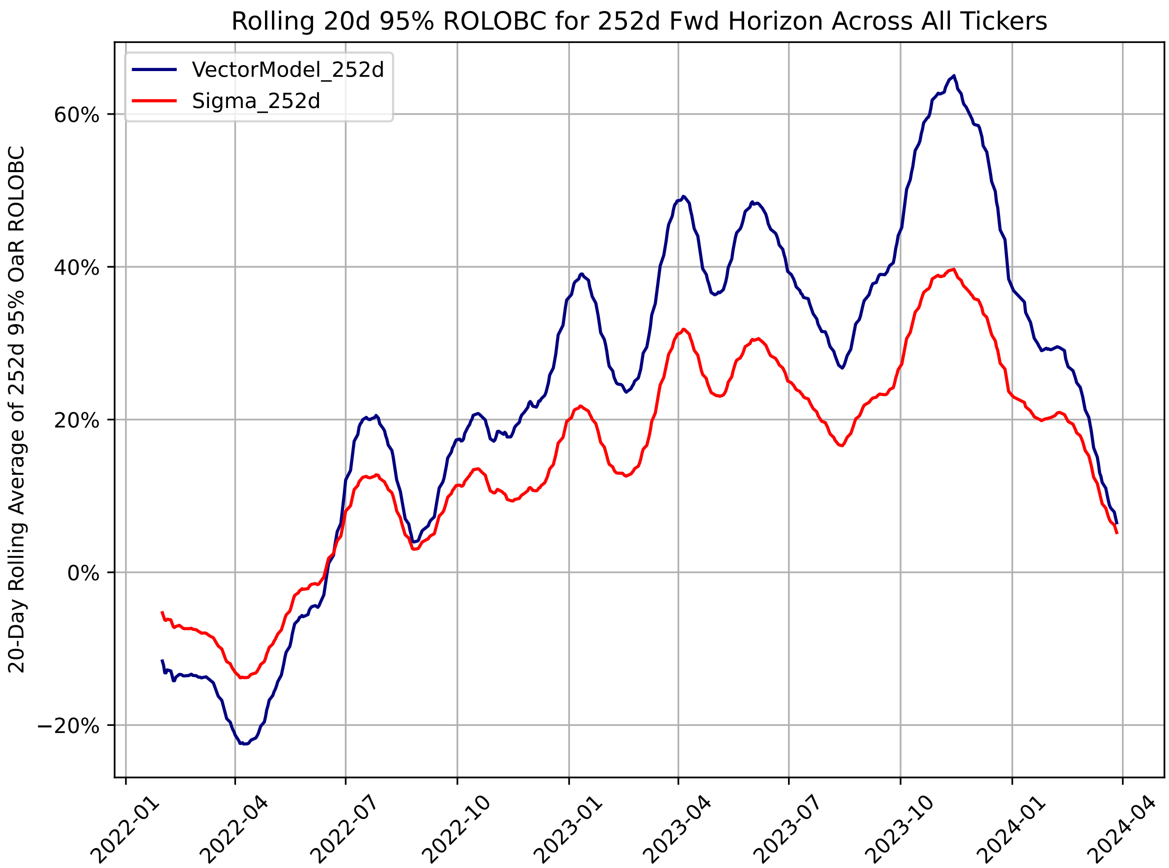




Rolling 20d 95% ROLOBC for 126d Fwd Horizon Across All Tickers
VectorModel_126d
Sigma_126d
20-Day Rolling Average of 126d 95% OaR ROLOBC
30%
20%
10%
0%
−10%
−20%
−30%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09

252d Horizon





Rolling 20d 95% ROLOBC for 252d Fwd Horizon Across All Tickers
VectorModel_252d
Sigma_252d
20-Day Rolling Average of 252d 95% OaR ROLOBC
60%
40%
20%
0%
−20%
2022-01
2022-04
2022-07
2022-10
2023-01
2023-04
2023-07
2023-10
2024-01
2024-04

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	MSTR	19.59%	VST	11.0%
1.0	SBNY	17.1%	MSTR	7.81%
1.0	GME	15.4%	NVDA	7.66%
1.0	SIVBQ	13.13%	AVGO	7.42%
1.0	AVGO	11.99%	GLD	6.62%
1.0	CHTR	11.73%	MU	6.39%
1.0	VST	11.51%	TRGP	6.39%
1.0	GNRC	10.94%	GBTC	6.36%
1.0	SLV	10.91%	ACGL	6.09%
1.0	GOLD	10.6%	PWR	6.01%
1.0	FRCB	10.07%	ON	5.96%
1.0	HLT	9.79%	FCX	5.87%
1.0	META	9.65%	WDC	5.87%
1.0	ACGL	9.33%	TEVA	5.83%
1.0	FRA	9.04%	CDNS	5.74%
1.0	BALL	8.66%	LLY	5.64%
1.0	NFLX	8.4%	TSLA	5.62%
1.0	INTU	8.25%	CAH	5.61%
1.0	ZTS	8.16%	IRM	5.56%
1.0	TEVA	8.13%	TXN	5.41%
1.0	ORCL	8.03%	SLV	5.39%
1.0	XOM	7.82%	GS	5.36%
1.0	TRGP	7.79%	AMAT	5.25%
1.0	CMA	7.41%	PHM	5.19%
1.0	BUD	7.15%	POST	5.1%
1.0	IRM	7.11%	SIVBQ	5.02%
1.0	OXY	6.98%	MUB	4.97%
1.0	HD	6.94%	DHI	4.88%
1.0	HCA	6.74%	AMGN	4.85%
1.0	KEY	6.16%	GOOGL	4.85%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	24.18%	VST	15.18%
10.0	META	19.77%	NVDA	13.25%
10.0	VST	19.39%	CAH	11.44%
10.0	TEVA	16.37%	LLY	11.19%
10.0	GME	16.04%	TRGP	10.19%
10.0	IRM	15.34%	MSTR	10.11%
10.0	CHTR	14.3%	GS	9.92%
10.0	SIVBQ	14.29%	ORCL	9.91%
10.0	TRGP	13.76%	GLD	9.53%
10.0	HCA	13.57%	IRM	9.41%
10.0	GOLD	13.45%	TSLA	8.88%
10.0	GWW	13.39%	AVGO	8.85%
10.0	AVGO	12.91%	MUB	8.78%
10.0	SLV	12.55%	ABBV	8.63%
10.0	GILD	12.08%	TMUS	8.57%
10.0	ORCL	12.07%	GE	8.56%
10.0	BALL	11.65%	NVS	8.52%
10.0	KALU	11.14%	CMG	8.24%
10.0	HD	10.84%	CPRT	8.19%
10.0	GNRC	10.61%	GWW	8.16%
10.0	SBNY	10.41%	TEVA	8.12%
10.0	EXPE	10.12%	SLV	7.68%
10.0	ZTS	9.82%	MS	7.61%
10.0	ABBV	9.66%	AMGN	7.52%
10.0	ISRG	9.61%	GILD	7.46%
10.0	MSI	9.34%	PWR	7.42%
10.0	AMGN	9.3%	GBTC	7.42%
10.0	LW	9.19%	MU	7.33%
10.0	ACGL	9.04%	PHM	7.24%
10.0	TDG	8.82%	JPM	6.93%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	MSTR	25.1%	MSTR	16.92%
21.0	VST	21.2%	VST	15.99%
21.0	META	20.32%	LLY	15.84%
21.0	TRGP	18.47%	NVDA	15.47%
21.0	TEVA	17.7%	TRGP	15.47%
21.0	IRM	16.97%	CAH	15.41%
21.0	GME	16.78%	GLD	13.62%
21.0	CHTR	16.45%	TSLA	12.13%
21.0	AVGO	16.11%	GWW	12.11%
21.0	GWW	14.84%	GS	12.08%
21.0	GOLD	13.56%	GE	11.93%
21.0	GILD	13.12%	IRM	11.71%
21.0	ORCL	12.97%	NVS	11.69%
21.0	ISRG	12.79%	AVGO	11.61%
21.0	GNRC	12.7%	TMUS	11.59%
21.0	SIVBQ	12.36%	ABBV	11.58%
21.0	ETRN	11.93%	CMG	11.56%
21.0	BUD	11.83%	MUB	11.43%
21.0	HCA	11.46%	AMGN	11.05%
21.0	CAH	11.29%	GBTC	10.91%
21.0	NVS	10.65%	TEVA	10.65%
21.0	GS	10.52%	ORCL	10.51%
21.0	ABBV	10.26%	JPM	10.22%
21.0	LW	10.19%	COST	10.18%
21.0	KALU	10.19%	AZN	9.77%
21.0	ACGL	10.17%	GILD	9.58%
21.0	FRCB	10.07%	PWR	9.56%
21.0	NFLX	9.92%	PHM	9.51%
21.0	MSI	9.79%	MS	9.49%
21.0	EXPE	9.66%	X	9.23%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	VST	33.15%	NVDA	32.46%
63.0	AVGO	32.56%	VST	31.09%
63.0	META	30.06%	TRGP	23.52%
63.0	MSTR	29.33%	LLY	22.88%
63.0	IRM	20.89%	AVGO	22.17%
63.0	TRGP	19.67%	GBTC	20.71%
63.0	TEVA	17.3%	MSTR	19.65%
63.0	GILD	17.08%	CMG	18.36%
63.0	ETRN	16.85%	GE	17.82%
63.0	CHTR	16.13%	GILD	17.36%
63.0	MSI	14.74%	THC	17.27%
63.0	WFC	14.15%	ETRN	16.48%
63.0	LW	13.9%	PHM	16.22%
63.0	GME	13.39%	TEVA	15.98%
63.0	EXPE	13.23%	CAH	15.61%
63.0	CAH	13.08%	GLD	15.5%
63.0	TMUS	12.93%	META	14.89%
63.0	LLY	12.52%	TMUS	14.31%
63.0	THC	11.84%	IRM	14.07%
63.0	NVDA	11.83%	VNO	13.66%
63.0	HCA	11.75%	WFC	13.59%
63.0	SIVBQ	10.81%	ACGL	13.13%
63.0	GWW	10.33%	ORCL	13.03%
63.0	ACGL	10.2%	ABBV	12.4%
63.0	ORCL	9.6%	MRK	12.36%
63.0	SNY	9.33%	TSLA	11.8%
63.0	GBTC	9.31%	JPM	11.79%
63.0	BUD	8.94%	GWW	11.57%
63.0	ISRG	8.53%	DHI	11.31%
63.0	GLD	7.96%	NVS	11.13%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	52.03%	NVDA	52.48%
126.0	MSTR	39.81%	VST	51.73%
126.0	TRGP	33.08%	AVGO	36.15%
126.0	META	31.38%	GE	35.54%
126.0	IRM	31.25%	TRGP	35.19%
126.0	TEVA	25.85%	MSTR	34.83%
126.0	LW	24.54%	LLY	33.54%
126.0	TMUS	24.21%	PHM	31.39%
126.0	NVDA	24.06%	GILD	30.7%
126.0	AVGO	21.94%	GLD	29.84%
126.0	LLY	20.53%	IRM	25.76%
126.0	MSI	20.45%	META	24.62%
126.0	GILD	18.09%	GBTC	24.44%
126.0	WFC	15.6%	ACGL	22.44%
126.0	CAH	14.92%	THC	22.41%
126.0	GLD	14.69%	TMUS	22.26%
126.0	THC	13.41%	TEVA	21.0%
126.0	ACGL	13.28%	GS	20.87%
126.0	EXPE	13.26%	MSI	20.45%
126.0	VFC	11.46%	ORCL	19.79%
126.0	GE	10.34%	JPM	19.58%
126.0	WDC	9.46%	CAH	19.54%
126.0	ETRN	8.88%	COST	18.88%
126.0	GOOGL	8.36%	CMG	18.87%
126.0	TDG	8.01%	WFC	18.2%
126.0	XOM	7.96%	TDG	17.07%
126.0	HCA	7.91%	GWW	15.96%
126.0	GME	7.9%	TSLA	13.43%
126.0	BALL	7.68%	T	13.3%
126.0	BXP	7.28%	MU	13.0%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	VST	66.98%	NVDA	80.41%
252.0	MSTR	63.85%	GE	80.4%
252.0	AVGO	61.86%	AVGO	77.03%
252.0	NVDA	50.83%	PHM	65.84%
252.0	TRGP	45.64%	LLY	62.69%
252.0	IRM	42.64%	VST	59.74%
252.0	META	39.06%	META	56.79%
252.0	LLY	35.04%	MSTR	52.69%
252.0	TEVA	31.34%	GBTC	52.64%
252.0	TDG	23.93%	ACGL	47.26%
252.0	GLD	23.48%	TDG	45.27%
252.0	GWW	22.63%	COST	44.78%
252.0	THC	17.64%	TRGP	41.93%
252.0	CAH	16.03%	IRM	38.11%
252.0	LW	14.48%	JPM	34.9%
252.0	GE	14.34%	GWW	33.02%
252.0	MSI	14.1%	ORCL	32.53%
252.0	TMUS	13.73%	TEVA	32.14%
252.0	GS	13.15%	CPRT	31.85%
252.0	WFC	11.93%	PWR	31.38%
252.0	ACGL	10.02%	THC	31.14%
252.0	WDC	9.15%	GS	31.11%
252.0	ORCL	8.69%	GLD	31.05%
252.0	GBTC	8.46%	TMUS	30.06%
252.0	ETRN	8.1%	CMG	29.27%
252.0	JPM	7.88%	ISRG	27.27%
252.0	CMG	7.69%	NFLX	26.56%
252.0	GOOGL	7.25%	MSI	26.16%
252.0	HLT	6.2%	DHI	24.77%
252.0	GILD	5.99%	HLT	21.99%

P30D: 1d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	ORLY	30.0%	TRGP	20.0%
1.0	MSTR	26.67%	MSTR	20.0%
1.0	GILD	25.0%	HLT	15.0%
1.0	GNRC	21.05%	ORLY	15.0%
1.0	CHTR	20.0%	VZ	15.0%
1.0	IRM	20.0%	POST	15.0%
1.0	WFC	20.0%	VNO	11.76%
1.0	UNH	15.79%	TSLA	11.11%
1.0	VZ	15.0%	BXP	11.11%
1.0	META	15.0%	INTC	11.11%
1.0	ABBV	15.0%	AZO	10.53%
1.0	VFC	11.76%	BA	10.53%
1.0	INTC	11.11%	GNRC	10.53%
1.0	ON	10.0%	GBTC	10.53%
1.0	HD	10.0%	VICI	10.0%
1.0	GS	10.0%	THC	10.0%
1.0	NVS	10.0%	CPRT	10.0%
1.0	FCX	10.0%	CAH	10.0%
1.0	TXN	10.0%	NVS	10.0%
1.0	MS	10.0%	LNC	10.0%
1.0	ZTS	10.0%	T	10.0%
1.0	AVGO	10.0%	NFLX	10.0%
1.0	AMC	10.0%	MS	10.0%
1.0	CLF	5.88%	SPY	10.0%
1.0	CCL	5.56%	HD	10.0%
1.0	NEM	5.56%	HSBC	10.0%
1.0	TSLA	5.56%	QQQ	10.0%
1.0	GME	5.26%	X	10.0%
1.0	BBY	5.26%	JPM	10.0%
1.0	PWR	5.26%	XOM	10.0%

P30D: 10d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	UNH	100.0%	BA	50.0%
10.0	MSTR	66.67%	TRGP	45.45%
10.0	INTC	50.0%	XOM	36.36%
10.0	FCX	45.45%	CAH	36.36%
10.0	BAC	36.36%	MSTR	33.33%
10.0	INTU	36.36%	FCX	27.27%
10.0	VZ	27.27%	JPM	27.27%
10.0	ORLY	27.27%	MOS	27.27%
10.0	CHTR	27.27%	INTC	20.0%
10.0	TRGP	27.27%	TSLA	20.0%
10.0	JPM	27.27%	ORLY	18.18%
10.0	CCL	22.22%	NFLX	18.18%
10.0	BA	20.0%	GS	18.18%
10.0	MU	20.0%	T	18.18%
10.0	GS	18.18%	CDNS	18.18%
10.0	IRM	18.18%	MS	18.18%
10.0	AMD	18.18%	FIS	18.18%
10.0	WFC	18.18%	X	18.18%
10.0	GE	18.18%	WFC	18.18%
10.0	PWR	10.0%	AMD	18.18%
10.0	TSLA	10.0%	BAC	18.18%
10.0	THC	9.09%	NEM	10.0%
10.0	HCA	9.09%	VST	10.0%
10.0	WDC	9.09%	PWR	10.0%
10.0	ON	0.0%	GLD	9.09%
10.0	ORCL	0.0%	MNST	9.09%
10.0	NWL	0.0%	AZO	9.09%
10.0	NVS	0.0%	MSI	0.0%
10.0	LQD	0.0%	LVS	0.0%
10.0	NVDA	0.0%	LQD	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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	GILD	32.73%	TMUS	16.33%
1.0	AVGO	26.87%	HD	12.73%
1.0	ZTS	20.0%	TRGP	12.73%
1.0	ORLY	20.0%	VICI	12.73%
1.0	CHTR	18.52%	NVS	12.73%
1.0	VST	16.67%	INTC	12.24%
1.0	GNRC	14.58%	MS	10.91%
1.0	HON	14.55%	COST	10.91%
1.0	BAC	14.55%	GLD	10.91%
1.0	IRM	12.73%	ORLY	10.91%
1.0	WFC	12.73%	HSBC	10.91%
1.0	ABBV	12.73%	MSFT	10.91%
1.0	GS	12.73%	LNC	10.2%
1.0	CLF	11.54%	TLT	9.8%
1.0	UNH	11.54%	MU	9.43%
1.0	CMA	10.91%	VST	9.26%
1.0	VZ	10.91%	HLT	9.09%
1.0	MSTR	10.64%	GILD	9.09%
1.0	BALL	10.2%	POST	9.09%
1.0	INTC	10.2%	SPY	9.09%
1.0	TSLA	10.0%	T	9.09%
1.0	AMZN	9.62%	MNST	9.09%
1.0	META	9.26%	TSLA	8.0%
1.0	ORCL	9.09%	CLF	7.69%
1.0	HD	9.09%	PWR	7.69%
1.0	GOOGL	9.09%	WDC	7.55%
1.0	SLV	9.09%	GT	7.41%
1.0	TXN	9.09%	AZO	7.41%
1.0	VFC	8.16%	MUB	7.27%
1.0	TMUS	8.16%	FITB	7.27%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	GILD	53.7%	T	50.0%
10.0	VZ	31.48%	TMUS	41.18%
10.0	INTC	30.61%	GILD	40.74%
10.0	CVS	28.3%	BUD	38.89%
10.0	UNH	27.45%	CVS	32.08%
10.0	GE	26.42%	HSBC	24.07%
10.0	ABBV	25.93%	EXPE	24.07%
10.0	CHTR	24.53%	LNC	22.92%
10.0	EXPE	24.07%	JAZZ	22.22%
10.0	TMUS	23.53%	INTC	20.41%
10.0	BUD	20.37%	NFLX	20.37%
10.0	ORLY	18.52%	JPM	20.37%
10.0	WFC	18.52%	COST	20.37%
10.0	META	16.98%	SBUX	18.52%
10.0	SBUX	16.67%	ABBV	18.52%
10.0	HLT	16.67%	GS	18.52%
10.0	GOLD	15.38%	TRGP	18.52%
10.0	INTU	15.09%	META	16.98%
10.0	ISRG	15.0%	MNST	16.67%
10.0	CMA	14.81%	ORLY	16.67%
10.0	HSBC	14.81%	GE	15.09%
10.0	GS	14.81%	MS	14.81%
10.0	VFC	14.29%	NVS	14.81%
10.0	AAP	13.73%	CSCO	14.81%
10.0	BMY	12.96%	CAH	14.81%
10.0	TRGP	12.96%	VICI	14.81%
10.0	TXN	12.96%	VZ	14.81%
10.0	CLF	12.96%	WFC	12.96%
10.0	QCOM	11.11%	SNY	12.96%
10.0	ZTS	11.11%	WYNN	12.96%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	BUD	79.07%	BUD	74.42%
21.0	GILD	76.74%	TMUS	61.9%
21.0	VZ	53.49%	GILD	58.14%
21.0	TMUS	45.24%	T	55.81%
21.0	ABBV	41.86%	HSBC	46.51%
21.0	GE	33.33%	ABBV	44.19%
21.0	SBUX	32.56%	COST	44.19%
21.0	META	30.95%	GLD	41.86%
21.0	CVS	28.57%	CVS	40.48%
21.0	T	27.91%	SBUX	39.53%
21.0	GOLD	27.91%	MNST	34.88%
21.0	HSBC	20.93%	NFLX	32.56%
21.0	ORLY	20.93%	NVS	30.23%
21.0	UNH	15.0%	GE	28.57%
21.0	NFLX	13.95%	META	28.57%
21.0	POST	13.95%	HLT	27.91%
21.0	MNST	11.63%	LNC	24.32%
21.0	GS	11.63%	AZN	23.26%
21.0	GSK	9.76%	JAZZ	20.93%
21.0	CHTR	9.52%	ORLY	18.6%
21.0	AMGN	9.3%	JPM	18.6%
21.0	WFC	9.3%	GS	13.95%
21.0	EXPE	9.3%	WFC	13.95%
21.0	INTU	7.14%	GSK	12.2%
21.0	LNC	5.41%	AMGN	11.63%
21.0	NEM	4.65%	VZ	11.63%
21.0	JPM	4.65%	GOLD	9.3%
21.0	QCOM	4.65%	POST	9.3%
21.0	ISRG	3.12%	VICI	9.3%
21.0	AAP	2.7%	LLY	8.33%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	VST	16.67%	VST	17.5%
1.0	FRA	13.69%	MSTR	11.54%
1.0	AVGO	12.96%	TRGP	10.79%
1.0	SLV	12.5%	NVDA	9.62%
1.0	GOLD	12.5%	TMUS	8.94%
1.0	GNRC	12.28%	CITI	8.7%
1.0	PWR	11.97%	GBTC	8.42%
1.0	GS	11.62%	GLD	8.3%
1.0	CHTR	11.26%	TSLA	8.15%
1.0	GME	11.22%	MU	8.15%
1.0	IRM	11.2%	AVGO	8.09%
1.0	MSTR	11.06%	WDC	7.93%
1.0	GILD	10.88%	PWR	7.69%
1.0	VFC	9.95%	TEVA	7.23%
1.0	HLT	9.13%	HD	7.2%
1.0	META	8.97%	SLV	7.08%
1.0	NFLX	8.94%	HLT	7.05%
1.0	HD	8.9%	GS	7.05%
1.0	CLF	8.81%	TXN	6.75%
1.0	HON	7.88%	CMG	6.69%
1.0	TXN	7.59%	T	6.3%
1.0	HCA	7.56%	THC	6.25%
1.0	AMGN	7.47%	ACGL	6.25%
1.0	ORLY	7.47%	POST	6.22%
1.0	KEY	7.46%	JPM	6.22%
1.0	BALL	7.39%	WRK	6.15%
1.0	BAC	7.11%	ETRN	5.97%
1.0	ORCL	7.05%	TDG	5.88%
1.0	TSLA	6.87%	CCL	5.83%
1.0	ZTS	6.67%	PHM	5.81%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	VST	23.14%	VST	25.62%
10.0	GILD	21.16%	TMUS	22.5%
10.0	META	20.76%	TRGP	20.99%
10.0	IRM	19.34%	TSLA	16.1%
10.0	CHTR	18.88%	MS	16.05%
10.0	EXPE	18.11%	T	15.83%
10.0	GME	17.17%	GS	14.81%
10.0	VFC	15.7%	AAPL	14.52%
10.0	TRGP	15.64%	GILD	14.11%
10.0	VZ	15.42%	NVDA	13.69%
10.0	ABBV	15.23%	IRM	13.17%
10.0	WFC	14.94%	ABBV	13.17%
10.0	HD	14.71%	JPM	12.76%
10.0	SLV	14.46%	ORCL	12.76%
10.0	MSI	14.41%	BUD	12.35%
10.0	MSTR	14.29%	WFC	12.03%
10.0	BXP	14.17%	MSTR	11.9%
10.0	GS	13.58%	AVGO	11.81%
10.0	ORCL	13.58%	CVS	11.16%
10.0	ETRN	13.56%	COST	11.11%
10.0	HCA	13.33%	CPRT	10.5%
10.0	TMUS	12.5%	HD	10.08%
10.0	AMGN	12.35%	LUMN	10.05%
10.0	UNH	12.18%	CAH	9.92%
10.0	NEM	12.08%	THC	9.92%
10.0	BUD	11.93%	CSCO	9.91%
10.0	PWR	11.86%	CCL	9.85%
10.0	BAC	11.62%	AMZN	9.79%
10.0	GOLD	11.54%	CITI	9.68%
10.0	TEVA	11.44%	WYNN	9.59%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	VST	25.99%	TMUS	38.05%
21.0	TMUS	25.66%	TRGP	29.96%
21.0	CHTR	24.31%	VST	26.87%
21.0	GILD	23.56%	MSTR	23.12%
21.0	VZ	22.77%	TSLA	20.81%
21.0	IRM	22.47%	MS	20.26%
21.0	TRGP	21.15%	COST	19.82%
21.0	META	20.45%	WFC	19.56%
21.0	BUD	20.26%	GILD	19.11%
21.0	GS	18.06%	GS	18.94%
21.0	AMGN	17.18%	IRM	18.5%
21.0	ABBV	17.18%	SBUX	18.06%
21.0	GME	16.3%	T	17.86%
21.0	TSLA	16.29%	BUD	17.18%
21.0	BBY	15.84%	AAPL	16.44%
21.0	TEVA	15.0%	JPM	16.3%
21.0	MSI	14.95%	BBY	16.29%
21.0	NFLX	14.93%	TEVA	15.91%
21.0	BXP	14.73%	ABBV	15.86%
21.0	EXPE	14.54%	AVGO	15.84%
21.0	GNRC	12.5%	ORCL	14.98%
21.0	ORCL	12.33%	NFLX	14.48%
21.0	MSTR	12.06%	NVDA	13.78%
21.0	WFC	12.0%	AZN	13.72%
21.0	SLV	11.5%	THC	13.72%
21.0	HD	11.21%	CAH	13.72%
21.0	WRK	11.11%	WRK	13.33%
21.0	SBUX	11.01%	LUMN	12.32%
21.0	GOLD	10.91%	CVS	11.95%
21.0	AAPL	10.67%	CHTR	11.93%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	MSI	54.24%	TRGP	63.78%
63.0	TMUS	50.81%	TMUS	54.05%
63.0	IRM	48.11%	IRM	44.86%
63.0	TRGP	36.76%	VST	44.86%
63.0	AVGO	34.66%	MSI	40.11%
63.0	GILD	34.43%	TSLA	35.16%
63.0	CHTR	32.2%	GILD	33.88%
63.0	EXPE	29.19%	VNO	33.77%
63.0	TSLA	27.47%	WFC	30.6%
63.0	BXP	27.32%	MSTR	28.75%
63.0	VST	27.03%	NFLX	27.22%
63.0	NEM	22.4%	MS	26.49%
63.0	WFC	21.31%	T	26.09%
63.0	GS	21.08%	LUMN	25.77%
63.0	HCA	19.34%	GS	24.86%
63.0	VFC	17.65%	ABBV	24.86%
63.0	HD	16.76%	GLD	24.86%
63.0	META	16.2%	ORCL	21.08%
63.0	ABBV	15.14%	CCL	20.65%
63.0	GME	14.97%	GBTC	20.13%
63.0	MSTR	14.37%	DHI	20.0%
63.0	ORCL	13.51%	HSBC	20.0%
63.0	THC	13.04%	SBUX	17.84%
63.0	AAPL	12.02%	AAPL	17.49%
63.0	MS	11.89%	NVDA	17.49%
63.0	SNY	11.35%	HCA	14.92%
63.0	BUD	10.81%	CSCO	14.37%
63.0	HSBC	10.27%	GME	14.29%
63.0	AMGN	9.73%	THC	14.13%
63.0	TEVA	9.5%	EXPE	14.05%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	TMUS	100.0%	TMUS	100.0%
126.0	TRGP	69.11%	TRGP	98.37%
126.0	EXPE	69.11%	VST	89.43%
126.0	MSI	65.04%	MSTR	77.23%
126.0	VST	63.41%	GILD	76.86%
126.0	VFC	61.11%	T	69.11%
126.0	GILD	54.55%	MS	59.35%
126.0	META	51.28%	CSCO	58.04%
126.0	IRM	39.02%	GS	55.28%
126.0	MSTR	31.68%	WFC	52.85%
126.0	BXP	29.27%	VNO	52.78%
126.0	WFC	26.83%	TSLA	52.46%
126.0	CHTR	25.41%	MSI	50.41%
126.0	TSLA	22.95%	IRM	44.72%
126.0	GME	22.11%	JPM	43.9%
126.0	TEVA	21.55%	GLD	42.28%
126.0	HD	12.3%	ORCL	41.46%
126.0	GLD	12.2%	CCL	40.2%
126.0	THC	11.48%	NFLX	39.5%
126.0	CMA	11.38%	ISRG	36.21%
126.0	NEM	10.57%	BMY	35.54%
126.0	AAPL	9.92%	HSBC	34.15%
126.0	NWL	8.2%	EXPE	33.33%
126.0	HSBC	5.69%	NVDA	29.75%
126.0	HCA	4.88%	CAH	25.2%
126.0	AVGO	4.19%	AVGO	24.37%
126.0	GS	4.07%	HLT	23.58%
126.0	MS	4.07%	TEVA	19.83%
126.0	ORCL	3.25%	LUMN	19.27%
126.0	USB	2.52%	AAPL	19.01%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	GBTC	0.44%	MSTR	0.5%
1.0	NVDA	0.4%	VST	0.25%
1.0	LLY	0.34%	NVDA	0.25%
1.0	GE	0.31%	GME	0.22%
1.0	VST	0.3%	AVGO	0.19%
1.0	MSTR	0.29%	LLY	0.18%
1.0	TSLA	0.29%	PWR	0.18%
1.0	X	0.26%	GBTC	0.18%
1.0	PWR	0.25%	TRGP	0.18%
1.0	TRGP	0.25%	GE	0.15%
1.0	BHC	0.22%	TMUS	0.14%
1.0	TDG	0.22%	NFLX	0.13%
1.0	CMG	0.2%	CAH	0.12%
1.0	CCL	0.19%	CDNS	0.12%
1.0	VNO	0.19%	PHM	0.12%
1.0	CDNS	0.19%	TDG	0.11%
1.0	TMUS	0.18%	ACGL	0.11%
1.0	ORLY	0.17%	ETRN	0.11%
1.0	PCG	0.17%	ORLY	0.11%
1.0	GME	0.16%	ORCL	0.11%
1.0	ON	0.16%	ISRG	0.1%
1.0	THC	0.16%	X	0.1%
1.0	DHI	0.16%	TEVA	0.1%
1.0	PHM	0.16%	GWW	0.1%
1.0	CAH	0.16%	THC	0.1%
1.0	JPM	0.16%	CMG	0.09%
1.0	AZO	0.16%	COST	0.09%
1.0	WYNN	0.15%	IRM	0.09%
1.0	COST	0.15%	AZO	0.09%
1.0	EXPE	0.15%	PCG	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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	4.96%	MSTR	4.52%
10.0	LLY	3.81%	VST	2.67%
10.0	TSLA	3.69%	NVDA	2.58%
10.0	MSTR	3.17%	LLY	1.91%
10.0	GBTC	3.01%	AVGO	1.9%
10.0	VST	2.98%	GBTC	1.71%
10.0	PWR	2.31%	GME	1.69%
10.0	CCL	1.98%	TRGP	1.68%
10.0	GE	1.95%	NFLX	1.53%
10.0	AZO	1.75%	META	1.45%
10.0	CAH	1.62%	PWR	1.43%
10.0	ORLY	1.57%	ETRN	1.41%
10.0	TRGP	1.56%	CAH	1.38%
10.0	PHM	1.56%	GE	1.33%
10.0	TMUS	1.52%	TEVA	1.24%
10.0	ETRN	1.52%	X	1.19%
10.0	CDNS	1.48%	PHM	1.17%
10.0	TDG	1.41%	TMUS	1.15%
10.0	MSFT	1.36%	TDG	1.12%
10.0	COST	1.31%	ORLY	1.04%
10.0	DHI	1.24%	THC	1.02%
10.0	HLT	1.2%	GWW	1.01%
10.0	THC	1.18%	ACGL	1.0%
10.0	T	1.18%	ORCL	0.99%
10.0	JPM	1.18%	IRM	0.97%
10.0	ACGL	1.16%	ISRG	0.95%
10.0	QQQ	1.16%	CDNS	0.89%
10.0	X	1.12%	COST	0.87%
10.0	CMG	1.08%	AZO	0.87%
10.0	MU	1.07%	MSI	0.87%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	10.4%	MSTR	9.86%
21.0	TSLA	9.15%	VST	5.8%
21.0	GBTC	7.71%	NVDA	5.62%
21.0	MSTR	7.53%	LLY	4.14%
21.0	LLY	7.13%	GBTC	4.0%
21.0	VST	6.81%	AVGO	3.78%
21.0	PWR	5.08%	META	3.6%
21.0	AZO	4.47%	NFLX	3.54%
21.0	GE	4.22%	ETRN	3.51%
21.0	CCL	4.11%	TRGP	3.48%
21.0	PHM	3.94%	GE	3.08%
21.0	DHI	3.55%	PWR	2.97%
21.0	CAH	3.45%	CAH	2.85%
21.0	ORLY	3.44%	X	2.73%
21.0	TRGP	3.41%	PHM	2.68%
21.0	ETRN	3.29%	TEVA	2.48%
21.0	TMUS	3.25%	TMUS	2.45%
21.0	PCG	3.24%	TDG	2.35%
21.0	CDNS	3.23%	ORCL	2.34%
21.0	COST	3.19%	GWW	2.33%
21.0	X	3.13%	ORLY	2.23%
21.0	NFLX	3.09%	THC	2.22%
21.0	TDG	3.08%	IRM	2.21%
21.0	JPM	2.83%	ACGL	2.14%
21.0	ACGL	2.74%	COST	2.08%
21.0	THC	2.64%	ISRG	2.05%
21.0	QQQ	2.63%	GME	2.04%
21.0	MSFT	2.39%	MSI	2.01%
21.0	HLT	2.38%	AZO	1.99%
21.0	GWW	2.32%	GILD	1.94%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	44.91%	MSTR	30.87%
63.0	NVDA	36.38%	VST	20.6%
63.0	GBTC	23.48%	NVDA	20.02%
63.0	VST	21.89%	GBTC	13.27%
63.0	CCL	21.64%	AVGO	13.18%
63.0	LLY	19.0%	META	13.13%
63.0	TSLA	15.77%	NFLX	12.18%
63.0	PWR	15.55%	LLY	11.74%
63.0	PHM	14.5%	ETRN	10.41%
63.0	GE	13.65%	GE	10.24%
63.0	NFLX	13.52%	TRGP	10.12%
63.0	DHI	12.17%	PHM	9.41%
63.0	TRGP	11.61%	PWR	8.68%
63.0	VNO	10.91%	TEVA	8.15%
63.0	AZO	10.41%	CAH	7.88%
63.0	AMZN	10.2%	ORCL	7.29%
63.0	TDG	10.14%	THC	7.24%
63.0	THC	9.74%	TDG	7.19%
63.0	CAH	9.68%	GWW	7.02%
63.0	CDNS	9.49%	ISRG	6.97%
63.0	ETRN	9.47%	ACGL	6.83%
63.0	ACGL	9.42%	IRM	6.62%
63.0	JPM	9.34%	CMG	6.54%
63.0	CMG	9.21%	MSI	6.41%
63.0	QQQ	9.18%	TMUS	6.21%
63.0	CPRT	8.96%	DHI	6.16%
63.0	ORCL	8.94%	ORLY	6.09%
63.0	AMAT	8.85%	CPRT	5.9%
63.0	PCG	8.75%	JPM	5.9%
63.0	COST	8.75%	CDNS	5.83%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	NVDA	102.15%	MSTR	77.19%
126.0	MSTR	81.74%	NVDA	54.86%
126.0	GBTC	68.08%	VST	47.59%
126.0	VST	56.07%	GBTC	40.42%
126.0	PHM	44.8%	META	31.96%
126.0	NFLX	42.8%	NFLX	29.43%
126.0	GE	40.52%	AVGO	28.17%
126.0	CCL	38.0%	GE	25.23%
126.0	PWR	34.8%	LLY	24.34%
126.0	LLY	33.52%	PHM	23.02%
126.0	THC	32.44%	TRGP	22.82%
126.0	VNO	31.86%	THC	20.46%
126.0	DHI	31.51%	PWR	19.75%
126.0	AMZN	31.29%	ETRN	18.67%
126.0	META	29.55%	ORCL	18.29%
126.0	TSLA	29.27%	TEVA	17.84%
126.0	MU	28.85%	ISRG	17.35%
126.0	AMAT	27.91%	TDG	17.28%
126.0	PCG	27.49%	IRM	16.9%
126.0	AMD	27.17%	GWW	16.89%
126.0	ORCL	27.14%	CAH	16.71%
126.0	ISRG	26.44%	ACGL	16.36%
126.0	ACGL	26.28%	CMG	15.76%
126.0	QQQ	25.73%	DHI	15.71%
126.0	CMG	25.67%	MSI	15.28%
126.0	TRGP	25.15%	CPRT	14.05%
126.0	TDG	23.55%	CCL	14.03%
126.0	COST	22.74%	LEN	13.8%
126.0	CPRT	22.24%	JPM	13.74%
126.0	JPM	22.17%	ORLY	13.28%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	NVDA	310.44%	MSTR	234.72%
252.0	GBTC	261.8%	NVDA	159.75%
252.0	MSTR	218.81%	VST	131.63%
252.0	PHM	139.89%	GBTC	131.1%
252.0	GE	132.41%	META	86.51%
252.0	NFLX	130.65%	AVGO	74.54%
252.0	LLY	119.47%	NFLX	67.39%
252.0	VST	115.81%	GE	64.74%
252.0	META	106.35%	PHM	63.65%
252.0	PWR	92.93%	LLY	61.38%
252.0	DHI	91.87%	THC	54.41%
252.0	CCL	89.53%	TRGP	51.09%
252.0	AMZN	87.78%	PWR	44.36%
252.0	THC	86.87%	TDG	44.09%
252.0	ACGL	84.19%	TEVA	41.81%
252.0	MU	83.51%	DHI	41.06%
252.0	CDNS	76.21%	ISRG	39.83%
252.0	ISRG	76.05%	IRM	39.65%
252.0	AMD	74.42%	ACGL	39.27%
252.0	VNO	72.5%	ORCL	38.92%
252.0	LEN	70.42%	CMG	38.41%
252.0	AMAT	69.86%	LEN	37.23%
252.0	CMG	69.79%	GWW	37.06%
252.0	MSFT	69.48%	ETRN	35.88%
252.0	TRGP	68.76%	AMAT	35.45%
252.0	COST	68.48%	AMD	35.3%
252.0	QQQ	68.01%	CCL	34.41%
252.0	TDG	67.32%	CPRT	34.27%
252.0	INTU	60.18%	AMZN	32.66%
252.0	ORCL	59.37%	CDNS	32.59%

P30D: 1d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	MOS	2.34%	MSTR	2.32%
1.0	MSTR	2.32%	MOS	0.75%
1.0	TSLA	1.35%	UNH	0.61%
1.0	AAP	1.23%	AAP	0.55%
1.0	OXY	1.06%	HCA	0.54%
1.0	AZO	1.02%	NEM	0.51%
1.0	GLD	1.01%	XOM	0.5%
1.0	GOLD	0.98%	AZO	0.48%
1.0	NEM	0.83%	OXY	0.47%
1.0	HCA	0.8%	X	0.45%
1.0	VST	0.7%	THC	0.41%
1.0	X	0.68%	INTC	0.41%
1.0	XOM	0.68%	CDNS	0.4%
1.0	UNH	0.6%	GLD	0.39%
1.0	DHI	0.58%	SLV	0.38%
1.0	THC	0.56%	FCX	0.38%
1.0	CDNS	0.56%	GOLD	0.38%
1.0	LW	0.5%	LW	0.34%
1.0	LEN	0.48%	DHI	0.34%
1.0	ACGL	0.48%	CAH	0.33%
1.0	MNST	0.47%	PWR	0.31%
1.0	SLV	0.46%	MNST	0.3%
1.0	CAH	0.45%	GT	0.28%
1.0	T	0.4%	AMD	0.27%
1.0	CNC	0.39%	CVS	0.22%
1.0	PWR	0.36%	BA	0.22%
1.0	BA	0.36%	ORLY	0.21%
1.0	TMUS	0.31%	VZ	0.19%
1.0	AMD	0.3%	CNC	0.18%
1.0	GSK	0.26%	FIS	0.18%

P30D: 10d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	MOS	26.54%	MSTR	22.46%
10.0	MSTR	16.27%	INTC	12.33%
10.0	BA	14.06%	X	11.32%
10.0	X	12.99%	MOS	10.9%
10.0	CDNS	12.62%	BA	9.94%
10.0	PCG	12.48%	FCX	9.33%
10.0	VST	10.86%	NEM	8.7%
10.0	INTC	10.48%	AMD	7.56%
10.0	NEM	10.07%	CDNS	7.45%
10.0	FIS	9.49%	TRGP	7.13%
10.0	XOM	9.05%	XOM	6.48%
10.0	TRGP	8.78%	VST	6.12%
10.0	OXY	8.35%	UNH	6.08%
10.0	FCX	7.63%	PWR	6.04%
10.0	AMD	7.13%	AAP	5.75%
10.0	CAH	6.75%	CAH	5.3%
10.0	GLD	6.6%	FIS	5.25%
10.0	GOLD	6.29%	GOLD	4.82%
10.0	PWR	6.0%	OXY	4.74%
10.0	LW	5.88%	PCG	4.67%
10.0	NFLX	5.85%	HCA	4.66%
10.0	TSLA	5.84%	MNST	4.17%
10.0	MNST	5.75%	GE	4.16%
10.0	ACGL	5.51%	THC	4.15%
10.0	AAP	5.44%	LW	4.02%
10.0	NVDA	4.94%	NFLX	3.76%
10.0	LNC	4.78%	GLD	3.72%
10.0	T	4.54%	ACGL	3.22%
10.0	TDG	4.21%	CVS	3.03%
10.0	HCA	4.15%	AZO	3.01%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	T	1.21%	INTC	1.02%
1.0	INTC	1.18%	TMUS	0.54%
1.0	GT	1.08%	T	0.53%
1.0	PRGO	1.07%	BUD	0.52%
1.0	TMUS	0.81%	MSTR	0.5%
1.0	GOLD	0.8%	GOLD	0.47%
1.0	GLD	0.74%	GILD	0.46%
1.0	NFLX	0.73%	PRGO	0.45%
1.0	HSBC	0.72%	NEM	0.43%
1.0	NEM	0.62%	GSK	0.4%
1.0	BUD	0.58%	GT	0.4%
1.0	GSK	0.53%	HSBC	0.38%
1.0	X	0.52%	GE	0.37%
1.0	HCA	0.52%	SLV	0.35%
1.0	VNO	0.52%	GLD	0.34%
1.0	GE	0.52%	MNST	0.33%
1.0	ACGL	0.51%	VZ	0.33%
1.0	TRGP	0.5%	ABBV	0.31%
1.0	WYNN	0.49%	AMGN	0.29%
1.0	MNST	0.49%	X	0.29%
1.0	AZO	0.49%	ORLY	0.28%
1.0	AMGN	0.48%	LNC	0.28%
1.0	AZN	0.48%	CVS	0.27%
1.0	LNC	0.47%	SNY	0.27%
1.0	VICI	0.46%	CAH	0.25%
1.0	MSTR	0.42%	AZO	0.25%
1.0	OXY	0.41%	AZN	0.25%
1.0	PWR	0.4%	NVS	0.24%
1.0	BHC	0.4%	HCA	0.24%
1.0	NVS	0.39%	NFLX	0.23%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	CVS	8.27%	INTC	8.77%
10.0	T	8.17%	CVS	7.51%
10.0	TMUS	7.96%	BUD	5.92%
10.0	GT	7.51%	TMUS	4.97%
10.0	INTC	6.99%	T	4.63%
10.0	LLY	6.85%	GOLD	4.54%
10.0	BUD	5.9%	X	4.45%
10.0	HSBC	5.53%	NEM	4.28%
10.0	X	5.22%	GILD	4.12%
10.0	GLD	4.81%	HSBC	3.85%
10.0	NEM	4.69%	LNC	3.56%
10.0	JAZZ	4.66%	GE	3.49%
10.0	NFLX	4.61%	ABBV	3.42%
10.0	GOLD	4.24%	GSK	3.36%
10.0	VICI	3.99%	AMGN	3.3%
10.0	LNC	3.91%	MNST	3.05%
10.0	AMGN	3.88%	VZ	2.78%
10.0	MOS	3.88%	SNY	2.78%
10.0	MNST	3.84%	GT	2.7%
10.0	AZN	3.8%	GLD	2.69%
10.0	COST	3.8%	AZN	2.65%
10.0	NVS	3.65%	JAZZ	2.6%
10.0	AZO	3.41%	NFLX	2.55%
10.0	GSK	3.31%	ORLY	2.51%
10.0	SNY	3.27%	NVS	2.45%
10.0	WYNN	3.23%	SLV	2.34%
10.0	CSTM	3.14%	AZO	2.3%
10.0	GILD	3.07%	LLY	2.21%
10.0	ABBV	3.04%	VICI	2.18%
10.0	ORLY	2.7%	CAH	1.86%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	TMUS	18.82%	CVS	15.36%
21.0	T	18.38%	BUD	14.83%
21.0	CVS	16.65%	TMUS	11.63%
21.0	BUD	14.88%	GILD	11.38%
21.0	LLY	11.25%	ABBV	10.46%
21.0	JAZZ	10.92%	T	10.29%
21.0	HSBC	10.8%	GOLD	10.06%
21.0	AZN	10.04%	AMGN	8.19%
21.0	ABBV	10.02%	HSBC	8.19%
21.0	GLD	9.21%	GSK	8.15%
21.0	COST	9.08%	INTC	7.53%
21.0	MNST	9.0%	NEM	7.18%
21.0	GOLD	8.81%	MNST	6.96%
21.0	AMGN	8.81%	SNY	6.67%
21.0	NVS	8.79%	JAZZ	6.65%
21.0	GSK	8.7%	X	6.6%
21.0	LNC	8.43%	VZ	6.59%
21.0	NFLX	8.39%	AZN	6.59%
21.0	VICI	8.29%	NVS	6.25%
21.0	CSTM	8.19%	LNC	6.22%
21.0	SNY	7.6%	PRGO	6.19%
21.0	X	7.56%	GE	5.66%
21.0	AZO	7.48%	GLD	5.34%
21.0	INTC	7.47%	AZO	5.27%
21.0	NEM	7.37%	ORLY	5.15%
21.0	PRGO	7.23%	VICI	5.0%
21.0	SBUX	7.11%	SLV	4.9%
21.0	GILD	6.94%	CSTM	4.9%
21.0	GE	4.93%	LLY	4.65%
21.0	ORLY	4.88%	SBUX	4.34%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	LUMN	1.33%	GME	0.76%
1.0	TSLA	0.81%	LUMN	0.55%
1.0	T	0.68%	MSTR	0.53%
1.0	VNO	0.67%	TSLA	0.39%
1.0	VST	0.57%	VST	0.29%
1.0	GME	0.51%	T	0.26%
1.0	TRGP	0.47%	TMUS	0.25%
1.0	BHC	0.43%	TRGP	0.24%
1.0	GE	0.43%	VNO	0.23%
1.0	NVDA	0.41%	AVGO	0.23%
1.0	MS	0.41%	CHTR	0.23%
1.0	TMUS	0.37%	GILD	0.21%
1.0	PRGO	0.36%	GE	0.21%
1.0	CCL	0.32%	NFLX	0.21%
1.0	HSBC	0.32%	HSBC	0.19%
1.0	NFLX	0.28%	GS	0.19%
1.0	COST	0.26%	EXPE	0.17%
1.0	JAZZ	0.24%	SLV	0.16%
1.0	GLD	0.23%	AAPL	0.15%
1.0	CITI	0.22%	PWR	0.15%
1.0	ZION	0.22%	NVDA	0.15%
1.0	EXPE	0.22%	WFC	0.15%
1.0	CHTR	0.2%	ISRG	0.14%
1.0	GILD	0.2%	MS	0.14%
1.0	LLY	0.2%	GLD	0.14%
1.0	TDG	0.19%	VFC	0.14%
1.0	ISRG	0.18%	INTC	0.14%
1.0	AAPL	0.18%	BHC	0.14%
1.0	CSCO	0.18%	NWL	0.13%
1.0	GOOGL	0.17%	THC	0.13%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	LUMN	11.89%	GME	6.97%
10.0	AMC	7.79%	LUMN	4.6%
10.0	VST	6.29%	MSTR	4.3%
10.0	TSLA	5.94%	VST	3.28%
10.0	NVDA	5.24%	TSLA	2.77%
10.0	T	5.03%	TRGP	2.51%
10.0	MSTR	4.7%	TMUS	2.32%
10.0	GME	3.57%	T	2.18%
10.0	TMUS	3.47%	GILD	2.1%
10.0	COST	3.27%	AVGO	2.03%
10.0	TRGP	2.94%	NFLX	1.95%
10.0	LLY	2.69%	NVDA	1.73%
10.0	NFLX	2.65%	CHTR	1.7%
10.0	JAZZ	2.5%	HSBC	1.68%
10.0	CCL	2.4%	EXPE	1.67%
10.0	HSBC	2.12%	ISRG	1.58%
10.0	VNO	1.83%	GS	1.58%
10.0	GILD	1.82%	VFC	1.52%
10.0	MS	1.76%	VNO	1.41%
10.0	JPM	1.69%	GE	1.35%
10.0	THC	1.61%	MS	1.33%
10.0	CITI	1.59%	AMC	1.32%
10.0	AAPL	1.59%	NEM	1.29%
10.0	GS	1.57%	THC	1.23%
10.0	EXPE	1.53%	AAPL	1.2%
10.0	WFC	1.5%	COST	1.19%
10.0	ISRG	1.45%	GLD	1.16%
10.0	CSCO	1.44%	LNC	1.14%
10.0	GLD	1.42%	WFC	1.13%
10.0	ORLY	1.4%	JAZZ	1.12%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	LUMN	20.56%	GME	12.91%
21.0	VST	14.91%	LUMN	11.07%
21.0	NVDA	13.61%	MSTR	9.19%
21.0	MSTR	13.34%	VST	7.38%
21.0	TSLA	13.04%	TSLA	6.23%
21.0	T	10.55%	TMUS	5.44%
21.0	AMC	9.32%	TRGP	5.27%
21.0	TMUS	7.59%	GILD	5.23%
21.0	COST	7.59%	T	5.05%
21.0	TRGP	7.04%	NFLX	4.99%
21.0	NFLX	5.98%	AVGO	4.05%
21.0	LLY	5.63%	CHTR	3.94%
21.0	GME	5.48%	ISRG	3.89%
21.0	VNO	5.15%	VNO	3.77%
21.0	CCL	4.92%	NVDA	3.74%
21.0	GILD	4.33%	VFC	3.7%
21.0	THC	4.32%	HSBC	3.49%
21.0	NWL	4.24%	GS	3.46%
21.0	SBUX	4.19%	EXPE	3.38%
21.0	MS	4.09%	THC	3.15%
21.0	HSBC	4.04%	COST	3.15%
21.0	JAZZ	3.9%	ORCL	3.14%
21.0	JPM	3.81%	GE	2.97%
21.0	CSCO	3.77%	MS	2.93%
21.0	QQQ	3.76%	META	2.92%
21.0	CYH	3.68%	LNC	2.85%
21.0	AAPL	3.65%	AAPL	2.84%
21.0	BMY	3.6%	CCL	2.83%
21.0	ISRG	3.53%	AMC	2.61%
21.0	GS	3.46%	ABBV	2.59%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	107.45%	MSTR	43.06%
63.0	LUMN	97.4%	LUMN	42.29%
63.0	VST	46.26%	TSLA	28.74%
63.0	TSLA	41.44%	VST	25.7%
63.0	VNO	40.97%	VFC	21.19%
63.0	CCL	33.27%	VNO	21.1%
63.0	T	30.14%	GME	20.59%
63.0	TRGP	28.95%	TRGP	19.27%
63.0	NVDA	28.31%	AVGO	16.39%
63.0	NFLX	23.87%	GILD	16.02%
63.0	MS	20.38%	CCL	15.75%
63.0	CSCO	17.52%	NFLX	15.41%
63.0	GILD	15.92%	EXPE	14.79%
63.0	BMY	15.31%	TMUS	13.9%
63.0	COST	15.07%	T	13.42%
63.0	JPM	14.11%	ISRG	11.78%
63.0	VFC	13.77%	GS	11.21%
63.0	TMUS	13.4%	MS	10.82%
63.0	NWL	13.29%	CHTR	10.66%
63.0	ORCL	13.2%	ORCL	10.65%
63.0	LLY	12.79%	META	10.6%
63.0	CAH	12.75%	BMY	9.85%
63.0	ISRG	12.62%	NVDA	9.47%
63.0	CYH	12.54%	SBUX	9.37%
63.0	GS	12.33%	JPM	9.27%
63.0	QQQ	12.25%	CSCO	8.82%
63.0	SBUX	11.75%	HSBC	8.8%
63.0	AAPL	11.45%	ZION	8.64%
63.0	WFC	11.38%	WFC	8.59%
63.0	HSBC	11.24%	IRM	8.49%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	LUMN	182.85%	MSTR	114.73%
126.0	MSTR	154.27%	LUMN	91.56%
126.0	VST	147.19%	VST	74.86%
126.0	VNO	101.64%	TSLA	65.25%
126.0	TSLA	99.29%	VNO	50.14%
126.0	CCL	93.65%	TRGP	47.35%
126.0	TRGP	71.02%	CCL	45.8%
126.0	MS	69.53%	VFC	43.83%
126.0	T	65.82%	EXPE	39.89%
126.0	NVDA	64.4%	NFLX	37.53%
126.0	NFLX	63.94%	GILD	35.45%
126.0	ORCL	51.87%	GME	34.13%
126.0	CSCO	49.62%	TMUS	32.69%
126.0	GILD	41.82%	AVGO	32.21%
126.0	GBTC	41.43%	ORCL	29.8%
126.0	ISRG	39.49%	MS	29.13%
126.0	BMY	37.67%	T	28.6%
126.0	JPM	35.1%	GBTC	26.69%
126.0	GS	34.61%	GS	25.21%
126.0	CAH	31.76%	WFC	25.02%
126.0	WFC	30.55%	ISRG	24.99%
126.0	AMZN	30.09%	BMY	24.51%
126.0	BHC	29.95%	NVDA	24.23%
126.0	HLT	29.91%	META	24.18%
126.0	ZION	29.88%	CSCO	23.59%
126.0	COST	28.76%	ZION	21.53%
126.0	QQQ	28.75%	CMA	21.34%
126.0	TMUS	28.47%	SBUX	20.56%
126.0	SBUX	27.11%	JPM	20.38%
126.0	NWL	26.59%	MSI	19.28%

Bottom 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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	HYG	0.0%	CYH	1.08%
1.0	VCSH	0.13%	AMC	1.13%
1.0	EMB	0.13%	BIIB	1.31%
1.0	VNO	0.14%	IEP	1.33%
1.0	CSCO	0.26%	GT	1.42%
1.0	T	0.27%	AAP	1.47%
1.0	IEP	0.27%	UAA	1.61%
1.0	LUMN	0.41%	LUMN	1.92%
1.0	ELAN	0.42%	FIS	1.94%
1.0	MOS	0.53%	META	2.22%
1.0	GE	0.54%	GME	2.22%
1.0	LVS	0.68%	NWL	2.25%
1.0	CCL	0.71%	LW	2.37%
1.0	QQQ	0.78%	ELAN	2.54%
1.0	MSFT	0.93%	LNC	2.57%
1.0	X	0.93%	BHC	2.6%
1.0	BHC	0.96%	ETRN	2.64%
1.0	CYH	1.08%	CLF	2.66%
1.0	GT	1.13%	CZR	2.66%
1.0	TLT	1.17%	NFLX	2.67%
1.0	NWL	1.19%	PRGO	2.69%
1.0	WYNN	1.21%	CNC	2.7%
1.0	ADBE	1.21%	KALU	2.73%
1.0	MUB	1.28%	EXPE	2.77%
1.0	CZR	1.33%	TFC	2.79%
1.0	HSBC	1.4%	ADBE	2.83%
1.0	BHP	1.4%	KHC	2.84%
1.0	JPM	1.42%	CMCSA	2.85%
1.0	MS	1.42%	BALL	2.89%
1.0	ON	1.42%	LVS	2.99%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	HYG	0.13%	SBNY	0.0%
10.0	EMB	0.13%	CZR	0.13%
10.0	CSCO	0.13%	FRCB	0.72%
10.0	GT	0.14%	CYH	0.94%
10.0	VCSH	0.25%	BALL	1.05%
10.0	QQQ	0.26%	AAP	1.07%
10.0	T	0.26%	FIS	1.29%
10.0	IEP	0.27%	IEP	1.33%
10.0	MSFT	0.4%	CMCSA	1.42%
10.0	CYH	0.54%	CMA	1.56%
10.0	VNO	0.55%	AMC	1.69%
10.0	TLT	0.65%	TFC	1.72%
10.0	BHC	0.68%	LNC	1.85%
10.0	MUB	0.89%	UAA	1.87%
10.0	TFC	0.93%	SIVBQ	1.93%
10.0	LUMN	0.96%	TLT	1.95%
10.0	CCL	0.99%	EMB	2.04%
10.0	PCG	1.04%	CSTM	2.07%
10.0	NWL	1.45%	BIIB	2.09%
10.0	KEY	1.54%	NAVI	2.1%
10.0	ON	1.55%	FRA	2.16%
10.0	FSUGY	1.55%	LQD	2.29%
10.0	CDNS	1.56%	BHC	2.32%
10.0	CMCSA	1.81%	ZION	2.39%
10.0	ELAN	1.83%	NWL	2.5%
10.0	MS	1.94%	HYG	2.54%
10.0	ZION	2.12%	BXP	2.54%
10.0	UAA	2.14%	KEY	2.65%
10.0	WYNN	2.14%	VICI	2.68%
10.0	COST	2.17%	CTLT	2.68%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	QQQ	0.0%	SBNY	0.0%
21.0	PCG	0.0%	AMC	0.0%
21.0	MSFT	0.0%	FIS	0.26%
21.0	IEP	0.0%	CMCSA	0.26%
21.0	HYG	0.0%	BALL	0.27%
21.0	TLT	0.0%	IEP	0.41%
21.0	GT	0.0%	CZR	0.41%
21.0	CSCO	0.0%	VFC	0.44%
21.0	FIS	0.0%	CSTM	0.53%
21.0	VNO	0.0%	NWL	0.94%
21.0	EMB	0.0%	KEY	1.14%
21.0	DHI	0.13%	CMA	1.19%
21.0	INTC	0.27%	CSCO	1.2%
21.0	BHC	0.28%	FRA	1.3%
21.0	CCL	0.29%	LNC	1.31%
21.0	VCSH	0.39%	AAP	1.37%
21.0	AMZN	0.53%	CYH	1.37%
21.0	CDNS	0.66%	HYG	1.42%
21.0	USB	0.67%	FRCB	1.44%
21.0	MU	0.69%	UAA	1.5%
21.0	ELAN	0.72%	ZTS	1.58%
21.0	CSTM	0.79%	GT	1.59%
21.0	CMCSA	0.92%	BHC	1.67%
21.0	CZR	0.95%	GNRC	1.71%
21.0	CYH	0.96%	MSFT	1.76%
21.0	TXN	1.05%	INTU	1.87%
21.0	WYNN	1.1%	TFC	1.9%
21.0	KEY	1.14%	JAZZ	2.01%
21.0	ON	1.19%	SPY	2.08%
21.0	GSK	1.31%	PEP	2.09%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	T	0.0%	LNC	0.0%
63.0	PRGO	0.0%	FRCB	0.0%
63.0	DHI	0.0%	GNRC	0.0%
63.0	SBNY	0.0%	CZR	0.0%
63.0	USB	0.0%	CSTM	0.0%
63.0	UNH	0.0%	CNC	0.0%
63.0	CDNS	0.0%	HYG	0.0%
63.0	BHC	0.0%	CLF	0.0%
63.0	FIS	0.0%	IEP	0.0%
63.0	TLT	0.0%	JAZZ	0.0%
63.0	CNC	0.0%	NAVI	0.0%
63.0	EMB	0.0%	BALL	0.0%
63.0	CSCO	0.0%	PEP	0.0%
63.0	TFC	0.0%	FIS	0.0%
63.0	ELAN	0.0%	AAP	0.0%
63.0	LNC	0.0%	SBNY	0.0%
63.0	BBY	0.0%	AMC	0.0%
63.0	QQQ	0.0%	TFC	0.0%
63.0	LUMN	0.0%	SIVBQ	0.0%
63.0	AAP	0.0%	ZTS	0.14%
63.0	MSFT	0.0%	TLT	0.14%
63.0	INTC	0.0%	CMA	0.14%
63.0	AMAT	0.0%	ZION	0.14%
63.0	IEP	0.0%	KEY	0.15%
63.0	PCG	0.0%	GT	0.15%
63.0	HYG	0.0%	PRGO	0.16%
63.0	CZR	0.0%	BBY	0.28%
63.0	NWL	0.0%	FRA	0.41%
63.0	VNO	0.0%	CMCSA	0.42%
63.0	GT	0.0%	ON	0.42%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	AA	0.0%	AA	0.0%
126.0	FSUGY	0.0%	LNC	0.0%
126.0	FRCB	0.0%	CLF	0.0%
126.0	FRA	0.0%	CMA	0.0%
126.0	NAVI	0.0%	CMCSA	0.0%
126.0	FCX	0.0%	KHC	0.0%
126.0	ON	0.0%	CNC	0.0%
126.0	MUB	0.0%	KEY	0.0%
126.0	PCG	0.0%	JAZZ	0.0%
126.0	ELAN	0.0%	ZION	0.0%
126.0	DHI	0.0%	CSTM	0.0%
126.0	CZR	0.0%	GNRC	0.0%
126.0	CYH	0.0%	CTLT	0.0%
126.0	CVS	0.0%	CYH	0.0%
126.0	PEP	0.0%	CZR	0.0%
126.0	EMB	0.0%	INTU	0.0%
126.0	CSTM	0.0%	FSUGY	0.0%
126.0	MU	0.0%	EMB	0.0%
126.0	MOS	0.0%	IEP	0.0%
126.0	IEP	0.0%	HYG	0.0%
126.0	HYG	0.0%	HON	0.0%
126.0	ZION	0.0%	FIS	0.0%
126.0	HON	0.0%	GT	0.0%
126.0	HLT	0.0%	CVS	0.0%
126.0	JAZZ	0.0%	LQD	0.0%
126.0	MSFT	0.0%	FRCB	0.0%
126.0	KEY	0.0%	MOS	0.0%
126.0	GT	0.0%	AAP	0.0%
126.0	GSK	0.0%	GOLD	0.0%
126.0	LNC	0.0%	VICI	0.0%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	AA	0.0%	AA	0.0%
252.0	NEM	0.0%	LUMN	0.0%
252.0	NAVI	0.0%	LQD	0.0%
252.0	MUB	0.0%	LNC	0.0%
252.0	MU	0.0%	KHC	0.0%
252.0	MSFT	0.0%	KEY	0.0%
252.0	MS	0.0%	KALU	0.0%
252.0	MRK	0.0%	JAZZ	0.0%
252.0	MOS	0.0%	ZION	0.0%
252.0	MNST	0.0%	INTU	0.0%
252.0	LVS	0.0%	IEP	0.0%
252.0	LUMN	0.0%	HYG	0.0%
252.0	LQD	0.0%	HON	0.0%
252.0	NVS	0.0%	GT	0.0%
252.0	LNC	0.0%	GSK	0.0%
252.0	KHC	0.0%	GOLD	0.0%
252.0	KEY	0.0%	GNRC	0.0%
252.0	KALU	0.0%	GME	0.0%
252.0	JAZZ	0.0%	FSUGY	0.0%
252.0	ZION	0.0%	FRCB	0.0%
252.0	INTU	0.0%	LVS	0.0%
252.0	INTC	0.0%	MNST	0.0%
252.0	IEP	0.0%	MOS	0.0%
252.0	HYG	0.0%	MUB	0.0%
252.0	HON	0.0%	WYNN	0.0%
252.0	HD	0.0%	VZ	0.0%
252.0	GT	0.0%	VICI	0.0%
252.0	LEN	0.0%	VFC	0.0%
252.0	GSK	0.0%	USB	0.0%
252.0	NWL	0.0%	UNH	0.0%

P30D: 1d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	AA	0.0%	AA	0.0%
1.0	MU	0.0%	LUMN	0.0%
1.0	MSI	0.0%	LQD	0.0%
1.0	MSFT	0.0%	LEN	0.0%
1.0	MRK	0.0%	KEY	0.0%
1.0	MOS	0.0%	KALU	0.0%
1.0	MNST	0.0%	JAZZ	0.0%
1.0	LW	0.0%	ZION	0.0%
1.0	LVS	0.0%	IRM	0.0%
1.0	LUMN	0.0%	IEP	0.0%
1.0	LQD	0.0%	HON	0.0%
1.0	LNC	0.0%	HCA	0.0%
1.0	MUB	0.0%	GWW	0.0%
1.0	LLY	0.0%	GSK	0.0%
1.0	KHC	0.0%	GOOGL	0.0%
1.0	KALU	0.0%	GME	0.0%
1.0	JPM	0.0%	GILD	0.0%
1.0	JAZZ	0.0%	GE	0.0%
1.0	ZION	0.0%	LVS	0.0%
1.0	IEP	0.0%	LW	0.0%
1.0	HYG	0.0%	MNST	0.0%
1.0	HSBC	0.0%	MRK	0.0%
1.0	HLT	0.0%	WDC	0.0%
1.0	HCA	0.0%	VST	0.0%
1.0	GWW	0.0%	VFC	0.0%
1.0	LEN	0.0%	VCSH	0.0%
1.0	NFLX	0.0%	USB	0.0%
1.0	NVDA	0.0%	UNH	0.0%
1.0	NWL	0.0%	UAA	0.0%
1.0	XOM	0.0%	TLT	0.0%

P30D: 10d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	AA	0.0%	AA	0.0%
10.0	NWL	0.0%	NWL	0.0%
10.0	NVS	0.0%	NVS	0.0%
10.0	NVDA	0.0%	NVDA	0.0%
10.0	NFLX	0.0%	NAVI	0.0%
10.0	NEM	0.0%	MUB	0.0%
10.0	NAVI	0.0%	MU	0.0%
10.0	MUB	0.0%	MSI	0.0%
10.0	MSI	0.0%	MSFT	0.0%
10.0	MSFT	0.0%	MRK	0.0%
10.0	MS	0.0%	META	0.0%
10.0	MRK	0.0%	LW	0.0%
10.0	MOS	0.0%	LVS	0.0%
10.0	MNST	0.0%	LUMN	0.0%
10.0	ON	0.0%	LQD	0.0%
10.0	META	0.0%	LNC	0.0%
10.0	LVS	0.0%	LLY	0.0%
10.0	LUMN	0.0%	LEN	0.0%
10.0	LQD	0.0%	KHC	0.0%
10.0	LNC	0.0%	KEY	0.0%
10.0	LLY	0.0%	KALU	0.0%
10.0	LEN	0.0%	JAZZ	0.0%
10.0	KHC	0.0%	ZION	0.0%
10.0	KEY	0.0%	IRM	0.0%
10.0	KALU	0.0%	INTU	0.0%
10.0	JAZZ	0.0%	IEP	0.0%
10.0	ZION	0.0%	HYG	0.0%
10.0	IEP	0.0%	HSBC	0.0%
10.0	HYG	0.0%	ON	0.0%
10.0	LW	0.0%	ORCL	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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	VICI	0.0%	IEP	0.0%
1.0	LLY	0.0%	CMA	0.0%
1.0	LEN	0.0%	CMG	0.0%
1.0	KHC	0.0%	CTLT	0.0%
1.0	ZION	0.0%	CYH	0.0%
1.0	IEP	0.0%	ELAN	0.0%
1.0	HYG	0.0%	FSUGY	0.0%
1.0	GWW	0.0%	GME	0.0%
1.0	VNO	0.0%	GWW	0.0%
1.0	GLD	0.0%	CHTR	0.0%
1.0	GBTC	0.0%	LUMN	0.0%
1.0	FSUGY	0.0%	CDNS	0.0%
1.0	FIS	0.0%	NAVI	0.0%
1.0	EMB	0.0%	NWL	0.0%
1.0	ELAN	0.0%	AMC	0.0%
1.0	DHI	0.0%	QCOM	0.0%
1.0	LNC	0.0%	UAA	0.0%
1.0	CYH	0.0%	LW	0.0%
1.0	LQD	0.0%	ZION	1.82%
1.0	LW	0.0%	ON	1.82%
1.0	UAA	0.0%	FRA	1.82%
1.0	TLT	0.0%	EMB	1.82%
1.0	TDG	0.0%	RIO	1.82%
1.0	SPY	0.0%	SBUX	1.82%
1.0	RIO	0.0%	CNC	1.82%
1.0	QQQ	0.0%	SLV	1.82%
1.0	PEP	0.0%	AA	1.82%
1.0	PCG	0.0%	IRM	1.82%
1.0	OXY	0.0%	BHP	1.82%
1.0	NWL	0.0%	AMAT	1.82%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	AA	0.0%	AA	0.0%
10.0	QQQ	0.0%	CNC	0.0%
10.0	RIO	0.0%	MUB	0.0%
10.0	GWW	0.0%	CPRT	0.0%
10.0	GT	0.0%	MSI	0.0%
10.0	GOOGL	0.0%	CSTM	0.0%
10.0	SPY	0.0%	CTLT	0.0%
10.0	GNRC	0.0%	CYH	0.0%
10.0	GME	0.0%	CZR	0.0%
10.0	GLD	0.0%	DHI	0.0%
10.0	TDG	0.0%	ELAN	0.0%
10.0	GBTC	0.0%	EMB	0.0%
10.0	NVDA	0.0%	LW	0.0%
10.0	FRA	0.0%	LVS	0.0%
10.0	FIS	0.0%	LUMN	0.0%
10.0	TEVA	0.0%	LQD	0.0%
10.0	TFC	0.0%	FRA	0.0%
10.0	EMB	0.0%	FSUGY	0.0%
10.0	HON	0.0%	GBTC	0.0%
10.0	ELAN	0.0%	LEN	0.0%
10.0	HYG	0.0%	KEY	0.0%
10.0	ZION	0.0%	KALU	0.0%
10.0	MUB	0.0%	GME	0.0%
10.0	ON	0.0%	GNRC	0.0%
10.0	MSI	0.0%	ZION	0.0%
10.0	MSFT	0.0%	GOOGL	0.0%
10.0	MS	0.0%	INTU	0.0%
10.0	MRK	0.0%	IEP	0.0%
10.0	MOS	0.0%	CMG	0.0%
10.0	OXY	0.0%	HYG	0.0%

P90D: 21d

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

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	AA	0.0%	AA	0.0%
21.0	LEN	0.0%	NWL	0.0%
21.0	KHC	0.0%	NVDA	0.0%
21.0	KEY	0.0%	NAVI	0.0%
21.0	KALU	0.0%	MUB	0.0%
21.0	TEVA	0.0%	MU	0.0%
21.0	JAZZ	0.0%	MSTR	0.0%
21.0	ZION	0.0%	MSI	0.0%
21.0	IRM	0.0%	MSFT	0.0%
21.0	TFC	0.0%	MS	0.0%
21.0	INTC	0.0%	MOS	0.0%
21.0	IEP	0.0%	LW	0.0%
21.0	HYG	0.0%	LVS	0.0%
21.0	THC	0.0%	LUMN	0.0%
21.0	HON	0.0%	LQD	0.0%
21.0	HLT	0.0%	LEN	0.0%
21.0	HD	0.0%	KEY	0.0%
21.0	HCA	0.0%	KALU	0.0%
21.0	GWW	0.0%	ZION	0.0%
21.0	GT	0.0%	IRM	0.0%
21.0	TLT	0.0%	INTU	0.0%
21.0	TRGP	0.0%	INTC	0.0%
21.0	TSLA	0.0%	IEP	0.0%
21.0	TXN	0.0%	HYG	0.0%
21.0	LLY	0.0%	HON	0.0%
21.0	GNRC	0.0%	HD	0.0%
21.0	TDG	0.0%	ON	0.0%
21.0	LUMN	0.0%	GWW	0.0%
21.0	PCG	0.0%	OXY	0.0%
21.0	OXY	0.0%	PEP	0.0%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	AMD	0.0%	AMC	0.0%
1.0	CTLT	0.0%	CTLT	0.0%
1.0	BA	0.0%	IEP	0.42%
1.0	EMB	0.0%	CYH	0.88%
1.0	SPY	0.0%	AAP	0.95%
1.0	VCSH	0.0%	FIS	1.27%
1.0	RIO	0.0%	LW	1.29%
1.0	COST	0.0%	HYG	1.66%
1.0	BHP	0.0%	TFC	1.75%
1.0	TLT	0.0%	AMD	1.83%
1.0	HYG	0.0%	GT	1.91%
1.0	IEP	0.0%	ELAN	1.91%
1.0	LLY	0.0%	VCSH	2.07%
1.0	QQQ	0.0%	LQD	2.07%
1.0	MOS	0.0%	EMB	2.08%
1.0	TDG	0.0%	CMA	2.09%
1.0	AZN	0.42%	FSUGY	2.15%
1.0	MUB	0.42%	NWL	2.16%
1.0	FIS	0.42%	BALL	2.17%
1.0	XOM	0.42%	CLF	2.2%
1.0	FSUGY	0.43%	BIIB	2.5%
1.0	OXY	0.43%	AZN	2.5%
1.0	JAZZ	0.46%	ZTS	2.5%
1.0	GT	0.48%	KALU	2.54%
1.0	PCG	0.48%	NFLX	2.55%
1.0	LVS	0.48%	KHC	2.56%
1.0	VNO	0.5%	ADBE	2.59%
1.0	CPRT	0.84%	CHTR	2.6%
1.0	T	0.84%	PRGO	2.6%
1.0	X	0.85%	UAA	2.61%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	CITI	0.0%	CSTM	0.41%
10.0	SPY	0.41%	IEP	0.41%
10.0	MRK	0.41%	ON	0.42%
10.0	HYG	0.41%	LW	0.43%
10.0	COST	0.41%	CZR	0.45%
10.0	IEP	0.41%	AAP	0.47%
10.0	EMB	0.41%	CTLT	0.53%
10.0	CSTM	0.41%	HYG	0.82%
10.0	MUB	0.41%	LQD	0.82%
10.0	MOS	0.41%	EMB	0.83%
10.0	QQQ	0.42%	MUB	0.83%
10.0	TDG	0.42%	CMCSA	0.84%
10.0	ON	0.42%	BALL	0.86%
10.0	OXY	0.42%	AMC	0.91%
10.0	KHC	0.42%	TLT	1.33%
10.0	CDNS	0.43%	PRGO	1.55%
10.0	CSCO	0.43%	MRK	2.06%
10.0	TLT	0.44%	ZTS	2.07%
10.0	AMC	0.46%	NAVI	2.07%
10.0	LLY	0.47%	KALU	2.09%
10.0	GT	0.47%	CLF	2.16%
10.0	PCG	0.49%	FRA	2.47%
10.0	CTLT	0.53%	CMA	2.49%
10.0	VCSH	0.82%	MOS	2.49%
10.0	T	0.83%	BXP	2.5%
10.0	MSFT	0.84%	CYH	2.6%
10.0	XOM	0.84%	AMD	2.73%
10.0	WDC	0.87%	VCSH	2.88%
10.0	JAZZ	0.9%	BIIB	2.89%
10.0	VNO	0.99%	AMAT	2.93%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	LEN	0.0%	OXY	0.0%
21.0	INTC	0.0%	INTC	0.0%
21.0	CDNS	0.0%	LQD	0.0%
21.0	FSUGY	0.0%	LW	0.0%
21.0	LLY	0.0%	EMB	0.0%
21.0	SPY	0.0%	CZR	0.0%
21.0	TLT	0.0%	CTLT	0.0%
21.0	CMCSA	0.0%	CSTM	0.0%
21.0	OXY	0.0%	ON	0.0%
21.0	COST	0.0%	IEP	0.0%
21.0	KHC	0.0%	CMCSA	0.0%
21.0	CSCO	0.0%	CLF	0.0%
21.0	CSTM	0.0%	TLT	0.0%
21.0	CTLT	0.0%	BALL	0.0%
21.0	TDG	0.0%	HYG	0.0%
21.0	FIS	0.0%	AAP	0.0%
21.0	CZR	0.0%	AMC	0.0%
21.0	DHI	0.0%	X	0.0%
21.0	MUB	0.0%	WDC	0.0%
21.0	EMB	0.0%	FRA	0.44%
21.0	IEP	0.0%	MUB	0.44%
21.0	ON	0.0%	NAVI	0.44%
21.0	USB	0.0%	FIS	0.45%
21.0	QQQ	0.0%	MOS	0.89%
21.0	MSFT	0.0%	TDG	0.89%
21.0	XOM	0.0%	KALU	0.9%
21.0	PCG	0.0%	FSUGY	0.9%
21.0	NAVI	0.0%	AMD	0.99%
21.0	HYG	0.0%	GT	1.02%
21.0	AMAT	0.0%	MRK	1.32%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	POST	0.0%	ZTS	0.0%
63.0	HYG	0.0%	GSK	0.0%
63.0	T	0.0%	GNRC	0.0%
63.0	ON	0.0%	PEP	0.0%
63.0	TDG	0.0%	POST	0.0%
63.0	TFC	0.0%	PRGO	0.0%
63.0	GWW	0.0%	QCOM	0.0%
63.0	GT	0.0%	FSUGY	0.0%
63.0	TLT	0.0%	FITB	0.0%
63.0	IEP	0.0%	FIS	0.0%
63.0	GOOGL	0.0%	FCX	0.0%
63.0	PHM	0.0%	ETRN	0.0%
63.0	UNH	0.0%	EMB	0.0%
63.0	USB	0.0%	LW	0.0%
63.0	FSUGY	0.0%	RIO	0.0%
63.0	NFLX	0.0%	CZR	0.0%
63.0	FITB	0.0%	GT	0.0%
63.0	FIS	0.0%	SLV	0.0%
63.0	FCX	0.0%	OXY	0.0%
63.0	PRGO	0.0%	NAVI	0.0%
63.0	ETRN	0.0%	MOS	0.0%
63.0	INTC	0.0%	LQD	0.0%
63.0	JAZZ	0.0%	LNC	0.0%
63.0	NAVI	0.0%	MRK	0.0%
63.0	MUB	0.0%	KHC	0.0%
63.0	MU	0.0%	KALU	0.0%
63.0	QQQ	0.0%	MSFT	0.0%
63.0	RIO	0.0%	JAZZ	0.0%
63.0	MSFT	0.0%	ZION	0.0%
63.0	NWL	0.0%	INTU	0.0%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	AA	0.0%	AA	0.0%
126.0	LEN	0.0%	MRK	0.0%
126.0	KHC	0.0%	MOS	0.0%
126.0	KEY	0.0%	MNST	0.0%
126.0	KALU	0.0%	LW	0.0%
126.0	JPM	0.0%	LVS	0.0%
126.0	JAZZ	0.0%	LQD	0.0%
126.0	ISRG	0.0%	LNC	0.0%
126.0	ZION	0.0%	LLY	0.0%
126.0	INTU	0.0%	LEN	0.0%
126.0	INTC	0.0%	KHC	0.0%
126.0	IEP	0.0%	KEY	0.0%
126.0	HYG	0.0%	KALU	0.0%
126.0	T	0.0%	JAZZ	0.0%
126.0	HON	0.0%	ZION	0.0%
126.0	HLT	0.0%	INTU	0.0%
126.0	TDG	0.0%	INTC	0.0%
126.0	TFC	0.0%	IEP	0.0%
126.0	GWW	0.0%	HYG	0.0%
126.0	GT	0.0%	HON	0.0%
126.0	GSK	0.0%	GT	0.0%
126.0	TLT	0.0%	GSK	0.0%
126.0	GOOGL	0.0%	GOOGL	0.0%
126.0	GOLD	0.0%	GOLD	0.0%
126.0	LLY	0.0%	MSFT	0.0%
126.0	LNC	0.0%	GNRC	0.0%
126.0	LQD	0.0%	MU	0.0%
126.0	LUMN	0.0%	NAVI	0.0%
126.0	PEP	0.0%	XOM	0.0%
126.0	PCG	0.0%	X	0.0%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SBNY	-0.63%	SBNY	-0.7%
1.0	SIVBQ	-0.59%	SIVBQ	-0.43%
1.0	IEP	-0.44%	FRCB	-0.23%
1.0	AVGO	-0.34%	AMC	-0.2%
1.0	CZR	-0.28%	AAP	-0.17%
1.0	AMC	-0.27%	IEP	-0.17%
1.0	NWL	-0.26%	VFC	-0.13%
1.0	UAA	-0.25%	UAA	-0.12%
1.0	LUMN	-0.2%	CZR	-0.09%
1.0	BIIB	-0.19%	NWL	-0.09%
1.0	FRCB	-0.17%	ELAN	-0.07%
1.0	LNC	-0.16%	CVS	-0.07%
1.0	AAP	-0.15%	BALL	-0.06%
1.0	VFC	-0.14%	LNC	-0.05%
1.0	GNRC	-0.14%	BIIB	-0.05%
1.0	GT	-0.11%	MOS	-0.05%
1.0	BALL	-0.11%	TLT	-0.05%
1.0	CVS	-0.08%	CNC	-0.05%
1.0	TLT	-0.08%	CSTM	-0.04%
1.0	AA	-0.08%	NEM	-0.04%
1.0	MOS	-0.06%	KALU	-0.04%
1.0	FSUGY	-0.06%	LUMN	-0.04%
1.0	BA	-0.06%	GT	-0.03%
1.0	BHP	-0.05%	AA	-0.03%
1.0	CSTM	-0.05%	FIS	-0.03%
1.0	ELAN	-0.05%	KEY	-0.02%
1.0	KALU	-0.05%	GSK	-0.02%
1.0	ZTS	-0.05%	ZION	-0.02%
1.0	CHTR	-0.05%	NAVI	-0.02%
1.0	CLF	-0.05%	USB	-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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SIVBQ	-4.47%	SBNY	-6.69%
10.0	SBNY	-3.27%	SIVBQ	-5.52%
10.0	AVGO	-3.19%	FRCB	-3.91%
10.0	IEP	-2.97%	AAP	-1.84%
10.0	LUMN	-2.7%	AMC	-1.58%
10.0	FRCB	-2.35%	IEP	-1.5%
10.0	NWL	-2.29%	VFC	-1.32%
10.0	CZR	-2.16%	UAA	-1.13%
10.0	GNRC	-1.62%	NWL	-1.1%
10.0	AAP	-1.58%	LUMN	-0.88%
10.0	UAA	-1.36%	CZR	-0.69%
10.0	VFC	-1.23%	BHC	-0.67%
10.0	CLF	-1.01%	ELAN	-0.63%
10.0	AA	-0.94%	BALL	-0.61%
10.0	BIIB	-0.93%	BIIB	-0.59%
10.0	BALL	-0.88%	LNC	-0.55%
10.0	FIS	-0.73%	GNRC	-0.54%
10.0	BXP	-0.72%	CLF	-0.54%
10.0	FSUGY	-0.65%	ZION	-0.53%
10.0	LNC	-0.64%	CYH	-0.53%
10.0	MOS	-0.56%	AA	-0.5%
10.0	TLT	-0.48%	TLT	-0.5%
10.0	CMA	-0.44%	GT	-0.48%
10.0	INTU	-0.43%	MOS	-0.42%
10.0	AMC	-0.4%	BXP	-0.39%
10.0	VZ	-0.39%	KEY	-0.38%
10.0	CYH	-0.35%	CNC	-0.37%
10.0	ADBE	-0.32%	FIS	-0.33%
10.0	CVS	-0.31%	CVS	-0.31%
10.0	ZION	-0.3%	CHTR	-0.31%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SIVBQ	-10.33%	SBNY	-14.05%
21.0	SBNY	-7.28%	SIVBQ	-11.91%
21.0	IEP	-7.1%	FRCB	-8.3%
21.0	CZR	-5.85%	AAP	-3.59%
21.0	LUMN	-5.45%	AMC	-3.51%
21.0	FRCB	-5.2%	IEP	-3.25%
21.0	AVGO	-4.73%	VFC	-2.8%
21.0	NWL	-4.52%	NWL	-2.49%
21.0	GNRC	-3.61%	UAA	-1.99%
21.0	AAP	-3.11%	CZR	-1.66%
21.0	VFC	-3.05%	BHC	-1.56%
21.0	CLF	-2.71%	LUMN	-1.47%
21.0	UAA	-2.07%	LNC	-1.29%
21.0	BALL	-1.79%	ELAN	-1.13%
21.0	BXP	-1.64%	BALL	-1.11%
21.0	CYH	-1.54%	INTC	-1.08%
21.0	AMC	-1.53%	GT	-1.08%
21.0	MOS	-1.45%	BXP	-1.03%
21.0	FSUGY	-1.29%	GNRC	-1.02%
21.0	AA	-1.27%	BIIB	-1.02%
21.0	INTC	-1.19%	TLT	-1.0%
21.0	VZ	-1.16%	AA	-0.97%
21.0	TLT	-1.12%	CLF	-0.95%
21.0	BIIB	-0.97%	CNC	-0.9%
21.0	INTU	-0.97%	MOS	-0.85%
21.0	BHP	-0.85%	CYH	-0.82%
21.0	LNC	-0.83%	ZION	-0.82%
21.0	FIS	-0.82%	KEY	-0.67%
21.0	CNC	-0.78%	CHTR	-0.65%
21.0	CMA	-0.7%	CSTM	-0.64%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	SIVBQ	-35.49%	SBNY	-39.31%
63.0	IEP	-25.54%	SIVBQ	-36.19%
63.0	SBNY	-25.31%	FRCB	-25.78%
63.0	FRCB	-19.84%	AMC	-15.78%
63.0	AVGO	-15.25%	IEP	-11.88%
63.0	NWL	-14.54%	AAP	-11.01%
63.0	GNRC	-13.5%	NWL	-7.09%
63.0	AAP	-11.1%	MOS	-5.66%
63.0	CLF	-8.6%	VFC	-5.64%
63.0	VFC	-8.55%	CLF	-5.52%
63.0	LUMN	-8.44%	BHC	-5.48%
63.0	CZR	-8.2%	CZR	-4.88%
63.0	AMC	-8.13%	UAA	-4.79%
63.0	MOS	-7.78%	INTC	-4.35%
63.0	UAA	-7.28%	AA	-4.14%
63.0	BALL	-6.62%	CVS	-3.79%
63.0	AA	-6.0%	LUMN	-3.72%
63.0	CVS	-4.93%	LNC	-3.49%
63.0	BHC	-4.93%	ELAN	-3.23%
63.0	INTC	-4.73%	BALL	-3.13%
63.0	BHP	-4.2%	NEM	-2.97%
63.0	CSTM	-3.74%	TLT	-2.95%
63.0	CHTR	-3.38%	GT	-2.7%
63.0	TLT	-3.27%	BXP	-2.6%
63.0	PRGO	-3.23%	CSTM	-2.52%
63.0	CYH	-3.1%	PRGO	-2.51%
63.0	VZ	-3.09%	GNRC	-2.5%
63.0	GT	-2.63%	CNC	-2.47%
63.0	KHC	-2.59%	BIIB	-2.38%
63.0	NEM	-2.45%	CHTR	-2.35%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	SIVBQ	-80.17%	SIVBQ	-67.06%
126.0	FRCB	-60.33%	SBNY	-65.9%
126.0	IEP	-47.66%	FRCB	-52.19%
126.0	SBNY	-46.58%	AMC	-30.51%
126.0	NWL	-36.99%	IEP	-22.34%
126.0	AVGO	-33.64%	AAP	-21.62%
126.0	GNRC	-24.43%	NWL	-14.37%
126.0	VFC	-22.9%	MOS	-12.41%
126.0	AAP	-22.28%	VFC	-11.75%
126.0	MOS	-20.37%	CVS	-8.69%
126.0	AMC	-18.09%	CLF	-8.54%
126.0	CVS	-14.01%	INTC	-6.88%
126.0	CLF	-13.05%	CTLT	-6.66%
126.0	LUMN	-13.05%	CZR	-6.59%
126.0	BALL	-9.82%	LNC	-6.39%
126.0	AA	-9.65%	PRGO	-6.17%
126.0	PRGO	-8.9%	AA	-5.89%
126.0	LNC	-8.18%	NEM	-5.85%
126.0	CHTR	-7.87%	CNC	-5.83%
126.0	GT	-7.84%	TLT	-5.28%
126.0	GSK	-7.68%	BHC	-5.0%
126.0	CTLT	-7.57%	GSK	-4.92%
126.0	VZ	-7.17%	ELAN	-4.82%
126.0	TLT	-6.91%	UAA	-4.51%
126.0	CZR	-6.36%	GT	-4.42%
126.0	UAA	-5.78%	GNRC	-3.98%
126.0	NEM	-5.74%	BALL	-3.87%
126.0	CNC	-5.54%	BXP	-3.85%
126.0	BHP	-5.33%	CHTR	-3.79%
126.0	KHC	-5.12%	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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	FRCB	-206.69%	SBNY	-96.1%
252.0	SIVBQ	-176.43%	SIVBQ	-95.64%
252.0	SBNY	-112.41%	FRCB	-91.52%
252.0	AVGO	-99.42%	AMC	-62.33%
252.0	IEP	-97.1%	IEP	-44.46%
252.0	NWL	-77.87%	AAP	-42.0%
252.0	AAP	-55.47%	NWL	-29.63%
252.0	AMC	-42.5%	VFC	-26.94%
252.0	MOS	-42.31%	MOS	-25.47%
252.0	CVS	-41.71%	CVS	-20.3%
252.0	VFC	-37.42%	BMY	-13.91%
252.0	GNRC	-31.43%	PRGO	-13.22%
252.0	CLF	-27.34%	UAA	-12.77%
252.0	CZR	-24.33%	CLF	-12.31%
252.0	AA	-21.02%	CZR	-12.06%
252.0	PRGO	-19.69%	JAZZ	-10.7%
252.0	UAA	-19.23%	LUMN	-10.38%
252.0	KEY	-17.78%	CHTR	-10.18%
252.0	BMY	-17.72%	CNC	-9.88%
252.0	GT	-16.08%	AA	-9.77%
252.0	JAZZ	-15.27%	TLT	-8.91%
252.0	CHTR	-15.19%	CTLT	-8.52%
252.0	TLT	-14.2%	LNC	-7.81%
252.0	BHC	-13.71%	INTC	-7.4%
252.0	CMA	-13.69%	NEM	-7.06%
252.0	CTLT	-13.03%	BXP	-6.84%
252.0	CNC	-12.52%	BHC	-6.79%
252.0	LNC	-11.19%	GT	-6.79%
252.0	CYH	-9.6%	BIIB	-6.6%
252.0	KHC	-9.19%	KHC	-6.17%

P30D: 1d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	VFC	-2.6%	VFC	-2.05%
1.0	LUMN	-2.59%	CCL	-1.28%
1.0	CCL	-1.9%	ISRG	-1.12%
1.0	CZR	-1.73%	CZR	-1.05%
1.0	LVS	-1.51%	BBY	-0.94%
1.0	CYH	-1.37%	LUMN	-0.9%
1.0	ISRG	-1.36%	SBUX	-0.79%
1.0	ORCL	-1.32%	WDC	-0.71%
1.0	BBY	-1.25%	HLT	-0.71%
1.0	COST	-1.23%	CYH	-0.7%
1.0	BHC	-1.13%	ORCL	-0.69%
1.0	IEP	-1.12%	MU	-0.69%
1.0	AMZN	-1.08%	EXPE	-0.66%
1.0	JAZZ	-1.01%	LVS	-0.66%
1.0	ADBE	-0.99%	ADBE	-0.64%
1.0	MU	-0.9%	BHC	-0.62%
1.0	TFC	-0.89%	META	-0.6%
1.0	QQQ	-0.83%	AMZN	-0.59%
1.0	LLY	-0.79%	JAZZ	-0.59%
1.0	ELAN	-0.77%	LLY	-0.57%
1.0	LNC	-0.71%	AVGO	-0.5%
1.0	SBUX	-0.7%	COST	-0.49%
1.0	META	-0.69%	GS	-0.48%
1.0	EXPE	-0.66%	TFC	-0.48%
1.0	WDC	-0.65%	MS	-0.47%
1.0	UAA	-0.61%	NAVI	-0.46%
1.0	MS	-0.54%	CLF	-0.46%
1.0	CSTM	-0.52%	IEP	-0.45%
1.0	ZION	-0.51%	ON	-0.45%
1.0	HSBC	-0.51%	FITB	-0.45%

P30D: 10d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	LUMN	-18.89%	VFC	-12.61%
10.0	ADBE	-14.26%	ADBE	-7.95%
10.0	UAA	-10.08%	LUMN	-7.85%
10.0	LVS	-10.03%	LVS	-7.25%
10.0	VFC	-8.91%	UAA	-7.0%
10.0	COST	-6.74%	SBUX	-5.51%
10.0	HLT	-6.43%	GILD	-4.74%
10.0	BIIB	-6.37%	CLF	-4.42%
10.0	KHC	-4.87%	COST	-4.29%
10.0	SBUX	-4.78%	HLT	-4.29%
10.0	CMG	-4.64%	CZR	-4.21%
10.0	LEN	-4.28%	META	-3.76%
10.0	META	-4.14%	KHC	-3.64%
10.0	CZR	-4.13%	HD	-3.22%
10.0	AAPL	-3.94%	WYNN	-3.03%
10.0	MRK	-3.85%	AAPL	-3.03%
10.0	WYNN	-3.67%	GOOGL	-3.02%
10.0	ORCL	-3.58%	SNY	-2.91%
10.0	TFC	-3.15%	AVGO	-2.87%
10.0	PEP	-3.02%	CMG	-2.86%
10.0	ISRG	-3.0%	PEP	-2.79%
10.0	CLF	-2.93%	LLY	-2.76%
10.0	BHC	-2.84%	LEN	-2.75%
10.0	AZN	-2.8%	MRK	-2.75%
10.0	JAZZ	-2.79%	NAVI	-2.61%
10.0	GOOGL	-2.69%	AZN	-2.53%
10.0	HD	-2.62%	BBY	-2.5%
10.0	KALU	-2.49%	KALU	-2.5%
10.0	SNY	-2.37%	JAZZ	-2.28%
10.0	NAVI	-2.37%	ORCL	-2.16%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	CYH	-1.05%	GME	-0.57%
1.0	LUMN	-1.05%	ON	-0.53%
1.0	UAA	-0.96%	VFC	-0.5%
1.0	VFC	-0.86%	UAA	-0.48%
1.0	CZR	-0.82%	AVGO	-0.47%
1.0	NWL	-0.7%	WDC	-0.44%
1.0	CCL	-0.69%	GNRC	-0.44%
1.0	BIIB	-0.62%	CZR	-0.43%
1.0	ON	-0.61%	CCL	-0.43%
1.0	TEVA	-0.58%	TEVA	-0.35%
1.0	IRM	-0.57%	NWL	-0.35%
1.0	LVS	-0.56%	BBY	-0.34%
1.0	GNRC	-0.54%	VST	-0.34%
1.0	AMZN	-0.51%	TSLA	-0.33%
1.0	PHM	-0.48%	GOOGL	-0.32%
1.0	ISRG	-0.46%	AAP	-0.31%
1.0	BBY	-0.46%	LVS	-0.29%
1.0	MSI	-0.43%	GBTC	-0.29%
1.0	GOOGL	-0.38%	AMZN	-0.27%
1.0	NVDA	-0.38%	IRM	-0.27%
1.0	CMG	-0.37%	LW	-0.27%
1.0	GME	-0.34%	LUMN	-0.26%
1.0	LW	-0.33%	MSI	-0.25%
1.0	ELAN	-0.3%	CMG	-0.24%
1.0	USB	-0.28%	CYH	-0.22%
1.0	UNH	-0.28%	NVDA	-0.22%
1.0	GBTC	-0.28%	BIIB	-0.2%
1.0	TFC	-0.27%	AMAT	-0.19%
1.0	WDC	-0.26%	MRK	-0.18%
1.0	QQQ	-0.25%	AA	-0.18%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NWL	-10.02%	TSLA	-7.9%
10.0	AMAT	-7.46%	NWL	-5.69%
10.0	UAA	-6.93%	TEVA	-5.23%
10.0	FIS	-6.86%	UAA	-5.03%
10.0	LUMN	-6.84%	ON	-4.92%
10.0	TEVA	-6.15%	GME	-4.5%
10.0	ON	-5.68%	VST	-4.29%
10.0	TSLA	-5.38%	WDC	-4.25%
10.0	LEN	-5.32%	AAP	-3.91%
10.0	NVDA	-4.76%	VFC	-3.78%
10.0	CMG	-4.72%	AVGO	-3.71%
10.0	IRM	-4.63%	GOOGL	-3.66%
10.0	PHM	-4.52%	IRM	-3.55%
10.0	GBTC	-4.36%	GNRC	-3.48%
10.0	PWR	-3.87%	LUMN	-3.45%
10.0	CCL	-3.82%	PWR	-3.45%
10.0	AMD	-3.65%	CMG	-3.31%
10.0	AMZN	-3.4%	CCL	-3.27%
10.0	MSTR	-3.31%	GBTC	-3.17%
10.0	BIIB	-3.28%	LW	-2.9%
10.0	LVS	-3.2%	AMAT	-2.87%
10.0	VFC	-3.2%	LEN	-2.72%
10.0	PCG	-3.06%	LVS	-2.66%
10.0	QQQ	-3.03%	CZR	-2.54%
10.0	GOOGL	-3.01%	AMZN	-2.49%
10.0	GNRC	-2.95%	CDNS	-2.45%
10.0	LW	-2.84%	MRK	-2.29%
10.0	ELAN	-2.65%	AMD	-2.2%
10.0	ZION	-2.58%	BHC	-2.2%
10.0	MS	-2.55%	ELAN	-2.19%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NWL	-32.3%	TSLA	-20.35%
21.0	MSTR	-22.76%	NWL	-17.71%
21.0	AMAT	-21.33%	WDC	-14.69%
21.0	PWR	-17.33%	TEVA	-13.76%
21.0	TEVA	-16.69%	VST	-13.44%
21.0	TSLA	-15.74%	AAP	-11.72%
21.0	ON	-14.66%	ON	-11.61%
21.0	WDC	-14.51%	VFC	-11.24%
21.0	NVDA	-14.4%	MSTR	-10.92%
21.0	FIS	-14.35%	PWR	-10.77%
21.0	UAA	-13.8%	UAA	-10.74%
21.0	LEN	-13.57%	GME	-10.05%
21.0	CCL	-13.11%	CCL	-9.94%
21.0	VFC	-12.54%	IRM	-9.66%
21.0	AMD	-11.75%	GNRC	-9.53%
21.0	LUMN	-11.56%	AVGO	-8.79%
21.0	VST	-11.25%	CDNS	-8.58%
21.0	ZION	-10.93%	GBTC	-8.4%
21.0	GBTC	-10.75%	GOOGL	-8.38%
21.0	GWW	-10.12%	AMAT	-8.28%
21.0	CMG	-9.92%	LW	-7.77%
21.0	IRM	-9.58%	AMD	-7.45%
21.0	CDNS	-9.39%	CMG	-7.12%
21.0	AMZN	-9.38%	CZR	-7.03%
21.0	DHI	-8.93%	NVDA	-7.02%
21.0	GNRC	-8.77%	LUMN	-7.02%
21.0	PHM	-8.27%	LEN	-6.87%
21.0	FSUGY	-7.88%	AMZN	-6.38%
21.0	MS	-7.85%	ZION	-6.35%
21.0	LW	-7.82%	ELAN	-6.08%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	AVGO	-0.68%	CLF	-0.33%
1.0	IEP	-0.66%	AAP	-0.26%
1.0	BIIB	-0.54%	AMD	-0.26%
1.0	AMD	-0.5%	CZR	-0.24%
1.0	CZR	-0.45%	CSTM	-0.23%
1.0	FSUGY	-0.35%	IEP	-0.23%
1.0	CLF	-0.34%	FSUGY	-0.2%
1.0	AMAT	-0.32%	GT	-0.2%
1.0	CSTM	-0.31%	LW	-0.19%
1.0	LW	-0.24%	ON	-0.18%
1.0	MOS	-0.19%	BIIB	-0.16%
1.0	BHP	-0.19%	MRK	-0.15%
1.0	UAA	-0.18%	CNC	-0.14%
1.0	ON	-0.18%	AMAT	-0.14%
1.0	CNC	-0.15%	KALU	-0.13%
1.0	PHM	-0.15%	MU	-0.11%
1.0	KALU	-0.15%	CVS	-0.11%
1.0	GT	-0.15%	ELAN	-0.1%
1.0	NAVI	-0.14%	MOS	-0.09%
1.0	RIO	-0.14%	LEN	-0.09%
1.0	LEN	-0.13%	OXY	-0.08%
1.0	MRK	-0.13%	GBTC	-0.08%
1.0	CYH	-0.11%	NAVI	-0.08%
1.0	CVS	-0.11%	FCX	-0.08%
1.0	AMC	-0.1%	BALL	-0.08%
1.0	GBTC	-0.1%	LVS	-0.07%
1.0	TEVA	-0.08%	BHP	-0.07%
1.0	NWL	-0.08%	AMC	-0.06%
1.0	AAP	-0.08%	DHI	-0.05%
1.0	BALL	-0.07%	WDC	-0.05%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	IEP	-5.23%	CLF	-2.99%
10.0	AVGO	-4.0%	AAP	-2.79%
10.0	AMD	-3.35%	CSTM	-2.36%
10.0	FSUGY	-2.82%	AMD	-2.19%
10.0	BIIB	-2.75%	IEP	-1.93%
10.0	CLF	-2.74%	LW	-1.74%
10.0	AMAT	-2.46%	FSUGY	-1.74%
10.0	CSTM	-2.33%	ON	-1.71%
10.0	INTC	-2.04%	BIIB	-1.46%
10.0	CZR	-2.01%	MRK	-1.45%
10.0	ON	-2.0%	CZR	-1.36%
10.0	AAP	-1.81%	AMAT	-1.35%
10.0	LEN	-1.65%	BHC	-1.31%
10.0	MRK	-1.52%	LEN	-1.19%
10.0	FIS	-1.49%	OXY	-1.17%
10.0	OXY	-1.33%	WDC	-1.12%
10.0	LW	-1.19%	BALL	-1.09%
10.0	CNC	-1.16%	KALU	-1.04%
10.0	BHC	-1.14%	GT	-0.99%
10.0	CMG	-1.12%	CNC	-0.89%
10.0	KHC	-1.03%	NAVI	-0.84%
10.0	KALU	-0.9%	KHC	-0.79%
10.0	MU	-0.89%	LVS	-0.74%
10.0	GBTC	-0.87%	PRGO	-0.73%
10.0	BHP	-0.83%	ADBE	-0.69%
10.0	ADBE	-0.78%	ELAN	-0.62%
10.0	PRGO	-0.78%	CMG	-0.61%
10.0	BALL	-0.76%	DHI	-0.59%
10.0	UAA	-0.7%	BHP	-0.55%
10.0	NAVI	-0.67%	PEP	-0.53%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	IEP	-11.6%	AAP	-5.69%
21.0	INTC	-6.6%	CLF	-5.39%
21.0	AVGO	-6.35%	CSTM	-4.76%
21.0	CLF	-6.24%	IEP	-3.9%
21.0	AMD	-5.73%	AMD	-3.67%
21.0	CSTM	-5.15%	LW	-3.5%
21.0	FSUGY	-5.09%	FSUGY	-3.35%
21.0	BIIB	-4.81%	ON	-3.27%
21.0	ON	-4.55%	OXY	-3.26%
21.0	AMAT	-4.43%	BIIB	-2.96%
21.0	OXY	-4.33%	MRK	-2.95%
21.0	AAP	-3.74%	WDC	-2.95%
21.0	MRK	-3.4%	INTC	-2.76%
21.0	CNC	-2.88%	AMAT	-2.45%
21.0	GT	-2.75%	GT	-2.44%
21.0	LEN	-2.67%	CNC	-2.16%
21.0	WDC	-2.59%	BALL	-2.05%
21.0	BHC	-2.55%	KALU	-1.99%
21.0	CZR	-2.47%	CZR	-1.96%
21.0	MOS	-2.34%	LEN	-1.87%
21.0	KHC	-2.32%	BHC	-1.79%
21.0	LW	-2.24%	FCX	-1.72%
21.0	CMG	-2.01%	KHC	-1.62%
21.0	BHP	-1.91%	NAVI	-1.37%
21.0	FCX	-1.9%	MOS	-1.3%
21.0	MU	-1.83%	CMG	-1.12%
21.0	KALU	-1.51%	CDNS	-1.09%
21.0	BALL	-1.47%	BHP	-1.05%
21.0	NAVI	-1.4%	PEP	-0.95%
21.0	QCOM	-1.34%	MU	-0.93%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	IEP	-46.45%	CSTM	-19.21%
63.0	CSTM	-25.13%	CLF	-16.59%
63.0	AVGO	-22.45%	IEP	-16.25%
63.0	AMD	-21.73%	AAP	-15.66%
63.0	CLF	-21.64%	BIIB	-12.47%
63.0	INTC	-20.22%	FSUGY	-10.91%
63.0	FSUGY	-17.95%	LW	-10.84%
63.0	ON	-16.43%	AMD	-10.73%
63.0	BIIB	-16.17%	INTC	-10.4%
63.0	AAP	-15.42%	MRK	-10.22%
63.0	AMAT	-14.43%	ELAN	-9.54%
63.0	MRK	-13.23%	ON	-8.94%
63.0	MU	-12.37%	GT	-8.68%
63.0	OXY	-11.62%	KALU	-8.6%
63.0	ELAN	-11.57%	OXY	-8.52%
63.0	GT	-10.04%	FCX	-8.02%
63.0	BHP	-9.38%	MU	-7.75%
63.0	PCG	-9.37%	AMAT	-7.51%
63.0	QCOM	-8.42%	BALL	-7.39%
63.0	FCX	-7.78%	WDC	-6.98%
63.0	LW	-7.4%	KHC	-5.27%
63.0	KALU	-7.12%	LEN	-5.22%
63.0	WDC	-7.06%	CNC	-5.02%
63.0	KHC	-6.9%	PEP	-4.49%
63.0	MOS	-6.86%	BHP	-4.48%
63.0	BALL	-6.78%	PRGO	-4.17%
63.0	GSK	-6.17%	QCOM	-4.13%
63.0	PEP	-5.26%	MOS	-3.98%
63.0	PRGO	-4.57%	CMG	-3.87%
63.0	CMG	-4.47%	GSK	-3.59%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	IEP	-73.57%	CSTM	-38.71%
126.0	CSTM	-50.07%	AAP	-33.51%
126.0	CLF	-45.64%	IEP	-31.23%
126.0	AVGO	-42.11%	CLF	-27.1%
126.0	FSUGY	-39.25%	BIIB	-26.43%
126.0	INTC	-37.77%	MRK	-20.69%
126.0	ON	-37.16%	AMD	-17.72%
126.0	AAP	-31.94%	OXY	-17.67%
126.0	AMD	-30.93%	FSUGY	-16.56%
126.0	ELAN	-28.61%	CNC	-16.54%
126.0	MRK	-28.04%	INTC	-16.51%
126.0	BIIB	-24.69%	ELAN	-16.48%
126.0	AMAT	-23.24%	ON	-15.98%
126.0	MU	-21.97%	AMAT	-15.84%
126.0	MOS	-20.78%	BALL	-12.68%
126.0	OXY	-20.65%	KALU	-12.45%
126.0	GT	-19.7%	GSK	-12.32%
126.0	CNC	-17.54%	FCX	-12.0%
126.0	WDC	-17.53%	LW	-11.63%
126.0	QCOM	-17.46%	MU	-11.6%
126.0	BHP	-17.32%	GT	-11.43%
126.0	ADBE	-17.11%	WDC	-11.02%
126.0	GSK	-17.08%	KHC	-10.58%
126.0	KHC	-13.99%	LEN	-10.1%
126.0	BALL	-13.84%	AMC	-9.99%
126.0	FCX	-13.8%	PEP	-9.18%
126.0	AMC	-12.44%	QCOM	-8.99%
126.0	BUD	-10.9%	ADBE	-8.8%
126.0	KALU	-9.97%	PRGO	-8.48%
126.0	PEP	-9.94%	AZN	-8.36%

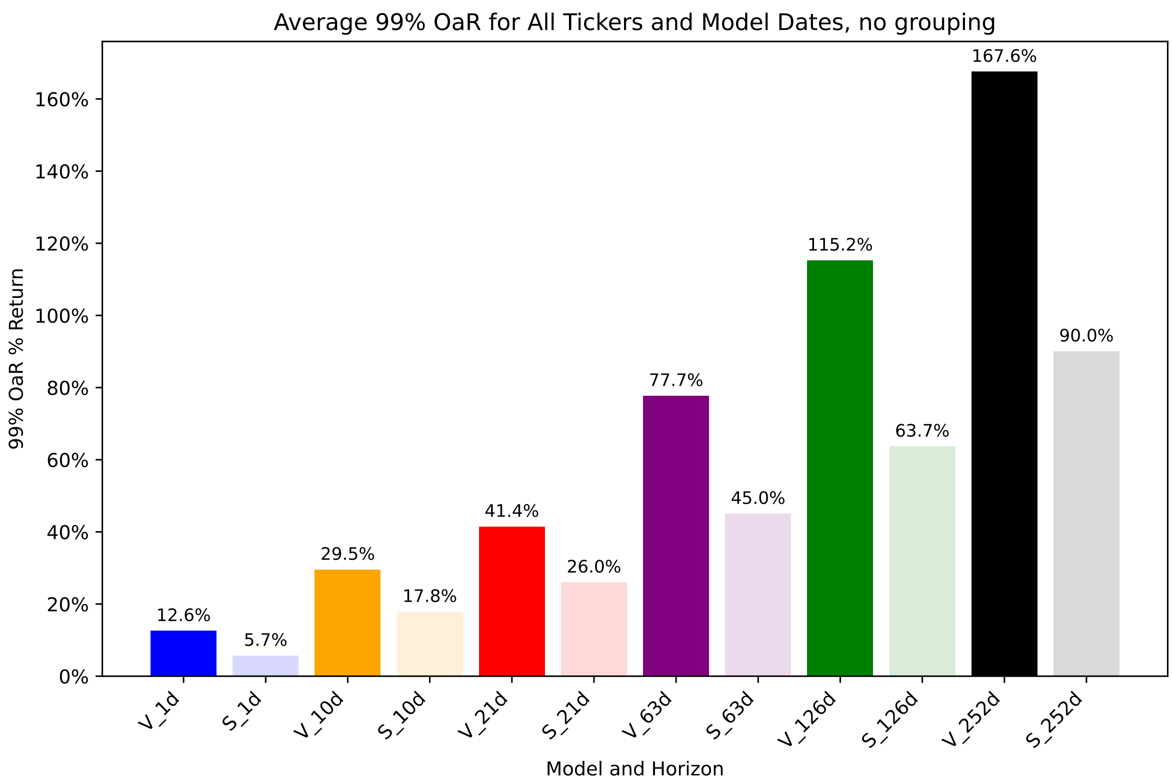
99% Opportunity At Risk (OaR)

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.

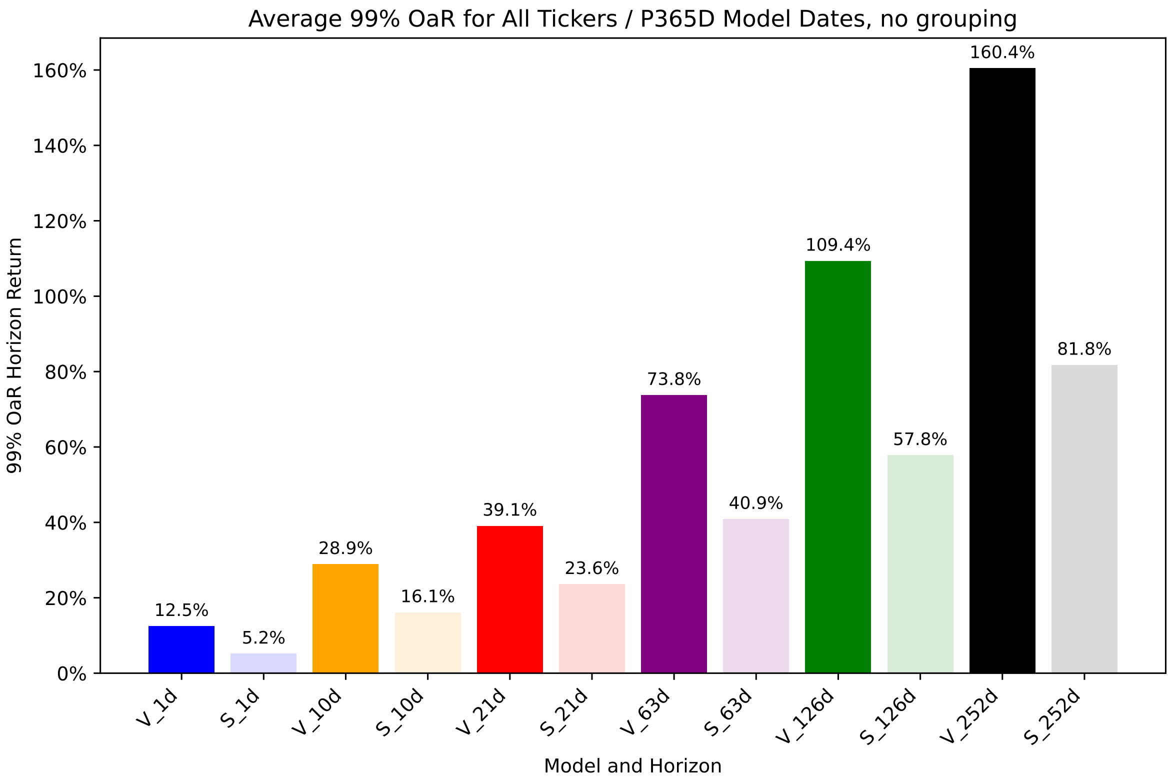
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28



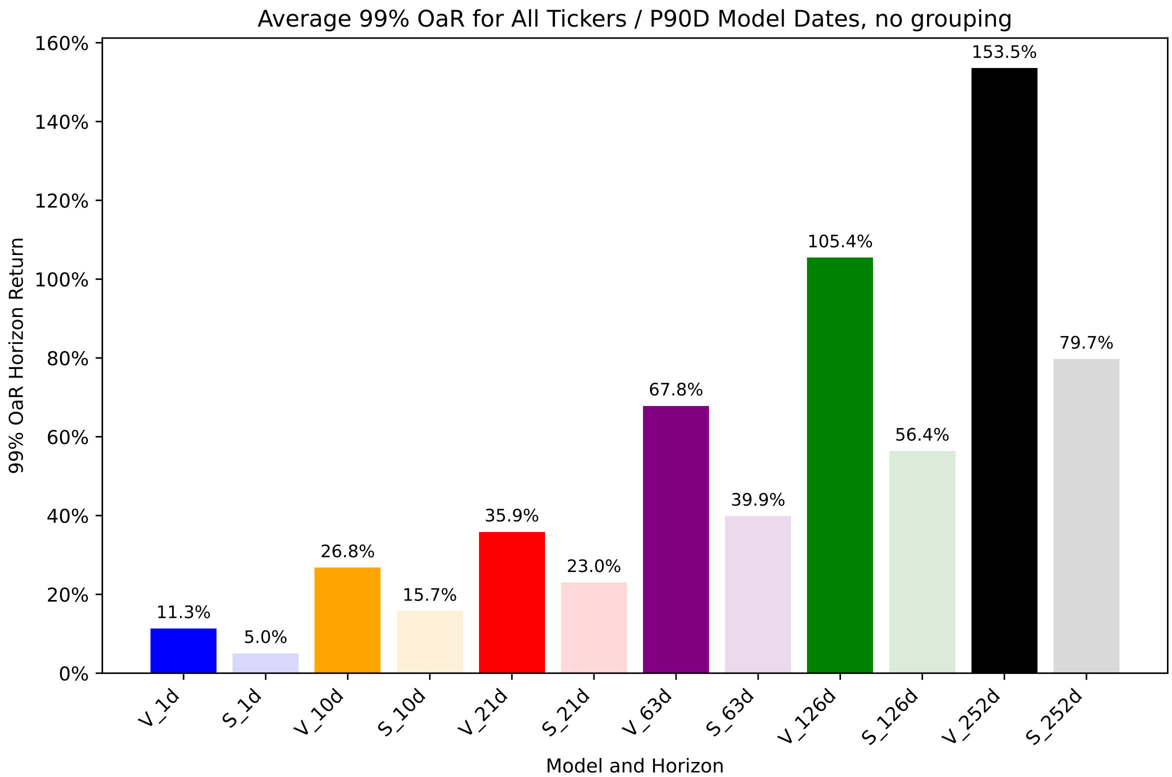
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2024-04-02 through 2025-03-28



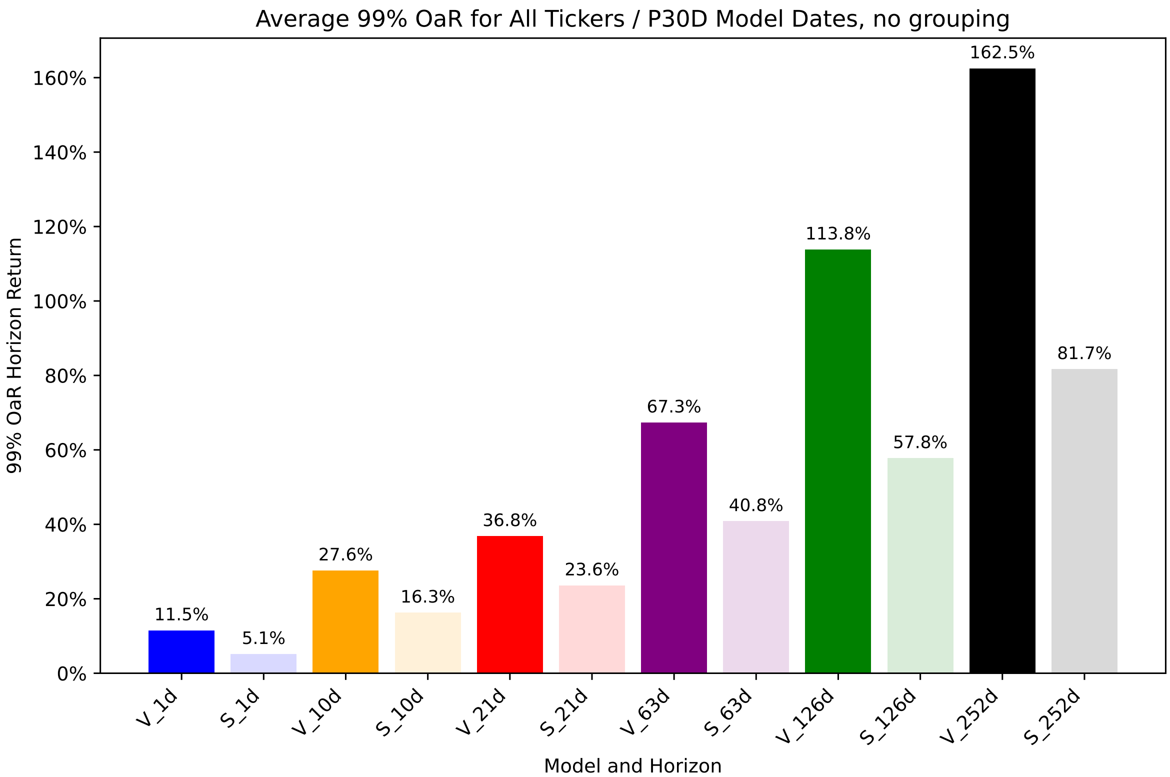
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-01-02 through 2025-03-28



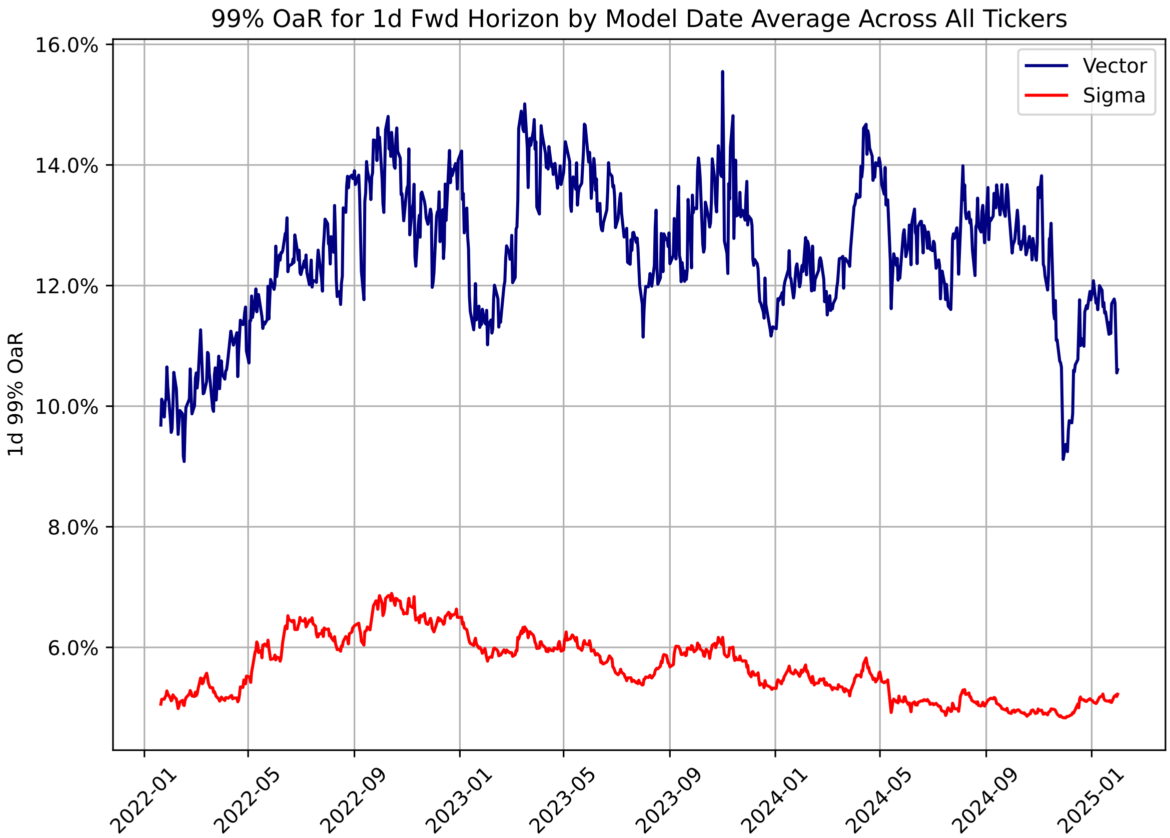
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-03-03 through 2025-03-28

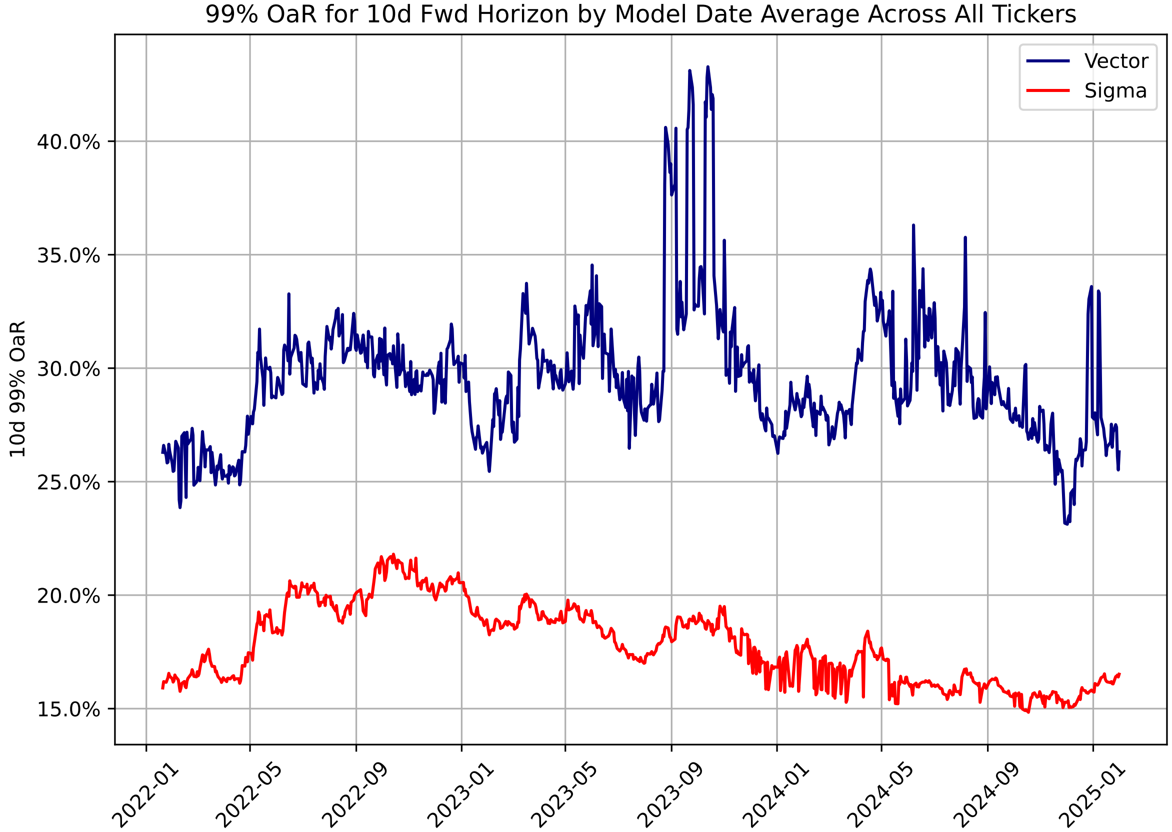

Average 99% OaR for All Tickers / P30D Model Dates, no grouping
99% OaR Horizon Return
Model and Horizon
0%
20%
40%
60%
80%
100%
120%
140%
160%
11.5%
5.1%
27.6%
16.3%
36.8%
23.6%
67.3%
40.8%
113.8%
57.8%
162.5%
81.7%
V_1d
S_1d
V_10d
S_10d
V_21d
S_21d
V_63d
S_63d
V_126d
S_126d
V_252d
S_252d

Daily Levels

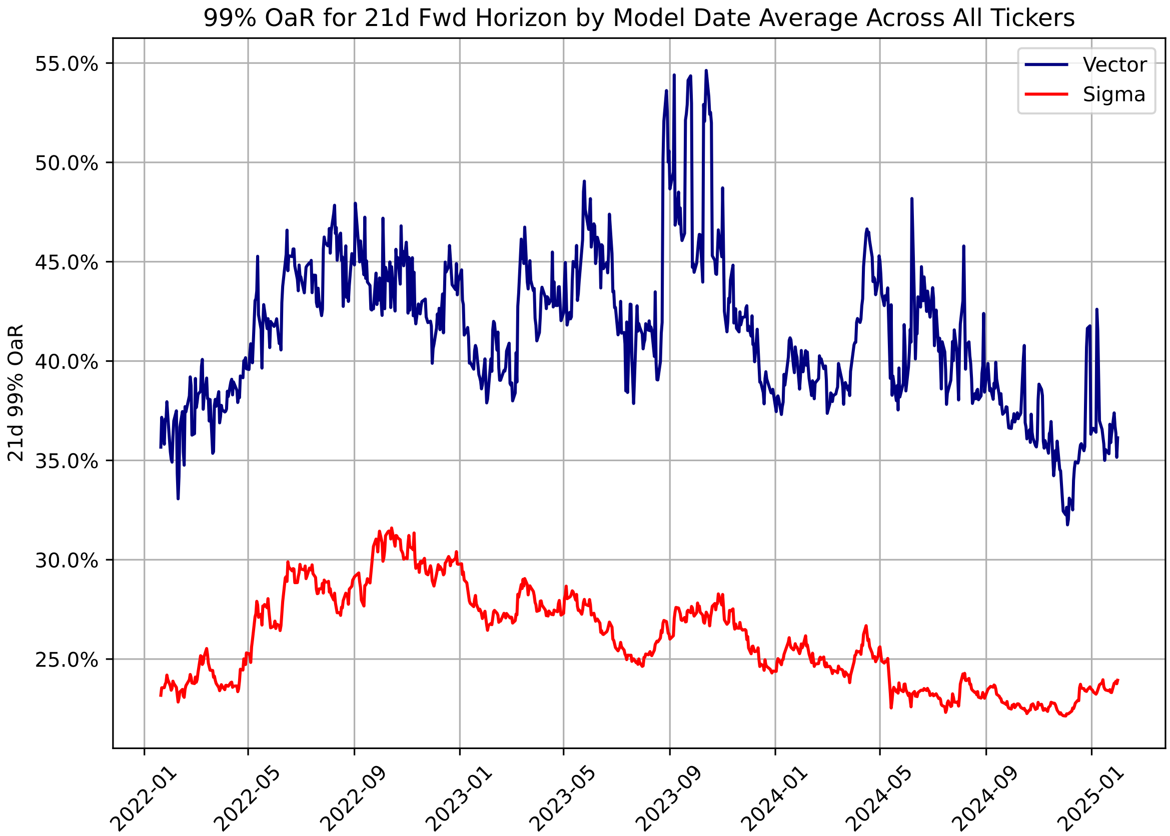
1d Horizon



10d Horizon

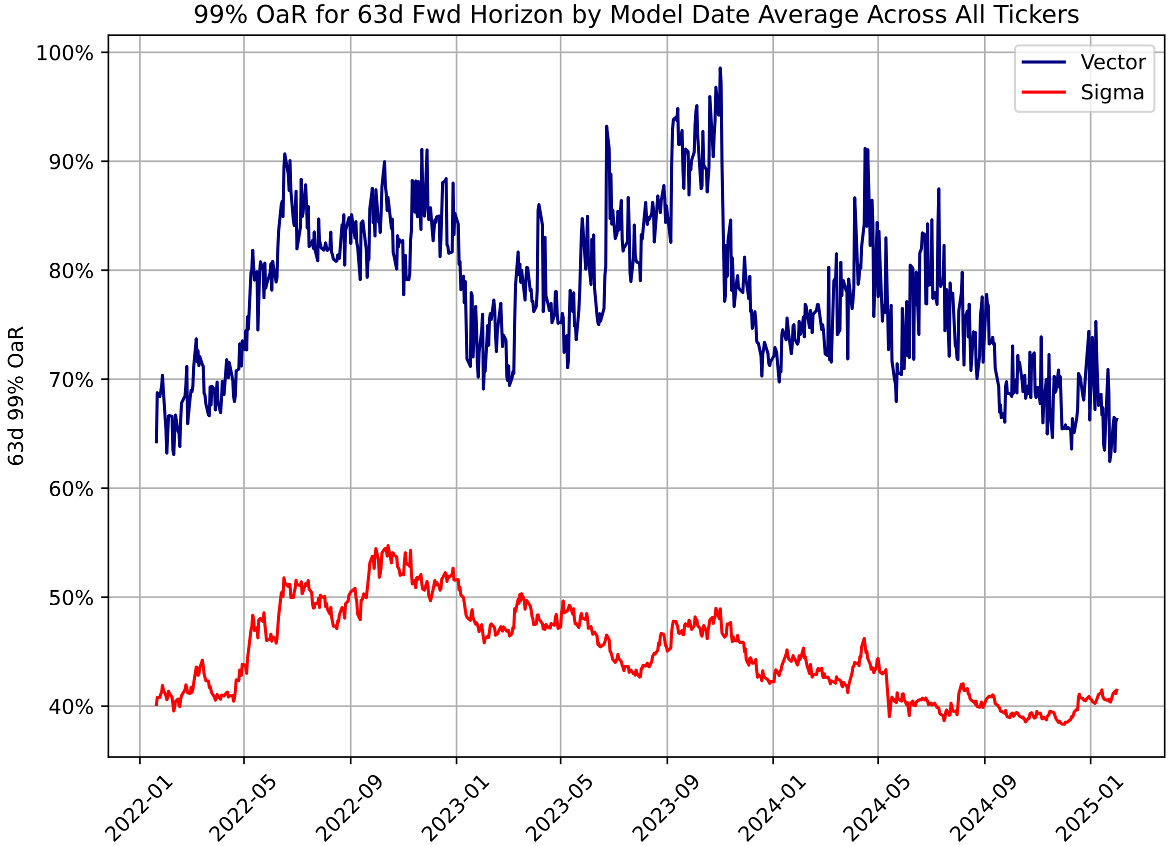

99% OaR for 10d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
10d 99% OaR
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

21d Horizon

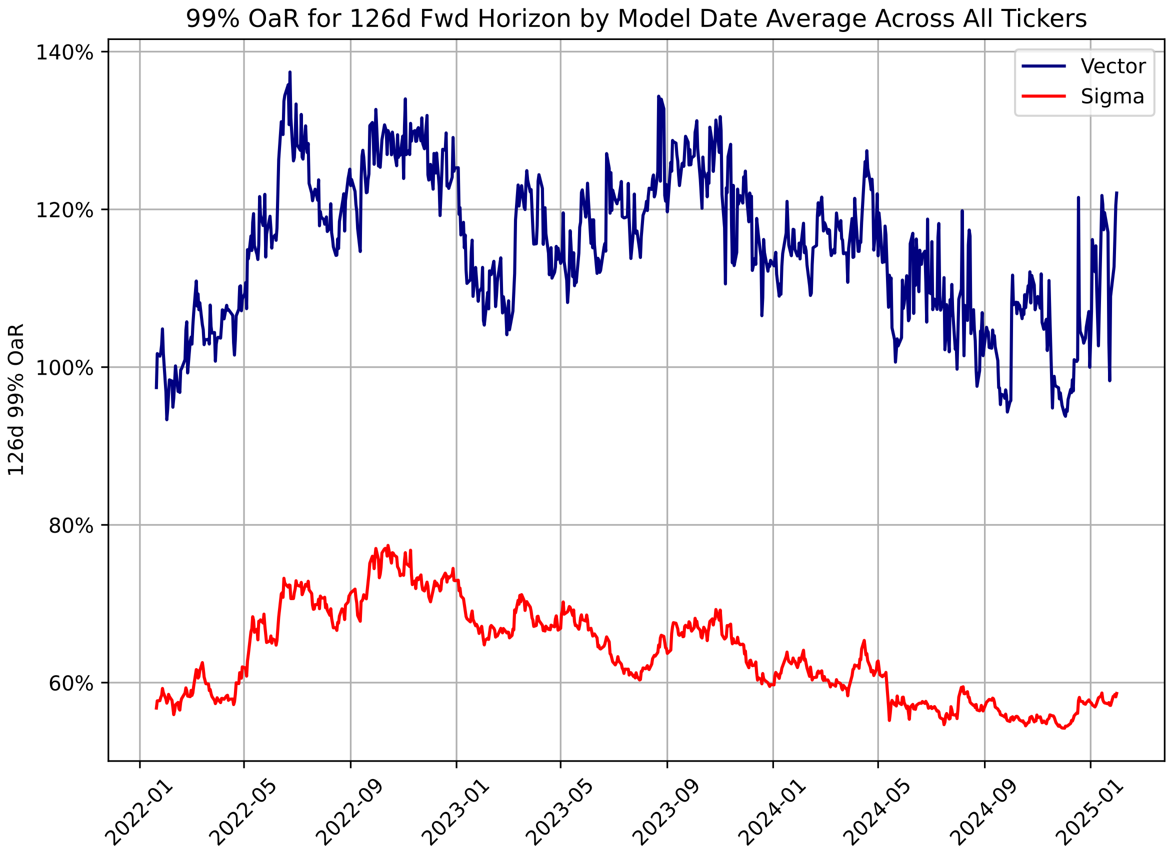


99% OaR for 21d Fwd Horizon by Model Date Average Across All Tickers
21d 99% OaR
55.0%
50.0%
45.0%
40.0%
35.0%
30.0%
25.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
Vector
Sigma

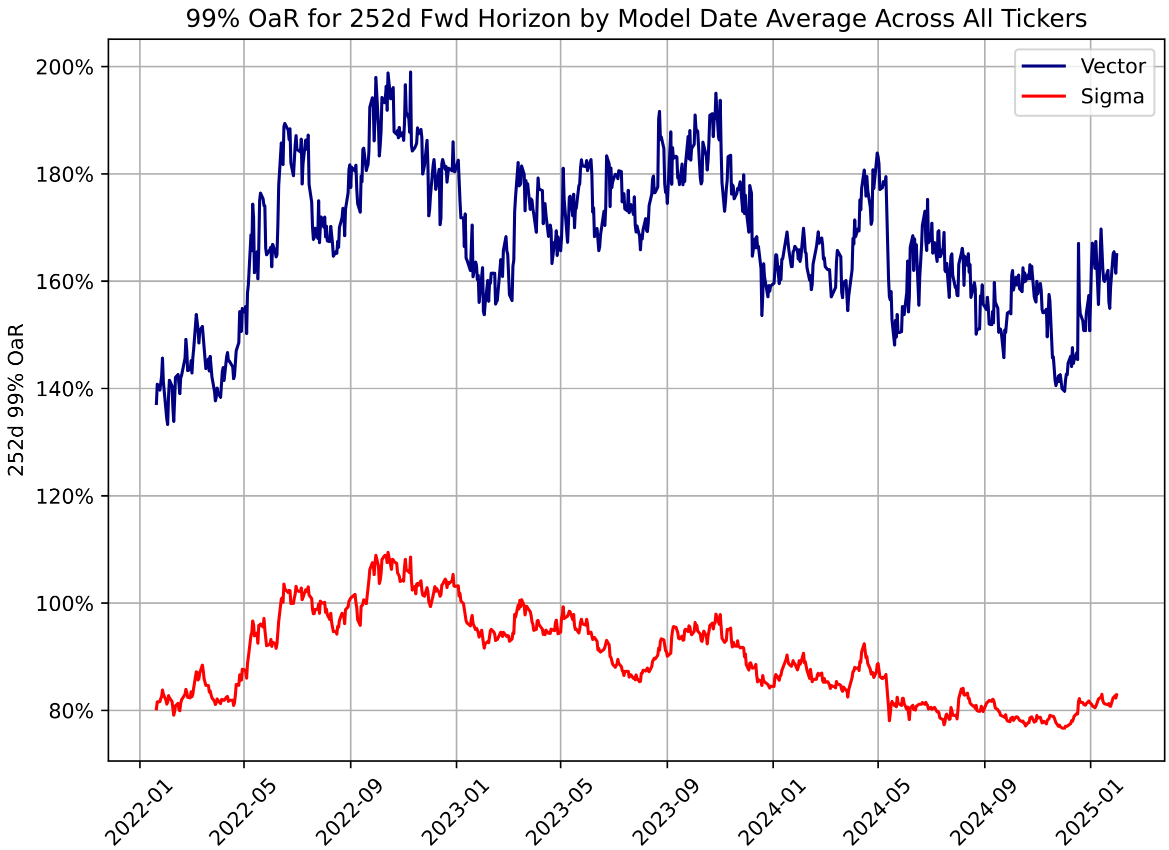
63d Horizon


99% OaR for 63d Fwd Horizon by Model Date Average Across All Tickers
63d 99% OaR
100%
90%
80%
70%
60%
50%
40%
Vector
Sigma
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

126d Horizon



252d Horizon



Performance Summary

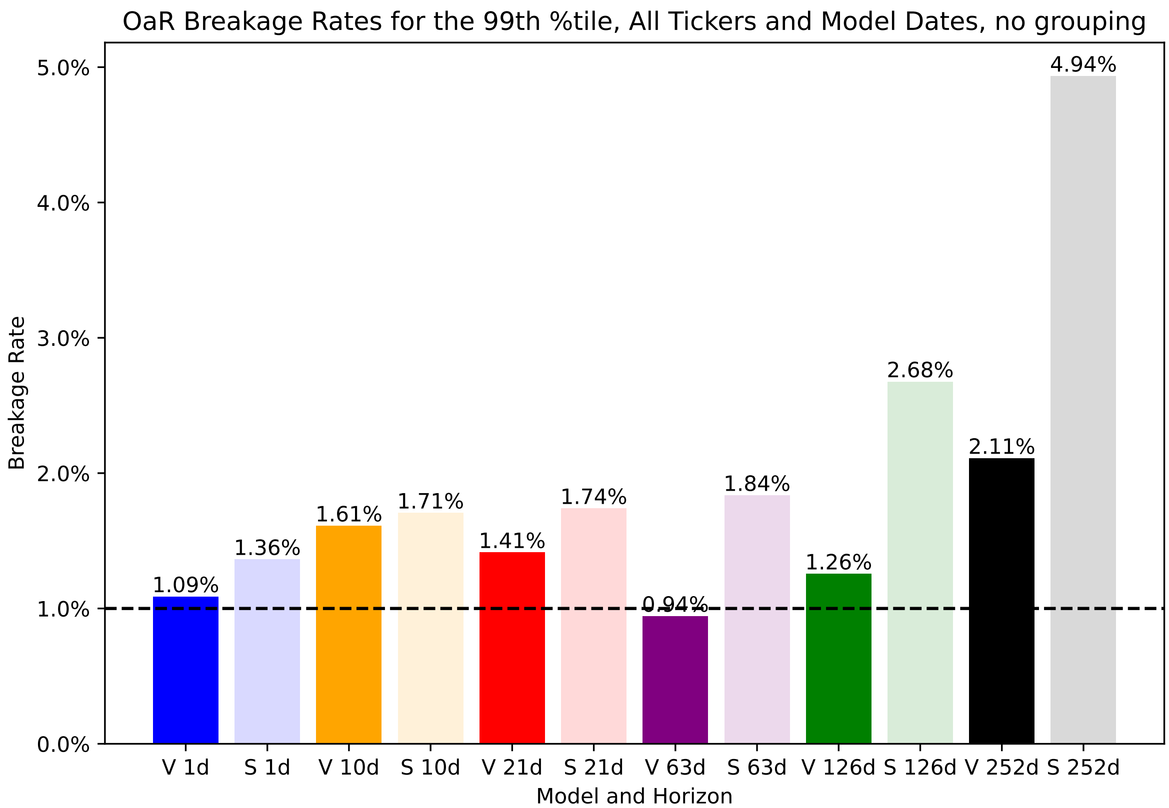
Here we compare the performance of 99% OaR estimates generated by the Vector Model ("V", presented with dark shading) with those generated by Sigma ("S", presented with light shading). This comparison is made on the basis of breakage rates and Return on Long OaR based Capital (ROLOBC), presenting the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

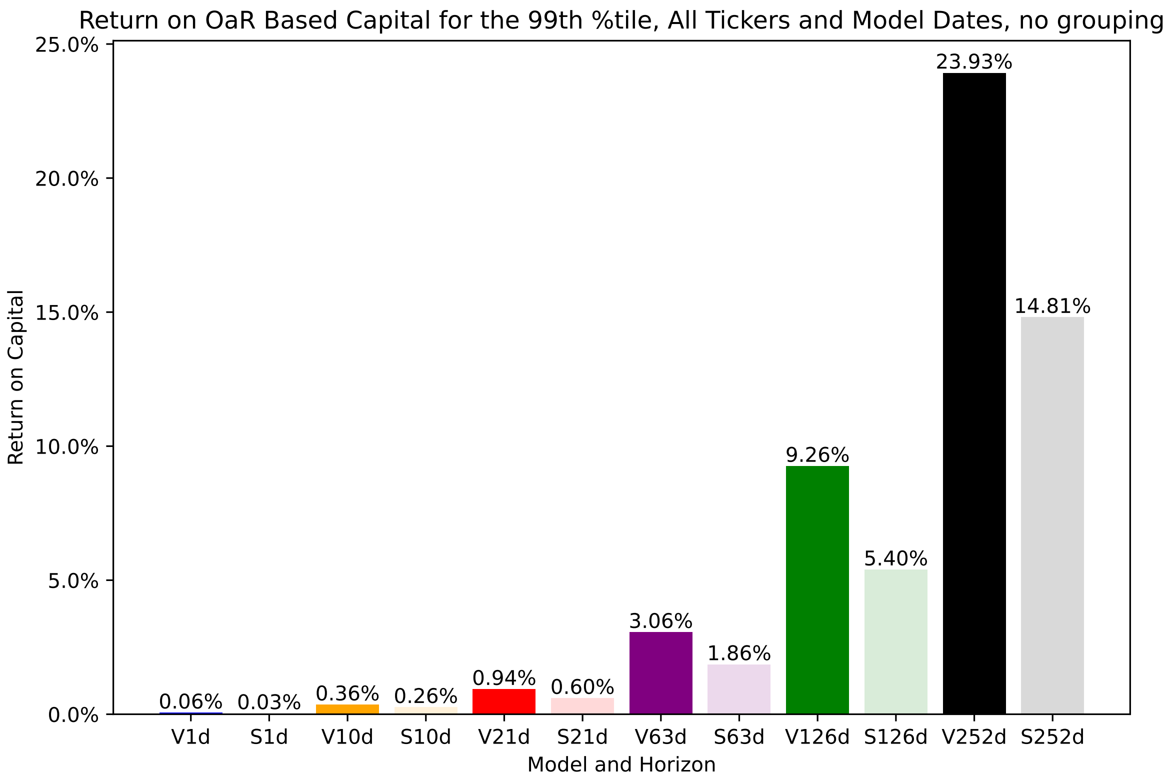
ROLOBC comparisons are made on the basis of outright ROLOBC and the alpha of Vector Model ROLOBC to underlying ticker returns (the proxy for Sigma ROLOBC). As discussed in the introduction, ROLOBC for Sigma is presumed to be the return of the underlying ticker, and for the Vector Model it is based on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

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 2025-03-28


OaR Breakage Rates for the 99th %tile, All Tickers and Model Dates, no grouping
Breakage Rate
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
1.09%
1.36%
1.61%
1.71%
1.41%
1.74%
0.94%
1.84%
1.26%
2.68%
2.11%
4.94%
V 1d
S 1d
V 10d
S 10d
V 21d
S 21d
V 63d
S 63d
V 126d
S 126d
V 252d
S 252d
Model and Horizon



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

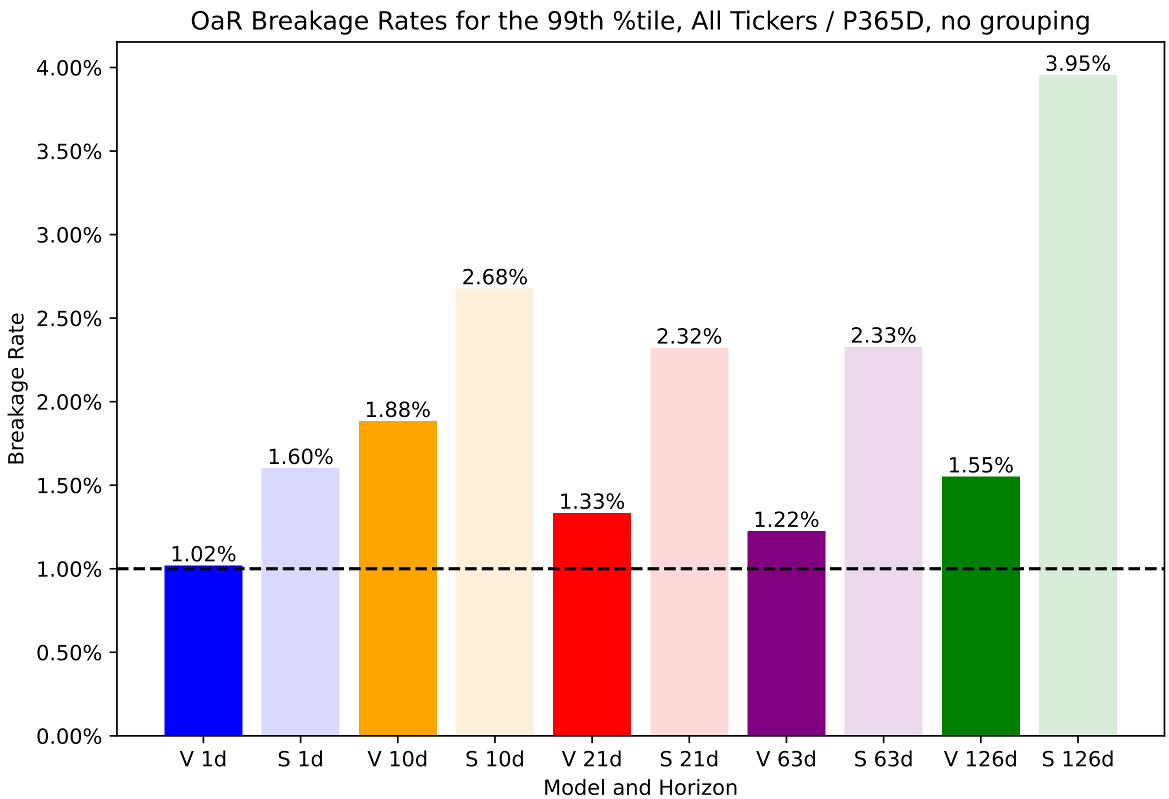
	1d	10d	21d	63d	126d	252d
intercept	0.00%	0.02%	0.11%	0.27%	0.50%	1.35%
intercept_p_value	66.64%	32.14%	0.01%	0.00%	0.00%	0.00%
slope	177.60%	145.90%	150.20%	163.71%	172.70%	163.00%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

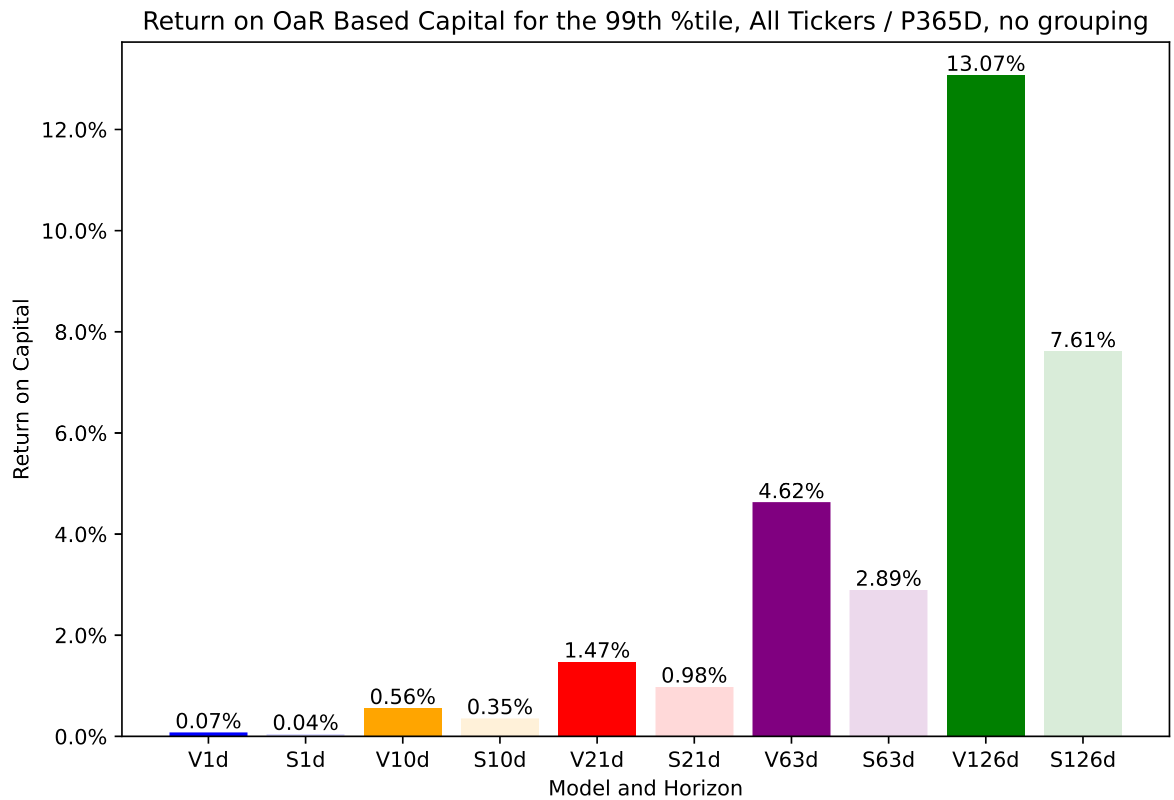
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

	1d	10d	21d	63d	126d	252d
intercept	0.00%	-0.02%	0.02%	-0.34%	-1.00%	-0.72%
intercept_p_value	48.44%	19.51%	13.88%	7.38%	10.48%	16.36%
slope	183.76%	150.35%	150.19%	158.18%	172.14%	180.14%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%

Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2024-04-02 through 2025-03-28





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

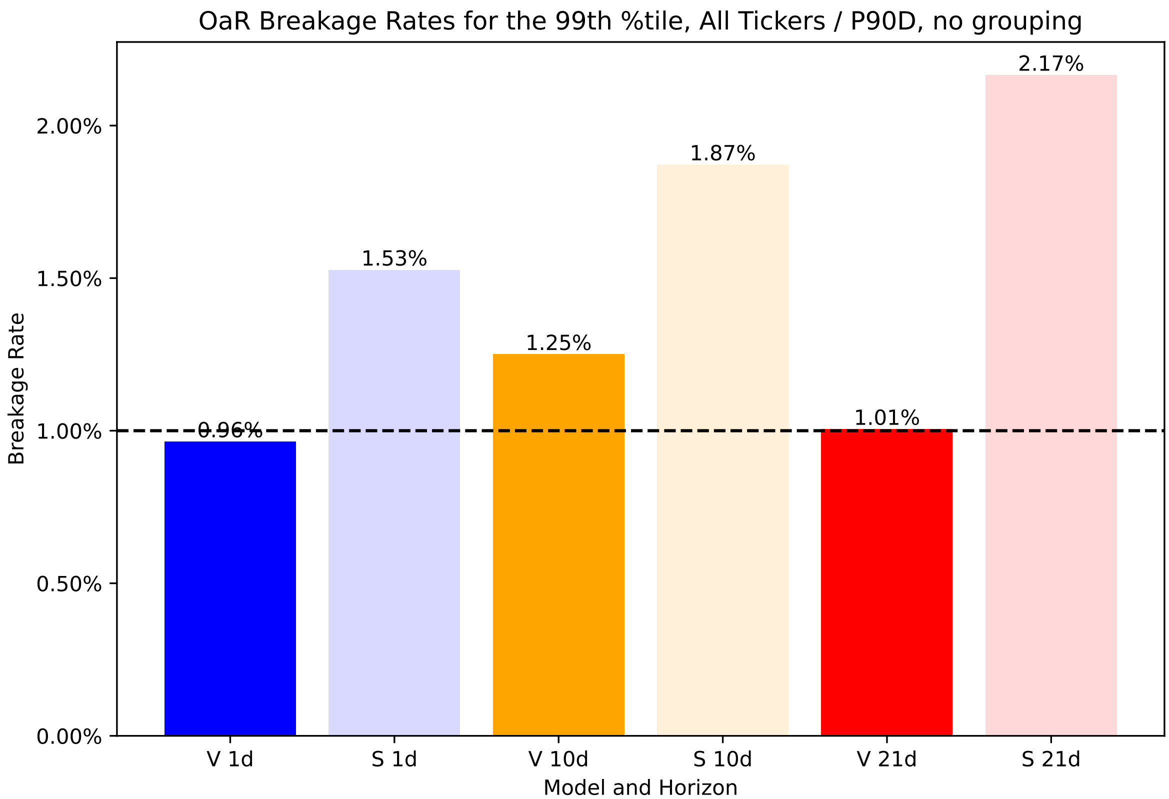
	1d	10d	21d	63d	126d
intercept	0.00%	0.06%	0.02%	-0.32%	-0.71%
intercept_p_value	79.22%	11.40%	78.20%	0.16%	0.01%
slope	190.27%	162.78%	165.99%	187.63%	194.15%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

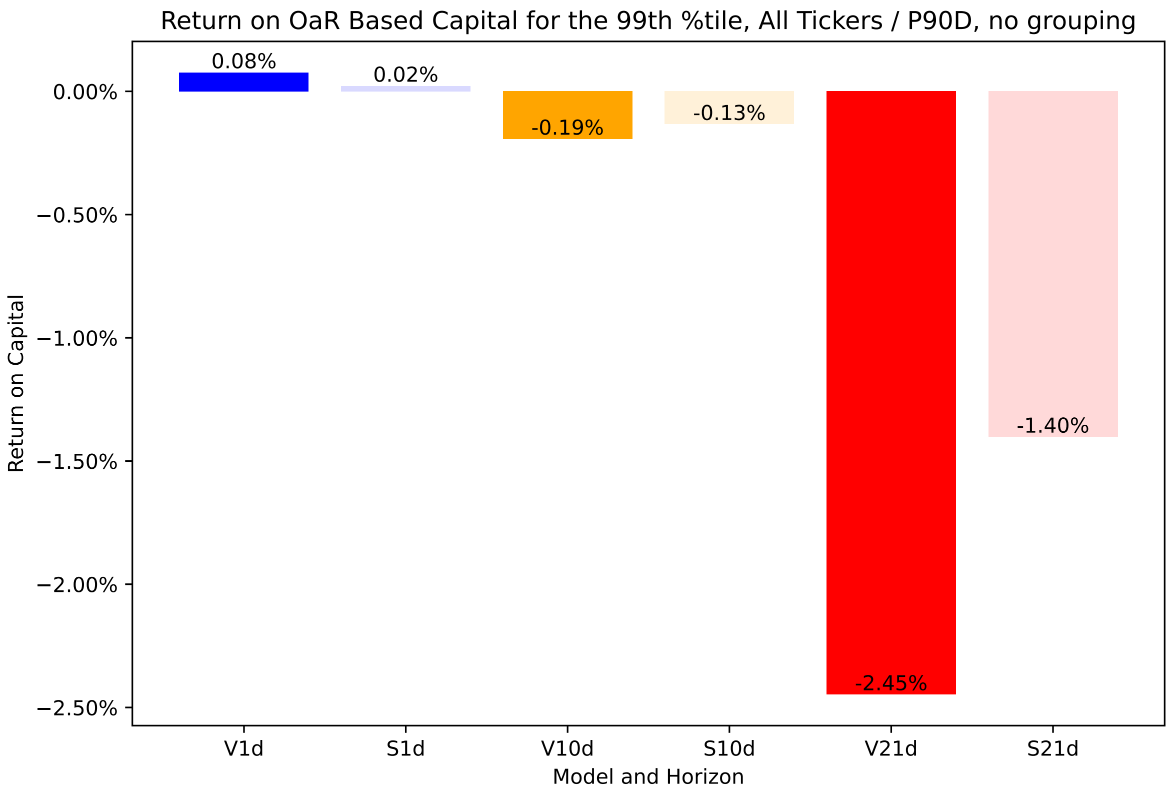
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

	1d	10d	21d	63d	126d
intercept	0.02%	0.08%	0.18%	0.25%	-0.05%
intercept_p_value	45.61%	19.32%	12.40%	14.95%	17.51%
slope	198.00%	162.56%	159.03%	165.91%	180.01%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-01-02 through 2025-03-28



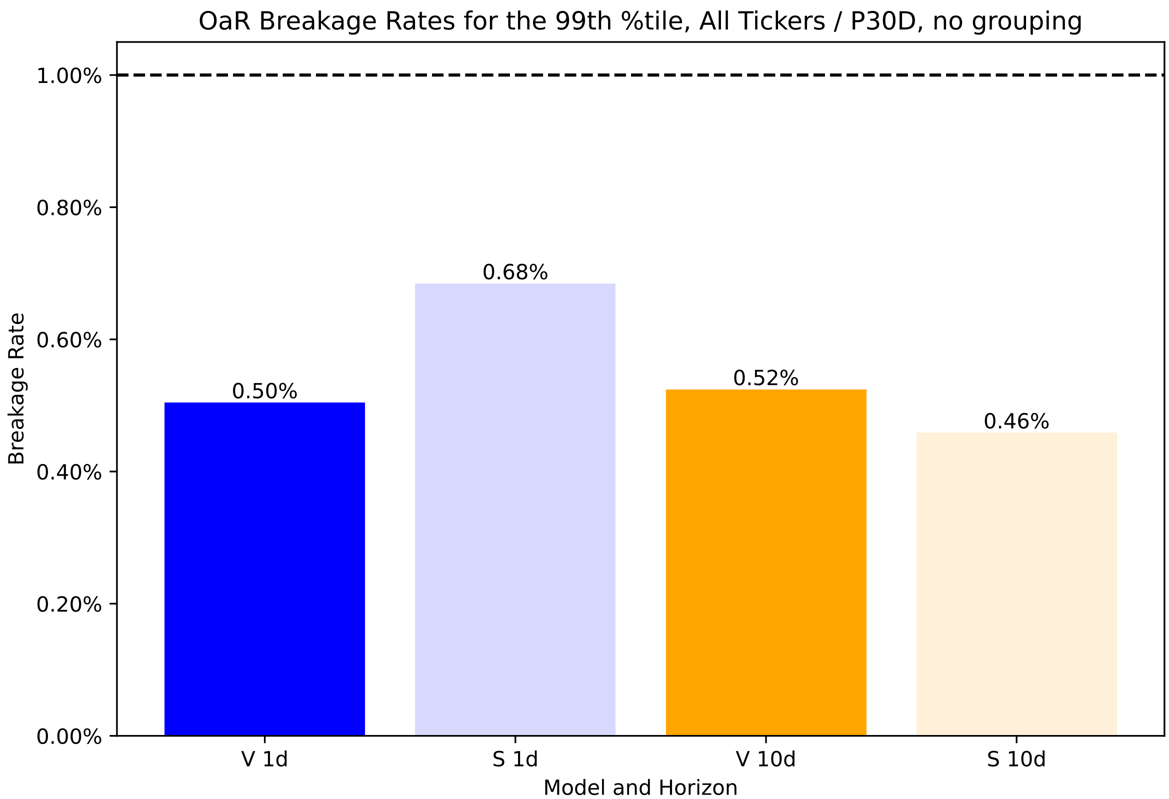


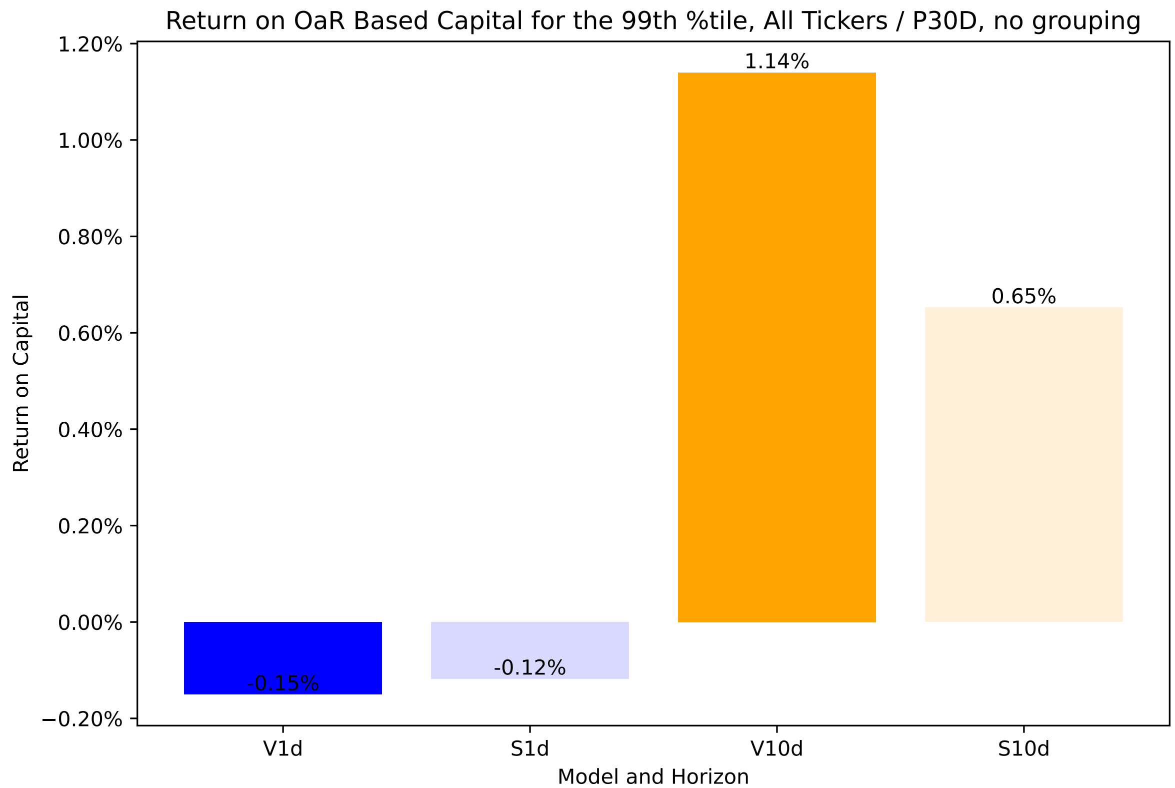

```
Alpha (intercept) and Beta (slope) of ROLOBC regressed upon corresponding
actual returns across TMD's:
                       1d      10d      21d
intercept            0.03%    0.00%   -0.34%
intercept_p_value   15.73%   94.43%    0.01%
slope              187.05%  155.72%  153.94%
slope_p_value        0.00%    0.00%    0.00%


Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon
corresponding actual returns, by ticker across Model Dates:
                       1d      10d      21d
intercept            0.02%    0.02%    0.06%
intercept_p_value   46.22%   21.69%   27.94%
slope              198.83%  161.06%  158.99%
slope_p_value        0.00%    0.00%    0.00%
```

Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-03-03 through 2025-03-28





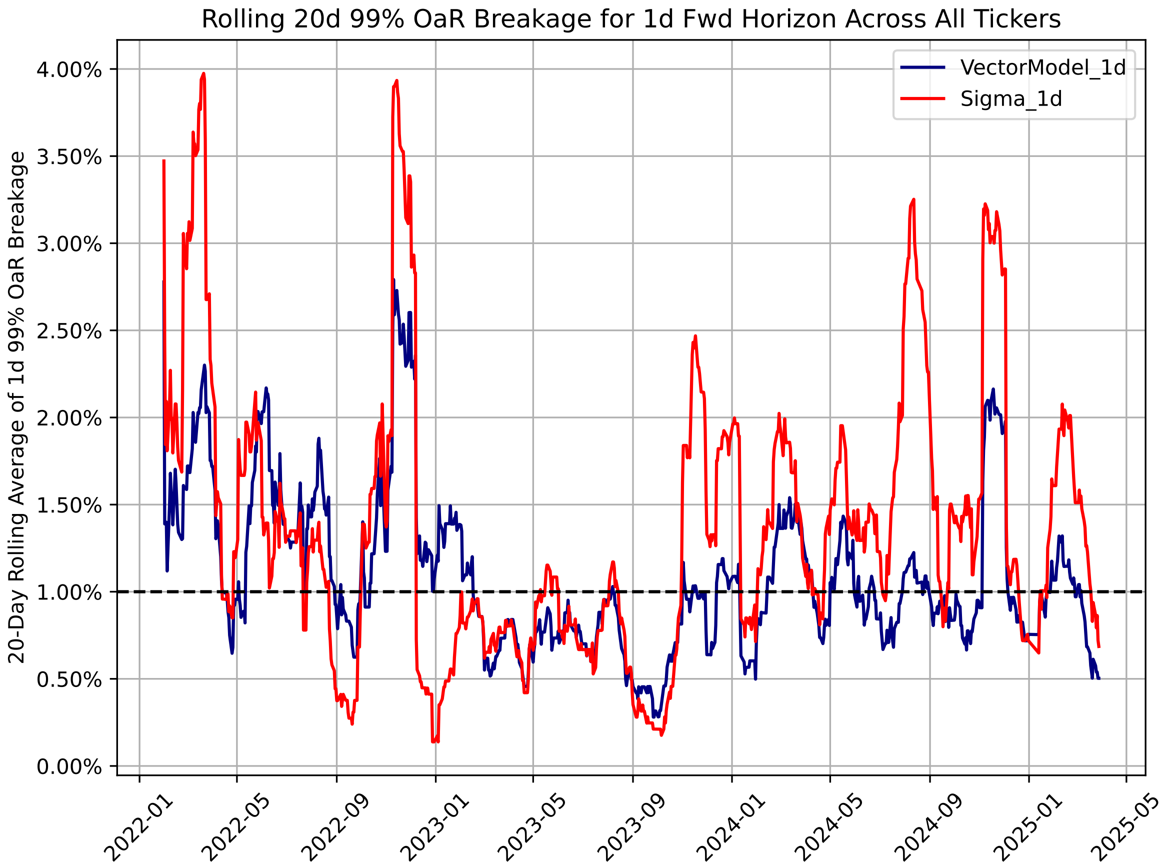

```
Alpha (intercept) and Beta (slope) of ROLOBC regressed upon corresponding
actual returns across TMD's:
                       1d      10d
intercept            0.06%    0.11%
intercept_p_value   10.33%   25.48%
slope              179.00%  153.39%
slope_p_value        0.00%    0.00%
```

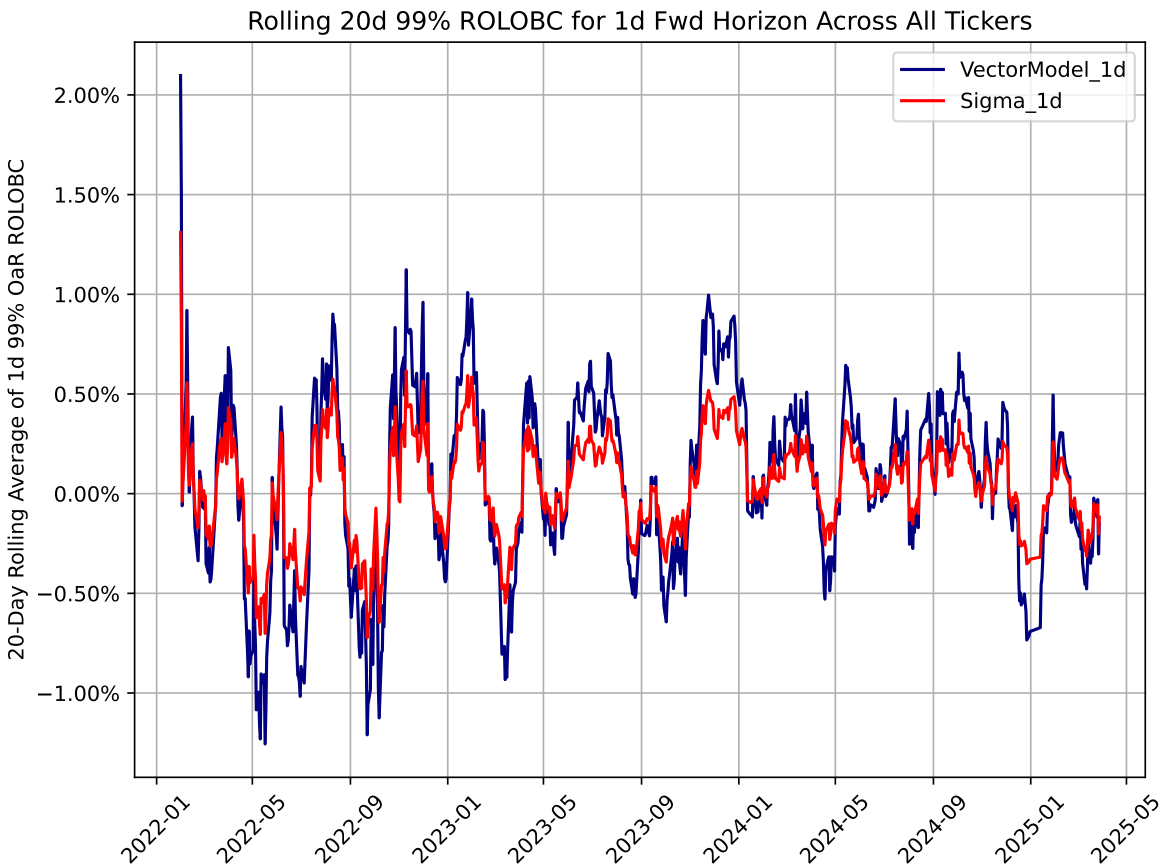
```
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon
corresponding actual returns, by ticker across Model Dates:
                       1d      10d
intercept            0.03%   -0.01%
intercept_p_value   45.92%   35.21%
slope              196.43%  158.07%
slope_p_value        0.00%    0.66%
```

Rolling Performance

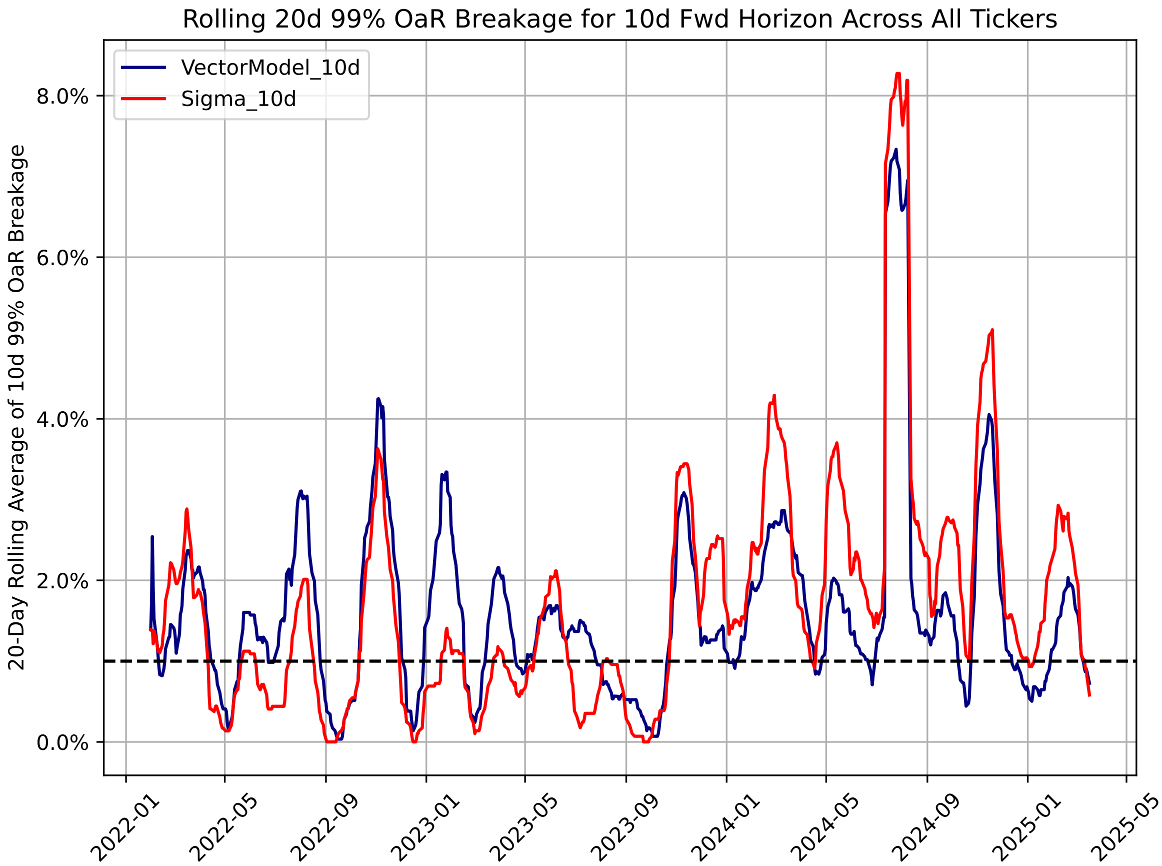
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statitics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

1d Horizon

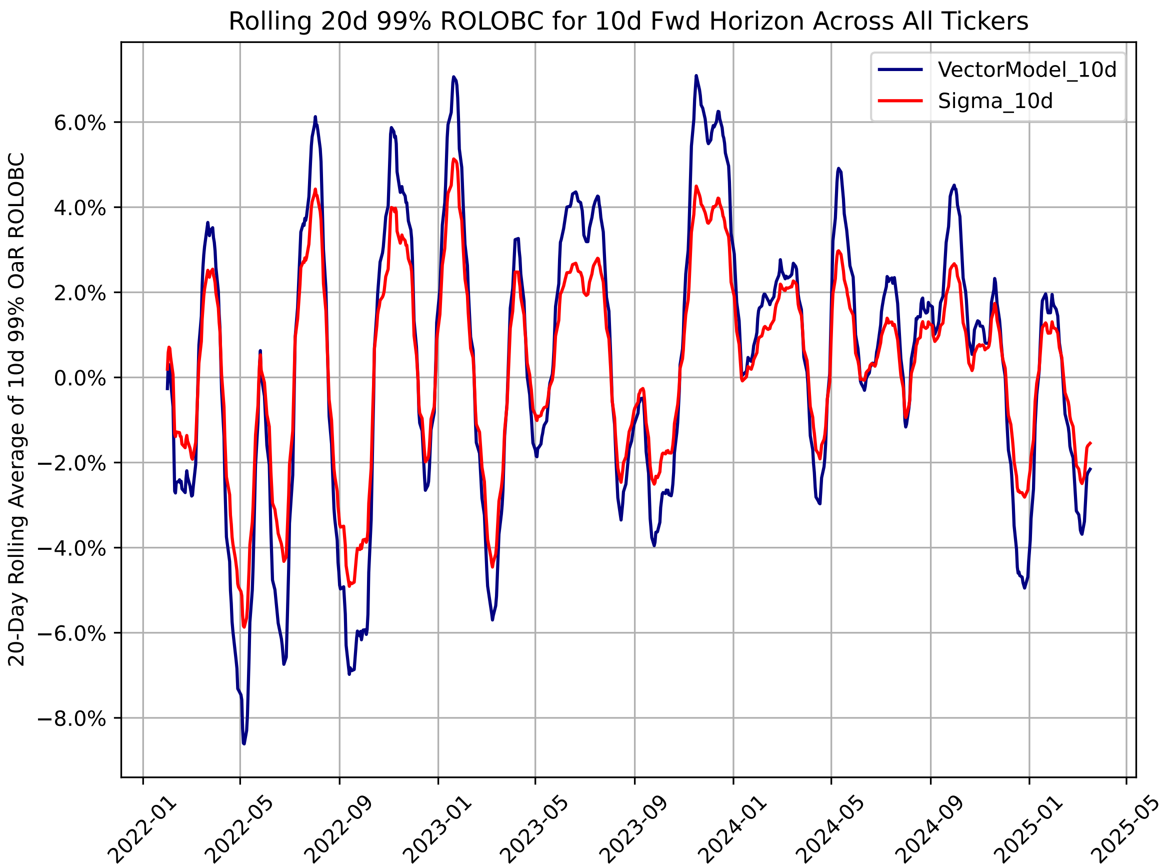



Rolling 20d 99% ROLOBC for 1d Fwd Horizon Across All Tickers
VectorModel_1d
Sigma_1d
20-Day Rolling Average of 1d 99% OaR ROLOBC
2.00%
1.50%
1.00%
0.50%
0.00%
−0.50%
−1.00%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

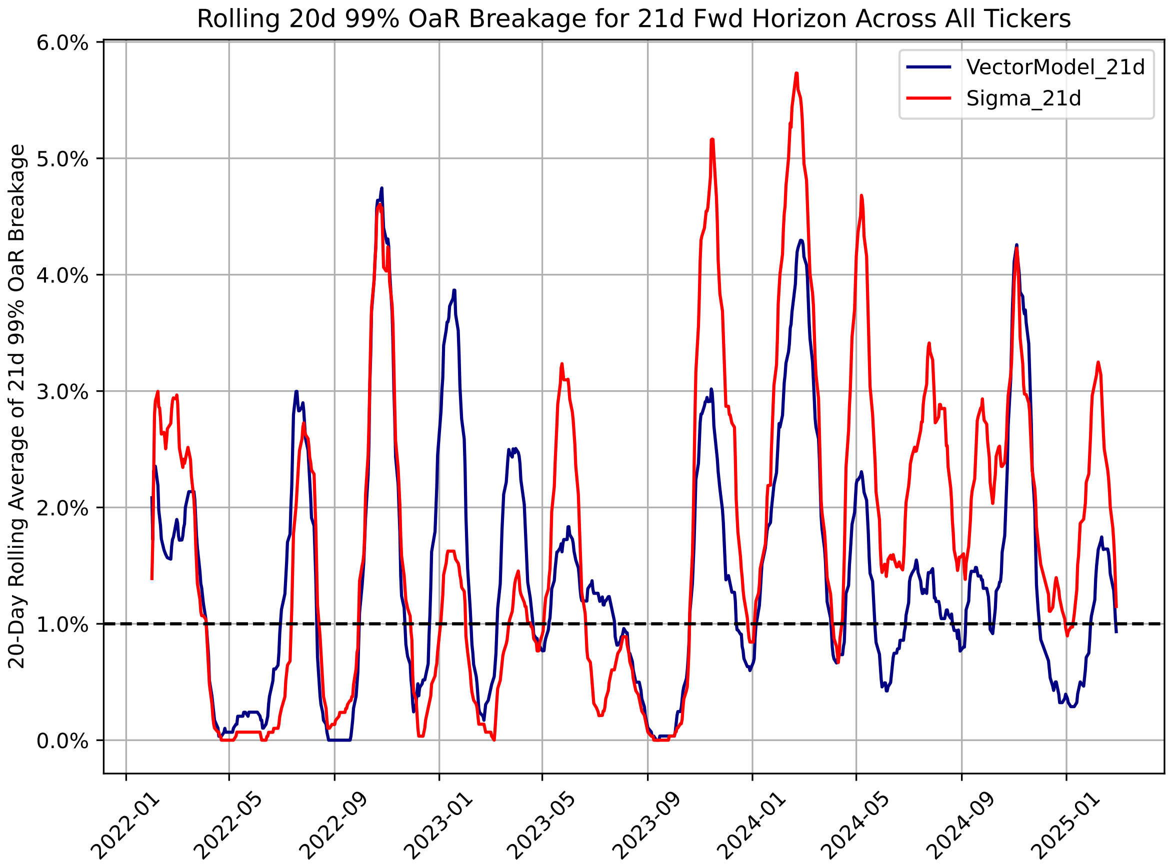
10d Horizon



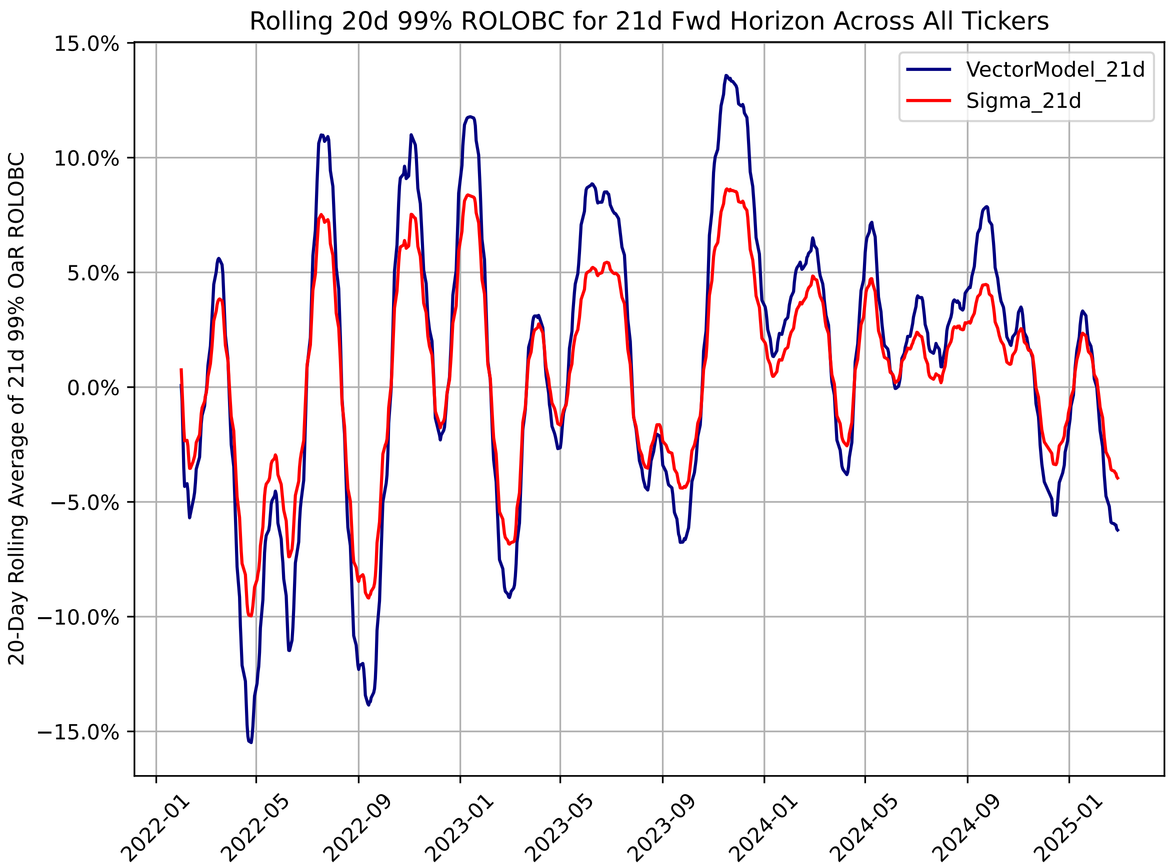
Rolling 20d 99% OaR Breakage for 10d Fwd Horizon Across All Tickers
VectorModel_10d
Sigma_10d
20-Day Rolling Average of 10d 99% OaR Breakage
8.0%
6.0%
4.0%
2.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05


Rolling 20d 99% ROLOBC for 10d Fwd Horizon Across All Tickers
VectorModel_10d
Sigma_10d
20-Day Rolling Average of 10d 99% OaR ROLOBC
6.0%
4.0%
2.0%
0.0%
−2.0%
−4.0%
−6.0%
−8.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

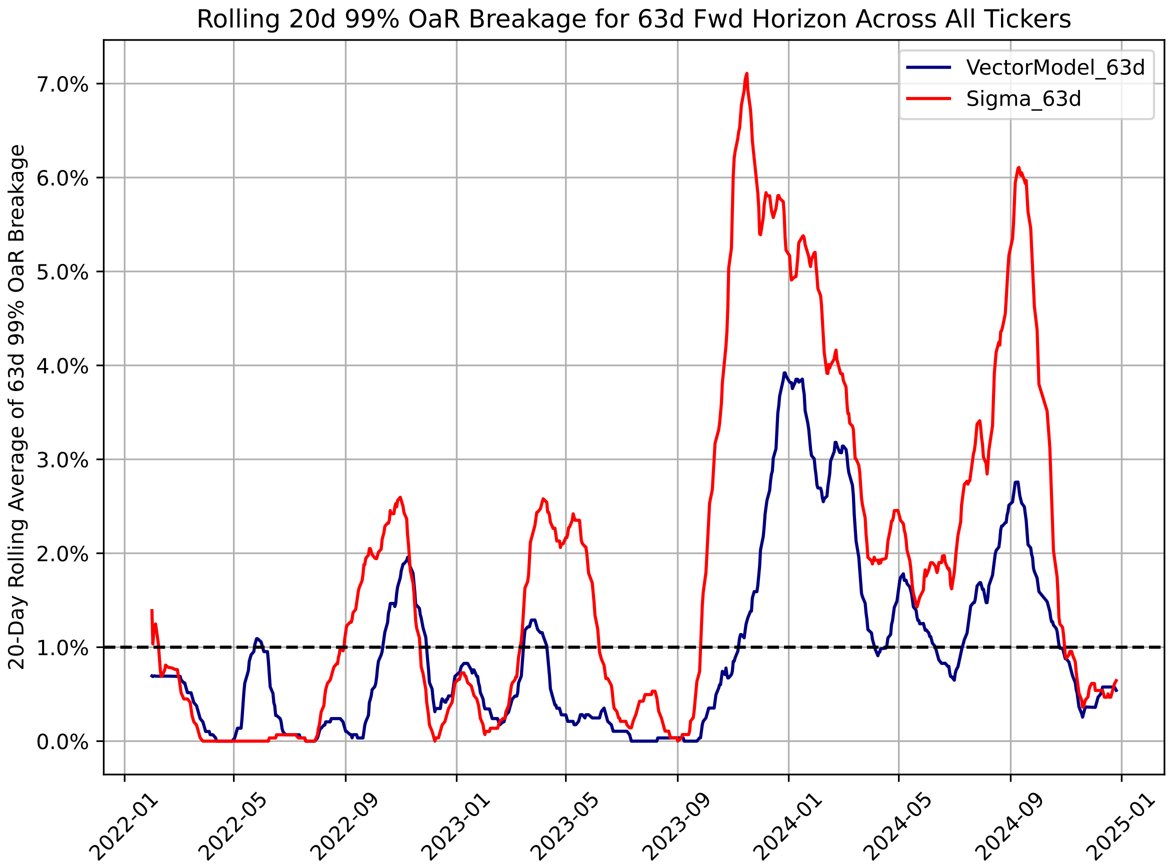
21d Horizon

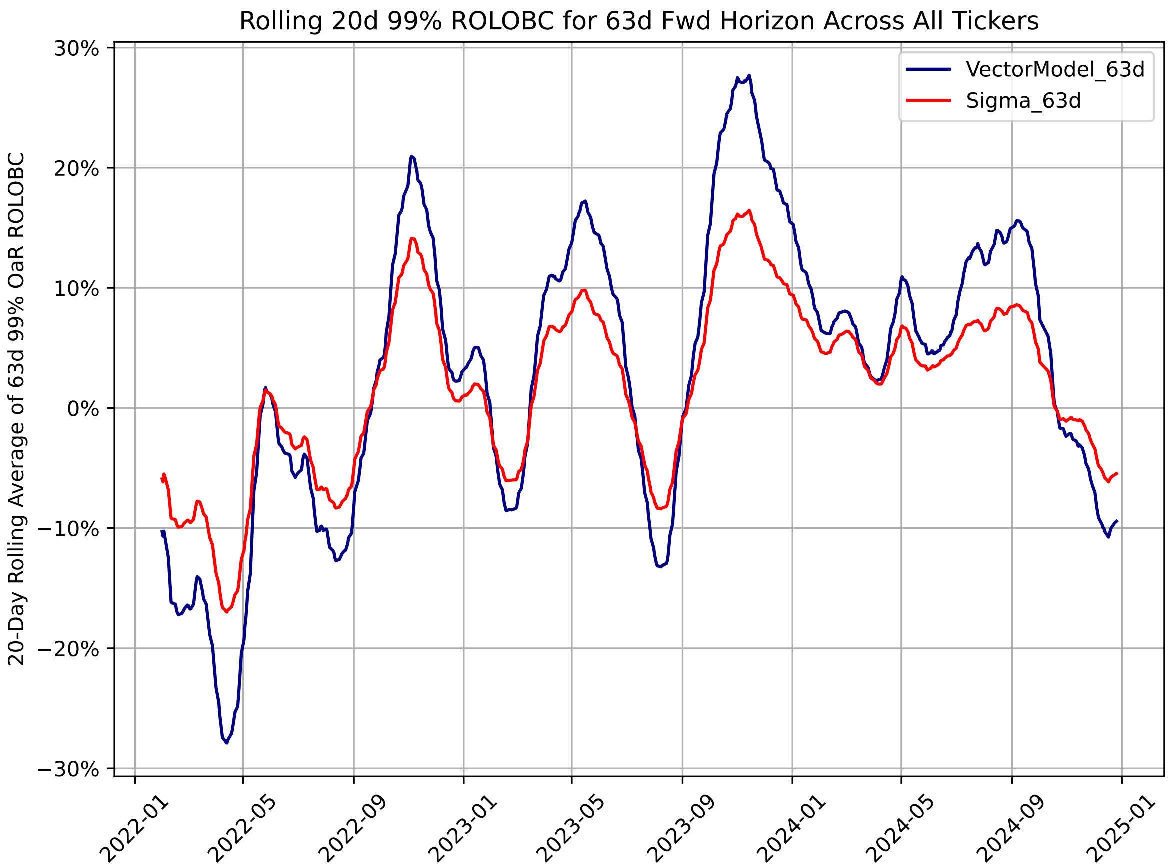


Rolling 20d 99% OaR Breakage for 21d Fwd Horizon Across All Tickers
20-Day Rolling Average of 21d 99% OaR Breakage
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
VectorModel_21d
Sigma_21d
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

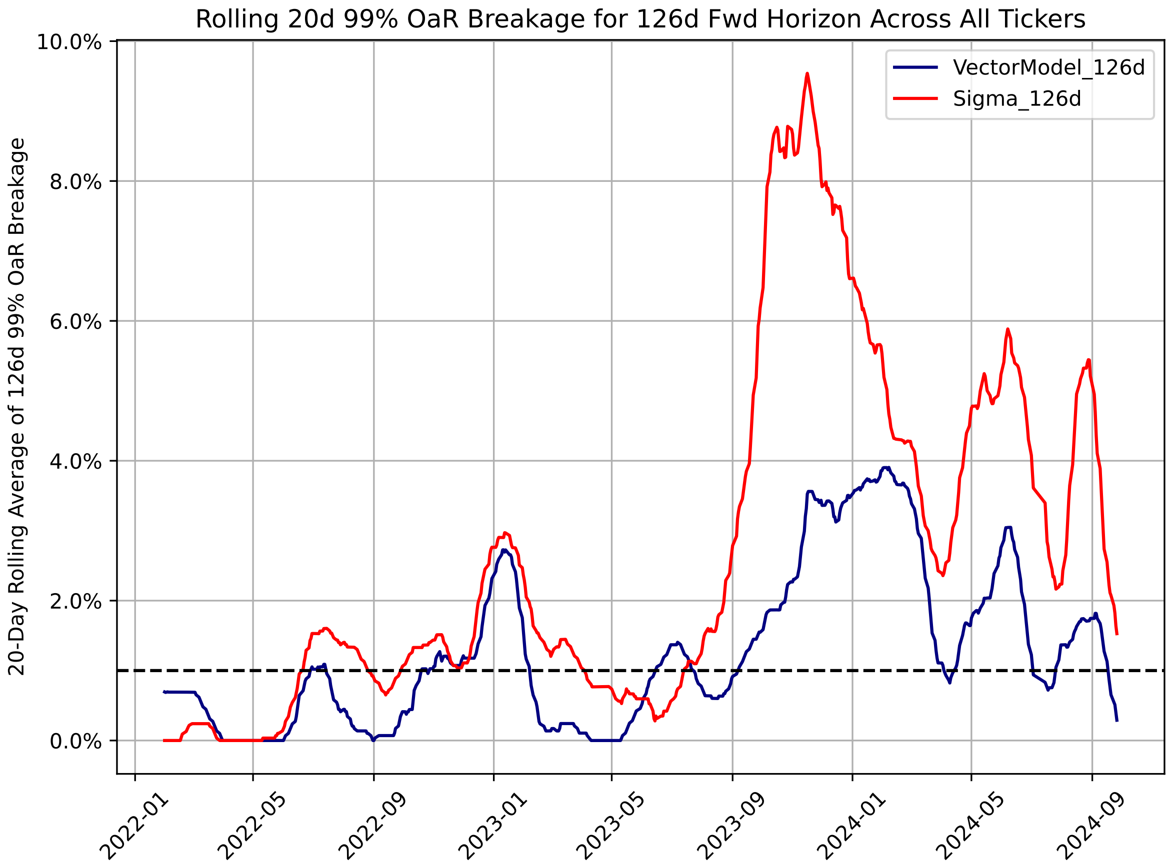

Rolling 20d 99% ROLOBC for 21d Fwd Horizon Across All Tickers
20-Day Rolling Average of 21d 99% OaR ROLOBC
VectorModel_21d
Sigma_21d
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

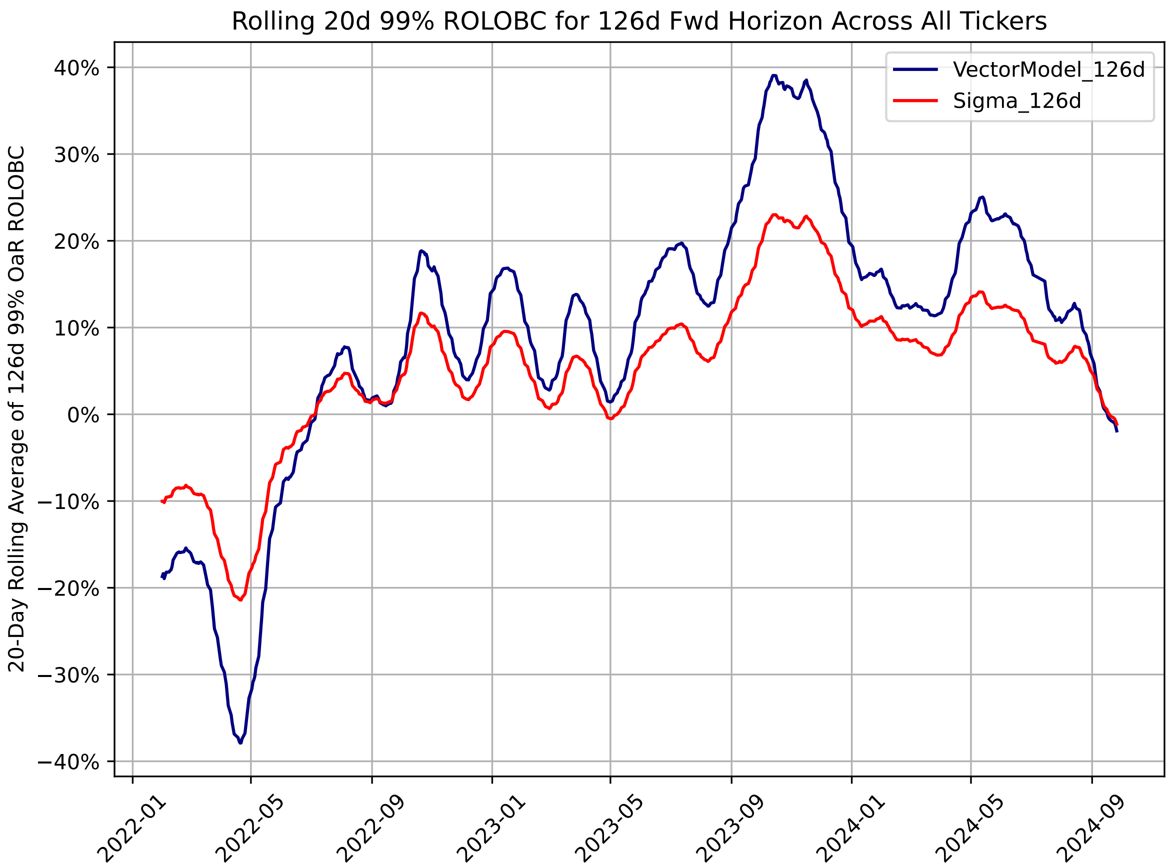
63d Horizon


Rolling 20d 99% OaR Breakage for 63d Fwd Horizon Across All Tickers
VectorModel_63d
Sigma_63d
20-Day Rolling Average of 63d 99% OaR Breakage
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01


Rolling 20d 99% ROLOBC for 63d Fwd Horizon Across All Tickers
VectorModel_63d
Sigma_63d
20-Day Rolling Average of 63d 99% OaR ROLOBC
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

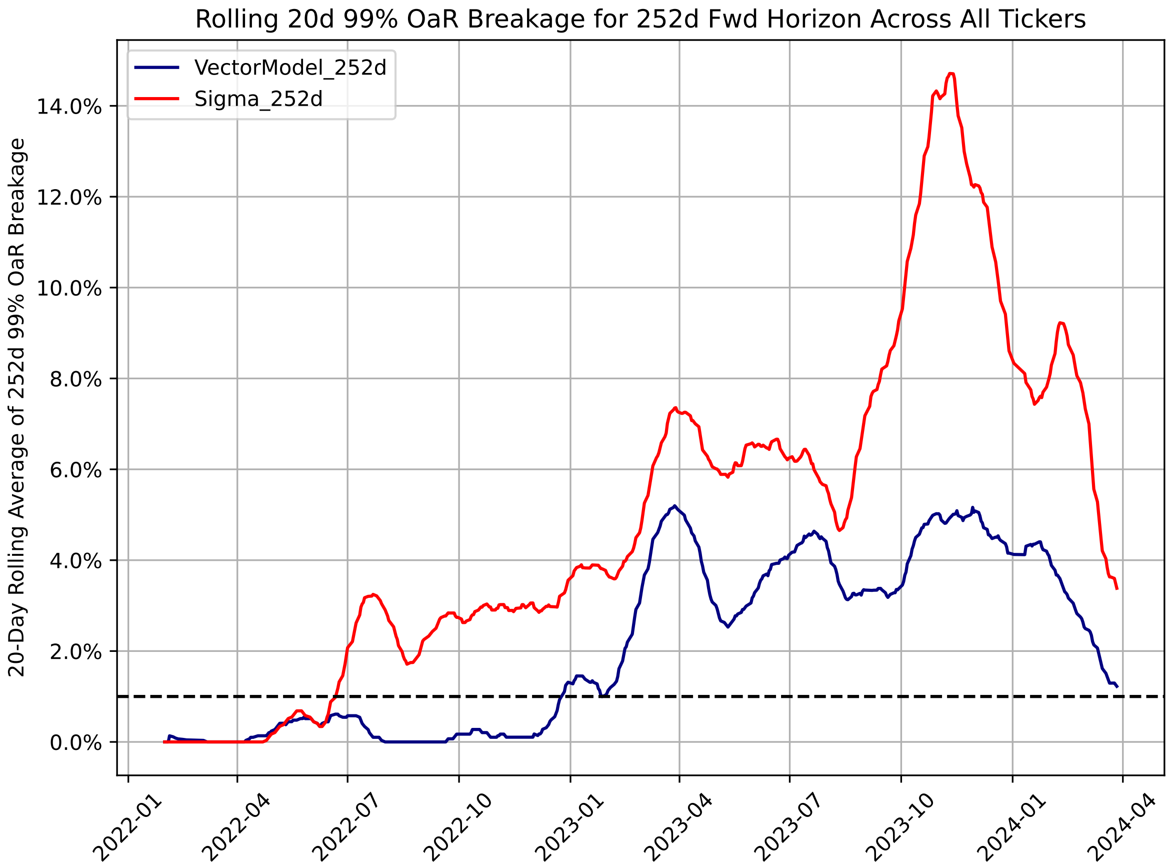
126d Horizon

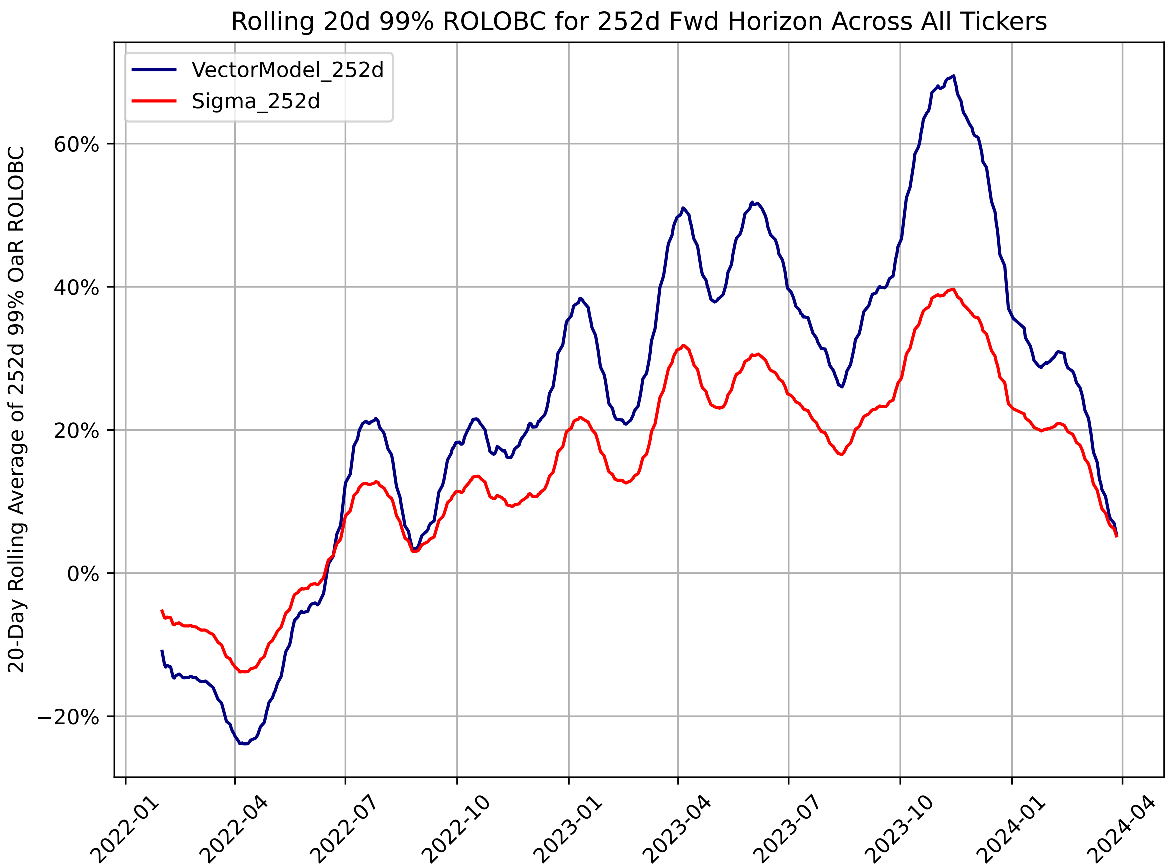




Rolling 20d 99% ROLOBC for 126d Fwd Horizon Across All Tickers
VectorModel_126d
Sigma_126d
20-Day Rolling Average of 126d 99% OaR ROLOBC
40%
30%
20%
10%
0%
−10%
−20%
−30%
−40%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09

252d Horizon




Rolling 20d 99% ROLOBC for 252d Fwd Horizon Across All Tickers
VectorModel_252d
Sigma_252d
20-Day Rolling Average of 252d 99% OaR ROLOBC
60%
40%
20%
0%
−20%
2022-01
2022-04
2022-07
2022-10
2023-01
2023-04
2023-07
2023-10
2024-01
2024-04

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SIVBQ	7.34%	VST	4.99%
1.0	GME	6.93%	MSTR	3.29%
1.0	MSTR	5.62%	AVGO	3.18%
1.0	VST	5.5%	SLV	2.82%
1.0	AVGO	5.35%	NVDA	2.81%
1.0	GOLD	4.06%	SIVBQ	2.7%
1.0	META	3.78%	LLY	2.68%
1.0	HLT	3.74%	MU	2.31%
1.0	FRCB	3.6%	PWR	2.22%
1.0	ACGL	3.5%	WDC	2.05%
1.0	BALL	3.41%	GOOGL	1.97%
1.0	CHTR	3.26%	IRM	1.94%
1.0	TEVA	3.25%	CMG	1.94%
1.0	INTU	3.14%	BAC	1.93%
1.0	SLV	2.95%	GBTC	1.92%
1.0	OXY	2.9%	SBNY	1.86%
1.0	TSLA	2.88%	PHM	1.82%
1.0	NFLX	2.67%	MS	1.81%
1.0	SBNY	2.6%	TMUS	1.8%
1.0	BUD	2.43%	FRCB	1.8%
1.0	SPY	2.29%	AMGN	1.79%
1.0	CMA	2.21%	GS	1.79%
1.0	ZTS	2.2%	MNST	1.78%
1.0	JAZZ	2.1%	GLD	1.78%
1.0	GWW	2.05%	WYNN	1.75%
1.0	ISRG	2.04%	AZO	1.74%
1.0	AMC	1.97%	AMD	1.73%
1.0	XOM	1.79%	OXY	1.71%
1.0	SNY	1.78%	USB	1.71%
1.0	AA	1.71%	WFC	1.69%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	15.3%	VST	9.31%
10.0	SIVBQ	10.42%	NVDA	6.88%
10.0	VST	9.44%	AVGO	5.42%
10.0	GME	8.02%	MSTR	5.05%
10.0	META	7.02%	TMUS	4.86%
10.0	GWW	6.63%	GWW	4.59%
10.0	AVGO	6.51%	LLY	4.58%
10.0	CHTR	6.37%	TEVA	4.47%
10.0	ORCL	5.08%	TRGP	4.46%
10.0	IRM	4.77%	TSLA	4.23%
10.0	ZTS	4.52%	MUB	4.07%
10.0	GILD	4.5%	ORCL	4.07%
10.0	VZ	4.25%	X	3.85%
10.0	ISRG	4.19%	GBTC	3.71%
10.0	EXPE	4.07%	CAH	3.64%
10.0	AMC	3.94%	IRM	3.61%
10.0	GOLD	3.92%	AMGN	3.57%
10.0	ETRN	3.85%	GLD	3.56%
10.0	TEVA	3.79%	CPRT	3.46%
10.0	SBNY	3.72%	CMG	3.22%
10.0	XOM	3.71%	DHI	3.2%
10.0	GNRC	3.35%	POST	3.18%
10.0	NFLX	3.19%	MU	2.85%
10.0	CAH	3.12%	GILD	2.83%
10.0	TRGP	3.06%	NVS	2.8%
10.0	TSLA	3.01%	PWR	2.73%
10.0	OXY	2.88%	WFC	2.72%
10.0	NVS	2.8%	PHM	2.72%
10.0	HCA	2.71%	BUD	2.68%
10.0	HLT	2.7%	ACGL	2.58%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	MSTR	15.4%	VST	11.7%
21.0	SIVBQ	10.04%	NVDA	11.05%
21.0	VST	9.88%	MSTR	7.63%
21.0	GWW	9.38%	LLY	6.75%
21.0	CHTR	8.62%	TEVA	6.64%
21.0	META	6.91%	TSLA	6.14%
21.0	GME	6.77%	GILD	5.91%
21.0	GILD	6.17%	GE	5.69%
21.0	AVGO	5.17%	GBTC	5.61%
21.0	TRGP	5.07%	TRGP	5.59%
21.0	ISRG	4.68%	TMUS	5.34%
21.0	TEVA	4.56%	GWW	5.34%
21.0	ORCL	4.54%	AVGO	5.26%
21.0	GOLD	4.39%	MUB	5.06%
21.0	NVDA	4.29%	CAH	4.91%
21.0	GNRC	3.99%	X	4.61%
21.0	WFC	3.31%	ETRN	4.6%
21.0	NFLX	3.12%	AMGN	4.55%
21.0	AAPL	3.11%	WFC	4.1%
21.0	LW	2.95%	DHI	3.91%
21.0	OXY	2.94%	ACGL	3.83%
21.0	VZ	2.89%	BUD	3.77%
21.0	XOM	2.87%	IRM	3.68%
21.0	BUD	2.86%	GS	3.64%
21.0	CAH	2.79%	MOS	3.62%
21.0	CMG	2.76%	ORCL	3.37%
21.0	GS	2.73%	PWR	3.05%
21.0	SNY	2.72%	NVS	2.99%
21.0	TSLA	2.51%	CPRT	2.86%
21.0	ACGL	2.51%	LUMN	2.8%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	VST	14.58%	NVDA	22.28%
63.0	MSTR	11.14%	VST	21.18%
63.0	GME	8.04%	MSTR	14.66%
63.0	NVDA	7.7%	GBTC	11.56%
63.0	IRM	7.52%	TRGP	11.42%
63.0	SIVBQ	7.34%	IRM	10.31%
63.0	AVGO	6.74%	LLY	9.5%
63.0	TRGP	6.05%	GILD	9.03%
63.0	WFC	5.46%	AVGO	8.15%
63.0	LW	4.68%	TMUS	7.98%
63.0	TMUS	4.54%	GE	6.63%
63.0	EXPE	3.98%	ACGL	6.56%
63.0	META	3.93%	MUB	6.04%
63.0	ORCL	3.84%	MRK	6.04%
63.0	OXY	3.24%	ETRN	6.04%
63.0	TEVA	3.23%	MU	6.02%
63.0	TSLA	3.1%	DHI	5.93%
63.0	CTLT	3.07%	PHM	5.87%
63.0	MSI	2.92%	THC	5.57%
63.0	GILD	2.64%	META	4.78%
63.0	ACGL	2.23%	TSLA	4.57%
63.0	GWW	2.2%	WFC	4.34%
63.0	GOOGL	2.12%	GLD	4.25%
63.0	BXP	1.69%	MS	3.91%
63.0	RIO	1.66%	ORCL	3.7%
63.0	CHTR	1.54%	ABBV	3.48%
63.0	CAH	1.41%	AAPL	3.16%
63.0	HCA	1.4%	CCL	3.04%
63.0	KALU	1.4%	COST	3.04%
63.0	GBTC	1.28%	AMD	3.02%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	34.74%	VST	38.35%
126.0	MSTR	23.76%	NVDA	35.79%
126.0	IRM	18.45%	TRGP	24.96%
126.0	TRGP	13.53%	MSTR	20.71%
126.0	META	12.15%	GE	18.26%
126.0	NVDA	10.98%	THC	18.14%
126.0	MSI	9.17%	IRM	16.31%
126.0	LW	7.25%	TMUS	16.24%
126.0	EXPE	7.02%	LLY	15.67%
126.0	TEVA	6.46%	GILD	14.44%
126.0	AVGO	5.77%	ACGL	13.59%
126.0	ACGL	3.97%	MU	11.72%
126.0	CAH	3.69%	GBTC	11.61%
126.0	OXY	3.55%	META	10.0%
126.0	TMUS	3.31%	CMG	9.59%
126.0	TDG	3.02%	PHM	8.58%
126.0	GOOGL	2.48%	AVGO	7.67%
126.0	THC	2.13%	X	5.98%
126.0	GLD	1.95%	ORCL	5.85%
126.0	BALL	1.69%	CITI	5.81%
126.0	GILD	1.67%	MSI	5.71%
126.0	GME	1.45%	GLD	5.55%
126.0	VFC	1.39%	TEVA	5.33%
126.0	GE	1.13%	COST	5.14%
126.0	ETRN	1.03%	TSLA	5.02%
126.0	WDC	0.48%	PWR	4.75%
126.0	WFC	0.46%	TDG	4.68%
126.0	ORCL	0.45%	WFC	4.43%
126.0	HCA	0.3%	JPM	4.25%
126.0	XOM	0.15%	WDC	4.17%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	VST	53.62%	NVDA	72.46%
252.0	NVDA	48.61%	AVGO	55.6%
252.0	MSTR	47.88%	VST	54.55%
252.0	IRM	27.92%	MSTR	48.85%
252.0	AVGO	26.61%	GE	47.27%
252.0	LLY	18.75%	LLY	46.4%
252.0	GWW	10.95%	GBTC	36.58%
252.0	TEVA	10.78%	PHM	34.91%
252.0	MSI	9.83%	TRGP	29.87%
252.0	TRGP	9.46%	COST	25.0%
252.0	META	8.68%	IRM	24.15%
252.0	LW	5.9%	META	23.4%
252.0	GLD	4.07%	ACGL	22.87%
252.0	TMUS	3.15%	GLD	20.89%
252.0	WFC	3.03%	MSI	18.37%
252.0	THC	2.44%	THC	16.89%
252.0	GOOGL	2.29%	TMUS	16.88%
252.0	TDG	1.67%	TEVA	16.17%
252.0	GE	1.62%	GS	16.11%
252.0	JPM	1.5%	JPM	13.7%
252.0	GNRC	1.04%	PWR	10.59%
252.0	GS	0.93%	TDG	7.79%
252.0	ORCL	0.92%	WFC	7.77%
252.0	CAH	0.76%	ETRN	7.26%
252.0	CMG	0.75%	CAH	7.25%
252.0	GBTC	0.42%	ISRG	6.58%
252.0	ACGL	0.38%	MU	6.21%
252.0	ORLY	0.37%	DHI	5.77%
252.0	XOM	0.18%	GWW	5.19%
252.0	MUB	0.0%	MS	4.73%

P30D: 1d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	GNRC	10.53%	ORLY	10.0%
1.0	UNH	10.53%	TRGP	10.0%
1.0	VZ	10.0%	VZ	10.0%
1.0	VFC	5.88%	TSLA	5.56%
1.0	TSLA	5.56%	INTC	5.56%
1.0	GME	5.26%	AZO	5.26%
1.0	HD	5.0%	BA	5.26%
1.0	AVGO	5.0%	GT	5.0%
1.0	AMC	5.0%	MSFT	5.0%
1.0	FCX	5.0%	SPY	5.0%
1.0	ORLY	5.0%	HD	5.0%
1.0	NWL	0.0%	HLT	5.0%
1.0	NVS	0.0%	TEVA	5.0%
1.0	MSTR	0.0%	AVGO	5.0%
1.0	NVDA	0.0%	NVS	5.0%
1.0	NFLX	0.0%	FCX	5.0%
1.0	ON	0.0%	MU	0.0%
1.0	NEM	0.0%	NEM	0.0%
1.0	ORCL	0.0%	NVDA	0.0%
1.0	NAVI	0.0%	NWL	0.0%
1.0	OXY	0.0%	NAVI	0.0%
1.0	MUB	0.0%	MUB	0.0%
1.0	MU	0.0%	ON	0.0%
1.0	AA	0.0%	ORCL	0.0%
1.0	MSI	0.0%	NFLX	0.0%
1.0	MSFT	0.0%	AA	0.0%
1.0	PEP	0.0%	MSTR	0.0%
1.0	MS	0.0%	MSI	0.0%
1.0	MRK	0.0%	PCG	0.0%
1.0	MOS	0.0%	MS	0.0%

P30D: 10d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	UNH	45.45%	BA	20.0%
10.0	CHTR	18.18%	TRGP	18.18%
10.0	ORLY	9.09%	FCX	18.18%
10.0	AA	0.0%	ORLY	9.09%
10.0	MU	0.0%	NVDA	0.0%
10.0	MUB	0.0%	MU	0.0%
10.0	NAVI	0.0%	MUB	0.0%
10.0	NEM	0.0%	NAVI	0.0%
10.0	NFLX	0.0%	NEM	0.0%
10.0	NVDA	0.0%	NFLX	0.0%
10.0	NVS	0.0%	AA	0.0%
10.0	MSI	0.0%	NVS	0.0%
10.0	NWL	0.0%	MSTR	0.0%
10.0	ON	0.0%	ON	0.0%
10.0	ORCL	0.0%	ORCL	0.0%
10.0	OXY	0.0%	OXY	0.0%
10.0	PCG	0.0%	PCG	0.0%
10.0	PEP	0.0%	PEP	0.0%
10.0	MSTR	0.0%	NWL	0.0%
10.0	MSFT	0.0%	MSI	0.0%
10.0	POST	0.0%	POST	0.0%
10.0	LQD	0.0%	LUMN	0.0%
10.0	KALU	0.0%	KEY	0.0%
10.0	KEY	0.0%	KHC	0.0%
10.0	KHC	0.0%	LEN	0.0%
10.0	LEN	0.0%	LLY	0.0%
10.0	LLY	0.0%	LNC	0.0%
10.0	LNC	0.0%	LQD	0.0%
10.0	LUMN	0.0%	LVS	0.0%
10.0	MS	0.0%	MSFT	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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	BAC	10.91%	GT	7.41%
1.0	AVGO	10.45%	MNST	7.27%
1.0	UNH	9.62%	HSBC	7.27%
1.0	VST	9.26%	INTC	6.12%
1.0	GILD	7.27%	TMUS	6.12%
1.0	GNRC	6.25%	WDC	5.66%
1.0	BALL	6.12%	VST	5.56%
1.0	TSLA	6.0%	NVS	5.45%
1.0	VZ	5.45%	HD	5.45%
1.0	CMA	5.45%	MS	5.45%
1.0	ISRG	5.26%	TRGP	5.45%
1.0	INTC	4.08%	ISRG	5.26%
1.0	WFC	3.64%	PCG	4.08%
1.0	GS	3.64%	WYNN	3.7%
1.0	PRGO	2.13%	GSK	3.7%
1.0	TMUS	2.04%	JAZZ	3.64%
1.0	VFC	2.04%	PEP	3.64%
1.0	GME	1.92%	LQD	3.64%
1.0	CLF	1.92%	ORLY	3.64%
1.0	CZR	1.89%	HLT	3.64%
1.0	GOLD	1.89%	ORCL	3.64%
1.0	GE	1.85%	HCA	3.64%
1.0	INTU	1.85%	MSFT	3.64%
1.0	AMC	1.85%	GS	3.64%
1.0	GSK	1.85%	FCX	3.64%
1.0	FCX	1.82%	HYG	3.64%
1.0	NVS	1.82%	SNY	3.64%
1.0	HCA	1.82%	VICI	3.64%
1.0	HD	1.82%	ABBV	3.64%
1.0	HLT	1.82%	AAPL	3.64%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	GILD	38.89%	TMUS	33.33%
10.0	EXPE	22.22%	BUD	20.37%
10.0	VZ	18.52%	EXPE	20.37%
10.0	INTC	14.29%	T	14.81%
10.0	BUD	12.96%	COST	14.81%
10.0	UNH	9.8%	HSBC	14.81%
10.0	TXN	9.26%	NFLX	12.96%
10.0	SBUX	7.41%	GILD	12.96%
10.0	VFC	6.12%	INTC	12.24%
10.0	VST	5.66%	TRGP	11.11%
10.0	ABBV	5.56%	CVS	9.43%
10.0	CHTR	3.77%	ISRG	7.5%
10.0	ZTS	3.7%	JAZZ	7.41%
10.0	ORLY	3.7%	PRGO	6.25%
10.0	ISRG	2.5%	POST	5.56%
10.0	TMUS	1.96%	ABBV	5.56%
10.0	GOLD	1.92%	MNST	5.56%
10.0	GSK	1.89%	BA	3.77%
10.0	WFC	1.85%	ORLY	3.7%
10.0	SNY	1.85%	FCX	3.7%
10.0	POST	1.85%	NVS	3.7%
10.0	HD	1.85%	GS	3.7%
10.0	AVGO	0.83%	SBUX	3.7%
10.0	PCG	0.0%	PEP	3.7%
10.0	PEP	0.0%	LNC	2.08%
10.0	NVS	0.0%	CCL	2.04%
10.0	OXY	0.0%	VFC	2.04%
10.0	AMGN	0.0%	PWR	1.96%
10.0	PHM	0.0%	GSK	1.89%
10.0	ORCL	0.0%	GE	1.89%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	GILD	60.47%	GILD	55.81%
21.0	VZ	27.91%	TMUS	52.38%
21.0	BUD	18.6%	BUD	44.19%
21.0	ABBV	16.28%	T	34.88%
21.0	HSBC	9.3%	COST	32.56%
21.0	CHTR	2.38%	NFLX	20.93%
21.0	META	2.38%	ABBV	16.28%
21.0	CVS	2.38%	HSBC	11.63%
21.0	TMUS	2.38%	MNST	9.3%
21.0	ON	0.0%	LNC	5.41%
21.0	ORCL	0.0%	CVS	4.76%
21.0	NWL	0.0%	VZ	4.65%
21.0	ORLY	0.0%	META	2.38%
21.0	OXY	0.0%	AMGN	2.33%
21.0	NVS	0.0%	JPM	2.33%
21.0	NVDA	0.0%	HLT	2.33%
21.0	PCG	0.0%	NVS	2.33%
21.0	PEP	0.0%	OXY	0.0%
21.0	NFLX	0.0%	PCG	0.0%
21.0	NEM	0.0%	NVDA	0.0%
21.0	NAVI	0.0%	NWL	0.0%
21.0	MUB	0.0%	ORLY	0.0%
21.0	MSTR	0.0%	ON	0.0%
21.0	MU	0.0%	NEM	0.0%
21.0	POST	0.0%	ORCL	0.0%
21.0	MSI	0.0%	AA	0.0%
21.0	MSFT	0.0%	MSTR	0.0%
21.0	MS	0.0%	NAVI	0.0%
21.0	MRK	0.0%	MUB	0.0%
21.0	MOS	0.0%	MU	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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	VST	7.92%	VST	7.5%
1.0	GME	6.63%	MSTR	4.81%
1.0	AVGO	6.07%	SLV	4.58%
1.0	SLV	5.42%	AVGO	4.26%
1.0	GOLD	5.17%	GME	4.08%
1.0	MSTR	4.81%	TEVA	3.83%
1.0	NFLX	4.68%	TSLA	3.43%
1.0	TSLA	3.86%	PWR	3.42%
1.0	VZ	3.36%	TMUS	3.4%
1.0	HLT	3.32%	NVDA	3.35%
1.0	ETRN	2.99%	PHM	3.32%
1.0	SBUX	2.9%	WRK	3.08%
1.0	BALL	2.61%	WFC	2.93%
1.0	TEVA	2.55%	CCL	2.91%
1.0	UNH	2.54%	LUMN	2.76%
1.0	CMA	2.51%	WYNN	2.76%
1.0	BAC	2.51%	WDC	2.64%
1.0	GILD	2.51%	UNH	2.54%
1.0	IRM	2.49%	TXN	2.53%
1.0	ORCL	2.49%	T	2.52%
1.0	AMGN	2.49%	AAPL	2.51%
1.0	KEY	2.19%	CMG	2.51%
1.0	GNRC	2.19%	GSK	2.5%
1.0	LW	2.16%	HSBC	2.49%
1.0	META	2.14%	TRGP	2.49%
1.0	GS	2.07%	SNY	2.49%
1.0	EXPE	2.07%	ABBV	2.49%
1.0	ISRG	1.87%	ORCL	2.49%
1.0	VFC	1.81%	LLY	2.34%
1.0	UAA	1.74%	JAZZ	2.28%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	VZ	10.83%	VST	16.12%
10.0	VST	10.33%	TMUS	13.75%
10.0	EXPE	10.29%	TRGP	11.11%
10.0	GME	9.6%	TSLA	8.9%
10.0	GILD	9.13%	AVGO	8.44%
10.0	CHTR	8.58%	TEVA	8.05%
10.0	MSTR	8.1%	NVDA	7.47%
10.0	TSLA	7.63%	LUMN	7.31%
10.0	TEVA	6.78%	MSTR	7.14%
10.0	AMGN	6.58%	BUD	7.0%
10.0	BBY	5.91%	BBY	6.75%
10.0	SBUX	5.76%	ORCL	6.58%
10.0	META	5.51%	WFC	6.22%
10.0	SLV	5.37%	CPRT	5.88%
10.0	ETRN	5.08%	MS	5.76%
10.0	BXP	5.0%	LVS	5.66%
10.0	BUD	4.94%	WYNN	5.48%
10.0	CMA	4.56%	T	5.42%
10.0	GS	4.53%	THC	5.37%
10.0	HD	4.2%	ELAN	5.24%
10.0	ZTS	4.13%	SBUX	4.94%
10.0	IRM	4.12%	EXPE	4.94%
10.0	GOLD	3.85%	GS	4.94%
10.0	CNC	3.81%	UNH	4.62%
10.0	WFC	3.73%	DHI	4.56%
10.0	TRGP	3.7%	GME	4.55%
10.0	VFC	3.59%	HON	4.53%
10.0	INTC	3.51%	AMGN	4.53%
10.0	NFLX	3.38%	POST	4.53%
10.0	AAPL	3.32%	SLV	4.13%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	CHTR	16.51%	VST	22.03%
21.0	GME	13.59%	TMUS	18.14%
21.0	GILD	12.44%	TRGP	14.1%
21.0	MSTR	10.55%	TEVA	14.09%
21.0	VST	10.13%	TSLA	11.76%
21.0	TEVA	9.55%	GILD	10.67%
21.0	VZ	9.38%	MSTR	10.55%
21.0	TSLA	8.14%	LUMN	9.85%
21.0	GS	6.61%	WFC	9.78%
21.0	WFC	5.78%	NVDA	9.78%
21.0	META	5.45%	BUD	9.69%
21.0	BXP	5.36%	AVGO	9.5%
21.0	NFLX	4.98%	LVS	9.14%
21.0	SLV	4.87%	GME	8.15%
21.0	TRGP	4.85%	SBUX	7.93%
21.0	ORCL	4.85%	WYNN	7.88%
21.0	AMGN	4.41%	T	7.14%
21.0	BUD	4.41%	ABBV	7.05%
21.0	HD	4.04%	ELAN	6.67%
21.0	QCOM	4.0%	THC	6.64%
21.0	ABBV	3.96%	DHI	6.61%
21.0	CNC	3.64%	GS	6.61%
21.0	CPRT	3.56%	UNH	6.31%
21.0	AVGO	2.73%	COST	6.17%
21.0	CMA	2.67%	ORCL	6.17%
21.0	ZTS	2.65%	BBY	5.43%
21.0	BAC	2.65%	GBTC	5.38%
21.0	AAPL	2.22%	NFLX	4.98%
21.0	MSI	1.87%	IRM	4.85%
21.0	BBY	1.81%	AMGN	4.85%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	IRM	23.24%	IRM	39.46%
63.0	TMUS	17.84%	TMUS	31.35%
63.0	WFC	17.49%	TRGP	31.35%
63.0	EXPE	15.14%	VST	31.35%
63.0	GME	14.97%	MSTR	21.25%
63.0	MSI	11.86%	TSLA	17.03%
63.0	TSLA	11.54%	WFC	16.94%
63.0	GILD	10.38%	MS	15.14%
63.0	ORCL	8.11%	AAPL	11.48%
63.0	VST	7.57%	CCL	10.32%
63.0	CHTR	6.21%	LUMN	8.59%
63.0	BXP	6.01%	NVDA	8.2%
63.0	HCA	5.52%	HSBC	7.57%
63.0	HD	5.03%	ORCL	7.57%
63.0	META	2.23%	DHI	7.03%
63.0	CMA	2.17%	MSI	6.78%
63.0	TRGP	2.16%	VNO	6.62%
63.0	VFC	1.76%	GILD	4.92%
63.0	TEVA	1.68%	GBTC	4.7%
63.0	BUD	1.62%	THC	4.35%
63.0	MSTR	0.62%	ABBV	3.78%
63.0	CYH	0.56%	GWW	3.26%
63.0	AAPL	0.55%	PHM	3.24%
63.0	ZTS	0.54%	CVS	3.24%
63.0	CVS	0.54%	CPRT	3.24%
63.0	NVS	0.0%	GME	2.72%
63.0	QQQ	0.0%	BMY	2.72%
63.0	QCOM	0.0%	CSCO	2.3%
63.0	PWR	0.0%	T	2.17%
63.0	PRGO	0.0%	GS	2.16%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	EXPE	36.59%	TMUS	87.8%
126.0	TRGP	35.77%	TRGP	83.74%
126.0	IRM	33.33%	VST	78.05%
126.0	MSI	30.08%	IRM	39.02%
126.0	VST	25.2%	GILD	33.88%
126.0	TMUS	17.89%	MSI	30.08%
126.0	META	17.09%	ORCL	25.2%
126.0	VFC	7.41%	MSTR	21.78%
126.0	GILD	5.79%	TSLA	20.49%
126.0	TEVA	3.45%	NVDA	16.53%
126.0	MSTR	1.98%	NFLX	14.29%
126.0	HCA	1.63%	T	13.82%
126.0	GME	1.05%	WFC	13.01%
126.0	GLD	0.81%	THC	11.48%
126.0	NVDA	0.0%	MS	11.38%
126.0	NVS	0.0%	JPM	9.76%
126.0	NFLX	0.0%	CSCO	7.14%
126.0	NEM	0.0%	VNO	6.48%
126.0	NWL	0.0%	BMY	5.79%
126.0	NAVI	0.0%	HSBC	5.69%
126.0	MUB	0.0%	LUMN	5.5%
126.0	ON	0.0%	CCL	4.9%
126.0	MU	0.0%	AAPL	4.13%
126.0	ORCL	0.0%	GS	2.44%
126.0	AA	0.0%	ISRG	0.86%
126.0	MSFT	0.0%	AVGO	0.84%
126.0	OXY	0.0%	EXPE	0.81%
126.0	MS	0.0%	HLT	0.81%
126.0	MRK	0.0%	OXY	0.0%
126.0	MOS	0.0%	NEM	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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NVDA	0.51%	MSTR	0.5%
1.0	GBTC	0.49%	VST	0.25%
1.0	MSTR	0.46%	NVDA	0.25%
1.0	LLY	0.43%	GME	0.22%
1.0	PWR	0.41%	AVGO	0.19%
1.0	GE	0.35%	LLY	0.18%
1.0	VST	0.35%	PWR	0.18%
1.0	TRGP	0.31%	GBTC	0.18%
1.0	X	0.29%	TRGP	0.18%
1.0	PCG	0.28%	GE	0.15%
1.0	TSLA	0.26%	TMUS	0.14%
1.0	TDG	0.26%	NFLX	0.13%
1.0	CDNS	0.25%	CAH	0.12%
1.0	TMUS	0.25%	CDNS	0.12%
1.0	CAH	0.23%	PHM	0.12%
1.0	WYNN	0.23%	TDG	0.11%
1.0	ORLY	0.23%	ACGL	0.11%
1.0	CMG	0.22%	ETRN	0.11%
1.0	WDC	0.21%	ORLY	0.11%
1.0	PHM	0.2%	ORCL	0.11%
1.0	BHC	0.2%	ISRG	0.1%
1.0	JPM	0.19%	X	0.1%
1.0	ORCL	0.19%	TEVA	0.1%
1.0	AZO	0.19%	GWW	0.1%
1.0	AMZN	0.18%	THC	0.1%
1.0	CPRT	0.17%	CMG	0.09%
1.0	GME	0.17%	COST	0.09%
1.0	THC	0.17%	IRM	0.09%
1.0	ON	0.17%	AZO	0.09%
1.0	NFLX	0.17%	PCG	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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	5.69%	MSTR	4.52%
10.0	LLY	4.67%	VST	2.67%
10.0	MSTR	4.01%	NVDA	2.58%
10.0	GBTC	3.8%	LLY	1.91%
10.0	VST	3.49%	AVGO	1.9%
10.0	TSLA	3.42%	GBTC	1.71%
10.0	PWR	2.67%	GME	1.69%
10.0	GE	2.21%	TRGP	1.68%
10.0	TRGP	2.14%	NFLX	1.53%
10.0	PHM	2.13%	META	1.45%
10.0	AZO	2.08%	PWR	1.43%
10.0	TMUS	1.84%	ETRN	1.41%
10.0	TEVA	1.83%	CAH	1.38%
10.0	CAH	1.83%	GE	1.33%
10.0	ACGL	1.8%	TEVA	1.24%
10.0	THC	1.76%	X	1.19%
10.0	DHI	1.75%	PHM	1.17%
10.0	TDG	1.73%	TMUS	1.15%
10.0	COST	1.71%	TDG	1.12%
10.0	T	1.7%	ORLY	1.04%
10.0	ORLY	1.62%	THC	1.02%
10.0	PCG	1.52%	GWW	1.01%
10.0	CCL	1.51%	ACGL	1.0%
10.0	WDC	1.47%	ORCL	0.99%
10.0	JPM	1.44%	IRM	0.97%
10.0	CDNS	1.36%	ISRG	0.95%
10.0	GS	1.35%	CDNS	0.89%
10.0	MU	1.23%	COST	0.87%
10.0	NFLX	1.22%	AZO	0.87%
10.0	HLT	1.2%	MSI	0.87%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	11.67%	MSTR	9.86%
21.0	MSTR	10.32%	VST	5.8%
21.0	GBTC	10.06%	NVDA	5.62%
21.0	VST	8.57%	LLY	4.14%
21.0	TSLA	8.23%	GBTC	4.0%
21.0	ETRN	7.6%	AVGO	3.78%
21.0	LLY	7.38%	META	3.6%
21.0	PWR	5.3%	NFLX	3.54%
21.0	TMUS	4.76%	ETRN	3.51%
21.0	GE	4.71%	TRGP	3.48%
21.0	PHM	4.66%	GE	3.08%
21.0	AZO	4.47%	PWR	2.97%
21.0	TRGP	4.17%	CAH	2.85%
21.0	CDNS	4.01%	X	2.73%
21.0	CAH	3.93%	PHM	2.68%
21.0	X	3.91%	TEVA	2.48%
21.0	DHI	3.88%	TMUS	2.45%
21.0	TDG	3.81%	TDG	2.35%
21.0	PCG	3.76%	ORCL	2.34%
21.0	THC	3.66%	GWW	2.33%
21.0	CCL	3.53%	ORLY	2.23%
21.0	COST	3.29%	THC	2.22%
21.0	ORLY	3.03%	IRM	2.21%
21.0	ORCL	3.01%	ACGL	2.14%
21.0	JPM	2.93%	COST	2.08%
21.0	ACGL	2.92%	ISRG	2.05%
21.0	NFLX	2.85%	GME	2.04%
21.0	HLT	2.72%	MSI	2.01%
21.0	GS	2.71%	AZO	1.99%
21.0	AMAT	2.69%	GILD	1.94%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	44.35%	MSTR	30.87%
63.0	NVDA	41.43%	VST	20.6%
63.0	GBTC	38.39%	NVDA	20.02%
63.0	VST	28.37%	GBTC	13.27%
63.0	LLY	23.03%	AVGO	13.18%
63.0	PWR	21.01%	META	13.13%
63.0	CCL	20.95%	NFLX	12.18%
63.0	PHM	20.25%	LLY	11.74%
63.0	GE	19.46%	ETRN	10.41%
63.0	ETRN	19.06%	GE	10.24%
63.0	TSLA	14.34%	TRGP	10.12%
63.0	NFLX	14.27%	PHM	9.41%
63.0	META	13.68%	PWR	8.68%
63.0	TRGP	13.42%	TEVA	8.15%
63.0	TMUS	12.25%	CAH	7.88%
63.0	JPM	11.8%	ORCL	7.29%
63.0	ACGL	11.74%	THC	7.24%
63.0	CAH	11.67%	TDG	7.19%
63.0	THC	11.09%	GWW	7.02%
63.0	TEVA	11.06%	ISRG	6.97%
63.0	COST	10.86%	ACGL	6.83%
63.0	CMG	10.53%	IRM	6.62%
63.0	TDG	10.39%	CMG	6.54%
63.0	CDNS	10.35%	MSI	6.41%
63.0	X	10.28%	TMUS	6.21%
63.0	DHI	10.03%	DHI	6.16%
63.0	AMD	9.87%	ORLY	6.09%
63.0	VNO	9.81%	CPRT	5.9%
63.0	PCG	9.68%	JPM	5.9%
63.0	GILD	9.52%	CDNS	5.83%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	NVDA	110.15%	MSTR	77.19%
126.0	GBTC	103.22%	NVDA	54.86%
126.0	MSTR	91.04%	VST	47.59%
126.0	VST	61.47%	GBTC	40.42%
126.0	LLY	52.51%	META	31.96%
126.0	PHM	52.3%	NFLX	29.43%
126.0	GE	51.18%	AVGO	28.17%
126.0	CCL	45.19%	GE	25.23%
126.0	NFLX	44.69%	LLY	24.34%
126.0	THC	40.75%	PHM	23.02%
126.0	PWR	39.07%	TRGP	22.82%
126.0	META	35.47%	THC	20.46%
126.0	DHI	32.72%	PWR	19.75%
126.0	TSLA	32.29%	ETRN	18.67%
126.0	ORCL	32.02%	ORCL	18.29%
126.0	VNO	30.9%	TEVA	17.84%
126.0	TRGP	30.86%	ISRG	17.35%
126.0	ACGL	30.82%	TDG	17.28%
126.0	CMG	30.59%	IRM	16.9%
126.0	AMZN	29.96%	GWW	16.89%
126.0	MU	29.69%	CAH	16.71%
126.0	JPM	28.76%	ACGL	16.36%
126.0	PCG	28.47%	CMG	15.76%
126.0	COST	27.83%	DHI	15.71%
126.0	ISRG	27.21%	MSI	15.28%
126.0	AMD	27.09%	CPRT	14.05%
126.0	TMUS	26.35%	CCL	14.03%
126.0	AMAT	25.82%	LEN	13.8%
126.0	TDG	25.09%	JPM	13.74%
126.0	CAH	25.03%	ORLY	13.28%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	GBTC	296.6%	MSTR	234.72%
252.0	NVDA	274.97%	NVDA	159.75%
252.0	MSTR	264.52%	VST	131.63%
252.0	GE	174.12%	GBTC	131.1%
252.0	PHM	161.29%	META	86.51%
252.0	VST	133.94%	AVGO	74.54%
252.0	META	124.42%	NFLX	67.39%
252.0	THC	121.33%	GE	64.74%
252.0	NFLX	114.08%	PHM	63.65%
252.0	CCL	106.03%	LLY	61.38%
252.0	TRGP	101.93%	THC	54.41%
252.0	LLY	95.74%	TRGP	51.09%
252.0	MU	82.73%	PWR	44.36%
252.0	AMAT	81.18%	TDG	44.09%
252.0	ORCL	75.0%	TEVA	41.81%
252.0	PWR	73.66%	DHI	41.06%
252.0	DHI	73.22%	ISRG	39.83%
252.0	ACGL	72.59%	IRM	39.65%
252.0	X	70.43%	ACGL	39.27%
252.0	TDG	67.05%	ORCL	38.92%
252.0	ISRG	66.8%	CMG	38.41%
252.0	QQQ	63.07%	LEN	37.23%
252.0	AMZN	62.33%	GWW	37.06%
252.0	CMG	61.86%	ETRN	35.88%
252.0	CDNS	61.72%	AMAT	35.45%
252.0	AMD	60.91%	AMD	35.3%
252.0	COST	59.06%	CCL	34.41%
252.0	VNO	58.8%	CPRT	34.27%
252.0	MSFT	58.22%	AMZN	32.66%
252.0	LEN	57.14%	CDNS	32.59%

P30D: 1d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	MSTR	3.44%	MSTR	2.32%
1.0	MOS	2.26%	MOS	0.75%
1.0	X	1.47%	UNH	0.61%
1.0	HCA	1.46%	AAP	0.55%
1.0	OXY	1.42%	HCA	0.54%
1.0	AZO	1.42%	NEM	0.51%
1.0	TSLA	1.32%	XOM	0.5%
1.0	AAP	1.3%	AZO	0.48%
1.0	GLD	1.1%	OXY	0.47%
1.0	CDNS	1.02%	X	0.45%
1.0	NEM	1.01%	THC	0.41%
1.0	XOM	0.98%	INTC	0.41%
1.0	AMD	0.88%	CDNS	0.4%
1.0	GOLD	0.85%	GLD	0.39%
1.0	GT	0.85%	SLV	0.38%
1.0	DHI	0.83%	FCX	0.38%
1.0	MNST	0.79%	GOLD	0.38%
1.0	VST	0.71%	LW	0.34%
1.0	CAH	0.64%	DHI	0.34%
1.0	ACGL	0.63%	CAH	0.33%
1.0	LW	0.61%	PWR	0.31%
1.0	INTC	0.61%	MNST	0.3%
1.0	UNH	0.56%	GT	0.28%
1.0	PWR	0.51%	AMD	0.27%
1.0	LEN	0.51%	CVS	0.22%
1.0	THC	0.49%	BA	0.22%
1.0	SLV	0.47%	ORLY	0.21%
1.0	FCX	0.47%	VZ	0.19%
1.0	CNC	0.46%	CNC	0.18%
1.0	FIS	0.46%	FIS	0.18%

P30D: 10d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	MSTR	36.06%	MSTR	22.46%
10.0	MOS	32.73%	INTC	12.33%
10.0	BA	16.34%	X	11.32%
10.0	X	15.3%	MOS	10.9%
10.0	PCG	14.03%	BA	9.94%
10.0	TRGP	13.57%	FCX	9.33%
10.0	OXY	13.42%	NEM	8.7%
10.0	NEM	13.09%	AMD	7.56%
10.0	INTC	12.58%	CDNS	7.45%
10.0	FIS	11.99%	TRGP	7.13%
10.0	CDNS	11.95%	XOM	6.48%
10.0	AMD	11.71%	VST	6.12%
10.0	FCX	11.04%	UNH	6.08%
10.0	XOM	10.63%	PWR	6.04%
10.0	ACGL	9.45%	AAP	5.75%
10.0	VST	9.01%	CAH	5.3%
10.0	HCA	7.91%	FIS	5.25%
10.0	GOLD	7.51%	GOLD	4.82%
10.0	AAP	7.47%	OXY	4.74%
10.0	LNC	7.43%	PCG	4.67%
10.0	NFLX	7.1%	HCA	4.66%
10.0	PWR	7.05%	MNST	4.17%
10.0	GLD	6.77%	GE	4.16%
10.0	GE	6.48%	THC	4.15%
10.0	MNST	6.48%	LW	4.02%
10.0	AA	6.28%	NFLX	3.76%
10.0	CAH	6.14%	GLD	3.72%
10.0	T	5.92%	ACGL	3.22%
10.0	TSLA	5.63%	CVS	3.03%
10.0	TDG	5.55%	AZO	3.01%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	T	1.47%	INTC	1.02%
1.0	INTC	1.41%	TMUS	0.54%
1.0	PRGO	1.29%	T	0.53%
1.0	GT	1.19%	BUD	0.52%
1.0	BUD	1.1%	MSTR	0.5%
1.0	TMUS	1.04%	GOLD	0.47%
1.0	HCA	0.96%	GILD	0.46%
1.0	GLD	0.93%	PRGO	0.45%
1.0	HSBC	0.92%	NEM	0.43%
1.0	MSTR	0.92%	GSK	0.4%
1.0	X	0.87%	GT	0.4%
1.0	NFLX	0.83%	HSBC	0.38%
1.0	WYNN	0.81%	GE	0.37%
1.0	LNC	0.8%	SLV	0.35%
1.0	GOLD	0.78%	GLD	0.34%
1.0	PWR	0.77%	MNST	0.33%
1.0	AMGN	0.76%	VZ	0.33%
1.0	MNST	0.76%	ABBV	0.31%
1.0	NEM	0.71%	AMGN	0.29%
1.0	VICI	0.71%	X	0.29%
1.0	GSK	0.68%	ORLY	0.28%
1.0	AZO	0.66%	LNC	0.28%
1.0	GE	0.63%	CVS	0.27%
1.0	AZN	0.55%	SNY	0.27%
1.0	VNO	0.55%	CAH	0.25%
1.0	ABBV	0.54%	AZO	0.25%
1.0	CVS	0.53%	AZN	0.25%
1.0	OXY	0.52%	NVS	0.24%
1.0	ACGL	0.5%	HCA	0.24%
1.0	NVS	0.48%	NFLX	0.23%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	T	12.27%	INTC	8.77%
10.0	CVS	12.0%	CVS	7.51%
10.0	BUD	10.01%	BUD	5.92%
10.0	TMUS	8.92%	TMUS	4.97%
10.0	INTC	8.38%	T	4.63%
10.0	LLY	7.27%	GOLD	4.54%
10.0	X	7.26%	X	4.45%
10.0	LNC	7.17%	NEM	4.28%
10.0	NEM	6.3%	GILD	4.12%
10.0	AZN	6.17%	HSBC	3.85%
10.0	GT	5.88%	LNC	3.56%
10.0	GLD	5.54%	GE	3.49%
10.0	GE	5.37%	ABBV	3.42%
10.0	GOLD	5.19%	GSK	3.36%
10.0	AMGN	5.15%	AMGN	3.3%
10.0	VICI	4.95%	MNST	3.05%
10.0	NFLX	4.87%	VZ	2.78%
10.0	HSBC	4.66%	SNY	2.78%
10.0	NVS	4.65%	GT	2.7%
10.0	MOS	4.53%	GLD	2.69%
10.0	MNST	4.24%	AZN	2.65%
10.0	CSTM	3.99%	JAZZ	2.6%
10.0	SNY	3.95%	NFLX	2.55%
10.0	JAZZ	3.61%	ORLY	2.51%
10.0	TDG	3.58%	NVS	2.45%
10.0	GSK	3.57%	SLV	2.34%
10.0	ABBV	3.4%	AZO	2.3%
10.0	SLV	3.38%	LLY	2.21%
10.0	AZO	3.32%	VICI	2.18%
10.0	WYNN	3.09%	CAH	1.86%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	TMUS	23.35%	CVS	15.36%
21.0	T	23.14%	BUD	14.83%
21.0	BUD	20.88%	TMUS	11.63%
21.0	CVS	18.13%	GILD	11.38%
21.0	GOLD	16.07%	ABBV	10.46%
21.0	AZN	12.98%	T	10.29%
21.0	AMGN	12.12%	GOLD	10.06%
21.0	NVS	11.59%	AMGN	8.19%
21.0	LLY	11.3%	HSBC	8.19%
21.0	ABBV	11.23%	GSK	8.15%
21.0	JAZZ	11.18%	INTC	7.53%
21.0	MNST	10.55%	NEM	7.18%
21.0	VICI	9.99%	MNST	6.96%
21.0	GSK	9.51%	SNY	6.67%
21.0	X	9.4%	JAZZ	6.65%
21.0	HSBC	9.35%	X	6.6%
21.0	INTC	8.87%	VZ	6.59%
21.0	GLD	8.83%	AZN	6.59%
21.0	LNC	8.78%	NVS	6.25%
21.0	SNY	8.72%	LNC	6.22%
21.0	NEM	8.55%	PRGO	6.19%
21.0	CSTM	8.2%	GE	5.66%
21.0	PRGO	8.09%	GLD	5.34%
21.0	COST	7.26%	AZO	5.27%
21.0	GILD	6.74%	ORLY	5.15%
21.0	AZO	6.66%	VICI	5.0%
21.0	NFLX	6.45%	SLV	4.9%
21.0	SBUX	6.26%	CSTM	4.9%
21.0	GT	6.25%	LLY	4.65%
21.0	GE	6.24%	SBUX	4.34%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	LUMN	1.67%	GME	0.76%
1.0	TSLA	0.96%	LUMN	0.55%
1.0	T	0.75%	MSTR	0.53%
1.0	GME	0.72%	TSLA	0.39%
1.0	VNO	0.63%	VST	0.29%
1.0	VST	0.62%	T	0.26%
1.0	TRGP	0.5%	TMUS	0.25%
1.0	GE	0.47%	TRGP	0.24%
1.0	PRGO	0.47%	VNO	0.23%
1.0	TMUS	0.46%	AVGO	0.23%
1.0	NVDA	0.42%	CHTR	0.23%
1.0	MS	0.39%	GILD	0.21%
1.0	NFLX	0.36%	GE	0.21%
1.0	JAZZ	0.34%	NFLX	0.21%
1.0	HSBC	0.34%	HSBC	0.19%
1.0	CCL	0.31%	GS	0.19%
1.0	VFC	0.3%	EXPE	0.17%
1.0	GLD	0.3%	SLV	0.16%
1.0	AAPL	0.3%	AAPL	0.15%
1.0	CITI	0.3%	PWR	0.15%
1.0	GILD	0.29%	NVDA	0.15%
1.0	WFC	0.29%	WFC	0.15%
1.0	COST	0.29%	ISRG	0.14%
1.0	JPM	0.28%	MS	0.14%
1.0	CSCO	0.28%	GLD	0.14%
1.0	BHC	0.27%	VFC	0.14%
1.0	CHTR	0.27%	INTC	0.14%
1.0	EXPE	0.27%	BHC	0.14%
1.0	PWR	0.27%	NWL	0.13%
1.0	ZION	0.26%	THC	0.13%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	LUMN	14.29%	GME	6.97%
10.0	VST	7.63%	LUMN	4.6%
10.0	MSTR	7.0%	MSTR	4.3%
10.0	T	6.33%	VST	3.28%
10.0	AMC	6.14%	TSLA	2.77%
10.0	TSLA	5.55%	TRGP	2.51%
10.0	NVDA	5.45%	TMUS	2.32%
10.0	TRGP	4.58%	T	2.18%
10.0	TMUS	3.81%	GILD	2.1%
10.0	GME	3.74%	AVGO	2.03%
10.0	COST	3.3%	NFLX	1.95%
10.0	CCL	3.08%	NVDA	1.73%
10.0	LLY	2.94%	CHTR	1.7%
10.0	NFLX	2.86%	HSBC	1.68%
10.0	THC	2.78%	EXPE	1.67%
10.0	JPM	2.51%	ISRG	1.58%
10.0	MS	2.33%	GS	1.58%
10.0	AAPL	2.24%	VFC	1.52%
10.0	WFC	2.23%	VNO	1.41%
10.0	ELAN	2.21%	GE	1.35%
10.0	GILD	1.97%	MS	1.33%
10.0	HSBC	1.95%	AMC	1.32%
10.0	GS	1.86%	NEM	1.29%
10.0	TDG	1.82%	THC	1.23%
10.0	GLD	1.81%	AAPL	1.2%
10.0	JAZZ	1.81%	COST	1.19%
10.0	CSCO	1.74%	GLD	1.16%
10.0	EXPE	1.7%	LNC	1.14%
10.0	GE	1.69%	WFC	1.13%
10.0	NEM	1.67%	JAZZ	1.12%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	LUMN	35.97%	GME	12.91%
21.0	VST	18.31%	LUMN	11.07%
21.0	MSTR	18.07%	MSTR	9.19%
21.0	NVDA	13.33%	VST	7.38%
21.0	T	12.97%	TSLA	6.23%
21.0	TMUS	10.76%	TMUS	5.44%
21.0	TSLA	10.36%	TRGP	5.27%
21.0	AMC	9.8%	GILD	5.23%
21.0	TRGP	9.7%	T	5.05%
21.0	VNO	8.77%	NFLX	4.99%
21.0	MS	7.11%	AVGO	4.05%
21.0	THC	6.61%	CHTR	3.94%
21.0	COST	6.58%	ISRG	3.89%
21.0	NFLX	5.95%	VNO	3.77%
21.0	LLY	5.72%	NVDA	3.74%
21.0	GME	5.38%	VFC	3.7%
21.0	CCL	5.32%	HSBC	3.49%
21.0	NWL	5.32%	GS	3.46%
21.0	CSCO	4.49%	EXPE	3.38%
21.0	WFC	4.45%	THC	3.15%
21.0	GILD	4.45%	COST	3.15%
21.0	ORCL	4.39%	ORCL	3.14%
21.0	JAZZ	4.37%	GE	2.97%
21.0	SBUX	4.34%	MS	2.93%
21.0	GS	4.3%	META	2.92%
21.0	ZION	4.23%	LNC	2.85%
21.0	CYH	4.1%	AAPL	2.84%
21.0	JPM	4.04%	CCL	2.83%
21.0	HSBC	4.01%	AMC	2.61%
21.0	BMY	3.75%	ABBV	2.59%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	LUMN	135.19%	MSTR	43.06%
63.0	MSTR	92.54%	LUMN	42.29%
63.0	VST	57.0%	TSLA	28.74%
63.0	TSLA	45.2%	VST	25.7%
63.0	VNO	44.44%	VFC	21.19%
63.0	CCL	43.35%	VNO	21.1%
63.0	T	37.98%	GME	20.59%
63.0	TRGP	34.04%	TRGP	19.27%
63.0	MS	31.91%	AVGO	16.39%
63.0	NVDA	30.48%	GILD	16.02%
63.0	TMUS	26.27%	CCL	15.75%
63.0	JPM	23.81%	NFLX	15.41%
63.0	NFLX	23.11%	EXPE	14.79%
63.0	NWL	19.97%	TMUS	13.9%
63.0	CSCO	17.79%	T	13.42%
63.0	HSBC	17.53%	ISRG	11.78%
63.0	GILD	17.48%	GS	11.21%
63.0	ZION	16.74%	MS	10.82%
63.0	GS	15.81%	CHTR	10.66%
63.0	CYH	15.66%	ORCL	10.65%
63.0	BMY	15.02%	META	10.6%
63.0	FITB	14.55%	BMY	9.85%
63.0	VFC	14.51%	NVDA	9.47%
63.0	ISRG	14.49%	SBUX	9.37%
63.0	CAH	13.89%	JPM	9.27%
63.0	COST	13.87%	CSCO	8.82%
63.0	GLD	12.42%	HSBC	8.8%
63.0	SBUX	12.35%	ZION	8.64%
63.0	ORLY	12.33%	WFC	8.59%
63.0	GE	11.96%	IRM	8.49%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	LUMN	278.93%	MSTR	114.73%
126.0	MSTR	156.68%	LUMN	91.56%
126.0	VST	141.25%	VST	74.86%
126.0	TSLA	138.76%	TSLA	65.25%
126.0	CCL	135.31%	VNO	50.14%
126.0	VNO	120.45%	TRGP	47.35%
126.0	MS	86.61%	CCL	45.8%
126.0	T	83.83%	VFC	43.83%
126.0	TRGP	83.11%	EXPE	39.89%
126.0	TMUS	68.56%	NFLX	37.53%
126.0	ORCL	63.62%	GILD	35.45%
126.0	GBTC	60.66%	GME	34.13%
126.0	JPM	57.87%	TMUS	32.69%
126.0	NVDA	57.82%	AVGO	32.21%
126.0	NFLX	56.23%	ORCL	29.8%
126.0	GILD	46.8%	MS	29.13%
126.0	CSCO	45.99%	T	28.6%
126.0	NWL	44.44%	GBTC	26.69%
126.0	BMY	41.9%	GS	25.21%
126.0	GS	40.8%	WFC	25.02%
126.0	CAH	37.71%	ISRG	24.99%
126.0	ZION	36.06%	BMY	24.51%
126.0	ISRG	35.09%	NVDA	24.23%
126.0	UAA	33.73%	META	24.18%
126.0	WFC	33.46%	CSCO	23.59%
126.0	COST	32.9%	ZION	21.53%
126.0	SBUX	32.3%	CMA	21.34%
126.0	BHC	30.3%	SBUX	20.56%
126.0	BAC	30.29%	JPM	20.38%
126.0	FITB	29.71%	MSI	19.28%

Bottom 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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	VCSH	0.0%	AAP	0.13%
1.0	PCG	0.0%	CYH	0.14%
1.0	MUB	0.0%	FRA	0.25%
1.0	TLT	0.0%	BIIB	0.26%
1.0	MSFT	0.0%	FIS	0.39%
1.0	MOS	0.0%	AMC	0.42%
1.0	LVS	0.0%	META	0.52%
1.0	LUMN	0.0%	EXPE	0.53%
1.0	HYG	0.0%	IEP	0.53%
1.0	GT	0.0%	ADBE	0.54%
1.0	EMB	0.0%	LNC	0.57%
1.0	CSCO	0.0%	CSTM	0.65%
1.0	VNO	0.0%	CMCSA	0.65%
1.0	CCL	0.0%	NAVI	0.66%
1.0	T	0.0%	CZR	0.67%
1.0	WYNN	0.0%	UAA	0.67%
1.0	MNST	0.13%	BA	0.67%
1.0	HSBC	0.13%	PCG	0.74%
1.0	BHP	0.13%	EMB	0.77%
1.0	AZN	0.13%	HLT	0.77%
1.0	CVS	0.13%	TLT	0.78%
1.0	QQQ	0.13%	GT	0.85%
1.0	IEP	0.13%	BMY	0.89%
1.0	CYH	0.14%	BHP	0.89%
1.0	GE	0.14%	PRGO	0.9%
1.0	BHC	0.14%	CVS	0.9%
1.0	ELAN	0.14%	BBY	0.9%
1.0	PRGO	0.15%	RIO	0.9%
1.0	LQD	0.25%	KHC	0.9%
1.0	VICI	0.26%	HD	0.92%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	UAA	0.0%	SBNY	0.0%
10.0	PRGO	0.0%	FRCB	0.0%
10.0	VCSH	0.13%	WRK	0.0%
10.0	FRA	0.13%	CMCSA	0.13%
10.0	HYG	0.13%	TLT	0.13%
10.0	HSBC	0.13%	BALL	0.13%
10.0	EMB	0.13%	MSFT	0.13%
10.0	MUB	0.13%	CZR	0.13%
10.0	AMAT	0.13%	AAP	0.13%
10.0	COST	0.13%	FRA	0.25%
10.0	DHI	0.13%	ON	0.26%
10.0	CVS	0.13%	CSTM	0.26%
10.0	KHC	0.13%	FIS	0.26%
10.0	MS	0.13%	CMA	0.26%
10.0	FIS	0.13%	TFC	0.26%
10.0	PHM	0.13%	IEP	0.27%
10.0	QQQ	0.13%	CYH	0.27%
10.0	TLT	0.13%	LNC	0.28%
10.0	CSCO	0.13%	LQD	0.38%
10.0	USB	0.13%	HLT	0.39%
10.0	FITB	0.13%	SIVBQ	0.39%
10.0	TFC	0.13%	LW	0.39%
10.0	MSFT	0.13%	VFC	0.43%
10.0	T	0.13%	EMB	0.51%
10.0	IEP	0.13%	AMAT	0.51%
10.0	CYH	0.13%	TXN	0.51%
10.0	LVS	0.14%	CITI	0.52%
10.0	VNO	0.14%	KALU	0.52%
10.0	LUMN	0.14%	ZION	0.53%
10.0	KEY	0.14%	KEY	0.56%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	FSUGY	0.0%	ZTS	0.0%
21.0	CSCO	0.0%	NWL	0.0%
21.0	CSTM	0.0%	MSFT	0.0%
21.0	CYH	0.0%	CMA	0.0%
21.0	DHI	0.0%	CMCSA	0.0%
21.0	EMB	0.0%	KEY	0.0%
21.0	TXN	0.0%	CSCO	0.0%
21.0	FIS	0.0%	CSTM	0.0%
21.0	FITB	0.0%	CYH	0.0%
21.0	FRA	0.0%	CZR	0.0%
21.0	TLT	0.0%	JAZZ	0.0%
21.0	TFC	0.0%	INTU	0.0%
21.0	PRGO	0.0%	IEP	0.0%
21.0	GSK	0.0%	FIS	0.0%
21.0	GT	0.0%	FRA	0.0%
21.0	MU	0.0%	FRCB	0.0%
21.0	T	0.0%	GT	0.0%
21.0	MSFT	0.0%	GOOGL	0.0%
21.0	HYG	0.0%	PEP	0.0%
21.0	IEP	0.0%	QQQ	0.0%
21.0	INTC	0.0%	CITI	0.0%
21.0	MS	0.0%	GNRC	0.0%
21.0	ZION	0.0%	VFC	0.0%
21.0	JPM	0.0%	AMC	0.0%
21.0	KEY	0.0%	AMZN	0.0%
21.0	KHC	0.0%	SBNY	0.0%
21.0	LEN	0.0%	WRK	0.0%
21.0	MNST	0.0%	VICI	0.0%
21.0	LNC	0.0%	SPY	0.0%
21.0	LQD	0.0%	TFC	0.0%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	AA	0.0%	AA	0.0%
63.0	HYG	0.0%	MSFT	0.0%
63.0	PRGO	0.0%	MNST	0.0%
63.0	HON	0.0%	LW	0.0%
63.0	HLT	0.0%	LQD	0.0%
63.0	PWR	0.0%	LNC	0.0%
63.0	QQQ	0.0%	KHC	0.0%
63.0	GT	0.0%	KEY	0.0%
63.0	GSK	0.0%	JAZZ	0.0%
63.0	GS	0.0%	ZION	0.0%
63.0	SBNY	0.0%	NAVI	0.0%
63.0	SBUX	0.0%	INTU	0.0%
63.0	SPY	0.0%	HYG	0.0%
63.0	T	0.0%	HON	0.0%
63.0	TDG	0.0%	HLT	0.0%
63.0	TFC	0.0%	GT	0.0%
63.0	FSUGY	0.0%	GSK	0.0%
63.0	FRCB	0.0%	GOOGL	0.0%
63.0	FRA	0.0%	GOLD	0.0%
63.0	NAVI	0.0%	GNRC	0.0%
63.0	IEP	0.0%	FRCB	0.0%
63.0	INTC	0.0%	IEP	0.0%
63.0	POST	0.0%	NEM	0.0%
63.0	ZION	0.0%	NWL	0.0%
63.0	MUB	0.0%	ON	0.0%
63.0	MU	0.0%	XOM	0.0%
63.0	NFLX	0.0%	WRK	0.0%
63.0	NVS	0.0%	VICI	0.0%
63.0	MSFT	0.0%	VFC	0.0%
63.0	MS	0.0%	VCSH	0.0%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	AA	0.0%	AA	0.0%
126.0	NFLX	0.0%	MUB	0.0%
126.0	NEM	0.0%	MSFT	0.0%
126.0	NAVI	0.0%	MRK	0.0%
126.0	MUB	0.0%	MOS	0.0%
126.0	MU	0.0%	MNST	0.0%
126.0	MSFT	0.0%	LW	0.0%
126.0	MS	0.0%	LVS	0.0%
126.0	MRK	0.0%	LQD	0.0%
126.0	MOS	0.0%	LNC	0.0%
126.0	MNST	0.0%	KHC	0.0%
126.0	LVS	0.0%	KEY	0.0%
126.0	LUMN	0.0%	NAVI	0.0%
126.0	LQD	0.0%	KALU	0.0%
126.0	LNC	0.0%	ZION	0.0%
126.0	LLY	0.0%	INTU	0.0%
126.0	LEN	0.0%	INTC	0.0%
126.0	KHC	0.0%	IEP	0.0%
126.0	KEY	0.0%	HYG	0.0%
126.0	KALU	0.0%	HON	0.0%
126.0	JPM	0.0%	HD	0.0%
126.0	JAZZ	0.0%	HCA	0.0%
126.0	ISRG	0.0%	GT	0.0%
126.0	ZION	0.0%	GSK	0.0%
126.0	INTU	0.0%	GOOGL	0.0%
126.0	INTC	0.0%	JAZZ	0.0%
126.0	IEP	0.0%	NWL	0.0%
126.0	HYG	0.0%	ON	0.0%
126.0	HSBC	0.0%	ORLY	0.0%
126.0	HON	0.0%	XOM	0.0%

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 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	AA	0.0%	AA	0.0%
252.0	NWL	0.0%	NVS	0.0%
252.0	NVS	0.0%	NEM	0.0%
252.0	NFLX	0.0%	NAVI	0.0%
252.0	NEM	0.0%	MUB	0.0%
252.0	NAVI	0.0%	MSFT	0.0%
252.0	MUB	0.0%	MRK	0.0%
252.0	MU	0.0%	MOS	0.0%
252.0	MSFT	0.0%	MNST	0.0%
252.0	MS	0.0%	LW	0.0%
252.0	MRK	0.0%	LVS	0.0%
252.0	MOS	0.0%	LUMN	0.0%
252.0	MNST	0.0%	LQD	0.0%
252.0	LVS	0.0%	NWL	0.0%
252.0	LUMN	0.0%	LNC	0.0%
252.0	LQD	0.0%	KEY	0.0%
252.0	LNC	0.0%	KALU	0.0%
252.0	LEN	0.0%	JAZZ	0.0%
252.0	KHC	0.0%	ZION	0.0%
252.0	KEY	0.0%	INTU	0.0%
252.0	KALU	0.0%	INTC	0.0%
252.0	JAZZ	0.0%	IEP	0.0%
252.0	ISRG	0.0%	HYG	0.0%
252.0	ZION	0.0%	HON	0.0%
252.0	INTU	0.0%	HLT	0.0%
252.0	INTC	0.0%	HD	0.0%
252.0	IEP	0.0%	GT	0.0%
252.0	HYG	0.0%	KHC	0.0%
252.0	HSBC	0.0%	GSK	0.0%
252.0	HON	0.0%	ON	0.0%

P30D: 1d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	AA	0.0%	AA	0.0%
1.0	ON	0.0%	ON	0.0%
1.0	NWL	0.0%	NWL	0.0%
1.0	NVS	0.0%	NVDA	0.0%
1.0	NVDA	0.0%	NFLX	0.0%
1.0	NFLX	0.0%	NEM	0.0%
1.0	NEM	0.0%	NAVI	0.0%
1.0	NAVI	0.0%	MUB	0.0%
1.0	MUB	0.0%	MU	0.0%
1.0	MU	0.0%	MSTR	0.0%
1.0	MSTR	0.0%	MSI	0.0%
1.0	MSI	0.0%	MS	0.0%
1.0	MSFT	0.0%	MRK	0.0%
1.0	MS	0.0%	MOS	0.0%
1.0	MRK	0.0%	MNST	0.0%
1.0	ORCL	0.0%	META	0.0%
1.0	MOS	0.0%	LW	0.0%
1.0	META	0.0%	LVS	0.0%
1.0	LW	0.0%	LUMN	0.0%
1.0	LVS	0.0%	LQD	0.0%
1.0	LUMN	0.0%	LNC	0.0%
1.0	LQD	0.0%	LLY	0.0%
1.0	LNC	0.0%	LEN	0.0%
1.0	LLY	0.0%	KHC	0.0%
1.0	LEN	0.0%	KEY	0.0%
1.0	KHC	0.0%	KALU	0.0%
1.0	KEY	0.0%	JPM	0.0%
1.0	KALU	0.0%	JAZZ	0.0%
1.0	JPM	0.0%	ZION	0.0%
1.0	JAZZ	0.0%	IRM	0.0%

P30D: 10d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	AA	0.0%	AA	0.0%
10.0	OXY	0.0%	OXY	0.0%
10.0	ORCL	0.0%	ORCL	0.0%
10.0	ON	0.0%	ON	0.0%
10.0	NWL	0.0%	NWL	0.0%
10.0	NVS	0.0%	NVS	0.0%
10.0	NVDA	0.0%	NVDA	0.0%
10.0	NFLX	0.0%	NFLX	0.0%
10.0	NEM	0.0%	NEM	0.0%
10.0	NAVI	0.0%	NAVI	0.0%
10.0	MUB	0.0%	MUB	0.0%
10.0	MU	0.0%	MU	0.0%
10.0	MSTR	0.0%	MSTR	0.0%
10.0	MSI	0.0%	MSI	0.0%
10.0	MSFT	0.0%	MSFT	0.0%
10.0	MS	0.0%	MS	0.0%
10.0	MRK	0.0%	MRK	0.0%
10.0	MOS	0.0%	MOS	0.0%
10.0	JAZZ	0.0%	JAZZ	0.0%
10.0	JPM	0.0%	JPM	0.0%
10.0	KALU	0.0%	KALU	0.0%
10.0	KEY	0.0%	KEY	0.0%
10.0	KHC	0.0%	KHC	0.0%
10.0	LEN	0.0%	LEN	0.0%
10.0	PCG	0.0%	PCG	0.0%
10.0	LLY	0.0%	LLY	0.0%
10.0	LQD	0.0%	LQD	0.0%
10.0	LUMN	0.0%	LUMN	0.0%
10.0	LVS	0.0%	LVS	0.0%
10.0	LW	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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	AA	0.0%	AA	0.0%
1.0	LEN	0.0%	MOS	0.0%
1.0	KHC	0.0%	META	0.0%
1.0	KEY	0.0%	LW	0.0%
1.0	KALU	0.0%	LUMN	0.0%
1.0	JPM	0.0%	LLY	0.0%
1.0	JAZZ	0.0%	LEN	0.0%
1.0	QQQ	0.0%	KEY	0.0%
1.0	ZION	0.0%	KALU	0.0%
1.0	RIO	0.0%	JPM	0.0%
1.0	SBUX	0.0%	ZION	0.0%
1.0	IEP	0.0%	IEP	0.0%
1.0	HYG	0.0%	HON	0.0%
1.0	HSBC	0.0%	GWW	0.0%
1.0	HON	0.0%	GOOGL	0.0%
1.0	SLV	0.0%	GME	0.0%
1.0	SPY	0.0%	GLD	0.0%
1.0	GWW	0.0%	GBTC	0.0%
1.0	GT	0.0%	FSUGY	0.0%
1.0	T	0.0%	FRA	0.0%
1.0	TDG	0.0%	MRK	0.0%
1.0	GOOGL	0.0%	FITB	0.0%
1.0	TEVA	0.0%	MSI	0.0%
1.0	TFC	0.0%	MU	0.0%
1.0	LLY	0.0%	XOM	0.0%
1.0	THC	0.0%	X	0.0%
1.0	LNC	0.0%	VNO	0.0%
1.0	LUMN	0.0%	VFC	0.0%
1.0	PCG	0.0%	VCSH	0.0%
1.0	OXY	0.0%	USB	0.0%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	AA	0.0%	AA	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%	MSTR	0.0%
10.0	MSTR	0.0%	MSI	0.0%
10.0	MSI	0.0%	MSFT	0.0%
10.0	MSFT	0.0%	MOS	0.0%
10.0	MS	0.0%	META	0.0%
10.0	MRK	0.0%	LW	0.0%
10.0	MOS	0.0%	LVS	0.0%
10.0	MNST	0.0%	LUMN	0.0%
10.0	META	0.0%	LQD	0.0%
10.0	LW	0.0%	LLY	0.0%
10.0	LVS	0.0%	LEN	0.0%
10.0	LUMN	0.0%	KHC	0.0%
10.0	LQD	0.0%	KEY	0.0%
10.0	LNC	0.0%	KALU	0.0%
10.0	LLY	0.0%	ZION	0.0%
10.0	LEN	0.0%	INTU	0.0%
10.0	KHC	0.0%	IEP	0.0%
10.0	KEY	0.0%	HYG	0.0%
10.0	KALU	0.0%	HON	0.0%
10.0	JPM	0.0%	HD	0.0%
10.0	JAZZ	0.0%	HCA	0.0%
10.0	ZION	0.0%	NVDA	0.0%
10.0	INTU	0.0%	NWL	0.0%
10.0	IEP	0.0%	ON	0.0%
10.0	HYG	0.0%	OXY	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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	AA	0.0%	AA	0.0%
21.0	OXY	0.0%	OXY	0.0%
21.0	ORLY	0.0%	ORLY	0.0%
21.0	ORCL	0.0%	ORCL	0.0%
21.0	ON	0.0%	ON	0.0%
21.0	NWL	0.0%	NWL	0.0%
21.0	NVS	0.0%	NVDA	0.0%
21.0	NVDA	0.0%	NEM	0.0%
21.0	NFLX	0.0%	NAVI	0.0%
21.0	NEM	0.0%	MUB	0.0%
21.0	NAVI	0.0%	MU	0.0%
21.0	MUB	0.0%	MSTR	0.0%
21.0	MU	0.0%	MSI	0.0%
21.0	MSTR	0.0%	MSFT	0.0%
21.0	MSI	0.0%	MS	0.0%
21.0	MSFT	0.0%	MRK	0.0%
21.0	MS	0.0%	MOS	0.0%
21.0	MRK	0.0%	LW	0.0%
21.0	JAZZ	0.0%	LVS	0.0%
21.0	JPM	0.0%	LUMN	0.0%
21.0	KALU	0.0%	LQD	0.0%
21.0	KEY	0.0%	LLY	0.0%
21.0	KHC	0.0%	LEN	0.0%
21.0	LEN	0.0%	KHC	0.0%
21.0	PCG	0.0%	KEY	0.0%
21.0	LLY	0.0%	KALU	0.0%
21.0	LQD	0.0%	JAZZ	0.0%
21.0	LUMN	0.0%	ZION	0.0%
21.0	LVS	0.0%	IRM	0.0%
21.0	LW	0.0%	INTU	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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	CSCO	0.0%	FRA	0.0%
1.0	CSTM	0.0%	CTLT	0.0%
1.0	CTLT	0.0%	IEP	0.0%
1.0	CVS	0.0%	AMD	0.0%
1.0	CYH	0.0%	AMC	0.0%
1.0	LLY	0.0%	MOS	0.0%
1.0	LQD	0.0%	CYH	0.0%
1.0	EMB	0.0%	EMB	0.0%
1.0	MOS	0.0%	AAP	0.0%
1.0	TLT	0.0%	VCSH	0.41%
1.0	FIS	0.0%	CSTM	0.42%
1.0	MNST	0.0%	AZN	0.42%
1.0	NVDA	0.0%	BIIB	0.42%
1.0	FSUGY	0.0%	NEM	0.42%
1.0	COST	0.0%	XOM	0.42%
1.0	JAZZ	0.0%	FIS	0.42%
1.0	T	0.0%	META	0.43%
1.0	SPY	0.0%	FSUGY	0.43%
1.0	RIO	0.0%	ADBE	0.43%
1.0	GOOGL	0.0%	BALL	0.43%
1.0	QQQ	0.0%	KEY	0.44%
1.0	OXY	0.0%	BA	0.44%
1.0	GT	0.0%	JPM	0.83%
1.0	PCG	0.0%	MRK	0.83%
1.0	LVS	0.0%	HYG	0.83%
1.0	LUMN	0.0%	EXPE	0.83%
1.0	HSBC	0.0%	CVS	0.83%
1.0	HYG	0.0%	ZTS	0.83%
1.0	IEP	0.0%	FITB	0.84%
1.0	TDG	0.0%	MSFT	0.84%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	CITI	0.0%	ETRN	0.0%
10.0	WRK	0.0%	WRK	0.0%
10.0	PRGO	0.0%	CITI	0.0%
10.0	UAA	0.0%	GLD	0.41%
10.0	NVS	0.41%	SNY	0.41%
10.0	JPM	0.41%	FRA	0.41%
10.0	FRA	0.41%	VCSH	0.41%
10.0	PHM	0.41%	LQD	0.41%
10.0	SPY	0.41%	HYG	0.41%
10.0	BHP	0.41%	EMB	0.41%
10.0	VCSH	0.41%	MUB	0.41%
10.0	PEP	0.41%	CSTM	0.41%
10.0	MRK	0.41%	IEP	0.41%
10.0	COST	0.41%	CMA	0.41%
10.0	MS	0.41%	NAVI	0.41%
10.0	HYG	0.41%	MOS	0.41%
10.0	HSBC	0.41%	VZ	0.42%
10.0	MNST	0.41%	TDG	0.42%
10.0	EMB	0.41%	BXP	0.42%
10.0	CSTM	0.41%	MSFT	0.42%
10.0	IEP	0.41%	CMCSA	0.42%
10.0	BIIB	0.41%	XOM	0.42%
10.0	ACGL	0.41%	ON	0.42%
10.0	MUB	0.41%	AZO	0.42%
10.0	CVS	0.41%	OXY	0.42%
10.0	AZN	0.41%	META	0.42%
10.0	MOS	0.41%	KHC	0.42%
10.0	CMG	0.41%	LW	0.43%
10.0	NAVI	0.41%	CLF	0.43%
10.0	NVDA	0.41%	BALL	0.43%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	GLD	0.0%	AA	0.0%
21.0	LEN	0.0%	MSFT	0.0%
21.0	KHC	0.0%	MRK	0.0%
21.0	KEY	0.0%	MOS	0.0%
21.0	KALU	0.0%	LW	0.0%
21.0	JPM	0.0%	LQD	0.0%
21.0	JAZZ	0.0%	KHC	0.0%
21.0	ZION	0.0%	KEY	0.0%
21.0	INTU	0.0%	KALU	0.0%
21.0	INTC	0.0%	JAZZ	0.0%
21.0	IEP	0.0%	ISRG	0.0%
21.0	LLY	0.0%	INTU	0.0%
21.0	HYG	0.0%	INTC	0.0%
21.0	HLT	0.0%	IEP	0.0%
21.0	TDG	0.0%	HYG	0.0%
21.0	TFC	0.0%	HD	0.0%
21.0	GT	0.0%	GT	0.0%
21.0	GSK	0.0%	GOOGL	0.0%
21.0	GOOGL	0.0%	GOLD	0.0%
21.0	GOLD	0.0%	GNRC	0.0%
21.0	GNRC	0.0%	GLD	0.0%
21.0	TLT	0.0%	GE	0.0%
21.0	PHM	0.0%	MSI	0.0%
21.0	T	0.0%	MUB	0.0%
21.0	LNC	0.0%	NAVI	0.0%
21.0	LQD	0.0%	NEM	0.0%
21.0	LUMN	0.0%	XOM	0.0%
21.0	PEP	0.0%	X	0.0%
21.0	PCG	0.0%	WRK	0.0%
21.0	OXY	0.0%	WDC	0.0%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	AA	0.0%	AA	0.0%
63.0	MOS	0.0%	NWL	0.0%
63.0	MNST	0.0%	NEM	0.0%
63.0	UAA	0.0%	NAVI	0.0%
63.0	LW	0.0%	MUB	0.0%
63.0	LVS	0.0%	MU	0.0%
63.0	LUMN	0.0%	MSFT	0.0%
63.0	LQD	0.0%	MRK	0.0%
63.0	LNC	0.0%	MOS	0.0%
63.0	LLY	0.0%	MNST	0.0%
63.0	LEN	0.0%	META	0.0%
63.0	KHC	0.0%	LW	0.0%
63.0	KEY	0.0%	LQD	0.0%
63.0	KALU	0.0%	LNC	0.0%
63.0	JPM	0.0%	LLY	0.0%
63.0	JAZZ	0.0%	LEN	0.0%
63.0	ISRG	0.0%	KHC	0.0%
63.0	ZION	0.0%	KEY	0.0%
63.0	INTU	0.0%	KALU	0.0%
63.0	INTC	0.0%	JAZZ	0.0%
63.0	IEP	0.0%	ISRG	0.0%
63.0	HYG	0.0%	ZION	0.0%
63.0	HSBC	0.0%	INTU	0.0%
63.0	HON	0.0%	INTC	0.0%
63.0	HLT	0.0%	IEP	0.0%
63.0	UNH	0.0%	HYG	0.0%
63.0	USB	0.0%	HON	0.0%
63.0	GWW	0.0%	HLT	0.0%
63.0	MRK	0.0%	ON	0.0%
63.0	GT	0.0%	ORLY	0.0%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	AA	0.0%	AA	0.0%
126.0	ORCL	0.0%	NWL	0.0%
126.0	ON	0.0%	NVS	0.0%
126.0	NWL	0.0%	NEM	0.0%
126.0	NVS	0.0%	NAVI	0.0%
126.0	NVDA	0.0%	MUB	0.0%
126.0	NFLX	0.0%	MU	0.0%
126.0	NEM	0.0%	MSFT	0.0%
126.0	NAVI	0.0%	MRK	0.0%
126.0	MUB	0.0%	MOS	0.0%
126.0	MU	0.0%	MNST	0.0%
126.0	MSFT	0.0%	META	0.0%
126.0	MS	0.0%	LW	0.0%
126.0	MRK	0.0%	LVS	0.0%
126.0	MOS	0.0%	LQD	0.0%
126.0	ORLY	0.0%	LNC	0.0%
126.0	MNST	0.0%	LLY	0.0%
126.0	LVS	0.0%	LEN	0.0%
126.0	LUMN	0.0%	KHC	0.0%
126.0	LQD	0.0%	KEY	0.0%
126.0	LNC	0.0%	KALU	0.0%
126.0	LLY	0.0%	JAZZ	0.0%
126.0	LEN	0.0%	ZION	0.0%
126.0	KHC	0.0%	INTU	0.0%
126.0	KEY	0.0%	INTC	0.0%
126.0	KALU	0.0%	IEP	0.0%
126.0	JPM	0.0%	HYG	0.0%
126.0	JAZZ	0.0%	HON	0.0%
126.0	ISRG	0.0%	ON	0.0%
126.0	ZION	0.0%	ORLY	0.0%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SIVBQ	-0.66%	SBNY	-0.7%
1.0	SBNY	-0.58%	SIVBQ	-0.43%
1.0	IEP	-0.46%	FRCB	-0.23%
1.0	NWL	-0.41%	AMC	-0.2%
1.0	AVGO	-0.37%	AAP	-0.17%
1.0	AMC	-0.31%	IEP	-0.17%
1.0	CZR	-0.23%	VFC	-0.13%
1.0	AAP	-0.22%	UAA	-0.12%
1.0	UAA	-0.21%	CZR	-0.09%
1.0	BIIB	-0.2%	NWL	-0.09%
1.0	FRCB	-0.19%	ELAN	-0.07%
1.0	MOS	-0.14%	CVS	-0.07%
1.0	VFC	-0.13%	BALL	-0.06%
1.0	GT	-0.12%	LNC	-0.05%
1.0	GNRC	-0.12%	BIIB	-0.05%
1.0	BALL	-0.12%	MOS	-0.05%
1.0	ELAN	-0.11%	TLT	-0.05%
1.0	FSUGY	-0.11%	CNC	-0.05%
1.0	NEM	-0.1%	CSTM	-0.04%
1.0	LUMN	-0.1%	NEM	-0.04%
1.0	CSTM	-0.1%	KALU	-0.04%
1.0	LNC	-0.1%	LUMN	-0.04%
1.0	ZTS	-0.09%	GT	-0.03%
1.0	FIS	-0.09%	AA	-0.03%
1.0	CVS	-0.08%	FIS	-0.03%
1.0	TLT	-0.06%	KEY	-0.02%
1.0	CTLT	-0.06%	GSK	-0.02%
1.0	CLF	-0.05%	ZION	-0.02%
1.0	USB	-0.05%	NAVI	-0.02%
1.0	BHP	-0.05%	USB	-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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SIVBQ	-5.37%	SBNY	-6.69%
10.0	SBNY	-4.64%	SIVBQ	-5.52%
10.0	IEP	-3.41%	FRCB	-3.91%
10.0	AVGO	-3.09%	AAP	-1.84%
10.0	NWL	-3.01%	AMC	-1.58%
10.0	FRCB	-2.89%	IEP	-1.5%
10.0	LUMN	-2.23%	VFC	-1.32%
10.0	AAP	-2.19%	UAA	-1.13%
10.0	CLF	-1.94%	NWL	-1.1%
10.0	CZR	-1.93%	LUMN	-0.88%
10.0	AMC	-1.86%	CZR	-0.69%
10.0	VFC	-1.62%	BHC	-0.67%
10.0	GNRC	-1.61%	ELAN	-0.63%
10.0	CYH	-1.43%	BALL	-0.61%
10.0	UAA	-1.29%	BIIB	-0.59%
10.0	BIIB	-1.11%	LNC	-0.55%
10.0	GT	-1.0%	GNRC	-0.54%
10.0	FSUGY	-0.8%	CLF	-0.54%
10.0	BXP	-0.8%	ZION	-0.53%
10.0	BALL	-0.78%	CYH	-0.53%
10.0	VZ	-0.73%	AA	-0.5%
10.0	FIS	-0.71%	TLT	-0.5%
10.0	RIO	-0.64%	GT	-0.48%
10.0	MOS	-0.61%	MOS	-0.42%
10.0	LNC	-0.61%	BXP	-0.39%
10.0	INTU	-0.6%	KEY	-0.38%
10.0	BHP	-0.59%	CNC	-0.37%
10.0	KEY	-0.54%	FIS	-0.33%
10.0	BAC	-0.53%	CVS	-0.31%
10.0	ZION	-0.52%	CHTR	-0.31%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SIVBQ	-11.7%	SBNY	-14.05%
21.0	SBNY	-9.55%	SIVBQ	-11.91%
21.0	IEP	-6.79%	FRCB	-8.3%
21.0	FRCB	-6.03%	AAP	-3.59%
21.0	NWL	-5.87%	AMC	-3.51%
21.0	AVGO	-5.25%	IEP	-3.25%
21.0	CZR	-4.41%	VFC	-2.8%
21.0	AAP	-4.33%	NWL	-2.49%
21.0	GNRC	-4.15%	UAA	-1.99%
21.0	CLF	-4.02%	CZR	-1.66%
21.0	VFC	-3.63%	BHC	-1.56%
21.0	GT	-2.76%	LUMN	-1.47%
21.0	LUMN	-2.33%	LNC	-1.29%
21.0	KEY	-2.24%	ELAN	-1.13%
21.0	UAA	-2.15%	BALL	-1.11%
21.0	BALL	-2.07%	INTC	-1.08%
21.0	BXP	-2.06%	GT	-1.08%
21.0	CYH	-1.88%	BXP	-1.03%
21.0	MOS	-1.8%	GNRC	-1.02%
21.0	BIIB	-1.38%	BIIB	-1.02%
21.0	INTC	-1.35%	TLT	-1.0%
21.0	ZION	-1.31%	AA	-0.97%
21.0	FSUGY	-1.27%	CLF	-0.95%
21.0	BBY	-1.26%	CNC	-0.9%
21.0	BAC	-1.26%	MOS	-0.85%
21.0	INTU	-1.2%	CYH	-0.82%
21.0	AMC	-1.14%	ZION	-0.82%
21.0	VZ	-1.11%	KEY	-0.67%
21.0	RIO	-1.08%	CHTR	-0.65%
21.0	TLT	-1.06%	CSTM	-0.64%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	SIVBQ	-49.01%	SBNY	-39.31%
63.0	SBNY	-33.67%	SIVBQ	-36.19%
63.0	IEP	-27.01%	FRCB	-25.78%
63.0	FRCB	-26.72%	AMC	-15.78%
63.0	AVGO	-18.6%	IEP	-11.88%
63.0	NWL	-15.79%	AAP	-11.01%
63.0	CLF	-14.89%	NWL	-7.09%
63.0	GNRC	-14.53%	MOS	-5.66%
63.0	AAP	-13.92%	VFC	-5.64%
63.0	BHC	-12.34%	CLF	-5.52%
63.0	UAA	-10.48%	BHC	-5.48%
63.0	AMC	-10.14%	CZR	-4.88%
63.0	MOS	-9.74%	UAA	-4.79%
63.0	VFC	-8.89%	INTC	-4.35%
63.0	CYH	-7.74%	AA	-4.14%
63.0	CVS	-7.69%	CVS	-3.79%
63.0	INTC	-7.69%	LUMN	-3.72%
63.0	AA	-7.38%	LNC	-3.49%
63.0	BALL	-7.15%	ELAN	-3.23%
63.0	CZR	-6.16%	BALL	-3.13%
63.0	KEY	-6.11%	NEM	-2.97%
63.0	GT	-5.96%	TLT	-2.95%
63.0	PRGO	-4.76%	GT	-2.7%
63.0	BHP	-4.0%	BXP	-2.6%
63.0	NEM	-4.0%	CSTM	-2.52%
63.0	TLT	-3.94%	PRGO	-2.51%
63.0	LNC	-3.69%	GNRC	-2.5%
63.0	VZ	-3.68%	CNC	-2.47%
63.0	FSUGY	-3.63%	BIIB	-2.38%
63.0	LUMN	-3.54%	CHTR	-2.35%

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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	FRCB	-129.53%	SIVBQ	-67.06%
126.0	SIVBQ	-91.31%	SBNY	-65.9%
126.0	SBNY	-71.69%	FRCB	-52.19%
126.0	IEP	-48.71%	AMC	-30.51%
126.0	AVGO	-39.18%	IEP	-22.34%
126.0	NWL	-34.74%	AAP	-21.62%
126.0	AAP	-27.74%	NWL	-14.37%
126.0	VFC	-27.03%	MOS	-12.41%
126.0	AMC	-26.45%	VFC	-11.75%
126.0	CLF	-24.75%	CVS	-8.69%
126.0	GNRC	-23.1%	CLF	-8.54%
126.0	MOS	-22.43%	INTC	-6.88%
126.0	INTC	-18.93%	CTLT	-6.66%
126.0	CVS	-15.93%	CZR	-6.59%
126.0	BHC	-13.88%	LNC	-6.39%
126.0	CTLT	-12.93%	PRGO	-6.17%
126.0	UAA	-11.93%	AA	-5.89%
126.0	PRGO	-11.57%	NEM	-5.85%
126.0	CHTR	-11.2%	CNC	-5.83%
126.0	BALL	-10.79%	TLT	-5.28%
126.0	AA	-10.05%	BHC	-5.0%
126.0	KEY	-9.27%	GSK	-4.92%
126.0	LNC	-9.08%	ELAN	-4.82%
126.0	CZR	-8.66%	UAA	-4.51%
126.0	GT	-8.64%	GT	-4.42%
126.0	GSK	-8.29%	GNRC	-3.98%
126.0	TLT	-7.77%	BALL	-3.87%
126.0	GME	-6.97%	BXP	-3.85%
126.0	VZ	-6.37%	CHTR	-3.79%
126.0	BHP	-5.79%	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 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	FRCB	-206.43%	SBNY	-96.1%
252.0	SBNY	-153.53%	SIVBQ	-95.64%
252.0	SIVBQ	-151.82%	FRCB	-91.52%
252.0	IEP	-104.22%	AMC	-62.33%
252.0	AVGO	-103.91%	IEP	-44.46%
252.0	NWL	-79.46%	AAP	-42.0%
252.0	AAP	-67.47%	NWL	-29.63%
252.0	AMC	-56.91%	VFC	-26.94%
252.0	MOS	-54.64%	MOS	-25.47%
252.0	VFC	-46.55%	CVS	-20.3%
252.0	CLF	-36.25%	BMY	-13.91%
252.0	CVS	-34.73%	PRGO	-13.22%
252.0	LUMN	-28.34%	UAA	-12.77%
252.0	GNRC	-25.35%	CLF	-12.31%
252.0	LNC	-25.16%	CZR	-12.06%
252.0	CZR	-24.41%	JAZZ	-10.7%
252.0	PRGO	-22.94%	LUMN	-10.38%
252.0	UAA	-22.66%	CHTR	-10.18%
252.0	CTLT	-22.13%	CNC	-9.88%
252.0	GT	-22.06%	AA	-9.77%
252.0	BHC	-21.34%	TLT	-8.91%
252.0	KEY	-19.54%	CTLT	-8.52%
252.0	BMY	-18.84%	LNC	-7.81%
252.0	INTC	-15.58%	INTC	-7.4%
252.0	TLT	-15.22%	NEM	-7.06%
252.0	JAZZ	-15.15%	BXP	-6.84%
252.0	CHTR	-14.43%	BHC	-6.79%
252.0	KHC	-13.54%	GT	-6.79%
252.0	CNC	-11.35%	BIIB	-6.6%
252.0	BIIB	-9.57%	KHC	-6.17%

P30D: 1d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	VFC	-2.75%	VFC	-2.05%
1.0	LUMN	-2.71%	CCL	-1.28%
1.0	ISRG	-2.42%	ISRG	-1.12%
1.0	CCL	-2.17%	CZR	-1.05%
1.0	LVS	-1.96%	BBY	-0.94%
1.0	BHC	-1.83%	LUMN	-0.9%
1.0	CZR	-1.73%	SBUX	-0.79%
1.0	AMZN	-1.67%	WDC	-0.71%
1.0	CYH	-1.64%	HLT	-0.71%
1.0	COST	-1.46%	CYH	-0.7%
1.0	ADBE	-1.42%	ORCL	-0.69%
1.0	BBY	-1.3%	MU	-0.69%
1.0	ORCL	-1.27%	EXPE	-0.66%
1.0	JAZZ	-1.21%	LVS	-0.66%
1.0	TFC	-1.15%	ADBE	-0.64%
1.0	MU	-1.12%	BHC	-0.62%
1.0	META	-1.1%	META	-0.6%
1.0	LLY	-1.06%	AMZN	-0.59%
1.0	IEP	-1.01%	JAZZ	-0.59%
1.0	WDC	-0.94%	LLY	-0.57%
1.0	UAA	-0.94%	AVGO	-0.5%
1.0	MS	-0.9%	COST	-0.49%
1.0	SBUX	-0.87%	GS	-0.48%
1.0	QQQ	-0.83%	TFC	-0.48%
1.0	CMG	-0.79%	MS	-0.47%
1.0	ELAN	-0.78%	NAVI	-0.46%
1.0	TXN	-0.75%	CLF	-0.46%
1.0	NAVI	-0.72%	IEP	-0.45%
1.0	LNC	-0.72%	ON	-0.45%
1.0	AMAT	-0.69%	FITB	-0.45%

P30D: 10d

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

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	LUMN	-21.03%	VFC	-12.61%
10.0	ADBE	-13.84%	ADBE	-7.95%
10.0	VFC	-13.1%	LUMN	-7.85%
10.0	UAA	-13.06%	LVS	-7.25%
10.0	LVS	-11.03%	UAA	-7.0%
10.0	CLF	-8.43%	SBUX	-5.51%
10.0	KHC	-7.76%	GILD	-4.74%
10.0	ORCL	-7.33%	CLF	-4.42%
10.0	BIIB	-6.32%	COST	-4.29%
10.0	HLT	-5.95%	HLT	-4.29%
10.0	COST	-5.43%	CZR	-4.21%
10.0	META	-5.04%	META	-3.76%
10.0	LLY	-4.95%	KHC	-3.64%
10.0	CMG	-4.94%	HD	-3.22%
10.0	SBUX	-4.76%	WYNN	-3.03%
10.0	LEN	-4.66%	AAPL	-3.03%
10.0	PEP	-4.58%	GOOGL	-3.02%
10.0	AAPL	-4.51%	SNY	-2.91%
10.0	GILD	-4.4%	AVGO	-2.87%
10.0	CZR	-4.38%	CMG	-2.86%
10.0	NAVI	-4.13%	PEP	-2.79%
10.0	CYH	-4.1%	LLY	-2.76%
10.0	WYNN	-4.08%	LEN	-2.75%
10.0	JAZZ	-4.02%	MRK	-2.75%
10.0	KALU	-3.97%	NAVI	-2.61%
10.0	AZN	-3.86%	AZN	-2.53%
10.0	HD	-3.46%	BBY	-2.5%
10.0	BHC	-3.16%	KALU	-2.5%
10.0	MRK	-3.13%	JAZZ	-2.28%
10.0	GOOGL	-2.83%	ORCL	-2.16%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	UAA	-1.31%	GME	-0.57%
1.0	CYH	-1.1%	ON	-0.53%
1.0	NWL	-1.01%	VFC	-0.5%
1.0	TEVA	-0.96%	UAA	-0.48%
1.0	LVS	-0.85%	AVGO	-0.47%
1.0	CCL	-0.83%	WDC	-0.44%
1.0	LUMN	-0.83%	GNRC	-0.44%
1.0	AMZN	-0.81%	CZR	-0.43%
1.0	IRM	-0.81%	CCL	-0.43%
1.0	GNRC	-0.8%	TEVA	-0.35%
1.0	ON	-0.74%	NWL	-0.35%
1.0	VFC	-0.69%	BBY	-0.34%
1.0	CZR	-0.68%	VST	-0.34%
1.0	CMG	-0.66%	TSLA	-0.33%
1.0	ISRG	-0.66%	GOOGL	-0.32%
1.0	NVDA	-0.64%	AAP	-0.31%
1.0	MSI	-0.63%	LVS	-0.29%
1.0	PHM	-0.61%	GBTC	-0.29%
1.0	BIIB	-0.6%	AMZN	-0.27%
1.0	AMAT	-0.56%	IRM	-0.27%
1.0	GOOGL	-0.54%	LW	-0.27%
1.0	GME	-0.52%	LUMN	-0.26%
1.0	BBY	-0.51%	MSI	-0.25%
1.0	LW	-0.46%	CMG	-0.24%
1.0	MRK	-0.46%	CYH	-0.22%
1.0	ELAN	-0.4%	NVDA	-0.22%
1.0	WDC	-0.38%	BIIB	-0.2%
1.0	GBTC	-0.33%	AMAT	-0.19%
1.0	UNH	-0.32%	MRK	-0.18%
1.0	VST	-0.32%	AA	-0.18%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	TEVA	-13.28%	TSLA	-7.9%
10.0	NWL	-12.09%	NWL	-5.69%
10.0	LUMN	-9.53%	TEVA	-5.23%
10.0	UAA	-9.14%	UAA	-5.03%
10.0	PWR	-8.59%	ON	-4.92%
10.0	AMAT	-8.55%	GME	-4.5%
10.0	TSLA	-8.38%	VST	-4.29%
10.0	MSTR	-7.89%	WDC	-4.25%
10.0	CDNS	-7.41%	AAP	-3.91%
10.0	ON	-6.73%	VFC	-3.78%
10.0	GNRC	-5.78%	AVGO	-3.71%
10.0	VFC	-5.74%	GOOGL	-3.66%
10.0	CMG	-5.6%	IRM	-3.55%
10.0	LEN	-5.59%	GNRC	-3.48%
10.0	IRM	-5.58%	LUMN	-3.45%
10.0	FIS	-5.54%	PWR	-3.45%
10.0	CCL	-5.49%	CMG	-3.31%
10.0	NVDA	-5.36%	CCL	-3.27%
10.0	GBTC	-5.05%	GBTC	-3.17%
10.0	AMD	-4.85%	LW	-2.9%
10.0	LW	-4.57%	AMAT	-2.87%
10.0	PHM	-4.09%	LEN	-2.72%
10.0	MS	-4.09%	LVS	-2.66%
10.0	AAP	-3.78%	CZR	-2.54%
10.0	LVS	-3.75%	AMZN	-2.49%
10.0	VNO	-3.57%	CDNS	-2.45%
10.0	GOOGL	-3.56%	MRK	-2.29%
10.0	MRK	-3.48%	AMD	-2.2%
10.0	BIIB	-3.37%	BHC	-2.2%
10.0	PCG	-3.36%	ELAN	-2.19%

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 2025-01-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	TEVA	-39.26%	TSLA	-20.35%
21.0	TSLA	-33.97%	NWL	-17.71%
21.0	NWL	-31.65%	WDC	-14.69%
21.0	CCL	-26.81%	TEVA	-13.76%
21.0	WDC	-23.77%	VST	-13.44%
21.0	AMAT	-23.51%	AAP	-11.72%
21.0	MSTR	-21.04%	ON	-11.61%
21.0	PWR	-19.99%	VFC	-11.24%
21.0	ON	-19.88%	MSTR	-10.92%
21.0	LUMN	-16.41%	PWR	-10.77%
21.0	LEN	-15.85%	UAA	-10.74%
21.0	FIS	-15.8%	GME	-10.05%
21.0	UAA	-15.23%	CCL	-9.94%
21.0	NVDA	-14.93%	IRM	-9.66%
21.0	CDNS	-14.83%	GNRC	-9.53%
21.0	VFC	-14.62%	AVGO	-8.79%
21.0	IRM	-14.4%	CDNS	-8.58%
21.0	AMD	-13.51%	GBTC	-8.4%
21.0	AAP	-12.66%	GOOGL	-8.38%
21.0	FITB	-12.21%	AMAT	-8.28%
21.0	ZION	-11.34%	LW	-7.77%
21.0	VST	-11.0%	AMD	-7.45%
21.0	GNRC	-10.74%	CMG	-7.12%
21.0	GBTC	-10.54%	CZR	-7.03%
21.0	AMZN	-10.5%	NVDA	-7.02%
21.0	PHM	-10.24%	LUMN	-7.02%
21.0	BHC	-10.2%	LEN	-6.87%
21.0	FSUGY	-10.01%	AMZN	-6.38%
21.0	DHI	-9.94%	ZION	-6.35%
21.0	VNO	-9.91%	ELAN	-6.08%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	AMD	-0.66%	CLF	-0.33%
1.0	AVGO	-0.65%	AAP	-0.26%
1.0	IEP	-0.65%	AMD	-0.26%
1.0	FSUGY	-0.52%	CZR	-0.24%
1.0	BIIB	-0.52%	CSTM	-0.23%
1.0	CSTM	-0.47%	IEP	-0.23%
1.0	CZR	-0.46%	FSUGY	-0.2%
1.0	AMAT	-0.45%	GT	-0.2%
1.0	CLF	-0.42%	LW	-0.19%
1.0	GT	-0.37%	ON	-0.18%
1.0	MRK	-0.32%	BIIB	-0.16%
1.0	MOS	-0.26%	MRK	-0.15%
1.0	LW	-0.26%	CNC	-0.14%
1.0	AAP	-0.24%	AMAT	-0.14%
1.0	KALU	-0.2%	KALU	-0.13%
1.0	LVS	-0.19%	MU	-0.11%
1.0	LEN	-0.18%	CVS	-0.11%
1.0	BHP	-0.18%	ELAN	-0.1%
1.0	NAVI	-0.18%	MOS	-0.09%
1.0	ON	-0.18%	LEN	-0.09%
1.0	PHM	-0.17%	OXY	-0.08%
1.0	CVS	-0.16%	GBTC	-0.08%
1.0	CYH	-0.15%	NAVI	-0.08%
1.0	DHI	-0.13%	FCX	-0.08%
1.0	CNC	-0.12%	BALL	-0.08%
1.0	MU	-0.12%	LVS	-0.07%
1.0	NWL	-0.12%	BHP	-0.07%
1.0	RIO	-0.11%	AMC	-0.06%
1.0	AMC	-0.11%	DHI	-0.05%
1.0	TEVA	-0.1%	WDC	-0.05%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	IEP	-5.36%	CLF	-2.99%
10.0	AVGO	-4.41%	AAP	-2.79%
10.0	CLF	-3.84%	CSTM	-2.36%
10.0	AMAT	-3.58%	AMD	-2.19%
10.0	AMD	-3.43%	IEP	-1.93%
10.0	FSUGY	-3.02%	LW	-1.74%
10.0	BIIB	-2.91%	FSUGY	-1.74%
10.0	ON	-2.84%	ON	-1.71%
10.0	CSTM	-2.73%	BIIB	-1.46%
10.0	AAP	-2.51%	MRK	-1.45%
10.0	BHC	-2.49%	CZR	-1.36%
10.0	OXY	-2.21%	AMAT	-1.35%
10.0	CNC	-2.06%	BHC	-1.31%
10.0	INTC	-1.99%	LEN	-1.19%
10.0	CZR	-1.94%	OXY	-1.17%
10.0	MRK	-1.91%	WDC	-1.12%
10.0	LW	-1.76%	BALL	-1.09%
10.0	LEN	-1.58%	KALU	-1.04%
10.0	MU	-1.49%	GT	-0.99%
10.0	PRGO	-1.28%	CNC	-0.89%
10.0	CMG	-1.27%	NAVI	-0.84%
10.0	NAVI	-1.25%	KHC	-0.79%
10.0	GBTC	-1.25%	LVS	-0.74%
10.0	KALU	-1.22%	PRGO	-0.73%
10.0	CDNS	-1.21%	ADBE	-0.69%
10.0	BHP	-1.16%	ELAN	-0.62%
10.0	KHC	-1.04%	CMG	-0.61%
10.0	FIS	-1.03%	DHI	-0.59%
10.0	RIO	-0.95%	BHP	-0.55%
10.0	QCOM	-0.85%	PEP	-0.53%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	IEP	-11.59%	AAP	-5.69%
21.0	AAP	-9.38%	CLF	-5.39%
21.0	AVGO	-8.39%	CSTM	-4.76%
21.0	OXY	-7.76%	IEP	-3.9%
21.0	FSUGY	-7.39%	AMD	-3.67%
21.0	CLF	-7.36%	LW	-3.5%
21.0	INTC	-7.16%	FSUGY	-3.35%
21.0	AMD	-7.13%	ON	-3.27%
21.0	CSTM	-6.31%	OXY	-3.26%
21.0	AMAT	-5.44%	BIIB	-2.96%
21.0	ON	-5.43%	MRK	-2.95%
21.0	BIIB	-4.92%	WDC	-2.95%
21.0	MRK	-4.32%	INTC	-2.76%
21.0	BHC	-3.71%	AMAT	-2.45%
21.0	CNC	-3.16%	GT	-2.44%
21.0	WDC	-3.07%	CNC	-2.16%
21.0	LEN	-3.04%	BALL	-2.05%
21.0	LW	-2.9%	KALU	-1.99%
21.0	MOS	-2.73%	CZR	-1.96%
21.0	CZR	-2.62%	LEN	-1.87%
21.0	GT	-2.51%	BHC	-1.79%
21.0	BHP	-2.23%	FCX	-1.72%
21.0	KHC	-2.22%	KHC	-1.62%
21.0	QCOM	-2.14%	NAVI	-1.37%
21.0	TEVA	-2.1%	MOS	-1.3%
21.0	BALL	-2.08%	CMG	-1.12%
21.0	MU	-1.93%	CDNS	-1.09%
21.0	FIS	-1.89%	BHP	-1.05%
21.0	CMG	-1.54%	PEP	-0.95%
21.0	FCX	-1.5%	MU	-0.93%

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 2024-04-02 through 2025-03-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	IEP	-43.8%	CSTM	-19.21%
63.0	CLF	-34.62%	CLF	-16.59%
63.0	AVGO	-30.14%	IEP	-16.25%
63.0	AMD	-28.62%	AAP	-15.66%
63.0	FSUGY	-27.74%	BIIB	-12.47%
63.0	CSTM	-27.18%	FSUGY	-10.91%
63.0	AAP	-23.82%	LW	-10.84%
63.0	INTC	-22.49%	AMD	-10.73%
63.0	ELAN	-17.78%	INTC	-10.4%
63.0	ON	-16.17%	MRK	-10.22%
63.0	GT	-16.05%	ELAN	-9.54%
63.0	OXY	-15.19%	ON	-8.94%
63.0	BIIB	-15.12%	GT	-8.68%
63.0	MU	-14.07%	KALU	-8.6%
63.0	MRK	-13.72%	OXY	-8.52%
63.0	BHP	-13.37%	FCX	-8.02%
63.0	AMAT	-12.58%	MU	-7.75%
63.0	QCOM	-11.85%	AMAT	-7.51%
63.0	WDC	-11.34%	BALL	-7.39%
63.0	BALL	-10.47%	WDC	-6.98%
63.0	FCX	-10.18%	KHC	-5.27%
63.0	MOS	-9.3%	LEN	-5.22%
63.0	CMG	-9.23%	CNC	-5.02%
63.0	LW	-9.02%	PEP	-4.49%
63.0	KHC	-7.95%	BHP	-4.48%
63.0	KALU	-7.4%	PRGO	-4.17%
63.0	PCG	-6.77%	QCOM	-4.13%
63.0	CDNS	-6.27%	MOS	-3.98%
63.0	PEP	-5.72%	CMG	-3.87%
63.0	PRGO	-5.64%	GSK	-3.59%

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 2024-04-02 through 2025-03-28

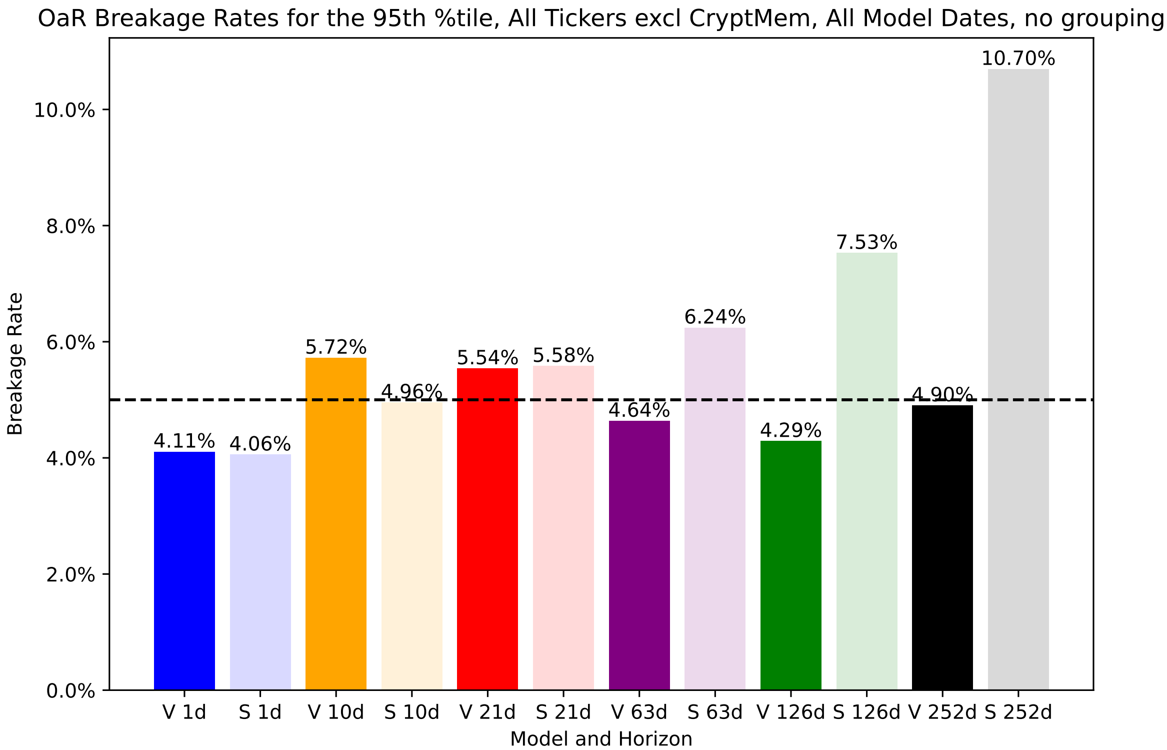
Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	IEP	-73.61%	CSTM	-38.71%
126.0	CSTM	-70.63%	AAP	-33.51%
126.0	CLF	-56.63%	IEP	-31.23%
126.0	AAP	-52.53%	CLF	-27.1%
126.0	AVGO	-49.76%	BIIB	-26.43%
126.0	INTC	-46.34%	MRK	-20.69%
126.0	FSUGY	-44.68%	AMD	-17.72%
126.0	AMD	-36.46%	OXY	-17.67%
126.0	ELAN	-33.8%	FSUGY	-16.56%
126.0	ON	-29.38%	CNC	-16.54%
126.0	MRK	-27.49%	INTC	-16.51%
126.0	BIIB	-27.14%	ELAN	-16.48%
126.0	GSK	-24.22%	ON	-15.98%
126.0	OXY	-23.59%	AMAT	-15.84%
126.0	MU	-22.86%	BALL	-12.68%
126.0	BALL	-21.52%	KALU	-12.45%
126.0	QCOM	-21.46%	GSK	-12.32%
126.0	AMAT	-21.37%	FCX	-12.0%
126.0	ADBE	-20.53%	LW	-11.63%
126.0	BHP	-19.4%	MU	-11.6%
126.0	CNC	-19.12%	GT	-11.43%
126.0	WDC	-18.77%	WDC	-11.02%
126.0	MOS	-18.2%	KHC	-10.58%
126.0	FCX	-16.27%	LEN	-10.1%
126.0	AZN	-16.26%	AMC	-9.99%
126.0	GT	-16.18%	PEP	-9.18%
126.0	PRGO	-14.72%	QCOM	-8.99%
126.0	AMC	-14.66%	ADBE	-8.8%
126.0	KALU	-14.58%	PRGO	-8.48%
126.0	BUD	-14.45%	AZN	-8.36%

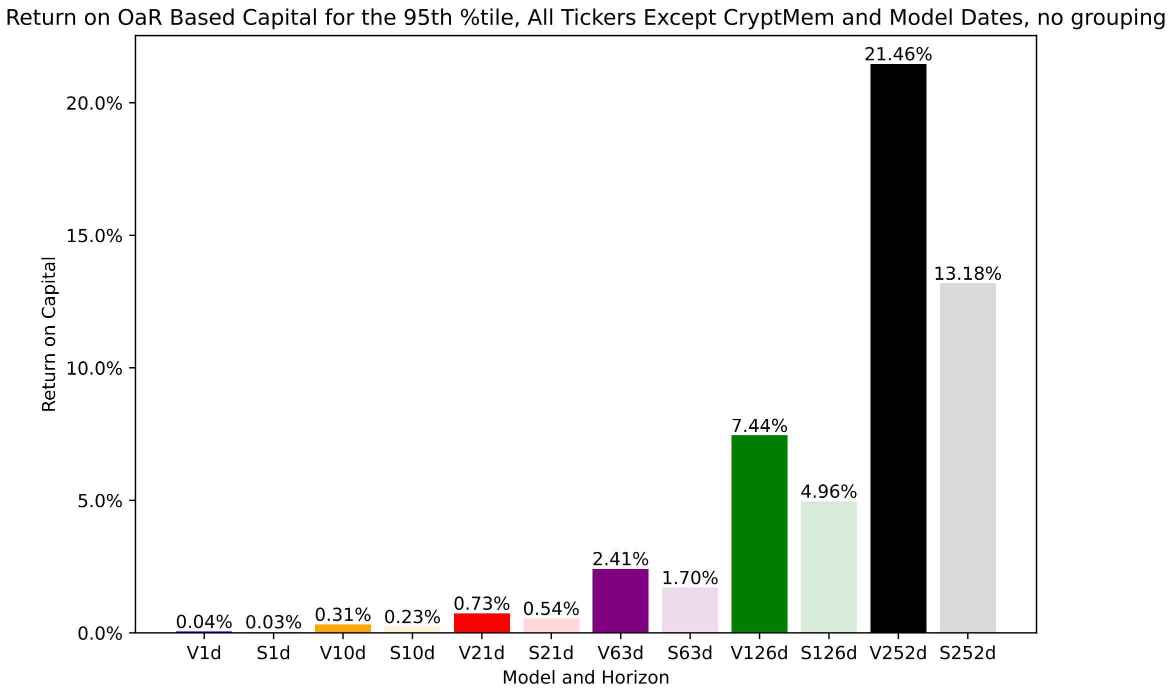
APPENDIX 1: 95% OaR Performance excluding Crypto & Meme stocks

Here we repeat the performance comparison of 95% OaR estimates generated by the Vector Model ("V", presented with dark shading) and Sigma ("S", presented with light shading) that was provided earlier but exclude tickers MSTR, GBTC, AMC, and GME from all model dates. We refer to these tickers as the Crypto / Meme basket, or "CryptMem" for short.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28





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

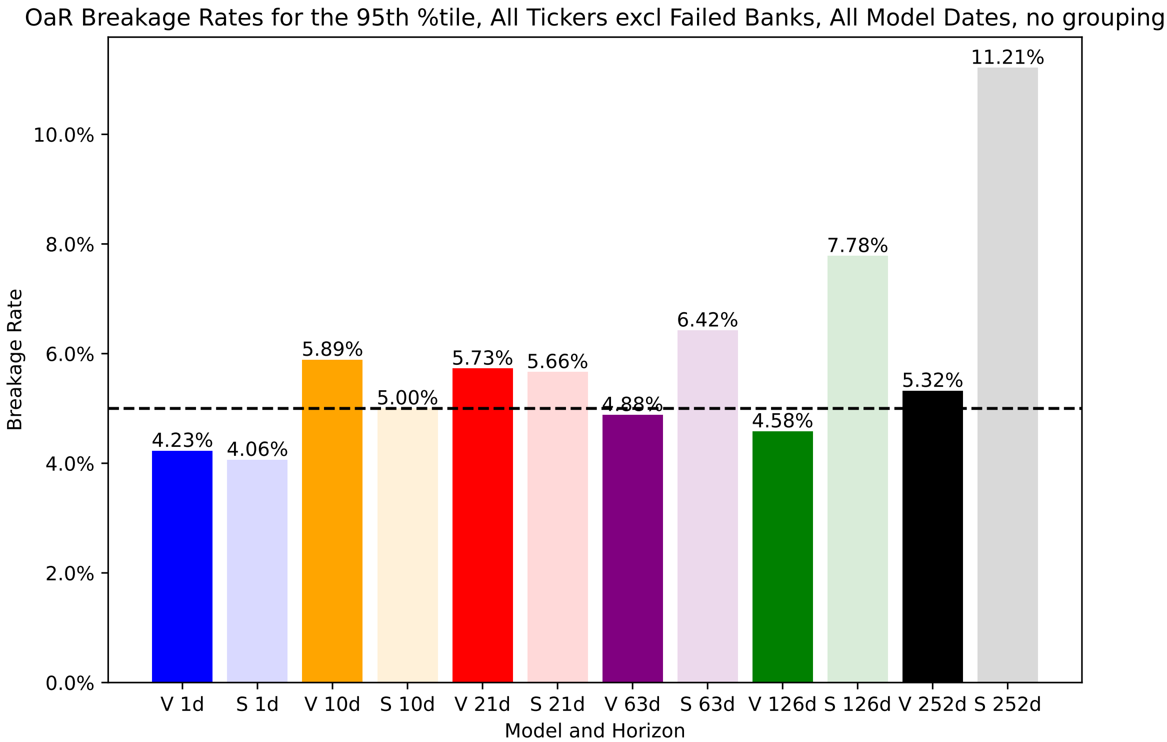
	1d	10d	21d	63d	126d	252d
intercept	0.00%	0.07%	0.11%	0.30%	0.56%	1.06%
intercept_p_value	64.80%	0.00%	0.00%	0.00%	0.00%	0.00%
slope	154.28%	126.96%	129.82%	137.28%	148.78%	166.91%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

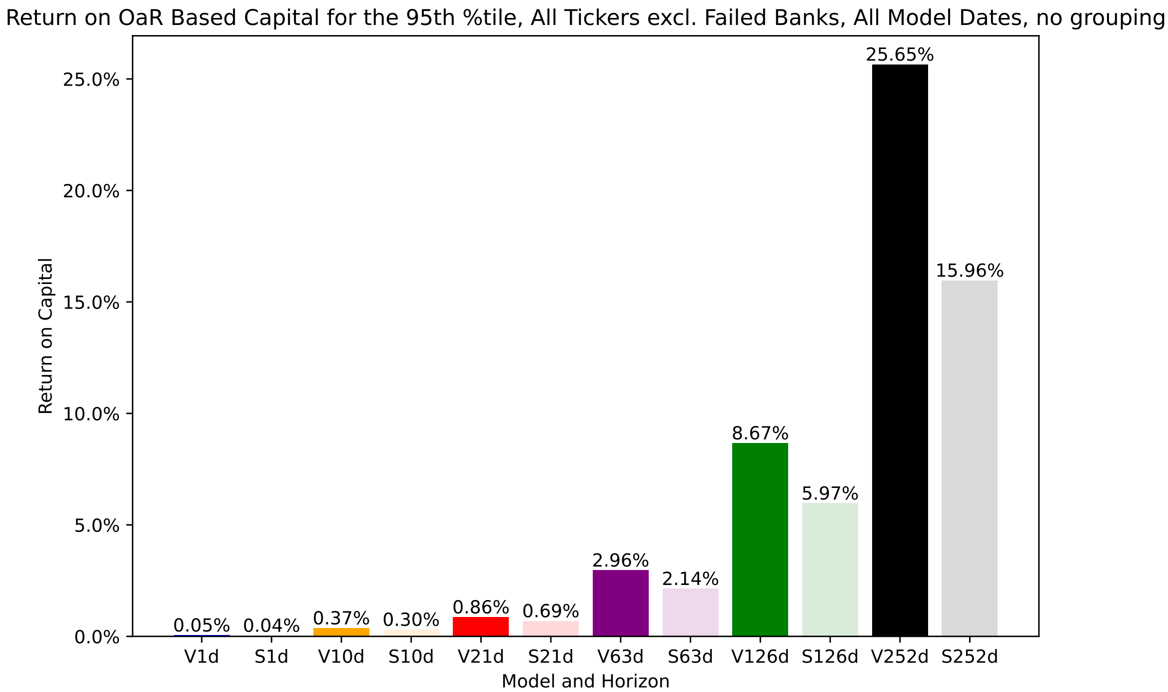
APPENDIX 2: 95% OaR Performance excluding Failed Banks

Here we repeat the performance comparison of 95% OaR estimates generated by the Vector Model ("V", presented with dark shading) and Sigma ("S", presented with light shading) that was provided earlier but exclude tickers SIVBQ, SBNY, and FRCB from all model dates. We refer to these tickers as the "Failed Banks".

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28



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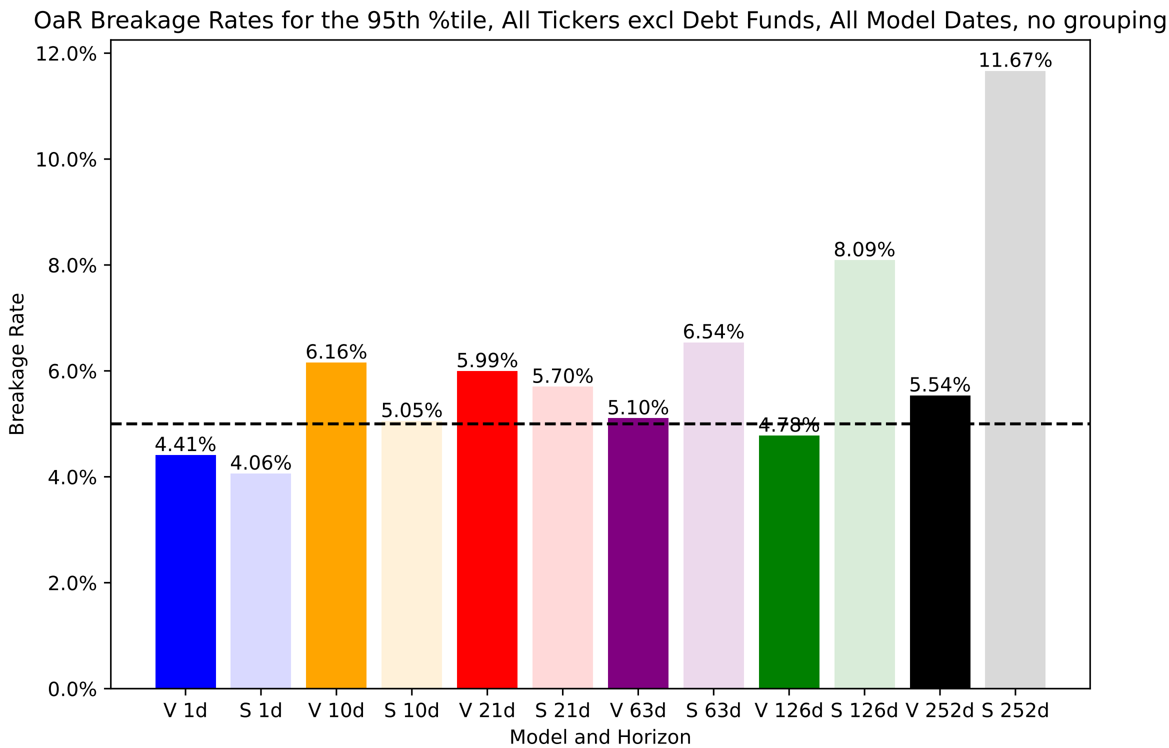
Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon
corresponding actual returns across TMD's:
                         1d       10d       21d       63d      126d      252d
intercept             0.00%     0.05%     0.07%     0.19%     0.51%     3.35%
intercept_p_value    96.68%     0.35%     0.16%     0.00%     0.00%     0.00%
slope               147.33%   121.73%   124.99%   139.82%   144.92%   149.43%
slope_p_value         0.00%     0.00%     0.00%     0.00%     0.00%     0.00%
```

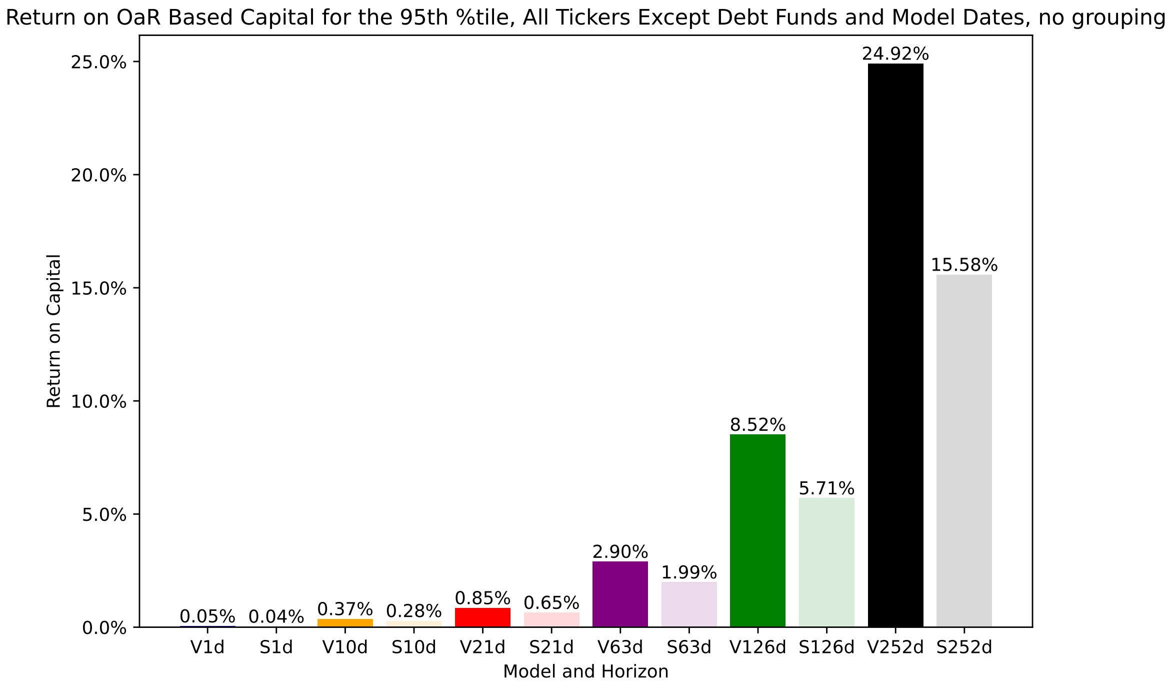
APPENDIX 3: 95% OaR Performance excluding Debt Funds

Here we repeat the performance comparison of 95% OaR estimates generated by the Vector Model (“V”, presented with dark shading) and Sigma (“S”, presented with light shading) that was provided earlier but exclude ETF and Closed End Fund tickers TLT, LQD, VCSH, MUB, HYG EMB, and FRA from all model dates. We refer to these tickers as the Debt Fund basket, or “Debt” for short.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28





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

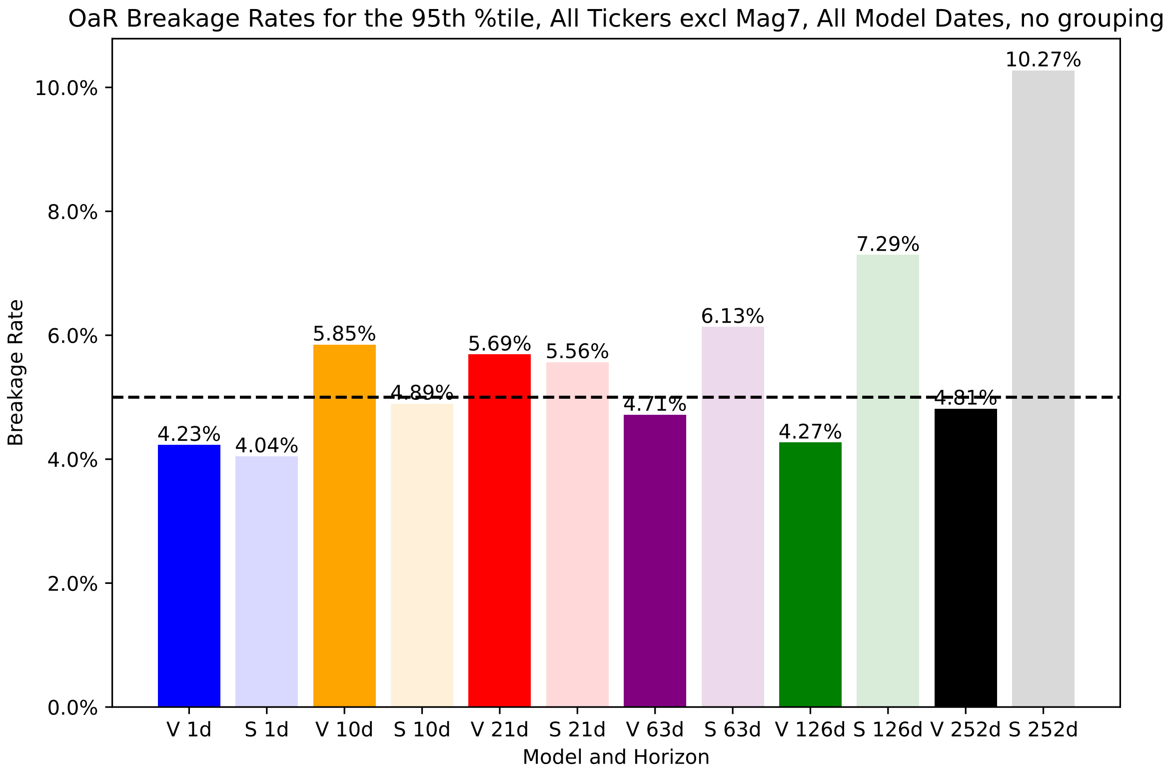
	1d	10d	21d	63d	126d	252d
intercept	0.00%	0.08%	0.15%	0.43%	0.94%	3.06%
intercept_p_value	68.97%	0.00%	0.00%	0.00%	0.00%	0.00%
slope	145.14%	118.49%	121.39%	135.69%	141.69%	150.56%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

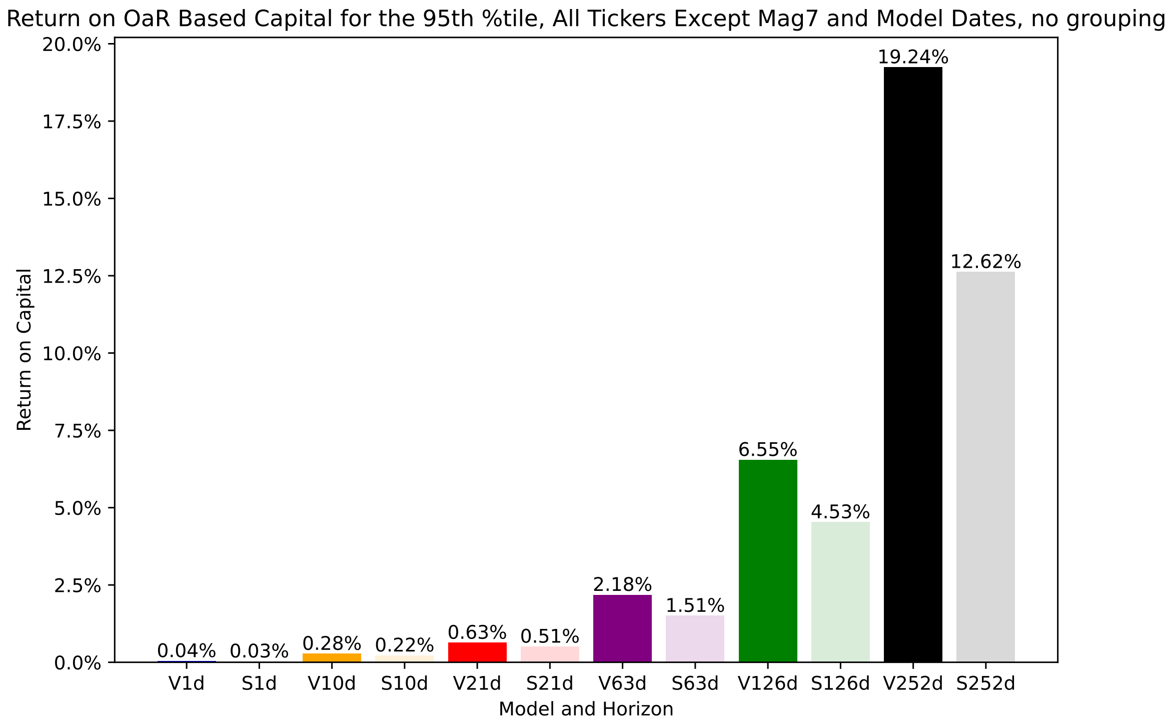
APPENDIX 4: 95% OaR Performance excluding "Mag 7" stocks

Here we repeat the performance comparison of 95% OaR estimates generated by the Vector Model ("V", presented with dark shading) and Sigma ("S", presented with light shading) that was provided earlier but exclude tickers AAPL, AMZN, GOOGL, META, NFLX, NVDA, and TSLA from all model dates. We refer to these tickers as the "Mag7" basket.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28





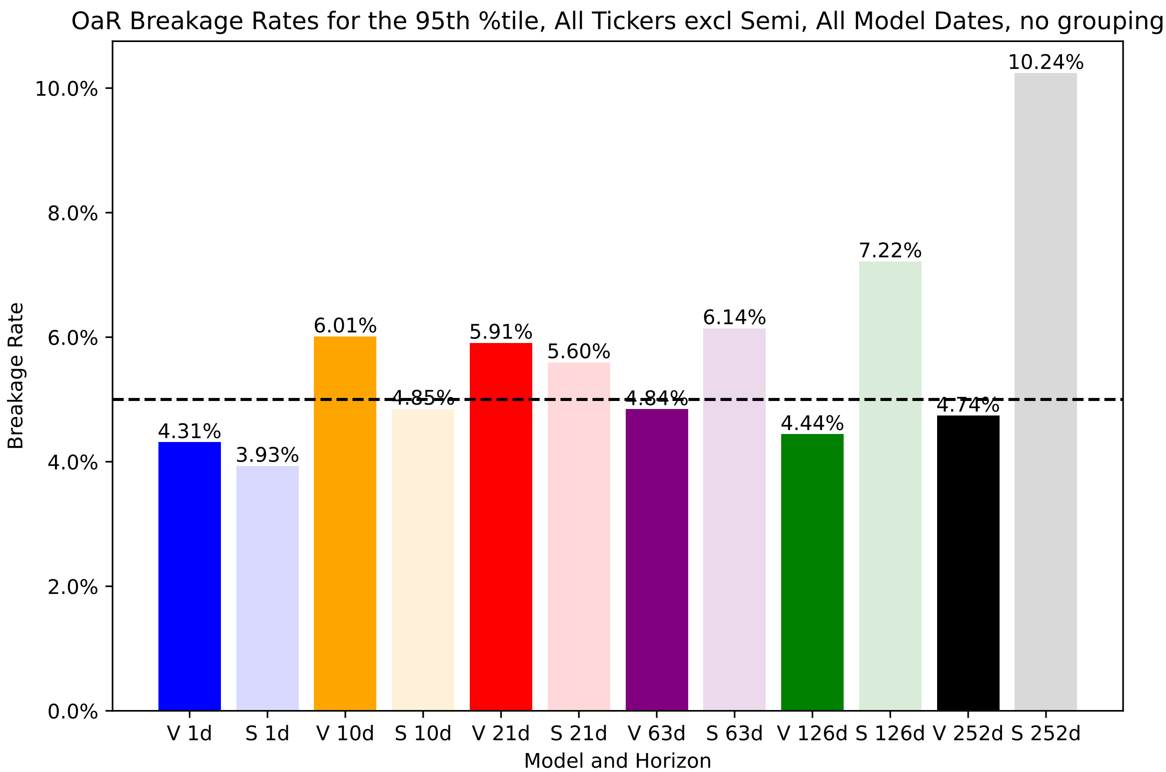

```
Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon
corresponding actual returns across TMD's:
                        1d       10d       21d       63d      126d      252d
intercept            0.00%     0.06%     0.10%     0.38%     0.83%     2.60%
intercept_p_value   69.29%     0.02%     0.00%     0.00%     0.00%     0.00%
slope              143.96%   116.21%   118.72%   133.95%   137.86%   146.08%
slope_p_value        0.00%     0.00%     0.00%     0.00%     0.00%     0.00%
```

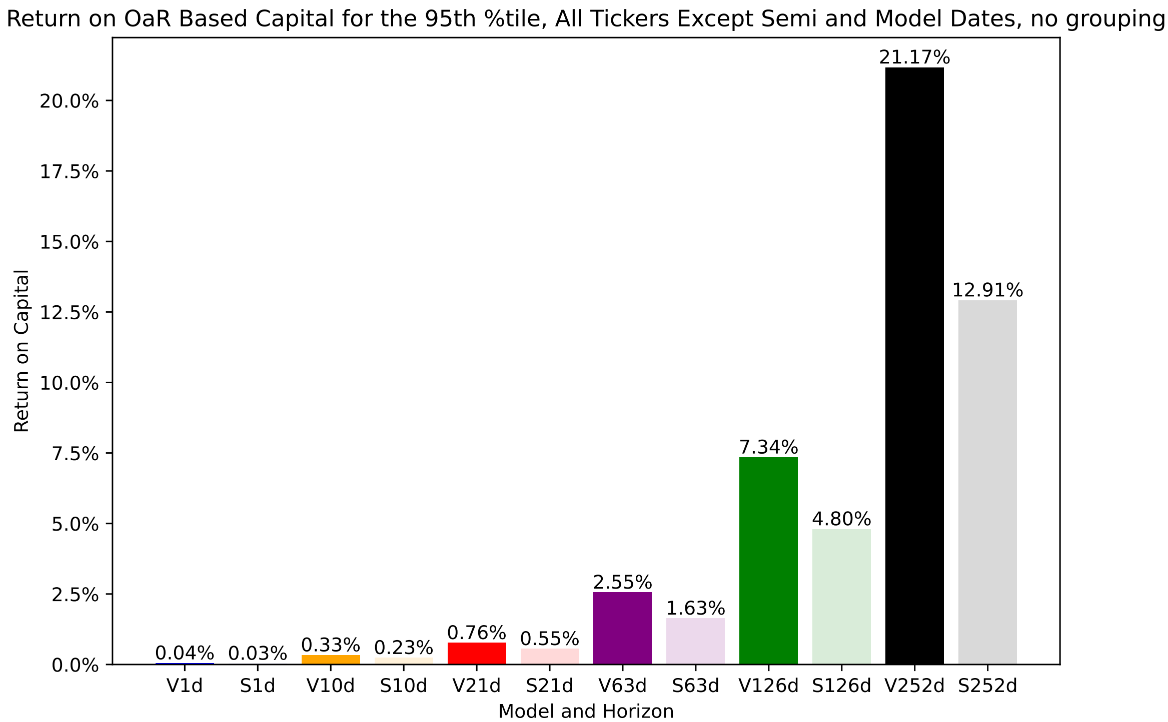
APPENDIX 5: 95% OaR Performance excluding “Semiconductor” stocks

Here we repeat the performance comparison of 95% OaR estimates generated by the Vector Model (“V”, presented with dark shading) and Sigma (“S”, presented with light shading) that was provided earlier but exclude tickers ‘NVDA’,‘AMD’,‘AVGO’,‘MU’,‘AMAT’,‘CDNS’,‘TXN’, ‘ON’,‘QCOM’, and ‘INTC’ from all model dates. We refer to these tickers as the “Semi” basket.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28



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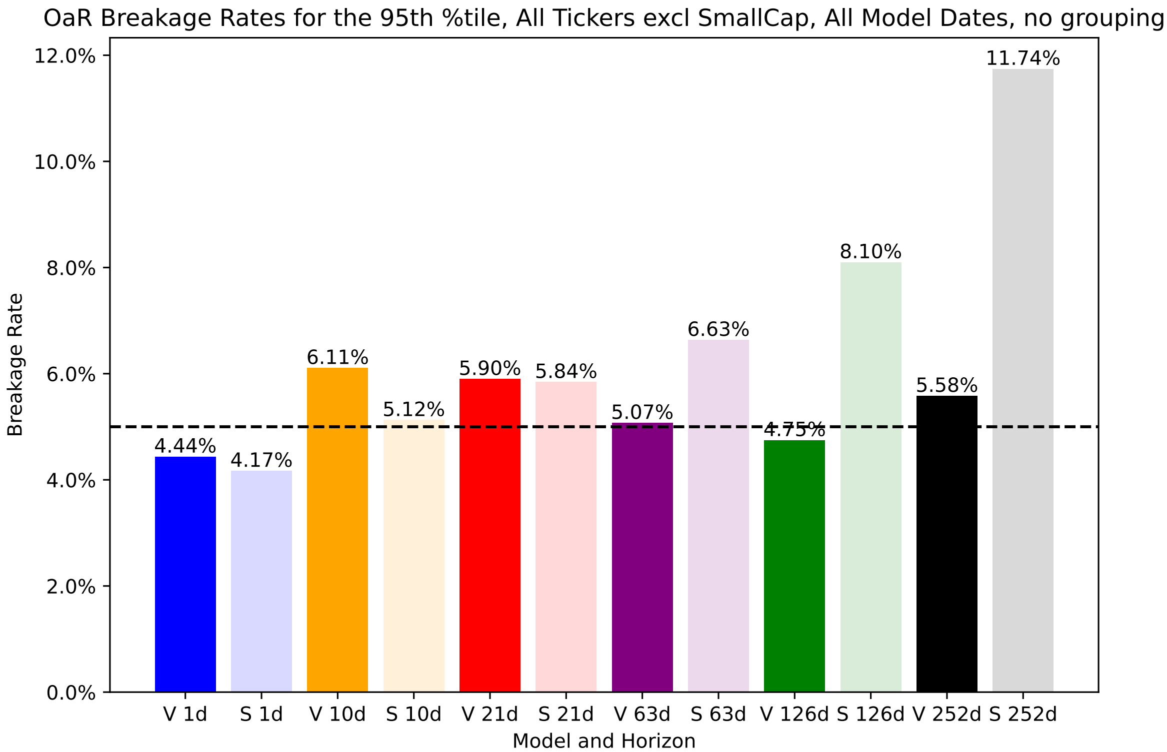
Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon
corresponding actual returns across TMD's:
                        1d       10d      21d      63d     126d     252d
intercept            0.00%     0.06%    0.11%    0.38%    0.76%    2.49%
intercept_p_value   93.34%     0.17%    0.00%    0.00%    0.00%    0.00%
slope              143.73%   116.54%  119.47%  133.13%  137.12%  144.74%
slope_p_value        0.00%     0.00%    0.00%    0.00%    0.00%    0.00%
```

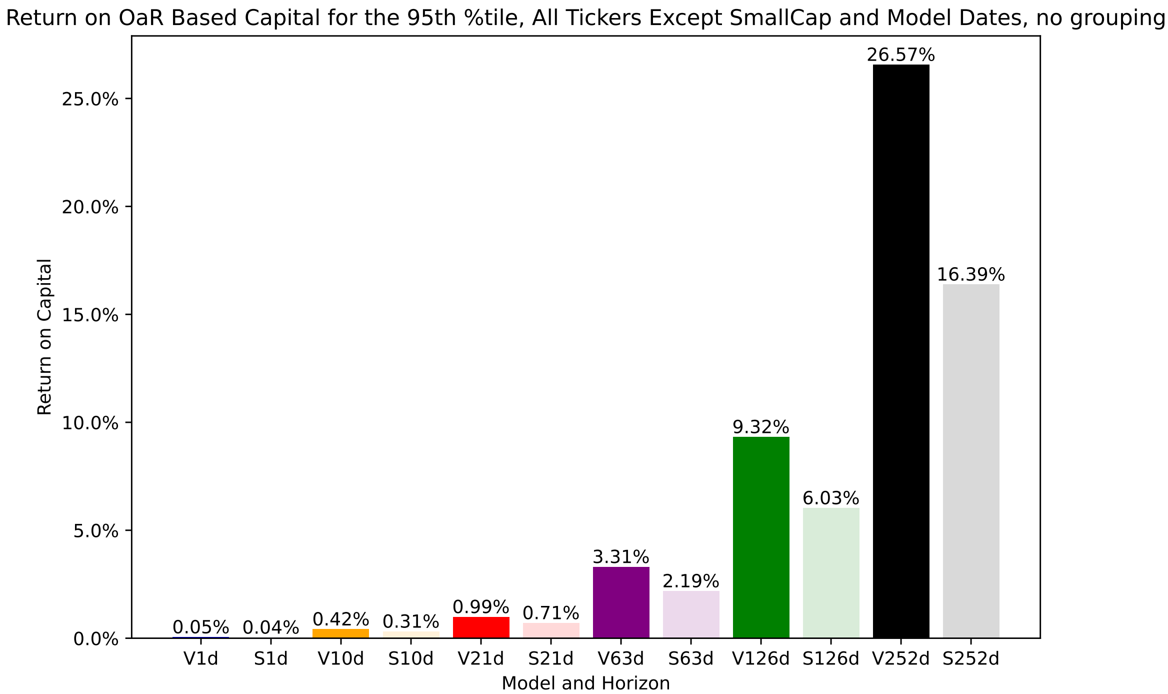
APPENDIX 6: 95% OaR Performance excluding Small Cap stocks

Here we repeat the performance comparison of 95% OaR estimates generated by the Vector Model ("V", presented with dark shading) and Sigma ("S", presented with light shading) that was provided earlier but exclude tickers 'NAVI','LUMN','CYH','NWL','KALU','IEP','POST','GT', and 'BHC' from all model dates. We refer to these tickers as the "SmallCap" basket.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28





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

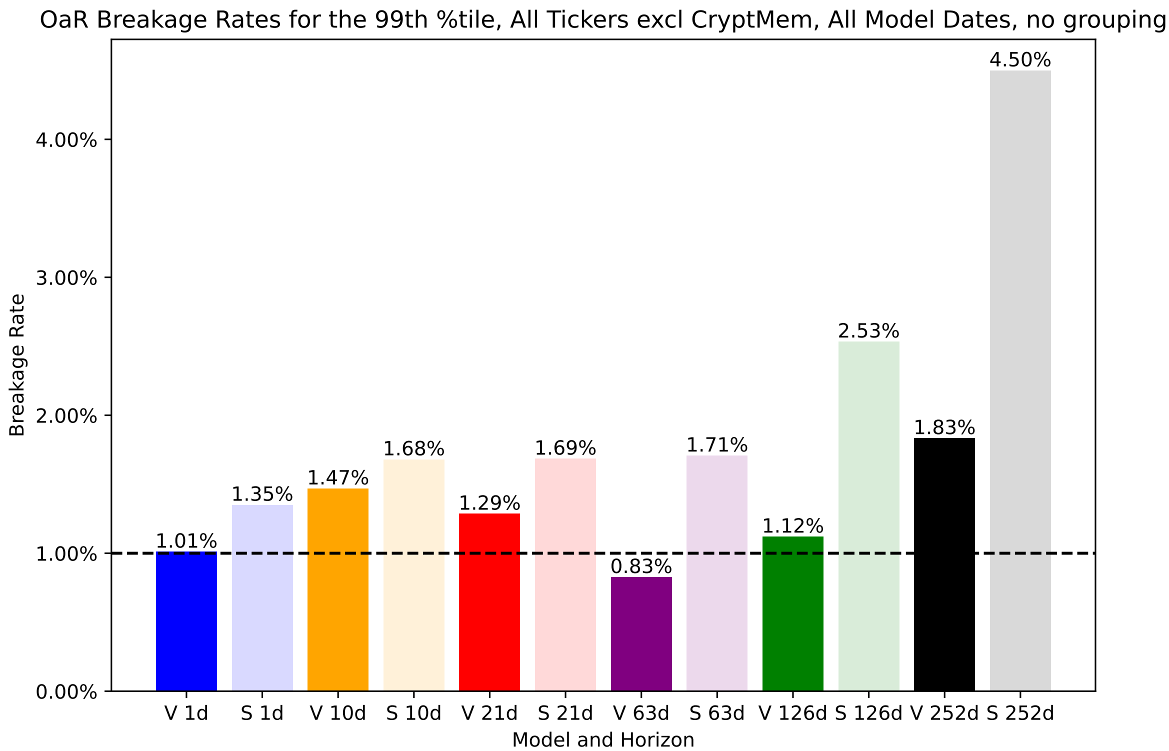
	1d	10d	21d	63d	126d	252d
intercept	0.01%	0.12%	0.24%	0.67%	1.52%	4.09%
intercept_p_value	20.64%	0.00%	0.00%	0.00%	0.00%	0.00%
slope	136.60%	111.58%	116.19%	131.23%	137.98%	147.13%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

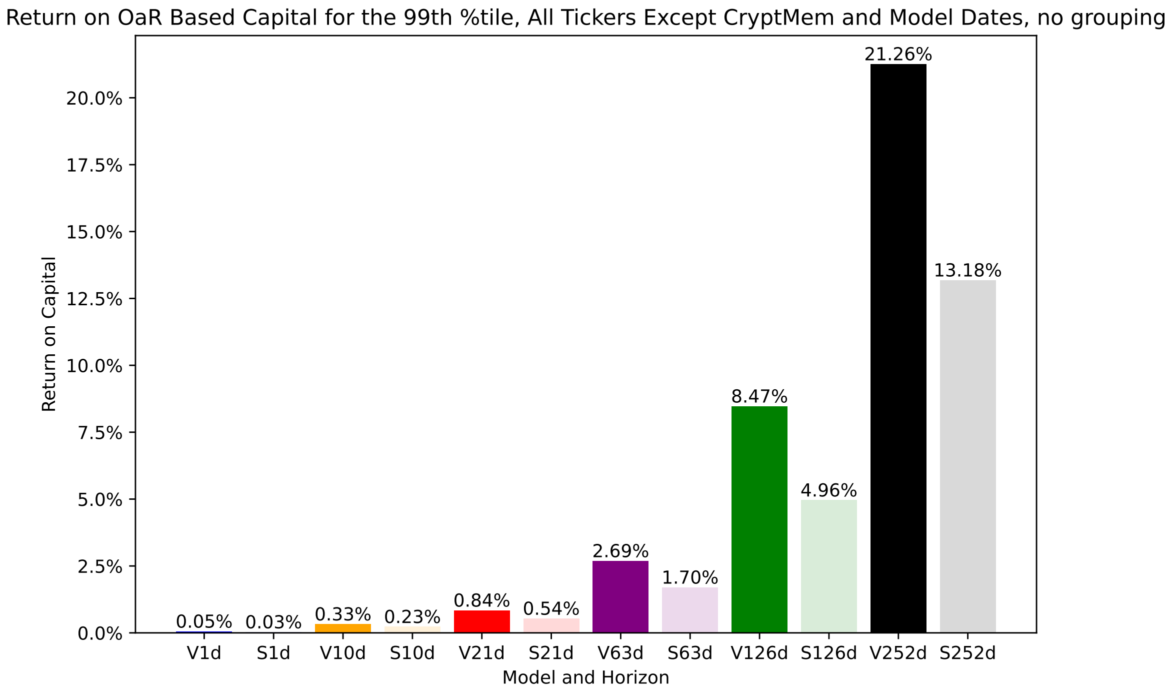
APPENDIX 7: 99% OaR Performance excluding Crypto & Meme stocks

Here we repeat the performance comparison of 99% OaR estimates generated by the Vector Model ("V", presented with dark shading) and Sigma ("S", presented with light shading) that was provided earlier but exclude tickers MSTR, GBTC, AMC, and GME from all model dates. We refer to these tickers as the Crypto / Meme basket, or "CryptMem" for short.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28



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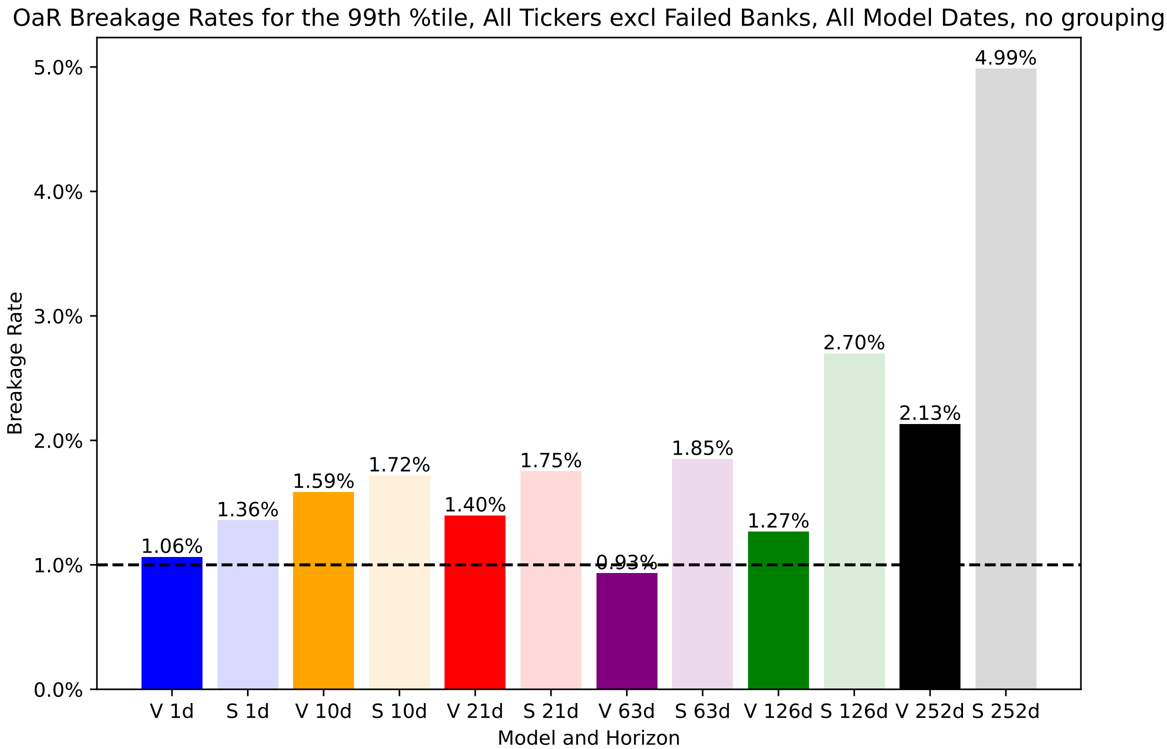
Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon
corresponding actual returns across TMD's:
                        1d       10d       21d       63d      126d      252d
intercept            0.00%     0.01%     0.06%     0.10%     0.12%    -0.37%
intercept_p_value   64.07%    48.01%     1.40%     2.23%     5.48%     0.09%
slope              188.37%   156.81%   160.31%   167.57%   179.87%   176.44%
slope_p_value        0.00%     0.00%     0.00%     0.00%     0.00%     0.00%
```

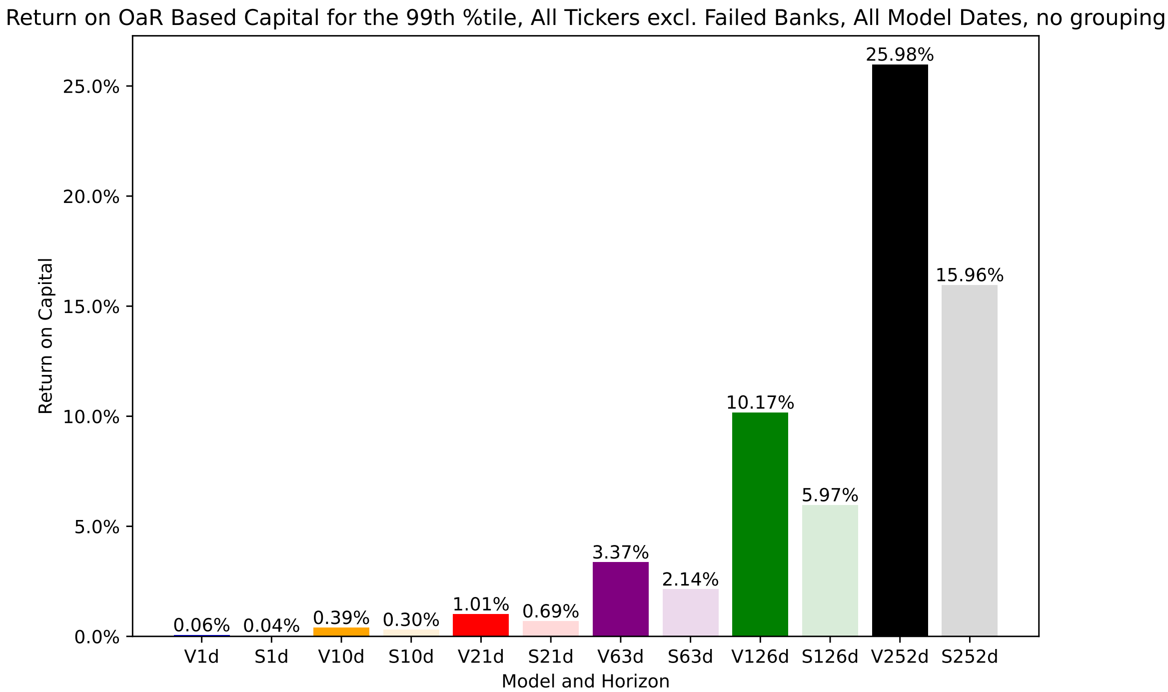
APPENDIX 8: 99% OaR Performance excluding Failed Banks

Here we repeat the performance comparison of 99% OaR estimates generated by the Vector Model ("V", presented with dark shading) and Sigma ("S", presented with light shading) that was provided earlier but exclude tickers SIVBQ, SBNY, and FRCB from all model dates. We refer to these tickers as the "Failed Banks".

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28





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

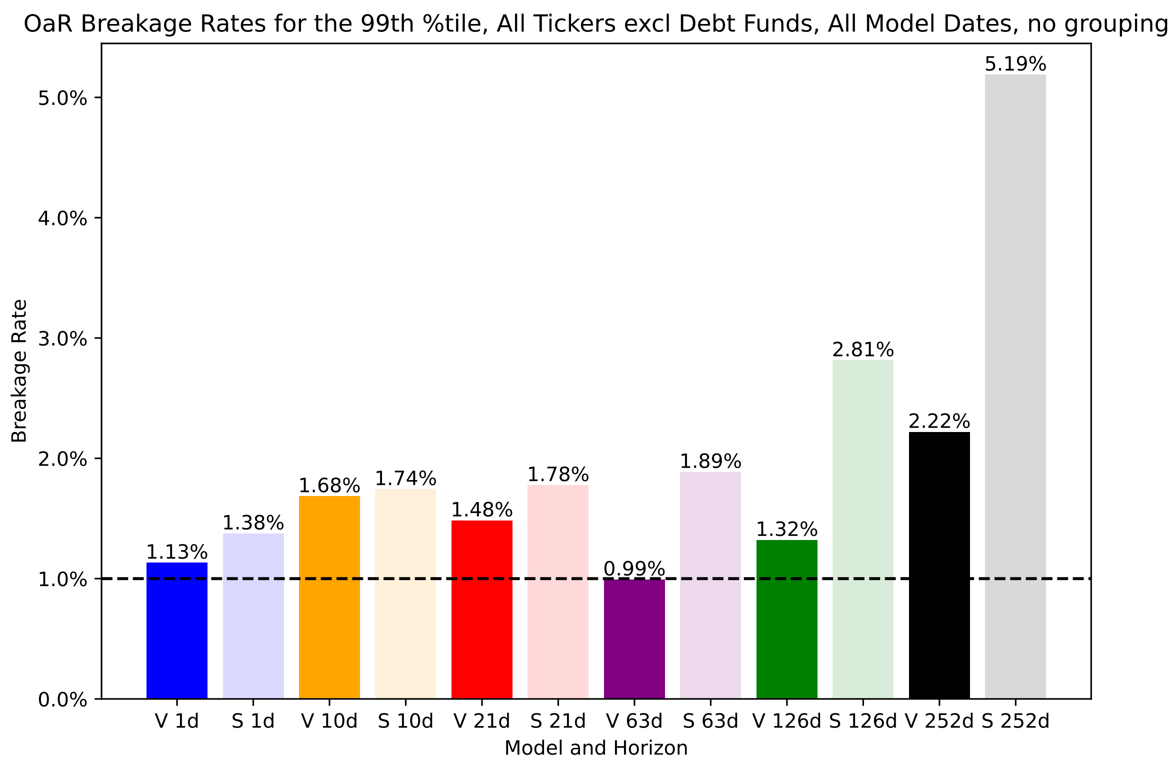
	1d	10d	21d	63d	126d	252d
intercept	-0.00%	-0.02%	0.02%	0.02%	0.34%	1.69%
intercept_p_value	93.06%	34.87%	43.74%	59.71%	0.00%	0.00%
slope	180.39%	150.01%	154.76%	168.45%	174.26%	162.08%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

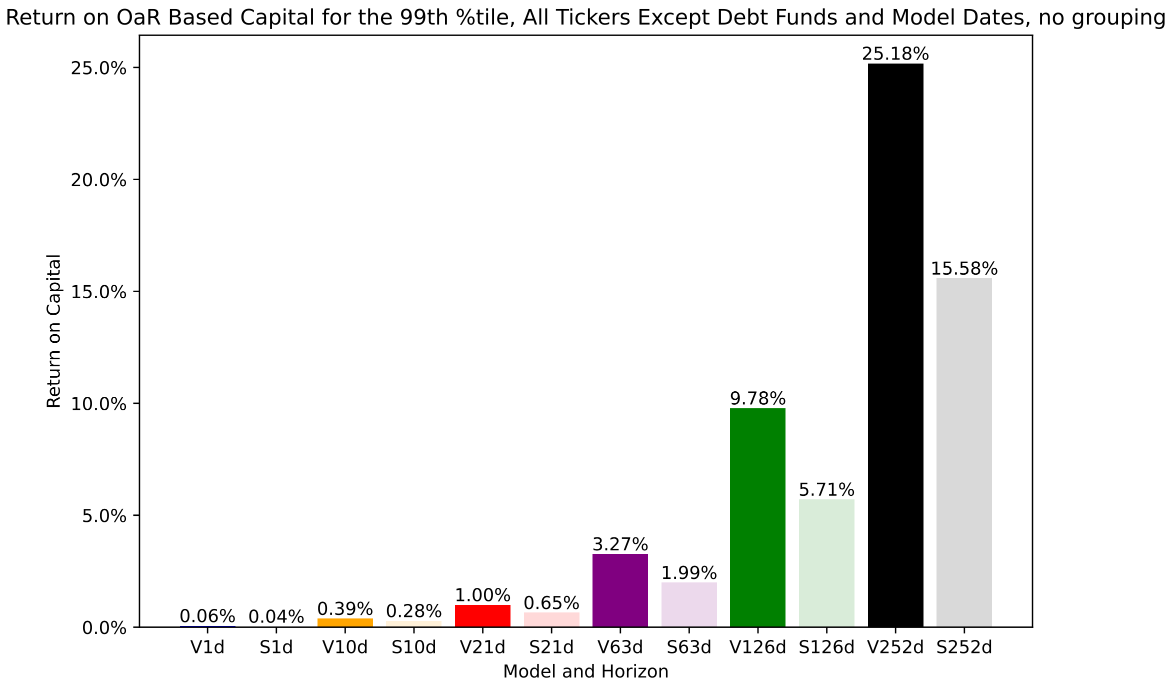
APPENDIX 9: 99% OaR Performance excluding Debt Funds

Here we repeat the performance comparison of 99% OaR estimates generated by the Vector Model ("V", presented with dark shading) and Sigma ("S", presented with light shading) that was provided earlier but exclude ETF and Closed End Fund tickers TLT, LQD, VCSH, MUB, HYG EMB, and FRA from all model dates. We refer to these tickers as the Debt Fund basket, or "Debt" for short.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28





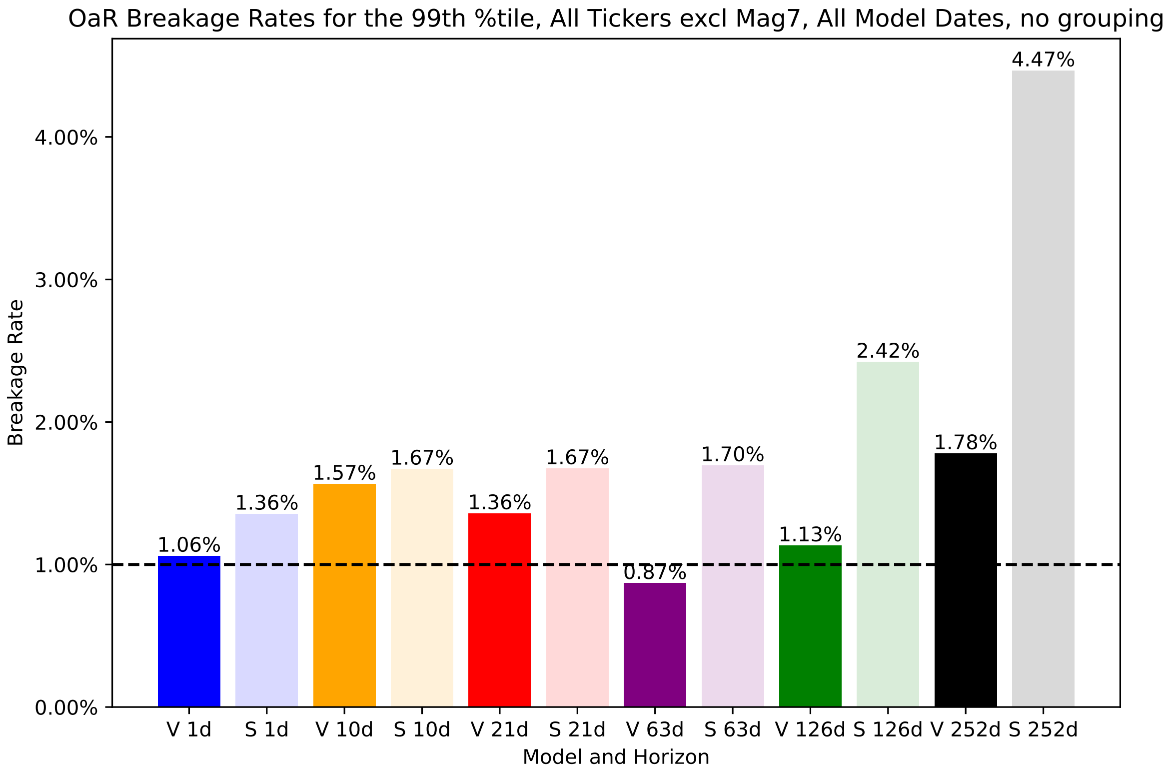

```
Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon
corresponding actual returns across TMD's:
                       1d      10d      21d      63d     126d     252d
intercept            0.00%    0.02%    0.11%    0.28%    0.52%    1.43%
intercept_p_value   68.80%   41.05%    0.02%    0.00%    0.00%    0.00%
slope              177.45%  145.81%  150.15%  163.70%  172.70%  162.95%
slope_p_value        0.00%    0.00%    0.00%    0.00%    0.00%    0.00%
```

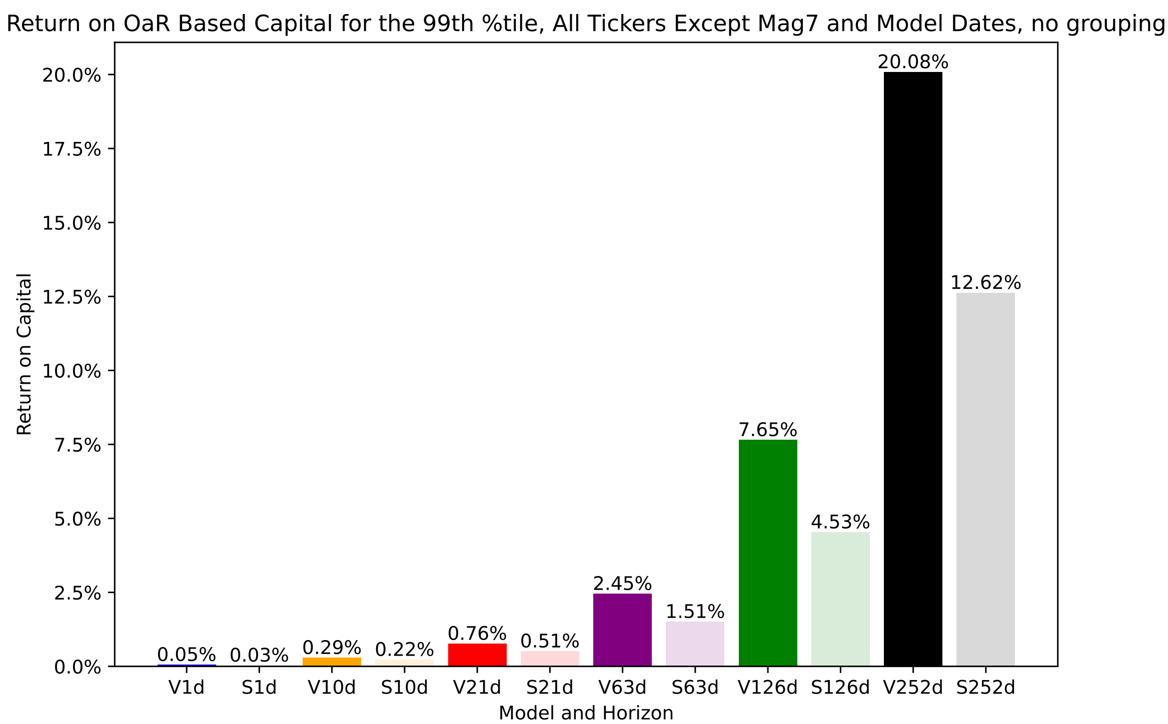
APPENDIX 10: 99% OaR Performance excluding "Mag 7" stocks

Here we repeat the performance comparison of 99% OaR estimates generated by the Vector Model ("V", presented with dark shading) and Sigma ("S", presented with light shading) that was provided earlier but exclude tickers AAPL, AMZN, GOOGL, META, NFLX, NVDA, and TSLA from all model dates. We refer to these tickers as the "Mag7" basket.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28





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

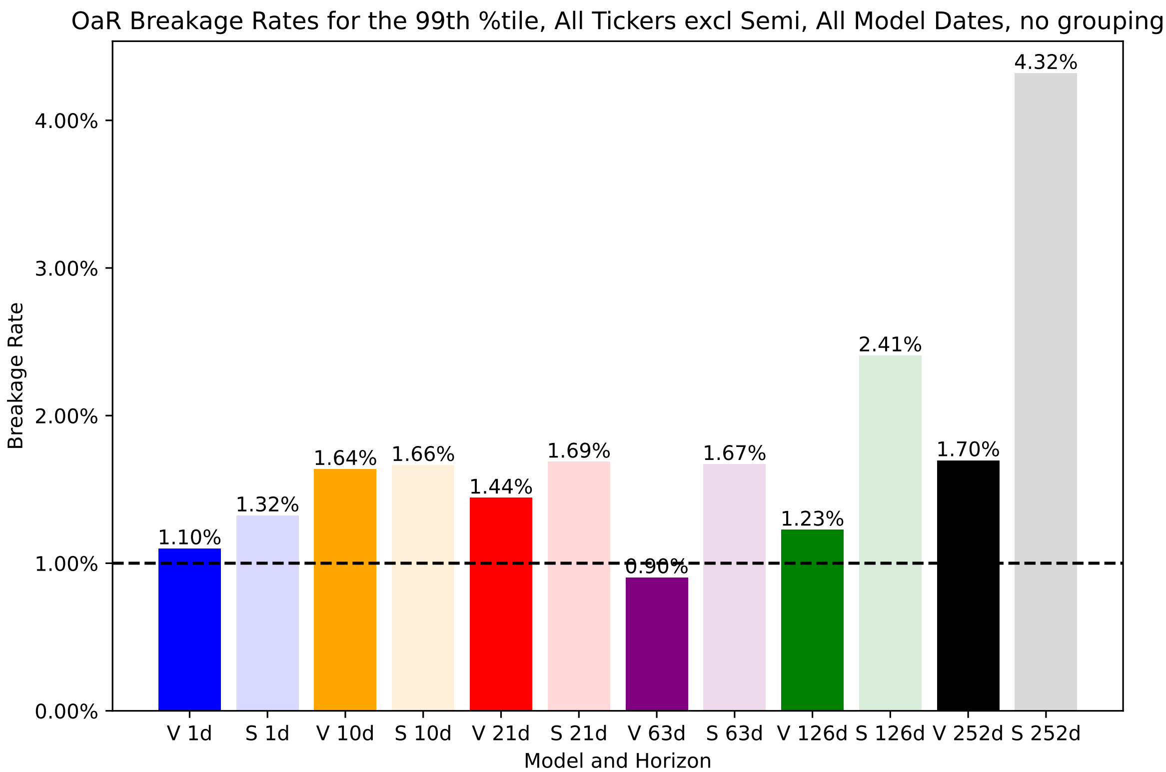
	1d	10d	21d	63d	126d	252d
intercept	0.00%	0.01%	0.08%	0.24%	0.47%	1.34%
intercept_p_value	62.79%	76.29%	0.48%	0.00%	0.00%	0.00%
slope	176.29%	144.19%	148.45%	162.43%	170.82%	161.70%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

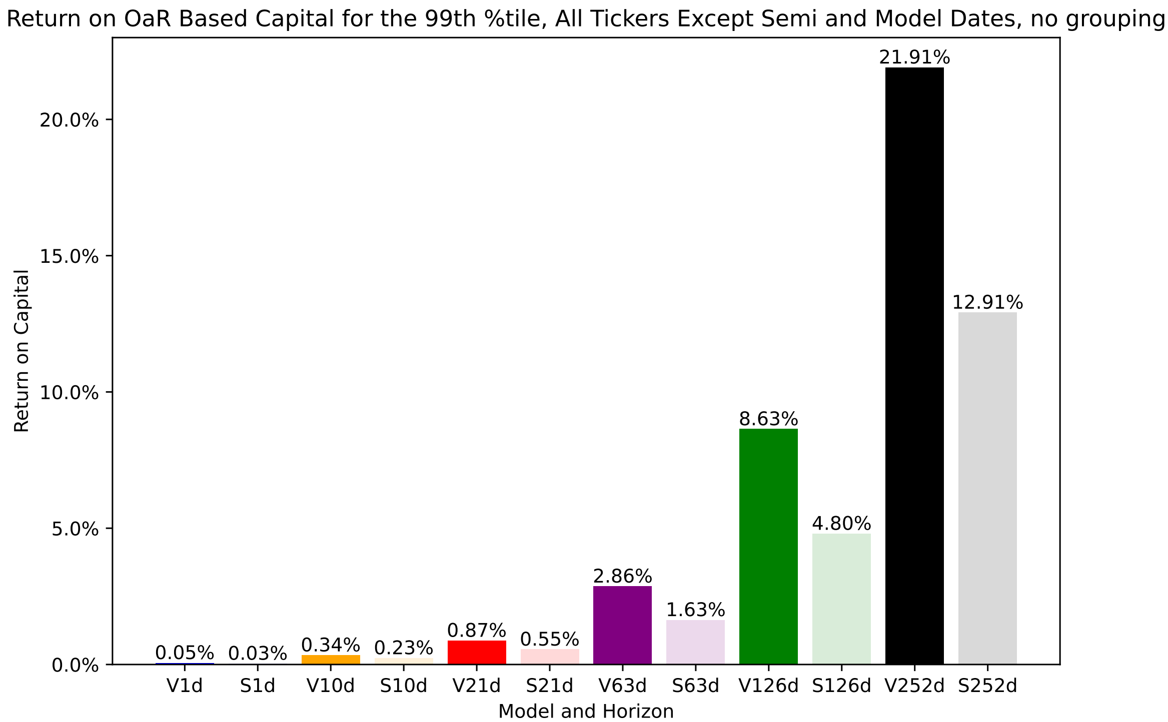
APPENDIX 11: 99% OaR Performance excluding "Semiconductor" stocks

Here we repeat the performance comparison of 99% OaR estimates generated by the Vector Model ("V", presented with dark shading) and Sigma ("S", presented with light shading) that was provided earlier but exclude tickers 'NVDA','AMD','AVGO','MU','AMAT','CDNS','TXN', 'ON','QCOM',and 'INTC' from all model dates. We refer to these tickers as the "Semi" basket.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28





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

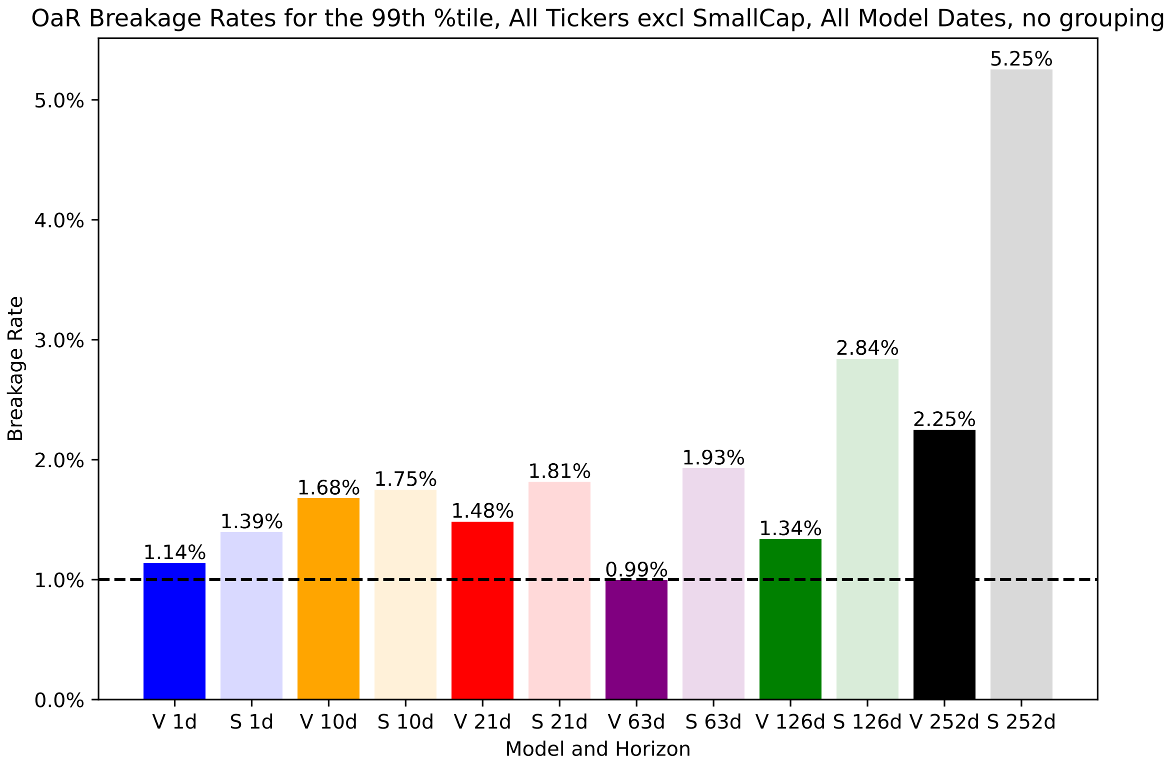
	1d	10d	21d	63d	126d	252d
intercept	0.00%	0.00%	0.06%	0.24%	0.50%	1.13%
intercept_p_value	81.24%	95.38%	3.68%	0.00%	0.00%	0.00%
slope	175.42%	143.47%	148.01%	160.98%	169.67%	160.99%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

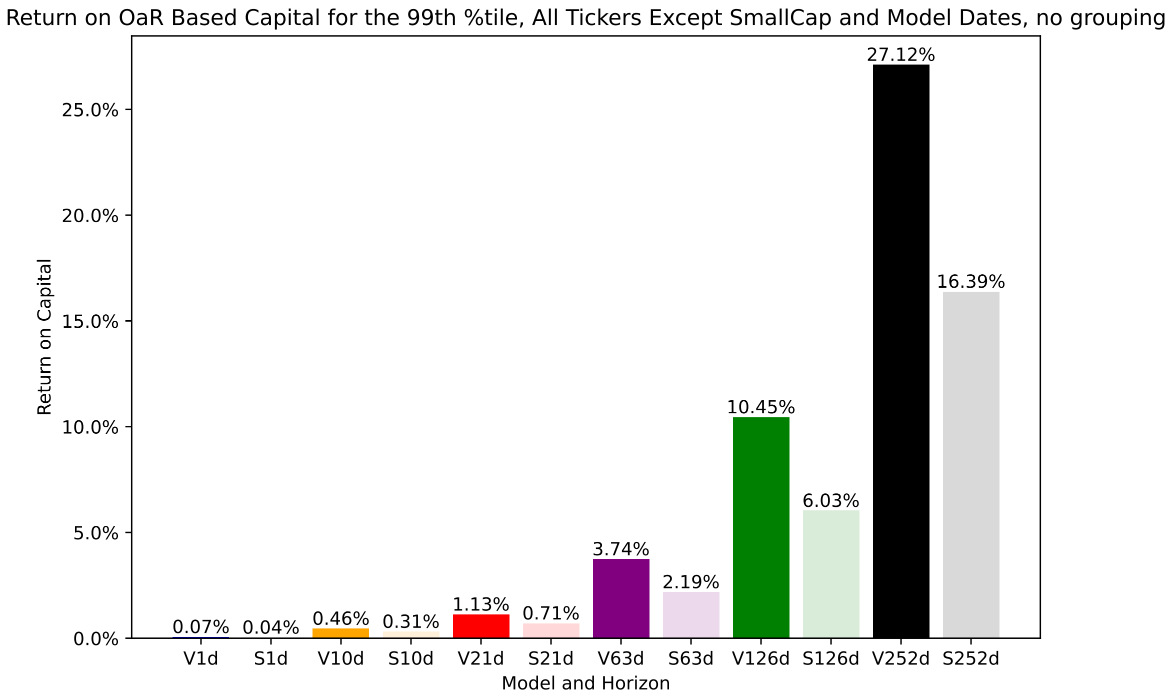
APPENDIX 12: 99% OaR Performance excluding Small Cap stocks

Here we repeat the performance comparison of 99% OaR estimates generated by the Vector Model ("V", presented with dark shading) and Sigma ("S", presented with light shading) that was provided earlier but exclude tickers 'NAVI','LUMN','CYH','NWL','KALU','IEP','POST','GT', and 'BHC' from all model dates. We refer to these tickers as the "SmallCap" basket.

All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-03-28





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

	1d	10d	21d	63d	126d	252d
intercept	0.01%	0.08%	0.21%	0.61%	1.01%	2.83%
intercept_p_value	20.19%	0.01%	0.00%	0.00%	0.00%	0.00%
slope	169.61%	136.59%	141.46%	155.95%	166.48%	158.37%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Appendix 13: Top & Bottom 25 Ticker Level Differences in 95% OaR

All Out of Sample Model Dates: 1d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
1.0	LUMN	34.99%	GME	-9.49%
1.0	IEP	30.04%	SBNY	-2.23%
1.0	AMC	23.62%	MSTR	-2.12%
1.0	ELAN	16.54%	BALL	-0.96%
1.0	TSLA	11.64%	FRCB	-0.87%
1.0	NWL	11.14%	CHTR	-0.78%
1.0	CCL	10.4%	CMA	-0.66%
1.0	CZR	9.81%	VFC	-0.65%
1.0	VNO	9.44%	HCA	-0.43%
1.0	CYH	9.38%	META	-0.37%
1.0	BHC	9.36%	KALU	-0.25%
1.0	T	9.01%	GOLD	-0.23%
1.0	MSFT	6.82%	SNY	-0.22%
1.0	GBTC	6.54%	SLV	-0.15%
1.0	NVDA	5.76%	AA	-0.13%
1.0	AZO	5.75%	TRGP	-0.06%
1.0	GT	5.7%	NAVI	-0.02%
1.0	MOS	5.44%	BUD	0.06%
1.0	X	5.1%	INTU	0.12%
1.0	QQQ	5.0%	SBUX	0.13%
1.0	LNC	4.86%	HD	0.17%
1.0	ON	4.81%	IRM	0.17%
1.0	BXP	4.78%	TMUS	0.17%
1.0	GE	4.2%	ZTS	0.2%
1.0	INTC	4.13%	CTLT	0.2%

All Out of Sample Model Dates: 10d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
10.0	LUMN	66.08%	GME	-31.32%
10.0	AMC	39.19%	SBNY	-8.61%
10.0	IEP	38.06%	MSTR	-6.34%
10.0	CZR	27.78%	VFC	-5.85%
10.0	ELAN	24.24%	META	-5.12%
10.0	CCL	24.15%	FRCB	-4.98%
10.0	NWL	23.86%	KALU	-4.87%
10.0	TSLA	17.71%	CHTR	-4.03%
10.0	MSFT	16.11%	BALL	-4.02%
10.0	T	15.09%	CMA	-3.83%
10.0	NVDA	13.14%	GOLD	-3.66%
10.0	VNO	12.77%	AAP	-3.29%
10.0	GT	12.4%	CTLT	-3.09%
10.0	GBTC	11.82%	AA	-2.96%
10.0	BHC	11.37%	HCA	-2.89%
10.0	QQQ	11.04%	NAVI	-2.76%
10.0	AZO	9.73%	EXPE	-2.64%
10.0	CYH	9.18%	SNY	-2.01%
10.0	UNH	8.22%	NEM	-1.84%
10.0	X	8.21%	TEVA	-1.82%
10.0	MS	7.7%	OXY	-1.68%
10.0	INTC	7.69%	ZTS	-1.61%
10.0	AMAT	7.41%	TRGP	-1.61%
10.0	PCG	7.3%	BUD	-1.51%
10.0	FSUGY	6.82%	GILD	-1.46%

All Out of Sample Model Dates: 21d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
21.0	LUMN	75.88%	GME	-44.39%
21.0	IEP	44.55%	SBNY	-12.09%
21.0	CZR	40.97%	META	-7.43%
21.0	CCL	40.12%	KALU	-6.91%
21.0	ELAN	33.89%	FRCB	-6.89%
21.0	NWL	30.71%	MSTR	-6.49%
21.0	TSLA	25.34%	VFC	-6.37%
21.0	MSFT	21.63%	CHTR	-5.89%
21.0	VNO	20.59%	CMA	-5.36%
21.0	T	18.09%	AAP	-5.28%
21.0	GBTC	17.83%	GOLD	-4.99%
21.0	BHC	17.34%	BALL	-4.08%
21.0	GT	16.86%	NAVI	-4.01%
21.0	PCG	15.73%	CTLT	-3.71%
21.0	NVDA	15.65%	AA	-3.71%
21.0	QQQ	15.31%	HCA	-3.26%
21.0	AMAT	14.66%	BUD	-3.01%
21.0	AZO	13.81%	EXPE	-2.86%
21.0	CYH	12.61%	SNY	-2.67%
21.0	INTC	12.0%	LW	-2.62%
21.0	FSUGY	11.54%	ZTS	-2.36%
21.0	X	11.17%	OXY	-2.17%
21.0	AMD	10.85%	IRM	-2.06%
21.0	MOS	10.55%	NEM	-1.91%
21.0	DHI	9.65%	TEVA	-1.73%

All Out of Sample Model Dates: 63d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
63.0	LUMN	125.87%	GME	-65.22%
63.0	CZR	76.04%	SBNY	-15.93%
63.0	CCL	66.65%	KALU	-10.12%
63.0	IEP	57.52%	META	-9.47%
63.0	NWL	52.78%	CHTR	-8.94%
63.0	ELAN	50.3%	MSTR	-7.86%
63.0	VNO	50.1%	FRCB	-7.63%
63.0	TSLA	47.65%	EXPE	-7.03%
63.0	NVDA	34.7%	CMA	-6.8%
63.0	QQQ	31.74%	NAVI	-6.28%
63.0	PCG	31.16%	BALL	-5.26%
63.0	MS	31.08%	GOLD	-5.2%
63.0	GT	31.02%	LW	-4.93%
63.0	MSFT	30.97%	CTLT	-4.84%
63.0	AMAT	30.71%	SNY	-4.63%
63.0	T	30.63%	IRM	-3.72%
63.0	BHC	28.82%	HCA	-3.4%
63.0	GBTC	28.07%	ZTS	-2.67%
63.0	AMD	25.53%	XOM	-2.29%
63.0	ADBE	24.88%	AAP	-2.22%
63.0	ON	24.78%	TRGP	-1.65%
63.0	FITB	23.8%	NEM	-1.63%
63.0	AMZN	23.79%	VFC	-1.18%
63.0	INTC	23.29%	POST	-0.79%
63.0	FSUGY	22.71%	TEVA	-0.75%

All Out of Sample Model Dates: 126d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
126.0	LUMN	172.14%	GME	-71.36%
126.0	CZR	105.02%	MSTR	-20.75%
126.0	VNO	86.87%	SBNY	-14.65%
126.0	CCL	86.04%	KALU	-14.23%
126.0	TSLA	79.37%	NAVI	-10.67%
126.0	NWL	77.46%	LW	-6.21%
126.0	ELAN	75.08%	IRM	-5.55%
126.0	PCG	74.06%	CHTR	-5.25%
126.0	NVDA	61.64%	EXPE	-5.17%
126.0	IEP	61.17%	CMA	-4.99%
126.0	MS	57.1%	TEVA	-4.36%
126.0	BHC	54.5%	BALL	-4.08%
126.0	FSUGY	53.23%	SNY	-4.03%
126.0	FITB	50.61%	CTLT	-3.8%
126.0	MSFT	50.56%	HCA	-2.37%
126.0	GT	50.3%	XOM	-1.83%
126.0	INTU	49.18%	POST	-1.54%
126.0	AMZN	47.94%	GOLD	-1.43%
126.0	AMD	46.81%	TRGP	-1.14%
126.0	QQQ	45.8%	PEP	-0.0%
126.0	ADBE	45.12%	VICI	0.77%
126.0	MU	43.26%	GNRC	0.83%
126.0	T	41.2%	NEM	0.88%
126.0	AMAT	40.85%	LQD	1.11%
126.0	CLF	39.79%	VST	1.54%

All Out of Sample Model Dates: 252d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
252.0	LUMN	305.18%	GME	-31.96%
252.0	CZR	184.0%	MSTR	-27.94%
252.0	CCL	178.51%	KALU	-16.51%
252.0	NWL	164.89%	AMC	-11.48%
252.0	VNO	156.07%	NAVI	-7.97%
252.0	PCG	132.29%	IRM	-7.37%
252.0	ELAN	125.69%	SNY	-4.14%
252.0	TSLA	120.57%	VST	-3.73%
252.0	GBTC	119.81%	LW	-3.09%
252.0	INTU	116.32%	GNRC	-1.99%
252.0	MS	109.1%	POST	-1.25%
252.0	NFLX	95.2%	HLT	0.82%
252.0	BHC	94.3%	VCSH	2.9%
252.0	MU	93.49%	PEP	3.19%
252.0	NVDA	91.86%	GWW	4.38%
252.0	AMZN	90.52%	XOM	4.57%
252.0	VFC	88.27%	TEVA	4.94%
252.0	FSUGY	86.54%	LQD	6.01%
252.0	CDNS	86.47%	CHTR	6.78%
252.0	AMD	85.25%	OXY	7.73%
252.0	ADBE	82.77%	NVS	7.84%
252.0	MSFT	81.19%	MUB	8.51%
252.0	FITB	77.4%	EXPE	8.52%
252.0	QQQ	76.09%	GLD	8.59%
252.0	CLF	75.0%	VICI	8.84%

P365D: 1d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
1.0	AMC	60.71%	GME	-8.13%
1.0	IEP	50.94%	GNRC	-1.74%
1.0	LUMN	21.43%	VFC	-1.66%
1.0	NWL	14.51%	CHTR	-1.29%
1.0	NVDA	10.85%	CLF	-0.78%
1.0	VNO	8.74%	META	-0.64%
1.0	TSLA	8.38%	SLV	-0.52%
1.0	MOS	8.06%	SBUX	-0.4%
1.0	QQQ	7.98%	EXPE	-0.4%
1.0	CYH	5.93%	GS	-0.35%
1.0	PCG	5.07%	BALL	-0.29%
1.0	BHC	5.03%	KALU	-0.27%
1.0	T	4.91%	AMGN	-0.24%
1.0	BIIB	4.86%	ZTS	-0.24%
1.0	GT	4.61%	GILD	-0.13%
1.0	LLY	4.58%	FRA	-0.02%
1.0	CCL	4.47%	QCOM	0.0%
1.0	LVS	4.3%	TXN	0.04%
1.0	MSTR	4.27%	HD	0.04%
1.0	AMAT	4.21%	PWR	0.05%
1.0	TDG	4.12%	SNY	0.06%
1.0	GOOGL	4.11%	IRM	0.08%
1.0	SPY	3.89%	AA	0.1%
1.0	AMD	3.86%	CMA	0.1%
1.0	BHP	3.81%	HCA	0.12%

P365D: 10d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
10.0	AMC	116.97%	GME	-29.14%
10.0	IEP	69.76%	VFC	-8.11%
10.0	LUMN	44.61%	AAP	-5.98%
10.0	NWL	25.95%	CHTR	-5.7%
10.0	NVDA	23.87%	KALU	-5.34%
10.0	MSTR	16.61%	GNRC	-4.1%
10.0	GT	16.36%	EXPE	-3.85%
10.0	MOS	15.94%	META	-3.59%
10.0	QQQ	14.03%	CMA	-3.05%
10.0	LLY	11.85%	AA	-2.55%
10.0	AMAT	11.82%	BALL	-2.55%
10.0	TSLA	10.37%	CLF	-2.49%
10.0	PCG	10.31%	BXP	-2.48%
10.0	T	9.76%	LW	-2.46%
10.0	FIS	9.2%	QCOM	-2.34%
10.0	GOOGL	8.96%	ZTS	-2.09%
10.0	MSFT	8.67%	ETRN	-2.04%
10.0	BHC	8.52%	VZ	-2.0%
10.0	AMD	8.4%	GOLD	-1.99%
10.0	CCL	8.36%	NEM	-1.77%
10.0	VNO	7.67%	AMGN	-1.68%
10.0	CZR	7.14%	GILD	-1.66%
10.0	FSUGY	7.13%	SBUX	-1.62%
10.0	COST	6.64%	HCA	-1.58%
10.0	BHP	6.51%	SLV	-1.57%

P365D: 21d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
21.0	IEP	84.21%	GME	-39.66%
21.0	AMC	73.95%	AAP	-11.36%
21.0	LUMN	45.64%	VFC	-9.17%
21.0	NWL	35.15%	CHTR	-8.78%
21.0	MSTR	30.59%	KALU	-7.33%
21.0	NVDA	26.86%	META	-5.83%
21.0	MOS	23.93%	EXPE	-5.79%
21.0	GT	21.62%	GNRC	-5.69%
21.0	AMAT	19.3%	BXP	-5.09%
21.0	PCG	17.08%	AVGO	-4.59%
21.0	AMD	16.99%	LW	-4.5%
21.0	QQQ	15.75%	CMA	-4.06%
21.0	CCL	14.98%	VZ	-3.96%
21.0	BHC	14.74%	BALL	-3.53%
21.0	LLY	14.08%	ZTS	-2.77%
21.0	TSLA	13.91%	AA	-2.76%
21.0	GOOGL	13.88%	SLV	-2.6%
21.0	BHP	12.9%	AMGN	-2.44%
21.0	CZR	12.89%	BUD	-2.43%
21.0	T	11.44%	NEM	-2.08%
21.0	FIS	10.48%	GILD	-2.03%
21.0	VNO	10.37%	GOLD	-1.98%
21.0	SPY	10.09%	ETRN	-1.84%
21.0	MSFT	9.96%	TXN	-1.64%
21.0	DHI	9.86%	GE	-1.5%

P365D: 63d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
63.0	AMC	170.7%	GME	-57.14%
63.0	IEP	119.44%	VFC	-16.32%
63.0	LUMN	87.35%	CHTR	-14.2%
63.0	MSTR	62.69%	EXPE	-11.31%
63.0	NWL	54.21%	META	-10.21%
63.0	MOS	48.6%	LW	-10.06%
63.0	GT	39.64%	AAP	-9.91%
63.0	ON	38.5%	GNRC	-9.19%
63.0	AMD	33.14%	KALU	-8.65%
63.0	AMAT	33.01%	BXP	-8.39%
63.0	BHC	32.56%	CMA	-5.91%
63.0	VNO	31.47%	NEM	-4.07%
63.0	CCL	31.1%	SNY	-3.77%
63.0	LLY	30.32%	BALL	-3.3%
63.0	NVDA	30.14%	AMGN	-2.59%
63.0	CYH	28.56%	GE	-2.42%
63.0	X	27.03%	SLV	-2.06%
63.0	PCG	25.97%	ZTS	-2.04%
63.0	ADBE	25.81%	VZ	-1.54%
63.0	QQQ	25.06%	AA	-1.08%
63.0	GOOGL	24.93%	LQD	-0.94%
63.0	BHP	24.45%	HD	-0.69%
63.0	MS	24.03%	GOLD	-0.66%
63.0	T	21.91%	NAVI	-0.53%
63.0	CZR	20.57%	TXN	-0.53%

P365D: 126d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
126.0	AMC	330.99%	GME	-69.62%
126.0	IEP	128.1%	VFC	-29.21%
126.0	LUMN	109.09%	EXPE	-19.53%
126.0	MOS	85.84%	META	-18.6%
126.0	GT	84.72%	GNRC	-16.08%
126.0	ON	79.29%	LW	-13.97%
126.0	BHC	70.63%	CHTR	-13.65%
126.0	FSUGY	68.08%	KALU	-10.6%
126.0	NWL	61.53%	BXP	-8.6%
126.0	NVDA	58.74%	AAP	-8.44%
126.0	INTU	53.07%	CMA	-7.77%
126.0	VNO	50.84%	NEM	-5.59%
126.0	ADBE	50.71%	AMGN	-5.36%
126.0	CCL	49.42%	SNY	-3.39%
126.0	FITB	47.39%	BIIB	-3.06%
126.0	ELAN	46.6%	MSI	-2.81%
126.0	MS	45.69%	TMUS	-2.35%
126.0	X	41.36%	NAVI	-2.11%
126.0	LLY	40.96%	CMCSA	-1.82%
126.0	BHP	39.58%	PRGO	-1.75%
126.0	INTC	38.72%	HCA	-1.65%
126.0	GOOGL	37.28%	ZTS	-0.83%
126.0	QQQ	36.18%	LQD	-0.22%
126.0	PCG	35.48%	HD	0.36%
126.0	AMD	35.18%	POST	0.37%

P90D: 1d

The columns labeled “OaR_VmS” represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
1.0	IEP	22.06%	AMC	-29.26%
1.0	LUMN	17.71%	GME	-4.74%
1.0	NWL	12.92%	AVGO	-2.79%
1.0	QQQ	9.72%	CHTR	-2.23%
1.0	NVDA	8.96%	ZTS	-1.11%
1.0	MOS	8.44%	NAVI	-1.06%
1.0	BIIB	7.79%	GNRC	-1.0%
1.0	VNO	6.96%	CLF	-0.98%
1.0	UAA	6.89%	GILD	-0.82%
1.0	CTLT	5.86%	SLV	-0.58%
1.0	LVS	5.56%	INTC	-0.57%
1.0	AMAT	5.22%	TSLA	-0.55%
1.0	LLY	5.11%	SBUX	-0.53%
1.0	FSUGY	5.04%	TXN	-0.45%
1.0	TDG	4.94%	HON	-0.44%
1.0	CYH	4.76%	AA	-0.44%
1.0	LNC	4.74%	GS	-0.41%
1.0	BHC	4.62%	MSTR	-0.38%
1.0	PCG	4.54%	ORLY	-0.32%
1.0	SPY	4.45%	VFC	-0.31%
1.0	CSTM	4.28%	CMA	-0.3%
1.0	PHM	4.11%	EXPE	-0.28%
1.0	WYNN	4.11%	KEY	-0.26%
1.0	OXY	4.05%	IRM	-0.25%
1.0	BXP	3.99%	BAC	-0.2%

P90D: 10d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
10.0	LUMN	32.72%	AMC	-92.48%
10.0	NVDA	25.03%	GME	-19.85%
10.0	GT	24.23%	AVGO	-10.33%
10.0	NWL	19.28%	AAP	-8.82%
10.0	BIIB	18.33%	CHTR	-6.76%
10.0	AMAT	17.67%	TSLA	-5.21%
10.0	MOS	17.56%	KALU	-4.22%
10.0	QQQ	13.79%	CMA	-4.13%
10.0	PHM	13.63%	CLF	-3.91%
10.0	PCG	13.43%	QCOM	-3.89%
10.0	IEP	12.12%	INTC	-3.69%
10.0	FIS	11.08%	AA	-3.65%
10.0	CSTM	10.96%	GNRC	-2.76%
10.0	TDG	8.88%	GILD	-2.53%
10.0	CTLT	8.68%	ZTS	-2.27%
10.0	LLY	8.55%	VFC	-2.22%
10.0	LEN	8.04%	TXN	-2.05%
10.0	COST	7.9%	EXPE	-2.02%
10.0	FSUGY	7.88%	HON	-1.86%
10.0	BHP	7.61%	SBUX	-1.8%
10.0	VNO	7.47%	VST	-1.8%
10.0	SPY	7.42%	BMY	-1.67%
10.0	UAA	7.11%	NAVI	-1.66%
10.0	BHC	6.89%	INTU	-1.54%
10.0	MS	6.66%	UNH	-1.47%

P90D: 21d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
21.0	AMAT	33.4%	AMC	-140.1%
21.0	MSTR	32.68%	GME	-23.68%
21.0	LUMN	31.18%	AVGO	-17.16%
21.0	MOS	28.47%	AAP	-15.59%
21.0	NWL	27.44%	CHTR	-9.84%
21.0	BIIB	25.57%	TSLA	-6.76%
21.0	NVDA	25.52%	KALU	-6.54%
21.0	GT	24.21%	CYH	-5.09%
21.0	PCG	20.79%	CLF	-4.05%
21.0	FIS	14.05%	GILD	-3.98%
21.0	AMD	13.6%	ZTS	-3.45%
21.0	TDG	13.52%	AA	-3.37%
21.0	OXY	13.38%	TXN	-3.23%
21.0	PHM	13.26%	VZ	-3.09%
21.0	BHP	13.2%	VST	-2.92%
21.0	QQQ	13.13%	META	-2.78%
21.0	LEN	12.16%	EXPE	-2.75%
21.0	SPY	12.01%	HON	-2.56%
21.0	ZION	12.01%	INTU	-2.53%
21.0	LNC	10.85%	QCOM	-2.44%
21.0	VNO	10.79%	CMA	-2.19%
21.0	CSTM	10.64%	GOOGL	-2.09%
21.0	ADBE	9.96%	CNC	-2.06%
21.0	IEP	9.35%	INTC	-1.71%
21.0	BHC	9.2%	SLV	-1.62%

P30D: 1d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
1.0	LUMN	25.57%	AMC	-34.41%
1.0	IEP	18.08%	GME	-5.02%
1.0	NWL	15.44%	VFC	-2.81%
1.0	MOS	8.93%	ON	-2.22%
1.0	BIIB	8.5%	CHTR	-2.2%
1.0	UAA	8.3%	WDC	-1.97%
1.0	QQQ	8.13%	MSTR	-1.86%
1.0	FSUGY	7.85%	AVGO	-1.58%
1.0	NVDA	7.79%	GNRC	-1.53%
1.0	AAP	7.65%	CVS	-1.42%
1.0	VST	7.54%	INTC	-1.36%
1.0	VNO	7.31%	GILD	-1.14%
1.0	LVS	5.9%	NAVI	-1.11%
1.0	CYH	5.14%	ZTS	-1.08%
1.0	CZR	4.98%	IRM	-1.05%
1.0	LNC	4.98%	SBUX	-0.94%
1.0	LLY	4.92%	KEY	-0.84%
1.0	PCG	4.89%	TXN	-0.73%
1.0	ZION	4.78%	AMGN	-0.7%
1.0	PHM	4.57%	EXPE	-0.58%
1.0	GOLD	4.43%	WFC	-0.53%
1.0	GT	4.35%	ORLY	-0.47%
1.0	WYNN	4.27%	SLV	-0.43%
1.0	OXY	4.1%	BAC	-0.42%
1.0	CSTM	3.99%	QCOM	-0.39%

P30D: 10d

The columns labeled “OaR_VmS” represent the average amount by which Vector Model 95% OaR exceeds Sigma 95% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
10.0	LUMN	41.36%	AMC	-117.73%
10.0	NVDA	30.08%	GME	-19.05%
10.0	NWL	26.3%	WDC	-12.51%
10.0	GT	24.08%	AVGO	-10.34%
10.0	PHM	22.58%	MSTR	-9.38%
10.0	MOS	19.46%	VFC	-8.2%
10.0	BIIB	19.38%	CHTR	-6.82%
10.0	QQQ	18.45%	UNH	-6.47%
10.0	AMAT	16.27%	TSLA	-6.44%
10.0	PCG	15.14%	GNRC	-6.33%
10.0	SPY	10.8%	QCOM	-4.47%
10.0	BHC	10.47%	ON	-4.46%
10.0	UAA	9.88%	CVS	-4.24%
10.0	CYH	9.71%	INTC	-3.94%
10.0	COST	9.2%	CMA	-3.89%
10.0	CDNS	8.6%	GILD	-3.7%
10.0	TDG	8.36%	MU	-3.63%
10.0	VST	8.34%	CLF	-3.48%
10.0	LW	8.2%	GE	-3.0%
10.0	FSUGY	8.15%	BAC	-2.72%
10.0	LNC	7.97%	KEY	-2.66%
10.0	FIS	7.88%	ZTS	-2.47%
10.0	BHP	7.72%	AMGN	-2.41%
10.0	MS	7.42%	SBUX	-2.4%
10.0	LLY	7.25%	FCX	-2.35%

Appendix 14: Top & Bottom 25 Ticker Level Differences in 99% OaR

All Out of Sample Model Dates: 1d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known. Note that OaR is stated as a negative return. Thus, TICKERS VIEWED AS LESS RISKY BY THE VECTOR MODEL ARE LISTED ON THE LEFT, THOSE VIEWED AS MORE RISKY ARE LISTED ON THE RIGHT.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
1.0	LUMN	74.53%	GME	-10.47%
1.0	IEP	52.91%	FRCB	-0.96%
1.0	AMC	45.28%	SBNY	-0.81%
1.0	CZR	34.4%	BALL	-0.36%
1.0	CCL	31.62%	SNY	0.36%
1.0	ELAN	30.22%	CHTR	0.44%
1.0	NWL	29.29%	GOLD	0.77%
1.0	GT	21.52%	TRGP	0.94%
1.0	BHC	20.1%	MUB	0.99%
1.0	CYH	20.01%	AA	1.02%
1.0	TSLA	19.76%	FRA	1.07%
1.0	VNO	18.65%	CTLT	1.1%
1.0	X	18.41%	META	1.15%
1.0	ETRN	17.48%	HCA	1.23%
1.0	T	16.66%	NAVI	1.29%
1.0	MSFT	15.95%	AAP	1.32%
1.0	MOS	14.05%	GLD	1.32%
1.0	NVDA	14.05%	SLV	1.33%
1.0	UAA	12.98%	PEP	1.37%
1.0	GBTC	12.19%	LQD	1.39%
1.0	QQQ	11.18%	VCSH	1.4%
1.0	AZO	10.9%	CMA	1.44%
1.0	INTC	10.58%	POST	1.53%
1.0	AMAT	10.51%	NVS	1.56%
1.0	PCG	10.22%	EXPE	1.63%

All Out of Sample Model Dates: 10d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
10.0	LUMN	165.98%	GME	-40.05%
10.0	AMC	128.64%	SBNY	-7.14%
10.0	CYH	95.76%	CHTR	-4.69%
10.0	NWL	78.26%	FRCB	-4.24%
10.0	IEP	66.99%	META	-3.91%
10.0	CCL	65.86%	KALU	-3.49%
10.0	CZR	62.21%	BALL	-3.27%
10.0	ELAN	48.58%	CMA	-2.1%
10.0	VNO	36.09%	GOLD	-2.05%
10.0	PCG	35.47%	HCA	-1.93%
10.0	CDNS	34.67%	IRM	-0.91%
10.0	BHC	34.6%	NAVI	-0.89%
10.0	X	30.34%	SNY	-0.74%
10.0	NVDA	27.43%	TRGP	-0.52%
10.0	GT	26.8%	VFC	-0.5%
10.0	T	26.62%	EXPE	-0.43%
10.0	MSFT	26.58%	ZTS	-0.29%
10.0	TSLA	25.82%	ISRG	-0.15%
10.0	MOS	24.88%	CTLT	0.01%
10.0	AMAT	24.72%	MSI	0.51%
10.0	UAA	24.66%	LQD	0.6%
10.0	CLF	23.82%	GILD	0.63%
10.0	AMD	21.86%	HON	0.67%
10.0	QQQ	21.69%	HD	0.75%
10.0	MS	21.0%	FRA	0.85%

All Out of Sample Model Dates: 21d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
21.0	LUMN	198.42%	GME	-51.89%
21.0	CYH	97.63%	SBNY	-10.92%
21.0	NWL	87.93%	META	-7.29%
21.0	AMC	85.93%	FRCB	-6.76%
21.0	CCL	78.75%	CHTR	-6.58%
21.0	CZR	70.95%	CMA	-4.41%
21.0	IEP	63.84%	KALU	-3.61%
21.0	ELAN	58.05%	GOLD	-2.92%
21.0	GT	57.18%	BALL	-2.26%
21.0	VNO	53.06%	ZTS	-1.62%
21.0	X	47.7%	NAVI	-1.48%
21.0	BHC	46.94%	SNY	-0.85%
21.0	PCG	46.54%	HCA	-0.76%
21.0	UAA	39.98%	IRM	-0.53%
21.0	ETRN	39.46%	TRGP	-0.4%
21.0	CDNS	37.3%	CTLT	-0.13%
21.0	AMD	37.16%	EXPE	0.01%
21.0	TSLA	34.98%	LW	0.25%
21.0	T	33.49%	LQD	0.37%
21.0	AMAT	32.25%	HON	0.47%
21.0	CLF	30.87%	MSI	0.66%
21.0	QQQ	30.23%	VFC	0.71%
21.0	MOS	29.95%	XOM	0.73%
21.0	MS	29.64%	POST	1.01%
21.0	MSFT	28.71%	GILD	1.19%

All Out of Sample Model Dates: 63d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
63.0	LUMN	340.52%	GME	-60.12%
63.0	CYH	314.9%	KALU	-6.23%
63.0	CCL	225.54%	SBNY	-5.48%
63.0	X	144.55%	EXPE	-3.67%
63.0	GT	135.79%	CHTR	-3.5%
63.0	NWL	130.83%	NAVI	-2.75%
63.0	CZR	99.8%	IRM	-2.55%
63.0	GBTC	98.73%	BALL	-1.98%
63.0	PCG	97.37%	SNY	-1.2%
63.0	IEP	94.74%	LW	-1.19%
63.0	UAA	90.79%	HON	-0.21%
63.0	FITB	87.68%	POST	0.37%
63.0	TSLA	80.51%	PEP	0.65%
63.0	ELAN	78.51%	META	1.36%
63.0	VNO	75.9%	HCA	1.56%
63.0	CDNS	74.39%	NVS	1.6%
63.0	MS	70.4%	VFC	1.74%
63.0	ON	68.87%	XOM	2.05%
63.0	AMD	66.8%	LQD	2.33%
63.0	NVDA	66.42%	VCSH	2.77%
63.0	T	66.38%	CTLT	2.85%
63.0	CLF	63.03%	TRGP	2.99%
63.0	BHC	61.75%	GWW	3.26%
63.0	UNH	59.08%	HLT	3.42%
63.0	FSUGY	57.79%	VICI	3.78%

All Out of Sample Model Dates: 126d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
126.0	LUMN	437.98%	GME	-55.09%
126.0	CYH	437.05%	MSTR	-6.2%
126.0	CCL	243.79%	LW	-5.44%
126.0	AMC	198.76%	SNY	-5.23%
126.0	X	190.39%	NAVI	-1.97%
126.0	MS	175.48%	IRM	-0.96%
126.0	CZR	162.49%	POST	0.04%
126.0	NWL	155.73%	GNRC	0.25%
126.0	GBTC	147.74%	PEP	0.81%
126.0	GT	141.09%	XOM	2.11%
126.0	VNO	132.34%	KALU	2.22%
126.0	PCG	121.12%	VCSH	2.35%
126.0	TSLA	115.51%	VICI	3.06%
126.0	FITB	113.18%	HLT	3.25%
126.0	UAA	110.9%	GWW	3.88%
126.0	ELAN	107.77%	EXPE	4.1%
126.0	BHC	103.49%	LQD	4.36%
126.0	CSCO	95.43%	NVS	4.54%
126.0	CLF	93.92%	MUB	7.12%
126.0	INTC	93.74%	GLD	7.7%
126.0	IEP	92.55%	HCA	9.98%
126.0	INTU	91.83%	BALL	10.3%
126.0	NVDA	91.79%	USB	10.51%
126.0	FRCB	87.96%	GOLD	11.41%
126.0	FSUGY	83.53%	VST	11.91%

All Out of Sample Model Dates: 252d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
252.0	LUMN	575.46%	GNRC	-20.38%
252.0	CYH	438.88%	IRM	-10.15%
252.0	CCL	327.65%	SNY	-2.7%
252.0	NWL	243.65%	GWW	-2.24%
252.0	CLF	229.56%	HLT	-2.04%
252.0	GBTC	222.07%	KALU	0.73%
252.0	CZR	220.65%	LW	0.74%
252.0	X	219.75%	POST	2.5%
252.0	VNO	209.17%	PEP	4.46%
252.0	BHC	193.83%	VCSH	4.8%
252.0	MOS	184.75%	VST	5.43%
252.0	GT	184.2%	MSI	10.34%
252.0	MS	176.94%	VICI	10.47%
252.0	VFC	162.1%	LQD	11.66%
252.0	GE	155.43%	MUB	13.17%
252.0	CSCO	150.55%	AMGN	14.08%
252.0	ELAN	150.17%	XOM	14.99%
252.0	PCG	149.48%	TMUS	15.84%
252.0	AA	146.09%	HCA	17.43%
252.0	BA	143.88%	NVS	18.48%
252.0	THC	142.69%	EMB	19.37%
252.0	FSUGY	127.5%	MSTR	19.4%
252.0	FITB	124.92%	CNC	19.62%
252.0	INTC	124.49%	JAZZ	21.02%
252.0	MU	121.35%	MNST	21.22%

P365D: 1d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
1.0	AMC	109.22%	GME	-9.41%
1.0	IEP	101.59%	GNRC	-0.45%
1.0	LUMN	48.76%	CHTR	-0.35%
1.0	NWL	35.31%	BALL	0.21%
1.0	MOS	25.4%	EXPE	0.37%
1.0	X	24.9%	SBUX	0.4%
1.0	NVDA	23.86%	MUB	0.52%
1.0	GT	17.98%	ZTS	0.52%
1.0	TEVA	17.79%	VCSH	0.53%
1.0	QQQ	17.12%	META	0.55%
1.0	MSTR	15.57%	GS	0.67%
1.0	AMAT	14.68%	SLV	0.7%
1.0	CYH	14.51%	ETRN	0.79%
1.0	WDC	14.38%	FRA	0.87%
1.0	PCG	14.15%	KALU	0.87%
1.0	VNO	12.29%	GOLD	1.02%
1.0	T	12.23%	SNY	1.04%
1.0	BHC	12.19%	GILD	1.08%
1.0	TSLA	11.84%	AMGN	1.18%
1.0	BHP	11.81%	HD	1.19%
1.0	UAA	11.31%	FCX	1.24%
1.0	LLY	11.17%	HON	1.28%
1.0	FSUGY	11.03%	LQD	1.43%
1.0	LVS	10.69%	NVS	1.49%
1.0	GOOGL	10.35%	VZ	1.53%

P365D: 10d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
10.0	AMC	304.96%	GME	-38.97%
10.0	LUMN	125.83%	CHTR	-7.06%
10.0	IEP	119.56%	EXPE	-4.29%
10.0	NWL	113.5%	KALU	-3.38%
10.0	CYH	86.02%	VZ	-2.99%
10.0	MSTR	62.65%	ETRN	-2.99%
10.0	NVDA	46.51%	META	-2.81%
10.0	MOS	39.8%	ZTS	-2.61%
10.0	CDNS	37.86%	BALL	-1.91%
10.0	AMAT	36.51%	VFC	-1.74%
10.0	UAA	34.58%	ISRG	-0.6%
10.0	X	33.38%	TXN	-0.53%
10.0	CCL	28.51%	GILD	-0.38%
10.0	LLY	26.4%	SBUX	-0.12%
10.0	PCG	26.02%	HON	-0.07%
10.0	BHC	25.32%	AVGO	-0.02%
10.0	GT	22.35%	AAP	0.01%
10.0	T	20.93%	HD	0.22%
10.0	VNO	20.85%	CMA	0.39%
10.0	QQQ	20.83%	VCSH	0.57%
10.0	AMD	20.17%	ORLY	0.57%
10.0	TEVA	20.07%	GS	0.72%
10.0	BHP	18.87%	SNY	0.73%
10.0	WDC	16.69%	LQD	0.73%
10.0	TSLA	16.33%	HSBC	0.86%

P365D: 21d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
21.0	AMC	261.04%	GME	-52.63%
21.0	LUMN	135.49%	CHTR	-11.83%
21.0	IEP	119.41%	META	-7.21%
21.0	NWL	102.79%	EXPE	-4.91%
21.0	CYH	77.29%	ZTS	-4.41%
21.0	MSTR	59.92%	GNRC	-4.36%
21.0	MOS	50.31%	CMA	-3.98%
21.0	AMD	44.5%	VZ	-2.08%
21.0	BHC	43.42%	ETRN	-1.96%
21.0	GT	42.76%	TXN	-1.61%
21.0	VNO	41.44%	BXP	-1.57%
21.0	PCG	39.86%	GILD	-1.41%
21.0	AMAT	39.47%	SLV	-1.08%
21.0	CDNS	38.78%	HON	-0.98%
21.0	NVDA	38.63%	AVGO	-0.87%
21.0	CCL	36.07%	BALL	-0.59%
21.0	ON	35.35%	LW	-0.51%
21.0	UAA	35.15%	ISRG	-0.46%
21.0	X	34.23%	HD	-0.32%
21.0	PHM	33.32%	KALU	-0.17%
21.0	TEVA	27.11%	LQD	0.11%
21.0	QQQ	26.75%	VFC	0.28%
21.0	T	25.49%	HSBC	0.35%
21.0	OXY	24.93%	VCSH	0.79%
21.0	TSLA	22.65%	SNY	1.06%

P365D: 63d

The columns labeled “OaR_VmS” represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
63.0	CYH	382.36%	GME	-60.59%
63.0	LUMN	305.0%	VFC	-17.36%
63.0	AMC	289.45%	GNRC	-16.2%
63.0	CCL	248.26%	CHTR	-14.84%
63.0	NWL	204.2%	EXPE	-8.37%
63.0	IEP	177.03%	META	-7.18%
63.0	CDNS	104.33%	KALU	-6.63%
63.0	AMD	102.85%	LW	-6.44%
63.0	GT	87.58%	BXP	-4.42%
63.0	MOS	82.99%	ZTS	-1.19%
63.0	CVS	72.25%	SNY	-0.9%
63.0	BHP	71.8%	LQD	0.39%
63.0	UAA	70.36%	HON	0.92%
63.0	MS	68.54%	MSI	1.11%
63.0	T	68.39%	LEN	1.14%
63.0	FSUGY	66.46%	NVS	1.45%
63.0	WYNN	64.42%	SBUX	1.64%
63.0	ON	61.45%	VCSH	1.86%
63.0	MSTR	60.59%	AMGN	2.41%
63.0	VNO	55.56%	MUB	2.91%
63.0	BHC	55.45%	VICI	3.07%
63.0	NVDA	54.66%	CNC	3.08%
63.0	AA	54.05%	POST	3.56%
63.0	ADBE	51.51%	HD	3.61%
63.0	TEVA	50.88%	PEP	3.92%

P365D: 126d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
126.0	AMC	669.43%	GME	-90.7%
126.0	LUMN	498.72%	VFC	-30.89%
126.0	CYH	389.66%	GNRC	-30.49%
126.0	CCL	334.01%	EXPE	-21.78%
126.0	NWL	215.82%	LW	-14.93%
126.0	IEP	184.41%	CHTR	-10.59%
126.0	MS	153.02%	SNY	-7.91%
126.0	GT	134.91%	AMGN	-2.94%
126.0	MOS	132.63%	BIIB	-0.26%
126.0	BHC	128.01%	MSI	0.85%
126.0	FSUGY	122.85%	VCSH	0.88%
126.0	X	120.08%	NVS	1.47%
126.0	UAA	114.53%	LQD	1.5%
126.0	GBTC	111.64%	ACGL	2.54%
126.0	CTLT	105.76%	VICI	2.77%
126.0	VNO	101.18%	META	3.68%
126.0	TSLA	100.95%	POST	3.76%
126.0	T	99.75%	ZTS	4.03%
126.0	ELAN	97.49%	MUB	4.39%
126.0	WYNN	92.07%	HON	4.72%
126.0	CLF	88.8%	XOM	5.08%
126.0	CVS	87.13%	PEP	5.18%
126.0	INTU	82.54%	AAPL	5.33%
126.0	MSFT	82.26%	CNC	7.35%
126.0	BA	81.77%	HCA	8.83%

P90D: 1d

The columns labeled “OaR_VmS” represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
1.0	NWL	44.9%	AMC	-30.62%
1.0	TEVA	38.65%	GME	-6.63%
1.0	LUMN	37.22%	AVGO	-3.16%
1.0	MOS	28.2%	CHTR	-2.27%
1.0	IEP	27.69%	ZTS	-0.73%
1.0	GT	23.07%	GILD	-0.45%
1.0	NVDA	22.39%	SBUX	0.01%
1.0	AMAT	21.7%	HON	0.3%
1.0	QQQ	19.01%	GS	0.35%
1.0	UAA	17.14%	MUB	0.45%
1.0	PCG	16.4%	AA	0.47%
1.0	BHC	16.07%	VCSH	0.62%
1.0	ACGL	15.72%	CMA	0.83%
1.0	MSTR	14.36%	GNRC	0.87%
1.0	CYH	13.37%	UNH	0.92%
1.0	CTLT	12.87%	EXPE	0.92%
1.0	BIIB	12.75%	BMY	0.94%
1.0	PHM	12.73%	ON	0.95%
1.0	FSUGY	11.81%	HD	1.05%
1.0	LVS	11.74%	BAC	1.12%
1.0	OXY	11.47%	SNY	1.19%
1.0	BHP	11.2%	IRM	1.2%
1.0	LNC	11.05%	WFC	1.39%
1.0	VNO	9.95%	AAPL	1.46%
1.0	BXP	9.94%	LQD	1.47%

P90D: 10d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
10.0	NWL	212.14%	AMC	-64.32%
10.0	CYH	113.38%	GME	-25.2%
10.0	LUMN	92.35%	AVGO	-12.28%
10.0	MOS	69.37%	CHTR	-7.96%
10.0	MSTR	56.48%	ZTS	-2.97%
10.0	IEP	55.09%	VST	-2.96%
10.0	NVDA	51.31%	GILD	-2.59%
10.0	AMAT	51.28%	SBUX	-2.25%
10.0	PCG	42.31%	VZ	-1.76%
10.0	BIIB	39.59%	HON	-1.75%
10.0	TEVA	38.78%	TXN	-1.3%
10.0	LNC	32.42%	INTC	-1.13%
10.0	VNO	29.83%	KALU	-0.98%
10.0	CSTM	26.07%	WFC	-0.87%
10.0	GT	24.45%	CNC	-0.77%
10.0	LLY	24.08%	BMY	-0.66%
10.0	ORCL	23.78%	ORLY	-0.46%
10.0	CLF	23.73%	CZR	-0.35%
10.0	CTLT	23.0%	EXPE	-0.26%
10.0	QQQ	22.21%	GOOGL	-0.1%
10.0	UAA	21.85%	HD	0.08%
10.0	OXY	21.56%	CMA	0.36%
10.0	BHP	21.28%	ABBV	0.46%
10.0	CDNS	20.89%	FRA	0.54%
10.0	AMD	20.15%	VCSH	0.6%

P90D: 21d

The columns labeled "OaR_VmS" represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
21.0	NWL	155.97%	AMC	-103.3%
21.0	LUMN	89.91%	GME	-25.16%
21.0	CYH	88.19%	AVGO	-23.88%
21.0	MOS	73.64%	CHTR	-11.92%
21.0	GT	73.05%	ZTS	-6.41%
21.0	AMAT	64.34%	GILD	-5.78%
21.0	IEP	62.69%	VST	-4.13%
21.0	TEVA	59.67%	VZ	-3.96%
21.0	PCG	59.19%	META	-3.92%
21.0	MSTR	51.98%	HON	-3.84%
21.0	VNO	41.2%	AAP	-3.1%
21.0	NVDA	37.87%	GOOGL	-2.09%
21.0	PHM	35.56%	WFC	-1.93%
21.0	BIIB	34.87%	CMA	-1.79%
21.0	BHC	33.12%	CNC	-1.32%
21.0	AMD	29.15%	CAH	-0.29%
21.0	OXY	28.45%	ORLY	-0.26%
21.0	QQQ	27.05%	TXN	-0.17%
21.0	ON	26.95%	HD	0.37%
21.0	ORCL	26.82%	ABBV	0.54%
21.0	CCL	26.6%	CZR	0.78%
21.0	WDC	25.16%	LQD	0.8%
21.0	LEN	24.11%	GS	0.85%
21.0	GE	22.9%	VCSH	0.86%
21.0	LVS	22.1%	BMY	0.92%

P30D: 1d

The columns labeled “OaR_VmS” represent the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
1.0	NWL	54.47%	AMC	-48.51%
1.0	LUMN	39.11%	GME	-7.09%
1.0	MOS	28.22%	VFC	-2.85%
1.0	QQQ	23.84%	ON	-2.23%
1.0	NVDA	23.78%	CHTR	-1.97%
1.0	GT	23.5%	AVGO	-1.9%
1.0	IEP	22.75%	ZTS	-0.76%
1.0	UAA	20.72%	SBUX	-0.72%
1.0	BHC	16.67%	GNRC	-0.58%
1.0	PHM	16.22%	WDC	-0.51%
1.0	ACGL	16.2%	GILD	-0.47%
1.0	PCG	16.05%	UNH	-0.4%
1.0	CYH	15.8%	WFC	-0.39%
1.0	TEVA	14.31%	ABBV	0.27%
1.0	AMAT	13.83%	HD	0.43%
1.0	FSUGY	13.57%	MUB	0.46%
1.0	OXY	13.3%	GE	0.48%
1.0	BIIB	13.05%	VCSH	0.55%
1.0	LVS	12.14%	HON	0.61%
1.0	MSI	11.51%	GBTC	0.7%
1.0	LNC	10.84%	CVS	0.72%
1.0	AAP	10.62%	GWW	0.78%
1.0	X	10.6%	HLT	0.8%
1.0	VST	10.25%	BMY	0.82%
1.0	VNO	9.91%	GS	0.94%

P30D: 10d

“OaR_VmS” is the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the periven ticker for the model dates in the period indicated for which forward horizon performance is known. Thus, TICKERS THE VECTOR MODEL INDICATES AS HAVING LESS DOWNSIDE AT THE 99%Tile ARE LISTED ON THE LEFT, THOSE VIEWED AS HAVING MORE DOWNSIDE ARE LISTED ON THE RIGHT.

“OaR_VmS” is the average amount by which Vector Model 99% OaR exceeds Sigma 99% OaR for the given ticker for the model dates in the period indicated for which forward horizon performance is known. Thus, TICKERS WITH LESS DOWNSIDE BY THE VECTOR MODEL ARE LISTED ON THE LEFT, THO

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	OaR_VmS	Ticker	OaR_VmS
10.0	NWL	366.32%	AMC	-154.01%
10.0	CYH	213.92%	GME	-25.34%
10.0	MOS	74.53%	WDC	-11.92%
10.0	LUMN	71.15%	CHTR	-6.71%
10.0	LNC	66.6%	UNH	-6.13%
10.0	NVDA	64.68%	VFC	-4.69%
10.0	IEP	46.65%	CVS	-3.9%
10.0	PCG	43.34%	CMA	-3.55%
10.0	BIIB	38.14%	SBUX	-3.22%
10.0	MSTR	35.5%	ZTS	-3.18%
10.0	ORCL	33.84%	QCOM	-2.48%
10.0	AA	26.53%	TXN	-2.23%
10.0	QQQ	26.37%	HON	-2.05%
10.0	CLF	25.54%	BMY	-1.66%
10.0	LLY	24.94%	GILD	-0.94%
10.0	UAA	24.41%	SNY	-0.93%
10.0	GT	24.41%	AVGO	-0.79%
10.0	OXY	23.75%	GOOGL	-0.65%
10.0	PHM	23.45%	WFC	-0.62%
10.0	AMAT	22.07%	LQD	-0.47%
10.0	BHP	21.74%	INTC	-0.44%
10.0	ACGL	21.56%	AMGN	-0.4%
10.0	MS	20.39%	HD	-0.34%
10.0	CSTM	19.04%	ABBV	-0.17%
10.0	TDG	18.82%	ORLY	-0.16%

Appendix 15: Top & Bottom 30 Ticker Level Differences in 95% OaR Breakage

All Out of Sample Model Dates: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
1.0	GME	13.18%	ON	-4.53%
1.0	SBNY	13.01%	VCSH	-4.2%
1.0	MSTR	11.78%	HYG	-4.2%
1.0	CHTR	8.47%	EMB	-3.95%
1.0	SIVBQ	8.11%	GE	-3.81%
1.0	META	7.43%	MUB	-3.7%
1.0	GNRC	7.15%	MOS	-3.68%
1.0	GOLD	6.15%	VNO	-3.56%
1.0	BALL	5.77%	MSFT	-3.45%
1.0	FRCB	5.76%	MS	-3.36%
1.0	NFLX	5.73%	NVDA	-3.32%
1.0	FRA	5.73%	DHI	-3.21%
1.0	SLV	5.52%	MU	-3.13%
1.0	HLT	5.15%	QQQ	-3.12%
1.0	AVGO	4.58%	TLT	-3.0%
1.0	ORCL	4.33%	CCL	-2.97%
1.0	ZTS	4.27%	T	-2.92%
1.0	INTU	4.19%	CSCO	-2.87%
1.0	CMA	4.03%	JPM	-2.7%
1.0	AMC	3.52%	WYNN	-2.69%
1.0	BUD	3.45%	LLY	-2.68%
1.0	XOM	3.33%	HSBC	-2.68%
1.0	ACGL	3.24%	PHM	-2.59%
1.0	HCA	3.24%	WDC	-2.59%
1.0	OXY	3.16%	FCX	-2.48%
1.0	CLF	3.06%	THC	-2.45%
1.0	AAP	2.94%	CMG	-2.45%
1.0	VFC	2.9%	AZN	-2.43%
1.0	AA	2.63%	LVS	-2.31%
1.0	ISRG	2.59%	AMAT	-2.3%

All Out of Sample Model Dates: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
10.0	META	15.21%	MUB	-7.89%
10.0	MSTR	14.07%	NVDA	-7.01%
10.0	GME	13.14%	LLY	-6.74%
10.0	SIVBQ	12.36%	T	-6.08%
10.0	BALL	10.6%	MS	-5.68%
10.0	SBNY	10.41%	CCL	-5.39%
10.0	CHTR	9.88%	GE	-4.89%
10.0	HCA	9.82%	CDNS	-4.81%
10.0	TEVA	8.25%	JPM	-4.75%
10.0	GOLD	8.22%	MU	-3.93%
10.0	KALU	8.16%	COST	-3.84%
10.0	FRCB	7.91%	CSCO	-3.77%
10.0	GNRC	7.68%	CMG	-3.73%
10.0	CMA	6.74%	VCSH	-3.68%
10.0	LW	6.3%	VNO	-3.68%
10.0	HD	6.27%	CAH	-3.51%
10.0	IRM	5.93%	CPRT	-3.46%
10.0	BXP	5.79%	FSUGY	-3.37%
10.0	ZTS	5.56%	AMD	-3.32%
10.0	PEP	5.51%	DHI	-3.2%
10.0	GWW	5.23%	INTC	-3.15%
10.0	SLV	4.87%	PHM	-3.1%
10.0	GILD	4.63%	QQQ	-2.72%
10.0	INTU	4.57%	GT	-2.69%
10.0	AMC	4.5%	MSFT	-2.65%
10.0	OXY	4.46%	GSK	-2.44%
10.0	ISRG	4.33%	HYG	-2.41%
10.0	TDG	4.22%	WYNN	-2.41%
10.0	VST	4.21%	BA	-2.41%
10.0	XOM	4.09%	GS	-2.29%

All Out of Sample Model Dates: 21d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
21.0	GME	14.25%	LLY	-9.37%
21.0	META	13.94%	MUB	-9.35%
21.0	GOLD	11.04%	COST	-8.62%
21.0	GNRC	10.98%	JPM	-7.99%
21.0	CHTR	9.95%	NVDA	-7.67%
21.0	FRCB	8.63%	CCL	-7.37%
21.0	SIVBQ	8.49%	MS	-7.25%
21.0	MSTR	8.18%	DHI	-7.04%
21.0	ZTS	7.39%	PHM	-6.47%
21.0	BALL	7.22%	GLD	-6.36%
21.0	LW	7.1%	TSLA	-6.28%
21.0	TEVA	7.05%	GE	-6.24%
21.0	KALU	6.75%	PWR	-5.71%
21.0	ISRG	6.74%	AZN	-5.34%
21.0	CMA	6.62%	VNO	-5.01%
21.0	AMC	6.04%	T	-5.0%
21.0	HCA	5.93%	ELAN	-4.89%
21.0	NAVI	5.63%	CMG	-4.86%
21.0	IRM	5.26%	CDNS	-4.64%
21.0	VST	5.2%	GBTC	-4.55%
21.0	HD	5.19%	VCSH	-4.41%
21.0	SBNY	4.83%	LEN	-4.22%
21.0	VZ	4.73%	CAH	-4.12%
21.0	AVGO	4.51%	EMB	-3.9%
21.0	BXP	4.34%	MU	-3.88%
21.0	EXPE	4.16%	TMUS	-3.78%
21.0	XOM	4.05%	WYNN	-3.56%
21.0	SPY	4.02%	CPRT	-3.52%
21.0	INTU	3.6%	AMAT	-3.39%
21.0	GILD	3.54%	INTC	-3.23%

All Out of Sample Model Dates: 63d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
63.0	META	15.17%	NVDA	-20.63%
63.0	CHTR	13.74%	CMG	-13.91%
63.0	LW	11.63%	VNO	-13.66%
63.0	SIVBQ	10.81%	GBTC	-11.4%
63.0	AVGO	10.38%	DHI	-11.31%
63.0	MSTR	9.68%	GE	-10.9%
63.0	GME	8.18%	LLY	-10.36%
63.0	GNRC	7.68%	CCL	-9.89%
63.0	IRM	6.82%	MU	-9.84%
63.0	SNY	5.9%	PHM	-9.65%
63.0	XOM	5.79%	JPM	-9.57%
63.0	NEM	5.16%	CITI	-9.3%
63.0	BALL	5.06%	COST	-8.7%
63.0	EXPE	4.98%	CPRT	-8.52%
63.0	BXP	4.15%	AMD	-8.05%
63.0	VFC	3.92%	GLD	-7.54%
63.0	BUD	3.85%	T	-6.86%
63.0	CTLT	3.83%	MUB	-6.73%
63.0	MSI	3.76%	VCSH	-6.58%
63.0	CMA	3.5%	ABBV	-6.41%
63.0	KALU	3.36%	LUMN	-6.22%
63.0	AMC	3.19%	HLT	-6.11%
63.0	ZTS	2.93%	NVS	-6.04%
63.0	FRCB	2.16%	MRK	-6.04%
63.0	WRK	2.13%	AMGN	-5.5%
63.0	AA	2.13%	NFLX	-5.47%
63.0	HCA	2.1%	THC	-5.43%
63.0	VST	2.06%	AZN	-5.37%
63.0	GOLD	1.69%	FSUGY	-5.03%
63.0	TEVA	1.32%	PWR	-4.9%

All Out of Sample Model Dates: 126d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
126.0	LW	17.28%	NVDA	-28.42%
126.0	VFC	11.46%	PHM	-27.87%
126.0	GME	7.74%	GE	-25.2%
126.0	XOM	7.66%	JPM	-19.27%
126.0	BALL	7.22%	COST	-18.73%
126.0	EXPE	6.86%	GBTC	-17.5%
126.0	META	6.77%	GS	-16.52%
126.0	BXP	6.6%	GLD	-15.14%
126.0	GOOGL	6.35%	AVGO	-14.21%
126.0	CHTR	5.78%	T	-13.3%
126.0	IRM	5.49%	LLY	-13.01%
126.0	MSTR	4.98%	MU	-13.0%
126.0	TEVA	4.85%	CMG	-12.79%
126.0	GNRC	3.65%	CITI	-12.69%
126.0	CMA	2.14%	GILD	-12.61%
126.0	TMUS	1.95%	CPRT	-12.61%
126.0	CTLT	1.86%	ORCL	-12.59%
126.0	HCA	1.67%	PWR	-12.25%
126.0	NWL	1.55%	AMAT	-11.76%
126.0	AMC	1.31%	VNO	-11.76%
126.0	KHC	1.21%	HLT	-11.55%
126.0	OXY	0.93%	MS	-10.53%
126.0	KALU	0.76%	MRK	-10.36%
126.0	BAC	0.76%	CSCO	-10.02%
126.0	BIIB	0.46%	NFLX	-9.62%
126.0	SNY	0.45%	ACGL	-9.16%
126.0	USB	0.31%	TDG	-9.06%
126.0	GOLD	0.31%	THC	-8.99%
126.0	VST	0.3%	TSLA	-8.9%
126.0	CLF	0.16%	GWW	-8.89%

All Out of Sample Model Dates: 252d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
252.0	MSTR	11.15%	GE	-66.06%
252.0	VST	7.24%	PHM	-60.53%
252.0	GNRC	5.59%	GBTC	-44.19%
252.0	GOOGL	4.96%	COST	-39.37%
252.0	IRM	4.53%	ACGL	-37.24%
252.0	XOM	3.88%	PWR	-31.19%
252.0	TRGP	3.71%	NVDA	-29.57%
252.0	BA	2.5%	LLY	-27.65%
252.0	OXY	2.48%	JPM	-27.02%
252.0	BALL	2.27%	CPRT	-26.11%
252.0	EXPE	2.14%	NFLX	-25.78%
252.0	GME	1.15%	DHI	-24.77%
252.0	GT	0.0%	ORCL	-23.84%
252.0	HYG	0.0%	ISRG	-23.4%
252.0	NEM	0.0%	CMG	-21.58%
252.0	CITI	0.0%	TDG	-21.34%
252.0	BMY	0.0%	GS	-17.96%
252.0	VICI	0.0%	LEN	-17.89%
252.0	EMB	0.0%	META	-17.74%
252.0	UNH	0.0%	MU	-17.03%
252.0	CNC	0.0%	TMUS	-16.33%
252.0	GOLD	0.0%	HLT	-15.79%
252.0	LQD	0.0%	AVGO	-15.16%
252.0	MUB	0.0%	THC	-13.51%
252.0	MNST	0.0%	AMAT	-13.49%
252.0	CMCSA	0.0%	MS	-13.42%
252.0	PEP	0.0%	CDNS	-13.37%
252.0	ZTS	0.0%	SPY	-13.31%
252.0	HON	0.0%	MSFT	-12.09%
252.0	ZION	0.0%	MSI	-12.06%

P365D: 1d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
1.0	FRA	10.79%	NVDA	-7.95%
1.0	GNRC	9.21%	WDC	-6.17%
1.0	GOLD	9.05%	TDG	-5.88%
1.0	CHTR	8.66%	LLY	-5.61%
1.0	GME	6.63%	T	-5.46%
1.0	CLF	6.61%	TRGP	-5.39%
1.0	NFLX	6.38%	QQQ	-5.04%
1.0	VFC	5.88%	COST	-4.98%
1.0	GILD	5.86%	CCL	-4.85%
1.0	IRM	5.81%	JAZZ	-4.57%
1.0	META	5.56%	SPY	-4.56%
1.0	SLV	5.42%	BA	-4.44%
1.0	BALL	5.22%	CITI	-4.35%
1.0	AVGO	4.87%	MU	-4.29%
1.0	KEY	4.82%	CDNS	-4.29%
1.0	GS	4.56%	PHM	-4.15%
1.0	PWR	4.27%	VNO	-4.0%
1.0	ZTS	4.17%	CMG	-3.77%
1.0	AMGN	3.73%	JPM	-3.73%
1.0	SBUX	3.73%	MS	-3.73%
1.0	UAA	3.48%	POST	-3.73%
1.0	HCA	3.36%	LUMN	-3.69%
1.0	HON	3.32%	RIO	-3.35%
1.0	ORCL	3.32%	MOS	-3.35%
1.0	ORLY	2.9%	ACGL	-3.33%
1.0	LW	2.59%	BHP	-3.32%
1.0	CMA	2.09%	HSBC	-3.32%
1.0	BAC	2.09%	TLT	-3.12%
1.0	HLT	2.07%	WRK	-3.08%
1.0	AAP	1.9%	CMCSA	-2.98%

P365D: 10d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
10.0	META	13.98%	T	-15.0%
10.0	BXP	11.67%	NVDA	-12.03%
10.0	CHTR	11.16%	COST	-10.7%
10.0	GME	9.6%	TMUS	-10.0%
10.0	EXPE	9.47%	MS	-9.88%
10.0	KALU	8.79%	CITI	-9.68%
10.0	HCA	8.75%	CSCO	-9.48%
10.0	VZ	8.75%	JAZZ	-8.14%
10.0	CMA	8.71%	AAPL	-7.88%
10.0	ETRN	8.47%	JPM	-7.82%
10.0	VFC	8.07%	LLY	-7.58%
10.0	NEM	7.5%	LUMN	-6.85%
10.0	GNRC	7.36%	CCL	-6.4%
10.0	GILD	7.05%	CDNS	-6.38%
10.0	GOLD	6.84%	TSLA	-5.93%
10.0	AMGN	6.58%	CAH	-5.79%
10.0	PWR	6.36%	TRGP	-5.35%
10.0	SLV	6.2%	PHM	-4.94%
10.0	IRM	6.17%	WYNN	-4.57%
10.0	BALL	5.6%	VNO	-4.43%
10.0	LW	5.56%	MU	-4.26%
10.0	MSI	5.24%	QQQ	-4.17%
10.0	CLF	4.74%	CMG	-4.15%
10.0	AAP	4.74%	AZN	-4.13%
10.0	HD	4.62%	BHC	-4.0%
10.0	ZTS	4.55%	PCG	-3.92%
10.0	QCOM	3.73%	ZION	-3.9%
10.0	BAC	3.32%	GT	-3.79%
10.0	INTC	3.07%	CVS	-3.72%
10.0	AA	2.99%	THC	-3.72%

P365D: 21d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
21.0	VZ	20.09%	COST	-19.82%
21.0	BXP	12.95%	NVDA	-13.78%
21.0	META	12.73%	AZN	-13.72%
21.0	CHTR	12.39%	MS	-12.78%
21.0	EXPE	10.57%	T	-12.5%
21.0	GNRC	9.72%	TMUS	-12.39%
21.0	KALU	8.52%	MSTR	-11.06%
21.0	CMA	8.44%	JPM	-10.13%
21.0	VFC	8.1%	CAH	-9.73%
21.0	GOLD	7.27%	BMY	-9.29%
21.0	GME	6.52%	LLY	-9.23%
21.0	HD	6.28%	CCL	-8.95%
21.0	ISRG	5.8%	TRGP	-8.81%
21.0	SLV	5.75%	GSK	-8.44%
21.0	AMGN	5.73%	PHM	-7.93%
21.0	NEM	5.73%	DHI	-7.93%
21.0	MSI	5.14%	WFC	-7.56%
21.0	GILD	4.44%	SBUX	-7.05%
21.0	AAP	4.17%	ELAN	-6.67%
21.0	PWR	4.07%	AVGO	-6.62%
21.0	ZTS	3.98%	LEN	-6.22%
21.0	IRM	3.96%	MNST	-6.17%
21.0	LW	3.67%	JAZZ	-5.85%
21.0	BALL	3.24%	AAPL	-5.78%
21.0	BAC	3.1%	LVS	-5.58%
21.0	BUD	3.08%	BHC	-5.38%
21.0	HCA	2.67%	WYNN	-4.93%
21.0	FRA	2.64%	LUMN	-4.93%
21.0	CLF	2.31%	CPRT	-4.89%
21.0	AA	2.29%	HSBC	-4.85%

P365D: 63d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
63.0	CHTR	27.68%	VNO	-33.77%
63.0	AVGO	20.69%	NFLX	-27.22%
63.0	BXP	18.03%	TRGP	-27.03%
63.0	NEM	17.49%	T	-26.09%
63.0	META	16.2%	LUMN	-25.77%
63.0	EXPE	15.14%	DHI	-20.0%
63.0	VFC	14.71%	GLD	-18.38%
63.0	MSI	14.12%	CCL	-18.06%
63.0	HD	9.5%	VST	-17.84%
63.0	CMA	8.7%	NVDA	-17.49%
63.0	GSK	7.03%	MS	-14.59%
63.0	BUD	5.41%	MSTR	-14.37%
63.0	HCA	4.42%	CSCO	-14.37%
63.0	SLV	3.8%	BMY	-13.59%
63.0	SNY	3.78%	UNH	-13.11%
63.0	IRM	3.24%	GBTC	-12.75%
63.0	AA	2.27%	LVS	-12.18%
63.0	GOLD	2.25%	GWW	-11.41%
63.0	ZTS	2.17%	JPM	-11.35%
63.0	GNRC	1.68%	AMZN	-10.56%
63.0	VZ	1.65%	SBUX	-9.73%
63.0	ZION	1.16%	ABBV	-9.73%
63.0	GE	1.11%	HSBC	-9.73%
63.0	QCOM	1.09%	WFC	-9.29%
63.0	GME	0.68%	HLT	-9.19%
63.0	KEY	0.58%	COST	-9.19%
63.0	LW	0.56%	CPRT	-9.19%
63.0	PWR	0.55%	PHM	-9.19%
63.0	KALU	0.55%	VCSH	-9.19%
63.0	GILD	0.55%	TSLA	-7.69%

P365D: 126d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
126.0	VFC	61.11%	T	-69.11%
126.0	META	46.15%	CSCO	-58.04%
126.0	EXPE	35.77%	MS	-55.28%
126.0	BXP	26.02%	VNO	-52.78%
126.0	CHTR	22.95%	GS	-51.22%
126.0	GME	22.11%	MSTR	-45.54%
126.0	MSI	14.63%	JPM	-43.9%
126.0	CMA	11.38%	CCL	-40.2%
126.0	NWL	8.2%	NFLX	-39.5%
126.0	NEM	2.44%	ORCL	-38.21%
126.0	TEVA	1.72%	ISRG	-36.21%
126.0	USB	1.68%	BMY	-35.54%
126.0	GNRC	0.85%	GLD	-30.08%
126.0	FITB	0.83%	NVDA	-29.75%
126.0	HD	0.82%	TSLA	-29.51%
126.0	ZTS	0.82%	TRGP	-29.27%
126.0	HCA	0.81%	HSBC	-28.46%
126.0	CZR	0.0%	VST	-26.02%
126.0	POST	0.0%	WFC	-26.02%
126.0	WDC	0.0%	CAH	-25.2%
126.0	BA	0.0%	HLT	-23.58%
126.0	CMCSA	0.0%	GILD	-22.31%
126.0	HYG	0.0%	AVGO	-20.18%
126.0	MNST	0.0%	LUMN	-19.27%
126.0	MU	0.0%	ORLY	-15.45%
126.0	MUB	0.0%	GWW	-12.3%
126.0	WYNN	0.0%	COST	-10.57%
126.0	EMB	0.0%	AAPL	-9.09%
126.0	JAZZ	0.0%	SBUX	-8.94%
126.0	LQD	0.0%	UNH	-8.13%

P90D: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
1.0	AVGO	25.05%	VICI	-12.73%
1.0	GILD	23.64%	GLD	-10.91%
1.0	CHTR	18.52%	COST	-10.91%
1.0	ZTS	16.36%	LNC	-10.2%
1.0	CMA	10.91%	TLT	-9.8%
1.0	IRM	10.91%	SPY	-9.09%
1.0	HON	10.91%	TRGP	-9.09%
1.0	UNH	9.62%	TMUS	-8.16%
1.0	ORLY	9.09%	T	-7.27%
1.0	GNRC	8.33%	QQQ	-7.27%
1.0	AMZN	7.69%	PEP	-7.27%
1.0	VST	7.41%	NVS	-7.27%
1.0	WFC	7.27%	ACGL	-7.27%
1.0	ABBV	7.27%	HSBC	-7.27%
1.0	GS	7.27%	MS	-7.27%
1.0	BAC	7.27%	MUB	-7.27%
1.0	NAVI	7.27%	OXY	-6.25%
1.0	SLV	7.27%	MSI	-6.0%
1.0	BALL	6.12%	VNO	-5.88%
1.0	SBUX	5.45%	BXP	-5.77%
1.0	FRA	5.45%	MU	-5.66%
1.0	MSTR	4.26%	KHC	-5.66%
1.0	CLF	3.85%	WDC	-5.66%
1.0	META	3.7%	XOM	-5.66%
1.0	AMC	3.7%	BA	-5.56%
1.0	GOOGL	3.64%	GT	-5.56%
1.0	QCOM	3.64%	POST	-5.45%
1.0	TXN	3.64%	NFLX	-5.45%
1.0	VZ	3.64%	HYG	-5.45%
1.0	ISRG	2.63%	HLT	-5.45%

P90D: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
10.0	UNH	27.45%	T	-48.15%
10.0	CHTR	24.53%	JAZZ	-20.37%
10.0	VZ	16.67%	COST	-20.37%
10.0	INTU	15.09%	BUD	-18.52%
10.0	CMA	14.81%	TMUS	-17.65%
10.0	AAP	13.73%	LNC	-16.67%
10.0	GILD	12.96%	CSCO	-14.81%
10.0	GE	11.32%	MS	-14.81%
10.0	QCOM	11.11%	VICI	-14.81%
10.0	INTC	10.2%	NFLX	-14.81%
10.0	GOLD	9.62%	WYNN	-12.96%
10.0	ZTS	9.26%	JPM	-12.96%
10.0	AMZN	7.55%	GT	-11.32%
10.0	ISRG	7.5%	AZN	-11.11%
10.0	AVGO	7.5%	LLY	-10.64%
10.0	BAC	7.41%	PEP	-9.26%
10.0	HLT	7.41%	MOS	-9.26%
10.0	ABBV	7.41%	NVDA	-9.26%
10.0	WFC	5.56%	CAH	-9.26%
10.0	CLF	5.56%	GLD	-9.26%
10.0	IRM	5.56%	HSBC	-9.26%
10.0	PHM	5.56%	XOM	-7.69%
10.0	MSTR	4.35%	MRK	-7.41%
10.0	BALL	4.17%	NVS	-7.41%
10.0	FCX	3.7%	MNST	-7.41%
10.0	HCA	3.7%	AAPL	-7.41%
10.0	BMY	3.7%	BHC	-6.0%
10.0	AMGN	3.7%	TFC	-5.88%
10.0	TXN	3.7%	KHC	-5.77%
10.0	SLV	3.7%	MU	-5.66%

P90D: 21d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
21.0	VZ	41.86%	COST	-44.19%
21.0	GOLD	18.6%	GLD	-41.86%
21.0	GILD	18.6%	NVS	-27.91%
21.0	UNH	15.0%	HLT	-27.91%
21.0	CHTR	9.52%	T	-27.91%
21.0	INTU	7.14%	HSBC	-25.58%
21.0	GE	4.76%	AZN	-23.26%
21.0	QCOM	4.65%	MNST	-23.26%
21.0	POST	4.65%	JAZZ	-20.93%
21.0	BUD	4.65%	LNC	-18.92%
21.0	EXPE	4.65%	NFLX	-18.6%
21.0	ISRG	3.12%	TMUS	-16.67%
21.0	AAP	2.7%	JPM	-13.95%
21.0	META	2.38%	CVS	-11.9%
21.0	ZTS	2.33%	VICI	-9.3%
21.0	BMY	2.33%	LLY	-8.33%
21.0	CMA	2.33%	SNY	-6.98%
21.0	ORLY	2.33%	MRK	-6.98%
21.0	GOOGL	2.33%	AAPL	-6.98%
21.0	LQD	0.0%	SBUX	-6.98%
21.0	PEP	0.0%	PRGO	-5.13%
21.0	EMB	0.0%	KHC	-4.88%
21.0	BXP	0.0%	WFC	-4.65%
21.0	KALU	0.0%	CSCO	-4.65%
21.0	TLT	0.0%	HCA	-4.65%
21.0	HYG	0.0%	GSK	-2.44%
21.0	CYH	0.0%	NEM	-2.33%
21.0	GWW	0.0%	THC	-2.33%
21.0	WYNN	0.0%	AZO	-2.33%
21.0	BIIB	0.0%	ORCL	-2.33%

P30D: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
1.0	GILD	25.0%	TRGP	-15.0%
1.0	CHTR	20.0%	HLT	-15.0%
1.0	IRM	20.0%	VNO	-11.76%
1.0	UNH	15.79%	BXP	-11.11%
1.0	ORLY	15.0%	BA	-10.53%
1.0	WFC	15.0%	GBTC	-10.53%
1.0	ABBV	15.0%	CPRT	-10.0%
1.0	VFC	11.76%	QQQ	-10.0%
1.0	GNRC	10.53%	LNC	-10.0%
1.0	AMC	10.0%	XOM	-10.0%
1.0	ON	10.0%	SPY	-10.0%
1.0	ZTS	10.0%	JPM	-10.0%
1.0	META	10.0%	HSBC	-10.0%
1.0	MSTR	6.67%	T	-10.0%
1.0	GME	5.26%	NFLX	-10.0%
1.0	TXN	5.0%	VICI	-10.0%
1.0	KEY	5.0%	MSFT	-10.0%
1.0	WDC	5.0%	X	-10.0%
1.0	HON	5.0%	POST	-10.0%
1.0	GS	5.0%	TMUS	-6.67%
1.0	AVGO	5.0%	OXY	-6.25%
1.0	AMGN	5.0%	AMZN	-5.88%
1.0	SBUX	5.0%	DHI	-5.88%
1.0	FCX	5.0%	TSLA	-5.56%
1.0	NAVI	5.0%	MU	-5.56%
1.0	CVS	5.0%	GOLD	-5.56%
1.0	AZN	0.0%	WYNN	-5.26%
1.0	NEM	0.0%	AZO	-5.26%
1.0	EXPE	0.0%	ADBE	-5.26%
1.0	MRK	0.0%	ORCL	-5.0%

P30D: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 95% OaR breakage exceeds Sigma 95% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
10.0	UNH	100.0%	CAH	-36.36%
10.0	INTU	36.36%	XOM	-36.36%
10.0	MSTR	33.33%	BA	-30.0%
10.0	INTC	30.0%	MOS	-27.27%
10.0	VZ	27.27%	CDNS	-18.18%
10.0	CHTR	27.27%	FIS	-18.18%
10.0	CCL	22.22%	X	-18.18%
10.0	MU	20.0%	NFLX	-18.18%
10.0	GE	18.18%	TRGP	-18.18%
10.0	IRM	18.18%	T	-18.18%
10.0	FCX	18.18%	MS	-18.18%
10.0	BAC	18.18%	TSLA	-10.0%
10.0	THC	9.09%	NEM	-10.0%
10.0	WDC	9.09%	VST	-10.0%
10.0	HCA	9.09%	MNST	-9.09%
10.0	ORLY	9.09%	AZO	-9.09%
10.0	VICI	0.0%	GLD	-9.09%
10.0	KEY	0.0%	TMUS	0.0%
10.0	EXPE	0.0%	BMY	0.0%
10.0	LQD	0.0%	TLT	0.0%
10.0	VCSH	0.0%	VCSH	0.0%
10.0	TMUS	0.0%	KEY	0.0%
10.0	BMY	0.0%	AZN	0.0%
10.0	TLT	0.0%	LQD	0.0%
10.0	HSBC	0.0%	BHP	0.0%
10.0	AZN	0.0%	WFC	0.0%
10.0	WFC	0.0%	VNO	0.0%
10.0	BHP	0.0%	HYG	0.0%
10.0	TFC	0.0%	EMB	0.0%
10.0	MSFT	0.0%	SNY	0.0%

Appendix 16: Top & Bottom 30 Ticker Level Differences in 95% OaR ROLOBC

All Out of Sample Model Dates: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
1.0	GBTC	0.26%	AVGO	-0.52%
1.0	BHC	0.22%	IEP	-0.28%
1.0	TSLA	0.21%	MSTR	-0.2%
1.0	CCL	0.18%	CZR	-0.19%
1.0	GE	0.17%	NWL	-0.18%
1.0	LLY	0.16%	LUMN	-0.16%
1.0	X	0.16%	SIVBQ	-0.16%
1.0	NVDA	0.15%	GNRC	-0.15%
1.0	ON	0.14%	BIIB	-0.14%
1.0	VNO	0.14%	UAA	-0.13%
1.0	GOLD	0.12%	LNC	-0.11%
1.0	TDG	0.11%	META	-0.09%
1.0	CYH	0.11%	NFLX	-0.08%
1.0	CMG	0.1%	GT	-0.08%
1.0	JAZZ	0.1%	AMC	-0.08%
1.0	MSFT	0.1%	TEVA	-0.07%
1.0	WDC	0.1%	BA	-0.06%
1.0	CITI	0.1%	GME	-0.06%
1.0	DHI	0.09%	BALL	-0.05%
1.0	T	0.09%	AAPL	-0.05%
1.0	PCG	0.08%	AA	-0.05%
1.0	WYNN	0.08%	SBUX	-0.04%
1.0	EXPE	0.08%	FSUGY	-0.04%
1.0	PWR	0.07%	CHTR	-0.04%
1.0	LEN	0.07%	BHP	-0.04%
1.0	SBNY	0.07%	RIO	-0.04%
1.0	MU	0.07%	HD	-0.04%
1.0	JPM	0.07%	TLT	-0.03%
1.0	TRGP	0.07%	ORCL	-0.03%

1.0	KEY	0.07%	INTU	-0.03%

All Out of Sample Model Dates: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
10.0	SBNY	3.41%	AVGO	-5.1%
10.0	TSLA	2.93%	LUMN	-1.82%
10.0	NVDA	2.38%	IEP	-1.47%
10.0	LLY	1.9%	CZR	-1.46%
10.0	CCL	1.78%	MSTR	-1.35%
10.0	FRCB	1.56%	NWL	-1.2%
10.0	GBTC	1.3%	GNRC	-1.08%
10.0	AMC	1.18%	GME	-0.95%
10.0	BHC	1.16%	INTU	-0.78%
10.0	SIVBQ	1.05%	META	-0.74%
10.0	MSFT	0.99%	NFLX	-0.65%
10.0	PWR	0.88%	MS	-0.54%
10.0	AZO	0.88%	ORCL	-0.5%
10.0	T	0.79%	CLF	-0.47%
10.0	ELAN	0.74%	FSUGY	-0.44%
10.0	QQQ	0.69%	AA	-0.44%
10.0	GT	0.64%	GOOGL	-0.44%
10.0	GE	0.62%	FIS	-0.4%
10.0	CDNS	0.59%	BIIB	-0.34%
10.0	DHI	0.56%	BXP	-0.32%
10.0	WYNN	0.53%	BALL	-0.27%
10.0	ORLY	0.53%	VZ	-0.27%
10.0	HLT	0.52%	TEVA	-0.25%
10.0	JAZZ	0.51%	UAA	-0.23%
10.0	CITI	0.48%	ADBE	-0.23%
10.0	MU	0.46%	OXY	-0.23%
10.0	JPM	0.45%	AAPL	-0.22%
10.0	LVS	0.44%	HD	-0.21%
10.0	COST	0.43%	SLV	-0.2%
10.0	PCG	0.4%	GWW	-0.19%

All Out of Sample Model Dates: 21d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
21.0	TSLA	7.28%	AVGO	-8.5%
21.0	SBNY	6.77%	CZR	-4.18%
21.0	NVDA	4.78%	LUMN	-3.98%
21.0	GBTC	3.71%	IEP	-3.85%
21.0	CCL	3.52%	GNRC	-2.58%
21.0	FRCB	3.11%	MSTR	-2.33%
21.0	LLY	2.99%	NWL	-2.02%
21.0	AZO	2.48%	CLF	-1.75%
21.0	ELAN	2.46%	INTU	-1.71%
21.0	PWR	2.11%	GME	-1.63%
21.0	PCG	2.04%	META	-1.53%
21.0	AMC	1.98%	FSUGY	-1.01%
21.0	DHI	1.95%	VZ	-0.91%
21.0	SIVBQ	1.58%	CYH	-0.71%
21.0	MSFT	1.56%	BAC	-0.69%
21.0	QQQ	1.54%	BALL	-0.67%
21.0	VNO	1.51%	OXY	-0.63%
21.0	CDNS	1.47%	BXP	-0.61%
21.0	PHM	1.26%	MOS	-0.6%
21.0	JPM	1.22%	ADBE	-0.55%
21.0	ORLY	1.21%	ORCL	-0.51%
21.0	GE	1.14%	BHP	-0.46%
21.0	T	1.13%	TEVA	-0.45%
21.0	AMAT	1.13%	NFLX	-0.45%
21.0	COST	1.11%	HD	-0.42%
21.0	MU	1.06%	QCOM	-0.4%
21.0	WYNN	1.02%	RIO	-0.38%
21.0	VST	1.01%	AAPL	-0.38%
21.0	BHC	0.88%	KHC	-0.35%
21.0	HLT	0.84%	HSBC	-0.33%

All Out of Sample Model Dates: 63d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
63.0	NVDA	16.36%	AVGO	-28.43%
63.0	CCL	16.11%	IEP	-13.66%
63.0	MSTR	14.04%	GNRC	-11.0%
63.0	SBNY	14.0%	NWL	-7.45%
63.0	TSLA	10.29%	META	-6.73%
63.0	GBTC	10.21%	LUMN	-4.72%
63.0	ELAN	7.91%	GME	-3.86%
63.0	VNO	7.91%	BALL	-3.5%
63.0	AMC	7.66%	CZR	-3.33%
63.0	LLY	7.26%	CLF	-3.08%
63.0	PWR	6.87%	VFC	-2.91%
63.0	DHI	6.0%	CYH	-2.51%
63.0	FRCB	5.94%	UAA	-2.49%
63.0	PCG	5.54%	BHP	-2.14%
63.0	MSFT	5.5%	MOS	-2.13%
63.0	QQQ	5.33%	AA	-1.85%
63.0	AZO	5.15%	VZ	-1.67%
63.0	AMZN	5.1%	INTU	-1.6%
63.0	PHM	5.09%	ON	-1.44%
63.0	AMAT	4.96%	IRM	-1.39%
63.0	AMD	4.9%	HD	-1.23%
63.0	MU	4.5%	CSTM	-1.21%
63.0	CDNS	3.65%	FSUGY	-1.17%
63.0	JPM	3.44%	BBY	-1.15%
63.0	GE	3.41%	CVS	-1.14%
63.0	COST	3.11%	CHTR	-1.03%
63.0	CPRT	3.05%	BAC	-0.98%
63.0	TDG	2.94%	ETRN	-0.94%
63.0	CMG	2.67%	RIO	-0.9%
63.0	ACGL	2.59%	ADBE	-0.9%

All Out of Sample Model Dates: 126d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
126.0	NVDA	47.29%	AVGO	-61.82%
126.0	GBTC	27.66%	IEP	-25.32%
126.0	CCL	23.96%	NWL	-22.62%
126.0	VNO	22.37%	GNRC	-20.45%
126.0	PHM	21.78%	SIVBQ	-13.11%
126.0	SBNY	19.33%	VFC	-11.15%
126.0	AMZN	19.18%	LUMN	-9.63%
126.0	MU	18.89%	FRCB	-8.13%
126.0	PCG	17.97%	MOS	-7.96%
126.0	TSLA	17.39%	BALL	-5.95%
126.0	AMAT	16.19%	CVS	-5.32%
126.0	AMD	16.09%	VZ	-4.69%
126.0	DHI	15.8%	CLF	-4.51%
126.0	QQQ	15.7%	CHTR	-4.08%
126.0	GE	15.29%	CYH	-3.93%
126.0	PWR	15.05%	AA	-3.76%
126.0	NFLX	13.36%	GME	-3.54%
126.0	AMC	12.42%	KEY	-3.48%
126.0	THC	11.97%	GT	-3.42%
126.0	ELAN	11.85%	IRM	-3.24%
126.0	MSFT	11.58%	TEVA	-3.14%
126.0	MS	11.25%	GSK	-2.75%
126.0	AZO	10.84%	PRGO	-2.72%
126.0	ACGL	9.92%	BA	-2.66%
126.0	CMG	9.9%	META	-2.42%
126.0	COST	9.5%	BHP	-2.4%
126.0	LLY	9.17%	CMA	-1.94%
126.0	ISRG	9.09%	FSUGY	-1.86%
126.0	ORCL	8.85%	LNC	-1.79%
126.0	VST	8.47%	BBY	-1.78%

All Out of Sample Model Dates: 252d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
252.0	NVDA	150.69%	AVGO	-173.96%
252.0	GBTC	130.7%	FRCB	-115.17%
252.0	PHM	76.24%	SIVBQ	-80.79%
252.0	GE	67.67%	IEP	-52.64%
252.0	NFLX	63.26%	NWL	-48.23%
252.0	LLY	58.09%	GNRC	-29.72%
252.0	AMZN	55.12%	CVS	-21.41%
252.0	CCL	55.12%	MOS	-16.84%
252.0	MU	51.06%	SBNY	-16.31%
252.0	VNO	50.82%	MSTR	-15.91%
252.0	DHI	50.81%	VST	-15.82%
252.0	PWR	48.57%	KEY	-15.09%
252.0	ACGL	44.92%	CLF	-15.02%
252.0	CDNS	43.63%	AAP	-13.47%
252.0	MSFT	42.8%	CZR	-12.27%
252.0	QQQ	42.18%	AA	-11.25%
252.0	AMD	39.13%	BA	-10.56%
252.0	INTU	38.22%	VFC	-10.49%
252.0	COST	36.59%	GT	-9.29%
252.0	PCG	36.31%	CMA	-7.6%
252.0	ISRG	36.22%	IRM	-7.22%
252.0	AMAT	34.42%	BHC	-6.92%
252.0	LEN	33.19%	PRGO	-6.47%
252.0	THC	32.46%	UAA	-6.46%
252.0	CMG	31.38%	BALL	-6.1%
252.0	ELAN	25.46%	FIS	-5.96%
252.0	SPY	24.56%	VZ	-5.81%
252.0	QCOM	24.47%	TLT	-5.29%
252.0	CPRT	23.49%	CHTR	-5.0%
252.0	AZO	23.45%	CYH	-4.85%

P365D: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
1.0	LUMN	0.78%	AVGO	-0.91%
1.0	VNO	0.44%	IEP	-0.43%
1.0	TSLA	0.43%	MSTR	-0.41%
1.0	T	0.42%	BIIB	-0.37%
1.0	BHC	0.3%	GME	-0.25%
1.0	VST	0.28%	AMD	-0.24%
1.0	NVDA	0.26%	NWL	-0.21%
1.0	MS	0.26%	CZR	-0.21%
1.0	CCL	0.26%	UAA	-0.2%
1.0	PRGO	0.26%	AMAT	-0.17%
1.0	TRGP	0.23%	FSUGY	-0.15%
1.0	GE	0.22%	VFC	-0.13%
1.0	AAP	0.19%	BHP	-0.12%
1.0	WDC	0.19%	CYH	-0.12%
1.0	JAZZ	0.16%	PHM	-0.12%
1.0	LLY	0.15%	INTC	-0.11%
1.0	CITI	0.15%	TEVA	-0.11%
1.0	COST	0.15%	RIO	-0.11%
1.0	GOOGL	0.14%	MOS	-0.1%
1.0	HSBC	0.13%	CSTM	-0.08%
1.0	TDG	0.13%	BXP	-0.08%
1.0	CDNS	0.13%	LNC	-0.08%
1.0	TMUS	0.13%	GNRC	-0.08%
1.0	ELAN	0.12%	IRM	-0.07%
1.0	ZION	0.11%	NAVI	-0.06%
1.0	WYNN	0.1%	AMZN	-0.06%
1.0	INTU	0.1%	GS	-0.06%
1.0	HLT	0.09%	LW	-0.05%
1.0	GLD	0.09%	X	-0.05%
1.0	VZ	0.09%	PWR	-0.05%

P365D: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
10.0	LUMN	7.29%	AVGO	-6.03%
10.0	AMC	6.47%	GME	-3.4%
10.0	NVDA	3.52%	IEP	-3.3%
10.0	TSLA	3.16%	INTC	-1.75%
10.0	VST	3.0%	FIS	-1.42%
10.0	T	2.84%	BIIB	-1.29%
10.0	COST	2.08%	AMD	-1.16%
10.0	LLY	1.86%	AMAT	-1.1%
10.0	CCL	1.44%	FSUGY	-1.09%
10.0	JAZZ	1.39%	X	-0.96%
10.0	WYNN	1.32%	BXP	-0.86%
10.0	GT	1.28%	CHTR	-0.68%
10.0	TMUS	1.15%	VFC	-0.68%
10.0	AAP	0.98%	CZR	-0.65%
10.0	WDC	0.97%	UAA	-0.6%
10.0	QQQ	0.93%	MU	-0.56%
10.0	CDNS	0.89%	CMA	-0.55%
10.0	SPY	0.82%	GBTC	-0.51%
10.0	LVS	0.78%	CMG	-0.5%
10.0	ELAN	0.76%	SLV	-0.49%
10.0	CITI	0.74%	PWR	-0.47%
10.0	NFLX	0.7%	LEN	-0.46%
10.0	CYH	0.7%	LNC	-0.39%
10.0	TDG	0.68%	META	-0.37%
10.0	JPM	0.59%	ORCL	-0.36%
10.0	LW	0.55%	QCOM	-0.36%
10.0	BUD	0.54%	ETRN	-0.34%
10.0	CSCO	0.53%	INTU	-0.34%
10.0	HLT	0.5%	IRM	-0.31%
10.0	HSBC	0.44%	ON	-0.28%

P365D: 21d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
21.0	NVDA	9.88%	AVGO	-10.4%
21.0	LUMN	9.49%	IEP	-7.69%
21.0	VST	7.53%	GME	-7.42%
21.0	TSLA	6.81%	INTC	-3.84%
21.0	AMC	6.7%	VFC	-2.28%
21.0	T	5.49%	AMD	-2.06%
21.0	COST	4.44%	AMAT	-1.98%
21.0	MSTR	4.15%	CHTR	-1.95%
21.0	LLY	3.43%	BIIB	-1.86%
21.0	NWL	2.89%	FSUGY	-1.73%
21.0	QQQ	2.56%	PWR	-1.55%
21.0	ELAN	2.44%	FIS	-1.32%
21.0	TMUS	2.15%	QCOM	-1.3%
21.0	CCL	2.09%	CMA	-1.29%
21.0	WYNN	1.97%	ON	-1.28%
21.0	AAP	1.96%	BXP	-1.15%
21.0	CYH	1.94%	OXY	-1.07%
21.0	SBUX	1.82%	MOS	-1.04%
21.0	TRGP	1.77%	TEVA	-0.96%
21.0	GOOGL	1.67%	GILD	-0.9%
21.0	LVS	1.54%	CMG	-0.9%
21.0	SPY	1.52%	MU	-0.89%
21.0	JAZZ	1.51%	META	-0.89%
21.0	CSCO	1.39%	BHP	-0.86%
21.0	VNO	1.38%	CLF	-0.85%
21.0	BMY	1.38%	SLV	-0.84%
21.0	LW	1.26%	RIO	-0.82%
21.0	JPM	1.23%	LEN	-0.8%
21.0	HLT	1.21%	X	-0.77%
21.0	CDNS	1.19%	BHC	-0.77%

P365D: 63d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
63.0	MSTR	64.39%	AVGO	-38.84%
63.0	LUMN	55.12%	IEP	-30.2%
63.0	VST	20.56%	GME	-11.95%
63.0	VNO	19.87%	AMD	-11.0%
63.0	NVDA	18.84%	INTC	-9.82%
63.0	CCL	17.52%	ON	-7.49%
63.0	T	16.72%	VFC	-7.42%
63.0	TSLA	12.7%	PCG	-7.08%
63.0	TRGP	9.68%	FSUGY	-7.04%
63.0	MS	9.55%	AMAT	-6.92%
63.0	NWL	8.87%	CSTM	-5.92%
63.0	LLY	8.86%	EXPE	-5.49%
63.0	CSCO	8.7%	CHTR	-5.15%
63.0	NFLX	8.46%	CLF	-5.05%
63.0	QQQ	8.08%	BHP	-4.9%
63.0	GOOGL	8.03%	MU	-4.62%
63.0	AMC	7.98%	QCOM	-4.29%
63.0	COST	7.06%	BXP	-4.22%
63.0	SPY	6.72%	BIIB	-3.69%
63.0	GWW	5.97%	META	-3.46%
63.0	BMY	5.46%	OXY	-3.1%
63.0	CYH	5.4%	MRK	-3.0%
63.0	JPM	4.84%	MOS	-2.88%
63.0	CAH	4.77%	MSI	-2.61%
63.0	LVS	4.31%	GSK	-2.58%
63.0	AMZN	4.22%	IRM	-2.35%
63.0	LW	3.44%	ELAN	-2.04%
63.0	AZO	3.39%	NEM	-1.98%
63.0	AAPL	3.29%	CMA	-1.81%
63.0	DHI	3.28%	KHC	-1.63%

P365D: 126d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
126.0	LUMN	91.3%	AVGO	-74.32%
126.0	VST	72.32%	IEP	-42.34%
126.0	VNO	51.49%	FSUGY	-22.69%
126.0	CCL	47.85%	INTC	-21.27%
126.0	MS	40.4%	ON	-21.19%
126.0	NVDA	40.17%	CLF	-18.53%
126.0	MSTR	39.54%	VFC	-17.64%
126.0	T	37.22%	EXPE	-15.13%
126.0	TSLA	34.03%	GME	-14.69%
126.0	NFLX	26.42%	AMD	-13.21%
126.0	CSCO	26.03%	MOS	-12.59%
126.0	TRGP	23.67%	ELAN	-12.13%
126.0	ORCL	22.07%	CSTM	-11.35%
126.0	QQQ	18.45%	META	-10.89%
126.0	BHC	16.65%	MU	-10.37%
126.0	SPY	15.7%	BHP	-10.14%
126.0	GBTC	14.73%	QCOM	-8.47%
126.0	JPM	14.71%	ADBE	-8.31%
126.0	ISRG	14.5%	GT	-8.27%
126.0	AMZN	14.19%	AMAT	-7.4%
126.0	CAH	13.45%	MRK	-7.35%
126.0	BMY	13.16%	WDC	-6.51%
126.0	COST	12.52%	CHTR	-5.78%
126.0	FITB	12.21%	BXP	-5.37%
126.0	HLT	12.03%	GSK	-4.76%
126.0	NWL	10.63%	TMUS	-4.22%
126.0	GWW	9.81%	BA	-3.83%
126.0	GS	9.4%	GNRC	-3.71%
126.0	KEY	8.42%	MSI	-3.5%
126.0	ZION	8.35%	KHC	-3.41%

P90D: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
1.0	GT	0.68%	CYH	-0.83%
1.0	TSLA	0.68%	LUMN	-0.78%
1.0	T	0.68%	UAA	-0.49%
1.0	PRGO	0.63%	BIIB	-0.43%
1.0	AVGO	0.62%	PHM	-0.42%
1.0	NFLX	0.5%	CZR	-0.39%
1.0	VST	0.47%	VFC	-0.36%
1.0	GLD	0.41%	NWL	-0.35%
1.0	TRGP	0.37%	ISRG	-0.34%
1.0	BHC	0.37%	IRM	-0.3%
1.0	ACGL	0.36%	LVS	-0.27%
1.0	MS	0.36%	CCL	-0.27%
1.0	HSBC	0.34%	AMZN	-0.23%
1.0	AAP	0.34%	BXP	-0.23%
1.0	VNO	0.33%	TEVA	-0.22%
1.0	GOLD	0.33%	ORCL	-0.19%
1.0	KEY	0.3%	RIO	-0.19%
1.0	LLY	0.3%	MSI	-0.18%
1.0	HCA	0.29%	QQQ	-0.16%
1.0	WYNN	0.27%	NVDA	-0.16%
1.0	TMUS	0.27%	UNH	-0.16%
1.0	MOS	0.25%	TFC	-0.15%
1.0	OXY	0.24%	ELAN	-0.15%
1.0	VICI	0.24%	GILD	-0.13%
1.0	AZO	0.24%	CMG	-0.13%
1.0	AZN	0.23%	BBY	-0.12%
1.0	GME	0.23%	WFC	-0.12%
1.0	X	0.23%	CSTM	-0.11%
1.0	KHC	0.22%	LEN	-0.11%
1.0	TDG	0.22%	AMD	-0.11%

P90D: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
10.0	GT	4.81%	FIS	-5.09%
10.0	LLY	4.64%	AMAT	-4.59%
10.0	T	3.54%	NWL	-4.33%
10.0	AVGO	3.49%	LUMN	-3.38%
10.0	COST	3.37%	PHM	-3.3%
10.0	TMUS	2.99%	NVDA	-2.9%
10.0	AAP	2.99%	LEN	-2.6%
10.0	TSLA	2.52%	BIIB	-2.11%
10.0	MOS	2.37%	PCG	-2.1%
10.0	GME	2.23%	QQQ	-2.02%
10.0	GLD	2.12%	UAA	-1.9%
10.0	WDC	2.07%	MS	-1.8%
10.0	NFLX	2.07%	INTC	-1.78%
10.0	JAZZ	2.06%	ADBE	-1.5%
10.0	VST	2.0%	AMD	-1.45%
10.0	WYNN	1.82%	HLT	-1.43%
10.0	VICI	1.81%	CMG	-1.41%
10.0	HSBC	1.68%	UNH	-1.35%
10.0	CSTM	1.34%	ISRG	-1.29%
10.0	NVS	1.2%	MSTR	-1.28%
10.0	AZN	1.15%	ORCL	-1.25%
10.0	AZO	1.11%	GBTC	-1.2%
10.0	CNC	1.02%	FSUGY	-1.19%
10.0	KHC	0.99%	IRM	-1.08%
10.0	JPM	0.91%	GILD	-1.05%
10.0	TDG	0.88%	TFC	-1.0%
10.0	AA	0.84%	GE	-0.98%
10.0	CSCO	0.82%	VNO	-0.96%
10.0	MNST	0.79%	SPY	-0.92%
10.0	X	0.77%	TEVA	-0.92%

P90D: 21d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
21.0	AVGO	10.27%	NWL	-14.59%
21.0	T	8.1%	AMAT	-13.05%
21.0	TMUS	7.19%	MSTR	-11.84%
21.0	COST	7.18%	FIS	-8.95%
21.0	LLY	6.6%	NVDA	-7.38%
21.0	AAP	6.32%	LEN	-6.7%
21.0	TSLA	4.61%	PWR	-6.56%
21.0	NFLX	4.43%	SPY	-4.61%
21.0	JAZZ	4.27%	QQQ	-4.61%
21.0	GME	3.96%	ZION	-4.58%
21.0	GLD	3.87%	LUMN	-4.54%
21.0	AMC	3.57%	GWW	-4.48%
21.0	AZN	3.45%	GILD	-4.44%
21.0	CSTM	3.29%	AMD	-4.3%
21.0	VICI	3.28%	OXY	-3.82%
21.0	SBUX	2.77%	PHM	-3.67%
21.0	HSBC	2.61%	DHI	-3.39%
21.0	NVS	2.54%	MS	-3.17%
21.0	LNC	2.22%	CCL	-3.16%
21.0	AZO	2.21%	UAA	-3.06%
21.0	VST	2.18%	ON	-3.05%
21.0	GT	2.06%	AMZN	-2.99%
21.0	MNST	2.04%	PCG	-2.96%
21.0	WYNN	1.94%	TEVA	-2.93%
21.0	KHC	1.68%	FITB	-2.89%
21.0	CNC	1.56%	CMG	-2.8%
21.0	BALL	1.48%	VNO	-2.72%
21.0	TLT	1.45%	GBTC	-2.35%
21.0	TDG	1.45%	BIIB	-2.33%
21.0	CZR	1.44%	FSUGY	-2.25%

P30D: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
1.0	MOS	1.59%	LUMN	-1.69%
1.0	TSLA	1.39%	LVS	-0.85%
1.0	VST	0.73%	COST	-0.75%
1.0	AAP	0.69%	CZR	-0.69%
1.0	GLD	0.62%	CYH	-0.67%
1.0	GOLD	0.6%	IEP	-0.66%
1.0	AVGO	0.6%	ORCL	-0.63%
1.0	OXY	0.6%	CCL	-0.61%
1.0	AZO	0.54%	QQQ	-0.55%
1.0	KEY	0.48%	VFC	-0.55%
1.0	LEN	0.33%	BHC	-0.52%
1.0	NEM	0.32%	AMZN	-0.49%
1.0	HLT	0.31%	LNC	-0.47%
1.0	ACGL	0.3%	ELAN	-0.44%
1.0	T	0.28%	JAZZ	-0.42%
1.0	MSFT	0.28%	TFC	-0.41%
1.0	HCA	0.26%	VZ	-0.39%
1.0	DHI	0.25%	RIO	-0.37%
1.0	BAC	0.25%	ADBE	-0.35%
1.0	X	0.23%	BIIB	-0.32%
1.0	CNC	0.21%	BBY	-0.32%
1.0	TMUS	0.2%	SPY	-0.3%
1.0	AMC	0.19%	CSTM	-0.29%
1.0	NVDA	0.18%	FCX	-0.28%
1.0	BALL	0.18%	HSBC	-0.27%
1.0	XOM	0.17%	UAA	-0.27%
1.0	AA	0.17%	ISRG	-0.24%
1.0	MNST	0.17%	ZION	-0.23%
1.0	CDNS	0.16%	LLY	-0.23%
1.0	KALU	0.16%	MU	-0.21%

P30D: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 95% ROLOBC(Return on OaR Based Capital, defined earlier) exceeds Sigma 95% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
10.0	MOS	15.64%	LUMN	-11.05%
10.0	PCG	7.8%	ADBE	-6.31%
10.0	CDNS	5.17%	MSTR	-6.19%
10.0	VST	4.74%	BIIB	-4.26%
10.0	TSLA	4.43%	UNH	-3.81%
10.0	FIS	4.24%	UAA	-3.07%
10.0	BA	4.11%	LVS	-2.77%
10.0	VFC	3.7%	TFC	-2.73%
10.0	AVGO	3.6%	COST	-2.45%
10.0	OXY	3.6%	HLT	-2.15%
10.0	NVDA	3.48%	MU	-2.0%
10.0	GLD	2.88%	INTC	-1.86%
10.0	GILD	2.68%	CMG	-1.77%
10.0	XOM	2.56%	FCX	-1.7%
10.0	ACGL	2.29%	CCL	-1.62%
10.0	TDG	2.2%	LEN	-1.52%
10.0	NFLX	2.08%	ORCL	-1.43%
10.0	LNC	1.96%	QQQ	-1.38%
10.0	LW	1.86%	GE	-1.25%
10.0	T	1.68%	KHC	-1.23%
10.0	X	1.67%	INTU	-1.22%
10.0	TRGP	1.65%	MRK	-1.11%
10.0	MNST	1.58%	GBTC	-1.07%
10.0	CLF	1.49%	AMAT	-1.05%
10.0	GOLD	1.47%	CVS	-1.04%
10.0	CAH	1.45%	NWL	-1.02%
10.0	NEM	1.36%	ISRG	-0.96%
10.0	GT	1.08%	VZ	-0.92%
10.0	AA	1.06%	AAPL	-0.92%
10.0	LLY	1.06%	GS	-0.87%

Appendix 17: Top & Bottom 30 Ticker Level Differences in 99% OaR Breakage

All Out of Sample Model Dates: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
1.0	GME	5.27%	NVDA	-2.17%
1.0	SIVBQ	4.63%	LLY	-2.01%
1.0	META	3.26%	MU	-1.77%
1.0	HLT	2.96%	WYNN	-1.75%
1.0	GOLD	2.62%	MUB	-1.66%
1.0	BALL	2.49%	HYG	-1.66%
1.0	MSTR	2.33%	MNST	-1.66%
1.0	AVGO	2.17%	WDC	-1.64%
1.0	INTU	1.96%	CCL	-1.55%
1.0	ACGL	1.81%	MS	-1.55%
1.0	FRCB	1.8%	HSBC	-1.53%
1.0	NFLX	1.73%	VCSH	-1.53%
1.0	CHTR	1.69%	VNO	-1.51%
1.0	TEVA	1.63%	GE	-1.5%
1.0	AMC	1.55%	PWR	-1.44%
1.0	BUD	1.28%	CMG	-1.42%
1.0	SPY	1.27%	LVS	-1.36%
1.0	TSLA	1.23%	T	-1.33%
1.0	OXY	1.19%	USB	-1.31%
1.0	FRA	1.15%	PHM	-1.3%
1.0	JAZZ	1.05%	ABBV	-1.29%
1.0	BA	0.94%	COST	-1.28%
1.0	CMA	0.91%	AZO	-1.2%
1.0	ZTS	0.91%	MSFT	-1.19%
1.0	SBNY	0.74%	AMZN	-1.19%
1.0	ISRG	0.68%	CDNS	-1.17%
1.0	EXPE	0.53%	QQQ	-1.17%
1.0	AA	0.53%	THC	-1.16%
1.0	VST	0.51%	QCOM	-1.16%
1.0	GWW	0.51%	HON	-1.16%

All Out of Sample Model Dates: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
10.0	MSTR	10.25%	NVDA	-5.1%
10.0	SIVBQ	10.04%	TMUS	-4.09%
10.0	GME	6.5%	MUB	-3.94%
10.0	CHTR	5.33%	LLY	-3.91%
10.0	META	5.07%	GBTC	-3.26%
10.0	ZTS	3.88%	DHI	-3.07%
10.0	SBNY	3.72%	CPRT	-3.07%
10.0	AMC	3.38%	PHM	-2.59%
10.0	VZ	3.22%	X	-2.52%
10.0	XOM	2.94%	PWR	-2.34%
10.0	GOLD	2.74%	MS	-2.19%
10.0	GNRC	2.65%	GLD	-2.16%
10.0	HLT	2.31%	T	-2.12%
10.0	CMA	2.2%	LUMN	-2.05%
10.0	ISRG	2.17%	MU	-2.04%
10.0	BALL	2.09%	CDNS	-1.95%
10.0	GWW	2.04%	GE	-1.9%
10.0	ETRN	1.84%	THC	-1.8%
10.0	NFLX	1.73%	CMG	-1.8%
10.0	EXPE	1.71%	COST	-1.79%
10.0	GILD	1.67%	CCL	-1.7%
10.0	OXY	1.57%	ELAN	-1.69%
10.0	INTU	1.57%	HSBC	-1.65%
10.0	FRCB	1.44%	LEN	-1.55%
10.0	HD	1.44%	UNH	-1.55%
10.0	HCA	1.29%	HON	-1.54%
10.0	IRM	1.16%	POST	-1.52%
10.0	BXP	1.13%	LVS	-1.49%
10.0	AVGO	1.1%	AMD	-1.46%
10.0	AAPL	1.06%	MOS	-1.44%

All Out of Sample Model Dates: 21d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
21.0	SIVBQ	9.65%	NVDA	-6.76%
21.0	CHTR	7.96%	GE	-5.41%
21.0	MSTR	7.77%	GBTC	-5.15%
21.0	GME	4.65%	TMUS	-4.95%
21.0	META	4.52%	MUB	-4.55%
21.0	GOLD	4.12%	ETRN	-4.43%
21.0	GWW	4.04%	LLY	-4.27%
21.0	GNRC	3.99%	DHI	-3.91%
21.0	ISRG	3.58%	TSLA	-3.63%
21.0	VZ	2.5%	PWR	-3.05%
21.0	LW	2.41%	X	-2.99%
21.0	AAPL	2.17%	LUMN	-2.8%
21.0	AMC	2.16%	MU	-2.77%
21.0	HD	1.86%	THC	-2.63%
21.0	XOM	1.83%	HON	-2.49%
21.0	ZTS	1.72%	AMGN	-2.47%
21.0	ORLY	1.56%	PHM	-2.38%
21.0	SNY	1.56%	MOS	-2.28%
21.0	NFLX	1.49%	COST	-2.22%
21.0	SBNY	1.49%	SBUX	-2.21%
21.0	CMA	1.46%	WYNN	-2.19%
21.0	KALU	1.46%	CCL	-2.17%
21.0	BALL	1.34%	T	-2.16%
21.0	RIO	1.18%	CAH	-2.12%
21.0	ORCL	1.17%	TEVA	-2.07%
21.0	INTU	1.07%	LVS	-2.07%
21.0	SPY	1.04%	BA	-2.05%
21.0	NEM	0.94%	ELAN	-2.01%
21.0	GOOGL	0.8%	UNH	-1.98%
21.0	OXY	0.8%	LEN	-1.84%

All Out of Sample Model Dates: 63d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
63.0	SIVBQ	7.34%	NVDA	-14.58%
63.0	GME	6.99%	GBTC	-10.27%
63.0	LW	4.68%	LLY	-9.5%
63.0	CTLT	3.07%	VST	-6.6%
63.0	EXPE	2.56%	GE	-6.48%
63.0	TEVA	2.49%	GILD	-6.39%
63.0	GOOGL	2.12%	ETRN	-6.04%
63.0	BXP	1.69%	MUB	-6.04%
63.0	CHTR	1.54%	MU	-6.02%
63.0	RIO	1.39%	DHI	-5.93%
63.0	MSI	1.25%	PHM	-5.73%
63.0	HD	1.13%	THC	-5.57%
63.0	OXY	1.13%	MRK	-5.49%
63.0	WFC	1.12%	TRGP	-5.36%
63.0	KALU	1.12%	ACGL	-4.33%
63.0	GWW	1.1%	GLD	-4.12%
63.0	AMC	0.76%	MS	-3.91%
63.0	XOM	0.69%	MSTR	-3.52%
63.0	GNRC	0.6%	TMUS	-3.44%
63.0	AZO	0.58%	ABBV	-3.06%
63.0	CMA	0.56%	CCL	-3.04%
63.0	VFC	0.47%	COST	-3.04%
63.0	BALL	0.42%	AMD	-3.02%
63.0	KHC	0.42%	AAPL	-3.01%
63.0	BUD	0.41%	IRM	-2.79%
63.0	SNY	0.41%	CMG	-2.78%
63.0	INTU	0.28%	LEN	-2.23%
63.0	GOLD	0.28%	LUMN	-2.07%
63.0	HCA	0.28%	CITI	-1.71%
63.0	ZTS	0.28%	NVS	-1.65%

All Out of Sample Model Dates: 126d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
126.0	LW	7.25%	NVDA	-24.81%
126.0	EXPE	6.86%	GE	-17.12%
126.0	MSI	3.46%	THC	-16.01%
126.0	MSTR	3.05%	LLY	-15.67%
126.0	GOOGL	2.48%	TMUS	-12.93%
126.0	OXY	2.47%	GILD	-12.77%
126.0	META	2.15%	MU	-11.72%
126.0	IRM	2.13%	GBTC	-11.61%
126.0	BALL	1.69%	TRGP	-11.43%
126.0	VFC	1.39%	ACGL	-9.62%
126.0	GME	1.29%	CMG	-9.59%
126.0	TEVA	1.13%	PHM	-8.58%
126.0	CAH	1.08%	X	-5.98%
126.0	ETRN	1.03%	CITI	-5.81%
126.0	HCA	0.3%	ORCL	-5.4%
126.0	XOM	0.15%	COST	-5.14%
126.0	POST	0.0%	TSLA	-5.02%
126.0	VICI	0.0%	PWR	-4.75%
126.0	VCSH	0.0%	JPM	-4.25%
126.0	CMCSA	0.0%	WFC	-3.98%
126.0	HYG	0.0%	WDC	-3.69%
126.0	PEP	0.0%	VST	-3.61%
126.0	HON	0.0%	GLD	-3.6%
126.0	CLF	0.0%	GWW	-2.86%
126.0	ZTS	0.0%	QCOM	-2.74%
126.0	PRGO	0.0%	NFLX	-2.68%
126.0	CZR	0.0%	T	-2.66%
126.0	CYH	0.0%	AMD	-2.36%
126.0	ORLY	0.0%	MS	-2.14%
126.0	KHC	0.0%	AVGO	-1.9%

All Out of Sample Model Dates: 252d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
252.0	LW	5.9%	GE	-45.66%
252.0	GWW	5.75%	GBTC	-36.15%
252.0	IRM	3.77%	PHM	-34.91%
252.0	GOOGL	2.29%	AVGO	-28.99%
252.0	GNRC	1.04%	LLY	-27.65%
252.0	ORLY	0.37%	COST	-25.0%
252.0	XOM	0.18%	NVDA	-23.84%
252.0	HYG	0.0%	ACGL	-22.5%
252.0	MOS	0.0%	TRGP	-20.41%
252.0	MNST	0.0%	GLD	-16.82%
252.0	CMCSA	0.0%	GS	-15.19%
252.0	ON	0.0%	META	-14.72%
252.0	CTLT	0.0%	THC	-14.45%
252.0	KHC	0.0%	TMUS	-13.73%
252.0	CMA	0.0%	JPM	-12.2%
252.0	EMB	0.0%	PWR	-10.59%
252.0	GT	0.0%	MSI	-8.53%
252.0	BIIB	0.0%	ETRN	-7.26%
252.0	MSFT	0.0%	ISRG	-6.58%
252.0	UNH	0.0%	CAH	-6.49%
252.0	TSLA	0.0%	MU	-6.21%
252.0	NEM	0.0%	TDG	-6.12%
252.0	VCSH	0.0%	DHI	-5.77%
252.0	CYH	0.0%	TEVA	-5.39%
252.0	VICI	0.0%	WFC	-4.73%
252.0	CCL	0.0%	MS	-4.73%
252.0	MUB	0.0%	CMG	-2.81%
252.0	LUMN	0.0%	AMD	-1.89%
252.0	X	0.0%	NFLX	-1.76%
252.0	LNC	0.0%	VNO	-1.7%

P365D: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
1.0	GOLD	4.31%	NVDA	-3.35%
1.0	NFLX	3.83%	PHM	-3.32%
1.0	GME	2.55%	CCL	-2.91%
1.0	BALL	2.17%	LUMN	-2.76%
1.0	AVGO	1.82%	WYNN	-2.76%
1.0	KEY	1.75%	WDC	-2.64%
1.0	META	1.71%	T	-2.52%
1.0	VZ	1.68%	AAPL	-2.51%
1.0	SBUX	1.66%	HSBC	-2.49%
1.0	HLT	1.66%	LLY	-2.34%
1.0	ETRN	1.49%	JAZZ	-2.28%
1.0	LW	1.29%	CMG	-2.09%
1.0	CMA	1.26%	PEP	-2.07%
1.0	EXPE	1.24%	ABBV	-2.07%
1.0	FRA	1.24%	MNST	-2.07%
1.0	AMGN	1.24%	LVS	-1.93%
1.0	IRM	1.24%	GT	-1.91%
1.0	GNRC	0.88%	CSCO	-1.74%
1.0	GILD	0.84%	CDNS	-1.72%
1.0	SLV	0.83%	PWR	-1.71%
1.0	AAP	0.48%	GE	-1.7%
1.0	AMC	0.46%	TMUS	-1.7%
1.0	CLF	0.44%	GOOGL	-1.69%
1.0	TSLA	0.43%	AMAT	-1.69%
1.0	BXP	0.42%	DHI	-1.68%
1.0	KALU	0.42%	WFC	-1.67%
1.0	BAC	0.42%	RIO	-1.67%
1.0	ZTS	0.42%	ACGL	-1.67%
1.0	VST	0.42%	TRGP	-1.66%
1.0	FITB	0.0%	COST	-1.66%

P365D: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
10.0	VZ	10.42%	TMUS	-12.5%
10.0	CHTR	5.58%	TRGP	-7.41%
10.0	GILD	5.39%	NVDA	-7.05%
10.0	EXPE	5.35%	LUMN	-6.85%
10.0	META	5.08%	VST	-5.79%
10.0	ETRN	5.08%	CPRT	-5.46%
10.0	GME	5.05%	MS	-5.35%
10.0	BXP	4.58%	AVGO	-5.2%
10.0	CMA	4.15%	LVS	-5.19%
10.0	ZTS	3.31%	T	-5.0%
10.0	HD	2.52%	ELAN	-4.76%
10.0	VFC	2.24%	DHI	-4.15%
10.0	AMGN	2.06%	THC	-4.13%
10.0	NEM	1.67%	HSBC	-3.7%
10.0	GNRC	1.3%	PHM	-3.7%
10.0	GOLD	1.28%	ORCL	-3.7%
10.0	TXN	1.26%	CDNS	-3.4%
10.0	SLV	1.24%	COST	-3.29%
10.0	MSTR	0.95%	WYNN	-3.2%
10.0	BALL	0.86%	LEN	-2.93%
10.0	NWL	0.85%	ACGL	-2.89%
10.0	CNC	0.85%	POST	-2.88%
10.0	KALU	0.84%	JAZZ	-2.71%
10.0	GWW	0.83%	CMG	-2.49%
10.0	LQD	0.82%	WFC	-2.49%
10.0	SBUX	0.82%	RIO	-2.49%
10.0	IRM	0.82%	JPM	-2.47%
10.0	INTC	0.44%	LLY	-2.37%
10.0	INTU	0.42%	CSCO	-2.16%
10.0	BAC	0.41%	UAA	-2.16%

P365D: 21d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
21.0	CHTR	14.68%	TMUS	-16.81%
21.0	VZ	8.48%	VST	-11.89%
21.0	GME	5.43%	LUMN	-9.85%
21.0	BXP	5.36%	NVDA	-9.78%
21.0	META	5.0%	TRGP	-9.25%
21.0	HD	4.04%	LVS	-9.14%
21.0	SLV	3.1%	WYNN	-7.88%
21.0	CMA	2.67%	SBUX	-7.49%
21.0	BAC	2.65%	T	-7.14%
21.0	ZTS	2.65%	AVGO	-6.77%
21.0	MSI	1.87%	ELAN	-6.67%
21.0	CNC	1.82%	DHI	-6.61%
21.0	GILD	1.78%	UNH	-6.31%
21.0	NEM	1.32%	THC	-6.19%
21.0	NVS	1.32%	COST	-6.17%
21.0	AA	0.92%	GBTC	-5.38%
21.0	EXPE	0.88%	BUD	-5.29%
21.0	ISRG	0.48%	TEVA	-4.55%
21.0	VFC	0.48%	MS	-4.41%
21.0	LW	0.0%	WFC	-4.0%
21.0	USB	0.0%	IRM	-3.96%
21.0	GE	0.0%	TSLA	-3.62%
21.0	VNO	0.0%	BBY	-3.62%
21.0	ON	0.0%	ACGL	-3.56%
21.0	NWL	0.0%	BMY	-3.54%
21.0	HYG	0.0%	ABBV	-3.08%
21.0	AMZN	0.0%	ADBE	-2.74%
21.0	GS	0.0%	LEN	-2.67%
21.0	CTLT	0.0%	TXN	-2.67%
21.0	AAP	0.0%	CAH	-2.21%

P365D: 63d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
63.0	EXPE	15.14%	TRGP	-29.19%
63.0	GME	12.24%	VST	-23.78%
63.0	CHTR	6.21%	MSTR	-20.62%
63.0	BXP	6.01%	IRM	-16.22%
63.0	GILD	5.46%	MS	-15.14%
63.0	MSI	5.08%	TMUS	-13.51%
63.0	HD	5.03%	AAPL	-10.93%
63.0	HCA	4.42%	CCL	-10.32%
63.0	META	2.23%	LUMN	-8.59%
63.0	CMA	2.17%	NVDA	-8.2%
63.0	VFC	1.76%	HSBC	-7.57%
63.0	TEVA	1.68%	DHI	-7.03%
63.0	BUD	1.62%	VNO	-6.62%
63.0	CYH	0.56%	TSLA	-5.49%
63.0	WFC	0.55%	GBTC	-4.7%
63.0	ZTS	0.54%	THC	-4.35%
63.0	ORCL	0.54%	ABBV	-3.78%
63.0	UNH	0.0%	GWW	-3.26%
63.0	GSK	0.0%	CPRT	-3.24%
63.0	CITI	0.0%	PHM	-3.24%
63.0	EMB	0.0%	BMY	-2.72%
63.0	ETRN	0.0%	CVS	-2.7%
63.0	GE	0.0%	CSCO	-2.3%
63.0	SNY	0.0%	T	-2.17%
63.0	HYG	0.0%	AMGN	-2.16%
63.0	TDG	0.0%	GS	-2.16%
63.0	PWR	0.0%	LVS	-1.92%
63.0	VCSH	0.0%	NFLX	-1.67%
63.0	MSFT	0.0%	GLD	-1.62%
63.0	ISRG	0.0%	AVGO	-1.12%

P365D: 126d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
126.0	EXPE	35.77%	TMUS	-69.92%
126.0	META	17.09%	VST	-52.85%
126.0	VFC	7.41%	TRGP	-47.97%
126.0	TEVA	3.45%	GILD	-28.1%
126.0	HCA	1.63%	ORCL	-25.2%
126.0	GME	1.05%	TSLA	-20.49%
126.0	GLD	0.81%	MSTR	-19.8%
126.0	TXN	0.0%	NVDA	-16.53%
126.0	POST	0.0%	NFLX	-14.29%
126.0	ABBV	0.0%	T	-13.82%
126.0	SLV	0.0%	WFC	-13.01%
126.0	MNST	0.0%	THC	-11.48%
126.0	NVS	0.0%	MS	-11.38%
126.0	WYNN	0.0%	JPM	-9.76%
126.0	PCG	0.0%	CSCO	-7.14%
126.0	ELAN	0.0%	VNO	-6.48%
126.0	EMB	0.0%	BMY	-5.79%
126.0	KHC	0.0%	IRM	-5.69%
126.0	NEM	0.0%	HSBC	-5.69%
126.0	PHM	0.0%	LUMN	-5.5%
126.0	VCSH	0.0%	CCL	-4.9%
126.0	HYG	0.0%	AAPL	-4.13%
126.0	IEP	0.0%	GS	-2.44%
126.0	AMC	0.0%	ISRG	-0.86%
126.0	QCOM	0.0%	AVGO	-0.84%
126.0	CDNS	0.0%	HLT	-0.81%
126.0	TDG	0.0%	HON	0.0%
126.0	BXP	0.0%	ELAN	0.0%
126.0	NWL	0.0%	MNST	0.0%
126.0	FRA	0.0%	HYG	0.0%

P90D: 1d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
1.0	UNH	9.62%	GT	-7.41%
1.0	BAC	9.09%	HSBC	-7.27%
1.0	AVGO	8.63%	MNST	-7.27%
1.0	BALL	6.12%	WDC	-5.66%
1.0	GILD	5.45%	MS	-5.45%
1.0	CMA	5.45%	PCG	-4.08%
1.0	GNRC	4.17%	TMUS	-4.08%
1.0	TSLA	4.0%	WYNN	-3.7%
1.0	VST	3.7%	AAPL	-3.64%
1.0	VFC	2.04%	ORCL	-3.64%
1.0	GME	1.92%	HD	-3.64%
1.0	AMC	1.85%	JAZZ	-3.64%
1.0	ZTS	1.82%	NVS	-3.64%
1.0	VZ	1.82%	LQD	-3.64%
1.0	KALU	0.0%	HYG	-3.64%
1.0	MOS	0.0%	VICI	-3.64%
1.0	SLV	0.0%	MSFT	-3.64%
1.0	NEM	0.0%	ABBV	-3.64%
1.0	EMB	0.0%	TRGP	-3.64%
1.0	HON	0.0%	PEP	-3.64%
1.0	CPRT	0.0%	OXY	-2.08%
1.0	CVS	0.0%	INTC	-2.04%
1.0	VCSH	0.0%	LNC	-2.04%
1.0	ISRG	0.0%	LVS	-2.0%
1.0	ON	0.0%	BHC	-2.0%
1.0	WFC	0.0%	CCL	-1.92%
1.0	AMZN	0.0%	BXP	-1.92%
1.0	CZR	0.0%	PWR	-1.92%
1.0	BBY	0.0%	TFC	-1.92%
1.0	UAA	0.0%	KHC	-1.89%

P90D: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
10.0	GILD	25.93%	TMUS	-31.37%
10.0	VZ	18.52%	T	-14.81%
10.0	UNH	9.8%	COST	-14.81%
10.0	TXN	9.26%	HSBC	-14.81%
10.0	VST	5.66%	NFLX	-12.96%
10.0	VFC	4.08%	TRGP	-11.11%
10.0	CHTR	3.77%	CVS	-9.43%
10.0	SBUX	3.7%	JAZZ	-7.41%
10.0	ZTS	3.7%	BUD	-7.41%
10.0	INTC	2.04%	PRGO	-6.25%
10.0	GOLD	1.92%	MNST	-5.56%
10.0	WFC	1.85%	ISRG	-5.0%
10.0	HD	1.85%	BA	-3.77%
10.0	EXPE	1.85%	GS	-3.7%
10.0	SNY	1.85%	PEP	-3.7%
10.0	AVGO	0.83%	FCX	-3.7%
10.0	CTLT	0.0%	NVS	-3.7%
10.0	LQD	0.0%	POST	-3.7%
10.0	TLT	0.0%	LNC	-2.08%
10.0	MSFT	0.0%	CCL	-2.04%
10.0	KALU	0.0%	PWR	-1.96%
10.0	CSTM	0.0%	GE	-1.89%
10.0	BALL	0.0%	HLT	-1.85%
10.0	EMB	0.0%	JPM	-1.85%
10.0	NAVI	0.0%	MS	-1.85%
10.0	BHP	0.0%	WYNN	-1.85%
10.0	BXP	0.0%	ORCL	-1.85%
10.0	HYG	0.0%	AMGN	-1.85%
10.0	ABBV	0.0%	VICI	-1.85%
10.0	BHC	0.0%	MRK	-1.85%

P90D: 21d

The columns labeled “OaRBreak_VmS” represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
21.0	VZ	23.26%	TMUS	-50.0%
21.0	GILD	4.65%	T	-34.88%
21.0	CHTR	2.38%	COST	-32.56%
21.0	AAP	0.0%	BUD	-25.58%
21.0	GE	0.0%	NFLX	-20.93%
21.0	MSTR	0.0%	MNST	-9.3%
21.0	VCSH	0.0%	LNC	-5.41%
21.0	KALU	0.0%	CVS	-2.38%
21.0	WFC	0.0%	HSBC	-2.33%
21.0	EMB	0.0%	NVS	-2.33%
21.0	NAVI	0.0%	HLT	-2.33%
21.0	IEP	0.0%	AMGN	-2.33%
21.0	LQD	0.0%	JPM	-2.33%
21.0	INTU	0.0%	CCL	0.0%
21.0	CYH	0.0%	IEP	0.0%
21.0	MSFT	0.0%	LQD	0.0%
21.0	PEP	0.0%	INTU	0.0%
21.0	BHP	0.0%	CYH	0.0%
21.0	BXP	0.0%	MSFT	0.0%
21.0	MUB	0.0%	ZTS	0.0%
21.0	ZTS	0.0%	BMY	0.0%
21.0	HYG	0.0%	TLT	0.0%
21.0	FCX	0.0%	KEY	0.0%
21.0	CLF	0.0%	KHC	0.0%
21.0	EXPE	0.0%	PEP	0.0%
21.0	SBUX	0.0%	EMB	0.0%
21.0	TSLA	0.0%	WFC	0.0%
21.0	TXN	0.0%	THC	0.0%
21.0	BALL	0.0%	KALU	0.0%
21.0	ACGL	0.0%	VCSH	0.0%

P30D: 1d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
1.0	UNH	10.53%	TRGP	-10.0%
1.0	GNRC	10.53%	INTC	-5.56%
1.0	VFC	5.88%	BA	-5.26%
1.0	GME	5.26%	AZO	-5.26%
1.0	AMC	5.0%	ORLY	-5.0%
1.0	T	0.0%	NVS	-5.0%
1.0	VICI	0.0%	GT	-5.0%
1.0	VCSH	0.0%	TEVA	-5.0%
1.0	BUD	0.0%	SPY	-5.0%
1.0	PRGO	0.0%	MSFT	-5.0%
1.0	LQD	0.0%	HLT	-5.0%
1.0	ZTS	0.0%	VICI	0.0%
1.0	QCOM	0.0%	QCOM	0.0%
1.0	BALL	0.0%	PRGO	0.0%
1.0	PCG	0.0%	ZTS	0.0%
1.0	HON	0.0%	PCG	0.0%
1.0	LW	0.0%	BUD	0.0%
1.0	AMGN	0.0%	HON	0.0%
1.0	AZN	0.0%	VCSH	0.0%
1.0	VST	0.0%	LW	0.0%
1.0	ORCL	0.0%	T	0.0%
1.0	TDG	0.0%	LQD	0.0%
1.0	AMAT	0.0%	ORCL	0.0%
1.0	GSK	0.0%	BALL	0.0%
1.0	RIO	0.0%	AMGN	0.0%
1.0	BXP	0.0%	VST	0.0%
1.0	FRA	0.0%	AMAT	0.0%
1.0	ABBV	0.0%	GSK	0.0%
1.0	NWL	0.0%	RIO	0.0%
1.0	CMA	0.0%	BXP	0.0%

P30D: 10d

The columns labeled "OaRBreak_VmS" represent the average amount by which Vector Model 99% OaR breakage exceeds Sigma 99% OaR breakage for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	OaRBreak_VmS	Ticker	OaRBreak_VmS
10.0	UNH	45.45%	BA	-20.0%
10.0	CHTR	18.18%	TRGP	-18.18%
10.0	BXP	0.0%	FCX	-18.18%
10.0	KEY	0.0%	VCSH	0.0%
10.0	HON	0.0%	ELAN	0.0%
10.0	RIO	0.0%	TMUS	0.0%
10.0	THC	0.0%	BHP	0.0%
10.0	HSBC	0.0%	CCL	0.0%
10.0	BHC	0.0%	PWR	0.0%
10.0	TEVA	0.0%	TEVA	0.0%
10.0	PWR	0.0%	CZR	0.0%
10.0	CCL	0.0%	HSBC	0.0%
10.0	BHP	0.0%	THC	0.0%
10.0	TMUS	0.0%	RIO	0.0%
10.0	ELAN	0.0%	HON	0.0%
10.0	VCSH	0.0%	KEY	0.0%
10.0	CZR	0.0%	BHC	0.0%
10.0	BMY	0.0%	BMY	0.0%
10.0	GT	0.0%	ON	0.0%
10.0	HYG	0.0%	BXP	0.0%
10.0	TXN	0.0%	TXN	0.0%
10.0	TLT	0.0%	TLT	0.0%
10.0	BUD	0.0%	BUD	0.0%
10.0	EMB	0.0%	EMB	0.0%
10.0	KALU	0.0%	KALU	0.0%
10.0	GWW	0.0%	GWW	0.0%
10.0	ZION	0.0%	GILD	0.0%
10.0	GILD	0.0%	HYG	0.0%
10.0	MSFT	0.0%	MSFT	0.0%
10.0	NVDA	0.0%	NVDA	0.0%

Appendix 18: Top & Bottom 30 Ticker Level Differences in 99% OaR ROLOBC

All Out of Sample Model Dates: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
1.0	GBTC	0.32%	AVGO	-0.56%
1.0	NVDA	0.25%	NWL	-0.32%
1.0	LLY	0.25%	IEP	-0.29%
1.0	PWR	0.23%	SIVBQ	-0.23%
1.0	GE	0.2%	BIIB	-0.15%
1.0	PCG	0.19%	CZR	-0.13%
1.0	X	0.19%	GNRC	-0.13%
1.0	BHC	0.19%	AMC	-0.11%
1.0	TSLA	0.18%	META	-0.1%
1.0	WDC	0.16%	FSUGY	-0.09%
1.0	WYNN	0.16%	UAA	-0.09%
1.0	ON	0.15%	GT	-0.09%
1.0	TDG	0.15%	MOS	-0.09%
1.0	TRGP	0.14%	TEVA	-0.09%
1.0	JAZZ	0.13%	ZTS	-0.07%
1.0	CDNS	0.13%	INTU	-0.07%
1.0	ORLY	0.12%	BALL	-0.07%
1.0	CMG	0.12%	FIS	-0.06%
1.0	BUD	0.12%	CTLT	-0.06%
1.0	SBNY	0.12%	LUMN	-0.06%
1.0	TMUS	0.11%	NEM	-0.06%
1.0	CAH	0.11%	CSTM	-0.05%
1.0	JPM	0.11%	INTC	-0.05%
1.0	MSFT	0.11%	GME	-0.05%
1.0	VNO	0.1%	LNC	-0.04%
1.0	AMZN	0.1%	AAP	-0.04%
1.0	HLT	0.1%	ELAN	-0.04%
1.0	T	0.1%	RIO	-0.04%
1.0	AZO	0.1%	CLF	-0.04%

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1.0   PRGO       0.1%    BHP      -0.04%
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All Out of Sample Model Dates: 10d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
10.0	NVDA	3.12%	AVGO	-4.99%
10.0	LLY	2.76%	NWL	-1.92%
10.0	TSLA	2.66%	IEP	-1.91%
10.0	GBTC	2.09%	CLF	-1.39%
10.0	SBNY	2.04%	LUMN	-1.35%
10.0	CCL	1.31%	CZR	-1.23%
10.0	T	1.3%	GNRC	-1.07%
10.0	PWR	1.23%	INTU	-0.95%
10.0	AZO	1.21%	CYH	-0.9%
10.0	WDC	1.13%	GME	-0.85%
10.0	DHI	1.07%	RIO	-0.63%
10.0	PCG	1.03%	META	-0.62%
10.0	FRCB	1.02%	VZ	-0.61%
10.0	PHM	0.97%	FSUGY	-0.59%
10.0	GE	0.87%	ETRN	-0.57%
10.0	COST	0.84%	HD	-0.55%
10.0	VST	0.81%	GT	-0.52%
10.0	MSFT	0.8%	BIIB	-0.52%
10.0	ACGL	0.8%	MSTR	-0.51%
10.0	THC	0.74%	BAC	-0.51%
10.0	BHC	0.73%	BHP	-0.44%
10.0	JPM	0.71%	ORCL	-0.41%
10.0	ELAN	0.71%	GOOGL	-0.4%
10.0	TMUS	0.69%	BXP	-0.4%
10.0	WYNN	0.64%	ON	-0.39%
10.0	MU	0.62%	FIS	-0.39%
10.0	GS	0.62%	AAP	-0.35%
10.0	TDG	0.61%	ZTS	-0.33%
10.0	WFC	0.6%	NFLX	-0.31%
10.0	TEVA	0.59%	VFC	-0.3%

All Out of Sample Model Dates: 21d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
21.0	TSLA	6.36%	AVGO	-9.02%
21.0	GBTC	6.07%	IEP	-3.54%
21.0	NVDA	6.06%	NWL	-3.37%
21.0	SBNY	4.5%	GNRC	-3.13%
21.0	ETRN	4.09%	CLF	-3.07%
21.0	LLY	3.24%	CZR	-2.74%
21.0	CCL	2.94%	GME	-2.67%
21.0	VST	2.77%	INTU	-1.94%
21.0	AA	2.6%	GT	-1.68%
21.0	PCG	2.56%	KEY	-1.57%
21.0	AZO	2.48%	BAC	-1.29%
21.0	ELAN	2.42%	META	-1.15%
21.0	AMC	2.37%	BBY	-1.08%
21.0	PWR	2.33%	CYH	-1.05%
21.0	TMUS	2.3%	BXP	-1.03%
21.0	DHI	2.28%	FSUGY	-0.99%
21.0	FRCB	2.27%	RIO	-0.97%
21.0	CDNS	2.25%	BALL	-0.96%
21.0	PHM	1.99%	MOS	-0.95%
21.0	AMD	1.9%	HD	-0.91%
21.0	AMAT	1.85%	LUMN	-0.86%
21.0	MSFT	1.77%	VZ	-0.85%
21.0	GE	1.63%	VFC	-0.83%
21.0	T	1.57%	ADBE	-0.76%
21.0	BHC	1.56%	AAP	-0.73%
21.0	TDG	1.46%	NFLX	-0.69%
21.0	THC	1.44%	OXY	-0.58%
21.0	QQQ	1.37%	FITB	-0.58%
21.0	JPM	1.32%	ZION	-0.49%
21.0	MU	1.29%	LW	-0.38%

All Out of Sample Model Dates: 63d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
63.0	GBTC	25.12%	AVGO	-31.77%
63.0	NVDA	21.42%	IEP	-15.13%
63.0	CCL	15.43%	SIVBQ	-12.83%
63.0	MSTR	13.48%	GNRC	-12.03%
63.0	PWR	12.32%	CLF	-9.38%
63.0	LLY	11.29%	NWL	-8.7%
63.0	PHM	10.84%	CYH	-7.14%
63.0	GE	9.22%	BHC	-6.86%
63.0	TSLA	8.86%	GME	-5.7%
63.0	ETRN	8.65%	UAA	-5.7%
63.0	VST	7.77%	KEY	-4.39%
63.0	VNO	6.81%	MOS	-4.08%
63.0	PCG	6.48%	BALL	-4.02%
63.0	AMD	6.36%	CVS	-3.91%
63.0	ELAN	6.32%	INTC	-3.34%
63.0	TMUS	6.04%	GT	-3.25%
63.0	JPM	5.91%	VFC	-3.25%
63.0	SBNY	5.64%	AA	-3.24%
63.0	AMC	5.64%	AAP	-2.91%
63.0	MS	5.64%	FSUGY	-2.88%
63.0	T	5.6%	BBY	-2.76%
63.0	AMAT	5.54%	VZ	-2.25%
63.0	QQQ	5.44%	PRGO	-2.25%
63.0	X	5.25%	BHP	-1.94%
63.0	COST	5.21%	FRA	-1.71%
63.0	ACGL	4.91%	ZTS	-1.5%
63.0	MSFT	4.62%	ZION	-1.44%
63.0	CDNS	4.52%	FIS	-1.38%
63.0	MU	4.21%	CZR	-1.28%
63.0	GILD	4.2%	RIO	-1.22%

All Out of Sample Model Dates: 126d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
126.0	GBTC	62.8%	FRCB	-77.34%
126.0	NVDA	55.29%	AVGO	-67.35%
126.0	CCL	31.16%	IEP	-26.37%
126.0	PHM	29.28%	SIVBQ	-24.25%
126.0	LLY	28.16%	NWL	-20.37%
126.0	GE	25.95%	GNRC	-19.12%
126.0	VNO	21.42%	CLF	-16.21%
126.0	TSLA	20.41%	VFC	-15.28%
126.0	THC	20.28%	INTC	-12.05%
126.0	MU	19.72%	MOS	-10.02%
126.0	PWR	19.31%	BHC	-8.88%
126.0	PCG	18.95%	GME	-8.45%
126.0	AMZN	17.84%	KEY	-8.05%
126.0	DHI	17.01%	UAA	-7.43%
126.0	AMD	16.0%	CHTR	-7.41%
126.0	MS	15.75%	CVS	-7.23%
126.0	NFLX	15.26%	BALL	-6.92%
126.0	JPM	15.02%	CTLT	-6.27%
126.0	CMG	14.83%	AAP	-6.12%
126.0	COST	14.58%	SBNY	-5.79%
126.0	ACGL	14.46%	PRGO	-5.4%
126.0	AMAT	14.1%	GT	-4.21%
126.0	VST	13.88%	AA	-4.16%
126.0	MSTR	13.85%	VZ	-3.88%
126.0	ORCL	13.73%	GSK	-3.37%
126.0	QQQ	13.56%	BHP	-2.85%
126.0	TMUS	13.52%	LNC	-2.69%
126.0	X	12.72%	CMA	-2.57%
126.0	CITI	11.9%	TLT	-2.48%
126.0	INTU	11.7%	KHC	-2.16%

All Out of Sample Model Dates: 252d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2022-01-31 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
252.0	GBTC	165.5%	AVGO	-178.45%
252.0	NVDA	115.22%	FRCB	-114.9%
252.0	GE	109.38%	IEP	-59.76%
252.0	PHM	97.64%	SBNY	-57.43%
252.0	CCL	71.61%	SIVBQ	-56.18%
252.0	THC	66.92%	NWL	-49.83%
252.0	TRGP	50.83%	MOS	-29.17%
252.0	MU	50.28%	AAP	-25.47%
252.0	NFLX	46.7%	CLF	-23.94%
252.0	AMAT	45.74%	GNRC	-23.65%
252.0	X	43.22%	VFC	-19.61%
252.0	META	37.91%	LUMN	-17.97%
252.0	QQQ	37.24%	LNC	-17.35%
252.0	VNO	37.12%	KEY	-16.84%
252.0	PCG	36.51%	GT	-15.27%
252.0	ORCL	36.08%	BHC	-14.55%
252.0	LLY	34.36%	CVS	-14.44%
252.0	ACGL	33.32%	CTLT	-13.61%
252.0	DHI	32.16%	CZR	-12.35%
252.0	MSFT	31.54%	UAA	-9.89%
252.0	QCOM	31.4%	PRGO	-9.72%
252.0	MSTR	29.8%	INTC	-8.18%
252.0	AMZN	29.67%	KHC	-7.37%
252.0	PWR	29.29%	IRM	-7.32%
252.0	CDNS	29.13%	TLT	-6.31%
252.0	INTU	27.38%	BA	-5.85%
252.0	COST	27.18%	CSTM	-5.54%
252.0	ISRG	26.97%	BMY	-4.93%
252.0	ADBE	26.76%	JAZZ	-4.46%
252.0	AMD	25.61%	OXY	-4.38%

P365D: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
1.0	LUMN	1.12%	AVGO	-0.88%
1.0	TSLA	0.57%	IEP	-0.42%
1.0	T	0.49%	AMD	-0.4%
1.0	VNO	0.4%	BIIB	-0.36%
1.0	PRGO	0.36%	FSUGY	-0.32%
1.0	VST	0.33%	MSTR	-0.31%
1.0	NVDA	0.28%	AMAT	-0.31%
1.0	GE	0.27%	NWL	-0.25%
1.0	JAZZ	0.27%	CSTM	-0.24%
1.0	TRGP	0.26%	CZR	-0.22%
1.0	MS	0.24%	GT	-0.18%
1.0	CCL	0.24%	MOS	-0.17%
1.0	CITI	0.22%	MRK	-0.16%
1.0	TMUS	0.21%	CYH	-0.16%
1.0	WYNN	0.19%	PHM	-0.14%
1.0	COST	0.18%	TEVA	-0.13%
1.0	JPM	0.18%	INTC	-0.12%
1.0	CSCO	0.18%	LVS	-0.12%
1.0	WDC	0.17%	BHP	-0.11%
1.0	CDNS	0.17%	LEN	-0.1%
1.0	PCG	0.17%	NAVI	-0.1%
1.0	HCA	0.16%	CLF	-0.09%
1.0	VFC	0.16%	RIO	-0.08%
1.0	GLD	0.16%	DHI	-0.08%
1.0	GOOGL	0.16%	SLV	-0.08%
1.0	NFLX	0.16%	KALU	-0.07%
1.0	TDG	0.16%	META	-0.07%
1.0	HSBC	0.15%	GWW	-0.07%
1.0	LLY	0.15%	LW	-0.06%
1.0	ZION	0.15%	GNRC	-0.06%

P365D: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
10.0	LUMN	9.69%	AVGO	-6.45%
10.0	AMC	4.83%	IEP	-3.44%
10.0	VST	4.35%	GME	-3.24%
10.0	T	4.15%	AMAT	-2.23%
10.0	NVDA	3.73%	INTC	-1.7%
10.0	ELAN	2.83%	BIIB	-1.45%
10.0	TSLA	2.77%	FSUGY	-1.28%
10.0	MSTR	2.7%	AMD	-1.24%
10.0	CCL	2.12%	BHC	-1.18%
10.0	COST	2.11%	CNC	-1.16%
10.0	LLY	2.11%	MU	-1.16%
10.0	TRGP	2.07%	X	-1.14%
10.0	WDC	1.85%	ON	-1.13%
10.0	THC	1.55%	OXY	-1.04%
10.0	TMUS	1.49%	BXP	-0.99%
10.0	JPM	1.42%	RIO	-0.97%
10.0	WYNN	1.38%	FIS	-0.96%
10.0	TDG	1.32%	GBTC	-0.88%
10.0	CVS	1.27%	TEVA	-0.85%
10.0	BUD	1.16%	CLF	-0.85%
10.0	WFC	1.1%	CDNS	-0.75%
10.0	AAPL	1.03%	WRK	-0.71%
10.0	MS	1.0%	QCOM	-0.69%
10.0	NFLX	0.91%	CMG	-0.66%
10.0	QQQ	0.89%	CHTR	-0.65%
10.0	AZO	0.84%	BHP	-0.61%
10.0	AA	0.83%	CMA	-0.59%
10.0	CSCO	0.82%	PWR	-0.58%
10.0	AZN	0.74%	ETRN	-0.58%
10.0	SPY	0.72%	CZR	-0.57%

P365D: 21d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
21.0	LUMN	24.9%	AVGO	-12.44%
21.0	VST	10.93%	IEP	-7.68%
21.0	NVDA	9.6%	GME	-7.52%
21.0	MSTR	8.89%	OXY	-4.51%
21.0	T	7.92%	INTC	-4.4%
21.0	AMC	7.18%	FSUGY	-4.04%
21.0	TMUS	5.32%	AAP	-3.68%
21.0	VNO	5.0%	AMD	-3.46%
21.0	TRGP	4.43%	TEVA	-3.35%
21.0	MS	4.18%	AMAT	-2.99%
21.0	TSLA	4.12%	ON	-2.16%
21.0	NWL	3.97%	QCOM	-2.1%
21.0	ELAN	3.76%	FIS	-2.08%
21.0	LLY	3.52%	CLF	-1.97%
21.0	THC	3.46%	BIIB	-1.96%
21.0	COST	3.43%	CHTR	-1.95%
21.0	UAA	2.72%	BHC	-1.92%
21.0	CCL	2.49%	BBY	-1.83%
21.0	CYH	2.37%	CSTM	-1.54%
21.0	ZION	2.22%	BXP	-1.49%
21.0	GOOGL	2.14%	PWR	-1.47%
21.0	CSCO	2.1%	MOS	-1.44%
21.0	WFC	2.07%	EXPE	-1.42%
21.0	LVS	2.07%	MRK	-1.36%
21.0	QQQ	2.04%	BAC	-1.35%
21.0	JAZZ	1.98%	CMA	-1.25%
21.0	SBUX	1.96%	BHP	-1.18%
21.0	TDG	1.76%	LEN	-1.16%
21.0	BUD	1.74%	CNC	-1.0%
21.0	SPY	1.7%	MU	-0.99%

P365D: 63d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
63.0	LUMN	92.91%	AVGO	-46.52%
63.0	MSTR	49.48%	IEP	-27.55%
63.0	VST	31.29%	CLF	-18.03%
63.0	CCL	27.6%	AMD	-17.89%
63.0	T	24.56%	FSUGY	-16.84%
63.0	VNO	23.34%	INTC	-12.09%
63.0	MS	21.09%	GME	-11.87%
63.0	NVDA	21.01%	BHP	-8.89%
63.0	TSLA	16.46%	ELAN	-8.24%
63.0	NWL	15.56%	AAP	-8.16%
63.0	TRGP	14.77%	CSTM	-7.96%
63.0	JPM	14.54%	QCOM	-7.72%
63.0	TMUS	12.38%	GT	-7.37%
63.0	FITB	9.34%	ON	-7.23%
63.0	CSCO	8.97%	VFC	-6.69%
63.0	HSBC	8.73%	OXY	-6.67%
63.0	CYH	8.52%	MU	-6.32%
63.0	ZION	8.1%	FIS	-5.96%
63.0	NFLX	7.7%	CMG	-5.35%
63.0	GOLD	7.64%	MOS	-5.32%
63.0	LLY	7.46%	AMAT	-5.07%
63.0	QQQ	7.41%	CVS	-4.76%
63.0	PWR	7.24%	PCG	-4.48%
63.0	GOOGL	6.73%	WDC	-4.36%
63.0	SPY	6.62%	CDNS	-4.17%
63.0	UAA	6.04%	NEM	-3.97%
63.0	CAH	5.91%	MRK	-3.49%
63.0	COST	5.86%	AA	-3.38%
63.0	GLD	5.24%	EXPE	-3.16%
63.0	TFC	5.21%	BALL	-3.08%

P365D: 126d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2024-04-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
126.0	LUMN	187.37%	AVGO	-81.97%
126.0	CCL	89.51%	IEP	-42.38%
126.0	TSLA	73.51%	CSTM	-31.91%
126.0	VNO	70.31%	INTC	-29.83%
126.0	VST	66.38%	CLF	-29.53%
126.0	MS	57.48%	FSUGY	-28.12%
126.0	T	55.23%	AAP	-19.02%
126.0	MSTR	41.95%	VFC	-18.78%
126.0	JPM	37.48%	AMD	-18.74%
126.0	TMUS	35.87%	ELAN	-17.32%
126.0	TRGP	35.76%	GME	-14.31%
126.0	GBTC	33.97%	ON	-13.4%
126.0	ORCL	33.82%	QCOM	-12.47%
126.0	NVDA	33.59%	BHP	-12.22%
126.0	NWL	28.49%	EXPE	-12.0%
126.0	CSCO	22.41%	GSK	-11.89%
126.0	CAH	19.4%	ADBE	-11.72%
126.0	NFLX	18.7%	MU	-11.26%
126.0	BMY	17.38%	MOS	-10.02%
126.0	BAC	17.08%	BALL	-8.83%
126.0	BHC	17.0%	AZN	-7.91%
126.0	UAA	16.94%	WDC	-7.75%
126.0	COST	16.66%	BA	-7.57%
126.0	FITB	16.44%	MRK	-6.8%
126.0	QQQ	16.29%	BUD	-6.66%
126.0	GS	15.58%	PRGO	-6.24%
126.0	SPY	14.53%	OXY	-5.92%
126.0	ZION	14.53%	AMAT	-5.53%
126.0	CTLT	12.84%	GT	-4.75%
126.0	UNH	12.76%	GNRC	-4.67%

P90D: 1d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
1.0	T	0.94%	CYH	-0.88%
1.0	PRGO	0.84%	UAA	-0.83%
1.0	GT	0.79%	NWL	-0.66%
1.0	HCA	0.72%	TEVA	-0.6%
1.0	AVGO	0.63%	LUMN	-0.56%
1.0	NFLX	0.61%	LVS	-0.56%
1.0	GLD	0.59%	PHM	-0.55%
1.0	WYNN	0.58%	IRM	-0.54%
1.0	BUD	0.58%	AMZN	-0.54%
1.0	X	0.57%	ISRG	-0.53%
1.0	PWR	0.56%	NVDA	-0.43%
1.0	HSBC	0.54%	CMG	-0.42%
1.0	LNC	0.52%	CCL	-0.4%
1.0	TMUS	0.5%	BIIB	-0.4%
1.0	VICI	0.49%	AMAT	-0.38%
1.0	AMGN	0.47%	MSI	-0.38%
1.0	MNST	0.43%	GNRC	-0.36%
1.0	MSTR	0.42%	MRK	-0.28%
1.0	AZO	0.41%	CZR	-0.25%
1.0	TSLA	0.4%	ELAN	-0.25%
1.0	INTC	0.38%	GOOGL	-0.22%
1.0	VNO	0.36%	ON	-0.21%
1.0	ACGL	0.35%	UNH	-0.2%
1.0	OXY	0.35%	VFC	-0.19%
1.0	TRGP	0.31%	LW	-0.19%
1.0	GOLD	0.3%	DHI	-0.19%
1.0	AZN	0.3%	TFC	-0.18%
1.0	LLY	0.29%	FIS	-0.18%
1.0	JPM	0.29%	BBY	-0.18%
1.0	GSK	0.28%	QQQ	-0.16%

P90D: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
10.0	T	7.64%	TEVA	-8.05%
10.0	LLY	5.06%	NWL	-6.4%
10.0	CVS	4.49%	LUMN	-6.08%
10.0	WDC	4.27%	MSTR	-5.86%
10.0	BUD	4.09%	AMAT	-5.68%
10.0	TMUS	3.95%	PWR	-5.14%
10.0	LNC	3.61%	CDNS	-4.96%
10.0	AVGO	3.52%	UAA	-4.11%
10.0	AZN	3.51%	FIS	-3.76%
10.0	GT	3.19%	NVDA	-3.5%
10.0	MOS	3.02%	MS	-3.34%
10.0	GLD	2.84%	LEN	-2.88%
10.0	X	2.81%	PHM	-2.87%
10.0	VICI	2.76%	VNO	-2.66%
10.0	COST	2.41%	AMD	-2.65%
10.0	TDG	2.41%	PCG	-2.4%
10.0	NFLX	2.32%	GNRC	-2.31%
10.0	NVS	2.19%	CMG	-2.29%
10.0	CSTM	2.18%	CCL	-2.22%
10.0	CLF	2.03%	BIIB	-2.2%
10.0	NEM	2.01%	UNH	-2.17%
10.0	TRGP	2.0%	IRM	-2.03%
10.0	GE	1.88%	QQQ	-2.02%
10.0	AMGN	1.84%	VFC	-1.96%
10.0	GME	1.82%	GBTC	-1.88%
10.0	WYNN	1.68%	ON	-1.81%
10.0	PRGO	1.42%	LW	-1.67%
10.0	HCA	1.27%	GILD	-1.6%
10.0	IEP	1.25%	TFC	-1.44%
10.0	MNST	1.19%	ORCL	-1.28%

P90D: 21d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-01-02 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
21.0	T	12.85%	TEVA	-25.5%
21.0	TMUS	11.72%	CCL	-16.87%
21.0	AVGO	10.23%	AMAT	-15.24%
21.0	LLY	6.65%	NWL	-13.94%
21.0	AZN	6.39%	TSLA	-13.62%
21.0	BUD	6.05%	FIS	-10.41%
21.0	GOLD	6.01%	MSTR	-10.11%
21.0	COST	5.36%	LUMN	-9.4%
21.0	NVS	5.34%	PWR	-9.22%
21.0	VICI	4.99%	WDC	-9.07%
21.0	JAZZ	4.53%	LEN	-8.98%
21.0	GT	4.31%	ON	-8.26%
21.0	AMGN	3.93%	FITB	-8.01%
21.0	MNST	3.59%	NVDA	-7.91%
21.0	GLD	3.49%	VNO	-6.63%
21.0	CSTM	3.3%	CDNS	-6.25%
21.0	GME	2.97%	QQQ	-6.16%
21.0	X	2.8%	OXY	-6.15%
21.0	CVS	2.77%	AMD	-6.06%
21.0	LNC	2.57%	PHM	-5.63%
21.0	NFLX	2.49%	ZION	-4.99%
21.0	VST	2.44%	BHC	-4.78%
21.0	TLT	2.29%	IRM	-4.75%
21.0	RIO	2.26%	GILD	-4.64%
21.0	TDG	2.15%	SPY	-4.54%
21.0	CLF	2.09%	UAA	-4.49%
21.0	SNY	2.05%	DHI	-4.39%
21.0	KHC	2.03%	FSUGY	-4.37%
21.0	SBUX	1.91%	AMZN	-4.12%
21.0	PRGO	1.91%	BBY	-3.88%

P30D: 1d

The columns labeled “ROLOBC_VmS” represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
1.0	MOS	1.51%	LUMN	-1.81%
1.0	TSLA	1.36%	LVS	-1.3%
1.0	MSTR	1.12%	ISRG	-1.3%
1.0	X	1.02%	BHC	-1.22%
1.0	OXY	0.95%	AMZN	-1.08%
1.0	AZO	0.94%	COST	-0.97%
1.0	HCA	0.92%	CYH	-0.94%
1.0	AVGO	0.82%	CCL	-0.89%
1.0	AAP	0.75%	ADBE	-0.78%
1.0	VST	0.73%	VFC	-0.7%
1.0	GLD	0.71%	CZR	-0.69%
1.0	CDNS	0.62%	TFC	-0.68%
1.0	AMD	0.61%	JAZZ	-0.62%
1.0	GT	0.57%	UAA	-0.61%
1.0	NEM	0.5%	ORCL	-0.58%
1.0	DHI	0.5%	IEP	-0.56%
1.0	MNST	0.49%	QQQ	-0.55%
1.0	XOM	0.48%	VZ	-0.55%
1.0	GOLD	0.47%	META	-0.5%
1.0	ACGL	0.45%	LLY	-0.49%
1.0	NVS	0.36%	LNC	-0.48%
1.0	LEN	0.36%	AMAT	-0.47%
1.0	CAH	0.31%	ELAN	-0.44%
1.0	TMUS	0.29%	MU	-0.44%
1.0	CNC	0.28%	MS	-0.43%
1.0	FIS	0.27%	CMG	-0.42%
1.0	LW	0.27%	NVDA	-0.4%
1.0	MSFT	0.26%	SPY	-0.39%
1.0	MSI	0.26%	GNRC	-0.39%
1.0	GSK	0.24%	TXN	-0.37%

P30D: 10d

The columns labeled "ROLOBC_VmS" represent the average amount by which Vector Model 99% ROLOBC (Return on OaR Based Capital, defined earlier) exceeds Sigma 99% ROLOBC (the underlying ticker return) for the given ticker for the model dates in the period indicated for which forward horizon performance is known.

Period examined: All model dates from 2025-03-03 through 2025-03-28

Horizon	Ticker	ROLOBC_VmS	Ticker	ROLOBC_VmS
10.0	MOS	21.83%	LUMN	-13.18%
10.0	MSTR	13.6%	UAA	-6.06%
10.0	PCG	9.36%	ADBE	-5.89%
10.0	OXY	8.68%	ORCL	-5.17%
10.0	FIS	6.74%	BIIB	-4.22%
10.0	TRGP	6.43%	KHC	-4.13%
10.0	BA	6.4%	CLF	-4.02%
10.0	ACGL	6.24%	LVS	-3.77%
10.0	AVGO	5.0%	UNH	-2.87%
10.0	LNC	4.61%	CCL	-2.78%
10.0	CDNS	4.5%	LLY	-2.19%
10.0	NEM	4.39%	CMG	-2.07%
10.0	TSLA	4.21%	CYH	-2.01%
10.0	AMD	4.15%	LEN	-1.9%
10.0	XOM	4.15%	NWL	-1.85%
10.0	X	3.98%	PEP	-1.79%
10.0	TDG	3.54%	JAZZ	-1.74%
10.0	AA	3.5%	HLT	-1.66%
10.0	NFLX	3.34%	NAVI	-1.51%
10.0	HCA	3.24%	AAPL	-1.49%
10.0	T	3.06%	KALU	-1.48%
10.0	GLD	3.05%	TFC	-1.39%
10.0	NVDA	2.94%	QQQ	-1.38%
10.0	VST	2.89%	AZN	-1.34%
10.0	BXP	2.87%	META	-1.28%
10.0	MSI	2.77%	VZ	-1.23%
10.0	GOLD	2.69%	COST	-1.14%
10.0	GE	2.32%	BHC	-1.14%
10.0	MNST	2.31%	BALL	-1.13%
10.0	AAP	1.72%	WYNN	-1.05%

Appendix 19: 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 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 OaR breakage is consistent wtih 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 2025-03-28. 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	219.82	0	5.26	0.02
Sigma	95	10	1.1	0.29	1.72	0.19
Sigma	95	21	13.48	0	0.12	0.73
Sigma	95	63	10.02	0	0.34	0.56
Sigma	95	126	0.11	0.74	-0	1
Sigma	95	252	11.04	0	nan	0
Sigma	99	1	134.05	0	10.43	0
Sigma	99	10	31.1	0	0.08	0.77
Sigma	99	21	21.99	0	0.1	0.76
Sigma	99	63	20.56	0	nan	0
Sigma	99	126	9.52	0	nan	0
Sigma	99	252	21.78	0	nan	0