

VecViz Opportunity At Risk (OaR) Performance Report

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Introduction

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

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

Evaluation of OaR Estimates

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

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

OaR Breakage Ratios

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

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



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

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

ROLOBC and its drivers

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

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

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

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



Addressing The Tradeoff Between OaR Breakage and ROLOBC

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

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

Determining the drivers of ROLOBC alpha

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

ROLOBC Beta

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

We encourage readers to consider the Vector Model ROLOBC beta to Sigma ROLOBC in the context of how well each model’s OaR breakage rates compare to targeted levels. For example, if the Sigma model OaR breakage is well above target and the Vector Model’s OaR breakage



is close to target, then Vector Model OaR levels are likely higher than Sigma's and the beta of Vector Model ROLOBC to Sigma ROLOBC should be expected to be > 1.00 .

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

Vector Model Input and Calculation Details

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

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

The Vector Model was trained upon $\sim 60,000$ 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.

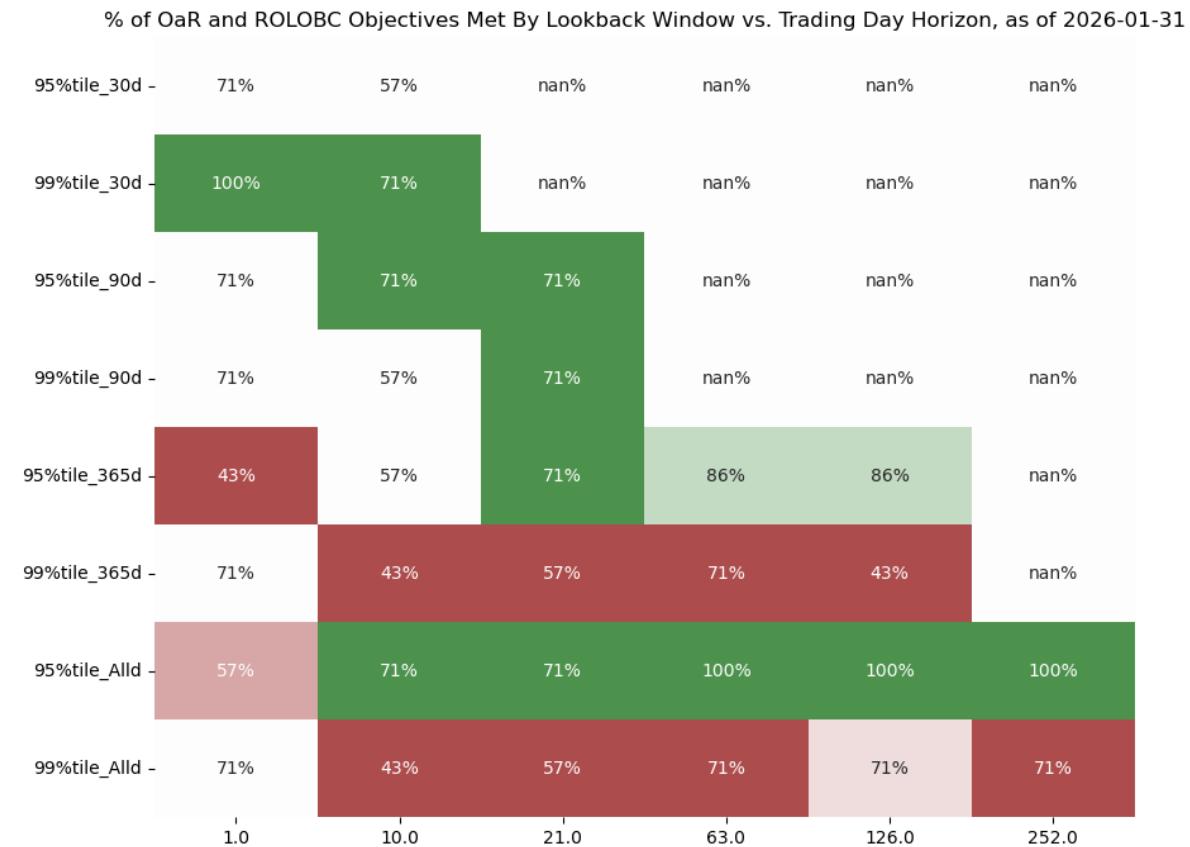
Thus, in summary, with the exception of the Kupiec and Christoferson tests, all metrics presented in this report are presented and are to be considered on a comparative basis. Are Vector Model OaR breakage rates closer to target than Sigma's? Does Vector Model ROLOBC outperform Sigma ROLOBC? Is the relative 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 2026-01-29 while 365D /90D/ 30D include the 365/90/30 days ended 2026-01-29, 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 2026-01-29. 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	197.43	0	3.15	0.08
Vector	95	10	29.78	0	2.81	0.09
Vector	95	21	28.57	0	0.75	0.39
Vector	95	63	4.36	0.04	0.15	0.7
Vector	95	126	0.71	0.4	nan	0
Vector	95	252	0.05	0.83	nan	0
Vector	99	1	8.55	0	2.18	0.14
Vector	99	10	37.07	0	3.29	0.07
Vector	99	21	18.89	0	2.1	0.15
Vector	99	63	6.93	0.01	2.35	0.13
Vector	99	126	8.74	0	0.17	0.68
Vector	99	252	2.4	0.12	nan	0

Combined Summary Report Card By Objective:

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

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

Period examined: 2022-01-31 through 2026-01-29.



OaR and ROLOBC Criteria	Average Score(%)
1. Closer to Target OaR Breakage Than Sigma	31.25
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	93.75
3. Less Volatile OaR Breakage Across Tickers Than Sigma	46.88
4. Higher ROLOBC Than Sigma	100
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	78.12
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	90.62
Overall Comparison to Sigma Average	69.64
Kupiec Test of VaR Proximity to Target	25
Christoferson Test of OaR Date Independence	75

OaR and ROLOBC Criteria By Fwd Hzn	1D	10D	21D	63D	126D	252D
1. Closer to Target OaR Breakage Than Sigma	75	12.5	0	25	25	50
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	100	75	100	100	100	100
3. Less Volatile OaR Breakage Across Tickers Than Sigma	25	12.5	33.33	100	100	100
4. Higher ROLOBC Than Sigma	100	100	100	100	100	100
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	25	62.5	50	50	50	50
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	75	62.5	83.33	100	75	100
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	87.5	87.5	100	100	75	100
TotalScore	69.64	58.93	66.67	82.14	75	85.71

OaR and ROLOBC Criteria Across Lookback Window	30D	90D	365D	AllD
1. Closer to Target OaR Breakage Than Sigma	25	33.33	20	41.67
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	75	100	90	100
3. Less Volatile OaR Breakage Across Tickers Than Sigma	25	50	50	50
4. Higher ROLOBC Than Sigma	100	100	100	100
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	100	33.33	40	41.67
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	100	83.33	60	83.33



OaR and ROLOBC Criteria Across Lookback Window	30D	90D	365D	AllD
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	100	83.33	80	100
TotalScore	75	69.05	62.86	73.81



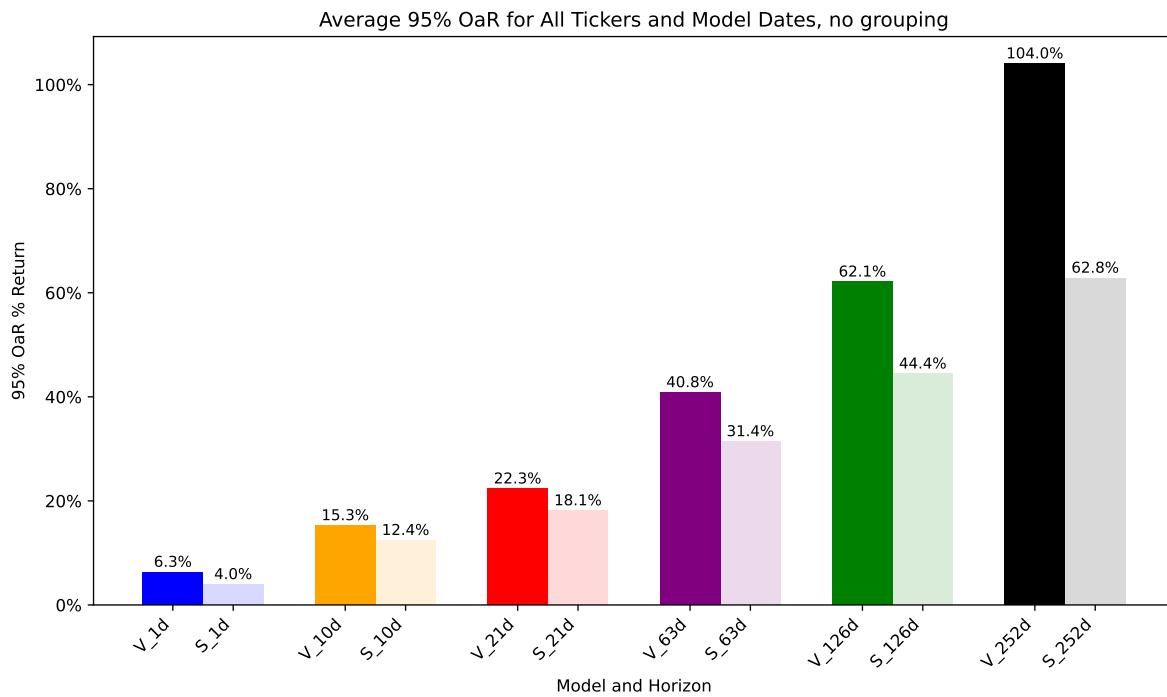
95% Opportunity At Risk (OaR)

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.

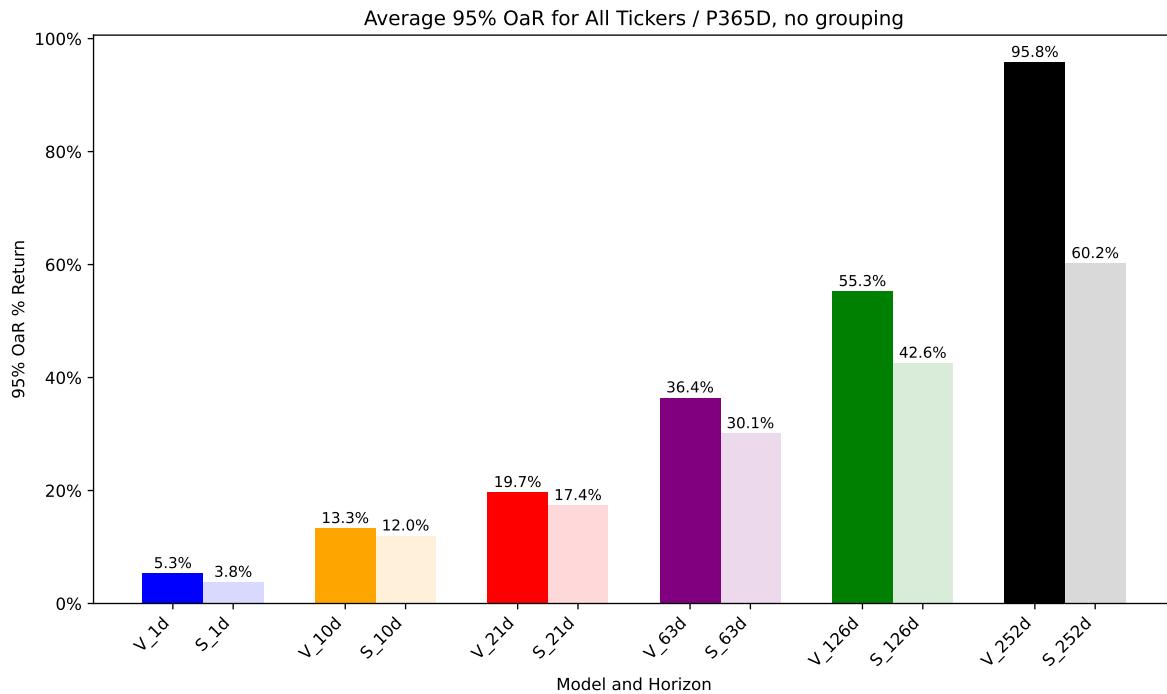
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-01-29



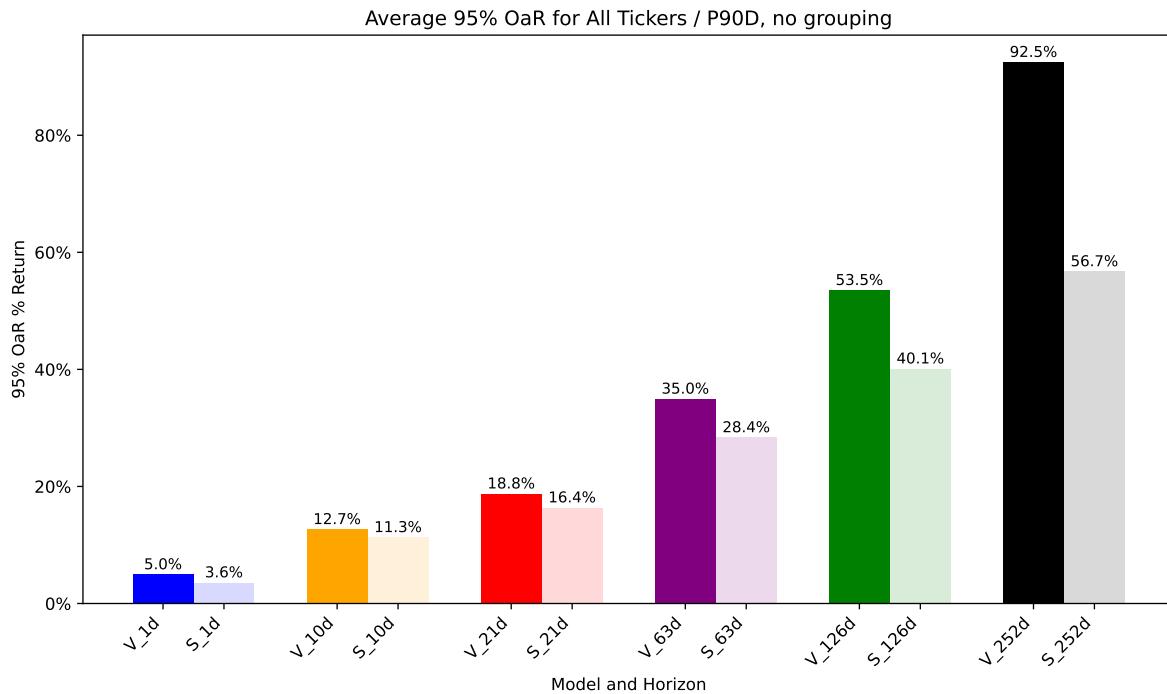
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-01-29 through 2025-02-03



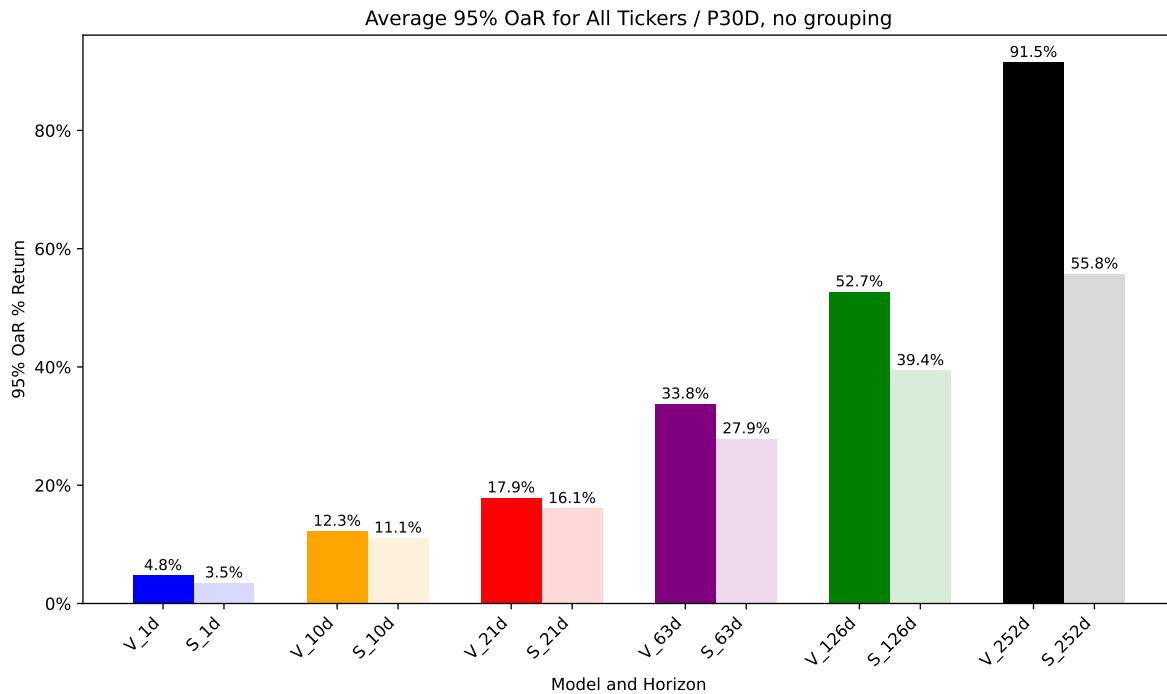
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-01-29 through 2025-11-03



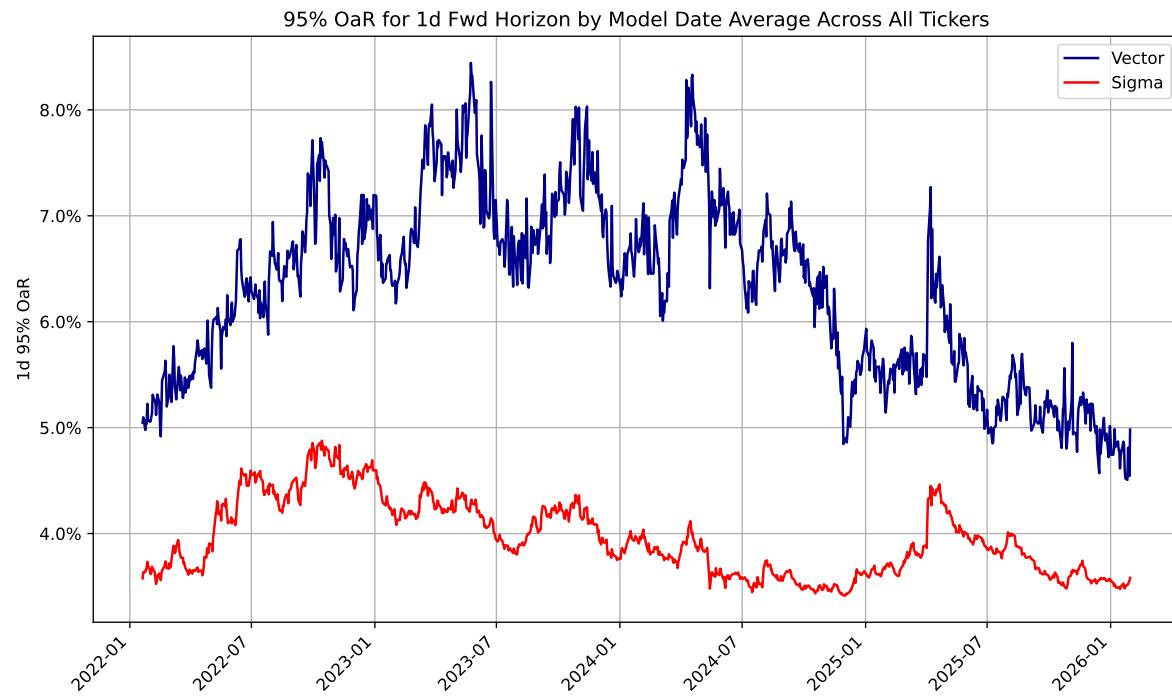
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-01-29 through 2026-01-02

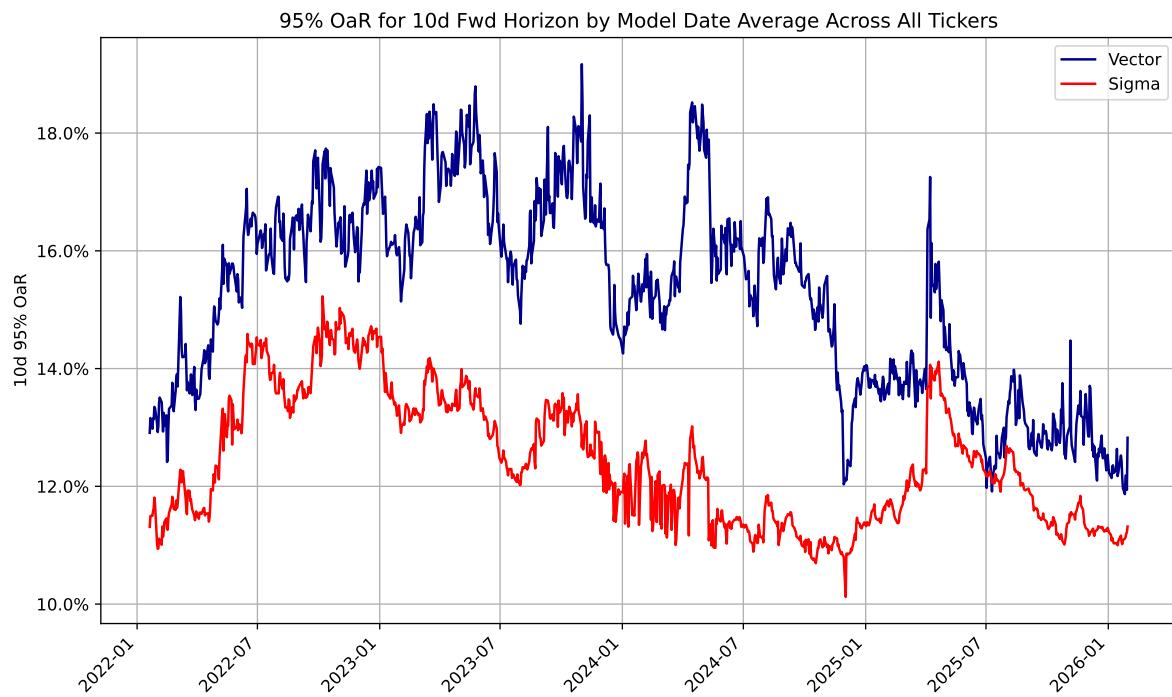


Daily Levels

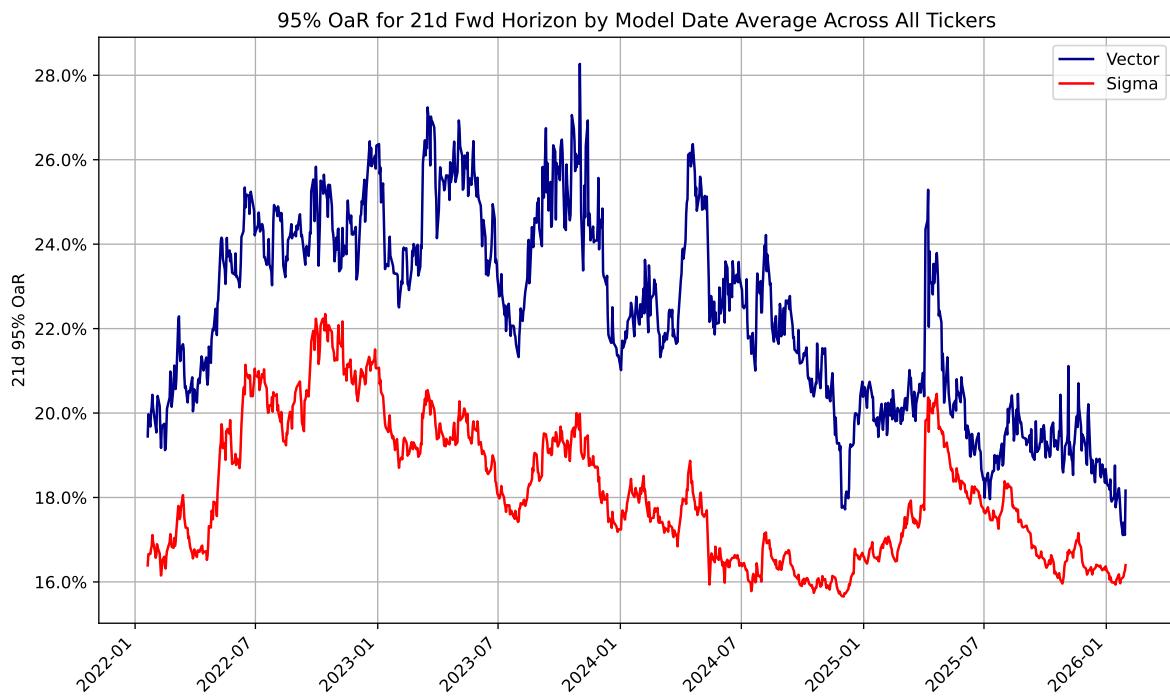
1d Horizon



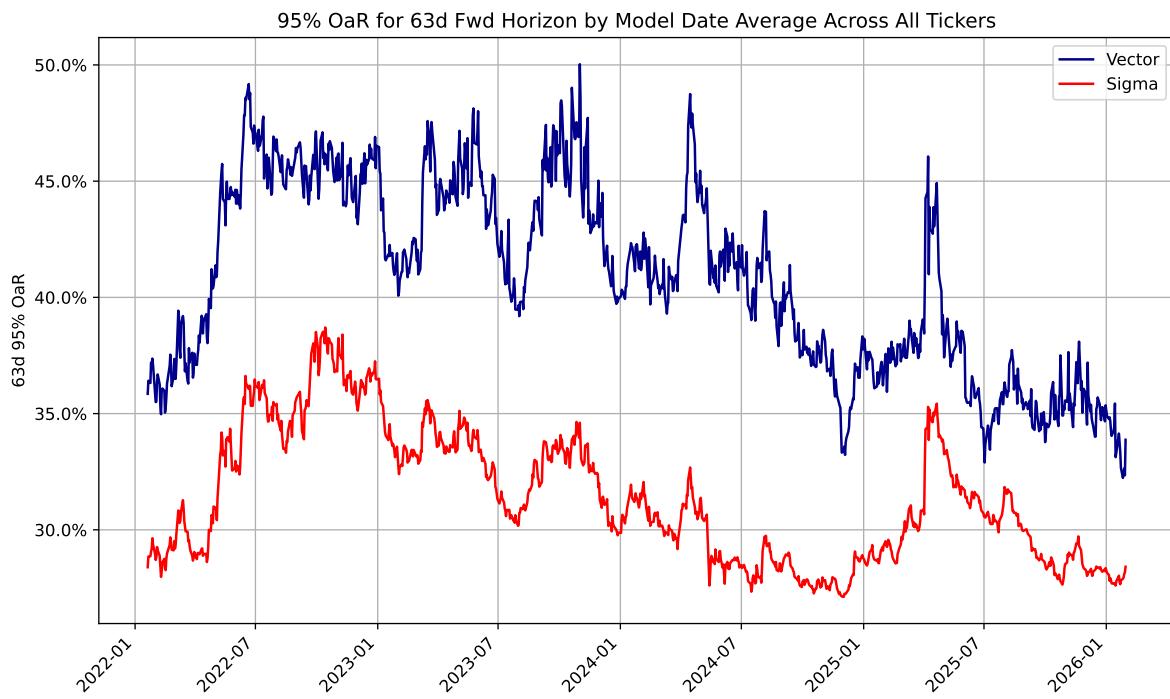
10d Horizon



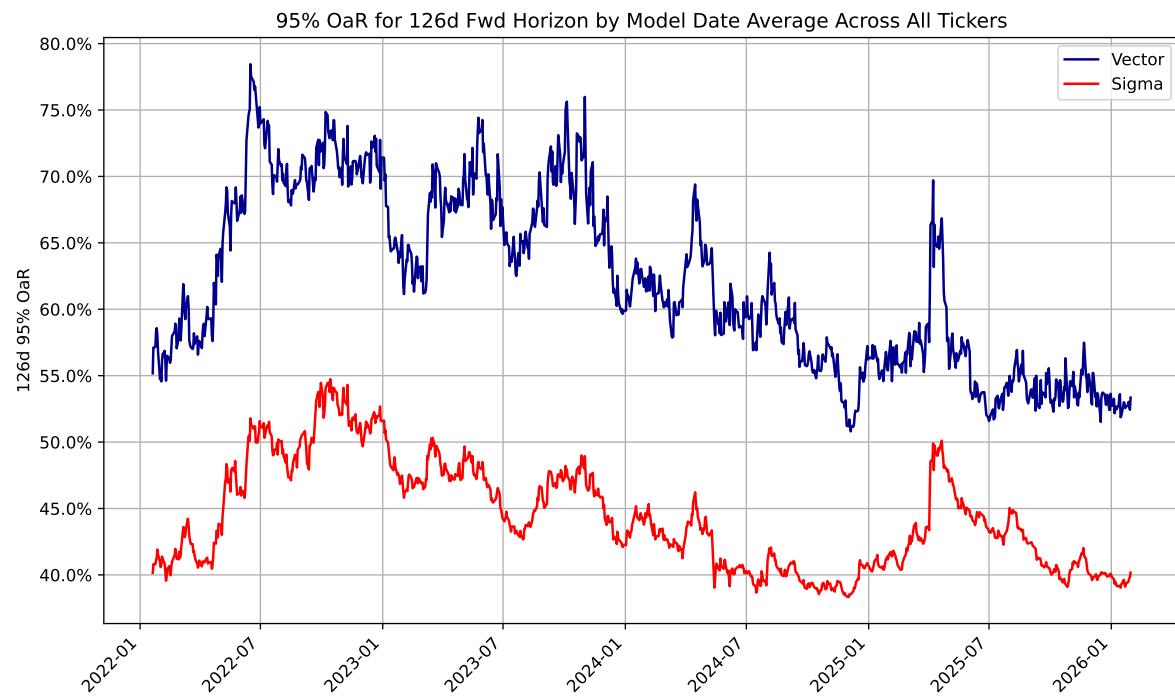
21d Horizon



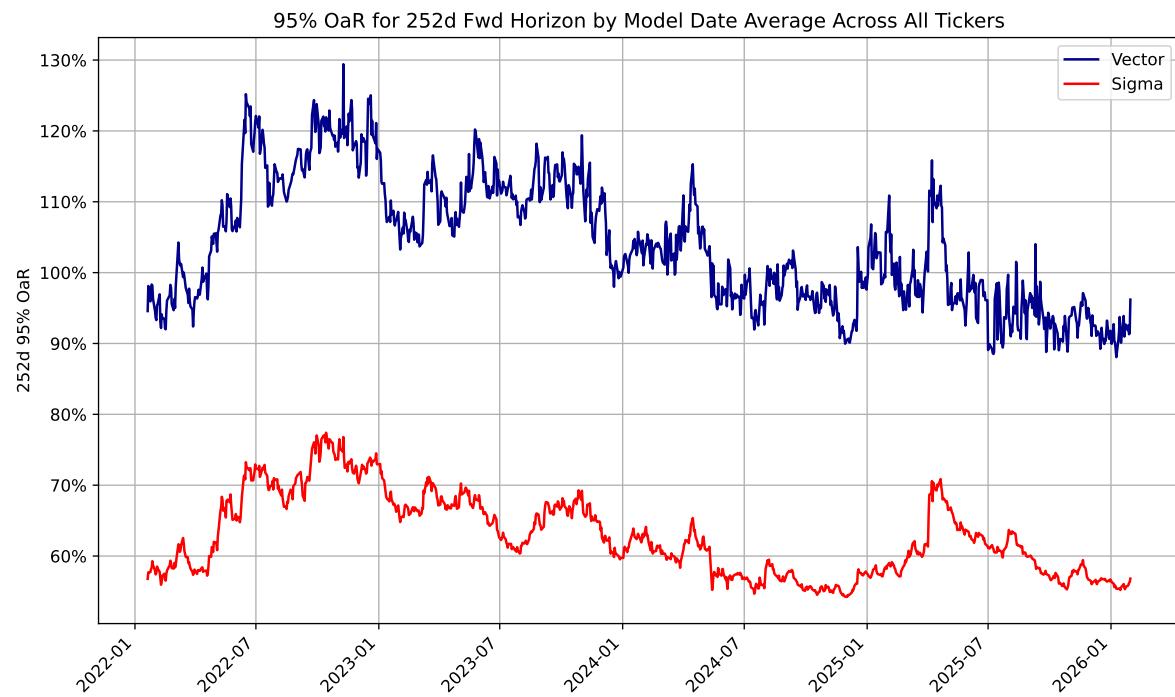
63d Horizon



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.

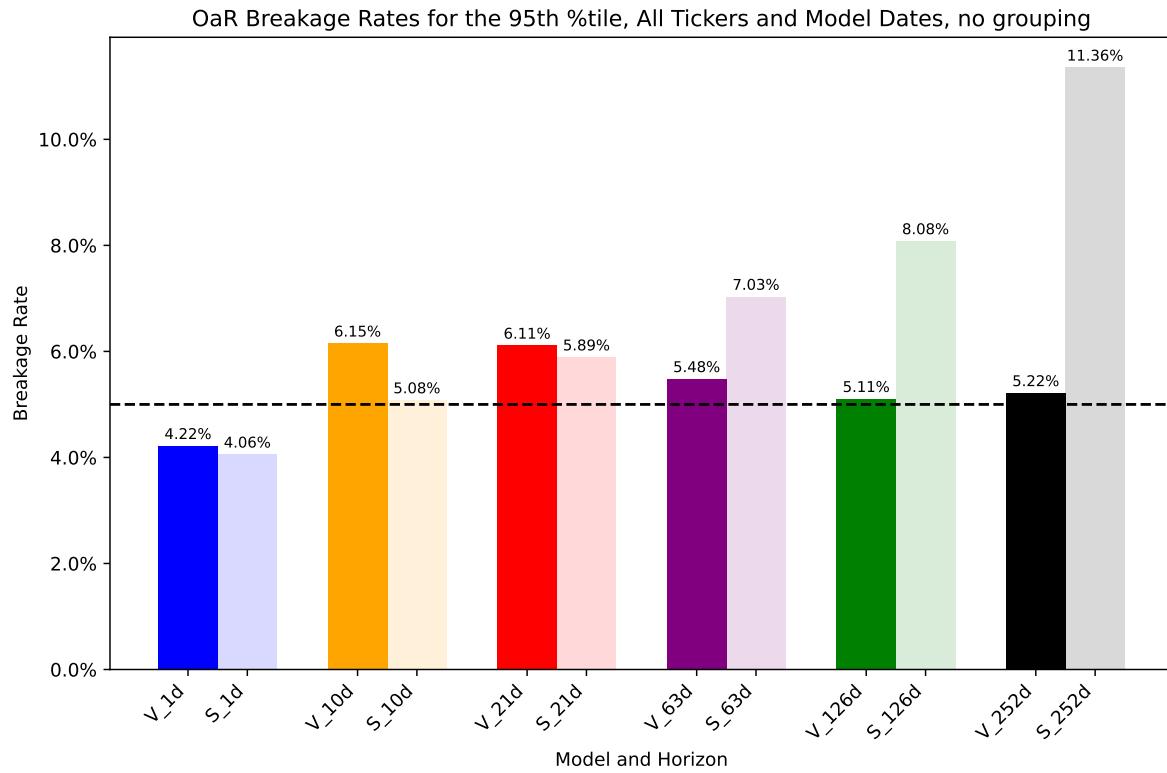
ROLOBC comparisons are made on the basis of outright ROLOBC and the alpha of Vector Model ROLOBC to underlying ticker returns (the proxy for Sigma ROLOBC). As discussed in the Introduction, ROLOBC for Sigma is presumed to be the return of the underlying ticker, and for the Vector Model it is based on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

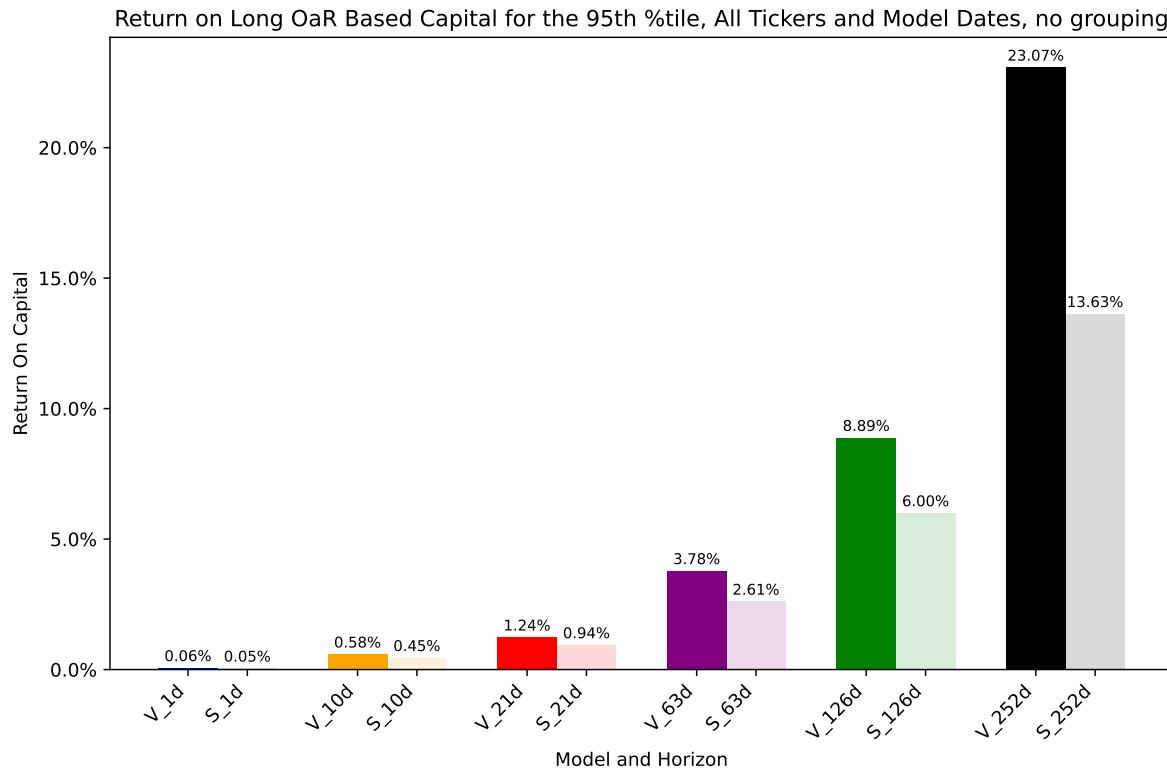
Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons $> 1d$ overlap.



All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-01-29





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%	0.09%	0.27%	0.60%	2.20%
intercept_p_value	84.15%	0.12%	0.00%	0.00%	0.00%	0.00%
slope	144.84%	119.79%	121.92%	134.57%	138.21%	153.10%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

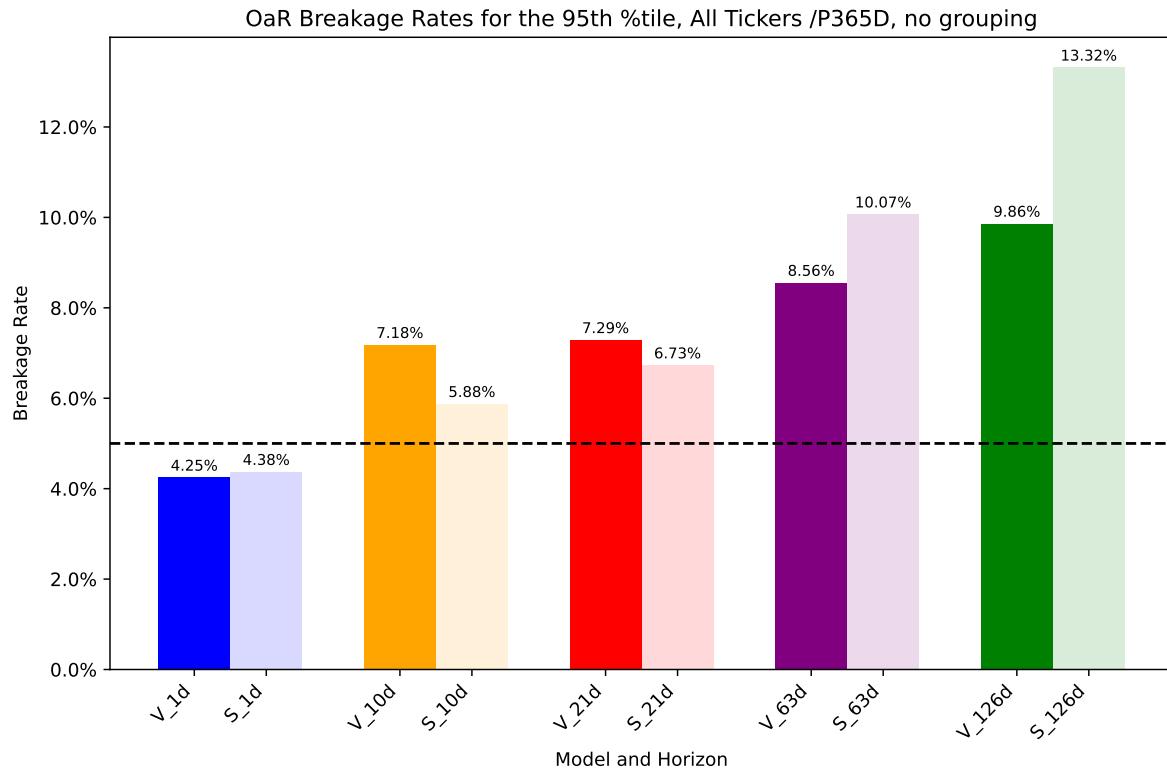
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

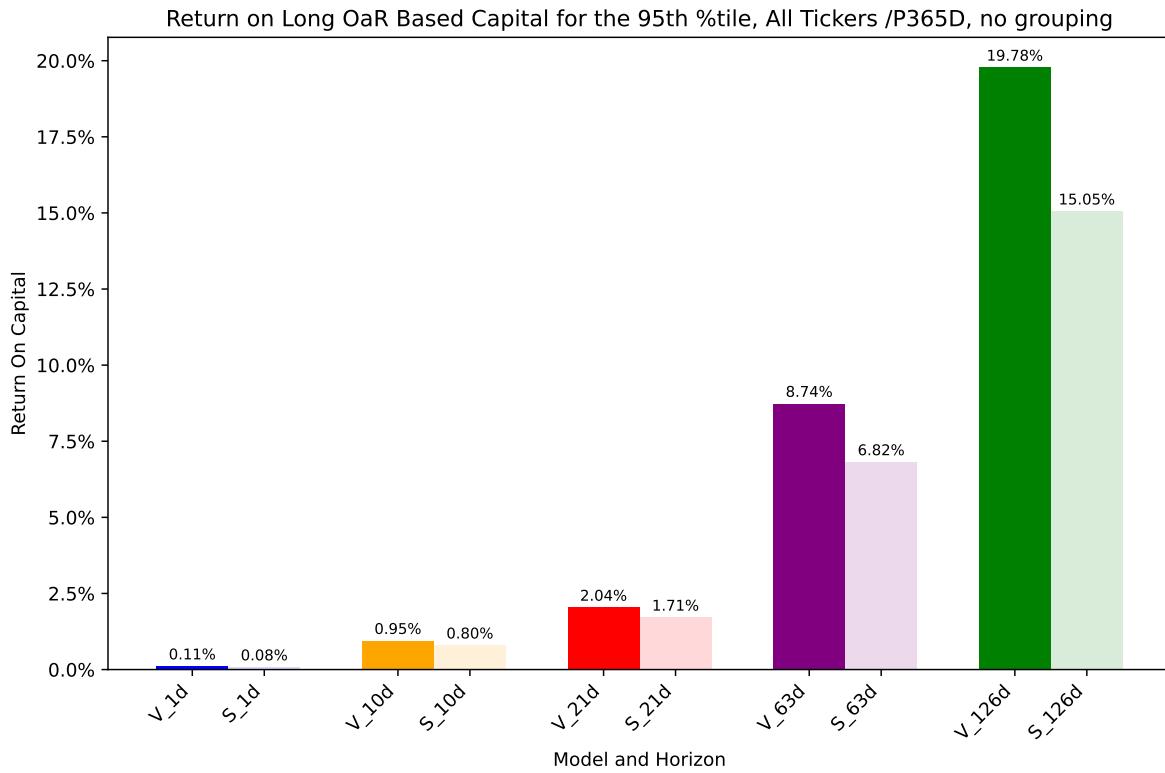
	1d	10d	21d	63d	126d	252d
intercept	-0.04%	-0.20%	-0.55%	-2.12%	-4.04%	-5.11%
intercept_p_value	0.00%	0.13%	0.01%	0.00%	0.00%	0.13%
slope	162.44%	147.01%	164.19%	179.27%	177.75%	162.38%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-01-29 through 2025-02-03





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

	1d	10d	21d	63d	126d
intercept	-0.00%	0.03%	0.02%	0.21%	1.40%
intercept_p_value	78.18%	16.44%	64.60%	0.47%	0.00%
slope	142.30%	114.73%	118.16%	125.07%	122.11%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

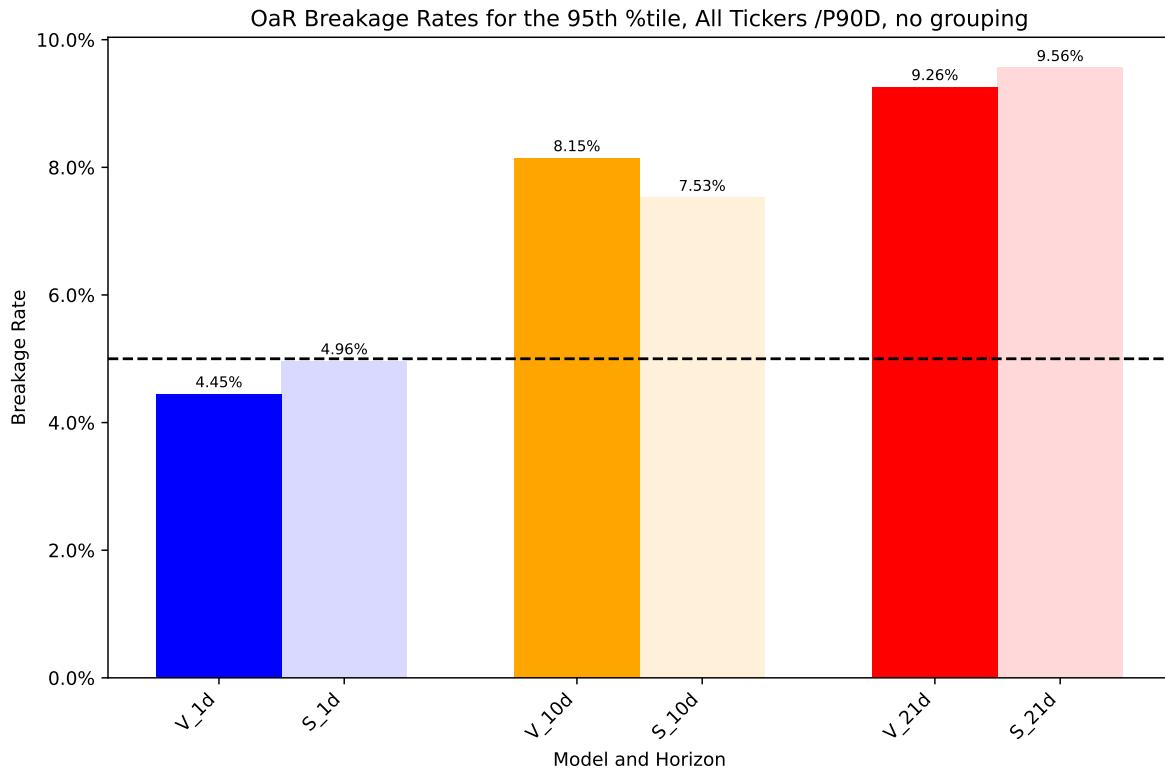
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P365D:

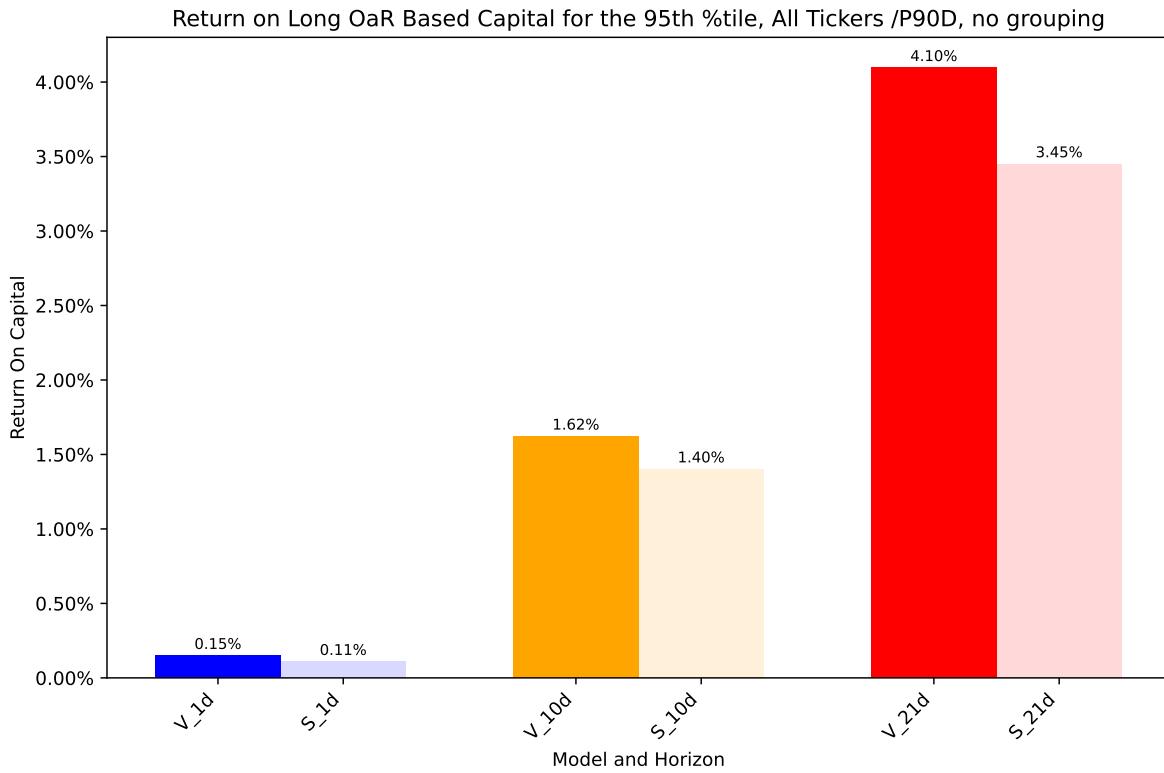
	1d	10d	21d	63d	126d
intercept	-0.00%	-0.01%	-0.07%	-1.31%	-3.31%
intercept_p_value	93.10%	94.14%	67.36%	1.62%	0.83%
slope	94.36%	112.60%	121.26%	136.26%	156.41%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-01-29 through 2025-11-03





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

	1d	10d	21d
intercept	0.01%	0.08%	0.18%
intercept_p_value	72.36%	6.38%	0.96%
slope	131.98%	110.19%	113.50%
slope_p_value	0.00%	0.00%	0.00%

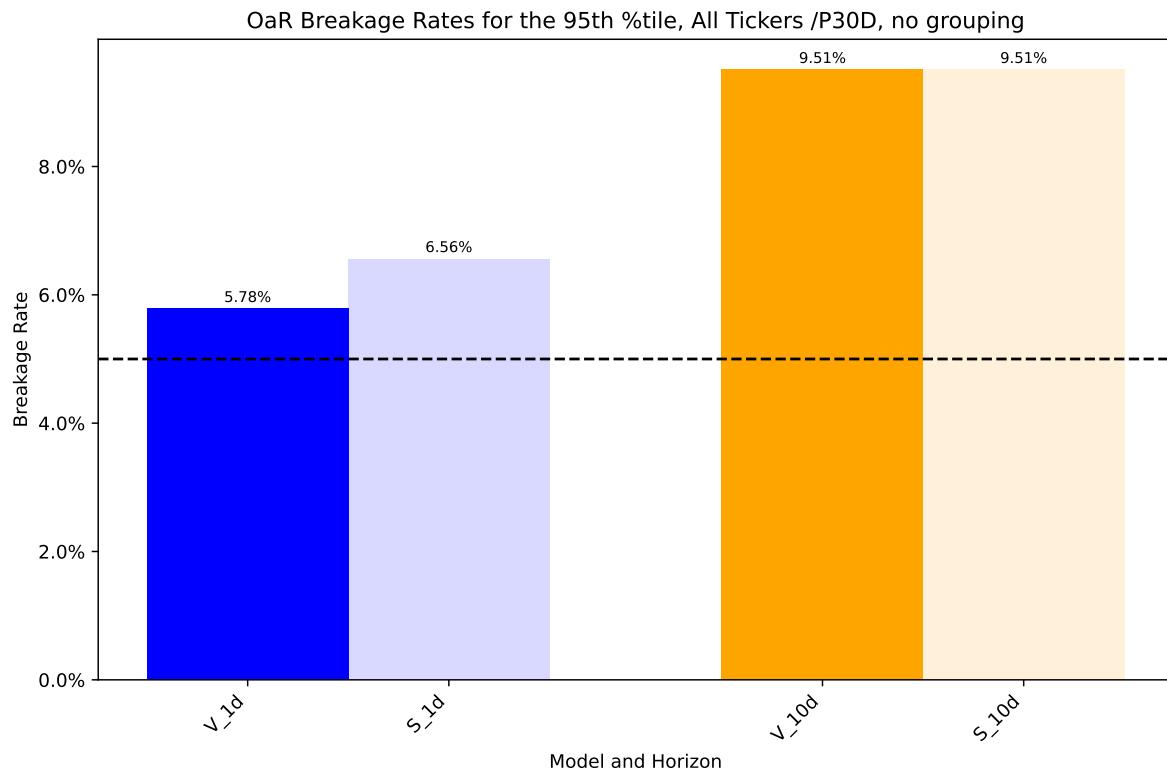
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across P90D:

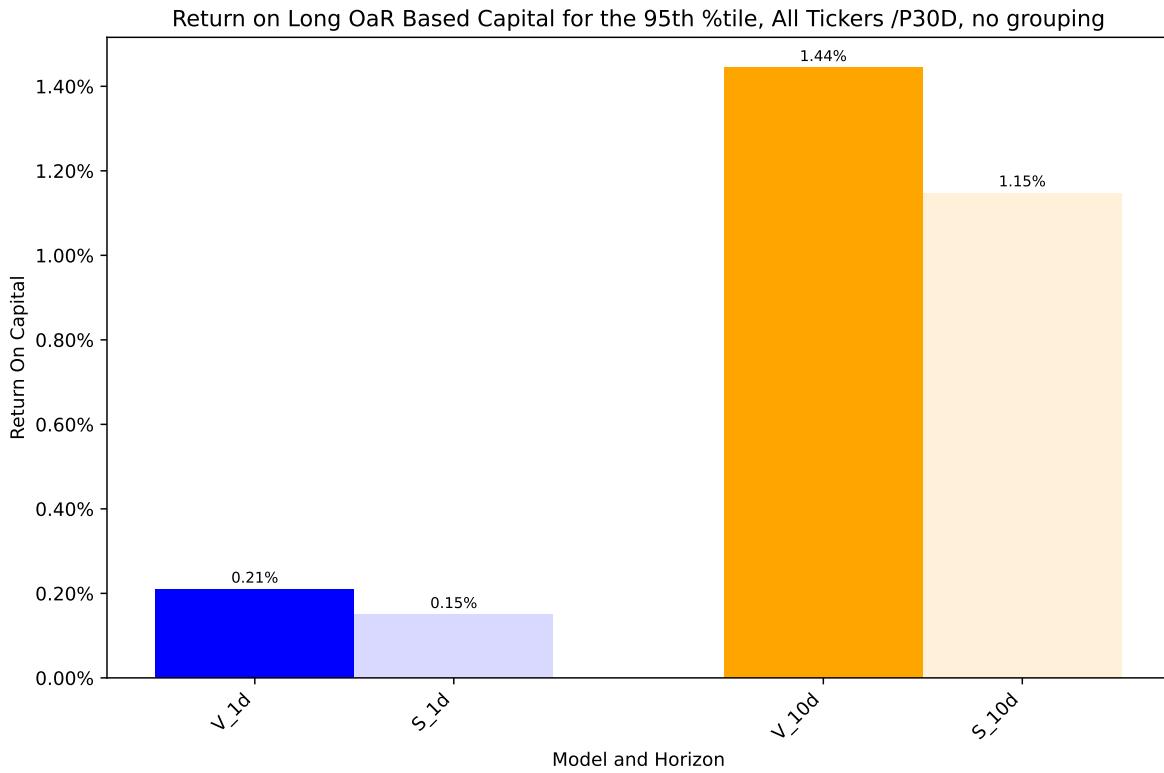
	1d	10d	21d
intercept	-0.02%	-0.08%	-0.09%
intercept_p_value	43.50%	66.82%	78.86%
slope	94.45%	101.68%	103.97%
slope_p_value	0.00%	0.00%	0.00%



Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-01-29 through 2026-01-02





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

	1d	10d
intercept	0.03%	0.18%
intercept_p_value	33.44%	6.86%
slope	121.27%	110.04%
slope_p_value	0.00%	0.00%

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

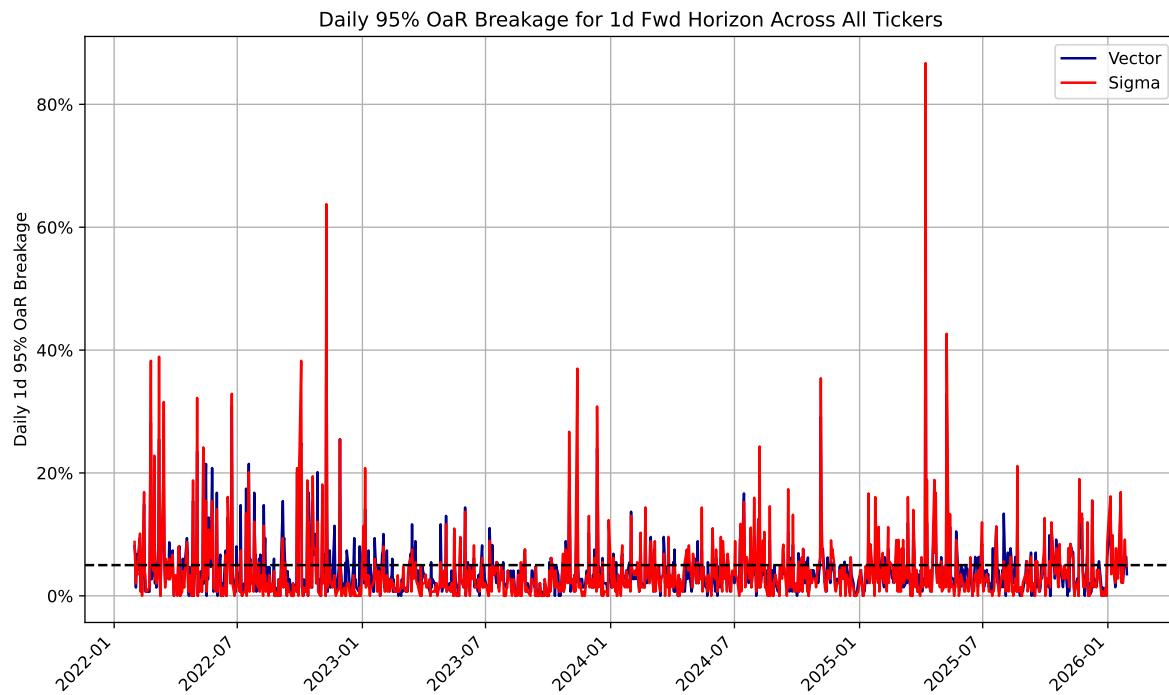
	1d	10d
intercept	-0.00%	0.07%
intercept_p_value	90.91%	78.37%
slope	93.86%	104.16%
slope_p_value	0.00%	0.00%

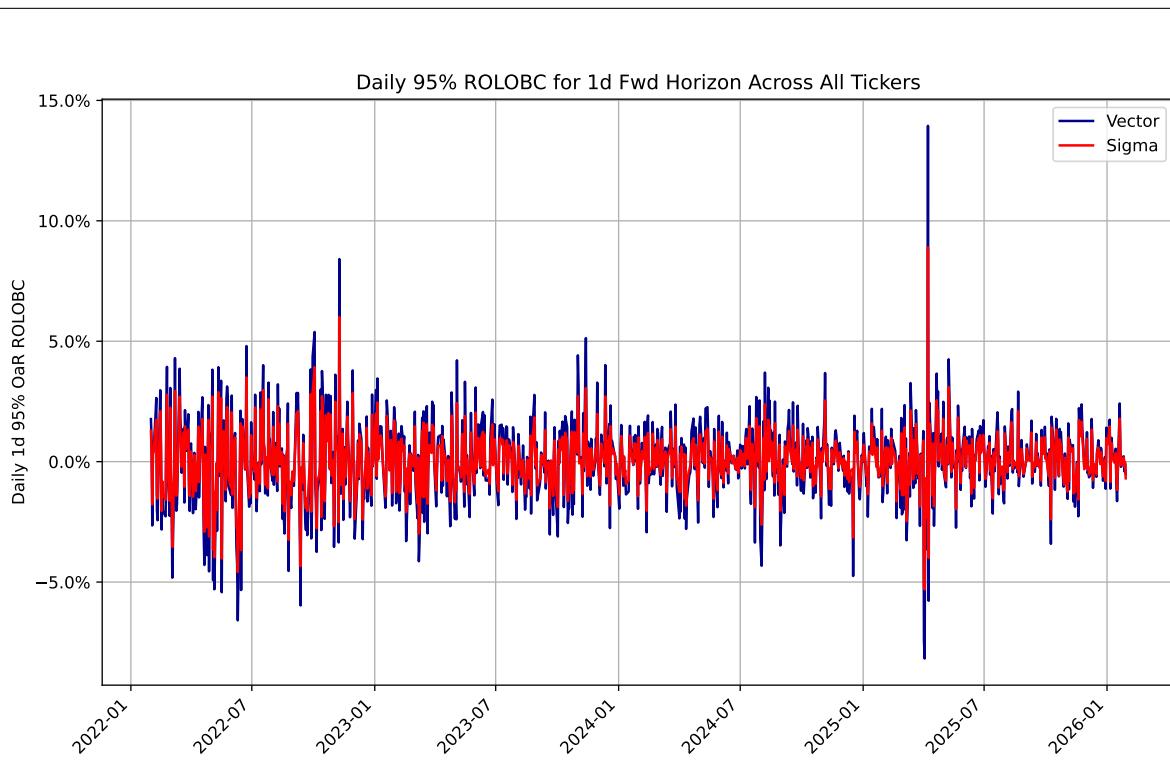


Daily Performance

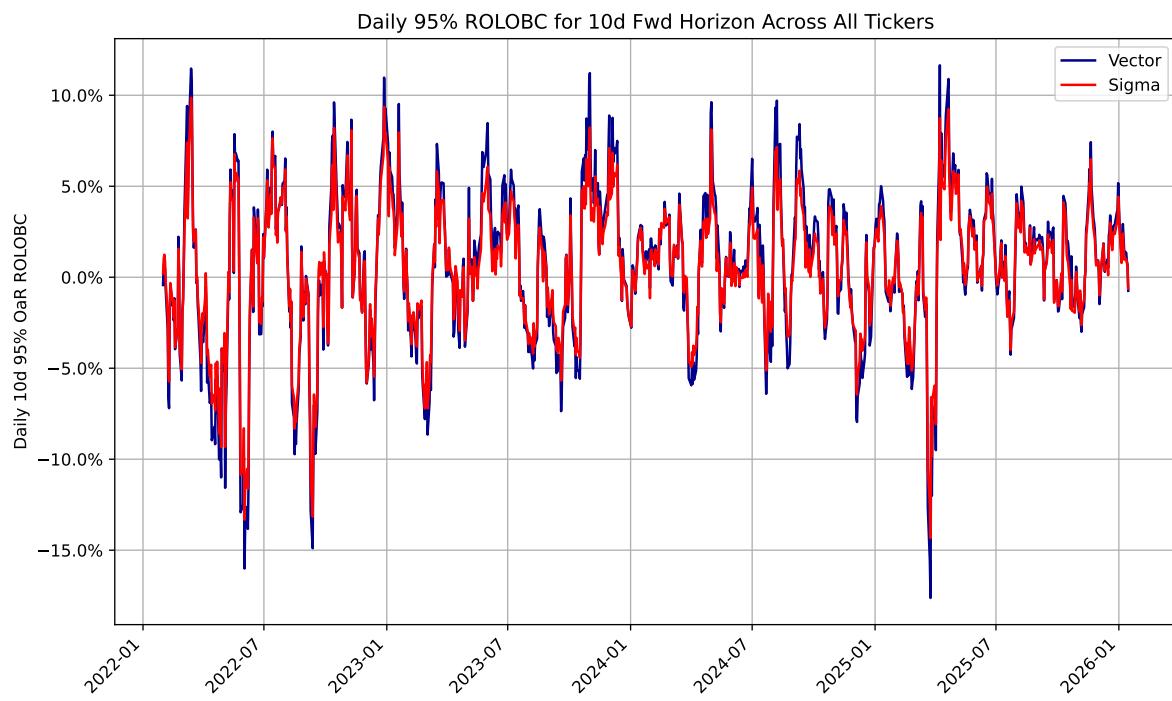
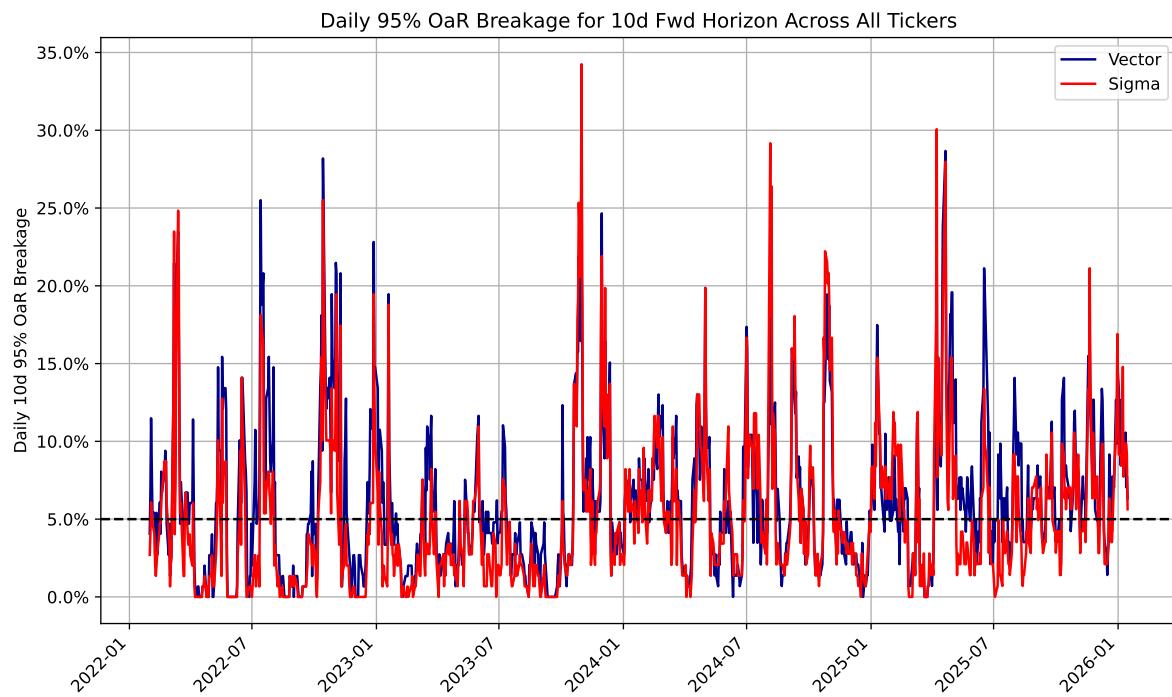
Here we look at the daily breakage and ROLOBC statistics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROLOBC outliers.

1d Horizon

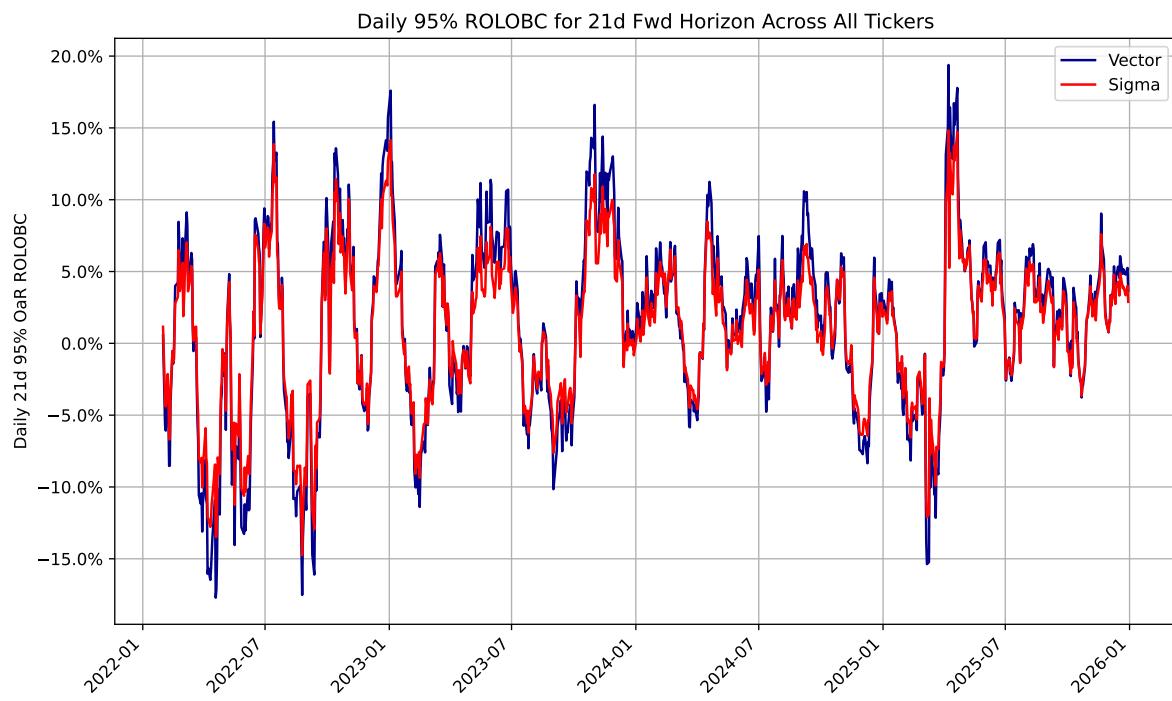
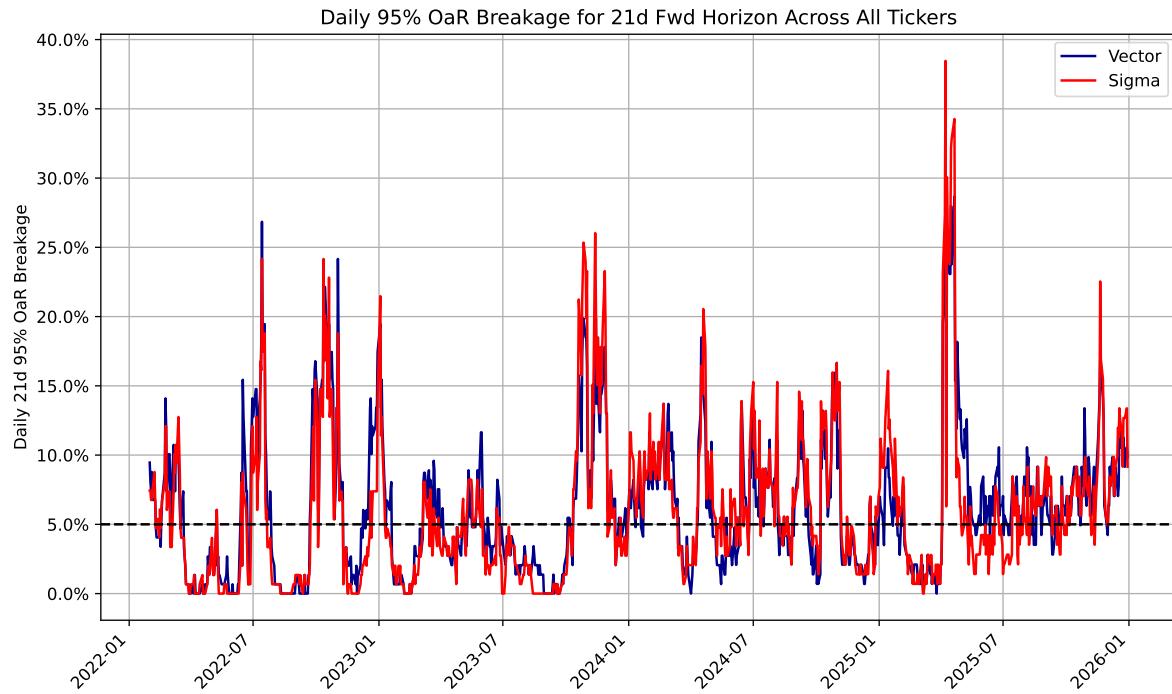




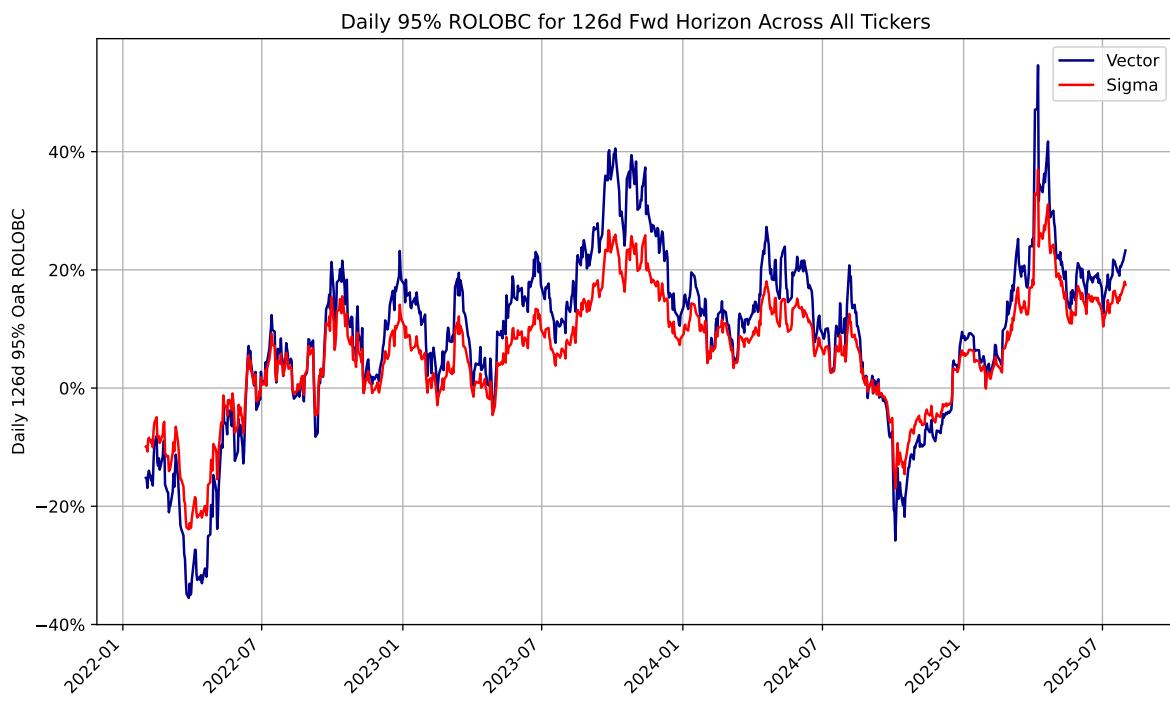
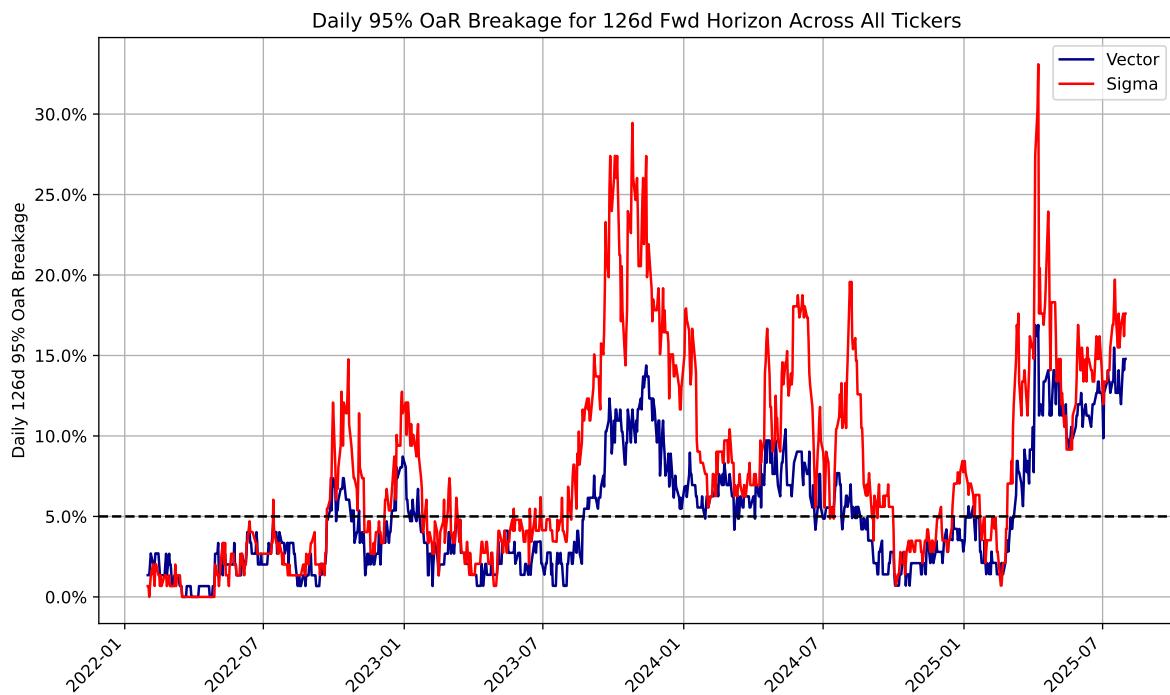
10d Horizon



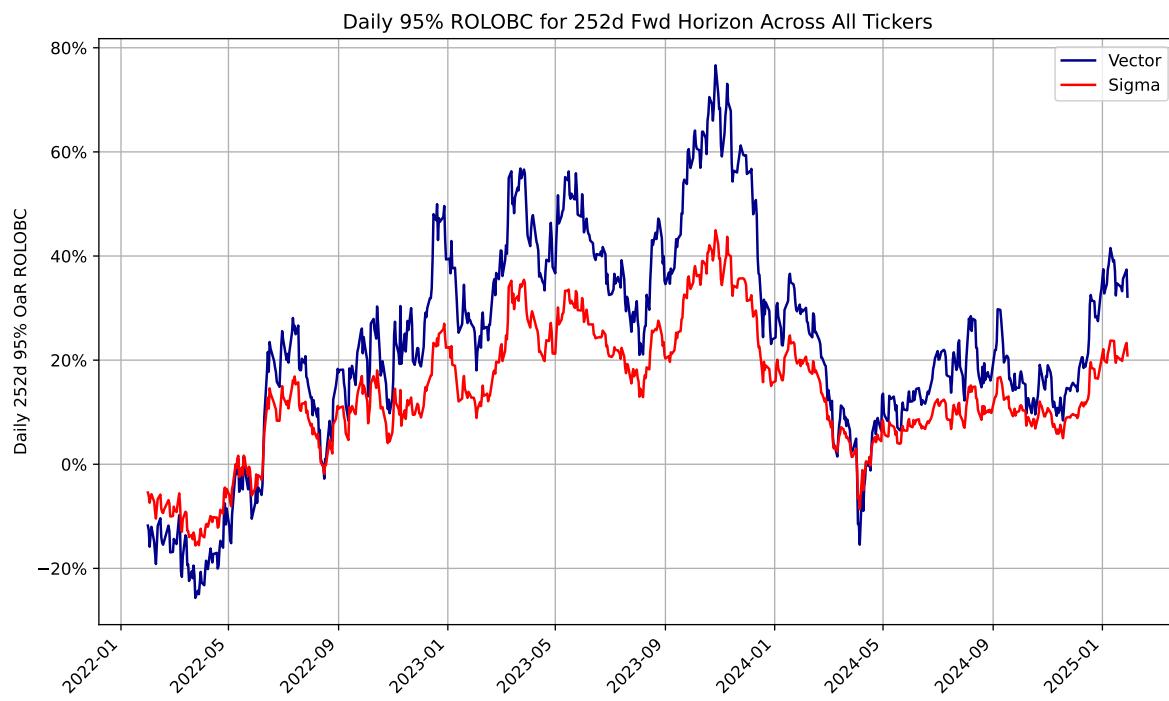
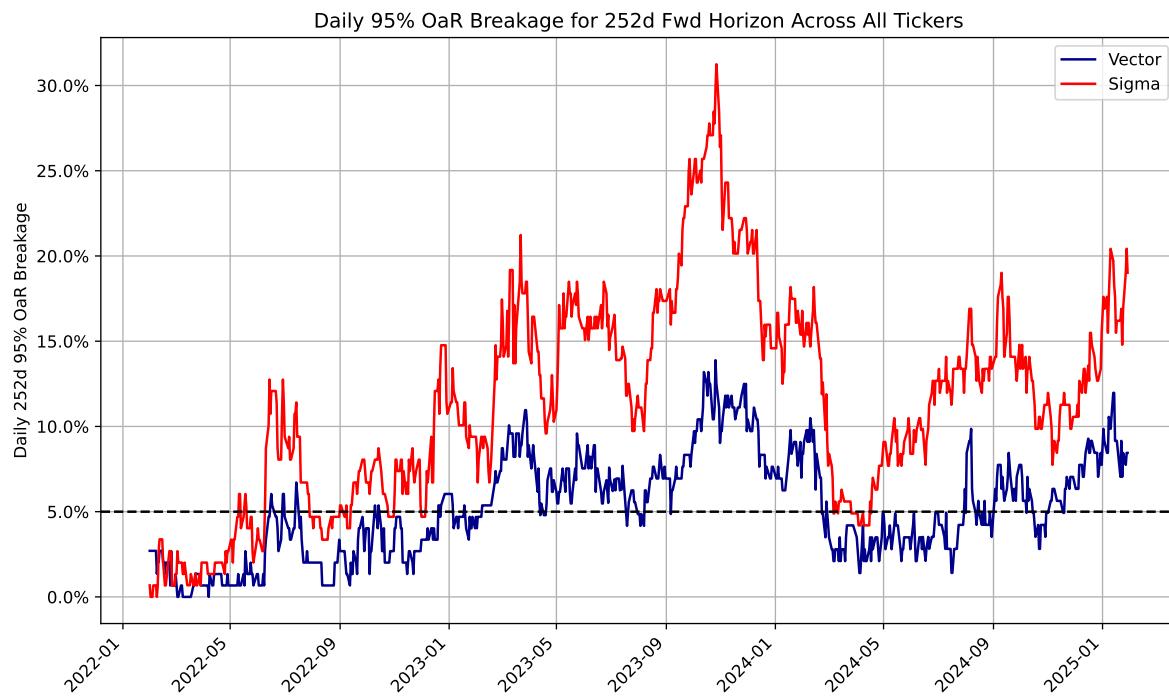
21d Horizon



63d Horizon



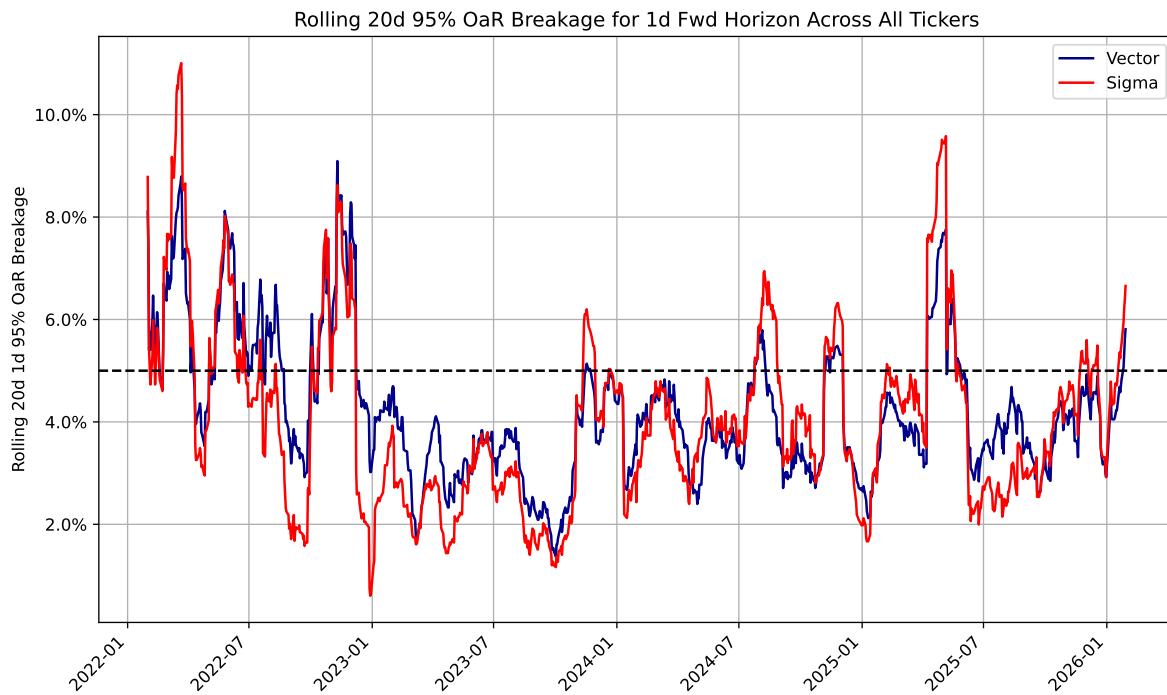
252d Horizon

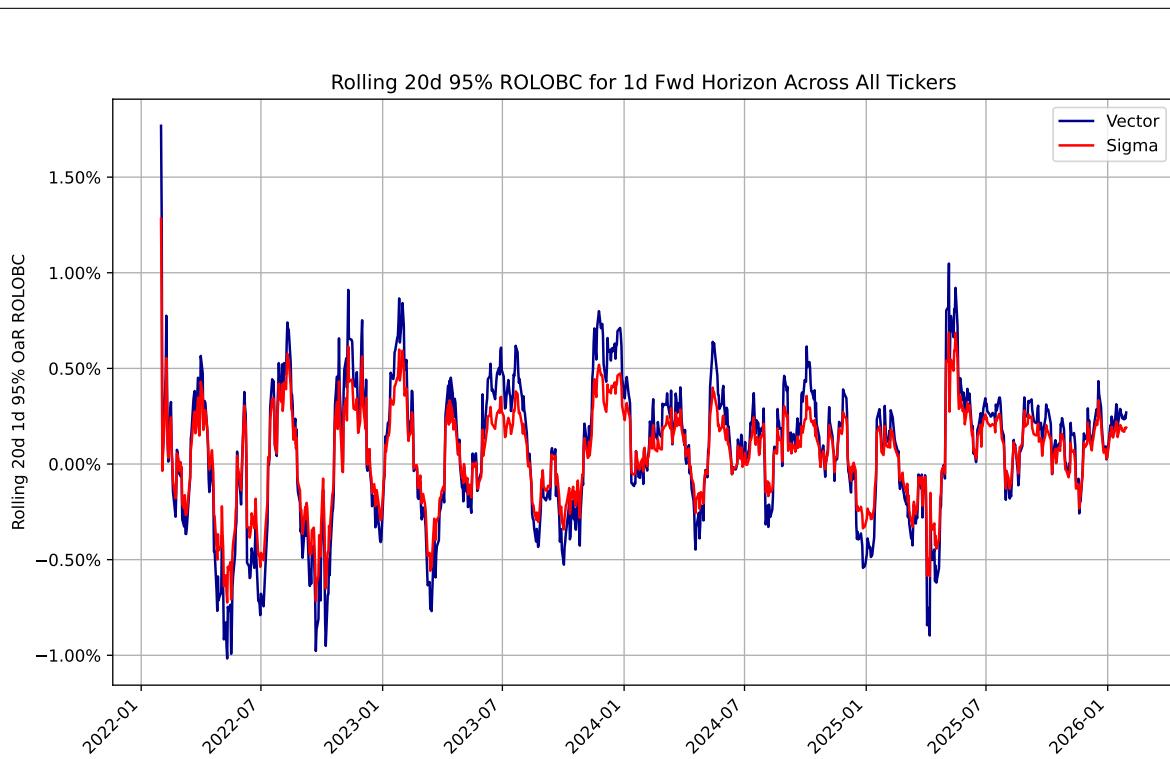


Rolling 20d Performance

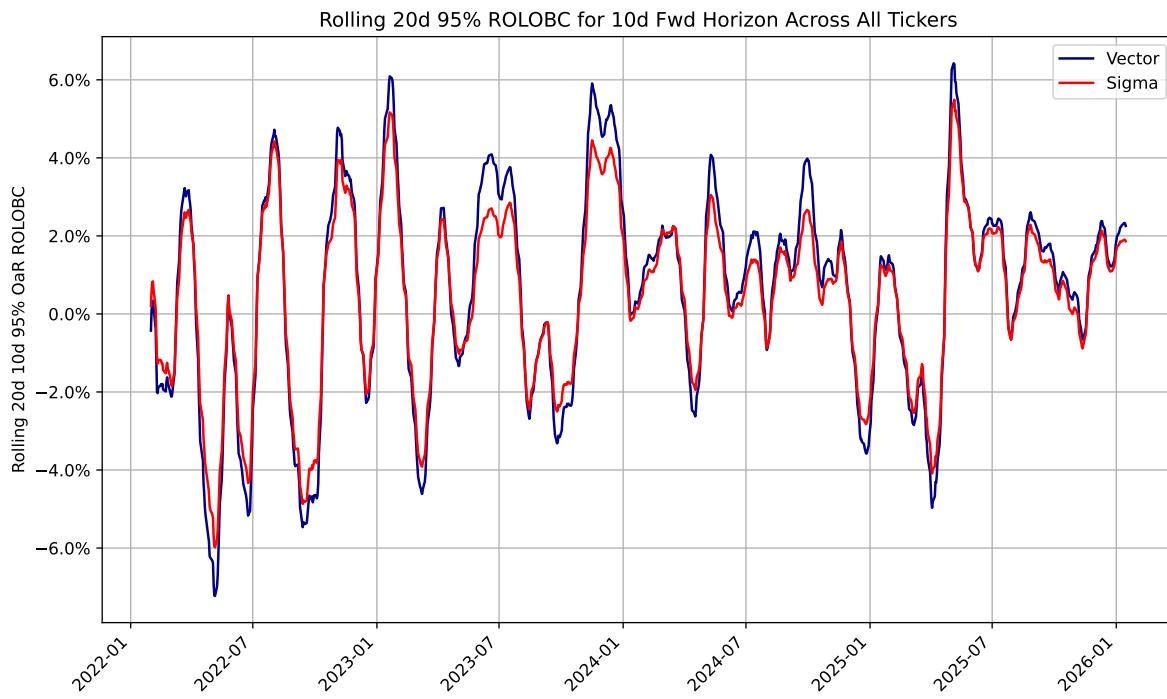
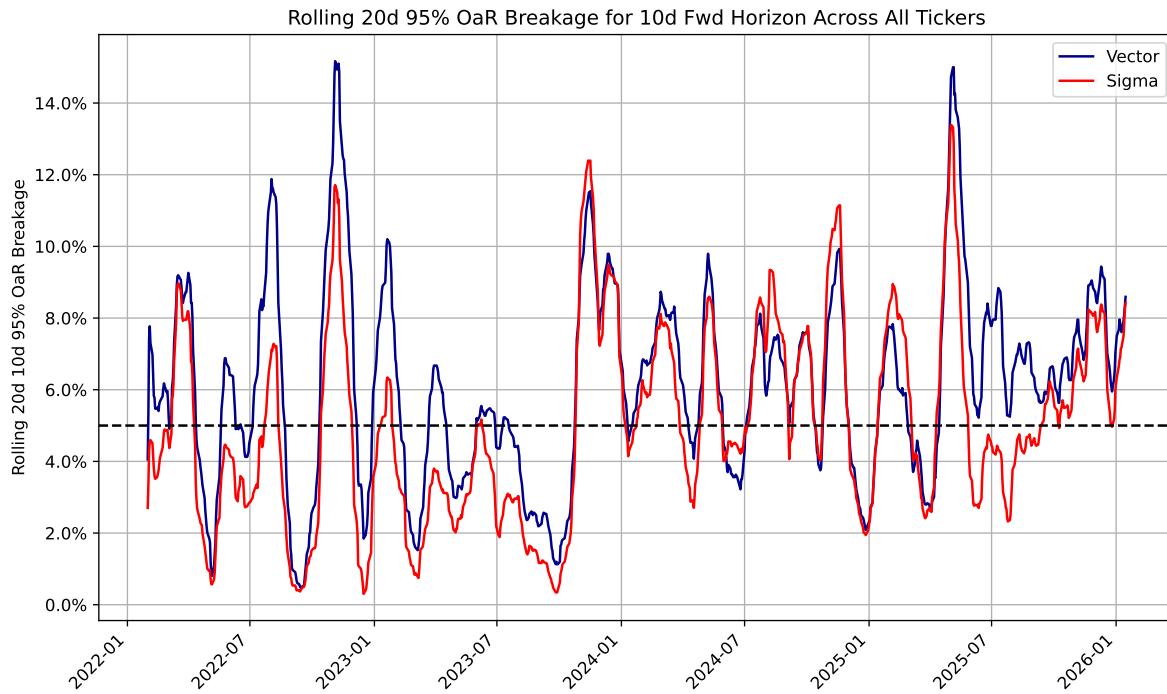
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statistics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

1d Horizon

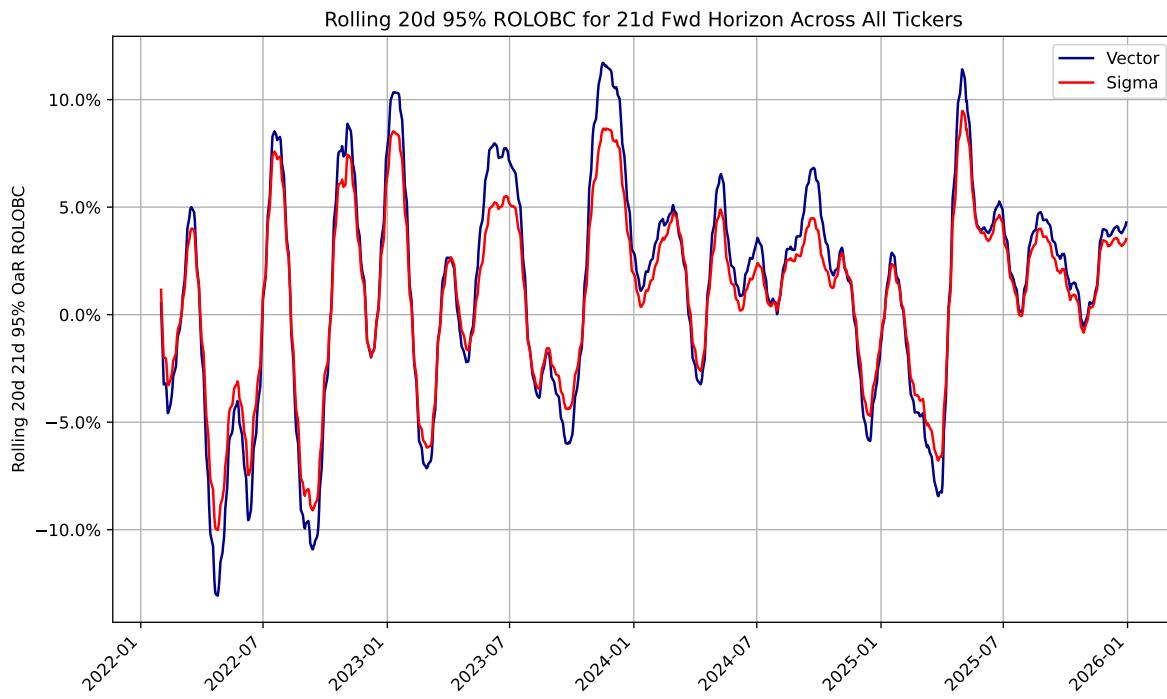
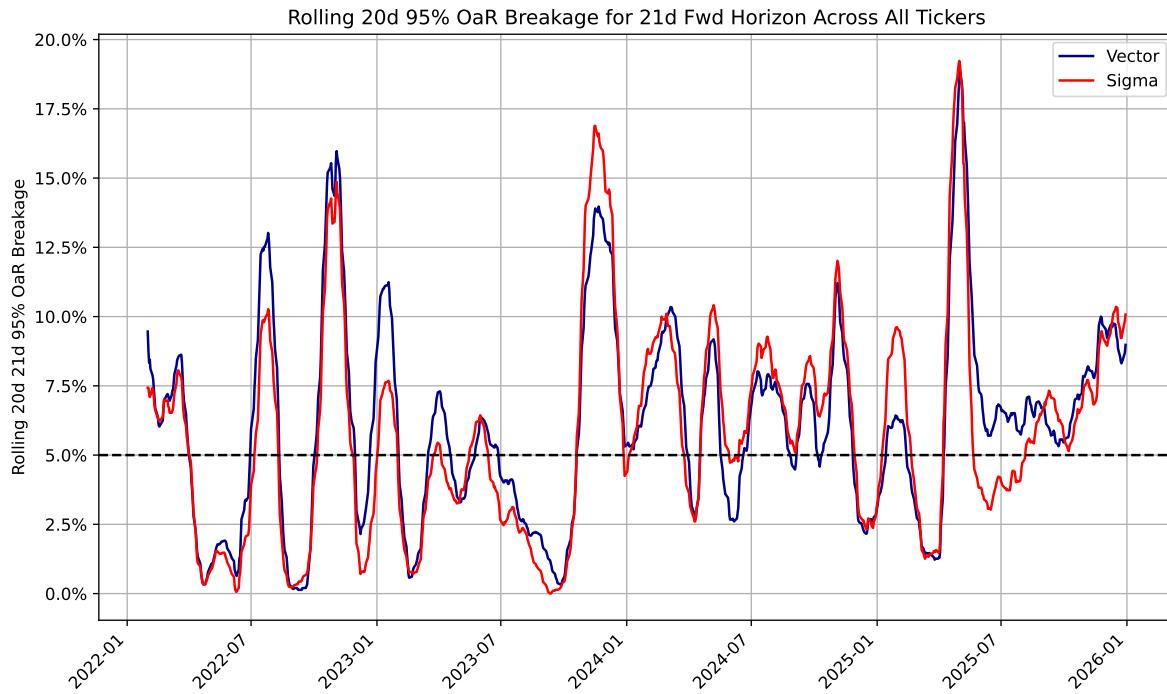




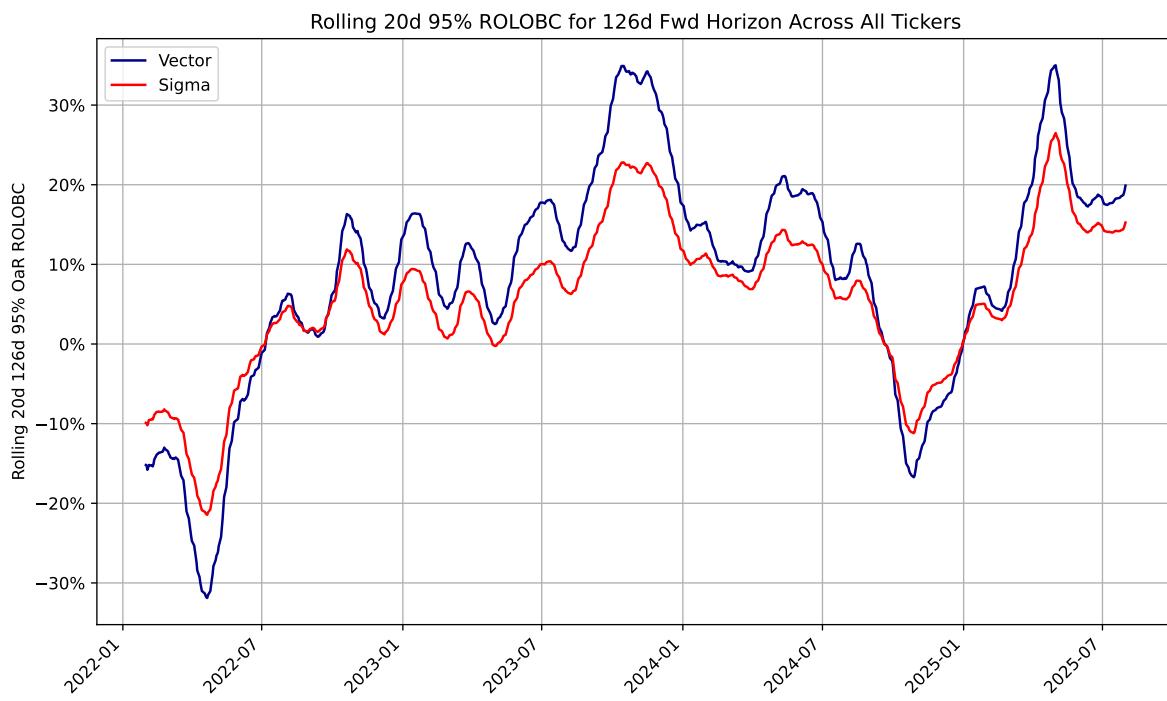
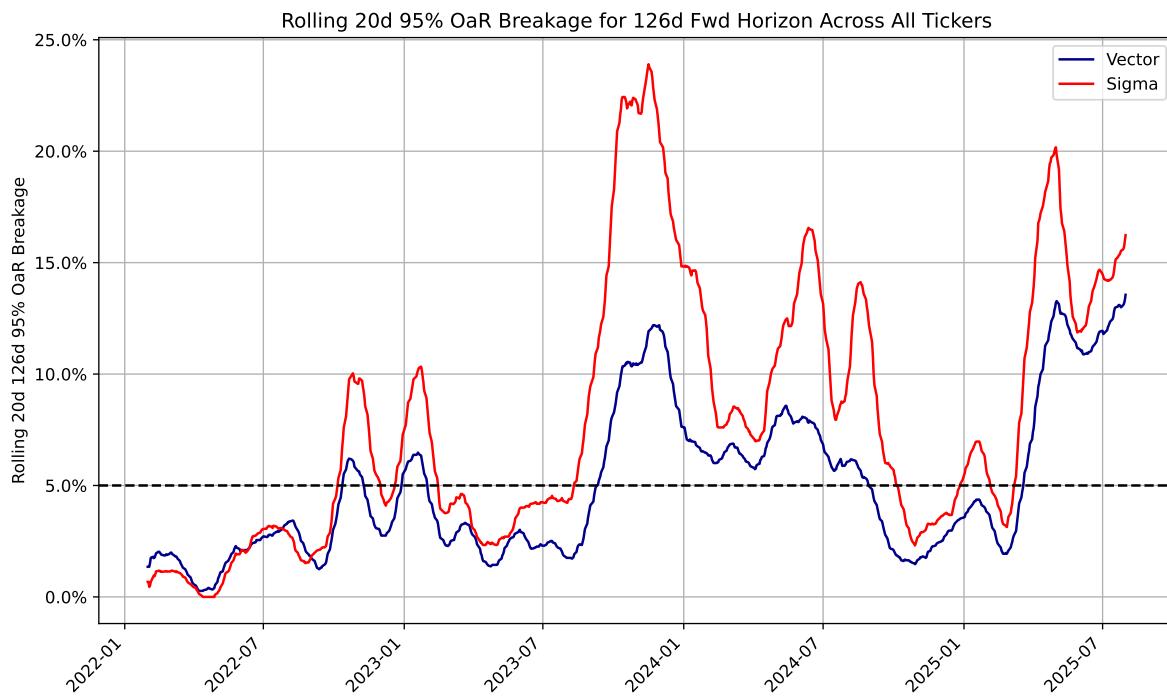
10d Horizon



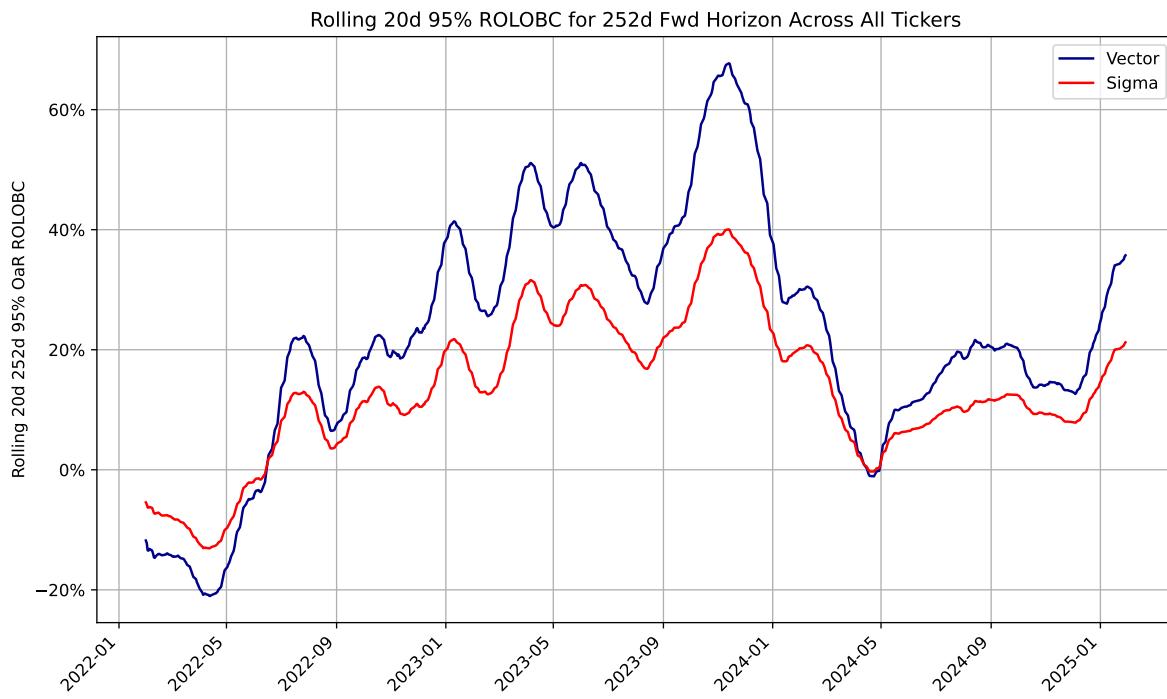
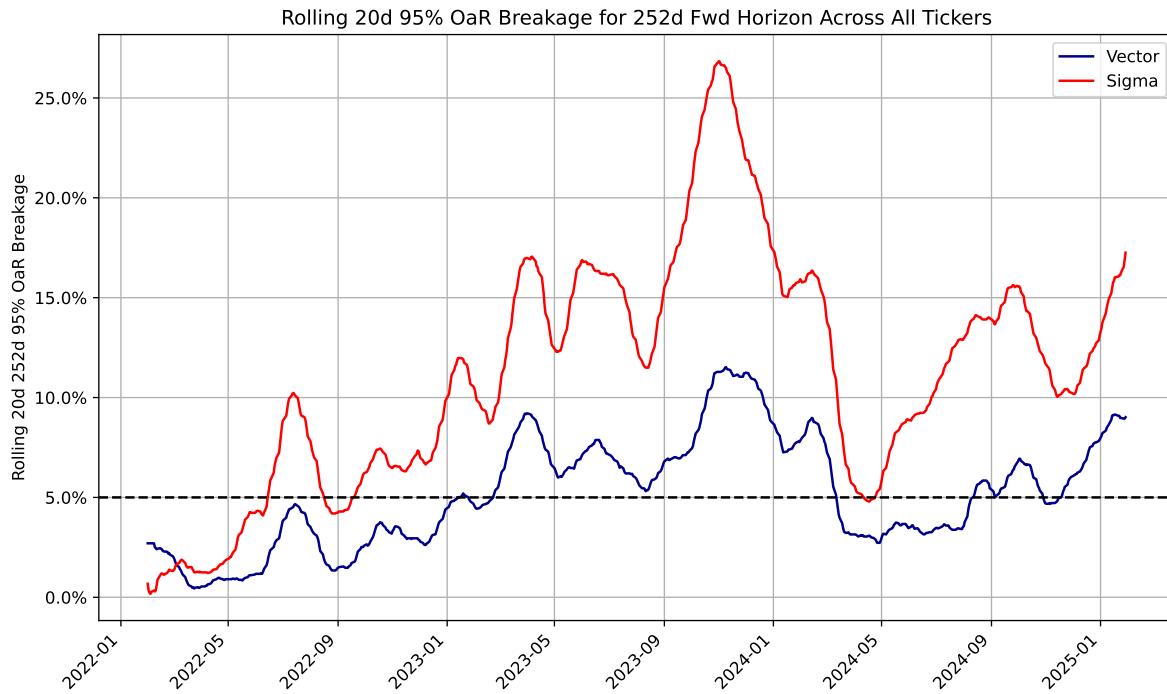
21d Horizon



63d Horizon



252d Horizon



Top 30 Tickers By OaR Breakage

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SBNY	16.55%	VST	9.27%
1.0	MSTR	15.65%	SLV	8.28%
1.0	SLV	13.07%	GLD	7.48%
1.0	SIVBQ	12.95%	WDC	7.38%
1.0	GME	12.16%	MU	7.38%
1.0	CHTR	10.37%	MSTR	6.58%
1.0	VST	10.27%	AVGO	6.58%
1.0	FRCB	10.07%	NVDA	6.48%
1.0	AVGO	10.07%	NEM	5.98%
1.0	META	9.67%	AMAT	5.88%
1.0	GNRC	9.67%	CAH	5.88%
1.0	B	9.37%	B	5.78%
1.0	HLT	8.47%	GBTC	5.68%
1.0	GILD	8.47%	TEVA	5.68%
1.0	ZTS	8.47%	PWR	5.58%
1.0	BUD	7.78%	PHM	5.58%
1.0	NFLX	7.68%	TRGP	5.58%
1.0	ORCL	7.48%	ACGL	5.48%
1.0	TEVA	7.38%	ON	5.38%
1.0	CMA	7.38%	AMGN	5.38%
1.0	ACGL	7.28%	NVS	5.38%
1.0	INTU	7.18%	DHI	5.38%
1.0	AA	7.08%	FCX	5.38%
1.0	TSLA	6.98%	TXN	5.28%
1.0	BALL	6.98%	HLT	5.28%



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 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	19.52%	SLV	13.39%
10.0	SLV	18.03%	GLD	12.07%
10.0	META	17.61%	VST	12.07%
10.0	B	16.2%	CAH	11.37%
10.0	VST	16.0%	LLY	11.17%
10.0	TEVA	15.79%	NVDA	10.76%
10.0	AVGO	15.39%	MU	10.46%
10.0	WDC	14.89%	ORCL	10.46%
10.0	HCA	14.79%	B	10.26%
10.0	KALU	14.59%	GS	9.76%
10.0	SIVBQ	13.97%	WDC	9.56%
10.0	GILD	13.88%	TEVA	9.26%
10.0	GME	13.28%	NVS	9.05%
10.0	IRM	12.98%	TRGP	8.85%
10.0	CHTR	12.88%	IRM	8.35%
10.0	ORCL	12.07%	GE	8.25%
10.0	GWW	11.77%	MSTR	8.05%
10.0	GNRNC	11.67%	AVGO	8.05%
10.0	NEM	11.57%	TSLA	7.95%
10.0	NVS	11.57%	MUB	7.65%
10.0	GLD	11.47%	INTC	7.55%
10.0	TRGP	11.27%	ABBV	7.44%
10.0	EXPE	10.66%	NEM	7.34%
10.0	SBNY	10.66%	MS	7.24%
10.0	HD	10.36%	AMD	7.24%



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 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	AVGO	20.85%	GLD	16.99%
21.0	MSTR	20.24%	CAH	16.07%
21.0	META	17.6%	LLY	13.63%
21.0	B	17.29%	MSTR	13.43%
21.0	VST	17.09%	ORCL	13.43%
21.0	TEVA	16.89%	VST	13.12%
21.0	KALU	16.07%	TEVA	12.82%
21.0	SLV	15.17%	NVDA	12.72%
21.0	TRGP	14.65%	SLV	12.42%
21.0	NEM	14.34%	TRGP	12.41%
21.0	CHTR	14.34%	GE	12.31%
21.0	ORCL	14.24%	GS	12.0%
21.0	ISRG	14.14%	MU	11.5%
21.0	IRM	14.04%	CCL	11.19%
21.0	NVS	13.94%	AVGO	10.99%
21.0	HCA	13.94%	B	10.78%
21.0	GME	13.43%	TSLA	10.78%
21.0	WDC	13.33%	WDC	10.78%
21.0	GNRC	12.92%	AMGN	10.68%
21.0	GWW	12.82%	IRM	10.48%
21.0	GILD	12.72%	X	10.4%
21.0	EXPE	12.61%	GWW	10.27%
21.0	ETRN	12.14%	GBTC	9.97%
21.0	CAH	11.9%	NEM	9.97%
21.0	SIVBQ	11.85%	NVS	9.97%



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 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	AVGO	31.24%	NVDA	27.95%
63.0	VST	26.35%	VST	26.04%
63.0	META	25.08%	GLD	24.65%
63.0	MSTR	22.53%	CAH	24.55%
63.0	EXPE	18.7%	WDC	21.47%
63.0	GILD	18.38%	LLY	21.25%
63.0	WDC	17.96%	AVGO	20.4%
63.0	TEVA	17.85%	GBTC	19.66%
63.0	ETRN	16.7%	TRGP	19.13%
63.0	GLD	16.15%	TEVA	18.07%
63.0	IRM	15.94%	GE	17.85%
63.0	NEM	15.52%	ORCL	17.85%
63.0	TRGP	15.3%	MU	17.75%
63.0	CAH	15.2%	THC	16.79%
63.0	SLV	14.79%	ETRN	16.15%
63.0	HCA	14.35%	MSTR	15.62%
63.0	ORCL	14.03%	SLV	14.68%
63.0	KALU	13.71%	PHM	14.56%
63.0	CHTR	13.6%	GOOGL	14.45%
63.0	BUD	13.28%	GILD	14.13%
63.0	B	13.07%	CMG	14.13%
63.0	WFC	12.96%	AMD	13.92%
63.0	MSI	11.26%	META	13.5%
63.0	MU	11.26%	B	13.39%
63.0	THC	11.16%	CCL	13.07%
63.0	SIVBQ	11.11%	TMUS	12.75%
63.0	GOOGL	10.84%	GS	12.75%
63.0	LW	10.52%	MRK	12.65%
63.0	TMUS	10.1%	DHI	12.43%
63.0	GME	9.99%	WFC	12.11%



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 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	39.64%	GLD	44.42%
126.0	AVGO	36.22%	NVDA	42.82%
126.0	MSTR	32.8%	VST	39.52%
126.0	GLD	27.33%	GE	37.59%
126.0	TRGP	25.63%	AVGO	34.51%
126.0	META	24.49%	CAH	29.27%
126.0	IRM	23.46%	MSTR	27.11%
126.0	TEVA	23.01%	TRGP	26.99%
126.0	CAH	20.5%	LLY	25.74%
126.0	TMUS	19.93%	GILD	24.6%
126.0	GILD	19.36%	ORCL	23.8%
126.0	WDC	19.25%	PHM	23.46%
126.0	NEM	18.91%	GS	22.44%
126.0	NVDA	18.22%	NEM	22.44%
126.0	LW	18.22%	THC	21.87%
126.0	GOOGL	17.54%	WDC	21.07%
126.0	EXPE	16.97%	TEVA	20.73%
126.0	GE	16.4%	MU	19.93%
126.0	MSI	15.95%	GBTC	19.59%
126.0	LLY	15.26%	META	19.36%
126.0	SLV	11.73%	IRM	19.25%
126.0	WFC	11.73%	TMUS	18.56%
126.0	B	10.71%	ACGL	16.86%
126.0	THC	10.48%	HSBC	16.74%
126.0	ORCL	10.25%	JPM	16.51%
126.0	ACGL	9.91%	MSI	15.49%
126.0	MU	9.68%	NFLX	15.15%
126.0	CMA	9.68%	T	14.58%
126.0	ELAN	9.6%	COST	14.24%
126.0	VFC	9.57%	CMG	14.24%



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 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	VST	63.03%	AVGO	75.93%
252.0	AVGO	61.17%	GE	75.8%
252.0	MSTR	48.67%	VST	60.24%
252.0	GLD	40.56%	NVDA	58.78%
252.0	NVDA	36.7%	GLD	50.4%
252.0	META	34.57%	MSTR	48.54%
252.0	TRGP	34.44%	PHM	47.87%
252.0	IRM	31.25%	LLY	45.08%
252.0	LLY	24.87%	JPM	43.09%
252.0	TEVA	24.2%	GBTC	42.42%
252.0	CAH	23.54%	META	41.76%
252.0	GILD	22.61%	GS	41.76%
252.0	GS	21.01%	TRGP	38.56%
252.0	TMUS	19.02%	CAH	37.1%
252.0	GE	18.48%	NFLX	36.7%
252.0	TDG	17.29%	ORCL	36.7%
252.0	GWW	16.22%	TMUS	35.9%
252.0	WDC	14.49%	COST	34.31%
252.0	THC	13.03%	ACGL	33.91%
252.0	NEM	11.84%	TDG	32.58%
252.0	ORCL	11.17%	GILD	27.93%
252.0	LW	11.17%	TEVA	27.66%
252.0	B	10.51%	PWR	27.39%
252.0	SLV	10.11%	HSBC	27.26%
252.0	MSI	10.11%	IRM	27.26%
252.0	WFC	9.18%	WDC	24.07%
252.0	EXPE	8.91%	MU	24.07%
252.0	HSBC	8.11%	MS	24.07%
252.0	ETRN	8.01%	THC	23.8%
252.0	GOOGL	7.85%	GWW	23.67%



P30D: 1d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SLV	47.37%	SLV	57.89%
1.0	GLD	36.84%	MU	31.58%
1.0	AA	31.58%	WDC	31.58%
1.0	GILD	31.58%	RIO	31.58%
1.0	WDC	31.58%	XOM	26.32%
1.0	FCX	31.58%	AMAT	26.32%
1.0	MSI	26.32%	INTC	26.32%
1.0	BUD	21.05%	BHP	21.05%
1.0	INTC	21.05%	NEM	21.05%
1.0	AMZN	21.05%	GLD	21.05%
1.0	FITB	21.05%	B	15.79%
1.0	MU	21.05%	FCX	15.79%
1.0	SBUX	15.79%	CSTM	15.79%
1.0	LEN	15.79%	HON	15.79%
1.0	GNRC	15.79%	AZO	15.79%
1.0	NVS	15.79%	T	15.79%
1.0	ON	15.79%	GILD	15.79%
1.0	VFC	15.79%	AMGN	15.79%
1.0	BALL	15.79%	GNRC	15.79%
1.0	AMGN	15.79%	HD	15.79%
1.0	TDG	15.79%	NVS	15.79%
1.0	T	10.53%	CSCO	10.53%
1.0	GWW	10.53%	COST	10.53%
1.0	CSTM	10.53%	META	10.53%
1.0	XOM	10.53%	DHI	10.53%
1.0	HSBC	10.53%	MS	10.53%
1.0	META	10.53%	MOS	10.53%
1.0	TXN	10.53%	LUMN	10.53%
1.0	CLF	10.53%	FSUGY	10.53%
1.0	MSFT	10.53%	LEN	10.53%



P30D: 10d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	WDC	100.0%	SLV	90.0%
10.0	MU	100.0%	XOM	80.0%
10.0	GLD	100.0%	GLD	80.0%
10.0	GILD	80.0%	WDC	80.0%
10.0	XOM	80.0%	NEM	80.0%
10.0	SLV	80.0%	AZO	70.0%
10.0	FCX	80.0%	MU	70.0%
10.0	BUD	80.0%	GILD	60.0%
10.0	NEM	60.0%	RIO	50.0%
10.0	SBUX	60.0%	CSTM	50.0%
10.0	TXN	50.0%	COST	50.0%
10.0	TDG	40.0%	ORLY	50.0%
10.0	GNRC	40.0%	BUD	40.0%
10.0	RIO	40.0%	AMD	40.0%
10.0	HD	40.0%	HD	40.0%
10.0	CSTM	40.0%	BHP	40.0%
10.0	CLF	30.0%	INTC	40.0%
10.0	HSBC	30.0%	TRGP	30.0%
10.0	LEN	30.0%	AMAT	30.0%
10.0	INTC	30.0%	HON	30.0%
10.0	HON	20.0%	HSBC	30.0%
10.0	NVS	10.0%	MNST	30.0%
10.0	COST	10.0%	GNRC	30.0%
10.0	UAA	10.0%	TXN	30.0%
10.0	IRM	10.0%	META	20.0%
10.0	MSI	10.0%	B	20.0%
10.0	GME	10.0%	FCX	10.0%
10.0	B	10.0%	NVS	10.0%
10.0	AZO	10.0%	IRM	10.0%
10.0	FITB	10.0%	PWR	10.0%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SLV	31.67%	SLV	43.33%
1.0	AA	26.67%	WDC	21.67%
1.0	WDC	25.0%	MU	20.0%
1.0	GILD	21.67%	NEM	18.33%
1.0	MU	20.0%	AA	16.67%
1.0	CLF	18.33%	RIO	15.0%
1.0	NVS	16.67%	AMAT	15.0%
1.0	GLD	16.67%	B	15.0%
1.0	AMZN	13.33%	INTC	13.33%
1.0	GWW	13.33%	XOM	11.67%
1.0	GNRCC	13.33%	NVS	11.67%
1.0	EXPE	11.67%	TEVA	10.0%
1.0	BUD	11.67%	BHP	10.0%
1.0	TXN	11.67%	HLT	10.0%
1.0	MSI	10.0%	GLD	10.0%
1.0	SBUX	10.0%	CSTM	10.0%
1.0	FCX	10.0%	DHI	10.0%
1.0	VFC	10.0%	ELAN	10.0%
1.0	INTC	10.0%	PHM	8.33%
1.0	AMGN	10.0%	MRK	8.33%
1.0	KEY	10.0%	ORLY	8.33%
1.0	LEN	10.0%	ABBV	8.33%
1.0	B	8.33%	HD	8.33%
1.0	FITB	8.33%	GOOGL	8.33%
1.0	CMA	8.33%	AMD	8.33%
1.0	LLY	8.33%	AMGN	8.33%
1.0	META	8.33%	TXN	8.33%
1.0	ON	6.67%	AZO	8.33%
1.0	GOOGL	6.67%	FSUGY	6.67%
1.0	CSTM	6.67%	FITB	6.67%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	SLV	66.67%	SLV	82.35%
10.0	AA	52.94%	AA	45.1%
10.0	FCX	47.06%	MU	41.18%
10.0	WDC	45.1%	B	39.22%
10.0	MU	43.14%	WDC	33.33%
10.0	TXN	43.14%	NEM	31.37%
10.0	B	37.25%	AMAT	31.37%
10.0	GLD	37.25%	INTC	29.41%
10.0	KALU	33.33%	GLD	27.45%
10.0	NEM	29.41%	BHP	27.45%
10.0	EXPE	29.41%	CSTM	25.49%
10.0	CSTM	27.45%	RIO	25.49%
10.0	VFC	25.49%	KEY	23.53%
10.0	THC	23.53%	MRK	23.53%
10.0	CLF	23.53%	TEVA	21.57%
10.0	NVS	23.53%	XOM	21.57%
10.0	BUD	21.57%	COST	19.61%
10.0	USB	21.57%	KALU	19.61%
10.0	TDG	21.57%	JAZZ	19.61%
10.0	GILD	21.57%	TXN	17.65%
10.0	GWW	21.57%	FITB	15.69%
10.0	LEN	21.57%	HD	15.69%
10.0	HSBC	21.57%	USB	15.69%
10.0	BIIB	19.61%	HSBC	15.69%
10.0	SBUX	19.61%	AZO	15.69%
10.0	GNRC	19.61%	GOOGL	15.69%
10.0	LLY	19.61%	LEN	15.69%
10.0	AMZN	19.61%	BA	15.69%
10.0	JAZZ	19.61%	PHM	13.73%
10.0	INTC	19.61%	FCX	13.73%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	SLV	92.5%	SLV	97.5%
21.0	AA	72.5%	B	75.0%
21.0	KALU	72.5%	AA	70.0%
21.0	FCX	72.5%	RIO	65.0%
21.0	WDC	60.0%	MU	65.0%
21.0	RIO	60.0%	FCX	60.0%
21.0	GLD	60.0%	CSTM	55.0%
21.0	B	57.5%	NEM	52.5%
21.0	MU	57.5%	HSBC	52.5%
21.0	TXN	55.0%	KALU	47.5%
21.0	NVS	52.5%	TEVA	42.5%
21.0	HSBC	42.5%	BA	40.0%
21.0	EXPE	42.5%	WDC	40.0%
21.0	NEM	37.5%	KEY	37.5%
21.0	USB	37.5%	CCL	35.0%
21.0	VFC	37.5%	GLD	32.5%
21.0	CLF	30.0%	AMAT	27.5%
21.0	GWW	30.0%	USB	27.5%
21.0	TEVA	30.0%	JAZZ	25.0%
21.0	CMA	30.0%	INTC	25.0%
21.0	TDG	27.5%	XOM	25.0%
21.0	JAZZ	25.0%	COST	25.0%
21.0	BUD	25.0%	FITB	22.5%
21.0	KEY	20.0%	BHP	20.0%
21.0	GNRNC	20.0%	GS	17.5%
21.0	MNST	17.5%	EXPE	17.5%
21.0	INTC	15.0%	UAA	15.0%
21.0	UAA	15.0%	BMY	15.0%
21.0	BIIB	15.0%	HON	15.0%
21.0	CCL	12.5%	MRK	12.5%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	GILD	21.69%	SLV	16.94%
1.0	SLV	20.16%	WDC	12.45%
1.0	WDC	14.46%	NEM	10.84%
1.0	MU	12.05%	MU	10.84%
1.0	NVS	11.65%	GLD	10.44%
1.0	CLF	10.44%	B	10.04%
1.0	ZTS	10.04%	INTC	9.24%
1.0	BUD	10.04%	AZN	8.43%
1.0	TSLA	10.04%	HLT	8.43%
1.0	ORLY	10.04%	NVS	8.03%
1.0	NEM	10.04%	GILD	7.63%
1.0	AA	9.64%	AA	7.63%
1.0	META	9.24%	CAH	7.23%
1.0	INTC	9.24%	AZO	7.23%
1.0	TXN	9.24%	HSBC	7.23%
1.0	GLD	8.84%	DHI	6.83%
1.0	AMZN	8.84%	KALU	6.83%
1.0	VFC	8.43%	ORLY	6.83%
1.0	GNRC	8.03%	BIIB	6.43%
1.0	AVGO	8.03%	PHM	6.43%
1.0	UNH	7.63%	RIO	6.43%
1.0	VZ	7.63%	AMAT	6.43%
1.0	WFC	7.63%	AMD	6.43%
1.0	BAC	7.63%	AMGN	6.43%
1.0	CMA	7.63%	XOM	6.02%
1.0	EXPE	7.23%	BHP	6.02%
1.0	AAP	7.23%	CSTM	6.02%
1.0	CHTR	7.23%	HD	6.02%
1.0	GWW	6.83%	MOS	5.62%
1.0	QQQ	6.43%	LUMN	5.62%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	WDC	37.92%	SLV	31.38%
10.0	SLV	35.15%	B	25.42%
10.0	MU	28.33%	MU	22.5%
10.0	GILD	25.83%	WDC	20.83%
10.0	KALU	25.0%	GLD	19.58%
10.0	TXN	22.5%	INTC	16.67%
10.0	B	22.08%	NEM	15.83%
10.0	NEM	22.08%	X	14.29%
10.0	NVS	20.83%	LVS	13.33%
10.0	GLD	19.17%	GOOGL	12.92%
10.0	INTC	18.75%	HSBC	12.92%
10.0	GOOGL	18.33%	AMAT	12.5%
10.0	AMZN	17.92%	CAH	12.08%
10.0	AVGO	17.92%	KALU	11.67%
10.0	FCX	17.5%	BA	11.67%
10.0	HCA	17.08%	ORCL	11.67%
10.0	BUD	16.67%	WYNN	11.67%
10.0	EXPE	15.42%	AMD	11.25%
10.0	GNRC	14.58%	TEVA	10.83%
10.0	UNH	14.58%	GILD	10.83%
10.0	TSLA	14.17%	JAZZ	10.42%
10.0	THC	13.75%	GNRC	10.42%
10.0	INTU	13.33%	AA	10.42%
10.0	CMA	12.92%	LLY	10.42%
10.0	VZ	12.5%	BUD	9.58%
10.0	X	11.9%	GS	9.58%
10.0	AA	11.67%	NVS	9.58%
10.0	VFC	11.67%	HCA	9.17%
10.0	TEVA	11.25%	BHP	9.17%
10.0	ORCL	10.83%	MRK	9.17%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	WDC	46.29%	B	36.24%
21.0	MU	39.3%	MU	34.93%
21.0	KALU	35.37%	WDC	31.88%
21.0	SLV	35.09%	SLV	31.58%
21.0	NEM	34.5%	GLD	29.69%
21.0	AVGO	31.0%	NEM	26.64%
21.0	B	26.64%	X	24.66%
21.0	TXN	24.45%	ORCL	21.83%
21.0	NVS	24.02%	KALU	19.65%
21.0	X	21.92%	GOOGL	19.21%
21.0	EXPE	21.83%	AMD	17.9%
21.0	HCA	21.4%	CAH	17.47%
21.0	GLD	20.96%	TEVA	17.47%
21.0	CMA	19.65%	CCL	17.47%
21.0	GOOGL	19.21%	HSBC	16.59%
21.0	BUD	18.34%	LVS	16.59%
21.0	ELAN	17.9%	ELAN	13.97%
21.0	ORCL	17.47%	INTC	13.54%
21.0	GILD	17.03%	GNRC	13.1%
21.0	INTC	16.16%	CSTM	13.1%
21.0	AAP	15.72%	AA	13.1%
21.0	ISRG	13.97%	BA	12.66%
21.0	CAH	13.54%	AMAT	12.66%
21.0	AA	13.1%	RIO	12.23%
21.0	TEVA	12.66%	WYNN	12.23%
21.0	GNRC	12.66%	FCX	11.79%
21.0	FCX	12.66%	ISRG	11.79%
21.0	VZ	12.23%	JAZZ	11.35%
21.0	VFC	12.23%	GE	11.35%
21.0	HSBC	11.79%	GS	10.92%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	WDC	75.94%	WDC	77.54%
63.0	SLV	58.06%	B	63.64%
63.0	B	54.55%	CAH	62.03%
63.0	MU	54.01%	GOOGL	55.08%
63.0	AVGO	51.87%	GLD	52.94%
63.0	NEM	48.13%	MU	50.8%
63.0	EXPE	43.85%	SLV	49.46%
63.0	GLD	41.71%	NEM	49.2%
63.0	KALU	39.04%	AMD	39.57%
63.0	GOOGL	37.97%	ORCL	38.5%
63.0	ORCL	32.62%	X	35.48%
63.0	ELAN	32.09%	TEVA	29.95%
63.0	CMA	31.55%	KALU	29.41%
63.0	INTC	29.41%	INTC	27.81%
63.0	AAP	28.34%	GNRC	24.6%
63.0	HCA	27.27%	ELAN	22.99%
63.0	JAZZ	25.13%	WYNN	22.99%
63.0	CAH	24.6%	PWR	22.99%
63.0	TEVA	22.99%	LVS	22.46%
63.0	GE	20.86%	MSFT	22.46%
63.0	BUD	19.79%	AMAT	21.93%
63.0	NVS	19.25%	GS	21.93%
63.0	WYNN	18.72%	INTU	19.79%
63.0	GILD	18.18%	MOS	19.79%
63.0	MSFT	18.18%	CCL	19.79%
63.0	TSLA	16.58%	LLY	19.79%
63.0	X	16.13%	JAZZ	18.72%
63.0	GNRC	16.04%	DHI	18.18%
63.0	ORLY	15.51%	RIO	17.65%
63.0	AA	15.51%	AAP	17.11%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	NEM	98.39%	NEM	100.0%
126.0	AVGO	91.94%	B	91.13%
126.0	WDC	88.71%	GLD	89.52%
126.0	GOOGL	80.65%	WDC	85.48%
126.0	GLD	76.61%	GOOGL	83.87%
126.0	B	74.19%	ELAN	83.87%
126.0	SLV	72.58%	MU	75.0%
126.0	MU	68.55%	SLV	73.39%
126.0	ELAN	66.94%	AMD	54.03%
126.0	CMA	57.26%	CAH	51.61%
126.0	EXPE	50.81%	GS	47.58%
126.0	JAZZ	39.52%	ORCL	45.97%
126.0	INTC	38.71%	MSFT	44.35%
126.0	WYNN	37.1%	LVS	43.55%
126.0	GE	35.48%	GE	41.94%
126.0	ORCL	33.87%	AVGO	41.13%
126.0	AAP	29.84%	WYNN	41.13%
126.0	KALU	29.84%	JAZZ	41.13%
126.0	AMD	29.03%	INTC	41.13%
126.0	AAPL	27.42%	CMA	38.71%
126.0	GS	26.61%	HSBC	38.71%
126.0	TEVA	26.61%	EXPE	36.29%
126.0	HCA	24.19%	TEVA	34.68%
126.0	AA	23.39%	QQQ	33.06%
126.0	NVS	21.77%	PWR	33.06%
126.0	HSBC	21.77%	THC	32.26%
126.0	CAH	18.55%	AZN	32.26%
126.0	CCL	16.94%	AMAT	29.84%
126.0	GILD	13.71%	MS	29.84%
126.0	BAC	10.48%	RIO	28.23%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NVDA	0.43%	MSTR	0.31%
1.0	X	0.38%	NVDA	0.26%
1.0	AVGO	0.37%	VST	0.25%
1.0	VST	0.33%	MU	0.21%
1.0	GE	0.33%	AVGO	0.21%
1.0	CCL	0.32%	WDC	0.21%
1.0	GBTC	0.31%	PWR	0.18%
1.0	TSLA	0.3%	TEVA	0.18%
1.0	LLY	0.28%	GME	0.17%
1.0	MU	0.28%	X	0.17%
1.0	B	0.27%	GBTC	0.17%
1.0	AMD	0.26%	LLY	0.16%
1.0	CAH	0.24%	GE	0.16%
1.0	WDC	0.23%	CAH	0.15%
1.0	PWR	0.22%	SLV	0.15%
1.0	TDG	0.22%	TRGP	0.14%
1.0	THC	0.2%	THC	0.14%
1.0	AMAT	0.2%	AMD	0.13%
1.0	TRGP	0.2%	META	0.13%
1.0	PHM	0.19%	AMAT	0.12%
1.0	SLV	0.17%	ETRN	0.12%
1.0	DHI	0.17%	B	0.11%
1.0	AZO	0.15%	GOOGL	0.11%
1.0	GLD	0.15%	GS	0.11%
1.0	ORLY	0.15%	PHM	0.11%
1.0	GS	0.14%	NFLX	0.11%
1.0	GME	0.14%	TSLA	0.11%
1.0	ETRN	0.14%	CCL	0.1%
1.0	FCX	0.14%	HSBC	0.1%
1.0	LVS	0.14%	ORCL	0.1%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	5.17%	MSTR	3.23%
10.0	AVGO	3.38%	NVDA	2.56%
10.0	LLY	3.25%	VST	2.46%
10.0	TSLA	3.25%	WDC	2.12%
10.0	VST	2.77%	MU	2.11%
10.0	CCL	2.74%	AVGO	2.09%
10.0	GBTC	2.56%	TEVA	1.8%
10.0	PWR	2.5%	PWR	1.74%
10.0	MU	2.42%	LLY	1.7%
10.0	AMD	2.23%	SLV	1.69%
10.0	AMAT	2.22%	GBTC	1.61%
10.0	GE	2.16%	GE	1.59%
10.0	CAH	2.03%	X	1.58%
10.0	MSTR	1.93%	CAH	1.54%
10.0	SLV	1.88%	GME	1.44%
10.0	WDC	1.76%	ETRN	1.41%
10.0	PHM	1.76%	TRGP	1.36%
10.0	TEVA	1.73%	META	1.34%
10.0	X	1.67%	THC	1.28%
10.0	AZO	1.6%	AMD	1.27%
10.0	ETRN	1.52%	B	1.21%
10.0	CDNS	1.48%	AMAT	1.2%
10.0	GS	1.46%	TSLA	1.16%
10.0	THC	1.44%	NFLX	1.15%
10.0	B	1.43%	GS	1.12%
10.0	HLT	1.36%	PHM	1.12%
10.0	MSFT	1.29%	ORCL	1.09%
10.0	LVS	1.29%	GLD	1.06%
10.0	ORLY	1.29%	GOOGL	1.05%
10.0	DHI	1.28%	CDNS	0.97%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	10.64%	MSTR	7.41%
21.0	TSLA	7.86%	NVDA	5.57%
21.0	GBTC	6.35%	VST	5.37%
21.0	VST	6.28%	AVGO	4.44%
21.0	LLY	6.05%	WDC	4.31%
21.0	CCL	6.03%	MU	4.18%
21.0	AMAT	5.59%	TEVA	3.88%
21.0	PWR	5.42%	PWR	3.62%
21.0	MU	5.2%	LLY	3.59%
21.0	MSTR	5.14%	GBTC	3.58%
21.0	AVGO	5.11%	GE	3.54%
21.0	AMD	4.89%	ETRN	3.5%
21.0	GE	4.7%	SLV	3.33%
21.0	CAH	4.46%	CAH	3.26%
21.0	TEVA	4.09%	X	3.17%
21.0	PHM	4.04%	META	2.99%
21.0	SLV	3.77%	THC	2.74%
21.0	X	3.55%	TRGP	2.74%
21.0	AZO	3.45%	TSLA	2.72%
21.0	WDC	3.41%	AMD	2.67%
21.0	CDNS	3.35%	NFLX	2.64%
21.0	ETRN	3.28%	ORCL	2.53%
21.0	DHI	3.27%	AMAT	2.45%
21.0	THC	3.1%	GS	2.43%
21.0	PCG	3.08%	PHM	2.41%
21.0	GS	3.0%	B	2.4%
21.0	B	2.88%	CCL	2.26%
21.0	JPM	2.81%	GOOGL	2.25%
21.0	QQQ	2.79%	GME	2.15%
21.0	ORLY	2.7%	GLD	2.08%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	NVDA	34.31%	MSTR	22.62%
63.0	MSTR	31.17%	NVDA	18.86%
63.0	GBTC	21.59%	VST	17.98%
63.0	VST	20.41%	AVGO	14.37%
63.0	CCL	20.39%	WDC	13.9%
63.0	LLY	18.12%	GBTC	12.42%
63.0	MU	16.68%	MU	12.29%
63.0	PWR	16.62%	GE	11.29%
63.0	AMAT	15.6%	META	10.51%
63.0	AMD	15.31%	LLY	10.48%
63.0	CAH	14.56%	TEVA	10.38%
63.0	GE	14.12%	PWR	10.32%
63.0	TSLA	13.67%	ETRN	10.28%
63.0	AVGO	13.55%	NFLX	10.0%
63.0	PHM	13.47%	CAH	9.76%
63.0	WDC	12.37%	THC	8.81%
63.0	TEVA	11.64%	ORCL	8.64%
63.0	THC	11.56%	AMD	8.5%
63.0	DHI	10.78%	PHM	8.2%
63.0	NFLX	10.56%	SLV	8.13%
63.0	GOOGL	10.0%	TRGP	7.45%
63.0	B	9.7%	GS	7.24%
63.0	ORCL	9.55%	GOOGL	7.2%
63.0	JPM	9.43%	TSLA	7.09%
63.0	CDNS	9.37%	CCL	7.08%
63.0	QQQ	9.34%	AMAT	6.75%
63.0	ETRN	9.32%	B	6.14%
63.0	LVS	9.31%	JPM	6.13%
63.0	SLV	8.79%	HSBC	6.11%
63.0	GS	8.77%	ISRG	6.06%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	NVDA	89.02%	MSTR	58.86%
126.0	MSTR	61.38%	NVDA	47.69%
126.0	GBTC	59.44%	VST	40.91%
126.0	VST	49.15%	GBTC	34.95%
126.0	MU	42.57%	AVGO	32.12%
126.0	GE	39.77%	WDC	28.66%
126.0	NFLX	38.93%	GE	27.17%
126.0	AMD	37.93%	META	26.45%
126.0	PHM	37.54%	NFLX	26.35%
126.0	CCL	36.38%	MU	25.42%
126.0	PWR	34.69%	THC	21.49%
126.0	THC	33.88%	PWR	20.83%
126.0	ORCL	33.01%	ORCL	20.8%
126.0	AVGO	31.07%	LLY	19.37%
126.0	AMAT	30.66%	TEVA	19.15%
126.0	DHI	28.43%	PHM	18.94%
126.0	LLY	28.04%	CAH	18.8%
126.0	TSLA	25.68%	AMD	18.77%
126.0	AMZN	24.95%	ETRN	18.49%
126.0	META	24.85%	TRGP	16.18%
126.0	WDC	24.73%	CCL	15.8%
126.0	QQQ	24.47%	SLV	15.69%
126.0	CAH	23.58%	GS	15.4%
126.0	JPM	23.33%	GOOGL	14.78%
126.0	MS	22.91%	JPM	14.08%
126.0	VNO	21.23%	AMAT	13.6%
126.0	GS	20.96%	TSLA	13.46%
126.0	MSFT	20.72%	DHI	13.43%
126.0	GOOGL	20.49%	TDG	13.31%
126.0	TDG	19.84%	CDNS	12.9%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	NVDA	245.68%	MSTR	193.96%
252.0	GBTC	208.28%	NVDA	126.07%
252.0	MSTR	193.67%	VST	116.38%
252.0	NFLX	123.66%	GBTC	105.49%
252.0	VST	118.92%	AVGO	76.34%
252.0	GE	115.03%	META	70.41%
252.0	AVGO	100.17%	NFLX	65.06%
252.0	PHM	98.31%	GE	62.27%
252.0	MU	95.93%	THC	47.79%
252.0	CCL	91.31%	PHM	45.0%
252.0	LLY	89.52%	LLY	44.85%
252.0	META	83.56%	PWR	42.12%
252.0	PWR	81.62%	MU	41.86%
252.0	THC	78.24%	TRGP	41.49%
252.0	AMD	69.99%	ORCL	40.4%
252.0	AMZN	69.09%	CCL	38.31%
252.0	ORCL	64.73%	CAH	37.35%
252.0	CDNS	64.15%	WDC	36.89%
252.0	JPM	63.78%	TEVA	35.92%
252.0	QQQ	63.49%	ETRN	35.78%
252.0	ISRG	61.5%	TDG	33.75%
252.0	VNO	61.2%	ISRG	32.33%
252.0	DHI	61.01%	JPM	32.15%
252.0	COST	58.81%	AMD	31.08%
252.0	AMAT	58.38%	GS	31.0%
252.0	MSFT	58.34%	SLV	28.53%
252.0	TRGP	57.4%	HSBC	28.06%
252.0	MS	56.08%	GOOGL	27.88%
252.0	ACGL	56.01%	AMAT	27.33%
252.0	WDC	55.92%	IRM	27.2%



P30D: 1d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SLV	2.17%	WDC	1.72%
1.0	INTC	2.13%	MU	1.53%
1.0	AMAT	1.78%	AAP	1.17%
1.0	MU	1.72%	INTC	1.11%
1.0	HON	1.45%	SLV	1.08%
1.0	AAP	1.39%	TXN	1.08%
1.0	BHP	1.36%	AMAT	1.01%
1.0	UAA	1.29%	GNRC	0.96%
1.0	MOS	1.27%	UAA	0.86%
1.0	NWL	1.26%	GILD	0.84%
1.0	LUMN	1.21%	FCX	0.83%
1.0	AZO	1.16%	LUMN	0.81%
1.0	XOM	1.0%	HON	0.81%
1.0	ORLY	0.98%	GME	0.81%
1.0	NEM	0.98%	XOM	0.77%
1.0	CSTM	0.97%	NWL	0.72%
1.0	VZ	0.96%	CSTM	0.7%
1.0	OXY	0.92%	GLD	0.63%
1.0	GNRC	0.88%	BUD	0.63%
1.0	RIO	0.88%	NEM	0.62%
1.0	CAH	0.87%	AZO	0.62%
1.0	PEP	0.81%	RIO	0.61%
1.0	LW	0.79%	BHP	0.59%
1.0	COST	0.79%	META	0.56%
1.0	WDC	0.77%	IRM	0.55%
1.0	TXN	0.76%	VZ	0.53%
1.0	HD	0.71%	MOS	0.53%
1.0	PHM	0.71%	TEVA	0.52%
1.0	GT	0.7%	COST	0.51%
1.0	TEVA	0.68%	SBUX	0.49%



P30D: 10d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SLV	40.1%	SLV	23.4%
10.0	AMD	25.2%	WDC	20.67%
10.0	AZO	21.97%	MU	19.86%
10.0	INTC	16.03%	AMD	14.89%
10.0	AMAT	15.25%	GNRC	12.02%
10.0	NEM	13.87%	NEM	11.81%
10.0	MOS	13.51%	AAP	11.41%
10.0	LUMN	13.36%	INTC	10.73%
10.0	WDC	12.58%	AMAT	10.59%
10.0	BHP	12.11%	GLD	10.55%
10.0	COST	11.08%	GILD	10.52%
10.0	TRGP	10.67%	AZO	9.22%
10.0	XOM	10.41%	PWR	8.84%
10.0	PWR	10.07%	XOM	8.76%
10.0	ORLY	9.76%	GME	8.64%
10.0	CSTM	9.72%	CLF	8.54%
10.0	RIO	9.65%	UAA	8.54%
10.0	AAP	9.41%	CSTM	8.47%
10.0	HON	9.12%	LUMN	8.34%
10.0	GNRC	8.45%	FCX	7.97%
10.0	NWL	7.93%	TRGP	7.76%
10.0	MU	7.74%	RIO	7.35%
10.0	GT	7.27%	HON	7.34%
10.0	GILD	7.16%	TXN	7.28%
10.0	IRM	6.76%	MOS	7.21%
10.0	CPRT	6.45%	SBUX	6.94%
10.0	B	6.38%	BUD	6.49%
10.0	LW	6.36%	ORLY	6.47%
10.0	MNST	6.28%	LW	6.37%
10.0	CLF	5.78%	BHP	6.36%



P90D: 1d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	GT	1.57%	SLV	1.06%
1.0	TEVA	1.56%	MU	1.05%
1.0	SLV	1.47%	TEVA	0.89%
1.0	UAA	1.18%	WDC	0.89%
1.0	MU	1.05%	AA	0.77%
1.0	AMAT	0.98%	FCX	0.67%
1.0	MRK	0.89%	VFC	0.59%
1.0	NWL	0.89%	B	0.59%
1.0	BMY	0.85%	NEM	0.58%
1.0	BHP	0.83%	CSTM	0.57%
1.0	B	0.76%	GT	0.55%
1.0	AA	0.75%	AMAT	0.55%
1.0	NEM	0.69%	UAA	0.54%
1.0	CSTM	0.67%	TXN	0.51%
1.0	INTC	0.63%	MRK	0.5%
1.0	GS	0.6%	NWL	0.48%
1.0	FCX	0.6%	KALU	0.48%
1.0	RIO	0.59%	RIO	0.44%
1.0	CMG	0.59%	TRGP	0.44%
1.0	HSBC	0.58%	CNC	0.42%
1.0	CNC	0.57%	EXPE	0.39%
1.0	CAH	0.56%	INTC	0.39%
1.0	TRGP	0.56%	HSBC	0.38%
1.0	ACGL	0.56%	XOM	0.37%
1.0	WDC	0.54%	CMG	0.37%
1.0	JAZZ	0.51%	BHP	0.35%
1.0	VFC	0.51%	KEY	0.35%
1.0	XOM	0.5%	JAZZ	0.34%
1.0	OXY	0.46%	MNST	0.33%
1.0	BIIB	0.46%	GLD	0.33%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SLV	23.29%	SLV	15.14%
10.0	AMAT	15.4%	MU	11.29%
10.0	GT	11.35%	AA	10.43%
10.0	MU	10.12%	WDC	9.11%
10.0	INTC	9.11%	FCX	8.59%
10.0	AA	8.83%	B	7.8%
10.0	B	8.38%	CSTM	7.54%
10.0	NEM	7.88%	NEM	7.35%
10.0	CSTM	7.79%	AMAT	7.31%
10.0	BHP	7.44%	KALU	6.37%
10.0	TEVA	7.36%	UAA	6.26%
10.0	NWL	7.05%	CLF	6.23%
10.0	RIO	6.76%	TEVA	6.22%
10.0	BA	6.58%	VFC	6.16%
10.0	FCX	6.46%	INTC	5.83%
10.0	CMG	6.34%	NWL	5.68%
10.0	WDC	6.23%	ON	5.12%
10.0	MRK	5.99%	RIO	5.11%
10.0	UAA	5.83%	CMG	5.05%
10.0	BMY	5.18%	JAZZ	4.74%
10.0	GS	4.9%	BA	4.64%
10.0	KALU	4.74%	TXN	4.57%
10.0	KEY	4.38%	MRK	4.48%
10.0	XOM	4.17%	GT	4.47%
10.0	GOOGL	3.86%	CNC	4.44%
10.0	FITB	3.86%	GLD	4.17%
10.0	ON	3.81%	BHP	4.05%
10.0	HSBC	3.78%	KEY	3.85%
10.0	ZION	3.71%	CMA	3.64%
10.0	TFC	3.54%	HSBC	3.5%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SLV	49.2%	SLV	34.54%
21.0	AMAT	35.54%	AA	29.03%
21.0	MU	32.45%	MU	27.47%
21.0	CSTM	26.44%	FCX	20.91%
21.0	AA	26.11%	WDC	20.19%
21.0	GT	26.04%	CSTM	18.01%
21.0	BA	22.95%	KALU	16.77%
21.0	BHP	21.07%	B	16.14%
21.0	B	18.82%	NEM	16.05%
21.0	NEM	18.47%	UAA	15.8%
21.0	TEVA	18.45%	AMAT	15.42%
21.0	FCX	16.55%	TEVA	15.32%
21.0	UAA	15.39%	VFC	13.33%
21.0	CMG	14.91%	ON	12.86%
21.0	INTC	14.73%	BA	12.55%
21.0	RIO	14.57%	CMG	12.21%
21.0	WDC	14.15%	INTC	11.75%
21.0	ON	13.88%	NWL	11.72%
21.0	NWL	12.57%	RIO	11.52%
21.0	TFC	12.15%	CNC	11.02%
21.0	GS	11.71%	CLF	10.9%
21.0	KALU	11.6%	KEY	9.97%
21.0	KEY	11.55%	TXN	9.83%
21.0	BMY	11.27%	BHP	9.79%
21.0	ZION	9.95%	GS	9.06%
21.0	HSBC	9.75%	GT	8.92%
21.0	MRK	9.65%	CMA	8.87%
21.0	CNC	9.64%	HSBC	8.76%
21.0	FITB	9.48%	FITB	8.39%
21.0	CCL	9.28%	MRK	8.29%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	LUMN	1.05%	MU	0.69%
1.0	B	0.81%	WDC	0.64%
1.0	AMD	0.74%	X	0.51%
1.0	MU	0.72%	INTC	0.44%
1.0	X	0.66%	B	0.44%
1.0	CSTM	0.58%	SLV	0.44%
1.0	SLV	0.57%	NEM	0.42%
1.0	WDC	0.54%	CSTM	0.39%
1.0	INTC	0.51%	AMD	0.36%
1.0	CLF	0.48%	LUMN	0.35%
1.0	AMAT	0.47%	ELAN	0.34%
1.0	NVDA	0.47%	TEVA	0.31%
1.0	NEM	0.45%	AMAT	0.28%
1.0	AVGO	0.45%	KALU	0.27%
1.0	TEVA	0.43%	AA	0.26%
1.0	CAH	0.43%	CLF	0.26%
1.0	ELAN	0.41%	FCX	0.26%
1.0	HSBC	0.37%	NVDA	0.24%
1.0	PWR	0.32%	CAH	0.23%
1.0	TSLA	0.32%	HSBC	0.23%
1.0	KALU	0.32%	GOOGL	0.23%
1.0	GLD	0.32%	GLD	0.23%
1.0	MNST	0.31%	MNST	0.22%
1.0	BHP	0.31%	EXPE	0.22%
1.0	RIO	0.3%	AVGO	0.22%
1.0	LVS	0.29%	PWR	0.21%
1.0	AA	0.29%	GE	0.18%
1.0	GE	0.28%	RIO	0.18%
1.0	VST	0.26%	GS	0.18%
1.0	FCX	0.26%	GSK	0.17%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	LUMN	9.73%	MU	7.03%
10.0	MU	6.69%	WDC	6.65%
10.0	SLV	6.59%	SLV	5.13%
10.0	AMD	6.1%	B	4.72%
10.0	B	5.42%	X	4.58%
10.0	X	5.35%	NEM	4.44%
10.0	CSTM	5.24%	INTC	4.42%
10.0	AMAT	5.05%	CSTM	4.19%
10.0	WDC	4.56%	AMD	4.01%
10.0	NVDA	4.49%	LUMN	3.69%
10.0	NEM	4.31%	ELAN	3.61%
10.0	INTC	4.26%	TEVA	3.1%
10.0	ELAN	3.63%	AMAT	2.89%
10.0	CAH	3.56%	KALU	2.86%
10.0	TEVA	3.43%	AA	2.69%
10.0	LVS	3.26%	GOOGL	2.52%
10.0	AVGO	3.23%	FCX	2.45%
10.0	MNST	2.7%	GLD	2.37%
10.0	CYH	2.69%	CAH	2.31%
10.0	GT	2.64%	MNST	2.31%
10.0	PWR	2.6%	PWR	2.13%
10.0	CLF	2.51%	HSBC	2.11%
10.0	AA	2.51%	CLF	2.05%
10.0	HSBC	2.5%	AVGO	1.94%
10.0	GLD	2.42%	NVDA	1.86%
10.0	BHP	2.35%	EXPE	1.86%
10.0	WYNN	2.23%	GE	1.8%
10.0	RIO	2.15%	GS	1.77%
10.0	GS	2.09%	HCA	1.74%
10.0	GOOGL	2.03%	WYNN	1.71%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MU	15.99%	MU	14.95%
21.0	AMD	15.6%	WDC	14.86%
21.0	LUMN	14.54%	SLV	10.66%
21.0	AMAT	14.01%	B	10.17%
21.0	B	13.08%	NEM	9.34%
21.0	SLV	12.91%	X	9.23%
21.0	CSTM	12.19%	AMD	8.67%
21.0	WDC	10.72%	CSTM	8.4%
21.0	X	9.51%	ELAN	8.13%
21.0	TEVA	8.97%	INTC	7.82%
21.0	NEM	8.85%	LUMN	7.51%
21.0	NVDA	8.66%	TEVA	6.96%
21.0	CAH	8.24%	AA	6.45%
21.0	LVS	8.13%	AMAT	6.36%
21.0	ELAN	7.79%	KALU	6.28%
21.0	INTC	7.05%	GOOGL	5.92%
21.0	AA	6.14%	CAH	5.04%
21.0	GOOGL	6.09%	AVGO	4.89%
21.0	MOS	5.67%	FCX	4.87%
21.0	GLD	5.64%	PWR	4.85%
21.0	BA	5.2%	GLD	4.67%
21.0	PWR	5.04%	MNST	4.35%
21.0	MNST	5.04%	GE	4.3%
21.0	BHP	4.81%	EXPE	4.08%
21.0	GE	4.59%	NVDA	4.07%
21.0	PHM	4.58%	THC	4.06%
21.0	GS	4.58%	GS	4.03%
21.0	HSBC	4.48%	LVS	3.94%
21.0	AVGO	4.45%	HSBC	3.94%
21.0	WYNN	4.37%	HCA	3.89%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	LUMN	68.35%	WDC	64.45%
63.0	MU	57.64%	MU	51.6%
63.0	WDC	56.39%	AMD	33.29%
63.0	AMD	52.43%	B	33.22%
63.0	AMAT	50.92%	LUMN	32.85%
63.0	B	47.99%	ELAN	31.75%
63.0	CAH	34.66%	SLV	29.12%
63.0	NVDA	34.18%	NEM	28.34%
63.0	TEVA	33.46%	INTC	26.48%
63.0	CSTM	33.07%	X	26.36%
63.0	X	31.84%	GOOGL	24.54%
63.0	ELAN	31.8%	AVGO	24.52%
63.0	SLV	31.65%	TEVA	24.44%
63.0	GOOGL	30.12%	CSTM	23.63%
63.0	NEM	29.67%	AMAT	21.54%
63.0	LVS	29.55%	KALU	21.23%
63.0	PWR	25.72%	AA	19.34%
63.0	BIIIB	23.53%	PWR	19.21%
63.0	INTC	23.24%	NVDA	18.98%
63.0	THC	21.02%	LVS	18.47%
63.0	LLY	20.55%	TSLA	17.91%
63.0	VST	20.05%	CAH	17.31%
63.0	FSUGY	19.96%	EXPE	17.13%
63.0	AA	19.5%	ORCL	17.1%
63.0	CLF	19.3%	THC	16.56%
63.0	MOS	17.54%	GE	16.23%
63.0	ORCL	16.74%	GS	16.13%
63.0	MS	16.58%	CLF	15.6%
63.0	GE	16.5%	WYNN	15.36%
63.0	WYNN	16.34%	CMA	14.13%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	WDC	158.07%	WDC	177.51%
126.0	MU	146.58%	MU	125.49%
126.0	AMD	142.23%	B	84.67%
126.0	B	130.86%	AMD	82.24%
126.0	LUMN	125.48%	ELAN	78.18%
126.0	ELAN	95.96%	LUMN	74.24%
126.0	NVDA	81.19%	NEM	71.29%
126.0	GOOGL	78.19%	INTC	63.46%
126.0	AMAT	77.28%	SLV	62.95%
126.0	SLV	76.79%	GOOGL	60.12%
126.0	ORCL	73.59%	AVGO	57.41%
126.0	NEM	73.25%	TEVA	46.29%
126.0	LVS	67.31%	CSTM	46.19%
126.0	INTC	66.3%	ORCL	45.19%
126.0	TEVA	60.24%	CLF	45.15%
126.0	CSTM	57.41%	NVDA	42.5%
126.0	THC	54.31%	TSLA	41.04%
126.0	MS	52.13%	EXPE	41.0%
126.0	DHI	51.56%	LVS	40.6%
126.0	PWR	49.8%	AA	40.45%
126.0	CLF	49.41%	AMAT	39.38%
126.0	FSUGY	48.31%	WYNN	37.39%
126.0	BIIB	47.48%	PWR	36.01%
126.0	TSLA	43.4%	GE	35.7%
126.0	PHM	42.45%	GS	35.1%
126.0	AA	42.19%	THC	34.64%
126.0	WYNN	41.62%	CMA	32.96%
126.0	GE	41.52%	KALU	30.89%
126.0	GS	40.98%	FSUGY	29.84%
126.0	GNRC	39.31%	MS	29.62%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SIVBQ	-0.8%	SIVBQ	-0.78%
1.0	IEP	-0.42%	SBNY	-0.45%
1.0	SBNY	-0.38%	FRCB	-0.23%
1.0	CZR	-0.25%	AMC	-0.19%
1.0	NWL	-0.23%	IEP	-0.15%
1.0	UAA	-0.19%	NWL	-0.11%
1.0	FRCB	-0.17%	AAP	-0.1%
1.0	AMC	-0.13%	CHTR	-0.08%
1.0	CHTR	-0.11%	CZR	-0.07%
1.0	BXP	-0.1%	PRGO	-0.07%
1.0	GT	-0.1%	BHC	-0.06%
1.0	LNC	-0.09%	UAA	-0.06%
1.0	GNRC	-0.09%	VFC	-0.05%
1.0	TLT	-0.09%	FIS	-0.05%
1.0	BALL	-0.08%	TLT	-0.04%
1.0	AAP	-0.08%	CMCSA	-0.04%
1.0	FIS	-0.07%	BALL	-0.03%
1.0	PRGO	-0.07%	ADBE	-0.03%
1.0	BIIB	-0.07%	BXP	-0.03%
1.0	UNH	-0.05%	NAVI	-0.03%
1.0	ZTS	-0.05%	ZTS	-0.03%
1.0	CMCSA	-0.05%	KHC	-0.03%
1.0	KHC	-0.04%	UNH	-0.03%
1.0	NAVI	-0.04%	GT	-0.02%
1.0	CTLT	-0.03%	CNC	-0.02%
1.0	VFC	-0.03%	CVS	-0.02%
1.0	ADBE	-0.03%	CTLT	-0.01%
1.0	CNC	-0.02%	BBY	-0.01%
1.0	INTU	-0.02%	LQD	-0.01%
1.0	SBUX	-0.02%	FRA	-0.01%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SIVBQ	-4.46%	SBNY	-4.05%
10.0	IEP	-2.88%	SIVBQ	-3.9%
10.0	CZR	-2.32%	FRCB	-2.19%
10.0	SBNY	-2.19%	AMC	-1.94%
10.0	NWL	-1.59%	IEP	-1.45%
10.0	FRCB	-1.26%	NWL	-1.09%
10.0	AMC	-1.2%	AAP	-0.97%
10.0	UAA	-0.87%	CHTR	-0.83%
10.0	AAP	-0.69%	CZR	-0.83%
10.0	CHTR	-0.68%	PRGO	-0.68%
10.0	VFC	-0.67%	UAA	-0.67%
10.0	BALL	-0.63%	VFC	-0.64%
10.0	BXP	-0.62%	FIS	-0.46%
10.0	PRGO	-0.58%	TLT	-0.42%
10.0	FIS	-0.57%	CMCSA	-0.42%
10.0	GNRC	-0.56%	BHC	-0.38%
10.0	KHC	-0.51%	BXP	-0.36%
10.0	TLT	-0.43%	ZTS	-0.35%
10.0	ADBE	-0.42%	BALL	-0.34%
10.0	INTU	-0.42%	KHC	-0.33%
10.0	VZ	-0.4%	CNC	-0.31%
10.0	BIIB	-0.36%	GT	-0.29%
10.0	CNC	-0.33%	ADBE	-0.28%
10.0	ZTS	-0.32%	NAVI	-0.26%
10.0	CMCSA	-0.31%	VZ	-0.2%
10.0	LNC	-0.29%	BBY	-0.19%
10.0	UNH	-0.22%	LNC	-0.18%
10.0	NAVI	-0.2%	UNH	-0.17%
10.0	CVS	-0.14%	CYH	-0.17%
10.0	FRA	-0.12%	MOS	-0.14%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SIVBQ	-9.97%	SBNY	-11.16%
21.0	IEP	-6.6%	SIVBQ	-9.37%
21.0	SBNY	-6.13%	FRCB	-6.02%
21.0	CZR	-5.46%	AMC	-4.48%
21.0	FRCB	-3.78%	IEP	-3.16%
21.0	NWL	-3.31%	NWL	-2.5%
21.0	AMC	-2.41%	AAP	-2.12%
21.0	VFC	-1.74%	CZR	-1.74%
21.0	AAP	-1.55%	CHTR	-1.65%
21.0	PRGO	-1.48%	PRGO	-1.43%
21.0	GNRC	-1.44%	VFC	-1.36%
21.0	CHTR	-1.41%	UAA	-1.35%
21.0	UAA	-1.38%	BHC	-0.89%
21.0	BALL	-1.25%	TLT	-0.88%
21.0	KHC	-1.24%	CMCSA	-0.86%
21.0	VZ	-1.13%	BXP	-0.78%
21.0	BXP	-1.05%	KHC	-0.77%
21.0	TLT	-1.02%	BALL	-0.73%
21.0	ADBE	-0.87%	ZTS	-0.71%
21.0	INTU	-0.86%	FIS	-0.71%
21.0	CLF	-0.81%	CNC	-0.59%
21.0	FIS	-0.73%	GT	-0.55%
21.0	CNC	-0.72%	NAVI	-0.48%
21.0	CYH	-0.61%	VZ	-0.44%
21.0	NAVI	-0.58%	MOS	-0.42%
21.0	CMCSA	-0.54%	LNC	-0.38%
21.0	ZTS	-0.48%	ADBE	-0.35%
21.0	BBY	-0.47%	BBY	-0.35%
21.0	CVS	-0.36%	UNH	-0.29%
21.0	LUMN	-0.36%	LW	-0.25%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	SIVBQ	-36.58%	SBNY	-37.59%
63.0	SBNY	-24.57%	SIVBQ	-33.73%
63.0	IEP	-21.29%	FRCB	-24.04%
63.0	FRCB	-18.2%	AMC	-15.26%
63.0	NWL	-14.48%	IEP	-10.52%
63.0	CZR	-9.8%	NWL	-8.92%
63.0	AMC	-8.15%	AAP	-6.3%
63.0	VFC	-8.03%	CZR	-6.18%
63.0	GNRC	-7.81%	UAA	-5.18%
63.0	UAA	-7.3%	PRGO	-5.14%
63.0	PRGO	-6.24%	CHTR	-4.79%
63.0	AAP	-6.1%	VFC	-4.64%
63.0	BALL	-5.15%	MOS	-4.04%
63.0	CHTR	-4.79%	BHC	-3.0%
63.0	KHC	-3.63%	CNC	-2.92%
63.0	CLF	-2.92%	CMCSA	-2.74%
63.0	VZ	-2.75%	KHC	-2.74%
63.0	TLT	-2.6%	BALL	-2.68%
63.0	MOS	-2.54%	TLT	-2.38%
63.0	ADBE	-2.46%	BXP	-2.35%
63.0	OXY	-2.39%	ZTS	-2.31%
63.0	CMCSA	-2.31%	FIS	-1.9%
63.0	ZTS	-2.24%	GT	-1.74%
63.0	BBY	-2.14%	NAVI	-1.62%
63.0	BHC	-2.06%	UNH	-1.56%
63.0	CVS	-1.92%	CLF	-1.42%
63.0	CYH	-1.88%	BMY	-1.39%
63.0	BXP	-1.6%	VZ	-1.32%
63.0	NAVI	-1.53%	LNC	-1.13%
63.0	CNC	-1.49%	BBY	-0.9%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	SIVBQ	-79.5%	SIVBQ	-65.15%
126.0	FRCB	-59.03%	SBNY	-64.8%
126.0	SBNY	-45.8%	FRCB	-51.17%
126.0	IEP	-43.17%	AMC	-27.76%
126.0	NWL	-38.93%	IEP	-20.36%
126.0	VFC	-22.08%	NWL	-17.53%
126.0	AMC	-17.06%	AAP	-11.89%
126.0	AAP	-13.44%	CZR	-10.33%
126.0	PRGO	-13.22%	VFC	-10.0%
126.0	GNRC	-12.82%	UAA	-9.31%
126.0	CZR	-12.57%	CNC	-9.06%
126.0	UAA	-12.15%	PRGO	-8.83%
126.0	BALL	-9.15%	CHTR	-7.47%
126.0	CHTR	-8.72%	MOS	-7.23%
126.0	GT	-7.7%	CTLT	-5.69%
126.0	MOS	-7.63%	KHC	-5.48%
126.0	CNC	-7.58%	GT	-4.57%
126.0	KHC	-7.31%	BMY	-4.49%
126.0	CTLT	-6.66%	BALL	-4.47%
126.0	CLF	-6.61%	TLT	-4.31%
126.0	FIS	-6.16%	BHC	-4.31%
126.0	CVS	-6.08%	CMCSA	-4.27%
126.0	TLT	-5.76%	BXP	-3.98%
126.0	VZ	-5.75%	UNH	-3.91%
126.0	BHC	-5.0%	FIS	-3.52%
126.0	UNH	-4.89%	ZTS	-3.21%
126.0	OXY	-4.62%	NAVI	-2.88%
126.0	CMCSA	-4.49%	CLF	-2.76%
126.0	BMY	-3.77%	OXY	-2.61%
126.0	BBY	-3.76%	CVS	-2.23%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	FRCB	-207.49%	SBNY	-95.75%
252.0	SIVBQ	-176.51%	SIVBQ	-95.29%
252.0	SBNY	-109.04%	FRCB	-91.61%
252.0	IEP	-89.26%	AMC	-54.56%
252.0	NWL	-77.17%	IEP	-42.56%
252.0	AMC	-47.85%	NWL	-30.74%
252.0	AAP	-40.62%	AAP	-30.6%
252.0	VFC	-34.29%	VFC	-22.95%
252.0	CLF	-31.79%	CZR	-17.96%
252.0	CZR	-31.17%	CNC	-16.97%
252.0	UAA	-27.19%	UAA	-16.31%
252.0	MOS	-23.58%	PRGO	-15.44%
252.0	GNRC	-21.9%	MOS	-15.38%
252.0	CVS	-20.81%	CLF	-13.93%
252.0	PRGO	-20.8%	KHC	-10.74%
252.0	CNC	-20.26%	BIIB	-10.67%
252.0	UNH	-19.84%	BMY	-10.42%
252.0	AA	-18.88%	OXY	-9.26%
252.0	GT	-18.25%	CHTR	-9.11%
252.0	BHC	-17.08%	BHC	-8.91%
252.0	KHC	-14.7%	UNH	-8.52%
252.0	BALL	-14.51%	AA	-8.36%
252.0	CYH	-13.31%	CVS	-7.82%
252.0	BMY	-12.72%	TLT	-7.82%
252.0	TLT	-12.13%	GT	-7.3%
252.0	OXY	-11.99%	CYH	-6.69%
252.0	CHTR	-11.55%	CTLT	-6.24%
252.0	FIS	-10.61%	NAVI	-5.7%
252.0	CTLT	-10.5%	PEP	-5.46%
252.0	BIIB	-10.46%	BALL	-5.22%



P30D: 1d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	BHC	-2.19%	NAVI	-1.27%
1.0	LVS	-2.17%	INTU	-1.18%
1.0	ADBE	-1.41%	BHC	-1.14%
1.0	NAVI	-1.3%	LVS	-1.05%
1.0	FIS	-1.16%	FIS	-0.89%
1.0	INTU	-1.09%	ORCL	-0.87%
1.0	CZR	-1.03%	UNH	-0.7%
1.0	UNH	-0.91%	WYNN	-0.68%
1.0	WYNN	-0.91%	QCOM	-0.67%
1.0	JPM	-0.81%	AMC	-0.67%
1.0	ORCL	-0.79%	ADBE	-0.65%
1.0	MSFT	-0.74%	CZR	-0.62%
1.0	CHTR	-0.74%	ISRG	-0.56%
1.0	ISRG	-0.71%	MSFT	-0.46%
1.0	VNO	-0.67%	NFLX	-0.44%
1.0	AVGO	-0.67%	LNC	-0.39%
1.0	NFLX	-0.66%	GBTC	-0.33%
1.0	LNC	-0.65%	EXPE	-0.32%
1.0	QCOM	-0.64%	CVS	-0.31%
1.0	GBTC	-0.59%	JPM	-0.31%
1.0	CVS	-0.57%	BBY	-0.29%
1.0	BAC	-0.38%	PCG	-0.27%
1.0	AAPL	-0.32%	THC	-0.26%
1.0	AMC	-0.32%	BAC	-0.25%
1.0	CDNS	-0.26%	WFC	-0.25%
1.0	ABBV	-0.24%	JAZZ	-0.25%
1.0	EXPE	-0.22%	VNO	-0.24%
1.0	SNY	-0.2%	BXP	-0.24%
1.0	THC	-0.19%	AVGO	-0.23%
1.0	BBY	-0.17%	AAPL	-0.22%



P30D: 10d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	BHC	-23.44%	BHC	-18.08%
10.0	ADBE	-12.55%	INTU	-13.79%
10.0	ORCL	-11.83%	QCOM	-10.53%
10.0	CCL	-11.23%	FIS	-10.43%
10.0	AVGO	-10.26%	NAVI	-9.76%
10.0	CZR	-9.99%	ORCL	-9.66%
10.0	INTU	-9.38%	ADBE	-8.76%
10.0	CHTR	-8.82%	ISRG	-8.42%
10.0	VNO	-8.17%	EXPE	-7.49%
10.0	NAVI	-7.87%	CHTR	-7.44%
10.0	QCOM	-7.72%	CCL	-7.34%
10.0	BIIB	-7.4%	CZR	-7.32%
10.0	EXPE	-6.99%	WFC	-6.1%
10.0	ISRG	-6.64%	JPM	-6.08%
10.0	GBTC	-6.61%	LNC	-6.03%
10.0	LVS	-6.58%	GE	-5.8%
10.0	BAC	-6.54%	THC	-5.43%
10.0	FIS	-6.52%	NFLX	-5.26%
10.0	JPM	-6.5%	BAC	-5.15%
10.0	GE	-5.92%	UNH	-5.13%
10.0	WYNN	-5.38%	LVS	-4.98%
10.0	NFLX	-5.33%	VNO	-4.84%
10.0	UNH	-5.33%	WYNN	-4.83%
10.0	LNC	-5.11%	TMUS	-4.75%
10.0	BBY	-4.33%	BBY	-4.22%
10.0	AAPL	-3.75%	GBTC	-4.22%
10.0	WFC	-3.74%	PCG	-4.15%
10.0	MSFT	-3.59%	AVGO	-3.88%
10.0	VST	-3.51%	BIIB	-3.82%
10.0	SNY	-3.41%	AMC	-3.66%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	MSTR	-1.12%	AMC	-0.96%
1.0	ORCL	-0.92%	MSTR	-0.86%
1.0	GBTC	-0.82%	ORCL	-0.7%
1.0	LW	-0.74%	PRGO	-0.53%
1.0	AMC	-0.64%	INTU	-0.48%
1.0	NFLX	-0.64%	NFLX	-0.44%
1.0	INTU	-0.64%	LW	-0.44%
1.0	VNO	-0.63%	LUMN	-0.39%
1.0	PRGO	-0.43%	GBTC	-0.37%
1.0	ADBE	-0.43%	BBY	-0.36%
1.0	MSFT	-0.42%	NAVI	-0.31%
1.0	LUMN	-0.42%	MSFT	-0.29%
1.0	WYNN	-0.41%	QCOM	-0.27%
1.0	IRM	-0.37%	VST	-0.27%
1.0	LVS	-0.35%	VNO	-0.26%
1.0	UNH	-0.34%	CYH	-0.26%
1.0	CHTR	-0.34%	WYNN	-0.24%
1.0	VST	-0.33%	BHC	-0.24%
1.0	QCOM	-0.32%	LVS	-0.23%
1.0	IEP	-0.31%	ADBE	-0.22%
1.0	BBY	-0.3%	ZTS	-0.21%
1.0	NVDA	-0.28%	UNH	-0.2%
1.0	CYH	-0.28%	CDNS	-0.19%
1.0	NAVI	-0.25%	FIS	-0.19%
1.0	BHC	-0.24%	IRM	-0.17%
1.0	CDNS	-0.22%	BXP	-0.14%
1.0	LEN	-0.21%	LEN	-0.13%
1.0	VICI	-0.2%	ISRG	-0.12%
1.0	FIS	-0.2%	VICI	-0.11%
1.0	CPRT	-0.18%	NVDA	-0.11%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	ORCL	-7.87%	AMC	-8.48%
10.0	MSTR	-5.78%	MSTR	-6.57%
10.0	NFLX	-5.22%	ORCL	-5.4%
10.0	LW	-5.06%	NFLX	-5.08%
10.0	AMC	-4.87%	LW	-4.88%
10.0	IEP	-4.8%	INTU	-3.7%
10.0	GBTC	-4.31%	BBY	-3.21%
10.0	VNO	-3.63%	GBTC	-2.43%
10.0	BBY	-3.26%	VST	-2.38%
10.0	INTU	-3.04%	CHTR	-2.18%
10.0	VST	-2.92%	QCOM	-2.15%
10.0	ADBE	-2.52%	TMUS	-2.02%
10.0	WYNN	-2.51%	MSFT	-1.99%
10.0	LVS	-2.3%	ADBE	-1.97%
10.0	CHTR	-2.3%	VNO	-1.95%
10.0	MSFT	-2.16%	IEP	-1.88%
10.0	VICI	-2.15%	WYNN	-1.84%
10.0	LUMN	-2.02%	LVS	-1.77%
10.0	QCOM	-1.65%	FIS	-1.72%
10.0	SNY	-1.62%	CYH	-1.69%
10.0	AAPL	-1.43%	SNY	-1.58%
10.0	T	-1.42%	BXP	-1.55%
10.0	TMUS	-1.31%	PCG	-1.44%
10.0	KHC	-1.25%	LUMN	-1.34%
10.0	LEN	-1.24%	AAPL	-1.27%
10.0	IRM	-0.89%	POST	-1.25%
10.0	FIS	-0.85%	VICI	-1.24%
10.0	POST	-0.84%	ISRG	-1.16%
10.0	BXP	-0.79%	LEN	-0.99%
10.0	CYH	-0.76%	BHC	-0.95%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	LW	-14.2%	AMC	-19.08%
21.0	MSTR	-13.88%	LW	-13.84%
21.0	ORCL	-13.21%	MSTR	-11.11%
21.0	NFLX	-13.17%	NFLX	-10.91%
21.0	AMC	-9.32%	ORCL	-8.52%
21.0	IEP	-7.51%	BBY	-6.76%
21.0	INTU	-7.49%	AAP	-5.5%
21.0	BBY	-7.17%	INTU	-5.2%
21.0	AZO	-7.01%	VST	-4.42%
21.0	VNO	-6.5%	TMUS	-4.27%
21.0	LEN	-6.45%	LVS	-3.96%
21.0	VST	-6.4%	LEN	-3.94%
21.0	WYNN	-5.36%	WYNN	-3.58%
21.0	AAP	-4.81%	AZO	-3.53%
21.0	LVS	-4.76%	VNO	-3.52%
21.0	MSFT	-4.66%	BXP	-3.36%
21.0	AVGO	-4.55%	MSFT	-3.18%
21.0	VICI	-4.44%	SNY	-3.08%
21.0	T	-4.09%	AVGO	-2.96%
21.0	KHC	-3.77%	POST	-2.81%
21.0	GBTC	-3.07%	T	-2.78%
21.0	AAPL	-2.98%	IEP	-2.77%
21.0	TMUS	-2.84%	AAPL	-2.75%
21.0	SNY	-2.71%	KHC	-2.7%
21.0	POST	-2.68%	VICI	-2.49%
21.0	LUMN	-2.57%	CYH	-2.49%
21.0	BXP	-2.29%	GBTC	-2.34%
21.0	CHTR	-2.04%	LUMN	-2.12%
21.0	ORLY	-1.97%	CHTR	-1.85%
21.0	TLT	-1.73%	PCG	-1.81%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	MSTR	-0.45%	AMC	-0.26%
1.0	UNH	-0.42%	NWL	-0.23%
1.0	CZR	-0.37%	MSTR	-0.23%
1.0	FIS	-0.29%	UNH	-0.2%
1.0	UAA	-0.26%	PRGO	-0.19%
1.0	NWL	-0.25%	CHTR	-0.17%
1.0	IEP	-0.24%	CZR	-0.16%
1.0	CNC	-0.23%	ADBE	-0.14%
1.0	AMC	-0.23%	FIS	-0.14%
1.0	VNO	-0.23%	CMG	-0.13%
1.0	CHTR	-0.22%	CPRT	-0.13%
1.0	CMG	-0.19%	ZTS	-0.11%
1.0	ADBE	-0.19%	NAVI	-0.1%
1.0	CPRT	-0.19%	VNO	-0.08%
1.0	CMCSA	-0.15%	CNC	-0.08%
1.0	MSI	-0.15%	IEP	-0.07%
1.0	PRGO	-0.12%	KHC	-0.07%
1.0	GBTC	-0.12%	LW	-0.07%
1.0	LEN	-0.1%	UAA	-0.06%
1.0	AMZN	-0.09%	BBY	-0.06%
1.0	IRM	-0.09%	TMUS	-0.06%
1.0	COST	-0.09%	MSI	-0.05%
1.0	ORCL	-0.09%	INTU	-0.05%
1.0	ISRG	-0.08%	GBTC	-0.05%
1.0	KHC	-0.07%	NFLX	-0.04%
1.0	SNY	-0.07%	SBUX	-0.04%
1.0	BXP	-0.06%	FRA	-0.04%
1.0	TMUS	-0.05%	SNY	-0.04%
1.0	ZTS	-0.05%	LEN	-0.03%
1.0	BBY	-0.05%	ISRG	-0.03%



P365D: 10d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	MSTR	-3.38%	AMC	-2.59%
10.0	CZR	-1.99%	MSTR	-2.25%
10.0	ADBE	-1.91%	CHTR	-2.07%
10.0	UNH	-1.91%	PRGO	-1.7%
10.0	PRGO	-1.91%	NWL	-1.7%
10.0	VNO	-1.86%	CZR	-1.54%
10.0	CHTR	-1.83%	ADBE	-1.51%
10.0	AMC	-1.6%	UNH	-1.49%
10.0	CPRT	-1.54%	CPRT	-1.35%
10.0	BBY	-1.33%	ZTS	-1.18%
10.0	CMG	-1.31%	CMG	-1.17%
10.0	ORCL	-1.3%	TMUS	-1.13%
10.0	FIS	-1.3%	FIS	-0.99%
10.0	IEP	-1.19%	VNO	-0.94%
10.0	TMUS	-1.13%	KHC	-0.85%
10.0	KHC	-1.09%	BBY	-0.84%
10.0	CNC	-0.97%	IEP	-0.73%
10.0	UAA	-0.96%	LW	-0.7%
10.0	NWL	-0.85%	CMCSA	-0.63%
10.0	ISRG	-0.74%	MSI	-0.58%
10.0	AMZN	-0.7%	NFLX	-0.52%
10.0	CMCSA	-0.62%	SBUX	-0.51%
10.0	GBTC	-0.6%	NAVI	-0.5%
10.0	ZTS	-0.58%	SNY	-0.49%
10.0	OXY	-0.58%	CNC	-0.41%
10.0	MSI	-0.51%	UAA	-0.39%
10.0	SNY	-0.46%	FRA	-0.36%
10.0	SBUX	-0.43%	POST	-0.34%
10.0	FRA	-0.41%	ISRG	-0.25%
10.0	NFLX	-0.33%	COST	-0.25%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MSTR	-8.78%	AMC	-5.83%
21.0	PRGO	-4.6%	CHTR	-4.28%
21.0	CZR	-3.95%	MSTR	-4.06%
21.0	CPRT	-3.83%	PRGO	-3.92%
21.0	CHTR	-3.63%	NWL	-3.42%
21.0	ADBE	-3.3%	CPRT	-2.94%
21.0	VNO	-3.21%	CZR	-2.85%
21.0	IEP	-2.96%	ADBE	-2.84%
21.0	CMG	-2.92%	TMUS	-2.57%
21.0	AMC	-2.8%	UNH	-2.39%
21.0	TMUS	-2.7%	ZTS	-2.37%
21.0	KHC	-2.67%	CMG	-2.25%
21.0	BBY	-2.47%	KHC	-2.06%
21.0	UNH	-2.46%	IEP	-1.94%
21.0	OXY	-2.27%	BBY	-1.85%
21.0	CMCSA	-2.18%	CMCSA	-1.69%
21.0	NWL	-1.65%	VNO	-1.68%
21.0	MSI	-1.63%	LW	-1.59%
21.0	UAA	-1.53%	SBUX	-1.55%
21.0	LW	-1.47%	FIS	-1.25%
21.0	CNC	-1.39%	SNY	-1.08%
21.0	ISRG	-1.28%	POST	-1.05%
21.0	VICI	-1.27%	MSI	-0.99%
21.0	TRGP	-1.26%	COST	-0.84%
21.0	ZTS	-1.17%	UAA	-0.83%
21.0	SBUX	-1.04%	VICI	-0.77%
21.0	FIS	-1.02%	NFLX	-0.77%
21.0	VFC	-0.99%	NAVI	-0.76%
21.0	COST	-0.95%	FRA	-0.75%
21.0	POST	-0.92%	OXY	-0.69%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	-28.2%	PRGO	-16.64%
63.0	PRGO	-19.33%	CHTR	-15.12%
63.0	CPRT	-15.36%	NWL	-13.33%
63.0	CMG	-13.7%	AMC	-11.49%
63.0	NWL	-13.37%	CMG	-10.93%
63.0	UNH	-11.89%	CPRT	-10.84%
63.0	CHTR	-11.1%	MSTR	-10.4%
63.0	CZR	-10.76%	UNH	-9.29%
63.0	TMUS	-8.47%	ZTS	-8.09%
63.0	CMCSA	-8.39%	TMUS	-7.75%
63.0	ADBE	-7.98%	CZR	-7.71%
63.0	UAA	-7.86%	CMCSA	-7.01%
63.0	KHC	-7.84%	UAA	-6.81%
63.0	OXY	-5.79%	KHC	-6.6%
63.0	ZTS	-5.31%	ADBE	-6.32%
63.0	IEP	-4.96%	CNC	-5.53%
63.0	AMC	-4.8%	IEP	-4.84%
63.0	VICI	-4.55%	POST	-3.79%
63.0	MSI	-4.27%	FIS	-3.7%
63.0	POST	-4.11%	GME	-3.65%
63.0	COST	-4.01%	SNY	-3.49%
63.0	VNO	-3.84%	MSI	-3.19%
63.0	T	-3.12%	SBUX	-3.16%
63.0	SNY	-3.04%	VICI	-2.91%
63.0	GME	-3.0%	VNO	-2.64%
63.0	FIS	-2.66%	COST	-2.48%
63.0	SBUX	-2.3%	T	-2.27%
63.0	CNC	-2.17%	VZ	-2.06%
63.0	VZ	-2.14%	OXY	-1.92%
63.0	NFLX	-1.88%	FRA	-1.81%



P365D: 126d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	PRGO	-46.9%	CHTR	-36.75%
126.0	CMG	-45.47%	PRGO	-30.65%
126.0	GT	-36.03%	CMG	-25.57%
126.0	NWL	-35.33%	CNC	-25.12%
126.0	MSTR	-35.23%	UAA	-24.13%
126.0	UAA	-32.7%	MSTR	-22.48%
126.0	CPRT	-28.0%	NWL	-22.24%
126.0	CZR	-25.76%	AMC	-20.38%
126.0	ADBE	-23.21%	CPRT	-20.35%
126.0	CHTR	-22.19%	GT	-17.88%
126.0	FIS	-21.66%	CZR	-17.74%
126.0	CNC	-20.15%	ZTS	-14.96%
126.0	UNH	-19.39%	CMCSA	-14.5%
126.0	CMCSA	-14.39%	ADBE	-13.94%
126.0	IEP	-14.2%	FIS	-13.39%
126.0	TMUS	-13.6%	UNH	-13.0%
126.0	KHC	-12.63%	TMUS	-11.38%
126.0	ZTS	-12.14%	KHC	-11.01%
126.0	COST	-10.41%	GME	-9.24%
126.0	GME	-8.81%	IEP	-9.1%
126.0	AMC	-8.16%	SBUX	-7.49%
126.0	SBUX	-7.98%	POST	-6.64%
126.0	POST	-7.69%	SNY	-6.37%
126.0	VICI	-6.34%	COST	-5.75%
126.0	GWW	-5.83%	NAVI	-5.26%
126.0	TRGP	-5.62%	TDG	-5.13%
126.0	SNY	-5.61%	BMY	-4.68%
126.0	VNO	-5.15%	VICI	-4.42%
126.0	OXY	-4.88%	HON	-4.25%
126.0	TDG	-4.31%	GWW	-3.83%



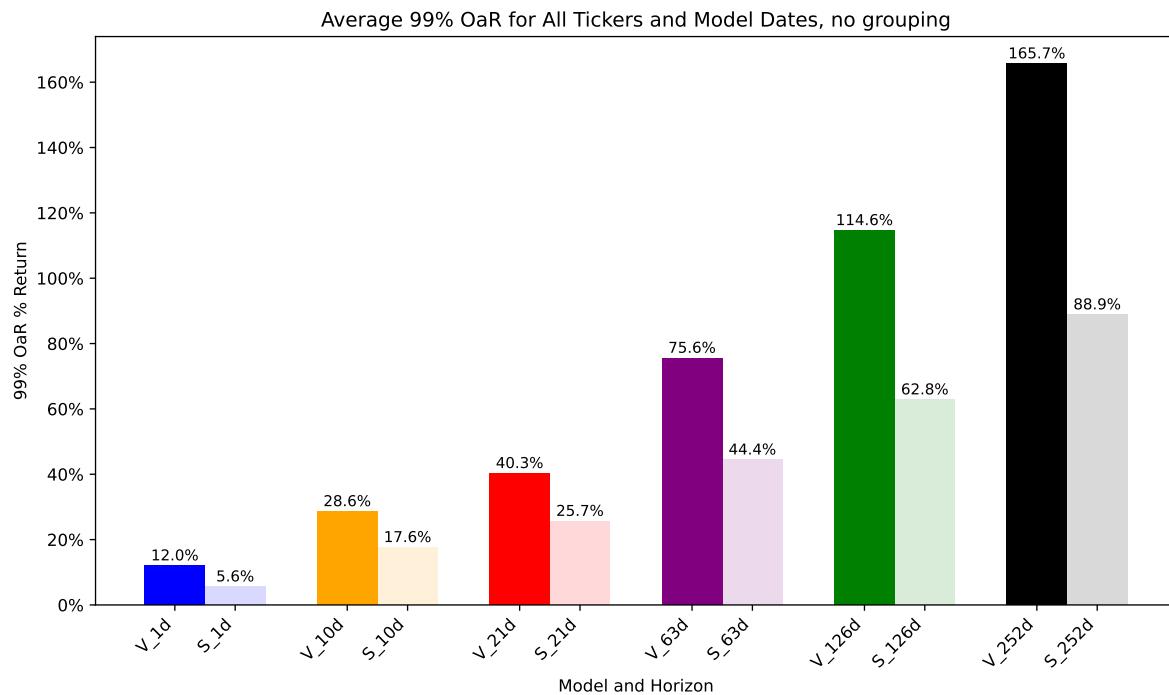
99% Opportunity At Risk (OaR)

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.

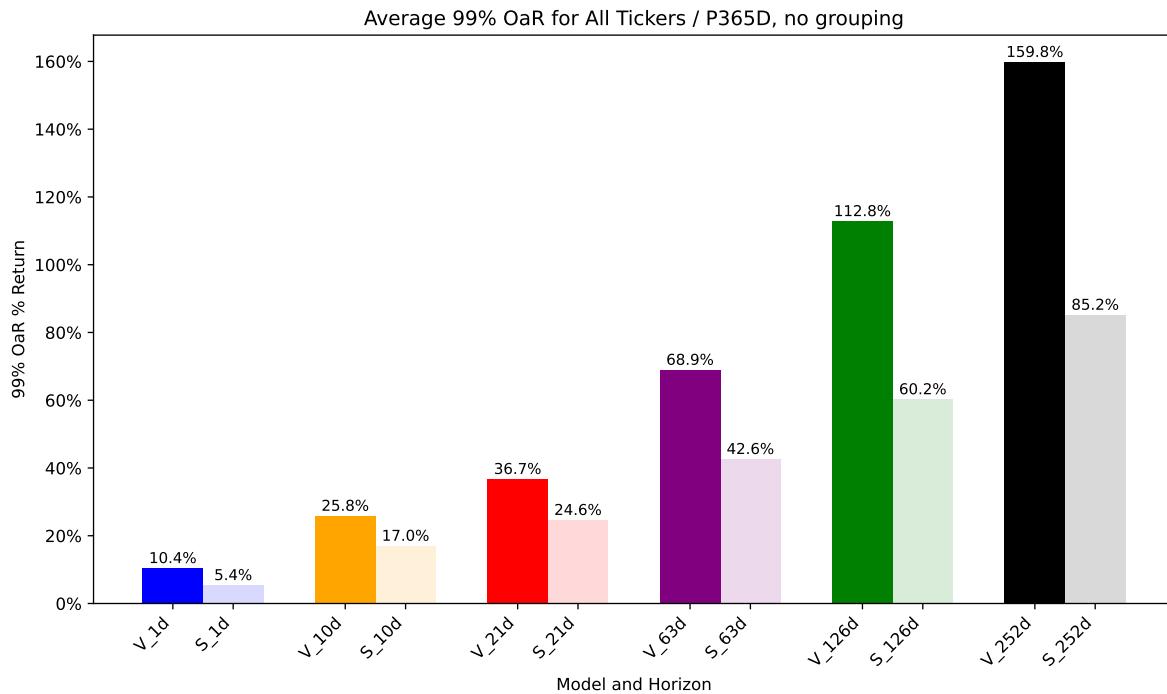
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-01-29



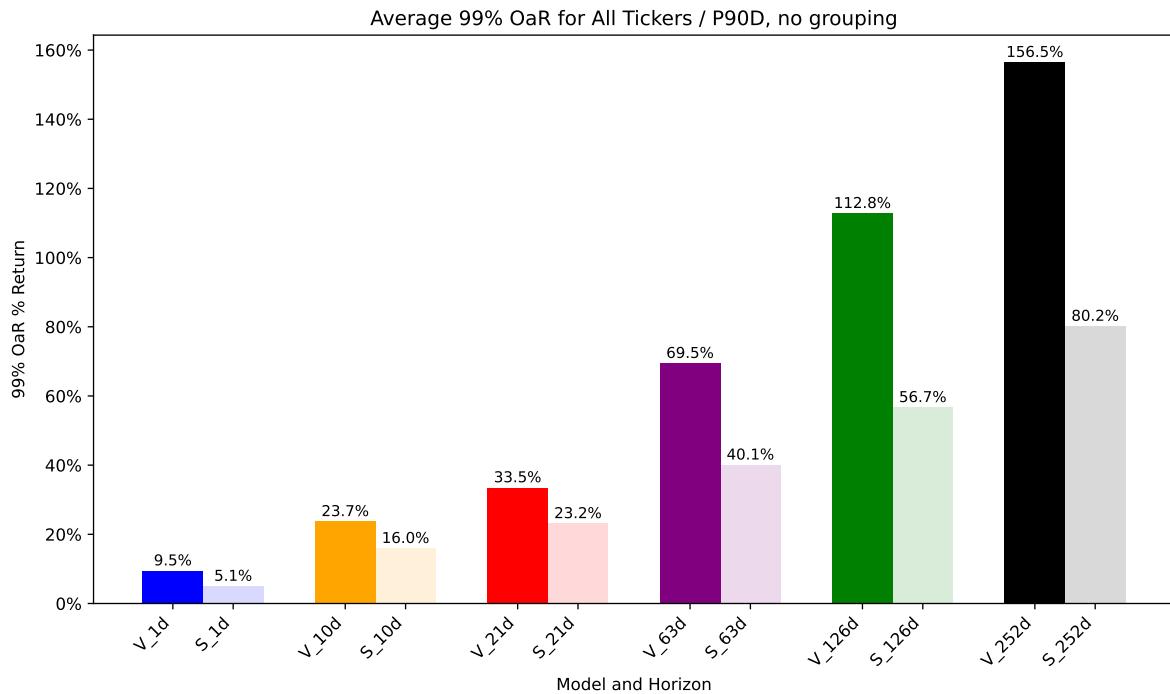
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-01-29 through 2025-02-03



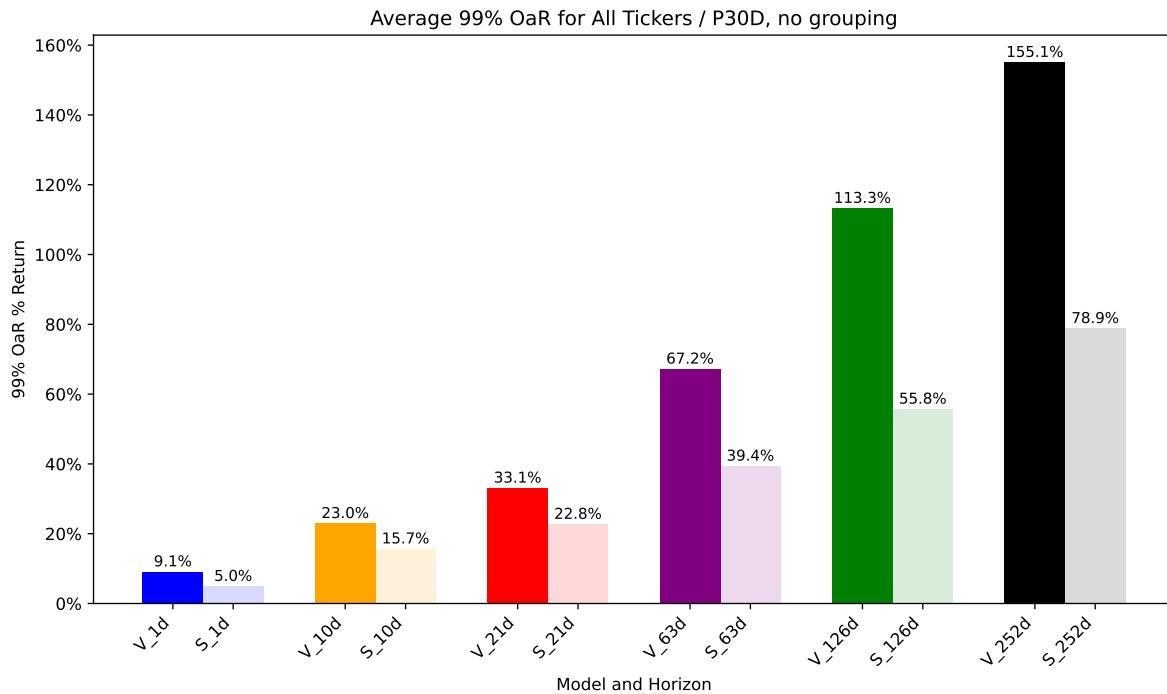
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-01-29 through 2025-11-03



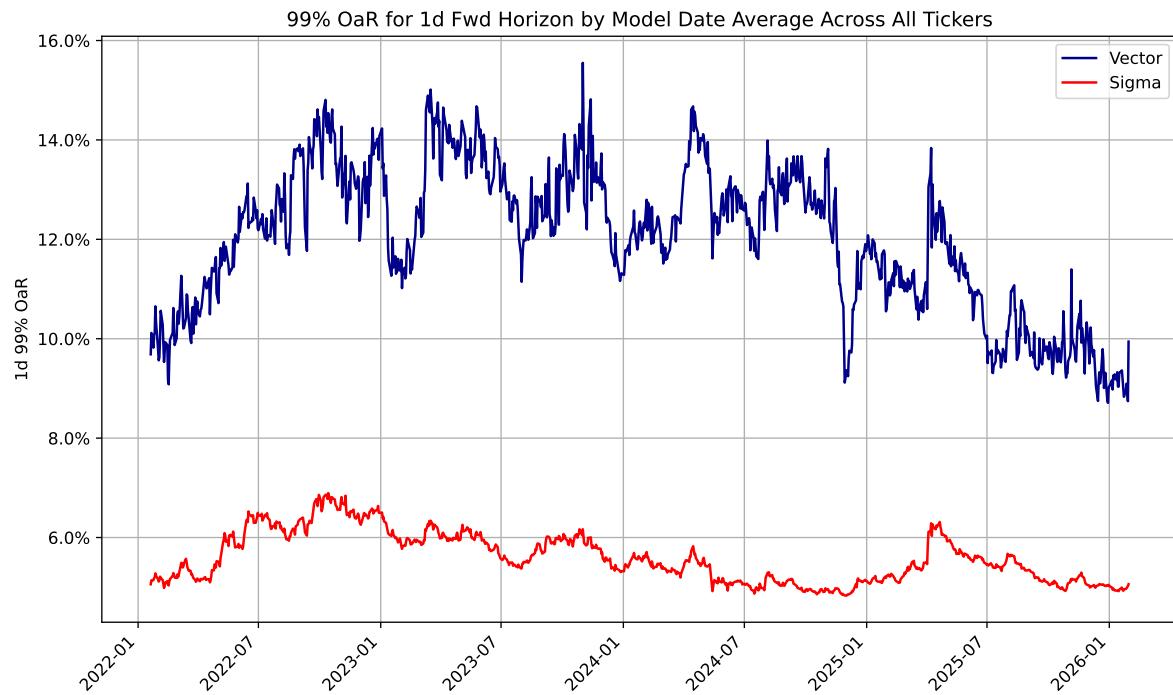
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-01-29 through 2026-01-02

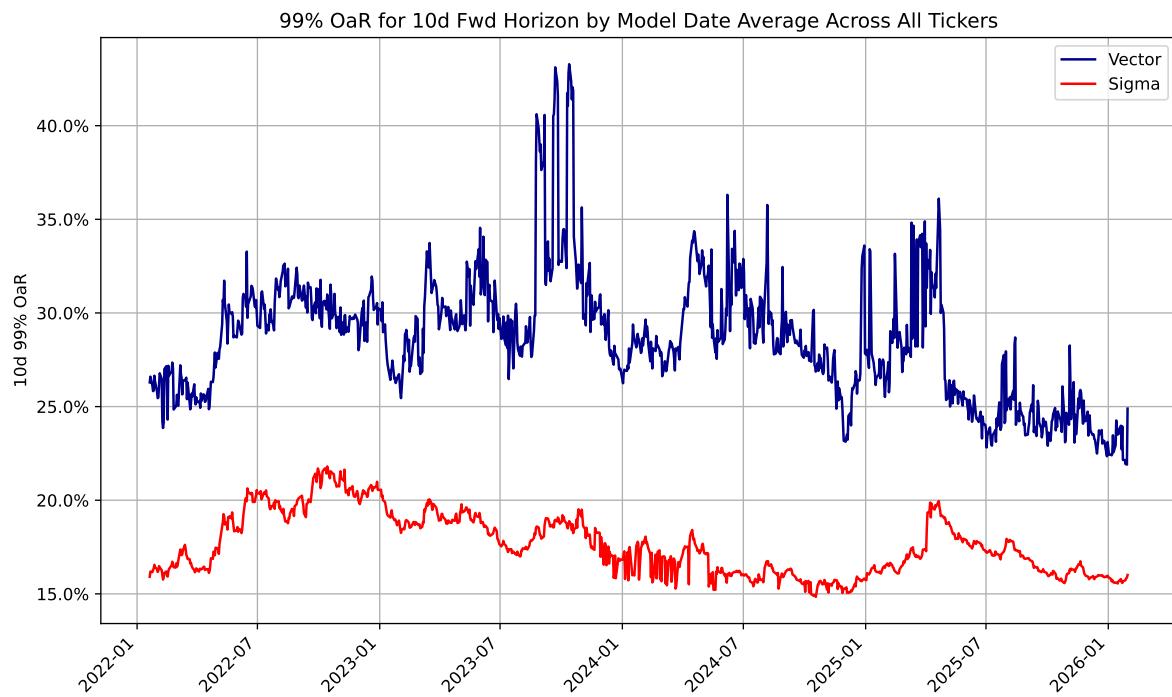


Daily Levels

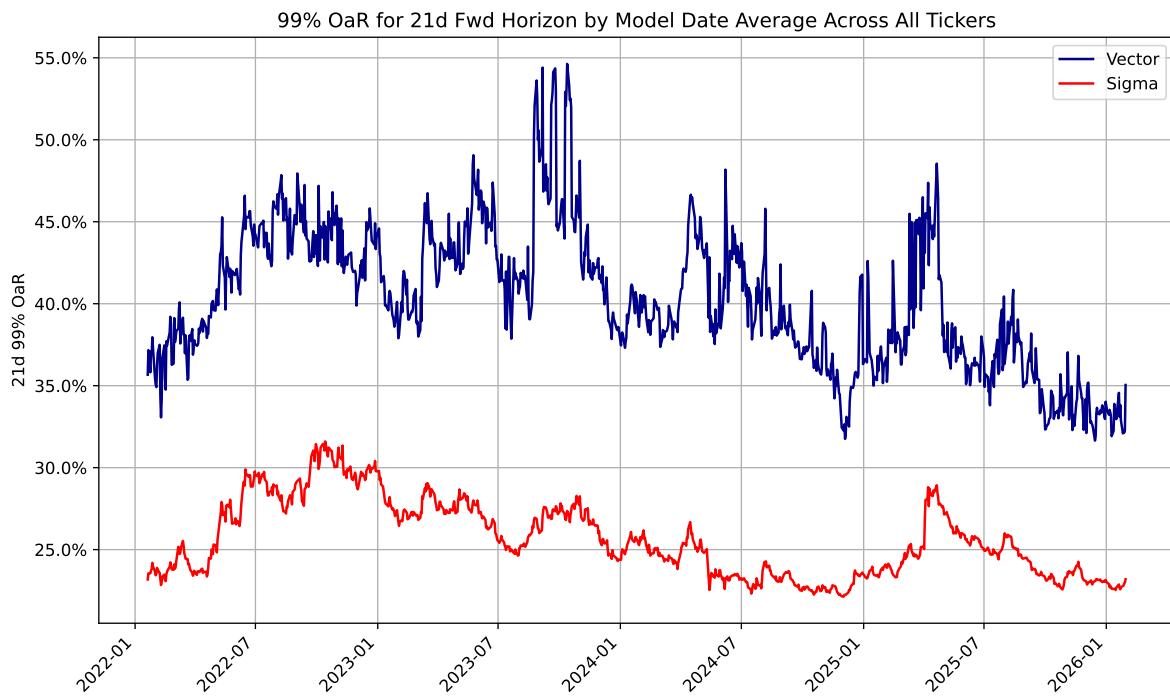
1d Horizon



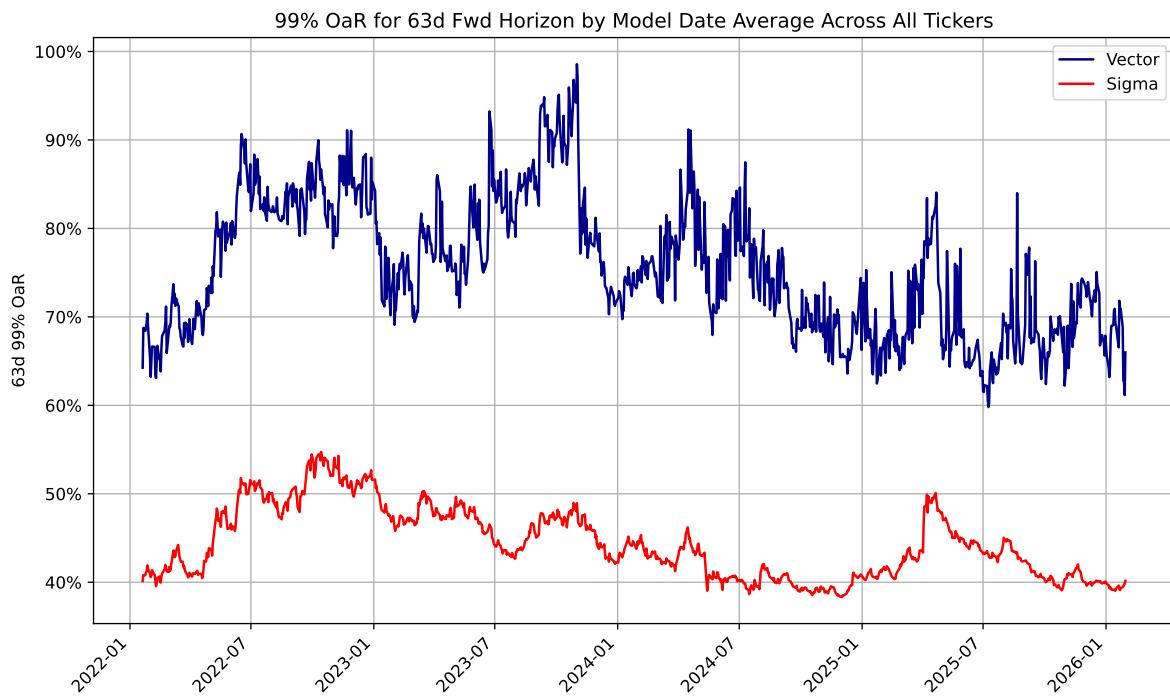
10d Horizon



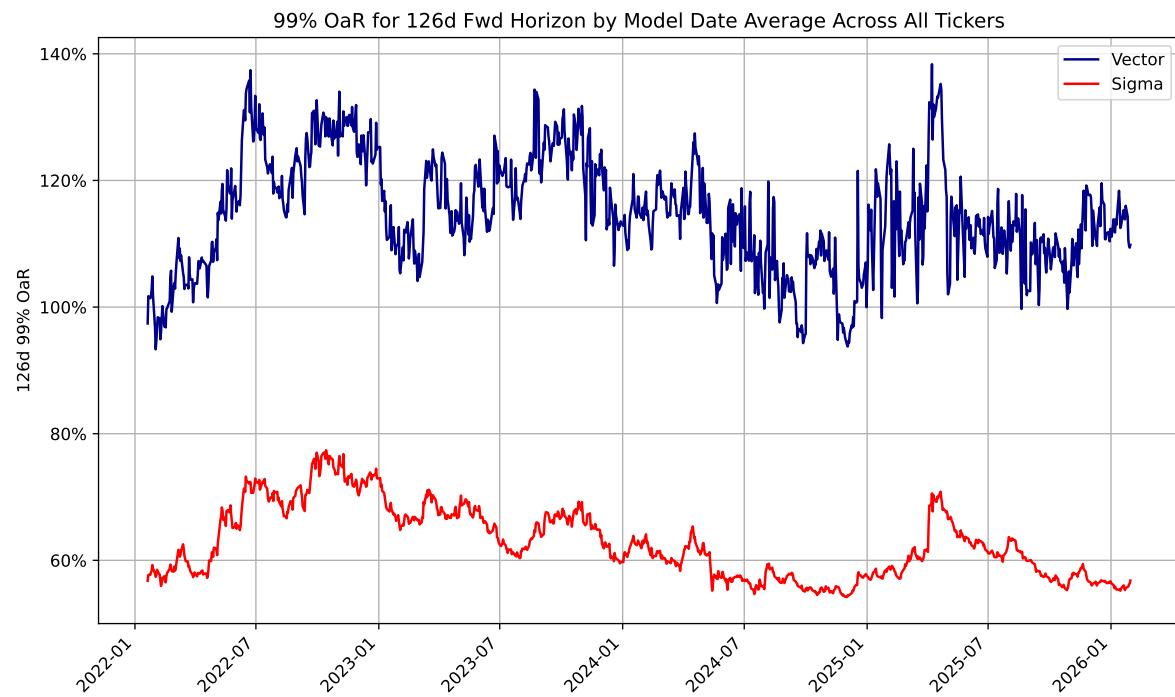
21d Horizon



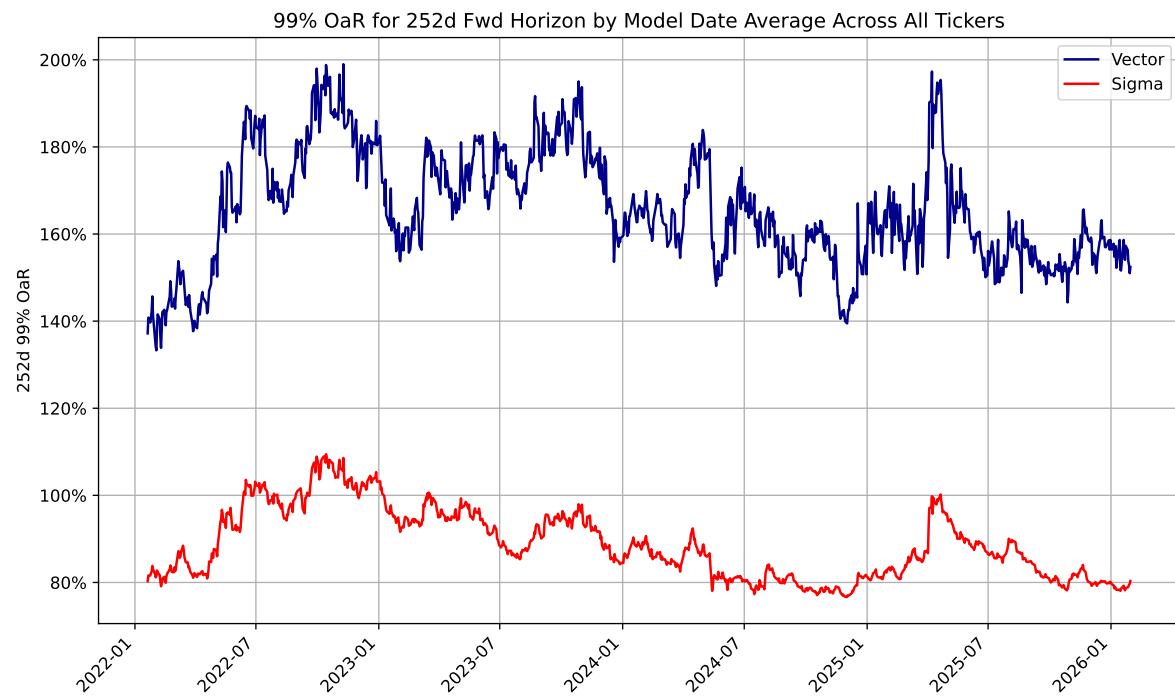
63d Horizon



126d Horizon



252d Horizon



Performance Summary

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

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

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

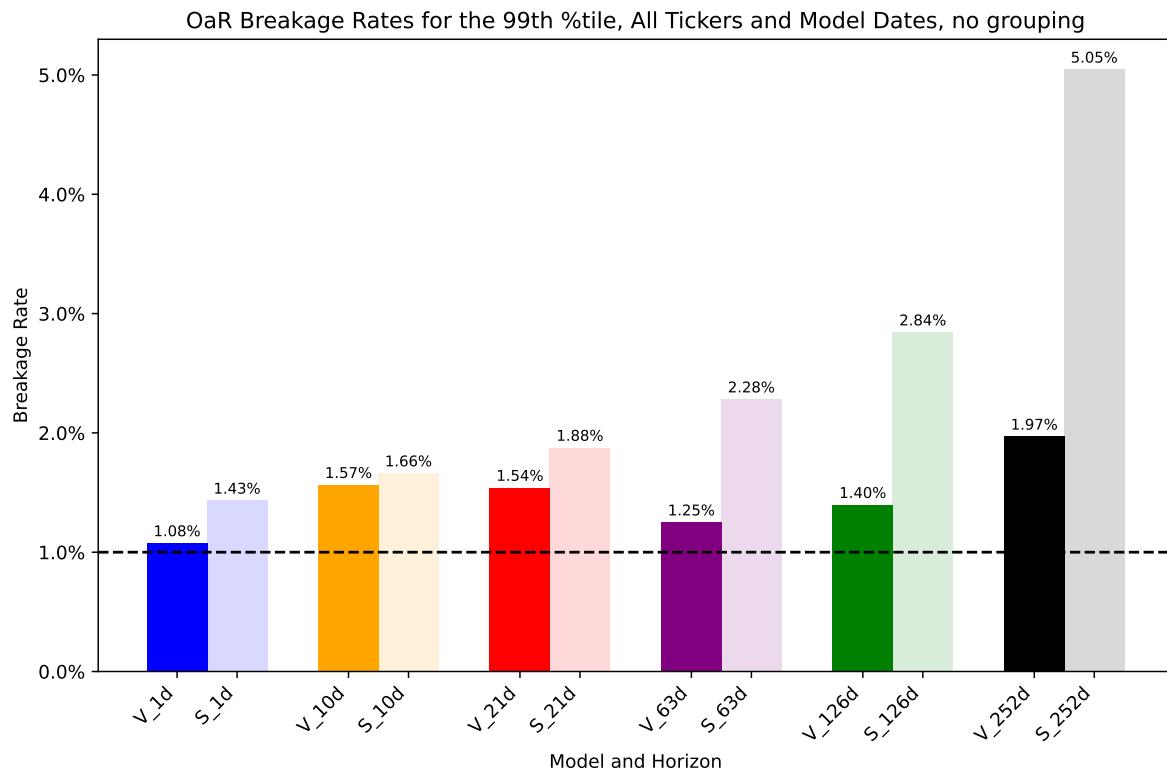
Alpha allows us to isolate ROLOBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROLOBC multiplier for the Vector Model and 1.00x. Alpha across TMD's could be driven by OaR differentials between tickers and / or between dates. Thus we also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

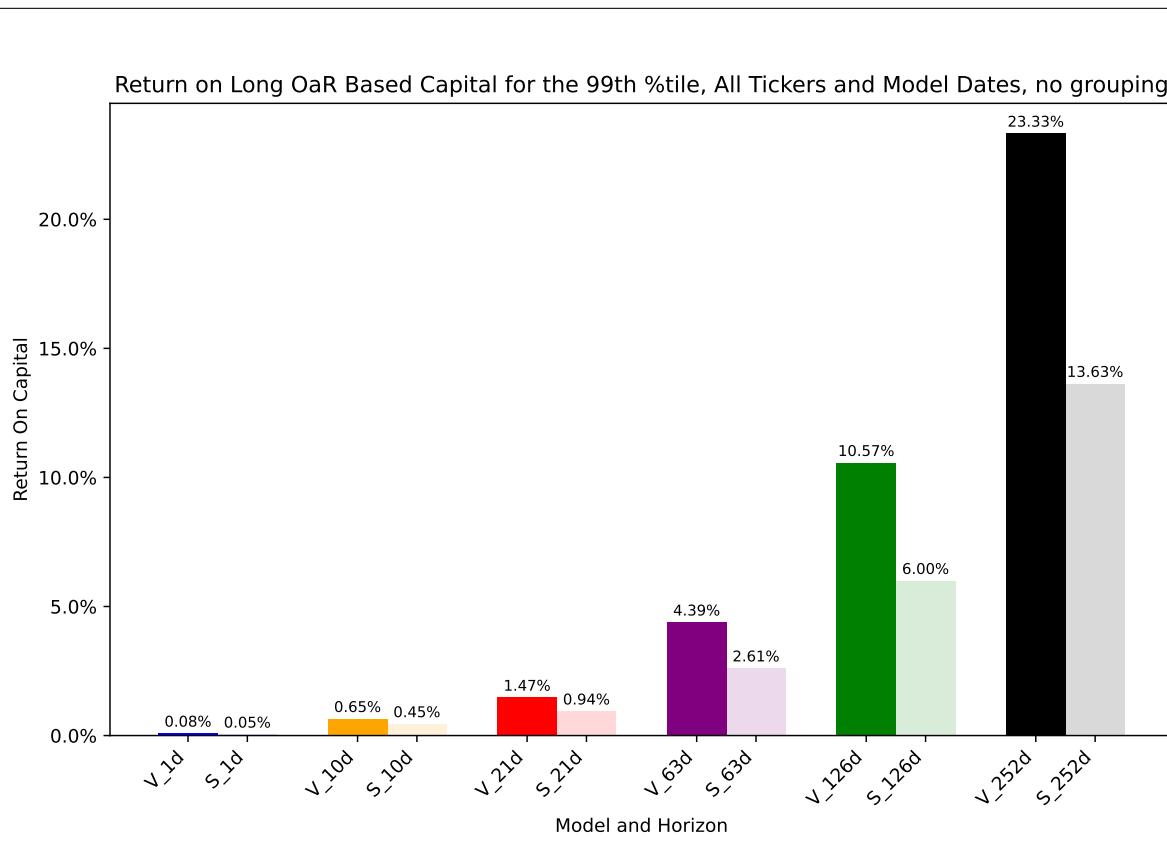
Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons $> 1d$ overlap.



All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-01-29





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

	1d	10d	21d	63d	126d	252d
intercept	0.00%	-0.02%	0.05%	0.13%	0.25%	0.87%
intercept_p_value	70.07%	28.10%	3.03%	0.13%	0.01%	0.00%
slope	177.91%	148.33%	151.14%	163.03%	172.06%	164.76%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

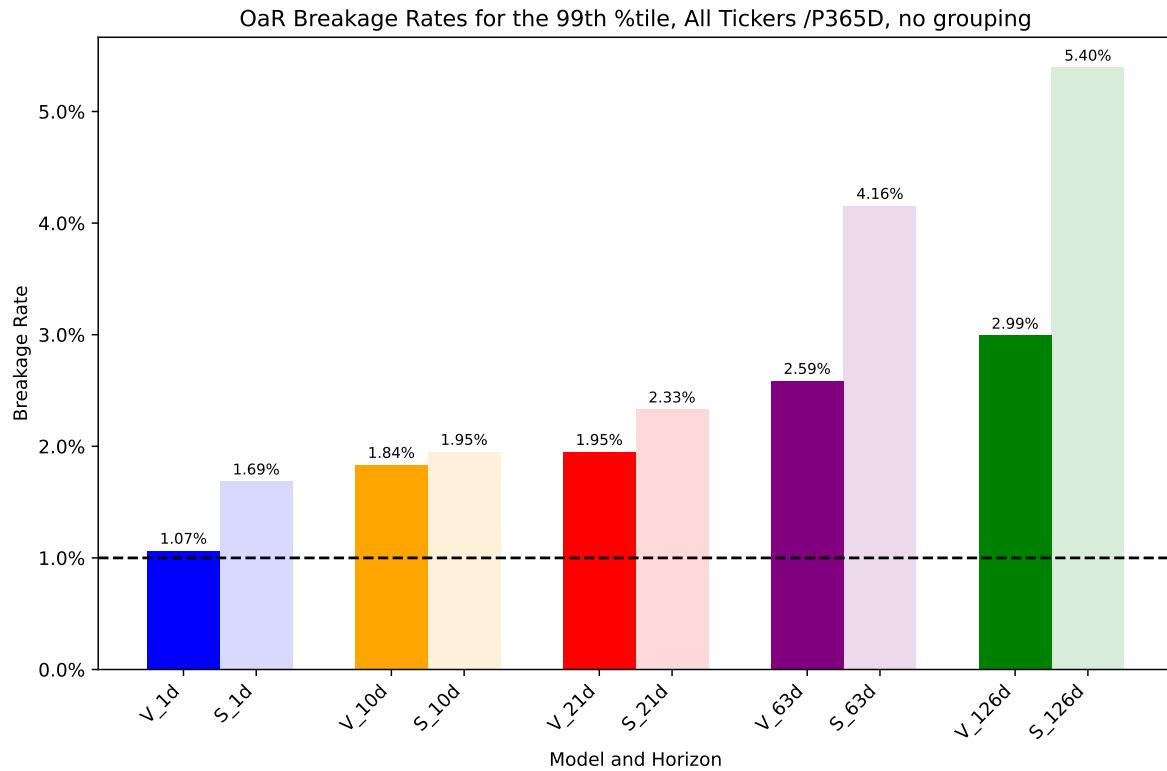
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across Model Dates:

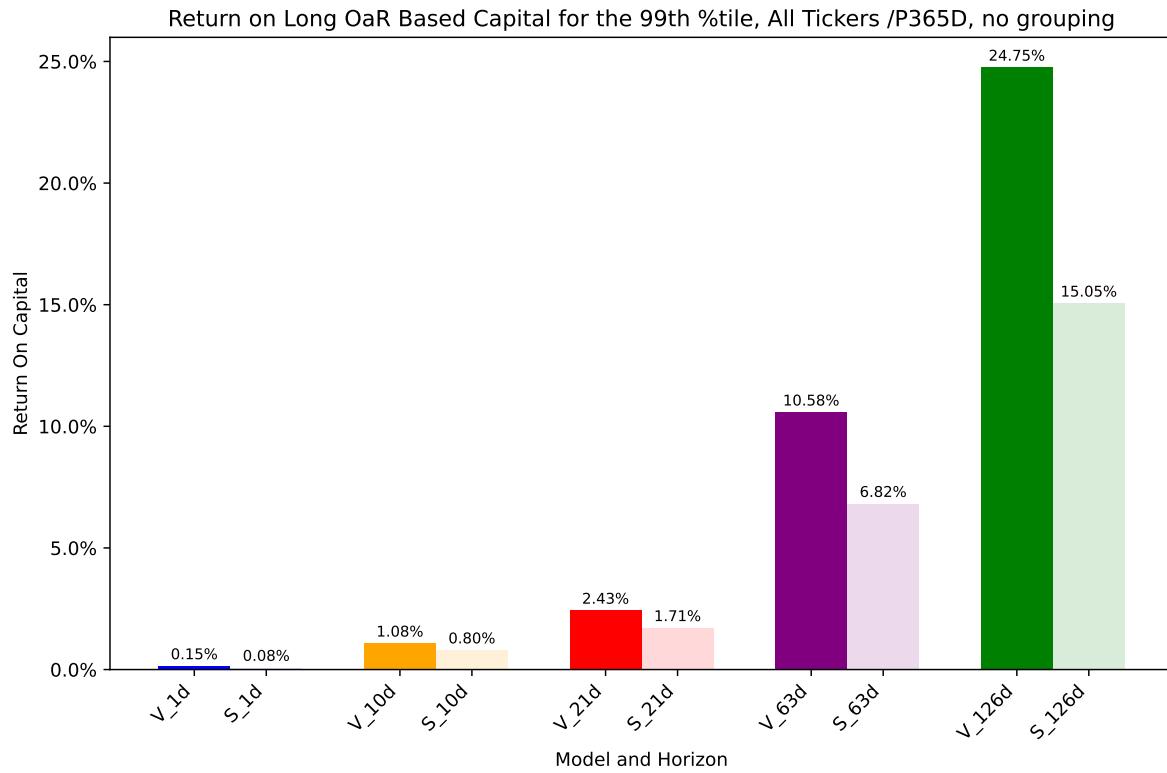
	1d	10d	21d	63d	126d	252d
intercept	-0.04%	-0.20%	-0.55%	-2.12%	-4.04%	-5.11%
intercept_p_value	0.00%	0.13%	0.01%	0.00%	0.00%	0.13%
slope	162.44%	147.01%	164.19%	179.27%	177.75%	162.38%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-01-29 through 2025-02-03





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

	1d	10d	21d	63d	126d
intercept	0.00%	-0.10%	-0.10%	0.12%	-0.23%
intercept_p_value	78.54%	0.07%	1.62%	21.15%	26.29%
slope	179.57%	147.35%	147.72%	153.38%	165.98%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

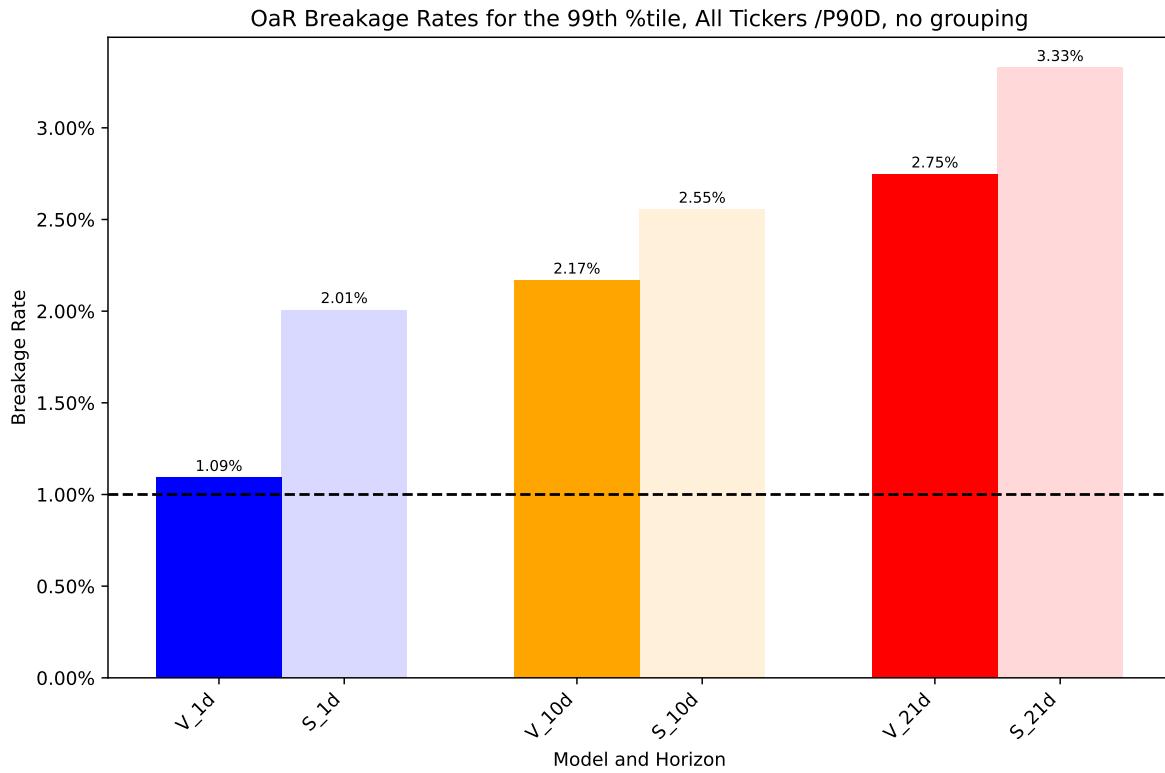
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P365D:

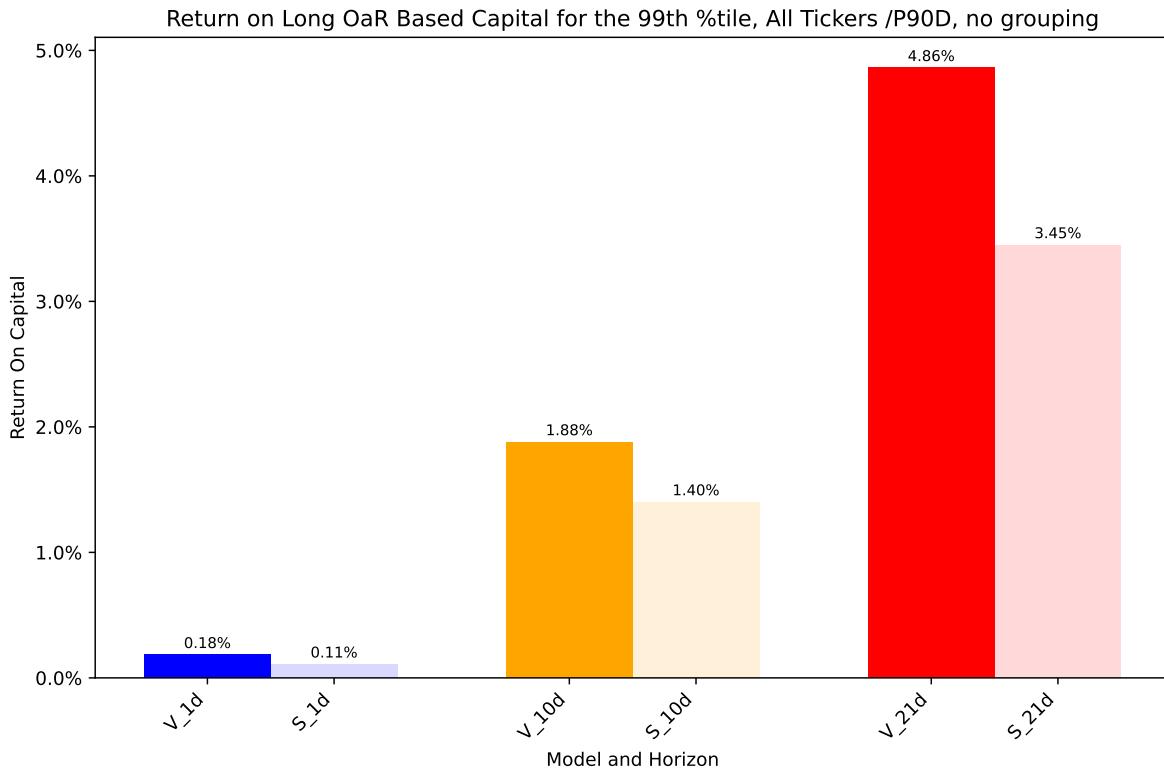
	1d	10d	21d	63d	126d
intercept	-0.00%	-0.01%	-0.07%	-1.31%	-3.31%
intercept_p_value	93.10%	94.14%	67.36%	1.62%	0.83%
slope	94.36%	112.60%	121.26%	136.26%	156.41%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-01-29 through 2025-11-03





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

	1d	10d	21d
intercept	0.00%	-0.09%	0.23%
intercept_p_value	92.86%	10.14%	0.64%
slope	167.94%	140.57%	134.31%
slope_p_value	0.00%	0.00%	0.00%

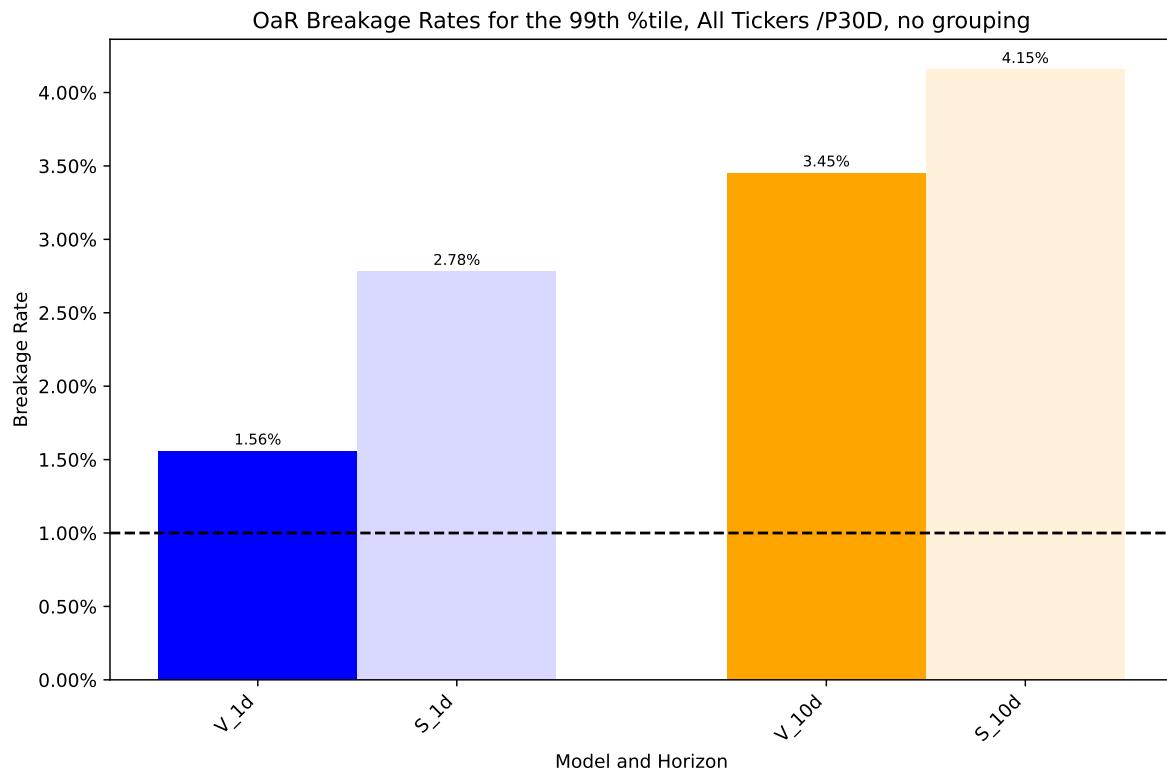
Average Alpha (intercept) and Beta (slope) of Vector Model ROLOBC regressed upon corresponding actual returns, by ticker across P90D:

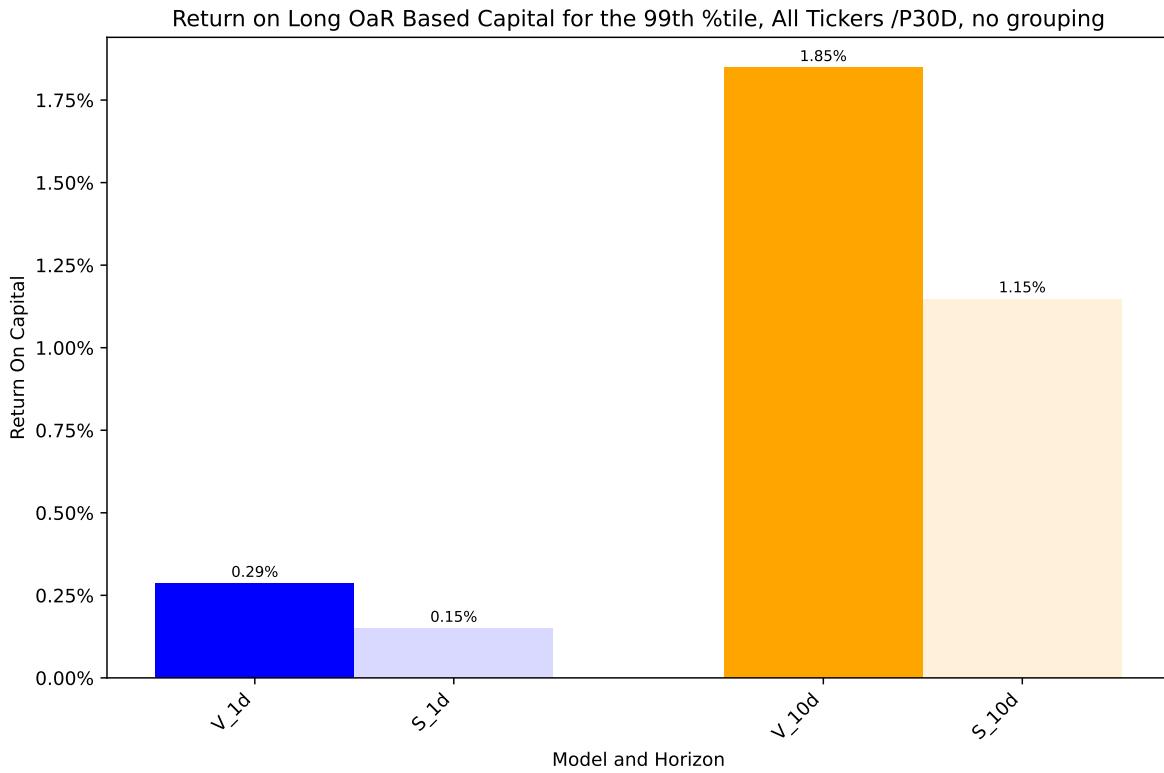
	1d	10d	21d
intercept	-0.02%	-0.08%	-0.09%
intercept_p_value	43.50%	66.82%	78.86%
slope	94.45%	101.68%	103.97%
slope_p_value	0.00%	0.00%	0.00%



Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-01-29 through 2026-01-02





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

	1d	10d
intercept	0.05%	0.24%
intercept_p_value	14.18%	7.00%
slope	156.14%	140.40%
slope_p_value	0.00%	0.00%

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

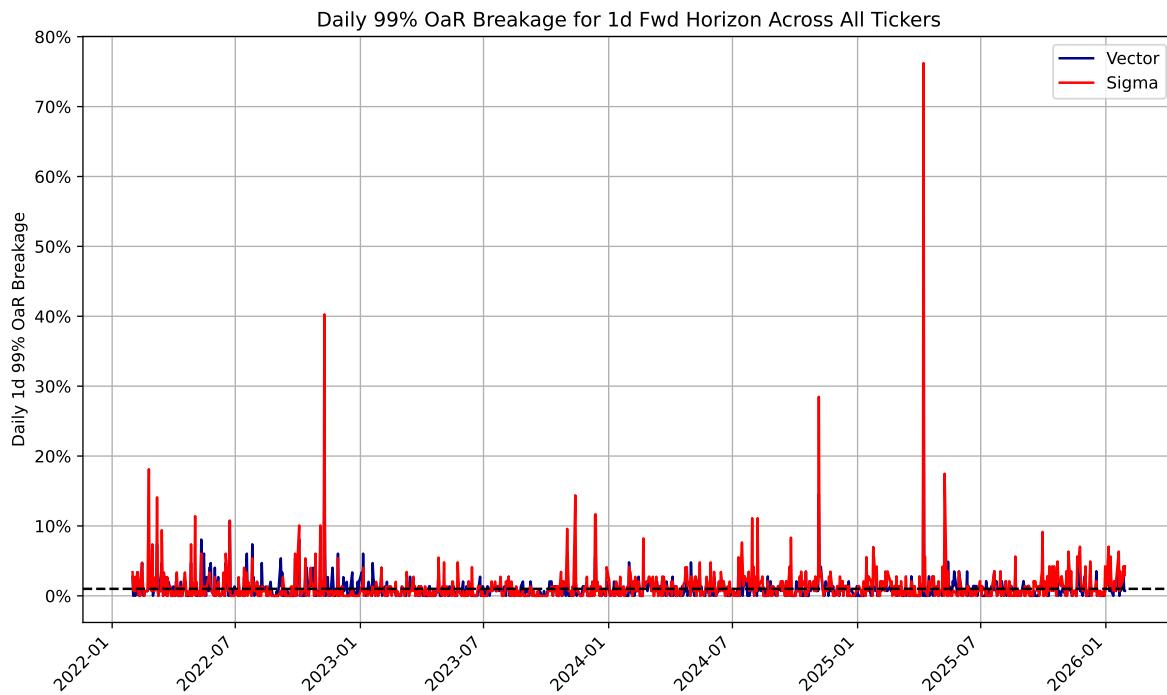
	1d	10d
intercept	-0.00%	0.07%
intercept_p_value	90.91%	78.37%
slope	93.86%	104.16%
slope_p_value	0.00%	0.00%

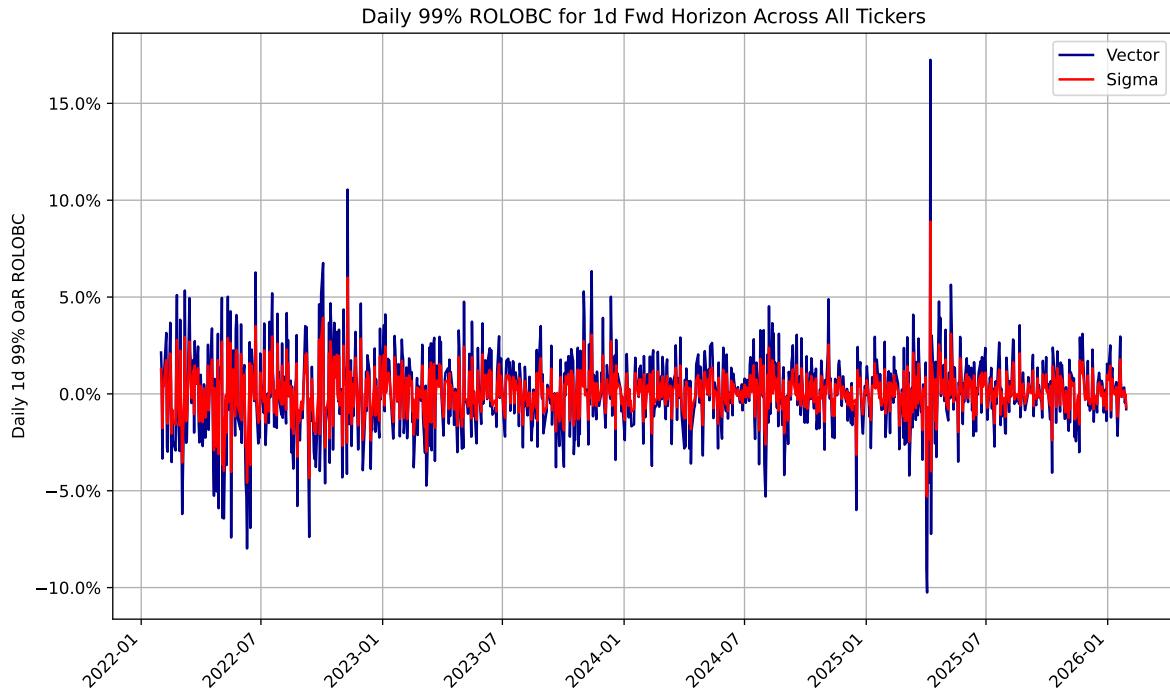


Daily Performance

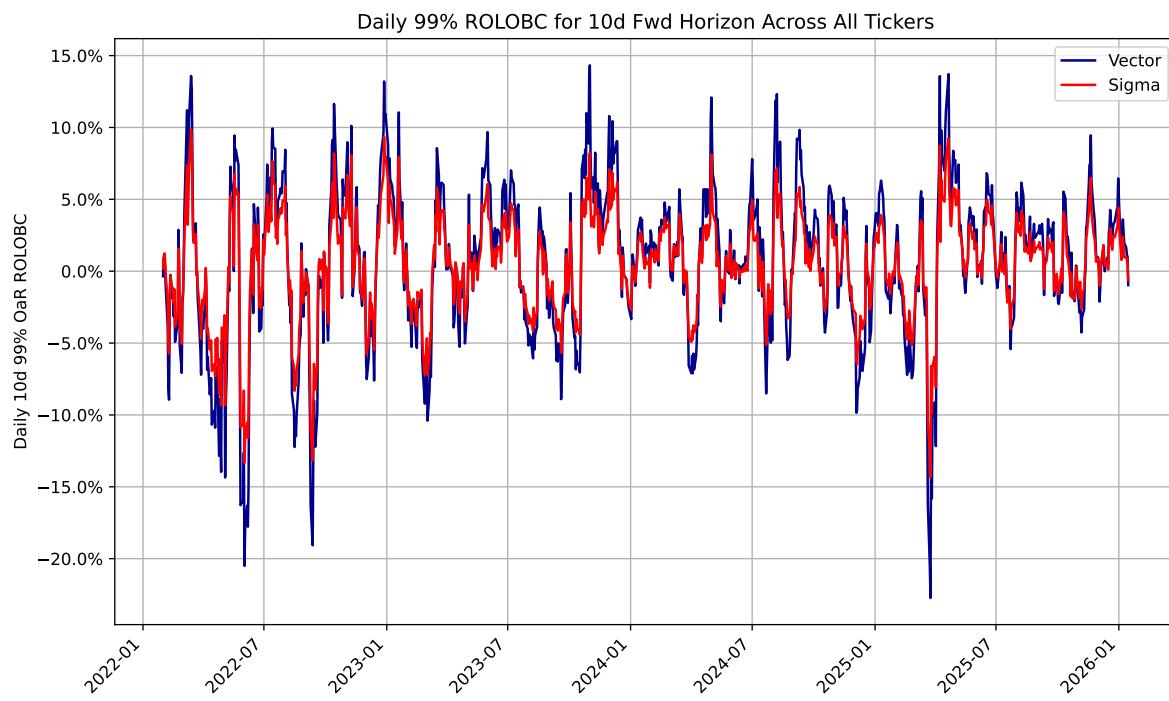
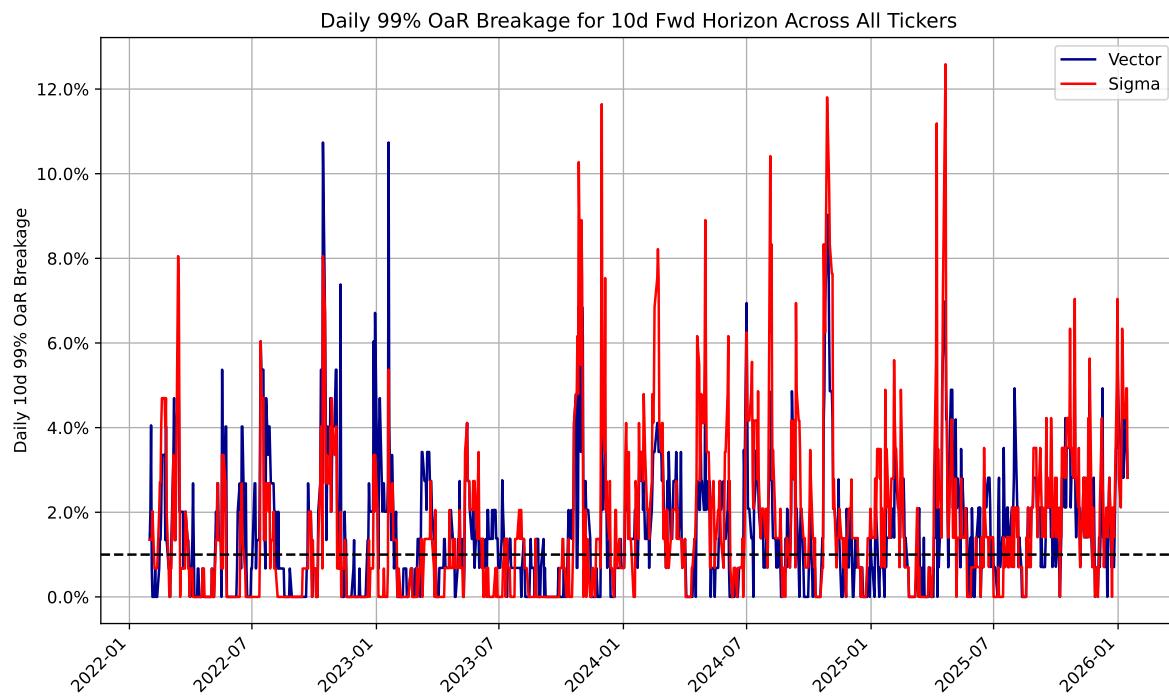
Here we look at the daily breakage and ROLOBC statistics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROLOBC outliers.

1d Horizon

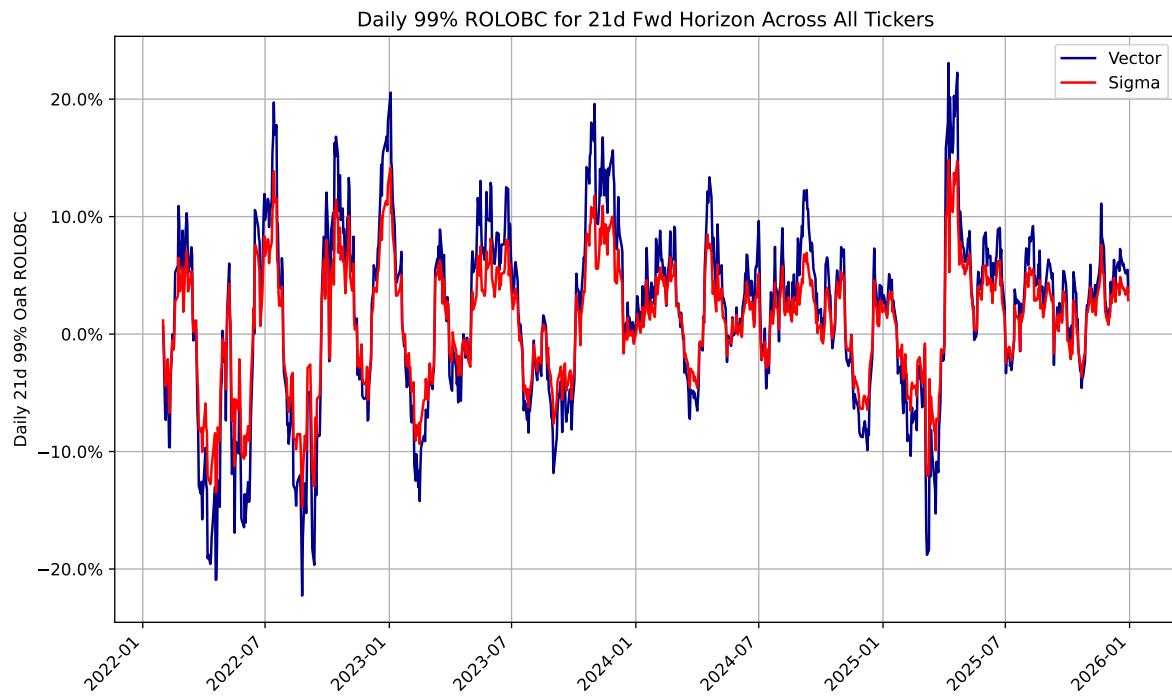
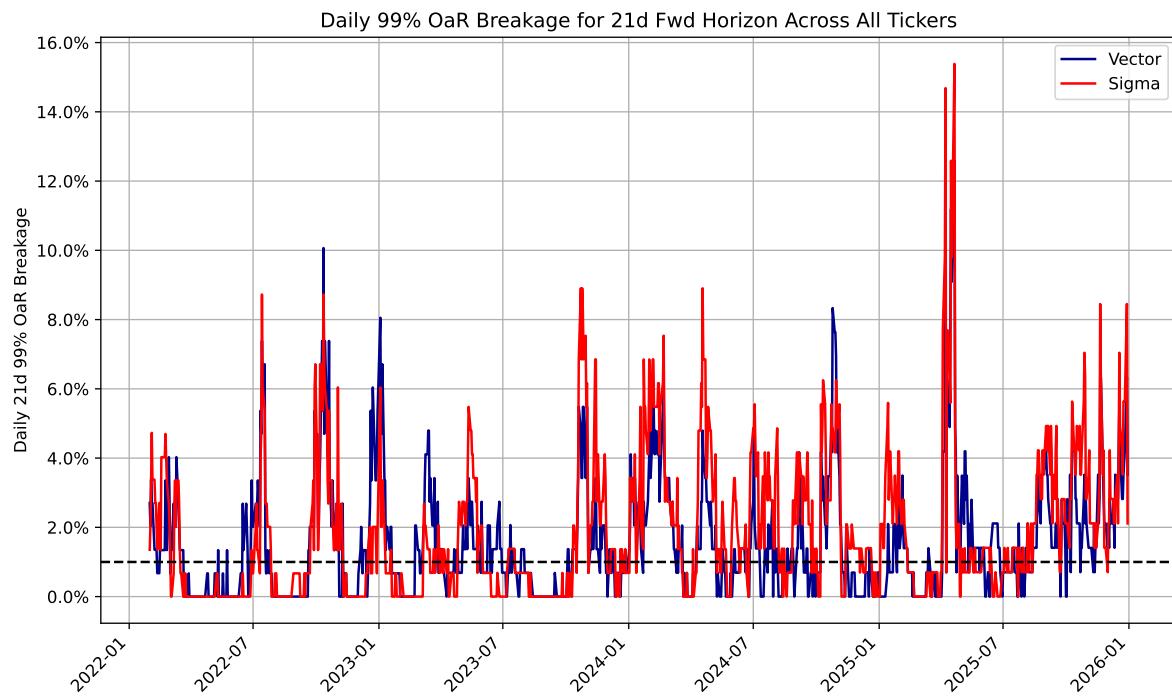




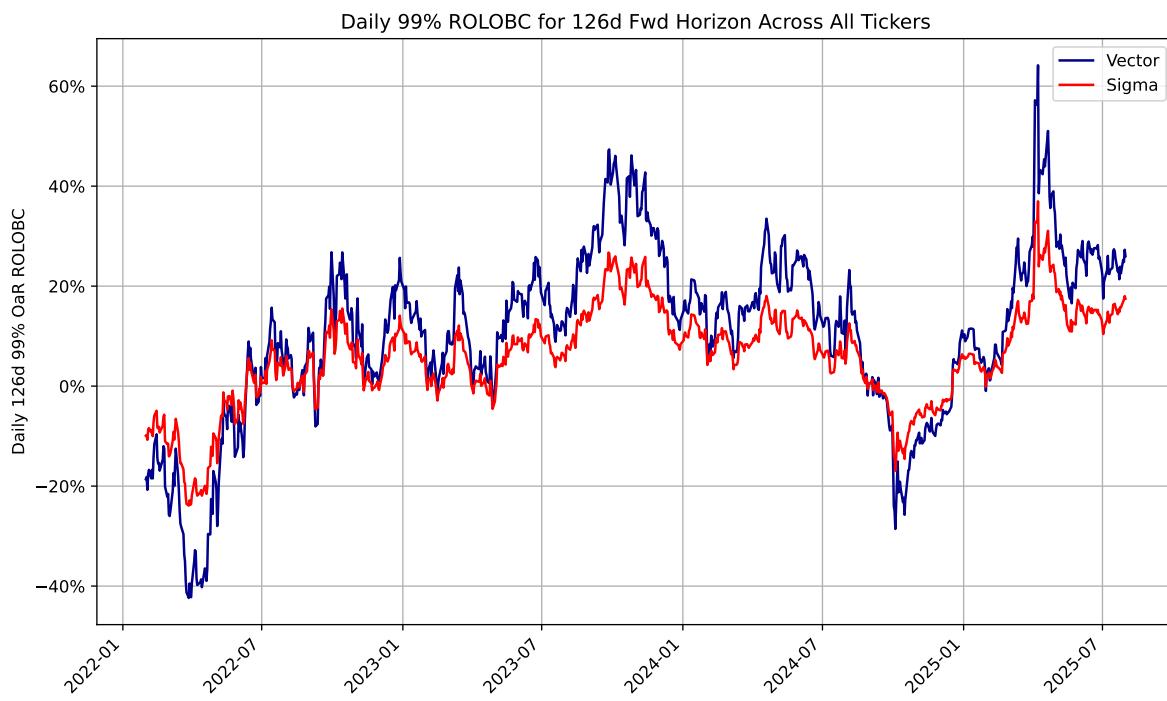
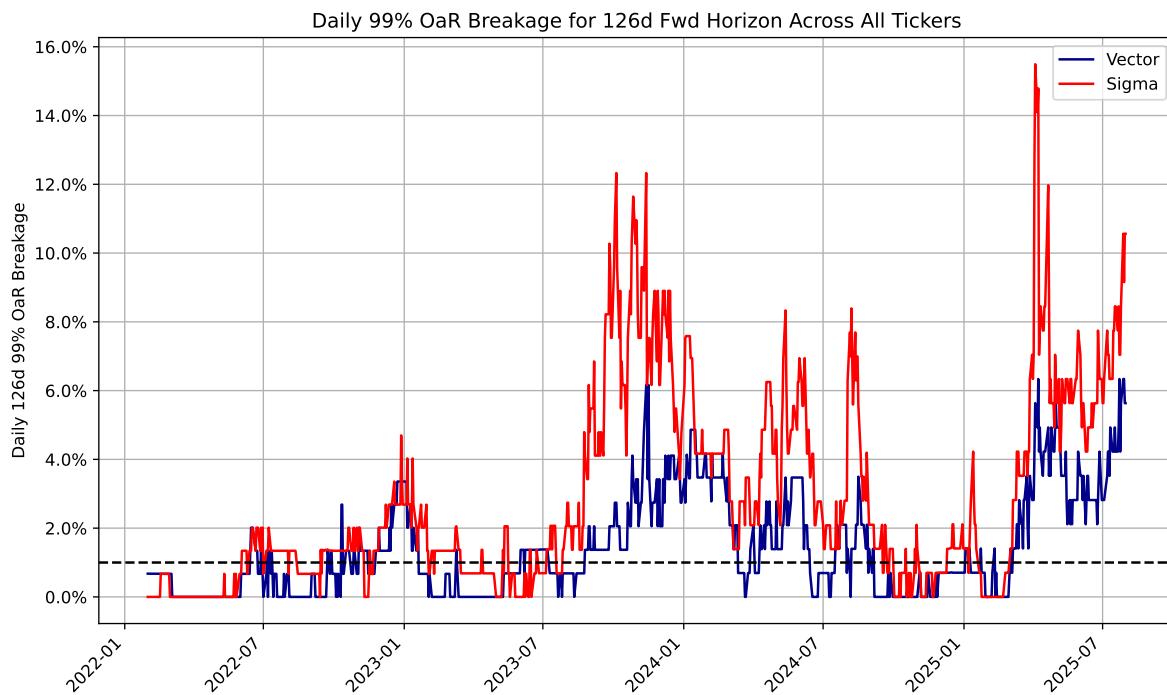
10d Horizon



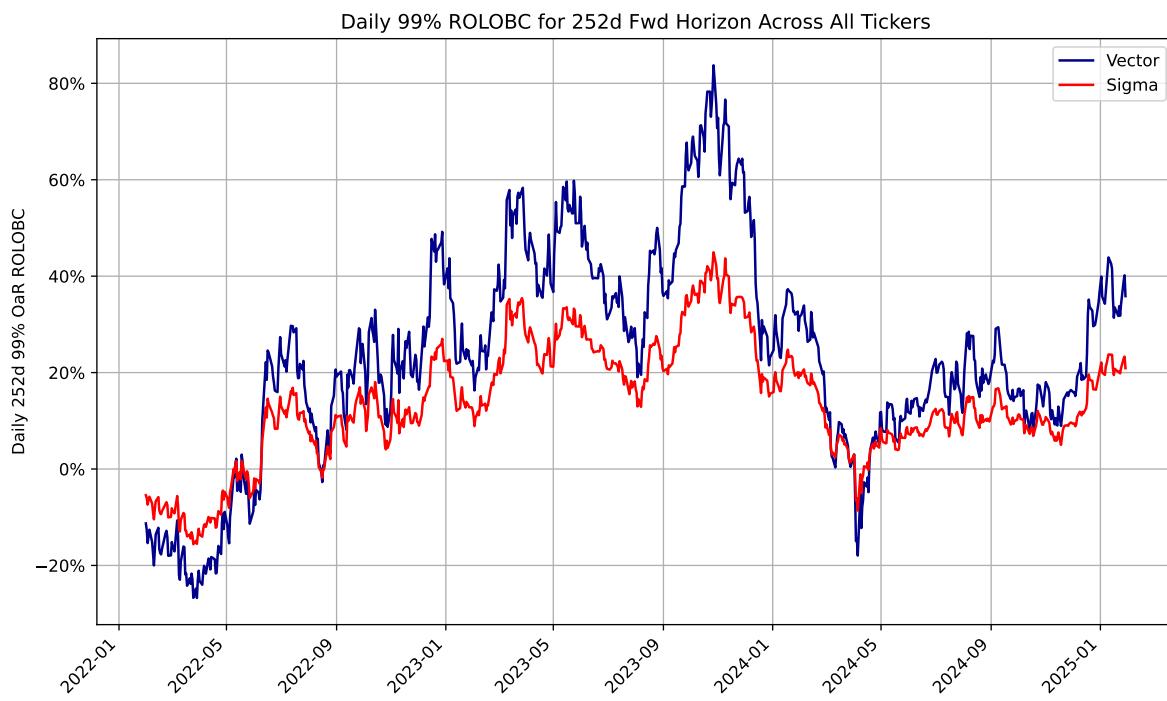
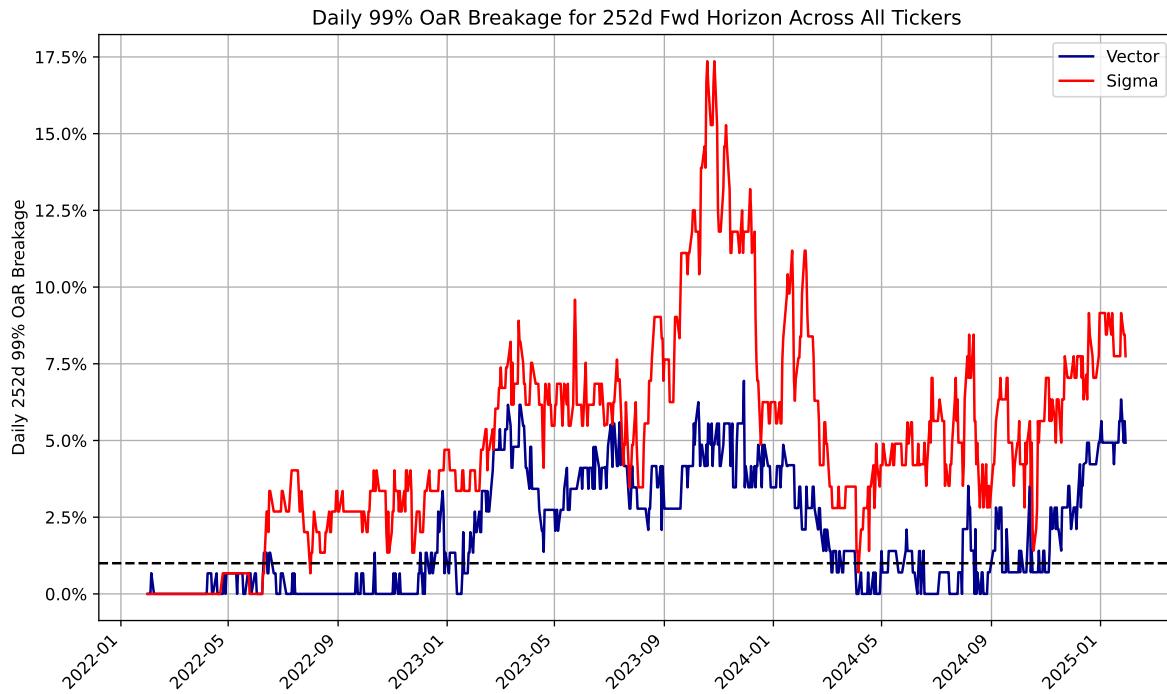
21d Horizon



63d Horizon



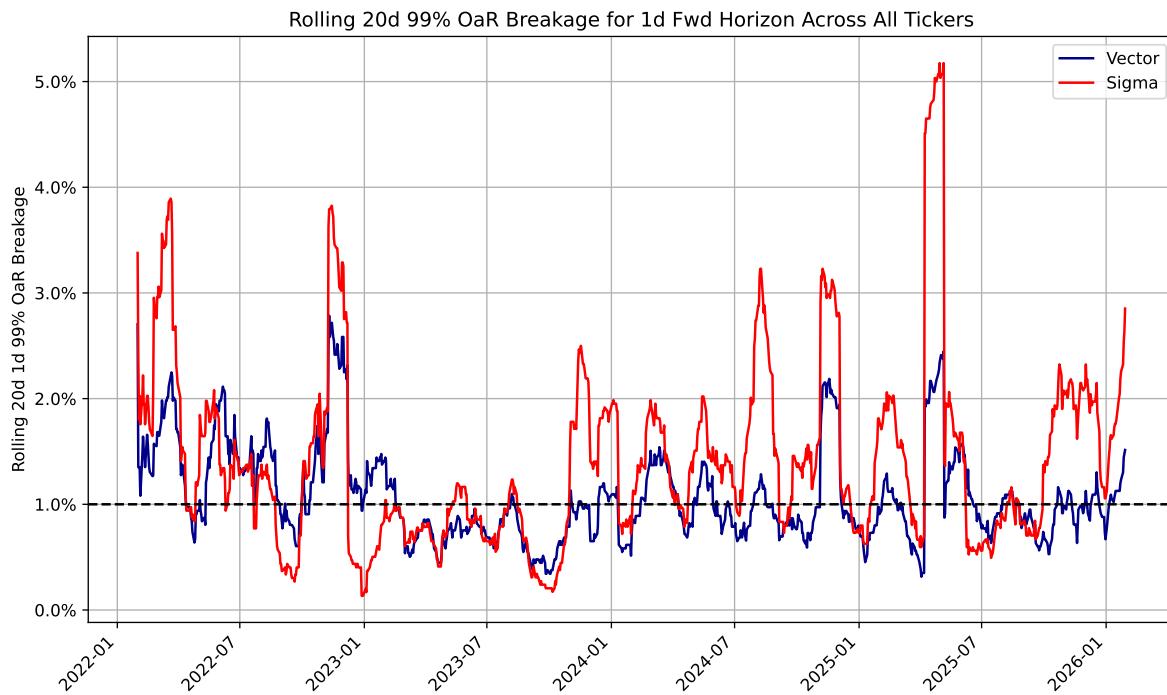
252d Horizon

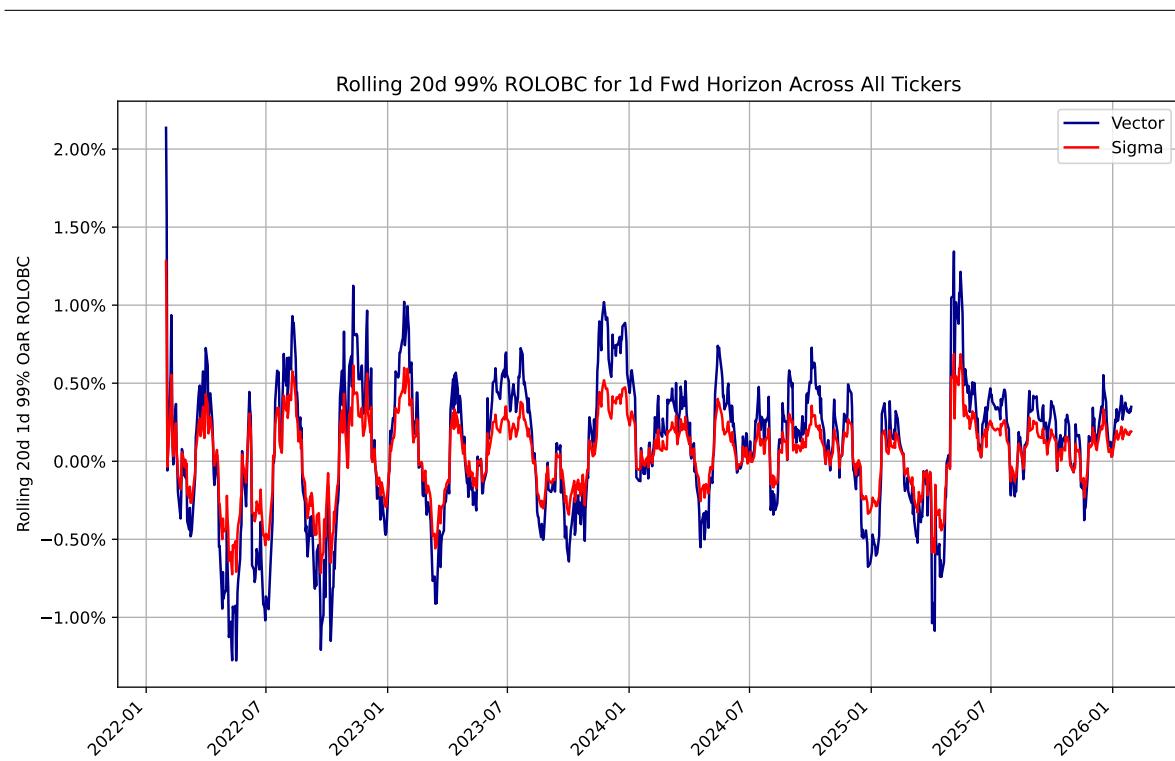


Rolling 20d Performance

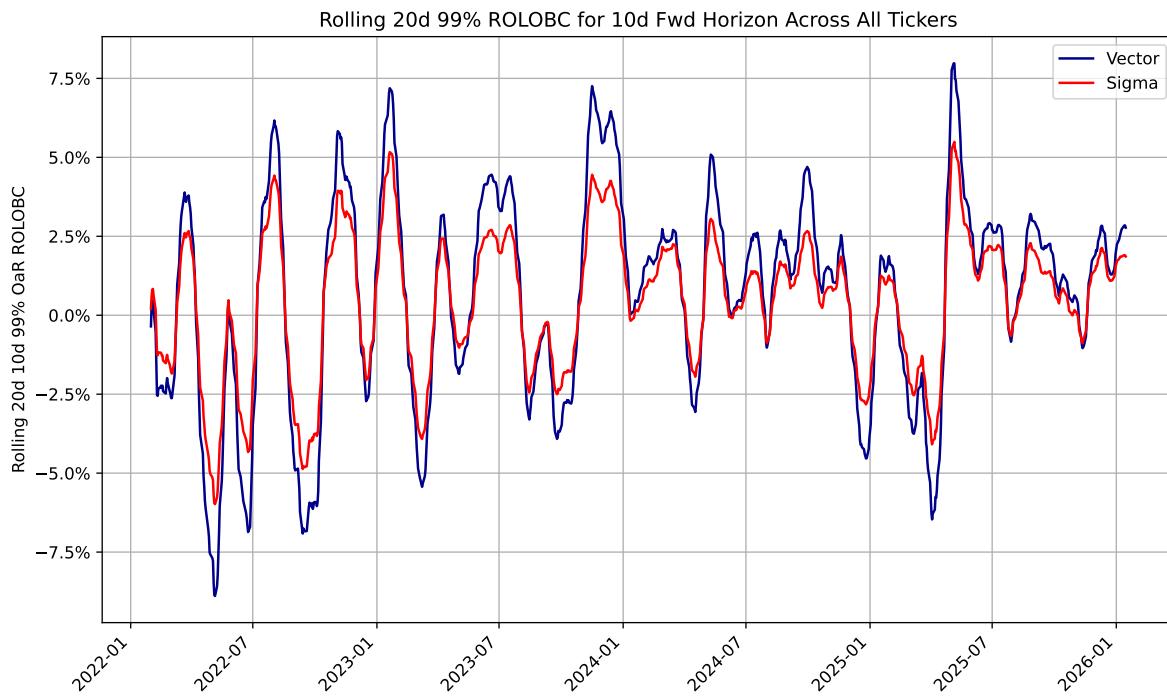
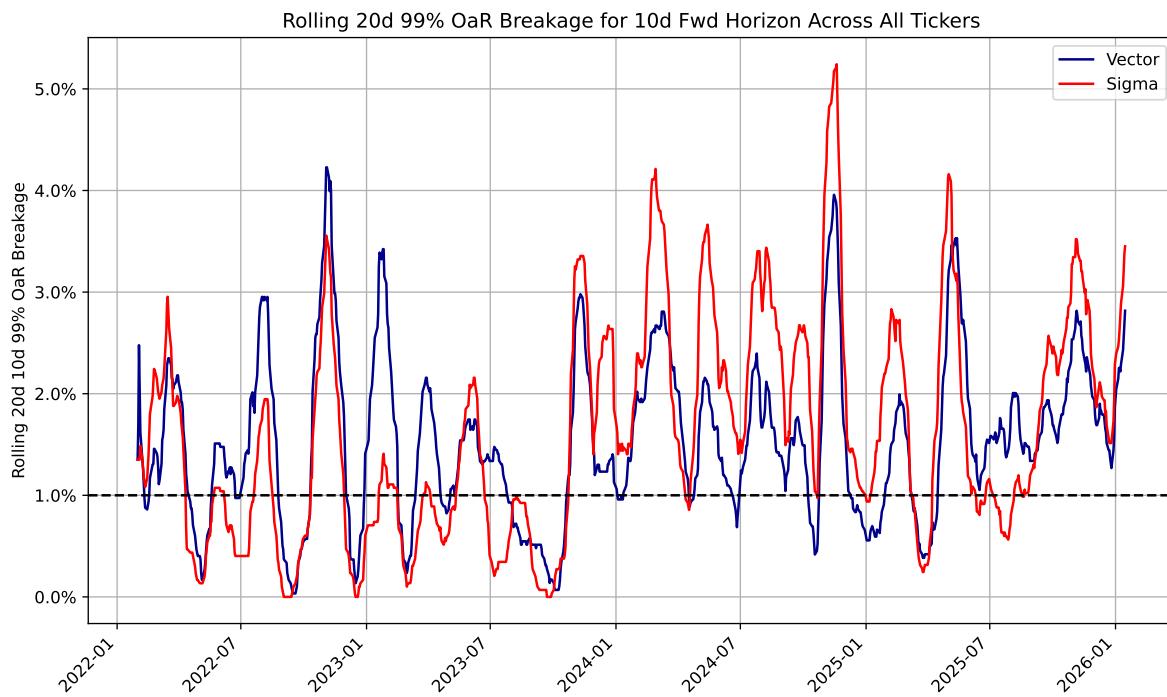
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statistics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

1d Horizon

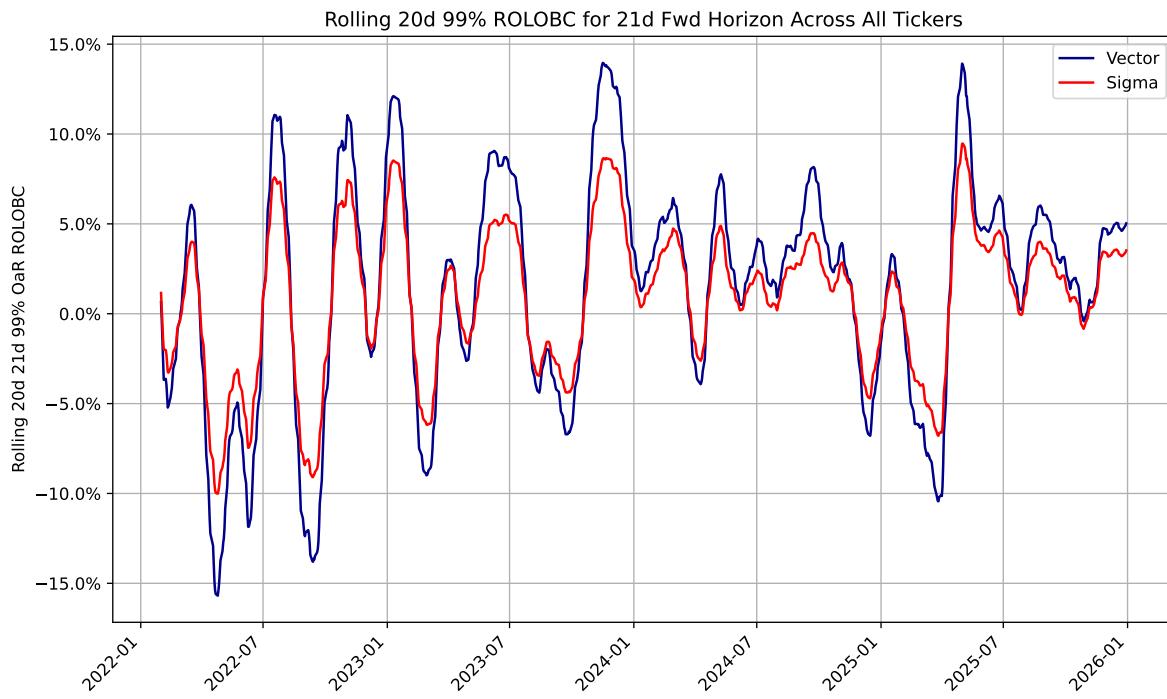
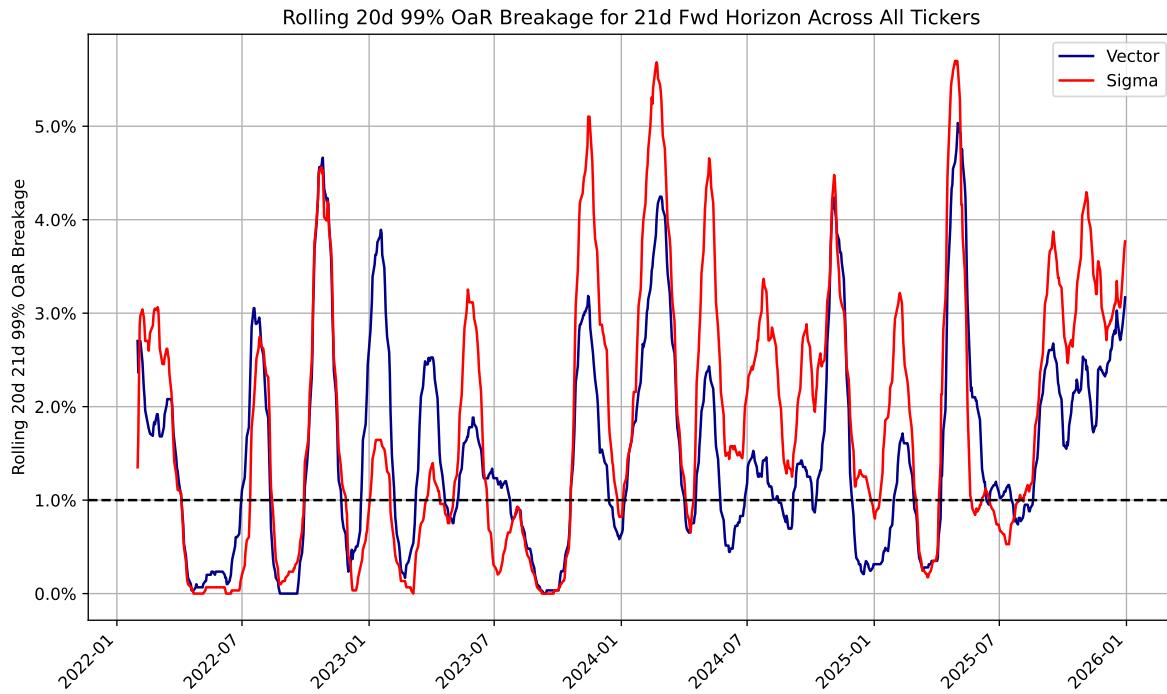




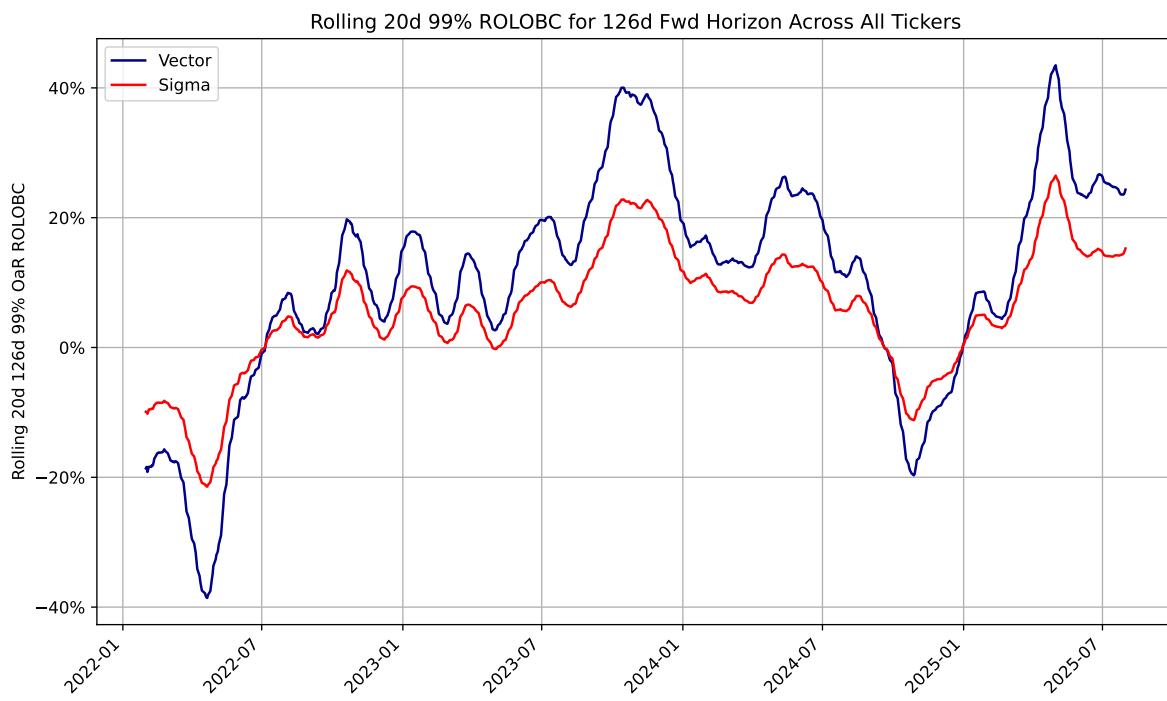
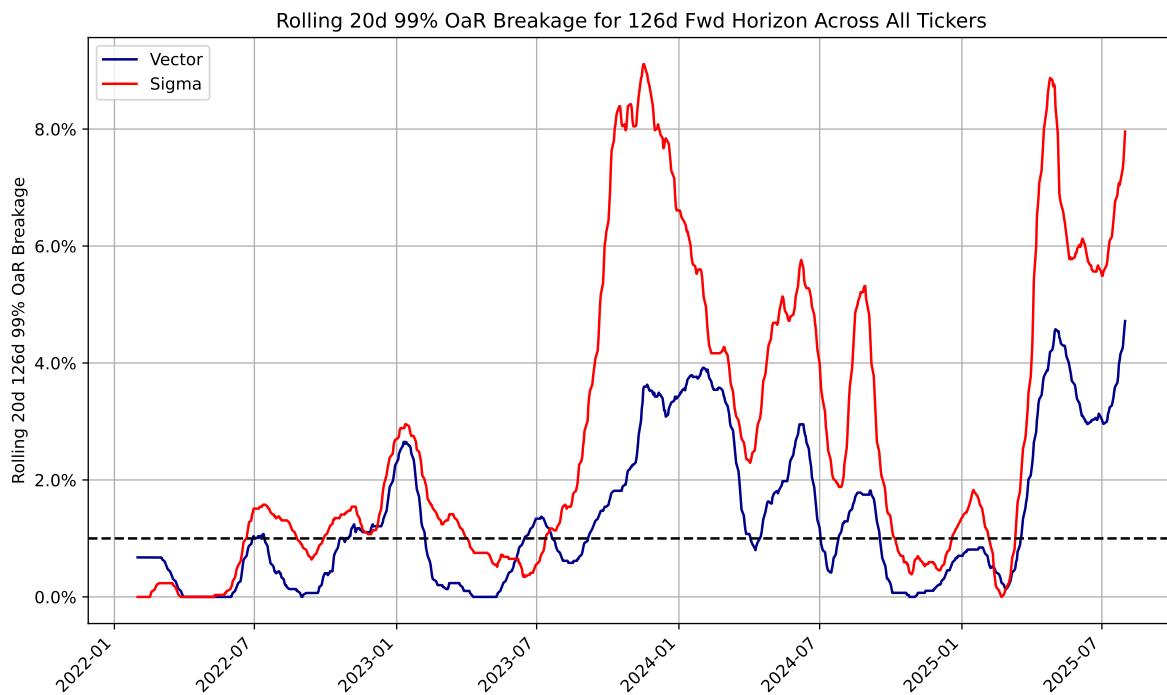
10d Horizon



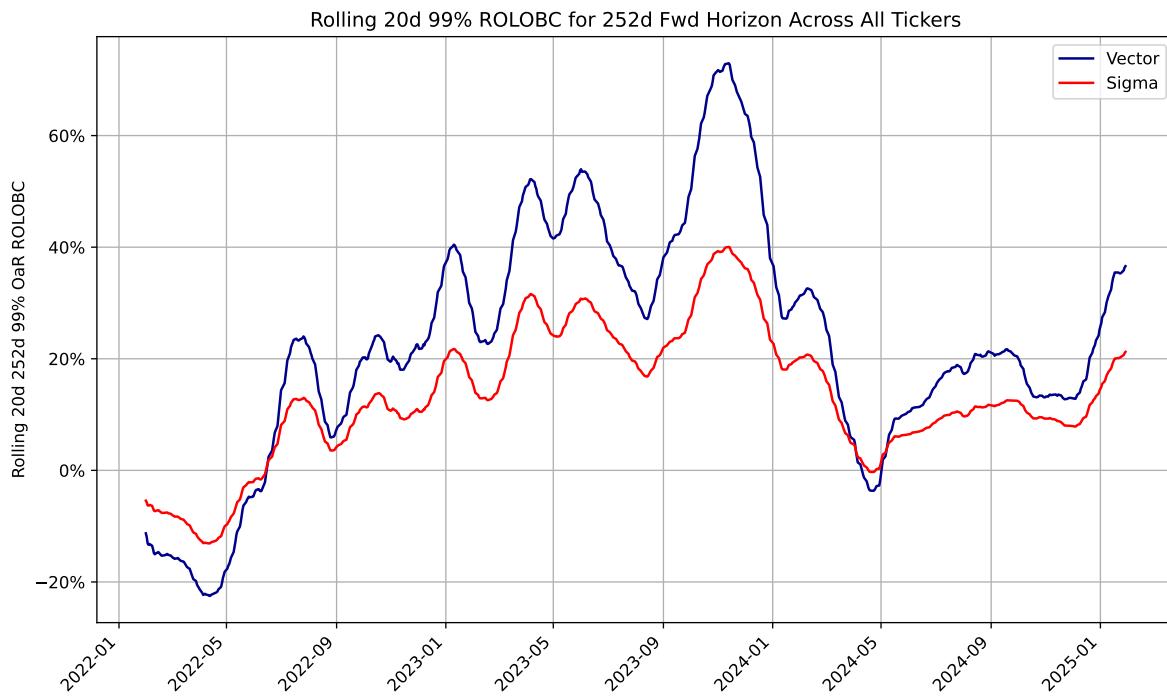
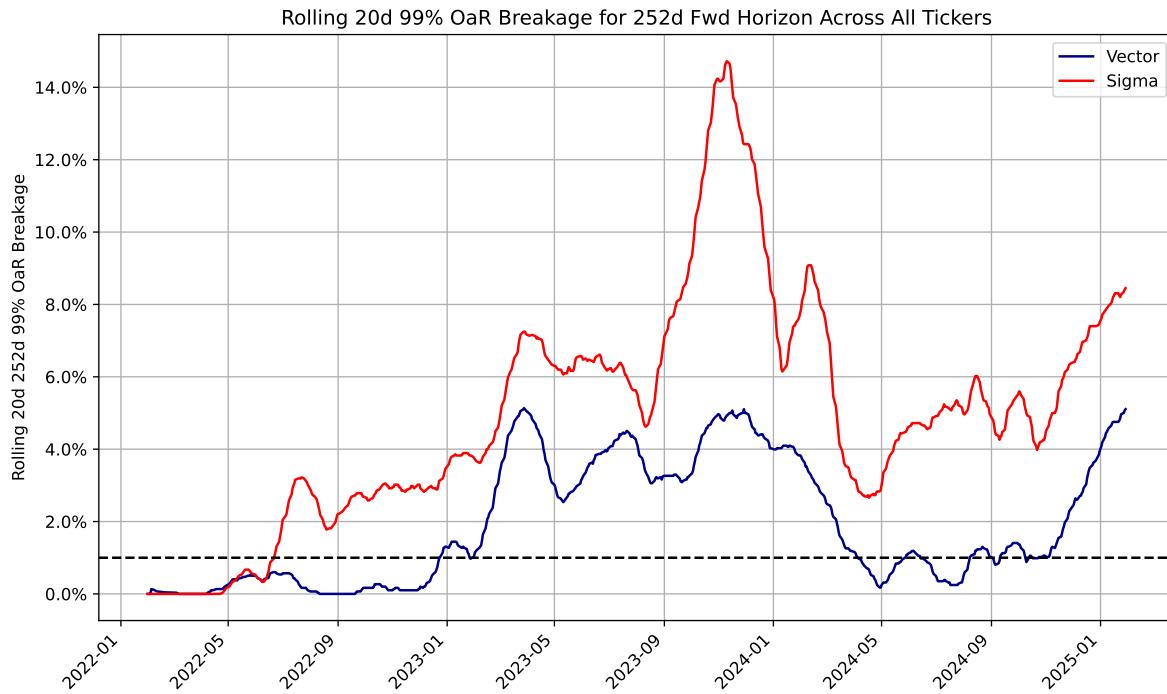
21d Horizon



63d Horizon



252d Horizon



Top 30 Tickers By OaR Breakage

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SIVBQ	6.83%	SLV	4.39%
1.0	GME	5.18%	VST	4.19%
1.0	AVGO	4.79%	WDC	3.19%
1.0	VST	4.49%	MU	2.99%
1.0	MSTR	4.39%	AVGO	2.99%
1.0	FRCB	3.6%	MSTR	2.89%
1.0	META	3.49%	SIVBQ	2.52%
1.0	TSLA	3.49%	GLD	2.49%
1.0	B	3.49%	NVDA	2.49%
1.0	HLT	3.19%	B	2.49%
1.0	SLV	3.09%	NEM	2.39%
1.0	WDC	2.89%	PHM	2.29%
1.0	TEVA	2.89%	LLY	2.19%
1.0	CHTR	2.79%	AMD	2.09%
1.0	ACGL	2.79%	CCL	2.09%
1.0	INTU	2.69%	GOOGL	1.99%
1.0	BALL	2.69%	INTC	1.99%
1.0	SBNY	2.52%	PWR	1.99%
1.0	GILD	2.49%	AMGN	1.89%
1.0	ZTS	2.49%	UNH	1.89%
1.0	BUD	2.29%	FRCB	1.8%
1.0	OXY	2.29%	SBNY	1.8%
1.0	AA	2.29%	GILD	1.79%
1.0	NFLX	2.19%	HSBC	1.79%
1.0	CMA	2.19%	AA	1.79%
1.0	GWW	2.09%	TEVA	1.79%
1.0	AMC	1.99%	WYNN	1.79%
1.0	SPY	1.89%	IRM	1.69%
1.0	JAZZ	1.79%	USB	1.69%
1.0	ORCL	1.69%	BAC	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 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	11.37%	VST	7.24%
10.0	SIVBQ	9.93%	SLV	6.24%
10.0	VST	7.95%	NVDA	5.43%
10.0	AVGO	7.85%	ORCL	5.23%
10.0	META	6.64%	TEVA	4.93%
10.0	WDC	6.14%	MU	4.63%
10.0	GME	6.14%	X	4.53%
10.0	CHTR	5.73%	GLD	4.43%
10.0	GWW	5.33%	AVGO	4.33%
10.0	SLV	4.63%	LLY	4.33%
10.0	GILD	4.43%	WDC	4.23%
10.0	ISRG	4.23%	CAH	4.12%
10.0	NVS	4.12%	MSTR	3.62%
10.0	ORCL	4.12%	GWW	3.52%
10.0	ETRN	3.97%	TMUS	3.42%
10.0	B	3.82%	TRGP	3.42%
10.0	TSLA	3.82%	AMGN	3.32%
10.0	IRM	3.72%	B	3.32%
10.0	ZTS	3.72%	MUB	3.22%
10.0	SBNY	3.68%	TSLA	3.12%
10.0	KALU	3.62%	GBTC	3.12%
10.0	HCA	3.62%	GILD	2.92%
10.0	EXPE	3.62%	IRM	2.92%
10.0	GNRC	3.52%	ELAN	2.85%
10.0	CAH	3.52%	DHI	2.82%
10.0	GLD	3.42%	CPRT	2.82%
10.0	VZ	3.22%	LUMN	2.72%
10.0	CMA	3.12%	AA	2.72%
10.0	TEVA	3.02%	WYNN	2.52%
10.0	AA	3.02%	ISRG	2.52%



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 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	MSTR	12.0%	VST	9.16%
21.0	SIVBQ	9.63%	NVDA	8.65%
21.0	CHTR	8.14%	TEVA	7.73%
21.0	VST	7.73%	SLV	7.03%
21.0	GWW	7.32%	CAH	6.71%
21.0	AVGO	7.32%	MU	6.31%
21.0	SLV	6.42%	MSTR	6.0%
21.0	B	5.9%	LLY	5.9%
21.0	META	5.9%	ORCL	5.6%
21.0	KALU	5.7%	B	5.39%
21.0	GME	5.6%	GE	5.39%
21.0	WDC	5.6%	WDC	4.78%
21.0	ISRG	5.19%	GBTC	4.58%
21.0	GILD	5.09%	TSLA	4.58%
21.0	GNRC	4.68%	AVGO	4.58%
21.0	MU	4.37%	ETRN	4.55%
21.0	ORCL	4.27%	TRGP	4.48%
21.0	CAH	4.07%	X	4.35%
21.0	TRGP	3.97%	GWW	4.17%
21.0	TEVA	3.56%	GILD	4.17%
21.0	WFC	3.56%	GLD	4.17%
21.0	NVDA	3.36%	MOS	4.07%
21.0	NEM	2.95%	AMGN	3.97%
21.0	GOOGL	2.75%	MUB	3.77%
21.0	EXPE	2.75%	TMUS	3.76%
21.0	AA	2.75%	DHI	3.66%
21.0	GS	2.64%	LUMN	3.46%
21.0	NVS	2.44%	WFC	3.36%
21.0	BUD	2.44%	PWR	3.36%
21.0	TSLA	2.44%	WYNN	3.36%



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 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	AVGO	12.75%	NVDA	17.64%
63.0	VST	11.16%	VST	16.79%
63.0	WDC	10.31%	WDC	12.43%
63.0	MSTR	8.5%	MU	11.9%
63.0	SLV	7.87%	MSTR	11.37%
63.0	SIVBQ	7.78%	B	10.84%
63.0	ORCL	7.76%	GBTC	9.88%
63.0	MU	7.65%	GLD	9.88%
63.0	EXPE	6.16%	CAH	9.46%
63.0	NVDA	5.95%	SLV	9.15%
63.0	GME	5.84%	TRGP	8.82%
63.0	IRM	5.74%	LLY	8.29%
63.0	KALU	5.53%	IRM	7.86%
63.0	WFC	4.99%	ORCL	7.76%
63.0	TRGP	4.68%	GILD	7.23%
63.0	GOOGL	4.04%	TMUS	6.91%
63.0	META	3.83%	GOOGL	6.7%
63.0	BUD	3.61%	AVGO	6.48%
63.0	TMUS	3.61%	GE	6.27%
63.0	B	3.51%	DHI	6.06%
63.0	LW	3.51%	ETRN	5.99%
63.0	CTLT	3.23%	CCL	5.21%
63.0	NEM	3.08%	MRK	4.99%
63.0	AA	2.76%	ACGL	4.99%
63.0	TSLA	2.55%	MUB	4.68%
63.0	TEVA	2.44%	TEVA	4.68%
63.0	OXY	2.44%	AMD	4.57%
63.0	GILD	2.34%	PHM	4.57%
63.0	MSI	2.23%	THC	4.25%
63.0	GLD	2.13%	NEM	4.14%



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 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	26.31%	VST	29.27%
126.0	MSTR	17.31%	NVDA	27.33%
126.0	AVGO	15.95%	TRGP	19.25%
126.0	IRM	13.78%	MU	17.88%
126.0	TRGP	10.25%	GLD	16.74%
126.0	META	9.23%	MSTR	15.6%
126.0	WDC	8.43%	GE	15.26%
126.0	NVDA	8.31%	WDC	14.69%
126.0	GOOGL	7.86%	THC	14.35%
126.0	MU	7.86%	TMUS	12.3%
126.0	MSI	6.95%	IRM	12.19%
126.0	EXPE	6.49%	NEM	11.96%
126.0	SLV	6.04%	B	11.85%
126.0	NEM	5.35%	LLY	11.85%
126.0	LW	5.35%	GOOGL	10.93%
126.0	TEVA	4.9%	GBTC	10.59%
126.0	B	4.44%	GILD	10.48%
126.0	BUD	4.44%	ACGL	10.14%
126.0	ACGL	2.96%	ORCL	9.45%
126.0	GLD	2.96%	SLV	8.88%
126.0	ORCL	2.85%	AVGO	7.97%
126.0	CAH	2.73%	META	7.86%
126.0	OXY	2.62%	CMG	7.18%
126.0	TDG	2.28%	CAH	7.06%
126.0	TMUS	2.16%	TEVA	6.95%
126.0	GILD	2.16%	AMD	6.26%
126.0	THC	1.59%	PHM	6.26%
126.0	GME	1.48%	X	5.26%
126.0	ELAN	1.39%	MSI	4.33%
126.0	VFC	1.25%	PWR	4.1%



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 2026-01-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	VST	42.69%	VST	54.52%
252.0	MSTR	37.1%	NVDA	52.39%
252.0	AVGO	35.51%	AVGO	50.66%
252.0	NVDA	35.11%	GLD	42.42%
252.0	IRM	20.21%	MSTR	37.23%
252.0	LLY	13.16%	GE	36.84%
252.0	GLD	11.04%	LLY	32.85%
252.0	NEM	8.11%	GBTC	27.39%
252.0	GWW	7.85%	PHM	24.6%
252.0	TEVA	7.85%	TRGP	22.87%
252.0	TRGP	7.05%	CAH	22.34%
252.0	MSI	7.05%	TMUS	19.28%
252.0	B	6.65%	GS	19.28%
252.0	WDC	6.52%	COST	17.42%
252.0	META	6.25%	IRM	17.29%
252.0	SLV	4.39%	META	17.15%
252.0	LW	4.12%	HSBC	16.36%
252.0	MU	2.66%	ACGL	16.09%
252.0	GILD	2.53%	NFLX	15.29%
252.0	ORCL	2.53%	TEVA	13.7%
252.0	WFC	2.26%	MSI	13.56%
252.0	THC	1.99%	MU	13.03%
252.0	TMUS	1.99%	JPM	12.63%
252.0	GOOGL	1.6%	THC	12.37%
252.0	ORLY	1.6%	T	10.64%
252.0	GE	1.6%	WDC	10.37%
252.0	EXPE	1.33%	ORCL	9.44%
252.0	TDG	1.2%	B	9.31%
252.0	JPM	1.06%	NEM	8.11%
252.0	GNRC	0.8%	GOOGL	7.98%



P30D: 1d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	WDC	31.58%	SLV	42.11%
1.0	GILD	21.05%	WDC	21.05%
1.0	MU	21.05%	INTC	21.05%
1.0	FCX	15.79%	T	15.79%
1.0	AA	10.53%	MU	10.53%
1.0	TXN	10.53%	NVS	10.53%
1.0	NVS	10.53%	BHP	10.53%
1.0	SLV	10.53%	GILD	10.53%
1.0	GLD	10.53%	GLD	10.53%
1.0	GNRC	10.53%	TXN	10.53%
1.0	MSI	10.53%	RIO	10.53%
1.0	LEN	5.26%	META	10.53%
1.0	TDG	5.26%	PHM	10.53%
1.0	CLF	5.26%	JAZZ	5.26%
1.0	HON	5.26%	AAP	5.26%
1.0	MS	5.26%	HCA	5.26%
1.0	INTC	5.26%	HSBC	5.26%
1.0	BALL	5.26%	HON	5.26%
1.0	HD	5.26%	HD	5.26%
1.0	HCA	5.26%	GS	5.26%
1.0	VZ	5.26%	FITB	5.26%
1.0	FITB	5.26%	LEN	5.26%
1.0	NFLX	0.0%	AA	5.26%
1.0	NVDA	0.0%	MNST	5.26%
1.0	MNST	0.0%	MS	5.26%
1.0	LQD	0.0%	MSFT	5.26%
1.0	NWL	0.0%	CZR	5.26%
1.0	LUMN	0.0%	NEM	5.26%
1.0	LNC	0.0%	ORLY	5.26%
1.0	ON	0.0%	OXY	5.26%



P30D: 10d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	WDC	100.0%	SLV	90.0%
10.0	GLD	90.0%	GLD	60.0%
10.0	GILD	60.0%	GILD	60.0%
10.0	SLV	50.0%	AZO	40.0%
10.0	MU	40.0%	MU	40.0%
10.0	BUD	40.0%	WDC	40.0%
10.0	TDG	20.0%	COST	40.0%
10.0	INTC	20.0%	RIO	40.0%
10.0	SBUX	20.0%	XOM	30.0%
10.0	RIO	10.0%	NEM	30.0%
10.0	XOM	10.0%	INTC	30.0%
10.0	IRM	10.0%	HON	20.0%
10.0	VZ	10.0%	META	10.0%
10.0	FCX	10.0%	T	10.0%
10.0	MUB	0.0%	BHP	10.0%
10.0	AA	0.0%	GNRC	10.0%
10.0	NAVI	0.0%	VZ	10.0%
10.0	NEM	0.0%	AMD	10.0%
10.0	NFLX	0.0%	AMAT	10.0%
10.0	NVS	0.0%	NAVI	0.0%
10.0	NWL	0.0%	NFLX	0.0%
10.0	ON	0.0%	NVDA	0.0%
10.0	NVDA	0.0%	NVS	0.0%
10.0	MSFT	0.0%	NWL	0.0%
10.0	MSTR	0.0%	ON	0.0%
10.0	LVS	0.0%	ORCL	0.0%
10.0	KHC	0.0%	AA	0.0%
10.0	LEN	0.0%	MS	0.0%
10.0	LLY	0.0%	MUB	0.0%
10.0	LNC	0.0%	MSTR	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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	WDC	20.0%	SLV	30.0%
1.0	GILD	10.0%	WDC	13.33%
1.0	TXN	8.33%	MU	13.33%
1.0	MU	8.33%	INTC	10.0%
1.0	NVS	8.33%	AA	8.33%
1.0	AA	8.33%	NEM	8.33%
1.0	CLF	6.67%	B	8.33%
1.0	SLV	6.67%	PHM	6.67%
1.0	GWW	5.0%	GLD	5.0%
1.0	GLD	5.0%	CCL	5.0%
1.0	FCX	5.0%	HD	5.0%
1.0	MSI	3.33%	NVS	5.0%
1.0	PCG	3.33%	CSCO	5.0%
1.0	HCA	3.33%	T	5.0%
1.0	GNRC	3.33%	DHI	5.0%
1.0	JAZZ	3.33%	LEN	5.0%
1.0	CMA	1.67%	JAZZ	5.0%
1.0	TDG	1.67%	MNST	3.33%
1.0	HSBC	1.67%	MRK	3.33%
1.0	HON	1.67%	CMA	3.33%
1.0	FITB	1.67%	GS	3.33%
1.0	HLT	1.67%	META	3.33%
1.0	HD	1.67%	CSTM	3.33%
1.0	TEVA	1.67%	HSBC	3.33%
1.0	GOOGL	1.67%	FITB	3.33%
1.0	EXPE	1.67%	GWW	3.33%
1.0	ON	1.67%	GILD	3.33%
1.0	CCL	1.67%	GOOGL	3.33%
1.0	IEP	1.67%	HLT	3.33%
1.0	B	1.67%	TEVA	3.33%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	SLV	37.25%	SLV	70.59%
10.0	AA	35.29%	AA	27.45%
10.0	WDC	35.29%	MU	23.53%
10.0	GLD	27.45%	JAZZ	19.61%
10.0	JAZZ	19.61%	B	19.61%
10.0	FCX	13.73%	INTC	19.61%
10.0	TXN	13.73%	WDC	19.61%
10.0	GILD	11.76%	GLD	11.76%
10.0	KALU	9.8%	GILD	11.76%
10.0	MU	9.8%	COST	11.76%
10.0	BUD	9.8%	MRK	11.76%
10.0	B	7.84%	AMAT	9.8%
10.0	TDG	7.84%	TEVA	9.8%
10.0	LLY	7.84%	CSTM	7.84%
10.0	VFC	7.84%	NEM	7.84%
10.0	THC	5.88%	AZO	7.84%
10.0	LEN	3.92%	RIO	7.84%
10.0	GWW	3.92%	CCL	7.84%
10.0	SBUX	3.92%	HSBC	5.88%
10.0	AMGN	3.92%	GOOGL	5.88%
10.0	NVS	3.92%	XOM	5.88%
10.0	CCL	3.92%	BHP	3.92%
10.0	INTC	3.92%	HON	3.92%
10.0	MRK	1.96%	AMGN	3.92%
10.0	VZ	1.96%	LEN	3.92%
10.0	EXPE	1.96%	GNRC	1.96%
10.0	XOM	1.96%	HCA	1.96%
10.0	RIO	1.96%	FITB	1.96%
10.0	ON	1.96%	FCX	1.96%
10.0	META	1.96%	MS	1.96%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	SLV	72.5%	SLV	97.5%
21.0	AA	52.5%	MU	55.0%
21.0	KALU	40.0%	AA	52.5%
21.0	MU	37.5%	WDC	27.5%
21.0	WDC	37.5%	B	27.5%
21.0	GLD	27.5%	JAZZ	25.0%
21.0	JAZZ	25.0%	RIO	22.5%
21.0	FCX	22.5%	XOM	17.5%
21.0	EXPE	15.0%	TEVA	15.0%
21.0	B	12.5%	GLD	15.0%
21.0	NEM	10.0%	NEM	15.0%
21.0	TXN	7.5%	HSBC	12.5%
21.0	INTC	5.0%	INTC	12.5%
21.0	BUD	5.0%	AMAT	12.5%
21.0	NVS	5.0%	COST	10.0%
21.0	CMA	5.0%	KEY	10.0%
21.0	HSBC	2.5%	KALU	10.0%
21.0	USB	2.5%	USB	7.5%
21.0	RIO	2.5%	FCX	5.0%
21.0	VFC	2.5%	MRK	5.0%
21.0	ORCL	0.0%	CSTM	5.0%
21.0	LQD	0.0%	CCL	2.5%
21.0	NWL	0.0%	BIIB	2.5%
21.0	NVDA	0.0%	BHP	2.5%
21.0	NFLX	0.0%	TXN	2.5%
21.0	LLY	0.0%	BALL	2.5%
21.0	LNC	0.0%	NVS	0.0%
21.0	ON	0.0%	ON	0.0%
21.0	MSTR	0.0%	NVDA	0.0%
21.0	NAVI	0.0%	NFLX	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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	WDC	9.64%	SLV	8.87%
1.0	GILD	8.03%	WDC	7.23%
1.0	TSLA	6.43%	B	5.62%
1.0	NVS	4.02%	NEM	5.22%
1.0	MU	4.02%	INTC	4.82%
1.0	GLD	4.02%	GLD	4.42%
1.0	SLV	3.63%	MU	4.42%
1.0	AA	3.61%	HSBC	3.61%
1.0	VZ	3.61%	PHM	3.61%
1.0	UNH	3.61%	AA	3.21%
1.0	PCG	3.61%	LUMN	3.21%
1.0	AVGO	3.61%	JAZZ	3.21%
1.0	ZTS	3.21%	AMD	3.21%
1.0	AMZN	2.81%	NVS	3.21%
1.0	NEM	2.81%	HLT	3.21%
1.0	GNRC	2.81%	PEP	2.81%
1.0	AMC	2.81%	HD	2.81%
1.0	AAP	2.81%	CCL	2.81%
1.0	TXN	2.81%	MNST	2.81%
1.0	CLF	2.41%	GILD	2.41%
1.0	BAC	2.41%	ORLY	2.41%
1.0	CMA	2.41%	GT	2.41%
1.0	FCX	2.01%	DHI	2.41%
1.0	GWW	2.01%	LEN	2.41%
1.0	BUD	2.01%	CSTM	2.41%
1.0	HD	2.01%	CLF	2.41%
1.0	HON	2.01%	LVS	2.41%
1.0	META	1.61%	BA	2.41%
1.0	HLT	1.61%	WYNN	2.41%
1.0	VFC	1.61%	AZN	2.41%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	WDC	22.08%	SLV	18.41%
10.0	SLV	11.72%	X	11.9%
10.0	KALU	11.25%	WDC	11.25%
10.0	GILD	10.83%	B	10.42%
10.0	GLD	10.0%	MU	10.42%
10.0	INTC	10.0%	INTC	9.17%
10.0	AVGO	8.75%	ORCL	8.75%
10.0	TXN	8.33%	GLD	7.08%
10.0	NVS	8.33%	ELAN	6.67%
10.0	MU	7.92%	JAZZ	6.67%
10.0	AAP	7.92%	GILD	6.25%
10.0	AA	7.5%	GOOGL	6.25%
10.0	TSLA	7.08%	AA	5.83%
10.0	ELAN	7.08%	GNRC	5.83%
10.0	HCA	6.67%	CAH	5.83%
10.0	BUD	5.83%	AAP	5.42%
10.0	CMA	5.42%	HSBC	5.42%
10.0	EXPE	5.0%	TEVA	5.42%
10.0	CAH	5.0%	WYNN	5.42%
10.0	META	4.58%	BUD	5.0%
10.0	AMZN	4.58%	CCL	4.58%
10.0	NEM	4.58%	LVS	4.58%
10.0	GOOGL	4.58%	AMD	4.58%
10.0	GNRC	4.58%	MSFT	4.17%
10.0	JAZZ	4.17%	NFLX	4.17%
10.0	VZ	4.17%	LUMN	4.17%
10.0	ISRG	4.17%	ISRG	4.17%
10.0	CHTR	3.75%	AMAT	4.17%
10.0	FCX	3.33%	LLY	3.75%
10.0	THC	3.33%	EXPE	3.75%



P365D: 21d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	WDC	23.14%	SLV	25.88%
21.0	SLV	22.37%	B	21.83%
21.0	MU	18.78%	WDC	18.78%
21.0	KALU	17.9%	MU	18.34%
21.0	AVGO	12.23%	ORCL	13.1%
21.0	B	9.61%	CAH	12.66%
21.0	TXN	9.61%	GLD	11.79%
21.0	AA	9.17%	TEVA	9.61%
21.0	JAZZ	9.17%	AMD	9.61%
21.0	GOOGL	9.17%	AA	9.17%
21.0	INTC	8.73%	JAZZ	9.17%
21.0	CAH	7.86%	INTC	8.73%
21.0	GLD	6.99%	GNRC	7.42%
21.0	AAP	6.99%	WYNN	6.55%
21.0	GNRC	6.55%	MSFT	6.11%
21.0	NEM	6.55%	LVS	6.11%
21.0	GILD	6.55%	ISRG	6.11%
21.0	CHTR	6.55%	GOOGL	5.68%
21.0	EXPE	5.24%	BUD	5.68%
21.0	ISRG	4.8%	AMAT	5.68%
21.0	CMA	4.37%	AAP	5.68%
21.0	BUD	4.37%	MOS	5.24%
21.0	WFC	4.37%	ELAN	4.8%
21.0	ZTS	3.93%	HSBC	4.8%
21.0	FCX	3.93%	LUMN	4.8%
21.0	ELAN	3.93%	HLT	4.37%
21.0	NVS	3.49%	BA	4.37%
21.0	HON	3.49%	NFLX	3.93%
21.0	KEY	3.49%	THC	3.93%
21.0	THC	3.06%	PWR	3.93%



P365D: 63d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	WDC	50.27%	WDC	57.22%
63.0	MU	38.5%	B	54.55%
63.0	SLV	36.56%	CAH	42.78%
63.0	AVGO	34.76%	SLV	39.78%
63.0	ORCL	24.06%	MU	37.97%
63.0	KALU	22.46%	GOOGL	33.69%
63.0	B	16.58%	ORCL	24.06%
63.0	NEM	15.51%	GLD	24.06%
63.0	EXPE	15.51%	NEM	20.86%
63.0	AA	13.9%	TEVA	20.86%
63.0	GOOGL	12.3%	KALU	19.79%
63.0	WYNN	9.09%	AA	13.9%
63.0	GLD	8.56%	MSFT	13.9%
63.0	BUD	6.95%	GNRC	12.83%
63.0	JAZZ	6.42%	AMD	11.76%
63.0	CCL	6.42%	INTC	10.7%
63.0	TXN	5.35%	CCL	10.16%
63.0	GNRC	4.81%	PWR	9.09%
63.0	HSBC	4.81%	BUD	8.56%
63.0	META	4.28%	LUMN	7.49%
63.0	INTC	3.74%	DHI	7.49%
63.0	WFC	3.21%	HSBC	7.49%
63.0	ELAN	2.67%	AAP	6.95%
63.0	GS	2.67%	NFLX	5.88%
63.0	NVS	2.67%	AMAT	5.88%
63.0	HON	2.67%	WYNN	5.88%
63.0	AAP	2.14%	LLY	5.35%
63.0	TSLA	1.6%	GS	5.35%
63.0	FCX	1.6%	BA	5.35%
63.0	CVS	1.6%	RIO	4.81%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	AVGO	75.81%	B	83.87%
126.0	WDC	57.26%	WDC	83.06%
126.0	MU	55.65%	NEM	82.26%
126.0	SLV	42.74%	GOOGL	77.42%
126.0	GOOGL	42.74%	MU	66.94%
126.0	NEM	37.9%	SLV	62.9%
126.0	B	31.45%	GLD	47.58%
126.0	ORCL	17.74%	AMD	32.26%
126.0	EXPE	11.29%	ORCL	31.45%
126.0	ELAN	9.68%	ELAN	22.58%
126.0	GLD	9.68%	TEVA	21.77%
126.0	CMA	8.87%	CAH	18.55%
126.0	AMD	7.26%	AA	15.32%
126.0	NVS	6.45%	JAZZ	12.9%
126.0	GS	4.84%	AVGO	12.1%
126.0	KALU	2.42%	INTC	10.48%
126.0	GILD	1.61%	RIO	10.48%
126.0	HSBC	0.81%	GE	8.87%
126.0	RIO	0.81%	GS	8.06%
126.0	NWL	0.0%	LVS	6.45%
126.0	NVDA	0.0%	HSBC	5.65%
126.0	ON	0.0%	EXPE	5.65%
126.0	ORLY	0.0%	AMAT	5.65%
126.0	OXY	0.0%	WYNN	4.84%
126.0	NFLX	0.0%	MSFT	4.84%
126.0	AA	0.0%	QQQ	4.03%
126.0	NAVI	0.0%	PWR	4.03%
126.0	MUB	0.0%	THC	3.23%
126.0	MSTR	0.0%	SPY	3.23%
126.0	MSI	0.0%	NVDA	1.61%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NVDA	0.56%	MSTR	0.31%
1.0	X	0.45%	NVDA	0.26%
1.0	GBTC	0.41%	VST	0.25%
1.0	AVGO	0.39%	MU	0.21%
1.0	GE	0.38%	AVGO	0.21%
1.0	PWR	0.37%	WDC	0.21%
1.0	LLY	0.37%	PWR	0.18%
1.0	VST	0.35%	TEVA	0.18%
1.0	MU	0.33%	GME	0.17%
1.0	CAH	0.33%	X	0.17%
1.0	WDC	0.29%	GBTC	0.17%
1.0	CCL	0.28%	LLY	0.16%
1.0	TSLA	0.27%	GE	0.16%
1.0	B	0.27%	CAH	0.15%
1.0	SLV	0.27%	SLV	0.15%
1.0	TRGP	0.25%	TRGP	0.14%
1.0	AMD	0.25%	THC	0.14%
1.0	MSTR	0.25%	AMD	0.13%
1.0	TDG	0.24%	META	0.13%
1.0	THC	0.23%	AMAT	0.12%
1.0	AMAT	0.21%	ETRN	0.12%
1.0	PHM	0.21%	B	0.11%
1.0	CDNS	0.2%	GOOGL	0.11%
1.0	ORLY	0.2%	GS	0.11%
1.0	GS	0.19%	PHM	0.11%
1.0	HLT	0.18%	NFLX	0.11%
1.0	GLD	0.18%	TSLA	0.11%
1.0	HCA	0.18%	CCL	0.1%
1.0	JPM	0.18%	HSBC	0.1%
1.0	AZO	0.18%	ORCL	0.1%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	5.82%	MSTR	3.23%
10.0	LLY	3.98%	NVDA	2.56%
10.0	GBTC	3.48%	VST	2.46%
10.0	AVGO	3.35%	WDC	2.12%
10.0	MSTR	3.07%	MU	2.11%
10.0	TSLA	3.07%	AVGO	2.09%
10.0	PWR	3.01%	TEVA	1.8%
10.0	VST	2.97%	PWR	1.74%
10.0	TEVA	2.86%	LLY	1.7%
10.0	CCL	2.85%	SLV	1.69%
10.0	MU	2.84%	GBTC	1.61%
10.0	AMAT	2.69%	GE	1.59%
10.0	WDC	2.6%	X	1.58%
10.0	GE	2.57%	CAH	1.54%
10.0	CAH	2.29%	GME	1.44%
10.0	SLV	2.18%	ETRN	1.41%
10.0	PHM	2.15%	TRGP	1.36%
10.0	X	2.09%	META	1.34%
10.0	THC	2.0%	THC	1.28%
10.0	GS	1.96%	AMD	1.27%
10.0	AMD	1.91%	B	1.21%
10.0	B	1.88%	AMAT	1.2%
10.0	AZO	1.87%	TSLA	1.16%
10.0	CSTM	1.69%	NFLX	1.15%
10.0	TRGP	1.66%	GS	1.12%
10.0	NEM	1.66%	PHM	1.12%
10.0	DHI	1.66%	ORCL	1.09%
10.0	TDG	1.6%	GLD	1.06%
10.0	LUMN	1.59%	GOOGL	1.05%
10.0	COST	1.55%	CDNS	0.97%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	11.62%	MSTR	7.41%
21.0	GBTC	8.39%	NVDA	5.57%
21.0	VST	7.82%	VST	5.37%
21.0	TSLA	7.55%	AVGO	4.44%
21.0	ETRN	7.53%	WDC	4.31%
21.0	MSTR	7.45%	MU	4.18%
21.0	LLY	6.56%	TEVA	3.88%
21.0	CCL	6.42%	PWR	3.62%
21.0	AMD	6.37%	LLY	3.59%
21.0	AMAT	5.86%	GBTC	3.58%
21.0	PWR	5.84%	GE	3.54%
21.0	AVGO	5.8%	ETRN	3.5%
21.0	GE	5.78%	SLV	3.33%
21.0	TEVA	5.67%	CAH	3.26%
21.0	MU	5.29%	X	3.17%
21.0	CAH	5.01%	META	2.99%
21.0	WDC	4.58%	THC	2.74%
21.0	X	4.44%	TRGP	2.74%
21.0	PHM	4.43%	TSLA	2.72%
21.0	LUMN	4.33%	AMD	2.67%
21.0	CDNS	4.32%	NFLX	2.64%
21.0	SLV	4.2%	ORCL	2.53%
21.0	THC	3.88%	AMAT	2.45%
21.0	B	3.65%	GS	2.43%
21.0	GS	3.64%	PHM	2.41%
21.0	DHI	3.62%	B	2.4%
21.0	AZO	3.5%	CCL	2.26%
21.0	AA	3.31%	GOOGL	2.25%
21.0	TRGP	3.3%	GME	2.15%
21.0	JPM	3.14%	GLD	2.08%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	NVDA	38.52%	MSTR	22.62%
63.0	GBTC	34.66%	NVDA	18.86%
63.0	MSTR	31.88%	VST	17.98%
63.0	VST	25.14%	AVGO	14.37%
63.0	LLY	22.64%	WDC	13.9%
63.0	PWR	22.03%	GBTC	12.42%
63.0	GE	20.81%	MU	12.29%
63.0	AMD	20.7%	GE	11.29%
63.0	CCL	20.14%	META	10.51%
63.0	ETRN	18.76%	LLY	10.48%
63.0	PHM	17.72%	TEVA	10.38%
63.0	LUMN	17.62%	PWR	10.32%
63.0	WDC	17.04%	ETRN	10.28%
63.0	MU	16.55%	NFLX	10.0%
63.0	CAH	16.52%	CAH	9.76%
63.0	TEVA	16.22%	THC	8.81%
63.0	B	15.89%	ORCL	8.64%
63.0	AVGO	15.72%	AMD	8.5%
63.0	AMAT	15.3%	PHM	8.2%
63.0	TSLA	13.02%	SLV	8.13%
63.0	JPM	12.4%	TRGP	7.45%
63.0	THC	12.32%	GS	7.24%
63.0	MS	11.77%	GOOGL	7.2%
63.0	META	11.65%	TSLA	7.09%
63.0	GOOGL	11.21%	CCL	7.08%
63.0	X	10.99%	AMAT	6.75%
63.0	NFLX	10.89%	B	6.14%
63.0	GS	10.71%	JPM	6.13%
63.0	CDNS	10.41%	HSBC	6.11%
63.0	LVS	10.35%	ISRG	6.06%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	NVDA	95.09%	MSTR	58.86%
126.0	GBTC	89.06%	NVDA	47.69%
126.0	MSTR	69.91%	VST	40.91%
126.0	VST	54.84%	GBTC	34.95%
126.0	GE	52.07%	AVGO	32.12%
126.0	AMD	45.77%	WDC	28.66%
126.0	PHM	44.96%	GE	27.17%
126.0	WDC	44.52%	META	26.45%
126.0	MU	44.32%	NFLX	26.35%
126.0	CCL	43.02%	MU	25.42%
126.0	LLY	42.52%	THC	21.49%
126.0	THC	42.08%	PWR	20.83%
126.0	PWR	41.96%	ORCL	20.8%
126.0	NFLX	41.73%	LLY	19.37%
126.0	ORCL	38.88%	TEVA	19.15%
126.0	AVGO	36.33%	PHM	18.94%
126.0	JPM	32.21%	CAH	18.8%
126.0	META	30.48%	AMD	18.77%
126.0	CAH	29.92%	ETRN	18.49%
126.0	TSLA	29.28%	TRGP	16.18%
126.0	MS	28.29%	CCL	15.8%
126.0	AMAT	28.12%	SLV	15.69%
126.0	B	28.05%	GS	15.4%
126.0	DHI	27.55%	GOOGL	14.78%
126.0	TEVA	27.24%	JPM	14.08%
126.0	LUMN	26.59%	AMAT	13.6%
126.0	X	25.56%	TSLA	13.46%
126.0	GS	25.39%	DHI	13.43%
126.0	ETRN	24.38%	TDG	13.31%
126.0	GOOGL	24.37%	CDNS	12.9%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	GBTC	237.37%	MSTR	193.96%
252.0	MSTR	215.84%	NVDA	126.07%
252.0	NVDA	214.11%	VST	116.38%
252.0	GE	148.38%	GBTC	105.49%
252.0	VST	129.73%	AVGO	76.34%
252.0	CCL	114.22%	META	70.41%
252.0	PHM	114.19%	NFLX	65.06%
252.0	NFLX	107.98%	GE	62.27%
252.0	THC	104.73%	THC	47.79%
252.0	META	99.82%	PHM	45.0%
252.0	AVGO	97.01%	LLY	44.85%
252.0	MU	92.62%	PWR	42.12%
252.0	TRGP	85.98%	MU	41.86%
252.0	ORCL	71.98%	TRGP	41.49%
252.0	LLY	71.8%	ORCL	40.4%
252.0	PWR	69.39%	CCL	38.31%
252.0	X	68.34%	CAH	37.35%
252.0	AMAT	64.99%	WDC	36.89%
252.0	CAH	62.4%	TEVA	35.92%
252.0	MS	60.29%	ETRN	35.78%
252.0	QQQ	59.3%	TDG	33.75%
252.0	JPM	59.18%	ISRG	32.33%
252.0	GS	58.3%	JPM	32.15%
252.0	AMD	56.83%	AMD	31.08%
252.0	WDC	54.78%	GS	31.0%
252.0	TEVA	54.39%	SLV	28.53%
252.0	ISRG	53.3%	HSBC	28.06%
252.0	TDG	52.45%	GOOGL	27.88%
252.0	CDNS	52.09%	AMAT	27.33%
252.0	MSFT	51.55%	IRM	27.2%



P30D: 1d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SLV	4.06%	WDC	1.72%
1.0	INTC	2.88%	MU	1.53%
1.0	AMAT	2.74%	AAP	1.17%
1.0	CSTM	2.51%	INTC	1.11%
1.0	LUMN	2.0%	SLV	1.08%
1.0	MU	1.85%	TXN	1.08%
1.0	BHP	1.77%	AMAT	1.01%
1.0	AZO	1.73%	GNRC	0.96%
1.0	HON	1.64%	UAA	0.86%
1.0	AAP	1.46%	GILD	0.84%
1.0	XOM	1.43%	FCX	0.83%
1.0	UAA	1.38%	LUMN	0.81%
1.0	HSBC	1.37%	HON	0.81%
1.0	NWL	1.37%	GME	0.81%
1.0	MOS	1.32%	XOM	0.77%
1.0	ORLY	1.25%	NWL	0.72%
1.0	NEM	1.16%	CSTM	0.7%
1.0	RIO	1.15%	GLD	0.63%
1.0	META	1.15%	BUD	0.63%
1.0	PEP	1.11%	NEM	0.62%
1.0	COST	1.07%	AZO	0.62%
1.0	B	1.02%	RIO	0.61%
1.0	LW	1.02%	BHP	0.59%
1.0	GNRC	1.0%	META	0.56%
1.0	T	0.99%	IRM	0.55%
1.0	OXY	0.95%	VZ	0.53%
1.0	TEVA	0.94%	MOS	0.53%
1.0	TXN	0.94%	TEVA	0.52%
1.0	VZ	0.94%	COST	0.51%
1.0	GT	0.91%	SBUX	0.49%



P30D: 10d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SLV	41.35%	SLV	23.4%
10.0	AMD	34.48%	WDC	20.67%
10.0	AZO	27.66%	MU	19.86%
10.0	CSTM	25.02%	AMD	14.89%
10.0	LUMN	22.84%	GNRC	12.02%
10.0	MU	22.25%	NEM	11.81%
10.0	GNRC	19.29%	AAP	11.41%
10.0	COST	17.43%	INTC	10.73%
10.0	BHP	16.55%	AMAT	10.59%
10.0	INTC	16.12%	GLD	10.55%
10.0	PWR	15.88%	GILD	10.52%
10.0	NEM	15.64%	AZO	9.22%
10.0	AMAT	14.92%	PWR	8.84%
10.0	MOS	14.79%	XOM	8.76%
10.0	TRGP	13.48%	GME	8.64%
10.0	WDC	12.71%	CLF	8.54%
10.0	AAP	12.4%	UAA	8.54%
10.0	XOM	10.31%	CSTM	8.47%
10.0	ORLY	10.18%	LUMN	8.34%
10.0	RIO	10.17%	FCX	7.97%
10.0	CLF	10.03%	TRGP	7.76%
10.0	TXN	9.59%	RIO	7.35%
10.0	MNST	9.23%	HON	7.34%
10.0	PEP	8.92%	TXN	7.28%
10.0	GT	8.8%	MOS	7.21%
10.0	B	8.65%	SBUX	6.94%
10.0	HON	8.5%	BUD	6.49%
10.0	NWL	7.79%	ORLY	6.47%
10.0	CPRT	7.74%	LW	6.37%
10.0	GILD	7.26%	BHP	6.36%



P90D: 1d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SLV	2.74%	SLV	1.06%
1.0	GT	1.66%	MU	1.05%
1.0	TEVA	1.52%	TEVA	0.89%
1.0	AMAT	1.44%	WDC	0.89%
1.0	CSTM	1.35%	AA	0.77%
1.0	MRK	1.32%	FCX	0.67%
1.0	MU	1.31%	VFC	0.59%
1.0	INTC	1.2%	B	0.59%
1.0	UAA	1.12%	NEM	0.58%
1.0	B	1.03%	CSTM	0.57%
1.0	NWL	1.03%	GT	0.55%
1.0	NEM	1.01%	AMAT	0.55%
1.0	BHP	0.97%	UAA	0.54%
1.0	EMY	0.93%	TXN	0.51%
1.0	RIO	0.93%	MRK	0.5%
1.0	HSBC	0.9%	NWL	0.48%
1.0	XOM	0.89%	KALU	0.48%
1.0	CNC	0.79%	RIO	0.44%
1.0	AA	0.77%	TRGP	0.44%
1.0	GS	0.69%	CNC	0.42%
1.0	KEY	0.68%	EXPE	0.39%
1.0	ZION	0.68%	INTC	0.39%
1.0	FCX	0.68%	HSBC	0.38%
1.0	AMGN	0.68%	XOM	0.37%
1.0	CMG	0.66%	CMG	0.37%
1.0	FITB	0.65%	BHP	0.35%
1.0	CAH	0.61%	KEY	0.35%
1.0	JAZZ	0.61%	JAZZ	0.34%
1.0	KALU	0.61%	MNST	0.33%
1.0	GOOGL	0.58%	GLD	0.33%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SLV	26.86%	SLV	15.14%
10.0	AMAT	16.44%	MU	11.29%
10.0	CSTM	15.75%	AA	10.43%
10.0	MU	13.68%	WDC	9.11%
10.0	GT	13.19%	FCX	8.59%
10.0	BHP	10.88%	B	7.8%
10.0	B	9.78%	CSTM	7.54%
10.0	NEM	9.68%	NEM	7.35%
10.0	INTC	9.33%	AMAT	7.31%
10.0	AA	8.77%	KALU	6.37%
10.0	TEVA	8.33%	UAA	6.26%
10.0	BA	8.14%	CLF	6.23%
10.0	RIO	7.71%	TEVA	6.22%
10.0	NWL	7.69%	VFC	6.16%
10.0	CMG	7.65%	INTC	5.83%
10.0	CLF	7.04%	NWL	5.68%
10.0	FCX	7.04%	ON	5.12%
10.0	WDC	6.52%	RIO	5.11%
10.0	KEY	6.35%	CMG	5.05%
10.0	GS	6.16%	JAZZ	4.74%
10.0	UAA	5.94%	BA	4.64%
10.0	GOOGL	5.69%	TXN	4.57%
10.0	KALU	5.59%	MRK	4.48%
10.0	MRK	5.55%	GT	4.47%
10.0	USB	4.95%	CNC	4.44%
10.0	ON	4.89%	GLD	4.17%
10.0	CMA	4.89%	BHP	4.05%
10.0	VFC	4.86%	KEY	3.85%
10.0	HSBC	4.81%	CMA	3.64%
10.0	TFC	4.7%	HSBC	3.5%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SLV	57.58%	SLV	34.54%
21.0	CSTM	33.27%	AA	29.03%
21.0	MU	32.91%	MU	27.47%
21.0	AMAT	31.78%	FCX	20.91%
21.0	AA	28.87%	WDC	20.19%
21.0	GT	26.76%	CSTM	18.01%
21.0	BHP	25.82%	KALU	16.77%
21.0	BA	25.48%	B	16.14%
21.0	B	23.66%	NEM	16.05%
21.0	TEVA	22.93%	UAA	15.8%
21.0	NEM	19.73%	AMAT	15.42%
21.0	KEY	19.47%	TEVA	15.32%
21.0	FCX	19.01%	VFC	13.33%
21.0	ON	18.92%	ON	12.86%
21.0	UAA	18.73%	BA	12.55%
21.0	RIO	18.38%	CMG	12.21%
21.0	INTC	15.84%	INTC	11.75%
21.0	CMG	15.82%	NWL	11.72%
21.0	ZION	15.51%	RIO	11.52%
21.0	GS	15.1%	CNC	11.02%
21.0	CCL	14.56%	CLF	10.9%
21.0	WDC	14.27%	KEY	9.97%
21.0	NWL	14.2%	TXN	9.83%
21.0	FSUGY	13.01%	BHP	9.79%
21.0	KALU	12.71%	GS	9.06%
21.0	BYM	12.6%	GT	8.92%
21.0	FITB	11.42%	CMA	8.87%
21.0	TFC	11.39%	HSBC	8.76%
21.0	MNST	11.33%	FITB	8.39%
21.0	HSBC	11.17%	MRK	8.29%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	X	1.14%	MU	0.69%
1.0	LUMN	0.97%	WDC	0.64%
1.0	SLV	0.96%	X	0.51%
1.0	MU	0.94%	INTC	0.44%
1.0	B	0.9%	B	0.44%
1.0	AMD	0.84%	SLV	0.44%
1.0	CSTM	0.8%	NEM	0.42%
1.0	INTC	0.73%	CSTM	0.39%
1.0	CLF	0.72%	AMD	0.36%
1.0	NEM	0.68%	LUMN	0.35%
1.0	NVDA	0.66%	ELAN	0.34%
1.0	WDC	0.63%	TEVA	0.31%
1.0	CAH	0.59%	AMAT	0.28%
1.0	AMAT	0.55%	KALU	0.27%
1.0	ELAN	0.48%	AA	0.26%
1.0	HSBC	0.47%	CLF	0.26%
1.0	PWR	0.44%	FCX	0.26%
1.0	AVGO	0.44%	NVDA	0.24%
1.0	RIO	0.43%	CAH	0.23%
1.0	MNST	0.42%	HSBC	0.23%
1.0	BHP	0.41%	GOOGL	0.23%
1.0	GLD	0.4%	GLD	0.23%
1.0	HCA	0.4%	MNST	0.22%
1.0	GE	0.39%	EXPE	0.22%
1.0	TEVA	0.38%	AVGO	0.22%
1.0	KALU	0.35%	PWR	0.21%
1.0	GS	0.34%	GE	0.18%
1.0	LVS	0.33%	RIO	0.18%
1.0	XOM	0.32%	GS	0.18%
1.0	GOOGL	0.32%	GSK	0.17%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	LUMN	11.46%	MU	7.03%
10.0	X	8.79%	WDC	6.65%
10.0	CSTM	8.31%	SLV	5.13%
10.0	MU	7.96%	B	4.72%
10.0	SLV	7.81%	X	4.58%
10.0	B	7.15%	NEM	4.44%
10.0	AMD	6.65%	INTC	4.42%
10.0	AMAT	6.06%	CSTM	4.19%
10.0	WDC	5.82%	AMD	4.01%
10.0	NEM	5.7%	LUMN	3.69%
10.0	TEVA	5.06%	ELAN	3.61%
10.0	NVDA	4.69%	TEVA	3.1%
10.0	INTC	4.59%	AMAT	2.89%
10.0	CAH	3.96%	KALU	2.86%
10.0	CLF	3.6%	AA	2.69%
10.0	LVS	3.6%	GOOGL	2.52%
10.0	GOOGL	3.54%	FCX	2.45%
10.0	ELAN	3.49%	GLD	2.37%
10.0	AVGO	3.42%	CAH	2.31%
10.0	BHP	3.33%	MNST	2.31%
10.0	MNST	3.26%	PWR	2.13%
10.0	GS	3.17%	HSBC	2.11%
10.0	WYNN	3.04%	CLF	2.05%
10.0	GLD	2.99%	AVGO	1.94%
10.0	GE	2.71%	NVDA	1.86%
10.0	MOS	2.66%	EXPE	1.86%
10.0	PWR	2.63%	GE	1.8%
10.0	RIO	2.54%	GS	1.77%
10.0	BIIB	2.53%	HCA	1.74%
10.0	HSBC	2.52%	WYNN	1.71%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	LUMN	23.52%	MU	14.95%
21.0	AMD	18.26%	WDC	14.86%
21.0	MU	15.6%	SLV	10.66%
21.0	B	15.37%	B	10.17%
21.0	SLV	14.43%	NEM	9.34%
21.0	CSTM	13.75%	X	9.23%
21.0	TEVA	13.29%	AMD	8.67%
21.0	AMAT	12.42%	CSTM	8.4%
21.0	WDC	12.35%	ELAN	8.13%
21.0	X	11.84%	INTC	7.82%
21.0	NEM	11.34%	LUMN	7.51%
21.0	LVS	10.97%	TEVA	6.96%
21.0	ELAN	9.64%	AA	6.45%
21.0	CAH	9.03%	AMAT	6.36%
21.0	GOOGL	8.93%	KALU	6.28%
21.0	NVDA	8.55%	GOOGL	5.92%
21.0	GE	7.52%	CAH	5.04%
21.0	INTC	7.52%	AVGO	4.89%
21.0	CLF	7.33%	FCX	4.87%
21.0	AA	7.23%	PWR	4.85%
21.0	MOS	6.78%	GLD	4.67%
21.0	BHP	6.39%	MNST	4.35%
21.0	MNST	6.24%	GE	4.3%
21.0	PWR	5.96%	EXPE	4.08%
21.0	GS	5.85%	NVDA	4.07%
21.0	BIIB	5.84%	THC	4.06%
21.0	GLD	5.77%	GS	4.03%
21.0	AVGO	5.6%	LVS	3.94%
21.0	WYNN	5.48%	HSBC	3.94%
21.0	FSUGY	5.48%	HCA	3.89%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	LUMN	98.03%	WDC	64.45%
63.0	WDC	84.24%	MU	51.6%
63.0	AMD	76.18%	AMD	33.29%
63.0	B	68.89%	B	33.22%
63.0	MU	58.68%	LUMN	32.85%
63.0	TEVA	49.57%	ELAN	31.75%
63.0	AMAT	46.84%	SLV	29.12%
63.0	ELAN	44.94%	NEM	28.34%
63.0	NEM	39.93%	INTC	26.48%
63.0	INTC	37.8%	X	26.36%
63.0	LVS	36.6%	GOOGL	24.54%
63.0	CAH	36.25%	AVGO	24.52%
63.0	NVDA	35.76%	TEVA	24.44%
63.0	SLV	34.78%	CSTM	23.63%
63.0	CSTM	34.71%	AMAT	21.54%
63.0	PWR	32.78%	KALU	21.23%
63.0	GOOGL	32.72%	AA	19.34%
63.0	X	31.63%	PWR	19.21%
63.0	LLY	28.99%	NVDA	18.98%
63.0	FSUGY	27.93%	LVS	18.47%
63.0	GE	27.78%	TSLA	17.91%
63.0	MS	25.79%	CAH	17.31%
63.0	CLF	22.5%	EXPE	17.13%
63.0	ORCL	22.22%	ORCL	17.1%
63.0	BIIIB	20.89%	THC	16.56%
63.0	GS	20.77%	GE	16.23%
63.0	KALU	20.7%	GS	16.13%
63.0	LNC	20.5%	CLF	15.6%
63.0	AA	20.34%	WYNN	15.36%
63.0	THC	20.2%	CMA	14.13%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	WDC	298.27%	WDC	177.51%
126.0	AMD	197.77%	MU	125.49%
126.0	B	175.11%	B	84.67%
126.0	LUMN	173.59%	AMD	82.24%
126.0	MU	154.86%	ELAN	78.18%
126.0	NEM	119.95%	LUMN	74.24%
126.0	INTC	119.13%	NEM	71.29%
126.0	ELAN	104.43%	INTC	63.46%
126.0	CSTM	92.45%	SLV	62.95%
126.0	TEVA	91.47%	GOOGL	60.12%
126.0	ORCL	86.62%	AVGO	57.41%
126.0	GOOGL	81.63%	TEVA	46.29%
126.0	NVDA	81.39%	CSTM	46.19%
126.0	SLV	77.87%	ORCL	45.19%
126.0	LVS	77.33%	CLF	45.15%
126.0	PWR	74.01%	NVDA	42.5%
126.0	CLF	73.95%	TSLA	41.04%
126.0	FSUGY	69.27%	EXPE	41.0%
126.0	AMAT	68.92%	LVS	40.6%
126.0	MS	63.81%	AA	40.45%
126.0	GE	58.92%	AMAT	39.38%
126.0	THC	56.92%	WYNN	37.39%
126.0	LNC	56.24%	PWR	36.01%
126.0	EXPE	55.06%	GE	35.7%
126.0	AA	54.74%	GS	35.1%
126.0	PHM	53.04%	THC	34.64%
126.0	JPM	52.75%	CMA	32.96%
126.0	TSLA	51.03%	KALU	30.89%
126.0	VST	48.83%	FSUGY	29.84%
126.0	BHP	47.99%	MS	29.62%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SIVBQ	-0.91%	SIVBQ	-0.78%
1.0	IEP	-0.44%	SBNY	-0.45%
1.0	SBNY	-0.39%	FRCB	-0.23%
1.0	NWL	-0.37%	AMC	-0.19%
1.0	CZR	-0.21%	IEP	-0.15%
1.0	FRCB	-0.19%	NWL	-0.11%
1.0	AMC	-0.16%	AAP	-0.1%
1.0	CHTR	-0.15%	CHTR	-0.08%
1.0	FIS	-0.14%	CZR	-0.07%
1.0	UAA	-0.14%	PRGO	-0.07%
1.0	BXP	-0.11%	BHC	-0.06%
1.0	AAP	-0.09%	UAA	-0.06%
1.0	PRGO	-0.09%	VFC	-0.05%
1.0	BALL	-0.09%	FIS	-0.05%
1.0	GNRC	-0.09%	TLT	-0.04%
1.0	GT	-0.09%	CMCSA	-0.04%
1.0	ZTS	-0.08%	BALL	-0.03%
1.0	KHC	-0.07%	ADBE	-0.03%
1.0	TLT	-0.07%	BXP	-0.03%
1.0	CTLT	-0.07%	NAVI	-0.03%
1.0	BIIB	-0.07%	ZTS	-0.03%
1.0	INTU	-0.07%	KHC	-0.03%
1.0	NAVI	-0.06%	UNH	-0.03%
1.0	ADBE	-0.06%	GT	-0.02%
1.0	CMCSA	-0.05%	CNC	-0.02%
1.0	UNH	-0.05%	CVS	-0.02%
1.0	VZ	-0.04%	CTLT	-0.01%
1.0	PEP	-0.02%	BBY	-0.01%
1.0	BBY	-0.02%	LQD	-0.01%
1.0	MUB	-0.01%	FRA	-0.01%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SIVBQ	-5.34%	SBNY	-4.05%
10.0	SBNY	-3.67%	SIVBQ	-3.9%
10.0	IEP	-3.43%	FRCB	-2.19%
10.0	NWL	-2.52%	AMC	-1.94%
10.0	AMC	-2.24%	IEP	-1.45%
10.0	CZR	-2.16%	NWL	-1.09%
10.0	FRCB	-1.67%	AAP	-0.97%
10.0	AAP	-1.15%	CHTR	-0.83%
10.0	CYH	-1.08%	CZR	-0.83%
10.0	CNC	-0.92%	PRGO	-0.68%
10.0	PRGO	-0.87%	UAA	-0.67%
10.0	BXP	-0.83%	VFC	-0.64%
10.0	UAA	-0.83%	FIS	-0.46%
10.0	VFC	-0.82%	TLT	-0.42%
10.0	CHTR	-0.76%	CMCSA	-0.42%
10.0	VZ	-0.73%	BHC	-0.38%
10.0	FIS	-0.66%	BXP	-0.36%
10.0	GT	-0.64%	ZTS	-0.35%
10.0	INTU	-0.58%	BALL	-0.34%
10.0	BALL	-0.52%	KHC	-0.33%
10.0	KHC	-0.52%	CNC	-0.31%
10.0	ZTS	-0.49%	GT	-0.29%
10.0	GNRC	-0.44%	ADBE	-0.28%
10.0	BBY	-0.44%	NAVI	-0.26%
10.0	VNO	-0.35%	VZ	-0.2%
10.0	TLT	-0.33%	BBY	-0.19%
10.0	ADBE	-0.32%	LNC	-0.18%
10.0	OXY	-0.27%	UNH	-0.17%
10.0	HD	-0.26%	CYH	-0.17%
10.0	NAVI	-0.25%	MOS	-0.14%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SIVBQ	-11.42%	SBNY	-11.16%
21.0	SBNY	-8.31%	SIVBQ	-9.37%
21.0	IEP	-6.59%	FRCB	-6.02%
21.0	NWL	-4.9%	AMC	-4.48%
21.0	FRCB	-4.48%	IEP	-3.16%
21.0	CZR	-4.18%	NWL	-2.5%
21.0	AAP	-2.58%	AAP	-2.12%
21.0	AMC	-2.57%	CZR	-1.74%
21.0	VFC	-2.07%	CHTR	-1.65%
21.0	GNRC	-1.81%	PRGO	-1.43%
21.0	CHTR	-1.76%	VFC	-1.36%
21.0	PRGO	-1.64%	UAA	-1.35%
21.0	UAA	-1.58%	BHC	-0.89%
21.0	BALL	-1.56%	TLT	-0.88%
21.0	BXP	-1.44%	CMCSA	-0.86%
21.0	BBY	-1.36%	BXP	-0.78%
21.0	GT	-1.21%	KHC	-0.77%
21.0	VZ	-1.16%	BALL	-0.73%
21.0	ADBE	-1.16%	ZTS	-0.71%
21.0	KHC	-1.1%	FIS	-0.71%
21.0	FIS	-1.02%	CNC	-0.59%
21.0	CNC	-0.95%	GT	-0.55%
21.0	INTU	-0.92%	NAVI	-0.48%
21.0	TLT	-0.92%	VZ	-0.44%
21.0	CYH	-0.77%	MOS	-0.42%
21.0	ZTS	-0.63%	LNC	-0.38%
21.0	CVS	-0.53%	ADBE	-0.35%
21.0	GME	-0.49%	BBY	-0.35%
21.0	NAVI	-0.45%	UNH	-0.29%
21.0	KEY	-0.42%	LW	-0.25%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	SIVBQ	-51.27%	SBNY	-37.59%
63.0	SBNY	-33.22%	SIVBQ	-33.73%
63.0	FRCB	-25.04%	FRCB	-24.04%
63.0	IEP	-22.91%	AMC	-15.26%
63.0	NWL	-19.49%	IEP	-10.52%
63.0	AMC	-11.18%	NWL	-8.92%
63.0	UAA	-9.93%	AAP	-6.3%
63.0	GNRC	-9.14%	CZR	-6.18%
63.0	VFC	-8.84%	UAA	-5.18%
63.0	CZR	-8.76%	PRGO	-5.14%
63.0	PRGO	-8.72%	CHTR	-4.79%
63.0	AAP	-7.99%	VFC	-4.64%
63.0	BHC	-7.55%	MOS	-4.04%
63.0	CLF	-6.78%	BHC	-3.0%
63.0	BALL	-5.46%	CNC	-2.92%
63.0	CHTR	-4.87%	CMCSA	-2.74%
63.0	CYH	-4.8%	KHC	-2.74%
63.0	MOS	-4.33%	BALL	-2.68%
63.0	KHC	-4.31%	TLT	-2.38%
63.0	CVS	-3.71%	BXP	-2.35%
63.0	FIS	-3.42%	ZTS	-2.31%
63.0	BBY	-3.28%	FIS	-1.9%
63.0	VZ	-3.2%	GT	-1.74%
63.0	ZTS	-3.14%	NAVI	-1.62%
63.0	GT	-3.11%	UNH	-1.56%
63.0	TLT	-3.11%	CLF	-1.42%
63.0	CMCSA	-2.6%	BMY	-1.39%
63.0	AA	-2.41%	VZ	-1.32%
63.0	GME	-2.24%	LNC	-1.13%
63.0	OXY	-2.07%	BBY	-0.9%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	FRCB	-125.62%	SIVBQ	-65.15%
126.0	SIVBQ	-88.65%	SBNY	-64.8%
126.0	SBNY	-70.11%	FRCB	-51.17%
126.0	IEP	-44.15%	AMC	-27.76%
126.0	NWL	-41.8%	IEP	-20.36%
126.0	AMC	-33.09%	NWL	-17.53%
126.0	VFC	-26.08%	AAP	-11.89%
126.0	UAA	-21.11%	CZR	-10.33%
126.0	PRGO	-19.06%	VFC	-10.0%
126.0	AAP	-15.88%	UAA	-9.31%
126.0	CZR	-15.03%	CNC	-9.06%
126.0	CNC	-14.95%	PRGO	-8.83%
126.0	GNRC	-12.25%	CHTR	-7.47%
126.0	CLF	-12.07%	MOS	-7.23%
126.0	CTLT	-11.71%	CTLT	-5.69%
126.0	BHC	-11.41%	KHC	-5.48%
126.0	BALL	-11.3%	GT	-4.57%
126.0	CHTR	-11.1%	BMY	-4.49%
126.0	MOS	-10.38%	BALL	-4.47%
126.0	GT	-9.16%	TLT	-4.31%
126.0	KHC	-7.66%	BHC	-4.31%
126.0	UNH	-7.14%	CMCSA	-4.27%
126.0	TLT	-6.71%	BXP	-3.98%
126.0	FIS	-6.42%	UNH	-3.91%
126.0	GME	-5.97%	FIS	-3.52%
126.0	OXY	-5.65%	ZTS	-3.21%
126.0	BMY	-5.11%	NAVI	-2.88%
126.0	VZ	-5.1%	CLF	-2.76%
126.0	CVS	-4.83%	OXY	-2.61%
126.0	ZTS	-4.37%	CVS	-2.23%



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 2026-01-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	FRCB	-207.06%	SBNY	-95.75%
252.0	SBNY	-152.31%	SIVBQ	-95.29%
252.0	SIVBQ	-151.21%	FRCB	-91.61%
252.0	IEP	-96.04%	AMC	-54.56%
252.0	NWL	-79.64%	IEP	-42.56%
252.0	AMC	-65.23%	NWL	-30.74%
252.0	AAP	-50.29%	AAP	-30.6%
252.0	VFC	-42.66%	VFC	-22.95%
252.0	CLF	-39.76%	CZR	-17.96%
252.0	CZR	-36.71%	CNC	-16.97%
252.0	UAA	-32.26%	UAA	-16.31%
252.0	MOS	-31.4%	PRGO	-15.44%
252.0	PRGO	-29.11%	MOS	-15.38%
252.0	CNC	-24.46%	CLF	-13.93%
252.0	BHC	-23.9%	KHC	-10.74%
252.0	GT	-23.02%	BIIB	-10.67%
252.0	OXY	-21.26%	BMY	-10.42%
252.0	CTLT	-19.6%	OXY	-9.26%
252.0	KHC	-18.51%	CHTR	-9.11%
252.0	GNRC	-17.83%	BHC	-8.91%
252.0	UNH	-17.65%	UNH	-8.52%
252.0	BIIB	-15.52%	AA	-8.36%
252.0	CHTR	-14.08%	CVS	-7.82%
252.0	BMY	-13.64%	TLT	-7.82%
252.0	CVS	-13.5%	GT	-7.3%
252.0	TLT	-13.34%	CYH	-6.69%
252.0	BALL	-13.3%	CTLT	-6.24%
252.0	CYH	-9.53%	NAVI	-5.7%
252.0	AA	-9.23%	PEP	-5.46%
252.0	FSUGY	-8.53%	BALL	-5.22%



P30D: 1d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	BHC	-3.07%	NAVI	-1.27%
1.0	LVS	-2.25%	INTU	-1.18%
1.0	NAVI	-1.95%	BHC	-1.14%
1.0	FIS	-1.73%	LVS	-1.05%
1.0	CVS	-1.52%	FIS	-0.89%
1.0	MSFT	-1.32%	ORCL	-0.87%
1.0	CZR	-1.25%	UNH	-0.7%
1.0	ADBE	-1.22%	WYNN	-0.68%
1.0	ISRG	-1.22%	QCOM	-0.67%
1.0	INTU	-1.18%	AMC	-0.67%
1.0	ORCL	-1.14%	ADBE	-0.65%
1.0	WYNN	-1.06%	CZR	-0.62%
1.0	QCOM	-1.05%	ISRG	-0.56%
1.0	UNH	-0.97%	MSFT	-0.46%
1.0	CHTR	-0.88%	NFLX	-0.44%
1.0	JPM	-0.82%	LNC	-0.39%
1.0	VNO	-0.7%	GBTC	-0.33%
1.0	AVGO	-0.68%	EXPE	-0.32%
1.0	NFLX	-0.59%	CVS	-0.31%
1.0	GBTC	-0.49%	JPM	-0.31%
1.0	CDNS	-0.44%	BBY	-0.29%
1.0	LNC	-0.41%	PCG	-0.27%
1.0	FSUGY	-0.38%	THC	-0.26%
1.0	BBY	-0.38%	BAC	-0.25%
1.0	BAC	-0.38%	WFC	-0.25%
1.0	AMC	-0.33%	JAZZ	-0.25%
1.0	EXPE	-0.29%	VNO	-0.24%
1.0	AAPL	-0.24%	BXP	-0.24%
1.0	GE	-0.22%	AVGO	-0.23%
1.0	CMA	-0.21%	AAPL	-0.22%



P30D: 10d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	BHC	-32.97%	BHC	-18.08%
10.0	ADBE	-21.56%	INTU	-13.79%
10.0	ORCL	-16.63%	QCOM	-10.53%
10.0	INTU	-14.26%	FIS	-10.43%
10.0	CCL	-13.9%	NAVI	-9.76%
10.0	AVGO	-11.57%	ORCL	-9.66%
10.0	ISRG	-11.47%	ADBE	-8.76%
10.0	CHTR	-10.78%	ISRG	-8.42%
10.0	CZR	-10.66%	EXPE	-7.49%
10.0	VNO	-10.56%	CHTR	-7.44%
10.0	GBTC	-9.25%	CCL	-7.34%
10.0	NAVI	-9.13%	CZR	-7.32%
10.0	QCOM	-9.05%	WFC	-6.1%
10.0	EXPE	-8.78%	JPM	-6.08%
10.0	LVS	-7.45%	LNC	-6.03%
10.0	NFLX	-7.21%	GE	-5.8%
10.0	BAC	-6.93%	THC	-5.43%
10.0	UNH	-6.86%	NFLX	-5.26%
10.0	BIIB	-6.33%	BAC	-5.15%
10.0	AMC	-6.05%	UNH	-5.13%
10.0	WYNN	-5.72%	LVS	-4.98%
10.0	FIS	-5.68%	VNO	-4.84%
10.0	JPM	-5.62%	WYNN	-4.83%
10.0	LLY	-5.54%	TMUS	-4.75%
10.0	GE	-5.35%	BBY	-4.22%
10.0	LNC	-5.08%	GBTC	-4.22%
10.0	MSFT	-4.91%	PCG	-4.15%
10.0	VST	-4.83%	AVGO	-3.88%
10.0	CVS	-4.81%	BIIB	-3.82%
10.0	BBY	-4.61%	AMC	-3.66%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	ORCL	-2.04%	AMC	-0.96%
1.0	MSTR	-1.37%	MSTR	-0.86%
1.0	LUMN	-1.26%	ORCL	-0.7%
1.0	PRGO	-1.09%	PRGO	-0.53%
1.0	INTU	-0.78%	INTU	-0.48%
1.0	AMC	-0.77%	NFLX	-0.44%
1.0	MSFT	-0.71%	LW	-0.44%
1.0	GBTC	-0.7%	LUMN	-0.39%
1.0	NFLX	-0.7%	GBTC	-0.37%
1.0	VNO	-0.7%	BBY	-0.36%
1.0	LW	-0.66%	NAVI	-0.31%
1.0	VST	-0.65%	MSFT	-0.29%
1.0	LEN	-0.48%	QCOM	-0.27%
1.0	QCOM	-0.48%	VST	-0.27%
1.0	NAVI	-0.47%	VNO	-0.26%
1.0	BBY	-0.46%	CYH	-0.26%
1.0	CHTR	-0.46%	WYNN	-0.24%
1.0	CVS	-0.43%	BHC	-0.24%
1.0	LVS	-0.43%	LVS	-0.23%
1.0	WYNN	-0.42%	ADBE	-0.22%
1.0	ADBE	-0.41%	ZTS	-0.21%
1.0	BHC	-0.39%	UNH	-0.2%
1.0	IEP	-0.38%	CDNS	-0.19%
1.0	CYH	-0.38%	FIS	-0.19%
1.0	CDNS	-0.37%	IRM	-0.17%
1.0	UNH	-0.34%	BXP	-0.14%
1.0	VICI	-0.33%	LEN	-0.13%
1.0	FIS	-0.3%	ISRG	-0.12%
1.0	AVGO	-0.28%	VICI	-0.11%
1.0	IRM	-0.23%	NVDA	-0.11%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	ORCL	-13.8%	AMC	-8.48%
10.0	AMC	-10.39%	MSTR	-6.57%
10.0	NFLX	-6.77%	ORCL	-5.4%
10.0	IEP	-6.74%	NFLX	-5.08%
10.0	MSTR	-6.44%	LW	-4.88%
10.0	LW	-4.8%	INTU	-3.7%
10.0	INTU	-4.47%	BBY	-3.21%
10.0	GBTC	-4.35%	GBTC	-2.43%
10.0	VST	-4.31%	VST	-2.38%
10.0	VNO	-3.93%	CHTR	-2.18%
10.0	BBY	-3.73%	QCOM	-2.15%
10.0	LUMN	-3.47%	TMUS	-2.02%
10.0	WYNN	-3.03%	MSFT	-1.99%
10.0	MSFT	-2.92%	ADBE	-1.97%
10.0	CHTR	-2.9%	VNO	-1.95%
10.0	LVS	-2.62%	IEP	-1.88%
10.0	IRM	-2.4%	WYNN	-1.84%
10.0	VICI	-2.32%	LVS	-1.77%
10.0	ADBE	-2.2%	FIS	-1.72%
10.0	CYH	-2.11%	CYH	-1.69%
10.0	SNY	-1.99%	SNY	-1.58%
10.0	CDNS	-1.97%	BXP	-1.55%
10.0	QCOM	-1.87%	PCG	-1.44%
10.0	T	-1.82%	LUMN	-1.34%
10.0	TMUS	-1.61%	AAPL	-1.27%
10.0	BXP	-1.51%	POST	-1.25%
10.0	BHC	-1.49%	VICI	-1.24%
10.0	KHC	-1.43%	ISRG	-1.16%
10.0	ISRG	-1.38%	LEN	-0.99%
10.0	AAPL	-1.35%	BHC	-0.95%



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 2026-01-29 through 2025-11-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	ORCL	-23.39%	AMC	-19.08%
21.0	NFLX	-20.81%	LW	-13.84%
21.0	AMC	-15.27%	MSTR	-11.11%
21.0	MSTR	-14.85%	NFLX	-10.91%
21.0	LW	-14.32%	ORCL	-8.52%
21.0	IEP	-9.41%	BBY	-6.76%
21.0	BBY	-7.63%	AAP	-5.5%
21.0	VNO	-7.62%	INTU	-5.2%
21.0	WYNN	-6.68%	VST	-4.42%
21.0	INTU	-6.58%	TMUS	-4.27%
21.0	LVS	-6.03%	LVS	-3.96%
21.0	VST	-5.73%	LEN	-3.94%
21.0	AZO	-5.52%	WYNN	-3.58%
21.0	LEN	-5.48%	AZO	-3.53%
21.0	T	-4.93%	VNO	-3.52%
21.0	VICI	-4.46%	BXP	-3.36%
21.0	LUMN	-4.4%	MSFT	-3.18%
21.0	AVGO	-4.23%	SNY	-3.08%
21.0	MSFT	-4.21%	AVGO	-2.96%
21.0	CHTR	-4.08%	POST	-2.81%
21.0	PCG	-3.75%	T	-2.78%
21.0	TMUS	-3.7%	IEP	-2.77%
21.0	AAP	-3.7%	AAPL	-2.75%
21.0	SNY	-3.45%	KHC	-2.7%
21.0	BXP	-3.44%	VICI	-2.49%
21.0	KHC	-3.28%	CYH	-2.49%
21.0	POST	-3.24%	GBTC	-2.34%
21.0	GBTC	-3.0%	LUMN	-2.12%
21.0	ORLY	-2.64%	CHTR	-1.85%
21.0	AAPL	-2.59%	PCG	-1.81%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NWL	-0.46%	AMC	-0.26%
1.0	UNH	-0.41%	NWL	-0.23%
1.0	FIS	-0.4%	MSTR	-0.23%
1.0	CHTR	-0.38%	UNH	-0.2%
1.0	MSTR	-0.35%	PRGO	-0.19%
1.0	CZR	-0.32%	CHTR	-0.17%
1.0	UAA	-0.3%	CZR	-0.16%
1.0	IEP	-0.29%	ADBE	-0.14%
1.0	VNO	-0.28%	FIS	-0.14%
1.0	AMZN	-0.27%	CMG	-0.13%
1.0	CMG	-0.26%	CPRT	-0.13%
1.0	PRGO	-0.26%	ZTS	-0.11%
1.0	CPRT	-0.26%	NAVI	-0.1%
1.0	AMC	-0.24%	VNO	-0.08%
1.0	ADBE	-0.23%	CNC	-0.08%
1.0	CNC	-0.2%	IEP	-0.07%
1.0	MSI	-0.17%	KHC	-0.07%
1.0	NAVI	-0.16%	LW	-0.07%
1.0	ISRG	-0.14%	UAA	-0.06%
1.0	CMCSA	-0.14%	BBY	-0.06%
1.0	BBY	-0.13%	TMUS	-0.06%
1.0	KHC	-0.11%	MSI	-0.05%
1.0	IRM	-0.11%	INTU	-0.05%
1.0	INTU	-0.1%	GBTC	-0.05%
1.0	HD	-0.09%	NFLX	-0.04%
1.0	GBTC	-0.08%	SBUX	-0.04%
1.0	SNY	-0.08%	FRA	-0.04%
1.0	FRA	-0.08%	SNY	-0.04%
1.0	LEN	-0.08%	LEN	-0.03%
1.0	BXP	-0.06%	ISRG	-0.03%



P365D: 10d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	MSTR	-3.52%	AMC	-2.59%
10.0	AMC	-3.18%	MSTR	-2.25%
10.0	VNO	-3.15%	CHTR	-2.07%
10.0	PRGO	-3.09%	PRGO	-1.7%
10.0	NWL	-2.97%	NWL	-1.7%
10.0	CNC	-2.75%	CZR	-1.54%
10.0	CMG	-2.14%	ADBE	-1.51%
10.0	CZR	-2.11%	UNH	-1.49%
10.0	CHTR	-2.02%	CPRT	-1.35%
10.0	IEP	-2.01%	ZTS	-1.18%
10.0	ORCL	-1.87%	CMG	-1.17%
10.0	UNH	-1.86%	TMUS	-1.13%
10.0	CPRT	-1.7%	FIS	-0.99%
10.0	ADBE	-1.67%	VNO	-0.94%
10.0	OXY	-1.51%	KHC	-0.85%
10.0	KHC	-1.5%	BBY	-0.84%
10.0	UAA	-1.43%	IEP	-0.73%
10.0	FIS	-1.4%	LW	-0.7%
10.0	BBY	-1.39%	CMCSA	-0.63%
10.0	NFLX	-1.3%	MSI	-0.58%
10.0	TMUS	-1.14%	NFLX	-0.52%
10.0	CMCSA	-0.97%	SBUX	-0.51%
10.0	MSI	-0.77%	NAVI	-0.5%
10.0	BXP	-0.77%	SNY	-0.49%
10.0	ISRG	-0.64%	CNC	-0.41%
10.0	ZTS	-0.63%	UAA	-0.39%
10.0	NAVI	-0.55%	FRA	-0.36%
10.0	FRA	-0.52%	POST	-0.34%
10.0	SNY	-0.52%	ISRG	-0.25%
10.0	GME	-0.5%	COST	-0.25%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MSTR	-9.18%	AMC	-5.83%
21.0	PRGO	-5.68%	CHTR	-4.28%
21.0	NWL	-4.84%	MSTR	-4.06%
21.0	AMC	-4.68%	PRGO	-3.92%
21.0	VNO	-4.57%	NWL	-3.42%
21.0	IEP	-4.16%	CPRT	-2.94%
21.0	CHTR	-4.04%	CZR	-2.85%
21.0	CMG	-3.85%	ADBE	-2.84%
21.0	CPRT	-3.63%	TMUS	-2.57%
21.0	CZR	-3.41%	UNH	-2.39%
21.0	ADBE	-3.33%	ZTS	-2.37%
21.0	BBY	-3.29%	CMG	-2.25%
21.0	NFLX	-3.28%	KHC	-2.06%
21.0	TMUS	-3.18%	IEP	-1.94%
21.0	KHC	-3.02%	BBY	-1.85%
21.0	OXY	-2.6%	CMCSA	-1.69%
21.0	CNC	-2.38%	VNO	-1.68%
21.0	UAA	-2.33%	LW	-1.59%
21.0	T	-2.14%	SBUX	-1.55%
21.0	CMCSA	-2.13%	FIS	-1.25%
21.0	FIS	-2.02%	SNY	-1.08%
21.0	GME	-1.98%	POST	-1.05%
21.0	UNH	-1.97%	MSI	-0.99%
21.0	MSI	-1.75%	COST	-0.84%
21.0	VFC	-1.59%	UAA	-0.83%
21.0	ISRG	-1.4%	VICI	-0.77%
21.0	ORCL	-1.23%	NFLX	-0.77%
21.0	POST	-1.1%	NAVI	-0.76%
21.0	VICI	-1.07%	FRA	-0.75%
21.0	ZTS	-1.06%	OXY	-0.69%



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 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	NWL	-33.72%	PRGO	-16.64%
63.0	PRGO	-25.92%	CHTR	-15.12%
63.0	MSTR	-21.62%	NWL	-13.33%
63.0	CMG	-14.89%	AMC	-11.49%
63.0	CPRT	-14.52%	CMG	-10.93%
63.0	UNH	-13.45%	CPRT	-10.84%
63.0	CHTR	-12.59%	MSTR	-10.4%
63.0	CZR	-12.27%	UNH	-9.29%
63.0	AMC	-11.4%	ZTS	-8.09%
63.0	KHC	-10.14%	TMUS	-7.75%
63.0	TMUS	-9.39%	CZR	-7.71%
63.0	ADBE	-9.23%	CMCSA	-7.01%
63.0	CMCSA	-8.81%	UAA	-6.81%
63.0	UAA	-8.47%	KHC	-6.6%
63.0	IEP	-6.59%	ADBE	-6.32%
63.0	ZTS	-6.31%	CNC	-5.53%
63.0	VNO	-5.92%	IEP	-4.84%
63.0	FIS	-5.18%	POST	-3.79%
63.0	COST	-5.07%	FIS	-3.7%
63.0	MSI	-5.06%	GME	-3.65%
63.0	VICI	-4.99%	SNY	-3.49%
63.0	OXY	-4.5%	MSI	-3.19%
63.0	T	-4.43%	SBUX	-3.16%
63.0	CNC	-4.27%	VICI	-2.91%
63.0	POST	-4.17%	VNO	-2.64%
63.0	GME	-3.91%	COST	-2.48%
63.0	NFLX	-3.21%	T	-2.27%
63.0	PCG	-3.11%	VZ	-2.06%
63.0	VZ	-2.81%	OXY	-1.92%
63.0	SNY	-2.75%	FRA	-1.81%



P365D: 126d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	PRGO	-75.08%	CHTR	-36.75%
126.0	AMC	-58.85%	PRGO	-30.65%
126.0	NWL	-56.51%	CMG	-25.57%
126.0	CNC	-52.99%	CNC	-25.12%
126.0	CMG	-46.13%	UAA	-24.13%
126.0	UAA	-45.26%	MSTR	-22.48%
126.0	GT	-42.57%	NWL	-22.24%
126.0	CZR	-32.62%	AMC	-20.38%
126.0	UNH	-30.89%	CPRT	-20.35%
126.0	ADBE	-26.64%	GT	-17.88%
126.0	CPRT	-25.78%	CZR	-17.74%
126.0	MSTR	-24.99%	ZTS	-14.96%
126.0	FIS	-23.02%	CMCSA	-14.5%
126.0	CHTR	-21.09%	ADBE	-13.94%
126.0	ZTS	-17.56%	FIS	-13.39%
126.0	CMCSA	-17.39%	UNH	-13.0%
126.0	TMUS	-15.99%	TMUS	-11.38%
126.0	IEP	-15.75%	KHC	-11.01%
126.0	GME	-13.93%	GME	-9.24%
126.0	COST	-13.19%	IEP	-9.1%
126.0	KHC	-12.99%	SBUX	-7.49%
126.0	GWW	-10.75%	POST	-6.64%
126.0	POST	-8.29%	SNY	-6.37%
126.0	SBUX	-7.68%	COST	-5.75%
126.0	TDG	-7.59%	NAVI	-5.26%
126.0	VICI	-7.21%	TDG	-5.13%
126.0	MOS	-6.82%	BMY	-4.68%
126.0	SNY	-6.14%	VICI	-4.42%
126.0	BMY	-6.03%	HON	-4.25%
126.0	VZ	-5.85%	GWW	-3.83%



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

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
1.0	SBNY	12.59%	SIVBQ	4.32%
1.0	GME	10.47%	GME	3.89%
1.0	MSTR	9.07%	META	2.49%
1.0	SIVBQ	7.91%	TSLA	2.19%
1.0	CHTR	7.48%	HLT	1.99%
1.0	META	6.78%	FRCB	1.8%
1.0	GNRC	5.88%	AVGO	1.79%
1.0	FRCB	5.76%	BALL	1.79%
1.0	NFLX	4.99%	AMC	1.69%
1.0	SLV	4.79%	INTU	1.6%
1.0	ZTS	4.69%	MSTR	1.5%
1.0	BUD	4.49%	ACGL	1.4%
1.0	FRA	4.19%	BUD	1.3%
1.0	CMA	3.99%	CHTR	1.3%
1.0	VFC	3.89%	NFLX	1.2%
1.0	INTU	3.69%	ZTS	1.1%
1.0	AMC	3.69%	TEVA	1.1%
1.0	BALL	3.59%	B	1.0%
1.0	B	3.59%	SPY	1.0%
1.0	CLF	3.59%	OXY	0.8%
1.0	GILD	3.49%	CMA	0.8%
1.0	AVGO	3.49%	SBNY	0.72%
1.0	ORCL	3.49%	GILD	0.7%
1.0	HLT	3.19%	FRA	0.7%
1.0	AAP	3.09%	AAP	0.6%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
10.0	META	12.37%	SIVBQ	9.56%
10.0	SIVBQ	12.13%	MSTR	7.75%
10.0	MSTR	11.47%	GME	5.03%
10.0	SBNY	10.66%	META	4.73%
10.0	GME	9.86%	CHTR	4.43%
10.0	KALU	9.56%	SBNY	3.68%
10.0	HCA	9.46%	AVGO	3.52%
10.0	BALL	8.45%	ZTS	3.22%
10.0	CHTR	8.45%	KALU	2.82%
10.0	FRCB	8.09%	AMC	2.62%
10.0	AVGO	7.34%	CMA	2.52%
10.0	GILD	7.14%	VZ	2.41%
10.0	GNRC	6.84%	HCA	2.21%
10.0	CMA	6.64%	ETRN	2.15%
10.0	TEVA	6.54%	NVS	2.01%
10.0	AMC	5.94%	XOM	2.01%
10.0	B	5.94%	WDC	1.91%
10.0	HD	5.94%	GWW	1.81%
10.0	BXP	5.84%	BALL	1.81%
10.0	VFC	5.73%	GNRC	1.71%
10.0	TDG	5.53%	ISRG	1.71%
10.0	WDC	5.33%	TXN	1.61%
10.0	ZTS	5.13%	EXPE	1.61%
10.0	EXPE	5.03%	GILD	1.51%
10.0	INTU	4.83%	FRCB	1.47%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
21.0	META	11.7%	SIVBQ	9.26%
21.0	GME	11.29%	CHTR	7.32%
21.0	AVGO	9.87%	MSTR	6.0%
21.0	FRCB	8.89%	KALU	4.37%
21.0	KALU	8.85%	GME	3.76%
21.0	GNRC	8.65%	META	3.66%
21.0	CMA	8.44%	GWW	3.15%
21.0	SIVBQ	8.15%	ISRG	2.95%
21.0	CHTR	7.93%	GNRC	2.95%
21.0	ZTS	7.22%	AVGO	2.75%
21.0	HCA	7.12%	ZTS	2.34%
21.0	MSTR	6.82%	CMA	2.14%
21.0	EXPE	6.61%	SBNY	1.85%
21.0	B	6.51%	LW	1.83%
21.0	ISRG	6.0%	VZ	1.83%
21.0	AMC	5.8%	AMC	1.63%
21.0	LW	5.7%	AAPL	1.63%
21.0	SBNY	5.56%	NEM	1.53%
21.0	BALL	5.39%	EXPE	1.42%
21.0	NAVI	5.19%	HD	1.42%
21.0	VZ	5.19%	SNY	1.42%
21.0	GILD	4.98%	GOOGL	1.32%
21.0	VFC	4.78%	ORLY	1.02%
21.0	BUD	4.58%	GILD	0.92%
21.0	HD	4.58%	BALL	0.92%



All TMD: 63d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
63.0	CHTR	11.8%	SIVBQ	7.78%
63.0	META	11.58%	AVGO	6.27%
63.0	SIVBQ	11.11%	EXPE	5.1%
63.0	AVGO	10.84%	GME	4.99%
63.0	EXPE	10.52%	LW	3.51%
63.0	LW	8.82%	CTLT	3.23%
63.0	MSTR	6.91%	WFC	1.49%
63.0	CMA	6.7%	KALU	1.38%
63.0	GME	6.16%	CHTR	1.17%
63.0	IRM	5.21%	BXP	1.17%
63.0	BUD	4.89%	MSI	0.96%
63.0	CTLT	4.69%	HD	0.85%
63.0	SNY	4.57%	OXY	0.85%
63.0	KALU	4.57%	GWW	0.74%
63.0	GILD	4.25%	CMA	0.53%
63.0	GNRC	4.25%	JAZZ	0.53%
63.0	VFC	3.93%	AMC	0.53%
63.0	XOM	3.83%	XOM	0.53%
63.0	HCA	3.83%	TXN	0.43%
63.0	BALL	3.51%	VFC	0.43%
63.0	NEM	3.4%	AZO	0.43%
63.0	BXP	2.76%	KHC	0.32%
63.0	MSI	2.66%	BALL	0.32%
63.0	ZTS	2.34%	SNY	0.32%
63.0	AAP	2.23%	HON	0.32%



All TMD: 126d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
126.0	LW	12.87%	AVGO	7.97%
126.0	VFC	9.57%	EXPE	5.58%
126.0	EXPE	7.4%	LW	5.35%
126.0	GME	6.04%	BUD	2.96%
126.0	XOM	5.81%	MSI	2.62%
126.0	MSTR	5.69%	OXY	1.82%
126.0	BALL	5.35%	MSTR	1.71%
126.0	META	5.13%	IRM	1.59%
126.0	AAP	4.78%	META	1.37%
126.0	BXP	4.44%	BALL	1.25%
126.0	CHTR	4.33%	VFC	1.25%
126.0	GOOGL	4.21%	GME	1.14%
126.0	CMA	4.21%	CMA	1.14%
126.0	IRM	4.21%	ETRN	1.02%
126.0	TEVA	2.28%	NVS	0.68%
126.0	KALU	2.05%	KALU	0.34%
126.0	CTLT	1.78%	HCA	0.11%
126.0	AVGO	1.71%	XOM	0.11%
126.0	HCA	1.48%	INTU	0.0%
126.0	TMUS	1.37%	KEY	0.0%
126.0	NWL	1.25%	MRK	0.0%
126.0	BAC	1.14%	FITB	0.0%
126.0	GNRC	1.03%	MOS	0.0%
126.0	KHC	0.91%	FRA	0.0%
126.0	AMC	0.91%	FRCB	0.0%



All TMD: 252d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
252.0	EXPE	6.12%	LW	4.12%
252.0	GNRC	3.99%	GWW	4.12%
252.0	IRM	3.99%	IRM	2.93%
252.0	GME	3.72%	ORLY	1.6%
252.0	XOM	2.79%	EXPE	1.33%
252.0	VST	2.79%	GNRC	0.8%
252.0	BA	1.73%	XOM	0.13%
252.0	OXY	1.73%	LQD	0.0%
252.0	BALL	1.6%	LUMN	0.0%
252.0	AA	0.8%	LVS	0.0%
252.0	CHTR	0.66%	MSFT	0.0%
252.0	AAPL	0.4%	MOS	0.0%
252.0	MSTR	0.13%	MRK	0.0%
252.0	INTU	0.0%	KHC	0.0%
252.0	LQD	0.0%	MUB	0.0%
252.0	LNC	0.0%	NAVI	0.0%
252.0	KHC	0.0%	LNC	0.0%
252.0	KEY	0.0%	AA	0.0%
252.0	AAP	0.0%	KEY	0.0%
252.0	VZ	0.0%	KALU	0.0%
252.0	IEP	0.0%	NWL	0.0%
252.0	LVS	0.0%	JAZZ	0.0%
252.0	HYG	0.0%	AAP	0.0%
252.0	HON	0.0%	INTU	0.0%
252.0	GT	0.0%	INTC	0.0%



P30D: 1d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
1.0	MSI	26.32%	FCX	15.79%
1.0	AA	21.05%	GNRC	10.53%
1.0	BUD	21.05%	MU	10.53%
1.0	GLD	15.79%	MSI	10.53%
1.0	BALL	15.79%	WDC	10.53%
1.0	FCX	15.79%	GILD	10.53%
1.0	AMZN	15.79%	AA	5.26%
1.0	GILD	15.79%	CLF	5.26%
1.0	FITB	15.79%	TDG	5.26%
1.0	VFC	15.79%	BALL	5.26%
1.0	SBUX	15.79%	KHC	0.0%
1.0	CYH	10.53%	LEN	0.0%
1.0	TDG	10.53%	NVDA	0.0%
1.0	CLF	10.53%	NFLX	0.0%
1.0	GME	5.26%	NAVI	0.0%
1.0	LNC	5.26%	IEP	0.0%
1.0	LEN	5.26%	MUB	0.0%
1.0	MSFT	5.26%	INTU	0.0%
1.0	GWW	5.26%	MSTR	0.0%
1.0	CVS	5.26%	IRM	0.0%
1.0	IEP	5.26%	MS	0.0%
1.0	HSBC	5.26%	MRK	0.0%
1.0	PCG	5.26%	JPM	0.0%
1.0	ON	5.26%	KALU	0.0%
1.0	UNH	5.26%	MOS	0.0%



P30D: 10d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
10.0	FCX	70.0%	WDC	60.0%
10.0	SBUX	60.0%	BUD	40.0%
10.0	BUD	40.0%	GLD	30.0%
10.0	TDG	40.0%	SBUX	20.0%
10.0	MU	30.0%	TDG	20.0%
10.0	GLD	20.0%	IRM	10.0%
10.0	GILD	20.0%	FCX	10.0%
10.0	CLF	20.0%	AA	0.0%
10.0	LEN	20.0%	MSTR	0.0%
10.0	WDC	20.0%	MU	0.0%
10.0	TXN	20.0%	MUB	0.0%
10.0	MSI	10.0%	NAVI	0.0%
10.0	AMGN	10.0%	MSFT	0.0%
10.0	FITB	10.0%	NFLX	0.0%
10.0	AMZN	10.0%	NVDA	0.0%
10.0	GNRC	10.0%	NVS	0.0%
10.0	GME	10.0%	NWL	0.0%
10.0	UAA	10.0%	ON	0.0%
10.0	AA	0.0%	MSI	0.0%
10.0	MSTR	0.0%	MRK	0.0%
10.0	NAVI	0.0%	MS	0.0%
10.0	NFLX	0.0%	LLY	0.0%
10.0	NVDA	0.0%	JAZZ	0.0%
10.0	NVS	0.0%	JPM	0.0%
10.0	MUB	0.0%	KALU	0.0%



P90D: 1d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
1.0	CLF	16.67%	CLF	6.67%
1.0	GILD	15.0%	WDC	6.67%
1.0	AMZN	11.67%	GILD	6.67%
1.0	AA	10.0%	TXN	5.0%
1.0	MSI	8.33%	FCX	5.0%
1.0	VFC	8.33%	MSI	3.33%
1.0	BUD	8.33%	PCG	3.33%
1.0	GNRC	8.33%	NVS	3.33%
1.0	GLD	6.67%	GNRC	3.33%
1.0	GWW	6.67%	MSTR	1.67%
1.0	LLY	5.0%	HCA	1.67%
1.0	SBUX	5.0%	GWW	1.67%
1.0	EXPE	5.0%	ORCL	1.67%
1.0	KEY	5.0%	TSLA	1.67%
1.0	CMA	5.0%	TDG	1.67%
1.0	PCG	5.0%	AMC	1.67%
1.0	BXP	5.0%	GLD	0.0%
1.0	FCX	5.0%	QQQ	0.0%
1.0	NVS	5.0%	GSK	0.0%
1.0	WDC	3.33%	GT	0.0%
1.0	AAP	3.33%	SNY	0.0%
1.0	META	3.33%	QCOM	0.0%
1.0	CYH	3.33%	GBTC	0.0%
1.0	LEN	3.33%	PWR	0.0%
1.0	TXN	3.33%	FSUGY	0.0%



P90D: 10d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
10.0	FCX	33.33%	GLD	15.69%
10.0	TXN	25.49%	WDC	15.69%
10.0	EXPE	23.53%	FCX	11.76%
10.0	TDG	21.57%	TXN	11.76%
10.0	CLF	21.57%	BUD	9.8%
10.0	NVS	21.57%	KALU	9.8%
10.0	AMZN	19.61%	LLY	7.84%
10.0	THC	19.61%	TDG	7.84%
10.0	SBUX	19.61%	VFC	7.84%
10.0	VFC	17.65%	AA	7.84%
10.0	GWW	13.73%	THC	5.88%
10.0	BUD	13.73%	GWW	3.92%
10.0	KALU	13.73%	NVS	3.92%
10.0	LLY	11.76%	SBUX	3.92%
10.0	WDC	11.76%	EXPE	1.96%
10.0	GILD	9.8%	IRM	1.96%
10.0	GLD	9.8%	ON	1.96%
10.0	BIIB	7.84%	MNST	1.96%
10.0	CMA	7.84%	ABBV	1.96%
10.0	ON	7.84%	MSFT	0.0%
10.0	AA	7.84%	NAVI	0.0%
10.0	GNRC	7.84%	MUB	0.0%
10.0	LEN	5.88%	NFLX	0.0%
10.0	USB	5.88%	MSTR	0.0%
10.0	CNC	5.88%	MSI	0.0%



P90D: 21d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
21.0	TXN	47.5%	KALU	30.0%
21.0	NVS	40.0%	FCX	17.5%
21.0	VFC	32.5%	EXPE	15.0%
21.0	CLF	30.0%	GLD	12.5%
21.0	GLD	27.5%	WDC	10.0%
21.0	KALU	25.0%	TXN	5.0%
21.0	GWW	25.0%	BUD	5.0%
21.0	EXPE	25.0%	NVS	5.0%
21.0	BUD	25.0%	CMA	5.0%
21.0	WDC	20.0%	VFC	2.5%
21.0	CMA	20.0%	MSI	0.0%
21.0	TDG	20.0%	MSTR	0.0%
21.0	FCX	12.5%	MUB	0.0%
21.0	MNST	12.5%	AA	0.0%
21.0	SBUX	10.0%	NAVI	0.0%
21.0	USB	10.0%	MS	0.0%
21.0	GNRC	7.5%	NFLX	0.0%
21.0	BIIB	5.0%	NVDA	0.0%
21.0	AA	2.5%	NWL	0.0%
21.0	VZ	2.5%	ON	0.0%
21.0	BALL	2.5%	MSFT	0.0%
21.0	WFC	2.5%	MNST	0.0%
21.0	AMZN	2.5%	MOS	0.0%
21.0	MSFT	0.0%	ORLY	0.0%
21.0	NVDA	0.0%	META	0.0%



P365D: 1d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
1.0	GILD	14.06%	GILD	5.62%
1.0	TSLA	7.23%	TSLA	5.62%
1.0	ZTS	6.83%	PCG	2.81%
1.0	BUD	6.83%	AMC	2.81%
1.0	VFC	6.83%	WDC	2.41%
1.0	CHTR	6.02%	AAP	2.01%
1.0	CLF	5.62%	ZTS	2.01%
1.0	META	5.22%	VZ	2.01%
1.0	AMZN	5.22%	AMZN	1.61%
1.0	AMC	5.22%	UNH	1.61%
1.0	AVGO	4.82%	BAC	1.2%
1.0	VZ	4.82%	GNRC	1.2%
1.0	NAVI	4.42%	BUD	1.2%
1.0	UNH	4.42%	AVGO	1.2%
1.0	CMA	4.42%	NWL	1.2%
1.0	TXN	4.02%	JPM	1.2%
1.0	AAP	4.02%	CMA	0.8%
1.0	WFC	4.02%	NVS	0.8%
1.0	KEY	3.61%	VFC	0.8%
1.0	NVS	3.61%	GME	0.8%
1.0	SLV	3.23%	TXN	0.4%
1.0	ORLY	3.21%	GWW	0.4%
1.0	QQQ	3.21%	HON	0.4%
1.0	BAC	3.21%	QCOM	0.4%
1.0	VST	3.21%	FCX	0.4%



P365D: 10d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
10.0	WDC	17.08%	WDC	10.83%
10.0	GILD	15.0%	KALU	9.17%
10.0	AMZN	14.58%	AVGO	7.92%
10.0	KALU	13.33%	NVS	7.92%
10.0	TXN	13.33%	TXN	7.5%
10.0	AVGO	12.92%	TSLA	7.08%
10.0	FCX	12.08%	HCA	5.0%
10.0	NVS	11.25%	GILD	4.58%
10.0	AMC	10.42%	VZ	3.75%
10.0	VFC	10.0%	AMZN	3.33%
10.0	VZ	9.58%	CMA	3.33%
10.0	TSLA	9.17%	GLD	2.92%
10.0	TDG	9.17%	META	2.5%
10.0	UNH	9.17%	AAP	2.5%
10.0	INTU	8.75%	CHTR	2.08%
10.0	THC	8.33%	KEY	2.08%
10.0	SBUX	7.92%	NAVI	2.08%
10.0	HCA	7.92%	HON	2.08%
10.0	EXPE	7.92%	VFC	2.08%
10.0	BUD	7.08%	VST	2.08%
10.0	BXP	7.08%	FCX	2.08%
10.0	CHTR	7.08%	JPM	1.67%
10.0	NEM	6.25%	AA	1.67%
10.0	CMA	6.25%	ZTS	1.67%
10.0	MU	5.83%	EXPE	1.25%



P365D: 21d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
21.0	AVGO	24.89%	KALU	13.97%
21.0	NVS	19.21%	AVGO	12.23%
21.0	TXN	18.78%	TXN	7.42%
21.0	KALU	15.72%	CHTR	5.24%
21.0	EXPE	14.85%	WFC	4.37%
21.0	WDC	14.41%	WDC	4.37%
21.0	CMA	13.54%	EXPE	4.37%
21.0	VFC	11.35%	CMA	4.37%
21.0	VZ	10.92%	ZTS	3.93%
21.0	HCA	10.92%	GOOGL	3.49%
21.0	GILD	10.48%	GILD	3.49%
21.0	BUD	10.48%	NEM	3.49%
21.0	TDG	9.61%	FCX	3.06%
21.0	AMZN	9.17%	HON	3.06%
21.0	NEM	7.86%	AMZN	3.06%
21.0	AMC	6.55%	NVS	2.62%
21.0	ZTS	6.11%	TSLA	2.18%
21.0	TSLA	6.11%	KEY	1.75%
21.0	AAP	6.11%	VZ	1.31%
21.0	AAPL	5.68%	AAP	1.31%
21.0	BXP	4.8%	GS	1.31%
21.0	JPM	4.8%	META	0.87%
21.0	CVS	4.37%	MU	0.44%
21.0	MU	4.37%	SNY	0.44%
21.0	BAC	3.93%	AZN	0.44%



P365D: 63d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
63.0	AVGO	35.29%	AVGO	32.62%
63.0	EXPE	34.22%	EXPE	15.51%
63.0	CMA	20.86%	WYNN	3.21%
63.0	GILD	17.11%	WFC	3.21%
63.0	TSLA	16.58%	KALU	2.67%
63.0	NVS	15.51%	NVS	2.67%
63.0	HCA	12.83%	META	2.14%
63.0	AAP	11.23%	JAZZ	2.14%
63.0	BUD	9.63%	TXN	2.14%
63.0	KALU	9.63%	TSLA	1.6%
63.0	ELAN	9.09%	CVS	1.6%
63.0	SLV	8.6%	HON	1.6%
63.0	ORLY	8.02%	AAPL	1.6%
63.0	KEY	6.95%	BAC	1.07%
63.0	CHTR	6.42%	MU	0.53%
63.0	JAZZ	6.42%	KEY	0.53%
63.0	VFC	4.81%	THC	0.53%
63.0	AAPL	4.81%	CMA	0.53%
63.0	GE	4.28%	UAA	0.0%
63.0	HON	3.74%	LQD	0.0%
63.0	WFC	3.21%	NAVI	0.0%
63.0	MU	3.21%	MUB	0.0%
63.0	TXN	3.21%	VICI	0.0%
63.0	TFC	2.67%	VNO	0.0%
63.0	BAC	2.67%	MSTR	0.0%



P365D: 126d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
126.0	AVGO	50.81%	AVGO	63.71%
126.0	AAP	29.84%	CMA	8.06%
126.0	CMA	18.55%	NVS	6.45%
126.0	EXPE	14.52%	EXPE	5.65%
126.0	AAPL	12.1%	KALU	2.42%
126.0	GILD	11.29%	GILD	1.61%
126.0	KALU	10.48%	NWL	0.0%
126.0	NVS	8.06%	NFLX	0.0%
126.0	ORLY	7.26%	NAVI	0.0%
126.0	META	4.03%	META	0.0%
126.0	BAC	4.03%	MUB	0.0%
126.0	TSLA	3.23%	ON	0.0%
126.0	WDC	3.23%	MSTR	0.0%
126.0	CCL	2.42%	MSI	0.0%
126.0	VFC	2.42%	MRK	0.0%
126.0	WFC	2.42%	MOS	0.0%
126.0	CVS	1.61%	ISRG	0.0%
126.0	HCA	1.61%	LQD	0.0%
126.0	AMZN	1.61%	LW	0.0%
126.0	HD	0.81%	OXY	0.0%
126.0	FCX	0.81%	LNC	0.0%
126.0	KEY	0.81%	LLY	0.0%
126.0	MUB	0.0%	LEN	0.0%
126.0	HYG	0.0%	KHC	0.0%
126.0	MSTR	0.0%	KEY	0.0%



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

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
1.0	MOS	-4.09%	PHM	-1.89%
1.0	EMB	-3.59%	NVDA	-1.89%
1.0	GE	-3.59%	CCL	-1.79%
1.0	HYG	-3.59%	WYNN	-1.79%
1.0	VCSH	-3.59%	LVS	-1.69%
1.0	DHI	-3.39%	HSBC	-1.6%
1.0	PHM	-3.29%	LLY	-1.6%
1.0	BHP	-3.09%	MU	-1.6%
1.0	CCL	-3.09%	GE	-1.5%
1.0	AMAT	-3.09%	T	-1.5%
1.0	MS	-3.09%	AMD	-1.5%
1.0	HSBC	-2.99%	MUB	-1.4%
1.0	ON	-2.99%	HYG	-1.4%
1.0	CAH	-2.89%	LUMN	-1.4%
1.0	AZN	-2.89%	MNST	-1.4%
1.0	VNO	-2.89%	INTC	-1.4%
1.0	X	-2.72%	SLV	-1.3%
1.0	MUB	-2.69%	DHI	-1.3%
1.0	LVS	-2.69%	COST	-1.3%
1.0	TLT	-2.69%	VCSH	-1.3%
1.0	AMD	-2.59%	USB	-1.3%
1.0	T	-2.49%	VNO	-1.3%
1.0	CSCO	-2.39%	PWR	-1.3%
1.0	NVDA	-2.39%	ABBV	-1.3%
1.0	CMG	-2.39%	CSCO	-1.2%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
10.0	MUB	-6.85%	NVDA	-4.12%
10.0	LLY	-6.24%	LLY	-3.52%
10.0	NVDA	-5.03%	MUB	-3.22%
10.0	CCL	-4.93%	X	-3.22%
10.0	MS	-4.93%	GBTC	-2.92%
10.0	T	-4.53%	TMUS	-2.92%
10.0	CDNS	-4.23%	DHI	-2.82%
10.0	COST	-4.23%	LUMN	-2.72%
10.0	AMAT	-4.23%	CPRT	-2.62%
10.0	CSCO	-4.02%	AMD	-2.21%
10.0	AMD	-3.92%	LVS	-2.21%
10.0	PHM	-3.82%	CCL	-2.21%
10.0	BA	-3.52%	MU	-2.11%
10.0	CYH	-3.52%	PHM	-2.01%
10.0	GE	-3.42%	COST	-2.01%
10.0	DHI	-3.22%	PWR	-2.01%
10.0	FSUGY	-3.22%	MS	-1.91%
10.0	VCSH	-3.22%	TEVA	-1.91%
10.0	LUMN	-3.22%	CDNS	-1.71%
10.0	CPRT	-3.02%	SLV	-1.61%
10.0	JPM	-3.02%	UNH	-1.61%
10.0	CAH	-3.02%	GE	-1.61%
10.0	VNO	-2.92%	T	-1.61%
10.0	MOS	-2.92%	MRK	-1.61%
10.0	CMG	-2.82%	WYNN	-1.61%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
21.0	CCL	-8.95%	NVDA	-5.29%
21.0	LLY	-8.24%	GE	-4.58%
21.0	MUB	-8.04%	ETRN	-4.38%
21.0	COST	-7.43%	GBTC	-4.27%
21.0	MS	-6.92%	TEVA	-4.17%
21.0	GLD	-6.41%	LLY	-4.07%
21.0	DHI	-6.41%	DHI	-3.66%
21.0	NVDA	-5.9%	LUMN	-3.46%
21.0	PHM	-5.9%	TMUS	-3.46%
21.0	GE	-5.7%	MUB	-3.36%
21.0	AMAT	-5.6%	WYNN	-3.36%
21.0	JPM	-4.98%	PWR	-3.05%
21.0	CDNS	-4.68%	AMD	-3.05%
21.0	PWR	-4.58%	MOS	-2.95%
21.0	AZN	-4.37%	LVS	-2.95%
21.0	AMD	-4.37%	X	-2.78%
21.0	LEN	-4.27%	CAH	-2.64%
21.0	GBTC	-4.27%	BA	-2.54%
21.0	CAH	-4.17%	AMGN	-2.34%
21.0	CMG	-3.97%	AMAT	-2.34%
21.0	CPRT	-3.87%	THC	-2.24%
21.0	T	-3.87%	GLD	-2.14%
21.0	LVS	-3.76%	CCL	-2.14%
21.0	VNO	-3.76%	TSLA	-2.14%
21.0	TSLA	-3.46%	MU	-1.93%



All TMD: 63d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
63.0	NVDA	-18.81%	NVDA	-11.69%
63.0	LLY	-12.01%	GBTC	-9.03%
63.0	DHI	-11.48%	CAH	-8.29%
63.0	GBTC	-11.48%	LLY	-8.29%
63.0	AMD	-11.05%	GLD	-7.76%
63.0	CMG	-10.63%	B	-7.33%
63.0	CCL	-10.1%	GE	-6.16%
63.0	VNO	-10.1%	DHI	-6.06%
63.0	PHM	-9.56%	ETRN	-5.99%
63.0	CAH	-9.35%	VST	-5.63%
63.0	LVS	-8.71%	GILD	-4.89%
63.0	JPM	-8.71%	MUB	-4.68%
63.0	GLD	-8.5%	MRK	-4.57%
63.0	GE	-7.97%	AMD	-4.57%
63.0	AMAT	-7.65%	PHM	-4.46%
63.0	LUMN	-7.65%	MU	-4.25%
63.0	HLT	-7.01%	TRGP	-4.14%
63.0	T	-6.7%	THC	-4.14%
63.0	COST	-6.7%	CCL	-3.93%
63.0	CPRT	-6.59%	LUMN	-3.51%
63.0	MU	-6.48%	MS	-3.4%
63.0	MRK	-6.48%	TMUS	-3.29%
63.0	NFLX	-6.27%	ACGL	-3.29%
63.0	PWR	-6.16%	MSTR	-2.87%
63.0	THC	-5.63%	GOOGL	-2.66%



All TMD: 126d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
126.0	NVDA	-24.6%	NVDA	-19.02%
126.0	GE	-21.18%	GE	-14.46%
126.0	PHM	-20.84%	GLD	-13.78%
126.0	GLD	-17.08%	THC	-12.76%
126.0	JPM	-16.29%	LLY	-11.85%
126.0	GS	-15.38%	GBTC	-10.59%
126.0	T	-14.58%	TMUS	-10.14%
126.0	COST	-14.12%	MU	-10.02%
126.0	GBTC	-13.78%	TRGP	-9.0%
126.0	ORCL	-13.55%	GILD	-8.31%
126.0	AMAT	-13.1%	B	-7.4%
126.0	PWR	-12.76%	CMG	-7.18%
126.0	NFLX	-12.07%	ACGL	-7.18%
126.0	HSBC	-11.5%	ORCL	-6.61%
126.0	THC	-11.39%	NEM	-6.61%
126.0	MS	-11.28%	PHM	-6.26%
126.0	LLY	-10.48%	WDC	-6.26%
126.0	MSFT	-10.36%	X	-5.26%
126.0	MU	-10.25%	AMD	-5.24%
126.0	AMD	-9.91%	CAH	-4.33%
126.0	CMG	-9.68%	PWR	-4.1%
126.0	CPRT	-9.57%	COST	-3.87%
126.0	CSCO	-9.23%	TSLA	-3.53%
126.0	HLT	-9.11%	GOOGL	-3.08%
126.0	MRK	-9.0%	JPM	-2.96%



All TMD: 252d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
252.0	GE	-57.31%	GE	-35.24%
252.0	PHM	-44.02%	GLD	-31.38%
252.0	JPM	-37.5%	GBTC	-27.13%
252.0	GBTC	-36.7%	PHM	-24.6%
252.0	NFLX	-33.64%	CAH	-21.81%
252.0	COST	-30.85%	LLY	-19.68%
252.0	ACGL	-26.86%	GS	-19.02%
252.0	PWR	-26.33%	COST	-17.42%
252.0	ORCL	-25.53%	TMUS	-17.29%
252.0	MS	-24.07%	NVDA	-17.29%
252.0	NVDA	-22.07%	HSBC	-16.22%
252.0	T	-21.01%	ACGL	-15.82%
252.0	GS	-20.74%	TRGP	-15.82%
252.0	MU	-20.35%	AVGO	-15.16%
252.0	LLY	-20.21%	NFLX	-14.63%
252.0	HSBC	-19.15%	VST	-11.84%
252.0	CPRT	-18.75%	JPM	-11.57%
252.0	DHI	-17.69%	META	-10.9%
252.0	ISRG	-17.42%	T	-10.64%
252.0	TMUS	-16.89%	MU	-10.37%
252.0	CSCO	-16.49%	THC	-10.37%
252.0	CMG	-15.69%	PWR	-7.45%
252.0	TDG	-15.29%	ETRN	-7.18%
252.0	AVGO	-14.76%	ORCL	-6.91%
252.0	CAH	-13.56%	MSI	-6.52%



P30D: 1d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
1.0	RIO	-31.58%	SLV	-31.58%
1.0	NEM	-21.05%	INTC	-15.79%
1.0	AMAT	-21.05%	T	-15.79%
1.0	BHP	-21.05%	PHM	-10.53%
1.0	XOM	-15.79%	RIO	-10.53%
1.0	B	-15.79%	META	-10.53%
1.0	ORLY	-10.53%	BHP	-10.53%
1.0	PHM	-10.53%	HSBC	-5.26%
1.0	CAH	-10.53%	CCL	-5.26%
1.0	MU	-10.53%	CHTR	-5.26%
1.0	HD	-10.53%	CMA	-5.26%
1.0	HON	-10.53%	NEM	-5.26%
1.0	TEVA	-10.53%	CSCO	-5.26%
1.0	MOS	-10.53%	CSTM	-5.26%
1.0	SLV	-10.53%	GS	-5.26%
1.0	BIIB	-10.53%	CZR	-5.26%
1.0	ELAN	-5.26%	DHI	-5.26%
1.0	DHI	-5.26%	ORLY	-5.26%
1.0	POST	-5.26%	OXY	-5.26%
1.0	LLY	-5.26%	POST	-5.26%
1.0	PEP	-5.26%	COST	-5.26%
1.0	EMB	-5.26%	BMY	-5.26%
1.0	IRM	-5.26%	TMUS	-5.26%
1.0	FSUGY	-5.26%	MSFT	-5.26%
1.0	GBTC	-5.26%	AAP	-5.26%



P30D: 10d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
10.0	AZO	-60.0%	COST	-40.0%
10.0	ORLY	-50.0%	SLV	-40.0%
10.0	COST	-40.0%	AZO	-40.0%
10.0	AMD	-40.0%	NEM	-30.0%
10.0	BHP	-40.0%	RIO	-30.0%
10.0	AMAT	-30.0%	XOM	-20.0%
10.0	TRGP	-30.0%	HON	-20.0%
10.0	NEM	-20.0%	GNRC	-10.0%
10.0	MNST	-20.0%	BHP	-10.0%
10.0	HON	-10.0%	INTC	-10.0%
10.0	SLV	-10.0%	AMAT	-10.0%
10.0	RIO	-10.0%	AMD	-10.0%
10.0	META	-10.0%	T	-10.0%
10.0	PWR	-10.0%	META	-10.0%
10.0	BA	-10.0%	MSTR	0.0%
10.0	INTC	-10.0%	MU	0.0%
10.0	CSTM	-10.0%	AA	0.0%
10.0	B	-10.0%	NAVI	0.0%
10.0	T	-10.0%	NFLX	0.0%
10.0	MUB	0.0%	NVDA	0.0%
10.0	NFLX	0.0%	NVS	0.0%
10.0	NVDA	0.0%	NWL	0.0%
10.0	NVS	0.0%	MUB	0.0%
10.0	NAVI	0.0%	MSI	0.0%
10.0	NWL	0.0%	MRK	0.0%



P90D: 1d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
1.0	AMAT	-13.33%	SLV	-23.33%
1.0	NEM	-13.33%	INTC	-8.33%
1.0	SLV	-11.67%	B	-6.67%
1.0	RIO	-11.67%	NEM	-6.67%
1.0	BHP	-10.0%	PHM	-6.67%
1.0	ORLY	-8.33%	DHI	-5.0%
1.0	XOM	-8.33%	CSCO	-5.0%
1.0	HLT	-6.67%	T	-5.0%
1.0	B	-6.67%	MU	-5.0%
1.0	CAH	-6.67%	BMY	-3.33%
1.0	TEVA	-6.67%	PEP	-3.33%
1.0	ELAN	-6.67%	GS	-3.33%
1.0	GS	-5.0%	POST	-3.33%
1.0	AZO	-5.0%	RIO	-3.33%
1.0	AMD	-5.0%	CSTM	-3.33%
1.0	FSUGY	-5.0%	CCL	-3.33%
1.0	MS	-5.0%	BHP	-3.33%
1.0	GT	-5.0%	META	-3.33%
1.0	MOS	-5.0%	HD	-3.33%
1.0	HD	-5.0%	MRK	-3.33%
1.0	BIIB	-5.0%	AZN	-3.33%
1.0	BMY	-5.0%	LEN	-3.33%
1.0	PHM	-5.0%	AMGN	-3.33%
1.0	MRK	-5.0%	AMD	-3.33%
1.0	GE	-3.33%	LUMN	-1.67%



P90D: 10d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
10.0	AMAT	-31.37%	SLV	-33.33%
10.0	BHP	-25.49%	INTC	-15.69%
10.0	COST	-15.69%	MU	-13.73%
10.0	SLV	-15.69%	B	-11.76%
10.0	MRK	-15.69%	COST	-11.76%
10.0	PHM	-13.73%	AMAT	-9.8%
10.0	RIO	-13.73%	MRK	-9.8%
10.0	AZO	-13.73%	TEVA	-9.8%
10.0	ORLY	-11.76%	AZO	-7.84%
10.0	BA	-11.76%	CSTM	-7.84%
10.0	GS	-11.76%	NEM	-7.84%
10.0	FITB	-9.8%	HSBC	-5.88%
10.0	BMY	-9.8%	GOOGL	-5.88%
10.0	MS	-9.8%	RIO	-5.88%
10.0	INTC	-9.8%	BHP	-3.92%
10.0	AMD	-7.84%	CCL	-3.92%
10.0	GE	-7.84%	XOM	-3.92%
10.0	FSUGY	-7.84%	HON	-3.92%
10.0	CSCO	-7.84%	GNRC	-1.96%
10.0	XOM	-5.88%	MS	-1.96%
10.0	TRGP	-5.88%	DHI	-1.96%
10.0	HON	-5.88%	FITB	-1.96%
10.0	LNC	-5.88%	T	-1.96%
10.0	KEY	-5.88%	HCA	-1.96%
10.0	TEVA	-5.88%	AMD	-1.96%



P90D: 21d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
21.0	CSTM	-42.5%	SLV	-25.0%
21.0	BA	-40.0%	RIO	-20.0%
21.0	AMAT	-27.5%	XOM	-17.5%
21.0	CCL	-22.5%	MU	-17.5%
21.0	BHP	-20.0%	TEVA	-15.0%
21.0	FITB	-20.0%	B	-15.0%
21.0	KEY	-17.5%	AMAT	-12.5%
21.0	B	-17.5%	KEY	-10.0%
21.0	XOM	-17.5%	COST	-10.0%
21.0	GS	-17.5%	HSBC	-10.0%
21.0	COST	-15.0%	INTC	-7.5%
21.0	BMY	-15.0%	CSTM	-5.0%
21.0	NEM	-15.0%	USB	-5.0%
21.0	HON	-12.5%	MRK	-5.0%
21.0	TEVA	-12.5%	NEM	-5.0%
21.0	ZION	-10.0%	BHP	-2.5%
21.0	INTC	-10.0%	BALL	-2.5%
21.0	CSCO	-10.0%	BIIB	-2.5%
21.0	HSBC	-10.0%	CCL	-2.5%
21.0	MRK	-7.5%	MUB	0.0%
21.0	GILD	-7.5%	MSTR	0.0%
21.0	MU	-7.5%	NFLX	0.0%
21.0	GE	-7.5%	NVDA	0.0%
21.0	GOOGL	-7.5%	NWL	0.0%
21.0	FSUGY	-7.5%	ON	0.0%



P365D: 1d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
1.0	BIIB	-6.43%	SLV	-5.24%
1.0	RIO	-5.62%	B	-4.42%
1.0	BHP	-5.62%	PHM	-3.61%
1.0	MOS	-5.62%	INTC	-3.61%
1.0	HSBC	-5.22%	HSBC	-3.21%
1.0	B	-5.22%	LUMN	-3.21%
1.0	PHM	-4.82%	AMD	-2.81%
1.0	CAH	-4.82%	PEP	-2.81%
1.0	VICI	-4.82%	CSTM	-2.41%
1.0	AMAT	-4.82%	AMGN	-2.41%
1.0	AZD	-4.82%	WYNN	-2.41%
1.0	DHI	-4.42%	LVS	-2.41%
1.0	PEP	-4.42%	JAZZ	-2.41%
1.0	AZN	-4.42%	BIIB	-2.41%
1.0	XOM	-4.42%	GT	-2.41%
1.0	HLT	-4.02%	NEM	-2.41%
1.0	ACGL	-4.02%	BHP	-2.01%
1.0	LUMN	-3.61%	MNST	-2.01%
1.0	BALL	-3.61%	T	-2.01%
1.0	COST	-3.61%	MRK	-2.01%
1.0	LVS	-3.61%	AZN	-2.01%
1.0	POST	-3.61%	ORLY	-2.01%
1.0	X	-3.23%	DHI	-2.01%
1.0	GT	-3.21%	RIO	-2.01%
1.0	AMD	-3.21%	LEN	-2.01%



P365D: 10d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
10.0	AMAT	-11.67%	X	-9.52%
10.0	LVS	-8.75%	ORCL	-7.92%
10.0	BHP	-8.75%	B	-7.92%
10.0	MOS	-8.33%	SLV	-6.69%
10.0	BA	-8.33%	TEVA	-5.42%
10.0	MRK	-7.5%	LVS	-4.58%
10.0	PEP	-5.83%	HSBC	-4.58%
10.0	RIO	-5.42%	AMD	-4.58%
10.0	T	-5.42%	NFLX	-4.17%
10.0	PHM	-5.0%	AMAT	-4.17%
10.0	AMD	-5.0%	LUMN	-4.17%
10.0	COST	-5.0%	CCL	-3.75%
10.0	CSCO	-5.0%	CYH	-3.33%
10.0	AZO	-5.0%	HLT	-3.33%
10.0	XOM	-4.58%	WYNN	-3.33%
10.0	JAZZ	-4.17%	MSFT	-2.92%
10.0	VICI	-3.75%	MRK	-2.5%
10.0	HSBC	-3.75%	MU	-2.5%
10.0	B	-3.33%	BHC	-2.5%
10.0	LLY	-3.33%	COST	-2.5%
10.0	CAH	-2.92%	JAZZ	-2.5%
10.0	LUMN	-2.92%	LLY	-2.08%
10.0	BHC	-2.92%	AZN	-1.67%
10.0	KHC	-2.92%	GOOGL	-1.67%
10.0	PWR	-2.5%	FIS	-1.67%



P365D: 21d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
21.0	LVS	-13.97%	B	-12.23%
21.0	AMAT	-12.66%	ORCL	-10.04%
21.0	AMD	-11.35%	AMD	-9.61%
21.0	CSTM	-10.92%	TEVA	-9.61%
21.0	BA	-10.04%	WYNN	-6.55%
21.0	MOS	-9.61%	LVS	-6.11%
21.0	B	-9.61%	AMAT	-5.68%
21.0	CCL	-9.17%	MOS	-5.24%
21.0	GLD	-8.73%	CAH	-4.8%
21.0	BHP	-5.68%	GLD	-4.8%
21.0	CSCO	-5.24%	LUMN	-4.8%
21.0	HLT	-4.8%	MSFT	-4.8%
21.0	HSBC	-4.8%	BA	-4.37%
21.0	TEVA	-4.8%	HLT	-4.37%
21.0	CPRT	-4.37%	NFLX	-3.93%
21.0	COST	-4.37%	LLY	-3.93%
21.0	LEN	-4.37%	SLV	-3.51%
21.0	ORCL	-4.37%	RIO	-3.49%
21.0	LLY	-4.37%	HSBC	-3.06%
21.0	XOM	-4.37%	XOM	-3.06%
21.0	DHI	-3.93%	PWR	-2.62%
21.0	PHM	-3.93%	DHI	-2.62%
21.0	MRK	-3.93%	MRK	-2.18%
21.0	CAH	-3.93%	BIIIB	-1.75%
21.0	LNC	-3.93%	QQQ	-1.75%



P365D: 63d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
63.0	CAH	-37.43%	CAH	-42.78%
63.0	AMD	-25.67%	B	-37.97%
63.0	LVS	-22.46%	GOOGL	-21.39%
63.0	AMAT	-21.93%	TEVA	-20.86%
63.0	LLY	-19.79%	GLD	-15.51%
63.0	MOS	-19.79%	MSFT	-12.83%
63.0	X	-19.35%	AMD	-11.76%
63.0	RIO	-17.65%	PWR	-9.09%
63.0	GOOGL	-17.11%	GNRC	-8.02%
63.0	NVDA	-14.44%	LUMN	-7.49%
63.0	DHI	-13.37%	DHI	-7.49%
63.0	MNST	-12.83%	WDC	-6.95%
63.0	PWR	-11.76%	INTC	-6.95%
63.0	LUMN	-11.76%	NFLX	-5.88%
63.0	NFLX	-11.76%	AMAT	-5.88%
63.0	PHM	-11.23%	NEM	-5.35%
63.0	GLD	-11.23%	LLY	-5.35%
63.0	INTU	-11.23%	BA	-5.35%
63.0	HLT	-10.7%	RIO	-4.81%
63.0	CSTM	-10.16%	MOS	-4.81%
63.0	BIIB	-9.63%	AAP	-4.81%
63.0	B	-9.09%	HLT	-4.81%
63.0	BA	-9.09%	GE	-4.28%
63.0	MRK	-9.09%	CCL	-3.74%
63.0	GS	-9.09%	SLV	-3.23%



P365D: 126d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	950aRBreak_VmS	Ticker	990aRBreak_VmS
126.0	MSFT	-44.35%	B	-52.42%
126.0	LVS	-43.55%	NEM	-44.35%
126.0	CAH	-33.06%	GLD	-37.9%
126.0	AZN	-32.26%	GOOGL	-34.68%
126.0	THC	-31.45%	WDC	-25.81%
126.0	AMAT	-29.84%	AMD	-25.0%
126.0	QQQ	-29.03%	TEVA	-21.77%
126.0	SPY	-27.42%	SLV	-20.16%
126.0	PWR	-25.0%	CAH	-18.55%
126.0	MS	-25.0%	AA	-15.32%
126.0	AMD	-25.0%	ORCL	-13.71%
126.0	RIO	-22.58%	JAZZ	-12.9%
126.0	NVDA	-21.77%	ELAN	-12.9%
126.0	GS	-20.97%	MU	-11.29%
126.0	MNST	-20.97%	INTC	-10.48%
126.0	BIIIB	-17.74%	RIO	-9.68%
126.0	B	-16.94%	GE	-8.87%
126.0	ELAN	-16.94%	LVS	-6.45%
126.0	HSBC	-16.94%	AMAT	-5.65%
126.0	JPM	-15.32%	HSBC	-4.84%
126.0	GNRC	-12.9%	WYNN	-4.84%
126.0	GLD	-12.9%	MSFT	-4.84%
126.0	ORCL	-12.1%	QQQ	-4.03%
126.0	LUMN	-12.1%	PWR	-4.03%
126.0	GSK	-10.48%	SPY	-3.23%



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

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	CCL	0.22%	NVDA	0.3%
1.0	X	0.21%	X	0.29%
1.0	TSLA	0.19%	GBTC	0.24%
1.0	NVDA	0.17%	GE	0.22%
1.0	GE	0.16%	LLY	0.2%
1.0	AVGO	0.16%	PWR	0.2%
1.0	B	0.16%	CCL	0.18%
1.0	GBTC	0.15%	AVGO	0.18%
1.0	AMD	0.13%	CAH	0.17%
1.0	TDG	0.12%	TSLA	0.16%
1.0	LLY	0.11%	B	0.15%
1.0	JAZZ	0.1%	TDG	0.14%
1.0	LVS	0.09%	JAZZ	0.14%
1.0	DHI	0.09%	AMD	0.12%
1.0	VST	0.08%	LVS	0.12%
1.0	CAH	0.08%	MU	0.12%
1.0	BHC	0.08%	SLV	0.11%
1.0	AZO	0.08%	TRGP	0.11%
1.0	AMAT	0.08%	WYNN	0.11%
1.0	ON	0.08%	CDNS	0.11%
1.0	PHM	0.07%	ORLY	0.11%
1.0	MSFT	0.07%	AZO	0.1%
1.0	SBNY	0.07%	HLT	0.1%
1.0	CMG	0.07%	VST	0.1%
1.0	THC	0.07%	ON	0.1%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	NVDA	2.61%	NVDA	3.25%
10.0	TSLA	2.09%	LLY	2.27%
10.0	SBNY	1.86%	TSLA	1.91%
10.0	CCL	1.78%	CCL	1.89%
10.0	LLY	1.55%	GBTC	1.87%
10.0	AVGO	1.29%	AMAT	1.49%
10.0	AMAT	1.02%	PWR	1.27%
10.0	AMD	0.95%	AVGO	1.26%
10.0	GBTC	0.95%	LUMN	1.23%
10.0	FRCB	0.93%	AZ0	1.14%
10.0	BHC	0.89%	TEVA	1.06%
10.0	AZ0	0.87%	CSTM	1.04%
10.0	GT	0.78%	PHM	1.03%
10.0	MSFT	0.77%	GE	0.98%
10.0	PWR	0.76%	PCG	0.94%
10.0	AMC	0.74%	DHI	0.88%
10.0	LVS	0.73%	GS	0.84%
10.0	PHM	0.64%	COST	0.81%
10.0	GE	0.57%	ACGL	0.75%
10.0	QQQ	0.56%	CAH	0.75%
10.0	PCG	0.52%	WYNN	0.74%
10.0	HLT	0.52%	MU	0.73%
10.0	CDNS	0.51%	THC	0.72%
10.0	ELAN	0.5%	T	0.72%
10.0	DHI	0.5%	NEM	0.69%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	TSLA	5.14%	NVDA	6.05%
21.0	NVDA	5.07%	TSLA	4.83%
21.0	SBNY	5.03%	GBTC	4.81%
21.0	CCL	3.77%	CCL	4.16%
21.0	AMAT	3.14%	ETRN	4.03%
21.0	GBTC	2.77%	AMD	3.7%
21.0	LLY	2.46%	LUMN	3.51%
21.0	FRCB	2.24%	AMAT	3.41%
21.0	AMD	2.21%	LLY	2.97%
21.0	PCG	2.18%	SBNY	2.85%
21.0	AMC	2.07%	VST	2.45%
21.0	AZ0	1.96%	AA	2.38%
21.0	PWR	1.8%	CDNS	2.3%
21.0	PHM	1.63%	GE	2.25%
21.0	ELAN	1.62%	PWR	2.22%
21.0	DHI	1.59%	PHM	2.02%
21.0	QQQ	1.38%	AZ0	2.01%
21.0	CDNS	1.33%	ELAN	1.95%
21.0	MSFT	1.3%	DHI	1.94%
21.0	LVS	1.25%	AMC	1.92%
21.0	CAH	1.2%	LVS	1.87%
21.0	GE	1.17%	PCG	1.82%
21.0	MU	1.02%	TEVA	1.79%
21.0	WYNN	1.0%	CAH	1.75%
21.0	JPM	1.0%	FRCB	1.54%



All TMD: 63d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	NVDA	15.45%	GBTC	22.23%
63.0	CCL	13.31%	NVDA	19.66%
63.0	SBNY	13.02%	LUMN	13.87%
63.0	GBTC	9.16%	CCL	13.06%
63.0	AMAT	8.84%	AMD	12.2%
63.0	MSTR	8.55%	LLY	12.16%
63.0	LLY	7.64%	PWR	11.71%
63.0	AMC	7.11%	B	9.75%
63.0	AMD	6.81%	GE	9.52%
63.0	TSLA	6.58%	PHM	9.52%
63.0	PWR	6.31%	MSTR	9.26%
63.0	FRCB	5.84%	AMAT	8.54%
63.0	PCG	5.47%	ETRN	8.48%
63.0	ELAN	5.35%	VST	7.17%
63.0	VNO	5.28%	CAH	6.76%
63.0	PHM	5.27%	MS	6.56%
63.0	QQQ	4.89%	JPM	6.28%
63.0	DHI	4.89%	ELAN	6.14%
63.0	CAH	4.8%	TSLA	5.93%
63.0	MSFT	4.66%	TEVA	5.84%
63.0	MU	4.39%	PCG	5.41%
63.0	LVS	4.3%	LVS	5.34%
63.0	AZO	4.21%	X	5.07%
63.0	LUMN	3.88%	QQQ	4.89%
63.0	AMZN	3.75%	T	4.88%



All TMD: 126d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	NVDA	41.34%	GBTC	54.11%
126.0	GBTC	24.49%	NVDA	47.4%
126.0	CCL	20.58%	CCL	27.22%
126.0	AMD	19.16%	AMD	27.0%
126.0	SBNY	19.0%	PHM	26.02%
126.0	PHM	18.6%	GE	24.9%
126.0	MU	17.15%	LLY	23.15%
126.0	AMAT	17.06%	LUMN	21.26%
126.0	VNO	15.62%	PWR	21.13%
126.0	DHI	15.0%	THC	20.6%
126.0	AMZN	14.67%	MU	18.9%
126.0	QQQ	14.15%	JPM	18.13%
126.0	PWR	13.86%	ORCL	18.08%
126.0	GE	12.6%	MS	17.4%
126.0	NFLX	12.58%	WDC	15.85%
126.0	THC	12.39%	TSLA	15.81%
126.0	TSLA	12.22%	B	15.53%
126.0	ORCL	12.21%	NFLX	15.39%
126.0	MS	12.02%	VNO	14.86%
126.0	PCG	11.96%	AMAT	14.52%
126.0	MSFT	10.78%	DHI	14.12%
126.0	AMC	10.7%	VST	13.92%
126.0	ELAN	10.29%	AMZN	13.92%
126.0	JPM	9.25%	X	13.25%
126.0	AZO	8.83%	QQQ	12.48%



All TMD: 252d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
252.0	NVDA	119.61%	GBTC	131.88%
252.0	GBTC	102.8%	NVDA	88.04%
252.0	NFLX	58.61%	GE	86.11%
252.0	MU	54.07%	CCL	75.91%
252.0	PHM	53.31%	PHM	69.19%
252.0	CCL	53.0%	THC	56.95%
252.0	GE	52.76%	MU	50.75%
252.0	LLY	44.68%	TRGP	44.5%
252.0	AMZN	42.59%	NFLX	42.92%
252.0	VNO	42.07%	X	41.64%
252.0	QQQ	39.99%	MS	39.28%
252.0	PWR	39.5%	AMAT	37.66%
252.0	AMD	38.91%	QQQ	35.79%
252.0	CDNS	37.22%	T	32.66%
252.0	MSFT	35.65%	VNO	31.93%
252.0	MS	35.06%	ORCL	31.59%
252.0	DHI	34.12%	META	29.42%
252.0	COST	32.7%	MSFT	28.86%
252.0	JPM	31.64%	GS	27.3%
252.0	INTU	31.46%	PWR	27.27%
252.0	AMAT	31.05%	JPM	27.03%
252.0	THC	30.45%	LLY	26.95%
252.0	ACGL	30.06%	AMD	25.76%
252.0	ISRG	29.17%	CDNS	25.15%
252.0	ELAN	28.93%	CAH	25.05%



P30D: 1d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	SLV	1.09%	SLV	2.98%
1.0	INTC	1.02%	CSTM	1.81%
1.0	BHP	0.77%	INTC	1.78%
1.0	AMAT	0.77%	AMAT	1.72%
1.0	MOS	0.74%	LUMN	1.19%
1.0	HON	0.64%	BHP	1.18%
1.0	CAH	0.63%	AZ0	1.11%
1.0	AZ0	0.55%	HSBC	0.89%
1.0	NWL	0.54%	HON	0.84%
1.0	OXY	0.54%	MOS	0.8%
1.0	ORLY	0.52%	ORLY	0.79%
1.0	UAA	0.44%	B	0.76%
1.0	VZ	0.42%	PEP	0.69%
1.0	VST	0.42%	XOM	0.66%
1.0	PHM	0.41%	NWL	0.64%
1.0	LUMN	0.4%	T	0.63%
1.0	GT	0.4%	GT	0.61%
1.0	PEP	0.39%	META	0.6%
1.0	NEM	0.36%	LW	0.57%
1.0	B	0.36%	OXY	0.57%
1.0	AMC	0.35%	COST	0.56%
1.0	LW	0.34%	NEM	0.55%
1.0	PRGO	0.31%	RIO	0.54%
1.0	ACGL	0.28%	UAA	0.52%
1.0	HD	0.28%	CPRT	0.5%



P30D: 10d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	SLV	16.71%	AMD	19.58%
10.0	AZ0	12.75%	AZ0	18.44%
10.0	AMD	10.3%	SLV	17.96%
10.0	MOS	6.31%	CSTM	16.55%
10.0	BHP	5.75%	LUMN	14.5%
10.0	INTC	5.3%	COST	11.37%
10.0	COST	5.02%	BHP	10.19%
10.0	LUMN	5.02%	MOS	7.58%
10.0	AMAT	4.67%	GNRC	7.27%
10.0	INTU	4.41%	PWR	7.04%
10.0	GT	3.93%	TRGP	5.73%
10.0	FIS	3.9%	GT	5.46%
10.0	ORLY	3.29%	INTC	5.39%
10.0	THC	3.17%	FIS	4.75%
10.0	TRGP	2.91%	PEP	4.64%
10.0	QCOM	2.81%	AMAT	4.34%
10.0	CPRT	2.37%	MNST	4.11%
10.0	WFC	2.36%	NEM	3.83%
10.0	RIO	2.3%	ORLY	3.71%
10.0	CAH	2.25%	CPRT	3.65%
10.0	NWL	2.07%	CAH	3.62%
10.0	NEM	2.06%	B	3.53%
10.0	TMUS	1.89%	RIO	2.82%
10.0	NAVI	1.89%	THC	2.61%
10.0	ISRG	1.79%	MU	2.39%



P90D: 1d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	GT	1.02%	SLV	1.68%
1.0	TEVA	0.67%	GT	1.11%
1.0	UAA	0.63%	AMAT	0.9%
1.0	BMY	0.54%	MRK	0.82%
1.0	BHP	0.47%	INTC	0.81%
1.0	AMAT	0.43%	CSTM	0.78%
1.0	SLV	0.42%	TEVA	0.63%
1.0	NWL	0.4%	BHP	0.62%
1.0	MRK	0.39%	BMY	0.62%
1.0	ACGL	0.37%	UAA	0.58%
1.0	CAH	0.36%	NWL	0.55%
1.0	AMC	0.31%	HSBC	0.52%
1.0	GS	0.3%	XOM	0.51%
1.0	OXY	0.27%	RIO	0.48%
1.0	INTC	0.25%	B	0.45%
1.0	VZ	0.23%	NEM	0.43%
1.0	CMG	0.22%	ZION	0.43%
1.0	PWR	0.21%	AMGN	0.42%
1.0	HSBC	0.2%	CAH	0.4%
1.0	HON	0.2%	ACGL	0.39%
1.0	ZTS	0.19%	GS	0.39%
1.0	GE	0.18%	CNC	0.37%
1.0	JAZZ	0.17%	KEY	0.33%
1.0	TFC	0.17%	FITB	0.32%
1.0	B	0.17%	T	0.31%



P90D: 10d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	SLV	8.16%	SLV	11.73%
10.0	AMAT	8.09%	AMAT	9.12%
10.0	GT	6.88%	GT	8.71%
10.0	AMC	3.61%	CSTM	8.21%
10.0	BHP	3.38%	BHP	6.82%
10.0	INTC	3.28%	BA	3.5%
10.0	BMY	2.12%	INTC	3.5%
10.0	BA	1.94%	GS	2.81%
10.0	RIO	1.64%	CMG	2.61%
10.0	GS	1.54%	RIO	2.59%
10.0	MRK	1.52%	KEY	2.5%
10.0	NWL	1.37%	GOOGL	2.41%
10.0	LNC	1.36%	MU	2.4%
10.0	AMD	1.33%	COST	2.35%
10.0	CMG	1.29%	NEM	2.33%
10.0	MOS	1.19%	TFC	2.31%
10.0	ACGL	1.19%	TEVA	2.12%
10.0	AVGO	1.19%	NWL	2.01%
10.0	TFC	1.16%	B	1.99%
10.0	XOM	1.15%	ACGL	1.89%
10.0	TEVA	1.14%	MOS	1.82%
10.0	NVDA	1.01%	FSUGY	1.78%
10.0	ZTS	0.98%	PWR	1.77%
10.0	BHC	0.98%	BIIB	1.65%
10.0	CYH	0.93%	ZION	1.59%



P90D: 21d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	AMAT	20.12%	SLV	23.04%
21.0	GT	17.12%	GT	17.84%
21.0	SLV	14.66%	AMAT	16.36%
21.0	BHP	11.29%	BHP	16.04%
21.0	BA	10.4%	CSTM	15.26%
21.0	AMC	9.76%	BA	12.93%
21.0	CSTM	8.43%	KEY	9.5%
21.0	TFC	6.19%	ZION	7.67%
21.0	MU	4.99%	TEVA	7.61%
21.0	MOS	4.61%	B	7.52%
21.0	XOM	3.54%	GE	7.29%
21.0	TEVA	3.13%	RIO	6.86%
21.0	RIO	3.05%	FSUGY	6.57%
21.0	BMY	2.99%	CCL	6.32%
21.0	INTC	2.98%	MNST	6.09%
21.0	CMG	2.71%	ON	6.06%
21.0	B	2.68%	GS	6.04%
21.0	GS	2.66%	MU	5.44%
21.0	AMD	2.54%	TFC	5.43%
21.0	NEM	2.42%	MOS	4.67%
21.0	ELAN	2.36%	BMY	4.32%
21.0	PHM	2.31%	INTC	4.08%
21.0	ZION	2.11%	AMC	3.81%
21.0	HON	2.04%	NEM	3.68%
21.0	NVDA	1.81%	CMG	3.61%



P365D: 1d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	LUMN	0.7%	X	0.63%
1.0	AMD	0.37%	LUMN	0.63%
1.0	B	0.37%	SLV	0.52%
1.0	AVGO	0.23%	AMD	0.48%
1.0	NVDA	0.23%	CLF	0.46%
1.0	VST	0.22%	B	0.45%
1.0	CLF	0.22%	NVDA	0.42%
1.0	TSLA	0.2%	CSTM	0.41%
1.0	CAH	0.2%	CAH	0.35%
1.0	LVS	0.19%	INTC	0.28%
1.0	AMAT	0.19%	AMAT	0.27%
1.0	CSTM	0.19%	BHP	0.26%
1.0	BHP	0.16%	NEM	0.25%
1.0	TDG	0.15%	MU	0.25%
1.0	X	0.15%	RIO	0.24%
1.0	HSBC	0.14%	HSBC	0.24%
1.0	ACGL	0.14%	PWR	0.23%
1.0	AZO	0.14%	LVS	0.23%
1.0	SLV	0.13%	HCA	0.23%
1.0	FSUGY	0.12%	AVGO	0.22%
1.0	TEVA	0.12%	GE	0.21%
1.0	RIO	0.12%	XOM	0.2%
1.0	PHM	0.12%	MNST	0.2%
1.0	PWR	0.12%	AAP	0.18%
1.0	CCL	0.12%	GLD	0.17%



P365D: 10d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	LUMN	6.04%	LUMN	7.77%
10.0	NVDA	2.63%	X	4.21%
10.0	AMAT	2.16%	CSTM	4.12%
10.0	AMD	2.09%	AMAT	3.17%
10.0	GT	1.88%	NVDA	2.83%
10.0	CYH	1.69%	SLV	2.67%
10.0	LVS	1.56%	AMD	2.64%
10.0	SLV	1.46%	B	2.43%
10.0	MOS	1.34%	MOS	2.19%
10.0	AVGO	1.29%	TEVA	1.96%
10.0	PCG	1.26%	BHP	1.96%
10.0	CAH	1.26%	LVS	1.9%
10.0	AAP	1.07%	CAH	1.65%
10.0	CSTM	1.05%	CLF	1.55%
10.0	AMC	0.99%	BIIIB	1.48%
10.0	BHP	0.98%	AVGO	1.48%
10.0	PHM	0.98%	GS	1.41%
10.0	MRK	0.88%	MRK	1.36%
10.0	NWL	0.85%	WYNN	1.33%
10.0	BMY	0.81%	NEM	1.26%
10.0	X	0.77%	LLY	1.15%
10.0	B	0.7%	GOOGL	1.02%
10.0	VST	0.67%	MNST	0.95%
10.0	LLY	0.64%	LW	0.94%
10.0	ZTS	0.59%	MU	0.93%



P365D: 21d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	AMAT	7.65%	LUMN	16.01%
21.0	LUMN	7.03%	AMD	9.59%
21.0	AMD	6.93%	LVS	7.03%
21.0	MOS	4.63%	TEVA	6.33%
21.0	NVDA	4.59%	AMAT	6.06%
21.0	LVS	4.18%	MOS	5.74%
21.0	CSTM	3.78%	CSTM	5.34%
21.0	CAH	3.2%	B	5.19%
21.0	AMC	3.03%	NVDA	4.49%
21.0	B	2.91%	CAH	3.99%
21.0	PHM	2.69%	BHP	3.77%
21.0	PCG	2.38%	SLV	3.77%
21.0	SLV	2.24%	CLF	3.56%
21.0	BHP	2.19%	BIIB	3.38%
21.0	TEVA	2.01%	GE	3.22%
21.0	CYH	1.95%	GOOGL	3.01%
21.0	GT	1.92%	FSUGY	2.71%
21.0	BA	1.9%	X	2.61%
21.0	BIIB	1.88%	LLY	2.56%
21.0	NWL	1.77%	GT	2.5%
21.0	GNRC	1.76%	CYH	2.33%
21.0	AAP	1.46%	GNRC	2.26%
21.0	LLY	1.32%	PHM	2.25%
21.0	XOM	1.26%	WYNN	2.06%
21.0	MRK	1.22%	NEM	2.0%



P365D: 63d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	LUMN	35.5%	LUMN	65.18%
63.0	AMAT	29.38%	AMD	42.89%
63.0	AMD	19.14%	B	35.67%
63.0	CAH	17.35%	AMAT	25.3%
63.0	MOS	15.83%	TEVA	25.12%
63.0	NVDA	15.21%	WDC	19.79%
63.0	B	14.76%	LLY	19.65%
63.0	BIIIB	13.8%	CAH	18.94%
63.0	LLY	11.21%	LVS	18.13%
63.0	LVS	11.07%	NVDA	16.78%
63.0	CSTM	9.43%	FSUGY	15.86%
63.0	TEVA	9.02%	MOS	14.11%
63.0	PHM	8.09%	PWR	13.57%
63.0	FSUGY	7.9%	ELAN	13.19%
63.0	BHP	7.77%	LNC	12.79%
63.0	VST	7.13%	MS	12.09%
63.0	AMC	6.7%	NEM	11.6%
63.0	PWR	6.51%	GE	11.54%
63.0	MU	6.04%	INTC	11.33%
63.0	LNC	5.75%	BIIIB	11.16%
63.0	GOOGL	5.58%	CSTM	11.08%
63.0	QQQ	5.52%	BHP	10.45%
63.0	X	5.48%	JPM	9.52%
63.0	RIO	5.06%	CYH	8.31%
63.0	GNRC	4.87%	GOOGL	8.19%



P365D: 126d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	AMD	59.99%	WDC	120.76%
126.0	LUMN	51.24%	AMD	115.54%
126.0	B	46.19%	LUMN	99.36%
126.0	NVDA	38.68%	B	90.44%
126.0	AMAT	37.9%	INTC	55.67%
126.0	ORCL	28.4%	NEM	48.66%
126.0	DHI	28.35%	CSTM	46.26%
126.0	LVS	26.71%	TEVA	45.18%
126.0	BIIB	26.6%	ORCL	41.42%
126.0	MS	22.5%	FSUGY	39.43%
126.0	PHM	21.52%	NVDA	38.89%
126.0	MU	21.09%	PWR	38.0%
126.0	BHP	21.02%	LVS	36.73%
126.0	THC	19.67%	LNC	34.92%
126.0	FSUGY	18.48%	JPM	34.53%
126.0	GOOGL	18.06%	MS	34.19%
126.0	ELAN	17.79%	PHM	32.11%
126.0	QQQ	16.46%	BHP	31.52%
126.0	LLY	16.31%	AMAT	29.53%
126.0	BA	16.17%	MU	29.36%
126.0	LNC	15.97%	CLF	28.79%
126.0	CHTR	14.57%	ELAN	26.26%
126.0	TEVA	13.96%	CAH	23.88%
126.0	JPM	13.86%	BIIB	23.73%
126.0	SLV	13.84%	GE	23.22%



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

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	IEP	-0.27%	IEP	-0.29%
1.0	MSTR	-0.24%	NWL	-0.27%
1.0	CZR	-0.17%	SIVBQ	-0.14%
1.0	UAA	-0.13%	CZR	-0.13%
1.0	NWL	-0.12%	GNRC	-0.09%
1.0	GNRC	-0.09%	FIS	-0.09%
1.0	LNC	-0.08%	INTU	-0.08%
1.0	GT	-0.07%	UAA	-0.08%
1.0	BXP	-0.07%	BXP	-0.08%
1.0	NFLX	-0.07%	CHTR	-0.07%
1.0	META	-0.07%	BIIIB	-0.07%
1.0	BIIB	-0.07%	GT	-0.06%
1.0	AAPL	-0.05%	MSTR	-0.06%
1.0	BALL	-0.05%	BALL	-0.06%
1.0	OXY	-0.04%	META	-0.06%
1.0	TLT	-0.04%	CTLT	-0.06%
1.0	ORCL	-0.04%	ZTS	-0.05%
1.0	BA	-0.04%	KHC	-0.04%
1.0	TEVA	-0.04%	OXY	-0.04%
1.0	INTU	-0.03%	VZ	-0.03%
1.0	SBUX	-0.03%	NAVI	-0.03%
1.0	GME	-0.03%	TEVA	-0.03%
1.0	CHTR	-0.03%	TLT	-0.03%
1.0	HD	-0.03%	ADBE	-0.03%
1.0	AA	-0.03%	AAPL	-0.03%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	CZR	-1.5%	IEP	-1.97%
10.0	IEP	-1.43%	SIVBQ	-1.44%
10.0	MSTR	-1.3%	NWL	-1.43%
10.0	ORCL	-0.77%	CZR	-1.33%
10.0	META	-0.62%	CYH	-0.91%
10.0	GNRC	-0.6%	GME	-0.88%
10.0	INTU	-0.59%	ORCL	-0.75%
10.0	SIVBQ	-0.56%	INTU	-0.75%
10.0	NWL	-0.5%	OXY	-0.61%
10.0	GOOGL	-0.49%	CNC	-0.61%
10.0	NFLX	-0.46%	ETRN	-0.55%
10.0	AA	-0.39%	META	-0.54%
10.0	MS	-0.38%	VZ	-0.53%
10.0	WDC	-0.36%	CLF	-0.49%
10.0	OXY	-0.35%	GNRC	-0.49%
10.0	CLF	-0.32%	BXP	-0.47%
10.0	AAPL	-0.31%	VNO	-0.45%
10.0	BALL	-0.3%	HD	-0.41%
10.0	GME	-0.29%	NFLX	-0.4%
10.0	BIIB	-0.28%	ON	-0.36%
10.0	KALU	-0.27%	GT	-0.35%
10.0	HCA	-0.26%	BAC	-0.33%
10.0	BXP	-0.26%	RIO	-0.32%
10.0	CMA	-0.23%	KALU	-0.31%
10.0	UAA	-0.2%	AMC	-0.3%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	CZR	-3.72%	IEP	-3.44%
21.0	IEP	-3.45%	GME	-2.64%
21.0	MSTR	-2.27%	CZR	-2.45%
21.0	GME	-1.7%	NWL	-2.4%
21.0	INTU	-1.44%	SIVBQ	-2.05%
21.0	CLF	-1.37%	GNRC	-1.68%
21.0	GNRC	-1.32%	INTU	-1.5%
21.0	META	-1.21%	BBY	-1.01%
21.0	LUMN	-1.17%	NFLX	-1.0%
21.0	ORCL	-1.0%	CLF	-0.95%
21.0	WDC	-0.9%	BALL	-0.83%
21.0	KALU	-0.85%	META	-0.82%
21.0	NWL	-0.81%	ADBE	-0.81%
21.0	OXY	-0.76%	OXY	-0.77%
21.0	VZ	-0.68%	VZ	-0.72%
21.0	AAPL	-0.6%	VFC	-0.71%
21.0	SIVBQ	-0.6%	HD	-0.7%
21.0	BAC	-0.53%	KALU	-0.68%
21.0	FSUGY	-0.52%	GT	-0.66%
21.0	ADBE	-0.52%	BXP	-0.66%
21.0	BALL	-0.51%	KEY	-0.65%
21.0	KHC	-0.48%	FITB	-0.58%
21.0	CMA	-0.47%	RIO	-0.54%
21.0	ISRG	-0.42%	CYH	-0.54%
21.0	CYH	-0.38%	ISRG	-0.51%



All TMD: 63d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	IEP	-10.77%	SIVBQ	-17.54%
63.0	GNRC	-7.27%	IEP	-12.38%
63.0	NWL	-5.56%	NWL	-10.57%
63.0	META	-4.86%	GNRC	-8.59%
63.0	CZR	-3.61%	CLF	-5.36%
63.0	VFC	-3.39%	CYH	-4.8%
63.0	GME	-3.13%	UAA	-4.75%
63.0	SIVBQ	-2.85%	GME	-4.56%
63.0	BALL	-2.47%	BHC	-4.55%
63.0	UAA	-2.12%	VFC	-4.21%
63.0	OXY	-1.89%	PRGO	-3.58%
63.0	CYH	-1.88%	CVS	-2.83%
63.0	ON	-1.77%	BALL	-2.77%
63.0	ADBE	-1.67%	KEY	-2.63%
63.0	WDC	-1.53%	CZR	-2.57%
63.0	CLF	-1.5%	AA	-2.38%
63.0	VZ	-1.43%	BBY	-2.38%
63.0	AA	-1.27%	VZ	-1.88%
63.0	BBY	-1.24%	AAP	-1.69%
63.0	IRM	-1.22%	KHC	-1.57%
63.0	PRGO	-1.1%	OXY	-1.56%
63.0	EXPE	-1.05%	FIS	-1.52%
63.0	CVS	-1.04%	ZION	-1.46%
63.0	INTC	-1.03%	GT	-1.38%
63.0	INTU	-1.0%	FRA	-1.33%



All TMD: 126d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	IEP	-22.81%	FRCB	-74.45%
126.0	NWL	-21.41%	NWL	-24.27%
126.0	SIVBQ	-14.35%	IEP	-23.79%
126.0	GNRC	-12.36%	SIVBQ	-23.49%
126.0	VFC	-12.08%	VFC	-16.08%
126.0	FRCB	-7.86%	UAA	-11.8%
126.0	BALL	-4.67%	GNRC	-11.79%
126.0	PRGO	-4.39%	PRGO	-10.23%
126.0	WDC	-3.93%	CLF	-9.31%
126.0	CVS	-3.86%	GME	-7.57%
126.0	CLF	-3.84%	BHC	-7.11%
126.0	VZ	-3.7%	BALL	-6.82%
126.0	GME	-3.57%	CTLT	-6.01%
126.0	ON	-3.55%	CNC	-5.89%
126.0	IRM	-3.39%	AMC	-5.34%
126.0	CYH	-3.22%	SBNY	-5.31%
126.0	GT	-3.13%	CZR	-4.71%
126.0	BBY	-2.99%	GT	-4.59%
126.0	ADBE	-2.89%	AAP	-3.98%
126.0	UAA	-2.84%	KEY	-3.89%
126.0	LUMN	-2.67%	CHTR	-3.63%
126.0	FIS	-2.64%	BBY	-3.23%
126.0	CMA	-2.38%	UNH	-3.23%
126.0	CZR	-2.24%	MOS	-3.14%
126.0	AA	-2.22%	VZ	-3.04%



All TMD: 252d

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

Period examined: All model dates from 2022-01-31 through 2026-01-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
252.0	FRCB	-115.88%	FRCB	-115.45%
252.0	SIVBQ	-81.22%	SBNY	-56.56%
252.0	IEP	-46.69%	SIVBQ	-55.92%
252.0	NWL	-46.43%	IEP	-53.48%
252.0	GNRC	-21.37%	NWL	-48.89%
252.0	CLF	-17.86%	CLF	-25.83%
252.0	SBNY	-13.3%	VFC	-19.7%
252.0	CZR	-13.22%	AAP	-19.7%
252.0	CVS	-12.99%	CZR	-18.75%
252.0	VFC	-11.33%	GNRC	-17.29%
252.0	UNH	-11.32%	MOS	-16.02%
252.0	GT	-10.94%	UAA	-15.96%
252.0	UAA	-10.88%	GT	-15.72%
252.0	AA	-10.52%	BHC	-14.99%
252.0	AAP	-10.02%	PRGO	-13.67%
252.0	FIS	-9.53%	CTLT	-13.37%
252.0	BALL	-9.29%	OXY	-12.0%
252.0	MOS	-8.2%	AMC	-10.67%
252.0	BHC	-8.17%	UNH	-9.13%
252.0	ON	-7.87%	KEY	-8.19%
252.0	IRM	-7.73%	FSUGY	-8.08%
252.0	KEY	-7.67%	BALL	-8.08%
252.0	CYH	-6.62%	KHC	-7.77%
252.0	GME	-5.91%	CNC	-7.49%
252.0	PRGO	-5.36%	LNC	-6.58%



P30D: 1d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	LVS	-1.13%	BHC	-1.92%
1.0	BHC	-1.04%	WDC	-1.21%
1.0	WDC	-0.95%	CVS	-1.21%
1.0	ADBE	-0.75%	LVS	-1.2%
1.0	CHTR	-0.71%	MSFT	-0.86%
1.0	JPM	-0.5%	CHTR	-0.85%
1.0	AVGO	-0.44%	FIS	-0.84%
1.0	VNO	-0.43%	NAVI	-0.69%
1.0	GME	-0.42%	ISRG	-0.67%
1.0	CZR	-0.41%	CZR	-0.62%
1.0	FCX	-0.33%	ADBE	-0.57%
1.0	TXN	-0.31%	JPM	-0.5%
1.0	ON	-0.31%	VNO	-0.46%
1.0	IEP	-0.29%	AVGO	-0.45%
1.0	FITB	-0.29%	ON	-0.44%
1.0	MSFT	-0.28%	WYNN	-0.38%
1.0	FIS	-0.27%	QCOM	-0.37%
1.0	CVS	-0.26%	GME	-0.34%
1.0	LNC	-0.26%	LEN	-0.31%
1.0	GBTC	-0.25%	FSUGY	-0.28%
1.0	WYNN	-0.23%	ORCL	-0.27%
1.0	NFLX	-0.22%	UNH	-0.27%
1.0	BUD	-0.21%	CMA	-0.23%
1.0	LEN	-0.21%	CDNS	-0.23%
1.0	UNH	-0.21%	IEP	-0.17%



P30D: 10d

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

Period examined: All model dates from 2026-01-29 through 2026-01-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	MU	-12.12%	BHC	-14.88%
10.0	WDC	-8.1%	ADBE	-12.8%
10.0	AVGO	-6.38%	WDC	-7.97%
10.0	BHC	-5.35%	AVGO	-7.69%
10.0	GLD	-5.0%	ORCL	-6.97%
10.0	GME	-3.99%	CCL	-6.57%
10.0	CCL	-3.9%	VNO	-5.72%
10.0	ADBE	-3.79%	GBTC	-5.03%
10.0	BIIB	-3.58%	GME	-4.75%
10.0	GNRC	-3.57%	GLD	-3.92%
10.0	GILD	-3.36%	LLY	-3.6%
10.0	VNO	-3.33%	CHTR	-3.34%
10.0	UAA	-3.12%	CZR	-3.33%
10.0	FCX	-3.06%	UAA	-3.27%
10.0	BUD	-2.81%	GILD	-3.26%
10.0	CLF	-2.76%	ISRG	-3.05%
10.0	SBUX	-2.69%	BIIB	-2.51%
10.0	CZR	-2.67%	BUD	-2.47%
10.0	GBTC	-2.39%	LVS	-2.47%
10.0	TXN	-2.27%	CVS	-2.46%
10.0	ORCL	-2.17%	AMC	-2.39%
10.0	AAP	-1.99%	SBUX	-2.31%
10.0	TDG	-1.97%	VST	-2.12%
10.0	LVS	-1.6%	GSK	-2.04%
10.0	BAC	-1.39%	NFLX	-1.95%



P90D: 1d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	GBTC	-0.45%	ORCL	-1.34%
1.0	VNO	-0.37%	LUMN	-0.87%
1.0	WDC	-0.34%	PRGO	-0.56%
1.0	LW	-0.3%	MSTR	-0.51%
1.0	IEP	-0.28%	VNO	-0.44%
1.0	MSTR	-0.26%	WDC	-0.42%
1.0	CHTR	-0.24%	MSFT	-0.42%
1.0	ORCL	-0.22%	VST	-0.38%
1.0	ADBE	-0.22%	CVS	-0.38%
1.0	TXN	-0.2%	CHTR	-0.36%
1.0	NFLX	-0.19%	LEN	-0.35%
1.0	IRM	-0.19%	IEP	-0.35%
1.0	NVDA	-0.17%	GBTC	-0.34%
1.0	WYNN	-0.16%	INTU	-0.29%
1.0	GILD	-0.16%	NFLX	-0.26%
1.0	INTU	-0.15%	VICI	-0.22%
1.0	GNRC	-0.15%	LW	-0.22%
1.0	MSI	-0.14%	QCOM	-0.2%
1.0	ON	-0.14%	LVS	-0.19%
1.0	CZR	-0.14%	ADBE	-0.19%
1.0	UNH	-0.14%	CDNS	-0.18%
1.0	MSFT	-0.13%	AVGO	-0.18%
1.0	ELAN	-0.13%	WYNN	-0.17%
1.0	LVS	-0.12%	BHC	-0.16%
1.0	CLF	-0.11%	NAVI	-0.16%



P90D: 10d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	VFC	-3.03%	ORCL	-8.4%
10.0	IEP	-2.91%	IEP	-4.86%
10.0	WDC	-2.88%	WDC	-2.58%
10.0	CLF	-2.69%	LUMN	-2.12%
10.0	ORCL	-2.48%	VNO	-1.98%
10.0	FCX	-2.13%	VST	-1.93%
10.0	GBTC	-1.88%	GBTC	-1.91%
10.0	TXN	-1.87%	AMC	-1.91%
10.0	GLD	-1.78%	LLY	-1.84%
10.0	VNO	-1.67%	NFLX	-1.69%
10.0	KALU	-1.64%	AA	-1.66%
10.0	BIIB	-1.61%	FCX	-1.55%
10.0	AA	-1.6%	IRM	-1.5%
10.0	JAZZ	-1.34%	CDNS	-1.47%
10.0	ON	-1.31%	VFC	-1.3%
10.0	CNC	-1.2%	GLD	-1.28%
10.0	EXPE	-1.19%	WYNN	-1.19%
10.0	MU	-1.17%	GME	-1.1%
10.0	GNRC	-1.12%	VICI	-1.09%
10.0	GILD	-1.11%	T	-1.03%
10.0	SBUX	-0.99%	MSFT	-0.93%
10.0	GME	-0.96%	EXPE	-0.9%
10.0	VICI	-0.91%	TXN	-0.89%
10.0	CZR	-0.79%	LVS	-0.86%
10.0	CMA	-0.78%	KALU	-0.78%



P90D: 21d

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

Period examined: All model dates from 2026-01-29 through 2025-11-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	VFC	-6.2%	ORCL	-14.87%
21.0	WDC	-6.04%	NFLX	-9.9%
21.0	CLF	-5.53%	IEP	-6.64%
21.0	KALU	-5.17%	WDC	-5.91%
21.0	IEP	-4.74%	VNO	-4.1%
21.0	ORCL	-4.69%	KALU	-4.07%
21.0	FCX	-4.37%	MSTR	-3.74%
21.0	TXN	-4.2%	WYNN	-3.1%
21.0	AZ0	-3.49%	TXN	-2.74%
21.0	EXPE	-3.44%	LUMN	-2.27%
21.0	VNO	-2.98%	CHTR	-2.23%
21.0	AA	-2.92%	VFC	-2.19%
21.0	MSTR	-2.77%	T	-2.15%
21.0	CMA	-2.58%	LVS	-2.07%
21.0	GLD	-2.52%	AZ0	-1.99%
21.0	LEN	-2.51%	VICI	-1.97%
21.0	INTU	-2.29%	PCG	-1.93%
21.0	NFLX	-2.26%	FCX	-1.91%
21.0	NVS	-2.02%	GLD	-1.85%
21.0	VST	-1.98%	EXPE	-1.68%
21.0	VICI	-1.95%	LEN	-1.54%
21.0	WYNN	-1.78%	INTU	-1.38%
21.0	AVGO	-1.6%	VST	-1.31%
21.0	MSFT	-1.48%	AVGO	-1.28%
21.0	BUD	-1.48%	ORLY	-1.26%



P365D: 1d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	UNH	-0.22%	AMZN	-0.3%
1.0	MSTR	-0.22%	FIS	-0.26%
1.0	CZR	-0.2%	UAA	-0.24%
1.0	UAA	-0.2%	IEP	-0.22%
1.0	IEP	-0.17%	NWL	-0.22%
1.0	FIS	-0.15%	CHTR	-0.21%
1.0	CNC	-0.15%	UNH	-0.2%
1.0	ORCL	-0.14%	VNO	-0.19%
1.0	VNO	-0.14%	CZR	-0.16%
1.0	LNC	-0.14%	CMG	-0.13%
1.0	CMCSA	-0.12%	CPRT	-0.13%
1.0	AMZN	-0.12%	CNC	-0.13%
1.0	WDC	-0.1%	MSI	-0.12%
1.0	MSI	-0.1%	MSTR	-0.12%
1.0	ON	-0.09%	ISRG	-0.11%
1.0	GILD	-0.09%	CMCSA	-0.11%
1.0	IRM	-0.08%	IRM	-0.1%
1.0	GBTC	-0.07%	ADBE	-0.09%
1.0	COST	-0.07%	VZ	-0.08%
1.0	LEN	-0.06%	ORCL	-0.08%
1.0	CMG	-0.06%	PRGO	-0.08%
1.0	CPRT	-0.06%	HD	-0.07%
1.0	CMA	-0.05%	BBY	-0.07%
1.0	ADBE	-0.05%	NAVI	-0.06%
1.0	ISRG	-0.05%	GILD	-0.06%



P365D: 10d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	WDC	-2.09%	ORCL	-2.6%
10.0	ORCL	-2.02%	CNC	-2.35%
10.0	MSTR	-1.13%	VNO	-2.21%
10.0	FCX	-0.98%	OXY	-1.42%
10.0	KALU	-0.97%	PRGO	-1.39%
10.0	AMZN	-0.95%	IEP	-1.28%
10.0	VNO	-0.92%	NWL	-1.27%
10.0	ON	-0.89%	MSTR	-1.27%
10.0	SPY	-0.71%	UAA	-1.04%
10.0	EXPE	-0.67%	KALU	-0.97%
10.0	MS	-0.64%	CMG	-0.96%
10.0	QQQ	-0.63%	TSLA	-0.84%
10.0	GILD	-0.61%	WDC	-0.83%
10.0	UAA	-0.57%	CDNS	-0.81%
10.0	CNC	-0.56%	NFLX	-0.79%
10.0	AAPL	-0.55%	MS	-0.74%
10.0	BBY	-0.49%	AMZN	-0.69%
10.0	GOOGL	-0.49%	KHC	-0.65%
10.0	OXY	-0.49%	GILD	-0.65%
10.0	ISRG	-0.48%	EXPE	-0.63%
10.0	HCA	-0.47%	AMC	-0.58%
10.0	IEP	-0.46%	CZR	-0.57%
10.0	CZR	-0.45%	BBY	-0.55%
10.0	UNH	-0.42%	BXP	-0.53%
10.0	GBTC	-0.42%	FITB	-0.52%



P365D: 21d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	MSTR	-4.72%	MSTR	-5.12%
21.0	WDC	-4.14%	ORCL	-3.52%
21.0	ORCL	-2.89%	VNO	-2.88%
21.0	KALU	-2.72%	NFLX	-2.51%
21.0	AMZN	-1.66%	WDC	-2.51%
21.0	OXY	-1.57%	KALU	-2.28%
21.0	EXPE	-1.54%	IEP	-2.22%
21.0	VNO	-1.53%	EXPE	-2.09%
21.0	AAPL	-1.34%	CNC	-1.98%
21.0	ISRG	-1.2%	OXY	-1.91%
21.0	CMA	-1.14%	AMZN	-1.79%
21.0	FCX	-1.13%	TSLA	-1.76%
21.0	CZR	-1.1%	PRGO	-1.76%
21.0	IEP	-1.02%	T	-1.61%
21.0	CNC	-0.99%	CMG	-1.6%
21.0	TSLA	-0.98%	UAA	-1.5%
21.0	CPRT	-0.89%	BBY	-1.45%
21.0	TRGP	-0.84%	FITB	-1.42%
21.0	HCA	-0.83%	NWL	-1.42%
21.0	SPY	-0.81%	VFC	-1.41%
21.0	VFC	-0.81%	ISRG	-1.32%
21.0	MS	-0.79%	GME	-1.29%
21.0	INTC	-0.77%	CVS	-1.24%
21.0	UAA	-0.69%	KHC	-0.95%
21.0	PRGO	-0.67%	TXN	-0.95%



P365D: 63d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	MSTR	-17.8%	NWL	-20.39%
63.0	AVGO	-9.1%	MSTR	-11.23%
63.0	WDC	-8.05%	PRGO	-9.29%
63.0	KALU	-5.69%	AVGO	-6.5%
63.0	VFC	-5.51%	VFC	-6.48%
63.0	EXPE	-5.33%	NFLX	-5.0%
63.0	CPRT	-4.52%	CZR	-4.55%
63.0	OXY	-3.88%	UNH	-4.16%
63.0	NFLX	-3.67%	CMG	-3.97%
63.0	INTC	-3.24%	CPRT	-3.69%
63.0	TSLA	-3.18%	KHC	-3.54%
63.0	AAPL	-3.12%	VNO	-3.27%
63.0	CZR	-3.05%	EXPE	-2.93%
63.0	CMG	-2.78%	ADBE	-2.91%
63.0	CMA	-2.77%	COST	-2.59%
63.0	PRGO	-2.69%	OXY	-2.59%
63.0	UNH	-2.6%	PCG	-2.34%
63.0	GILD	-2.2%	T	-2.16%
63.0	BUD	-2.11%	VICI	-2.07%
63.0	HCA	-1.87%	TSLA	-1.91%
63.0	ORLY	-1.73%	MSI	-1.87%
63.0	JAZZ	-1.67%	CMCSA	-1.8%
63.0	ADBE	-1.66%	IEP	-1.76%
63.0	NVS	-1.64%	UAA	-1.65%
63.0	VICI	-1.63%	TMUS	-1.64%



P365D: 126d

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

Period examined: All model dates from 2026-01-29 through 2025-02-03

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	AVGO	-29.19%	PRGO	-44.43%
126.0	CMG	-19.9%	AMC	-38.46%
126.0	WDC	-19.44%	NWL	-34.27%
126.0	GT	-18.15%	CNC	-27.87%
126.0	PRGO	-16.25%	GT	-24.69%
126.0	NWL	-13.09%	AVGO	-21.77%
126.0	MSTR	-12.75%	UAA	-21.13%
126.0	VFC	-12.36%	CMG	-20.56%
126.0	ADBE	-9.27%	UNH	-17.89%
126.0	UAA	-8.56%	CZR	-14.88%
126.0	FIS	-8.27%	ADBE	-12.7%
126.0	CZR	-8.02%	FIS	-9.63%
126.0	CPRT	-7.65%	COST	-7.43%
126.0	EXPE	-6.75%	GWW	-6.92%
126.0	UNH	-6.38%	IEP	-6.66%
126.0	CMA	-5.98%	CPRT	-5.44%
126.0	AAP	-5.9%	GME	-4.69%
126.0	IEP	-5.11%	TMUS	-4.61%
126.0	COST	-4.66%	MOS	-4.55%
126.0	KALU	-4.03%	OXY	-3.52%
126.0	OXY	-3.1%	CMCSA	-2.89%
126.0	TRGP	-2.41%	VICI	-2.79%
126.0	TMUS	-2.22%	ZTS	-2.61%
126.0	GWW	-2.0%	MSTR	-2.51%
126.0	VICI	-1.93%	TDG	-2.46%



Appendix 5: Kupiec and Christoferson Tests for Sigma

The Kupiec Proportion of Failures test statistic (listed as OaR_kStat in the table below), and its probability (OaR_pValK) are used to test the null hypothesis that the OaR model breakage is consistent with expectations. The test statistic is calculated by comparing the number of OaR breaks experienced to the expected number of breaks given the total number of observations and the specified probability level. Breakage was measured at the individual ticker-model date level. The probability of the Kupiec statistic occurring is obtained from the chi-squared distribution. The lower the statistic, the higher the p-Value, and the more likely that Sigma's OaR breakage 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 statistic, 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 2026-01-29. 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	290.54	0	8.53	0
Sigma	95	10	1.45	0.23	1.44	0.23
Sigma	95	21	16.13	0	0.1	0.75
Sigma	95	63	23.7	0	0.25	0.61
Sigma	95	126	5.86	0.02	0.54	0.46
Sigma	95	252	11.36	0	nan	0
Sigma	99	1	244.77	0	16.78	0
Sigma	99	10	42.42	0	0.51	0.48
Sigma	99	21	42.93	0	2.1	0.15
Sigma	99	63	46.69	0	nan	0
Sigma	99	126	28.65	0	0.17	0.68
Sigma	99	252	23.94	0	nan	0

