

# 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.



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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.



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## 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



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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  $\sim 550$  tickers (including equities, currencies, and commodities) and  $\sim 120$  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  $\sim 150$  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,



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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](http://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.



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## 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-vecvizz-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.



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- 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.

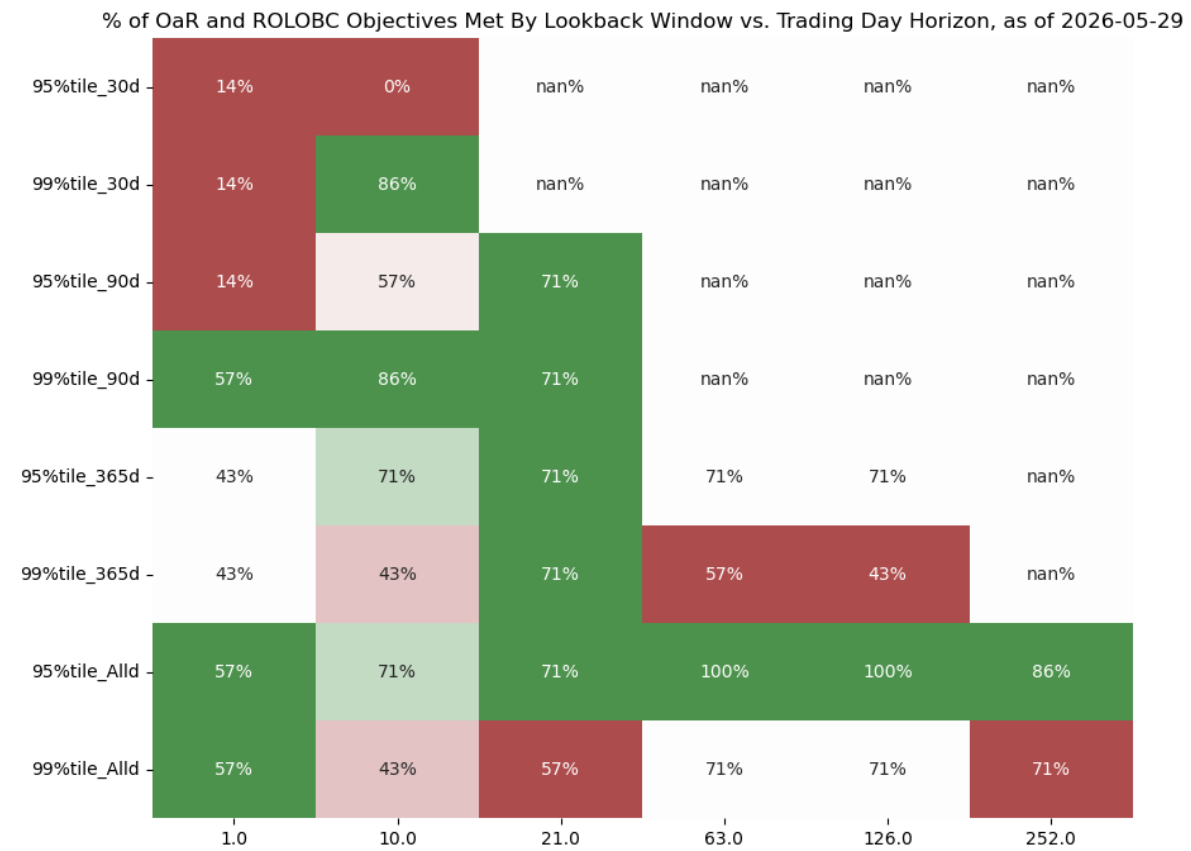
Thus, in summary, with the exception of the Kupiec and Christoferson tests, all metrics presented in this report are presented and are to be considered on a comparative basis. Are Vector Model OaR breakage rates closer to target than Sigma’s? Does Vector Model ROLOBC outperform Sigma ROLOBC? Is the relative 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 2026-05-28 while 365D /90D/ 30D include the 365/90/30 days ended 2026-05-28, respectively.

### Sigma Comparison Report Card:



### Vector Model Statistical Testing Report Card:

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



chi-squared distribution. The lower the Kupiec statistic, the higher the p-Value, and the more likely that the Vector Model's OaR breakage rate is consistent with expectations.

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

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

Period examined: 2022-01-31 through 2026-05-28. Note that for horizon periods greater than 1d we exclude enough model dates to assure no overlap between observation periods.

Model	Pctile	Horizon	OaR_kStat	OaR_pValK	OaR_chrStat	OaR_pValChr
Vector	95	1	143.98	0	4.72	0.03
Vector	95	10	52.26	0	4.21	0.04
Vector	95	21	51.48	0	0.66	0.42
Vector	95	63	4.47	0.03	0.49	0.49
Vector	95	126	0.71	0.4	nan	0
Vector	95	252	2.09	0.15	nan	0
Vector	99	1	20.23	0	6.05	0.01
Vector	99	10	60.69	0	3.73	0.05
Vector	99	21	44.41	0	1.94	0.16
Vector	99	63	8.07	0	3.05	0.08
Vector	99	126	8.74	0	0.17	0.68
Vector	99	252	8.33	0	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 2026-05-28.



OaR and ROLOBC Criteria	Average Score(%)
1. Closer to Target OaR Breakage Than Sigma	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	87.5
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	34.38
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	56.25
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	75
Overall Comparison to Sigma Average	59.82
Kupiec Test of VaR Proximity to Target	16.6667
Christoferson Test of OaR Date Independence	50

OaR and ROLOBC Criteria By Fwd Hzn	1D	10D	21D	63D	126D	252D
1. Closer to Target OaR Breakage Than Sigma	62.5	0	0	25	25	50
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	100	87.5	100	100	75	100
3. Less Volatile OaR Breakage Across Tickers Than Sigma	12.5	25	33.33	100	100	100
4. Higher ROLOBC Than Sigma	62.5	87.5	100	100	100	100
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	0	50	50	50	50	0
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	0	62.5	100	50	75	100
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	25	87.5	100	100	75	100
TotalScore	37.5	57.14	69.05	75	71.43	78.57

OaR and ROLOBC Criteria Across Lookback Window	30D	90D	365D	AllD
1. Closer to Target OaR Breakage Than Sigma	0	16.67	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	25	83.33	100	100
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	25	33.33	40	33.33
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	25	66.67	40	75



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OaR and ROLOBC Criteria Across Lookback Window	30D	90D	365D	AllD
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	25	66.67	70	100
TotalScore	28.57	59.52	58.57	71.43

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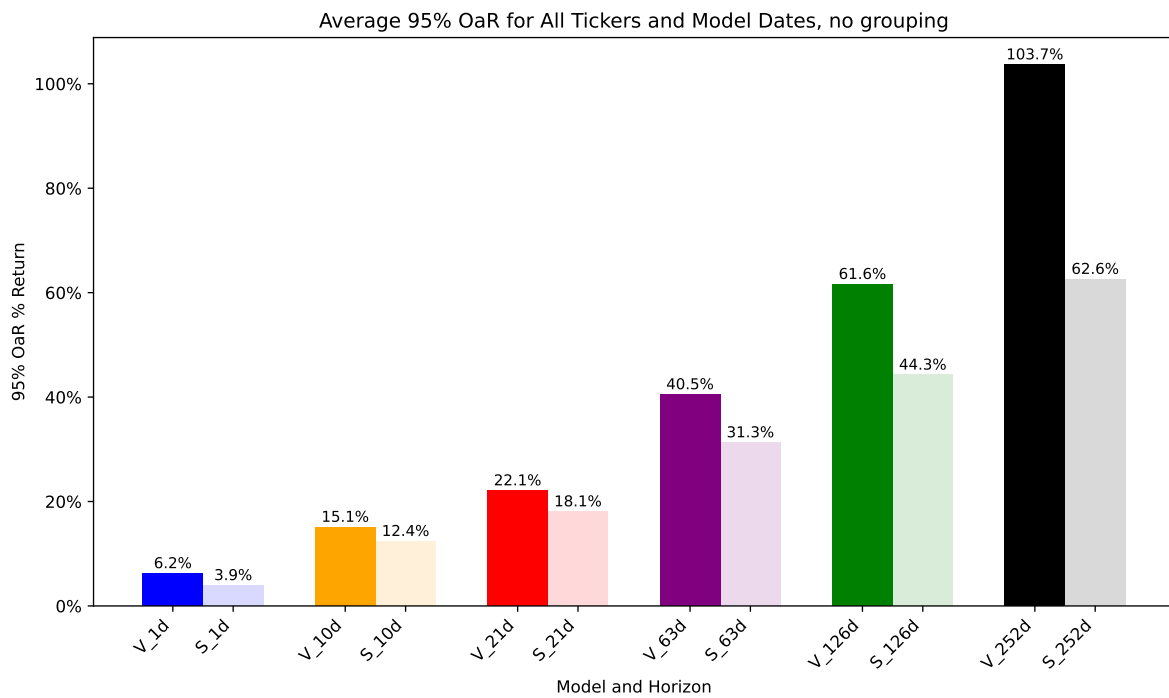
# 95% Opportunity At Risk (OaR)

## 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.

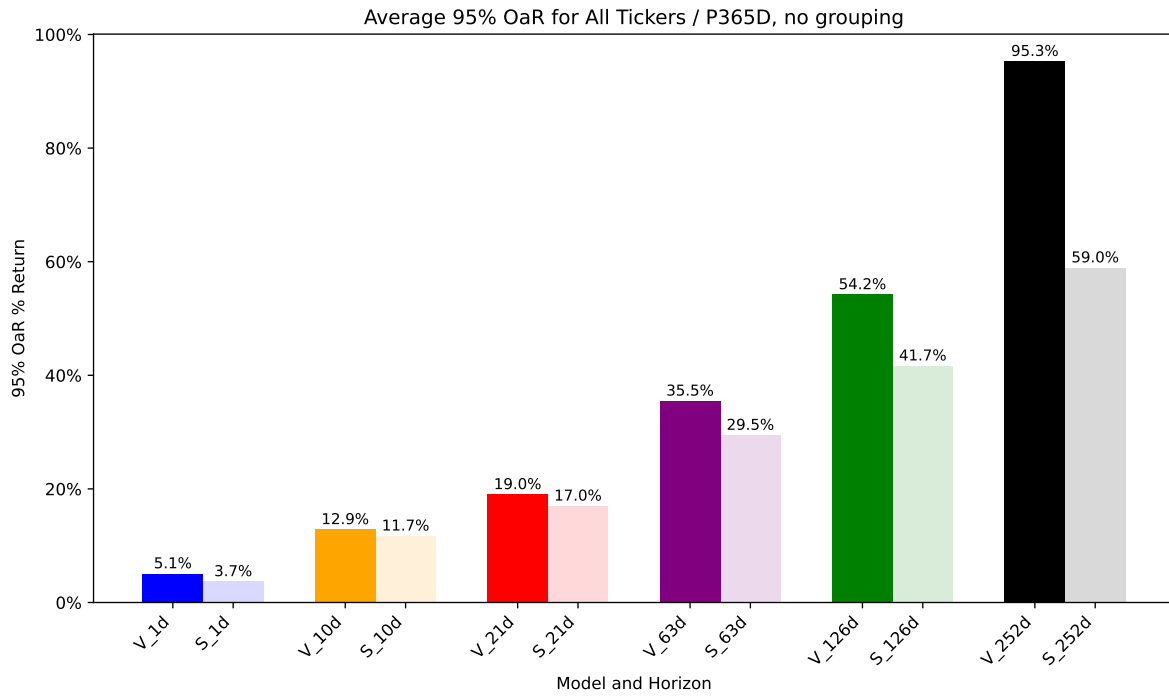
## All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-05-28



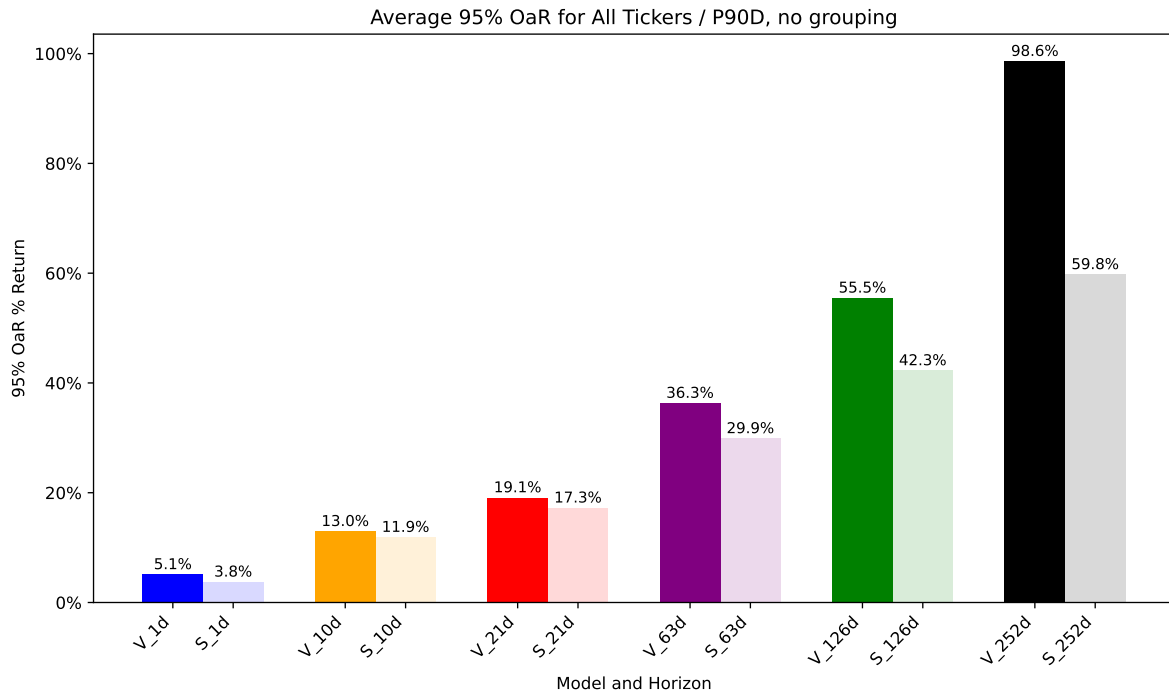
## Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-05-28 through 2025-05-30



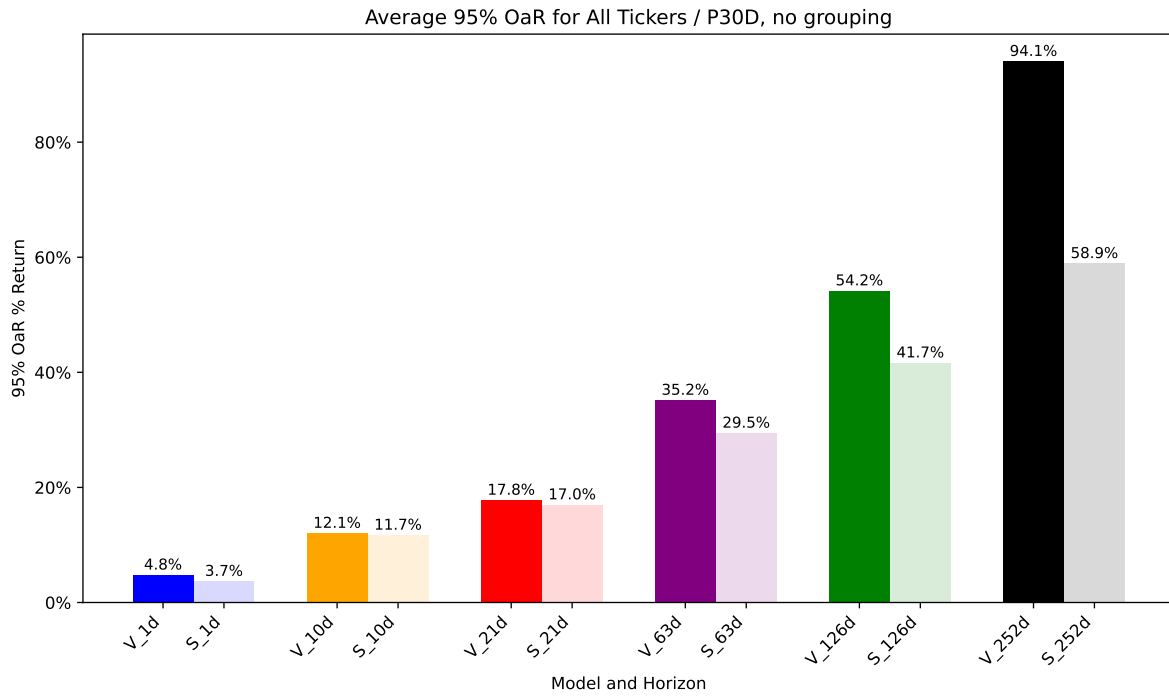
## Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-05-28 through 2026-03-02



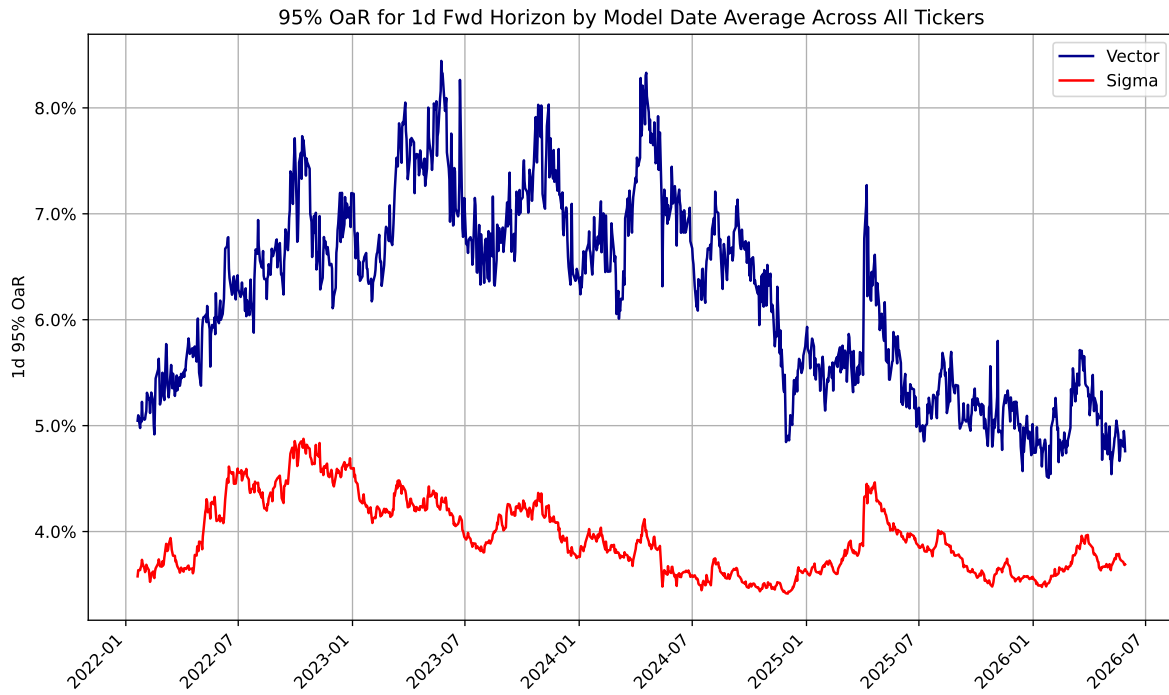
## Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-05-28 through 2026-04-30

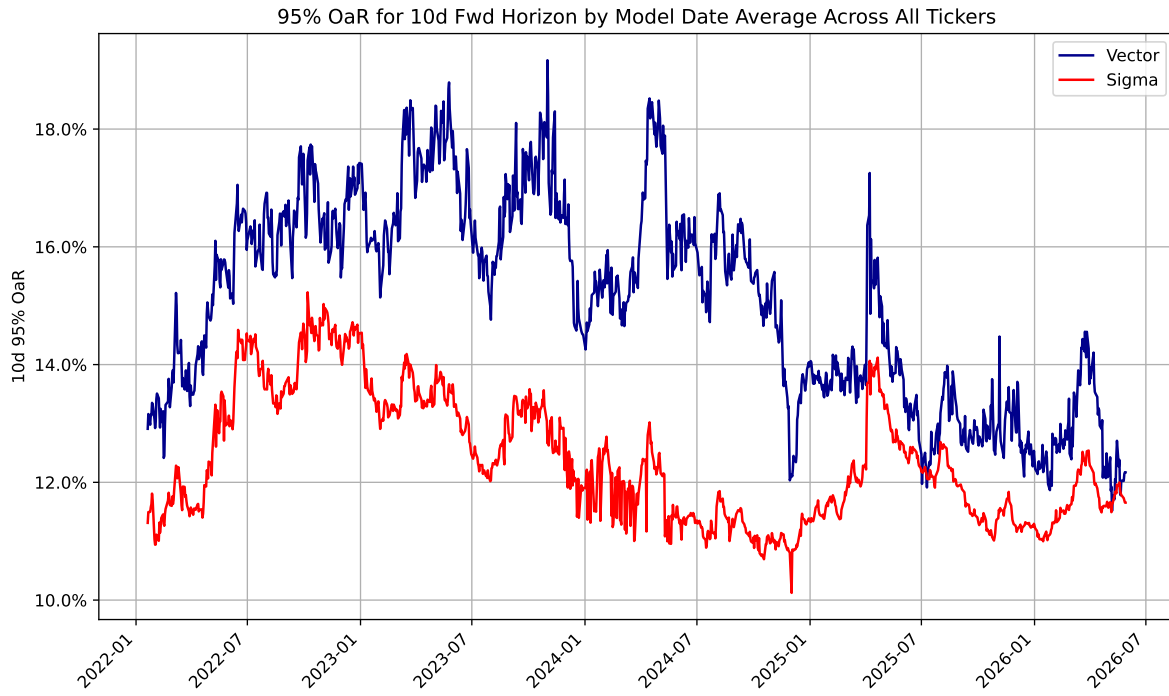


## Daily Levels

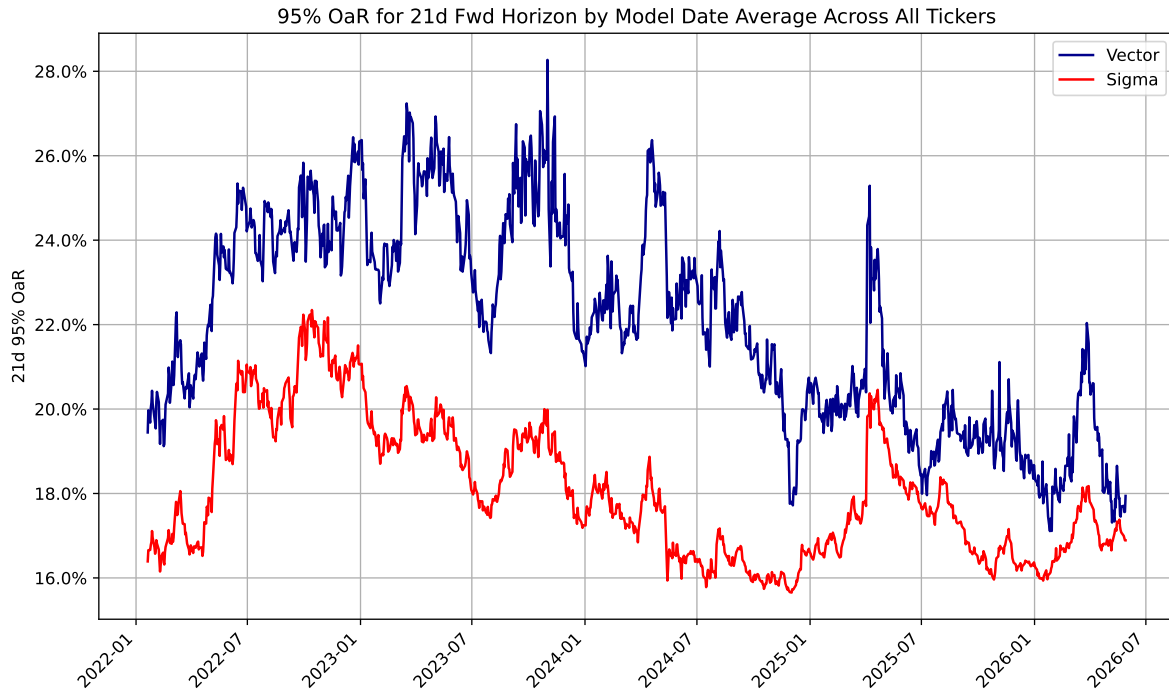
### 1d Horizon



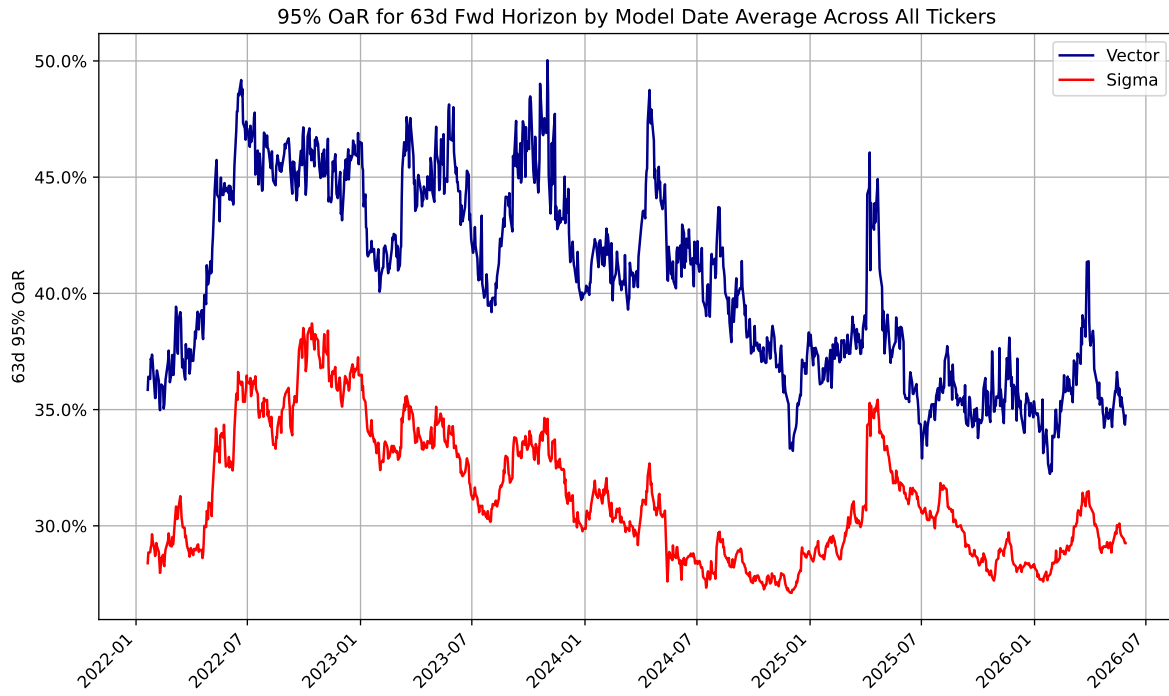
## 10d Horizon



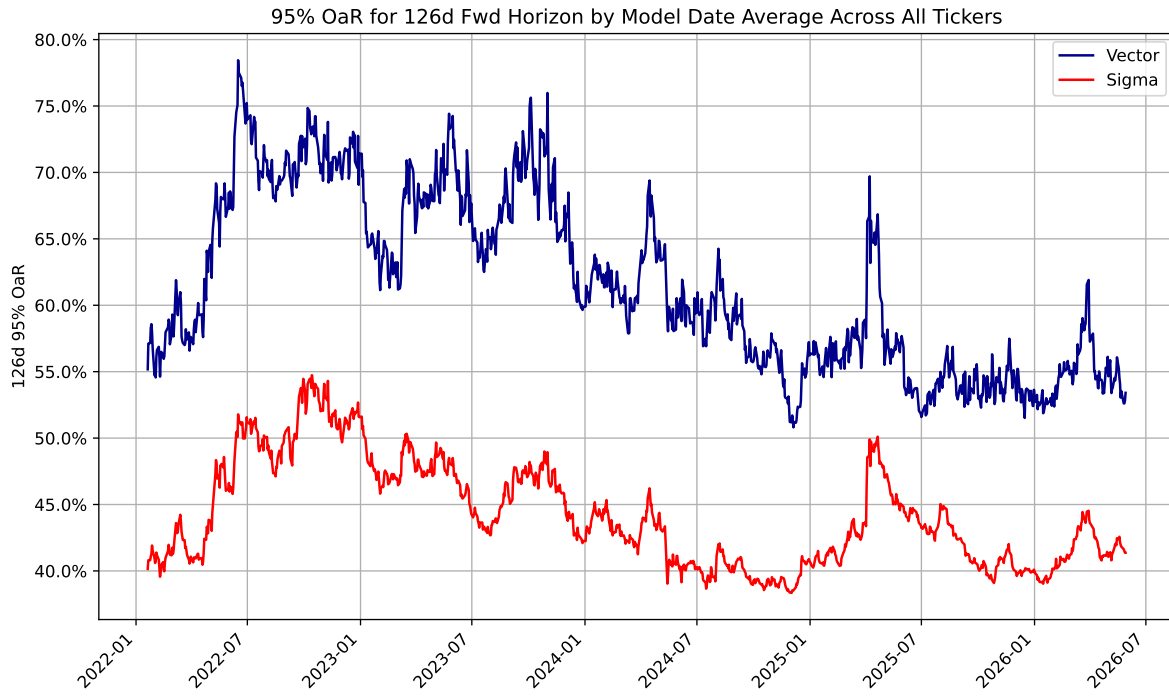
## 21d Horizon



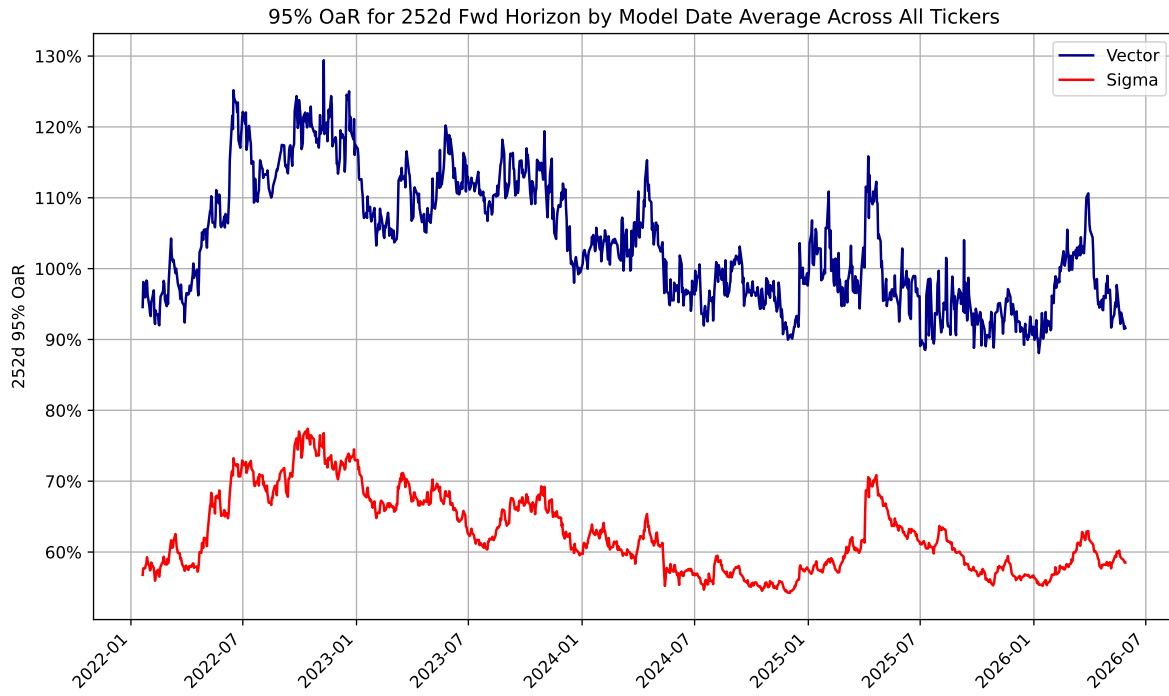
## 63d Horizon



## 126d Horizon



## 252d Horizon



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## 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.

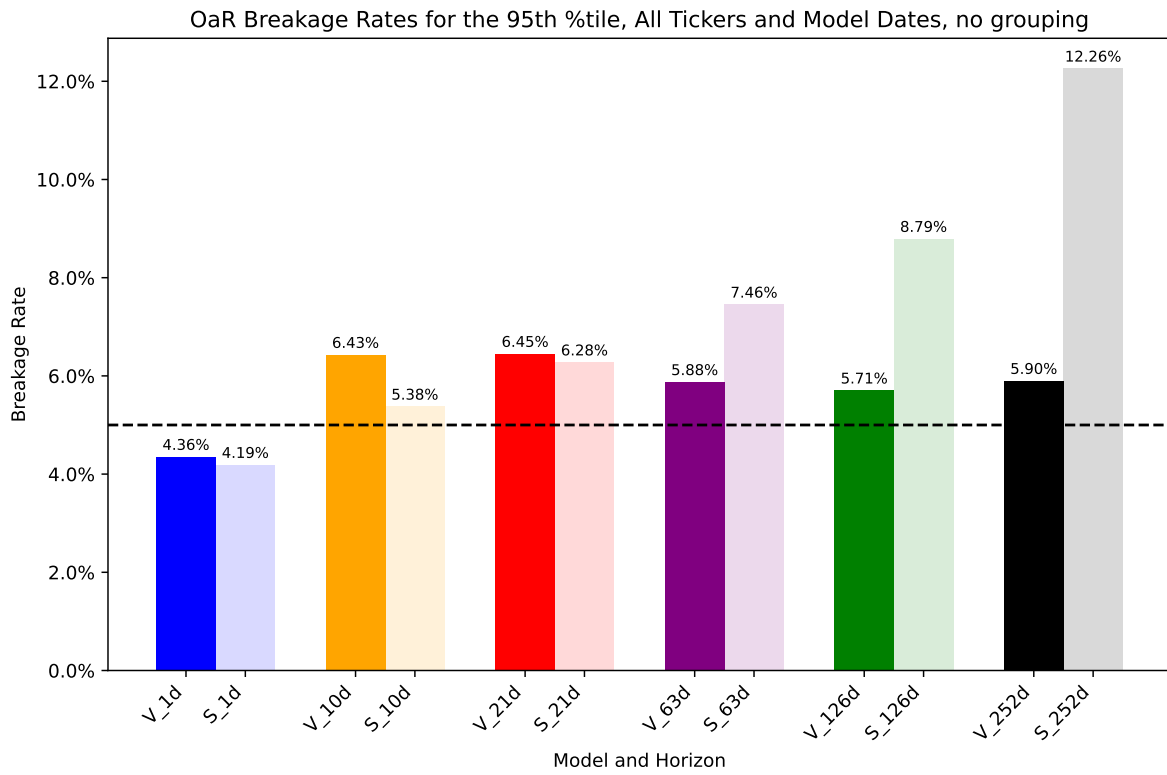
ROLOBC comparisons are made on the basis of outright ROLOBC and the alpha of Vector Model ROLOBC to underlying ticker returns (the proxy for Sigma ROLOBC). As discussed in the Introduction, ROLOBC for Sigma is presumed to be the return of the underlying ticker, and for the Vector Model it is based on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

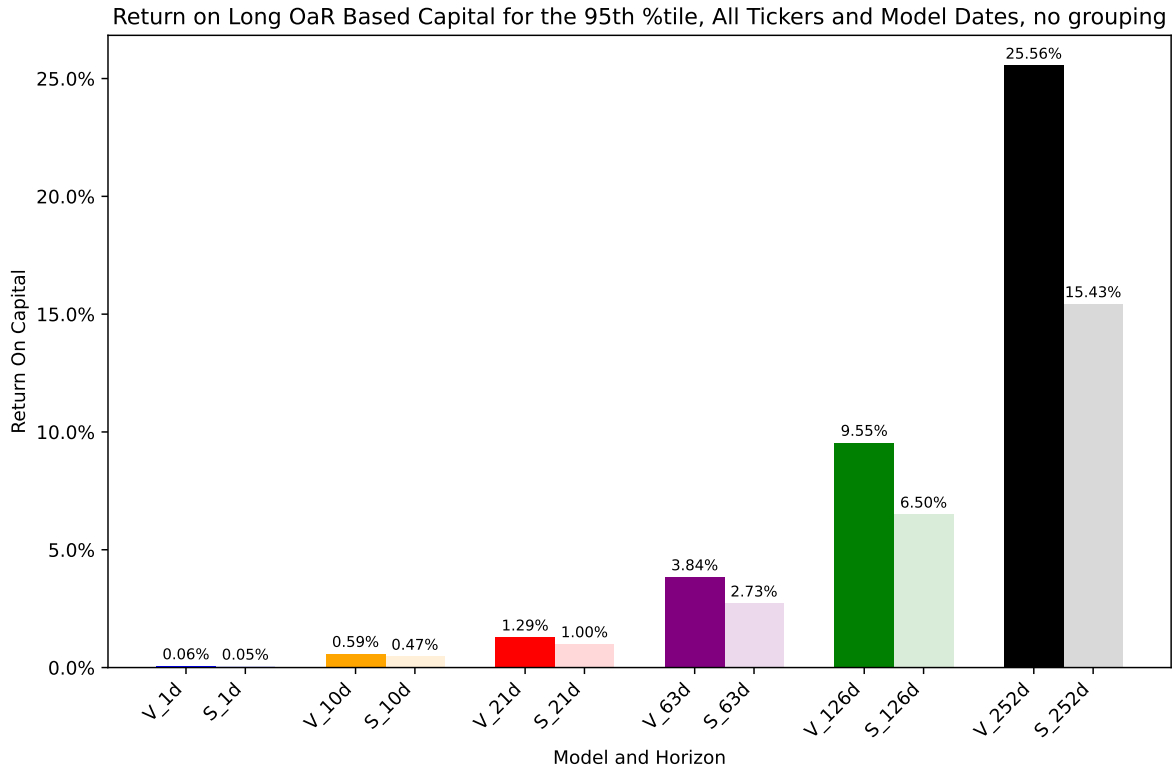
Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons > 1d overlap.



## All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-05-28





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

	1d	10d	21d	63d	126d	252d
intercept	-0.01%	0.03%	0.08%	0.22%	0.63%	3.09%
intercept_p_value	24.04%	1.27%	0.00%	0.00%	0.00%	0.00%
slope	143.55%	118.36%	120.49%	132.87%	137.20%	145.57%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

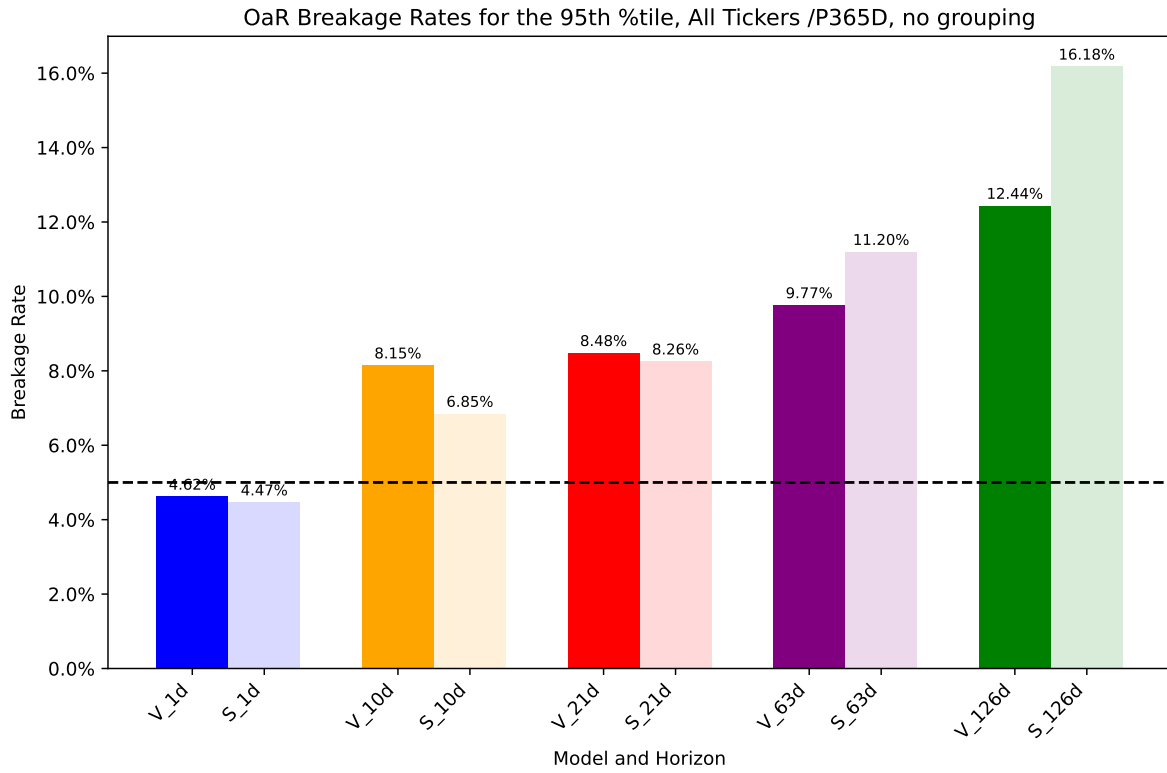
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across Model Dates:

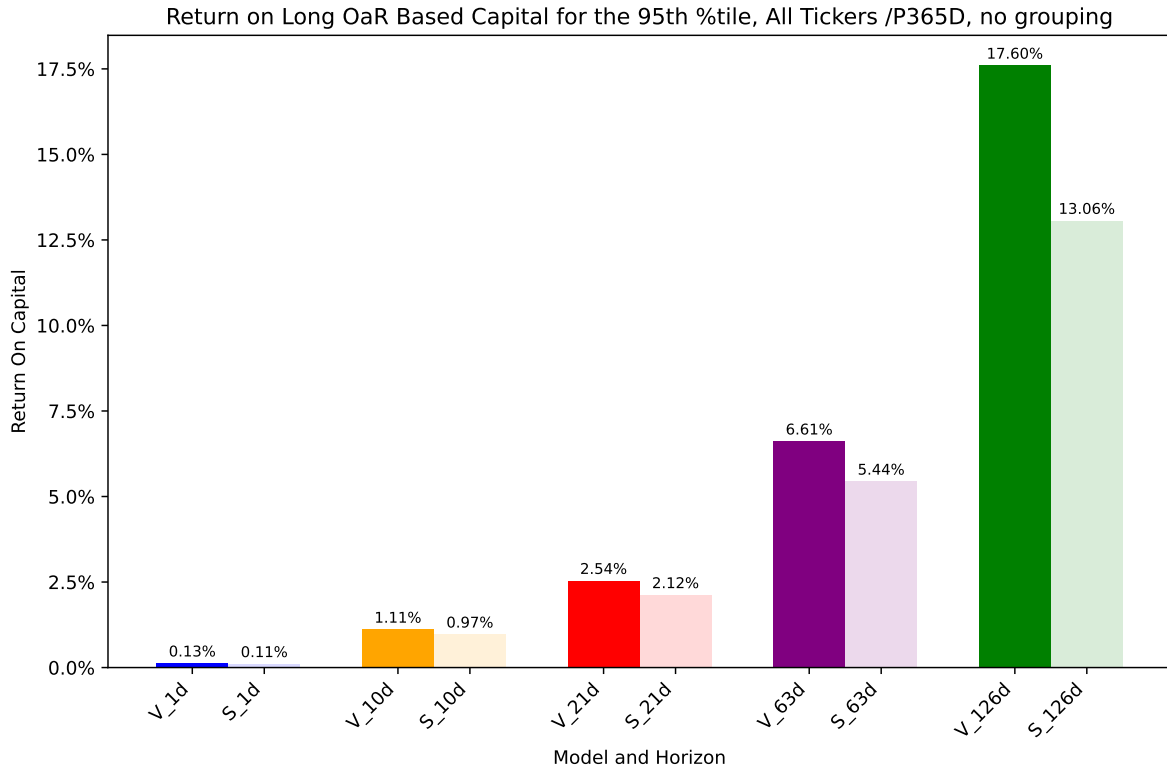
	1d	10d	21d	63d	126d	252d
intercept	-0.04%	-0.21%	-0.57%	-2.21%	-4.42%	-5.41%
intercept_p_value	0.00%	0.10%	0.01%	0.00%	0.00%	0.08%
slope	163.39%	148.18%	165.06%	181.03%	178.37%	166.98%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



## Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-05-28 through 2025-05-30





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

	1d	10d	21d	63d	126d
intercept	-0.02%	0.05%	0.11%	-0.02%	0.85%
intercept_p_value	2.41%	2.89%	0.10%	82.39%	0.00%
slope	135.54%	109.63%	114.41%	121.87%	128.25%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

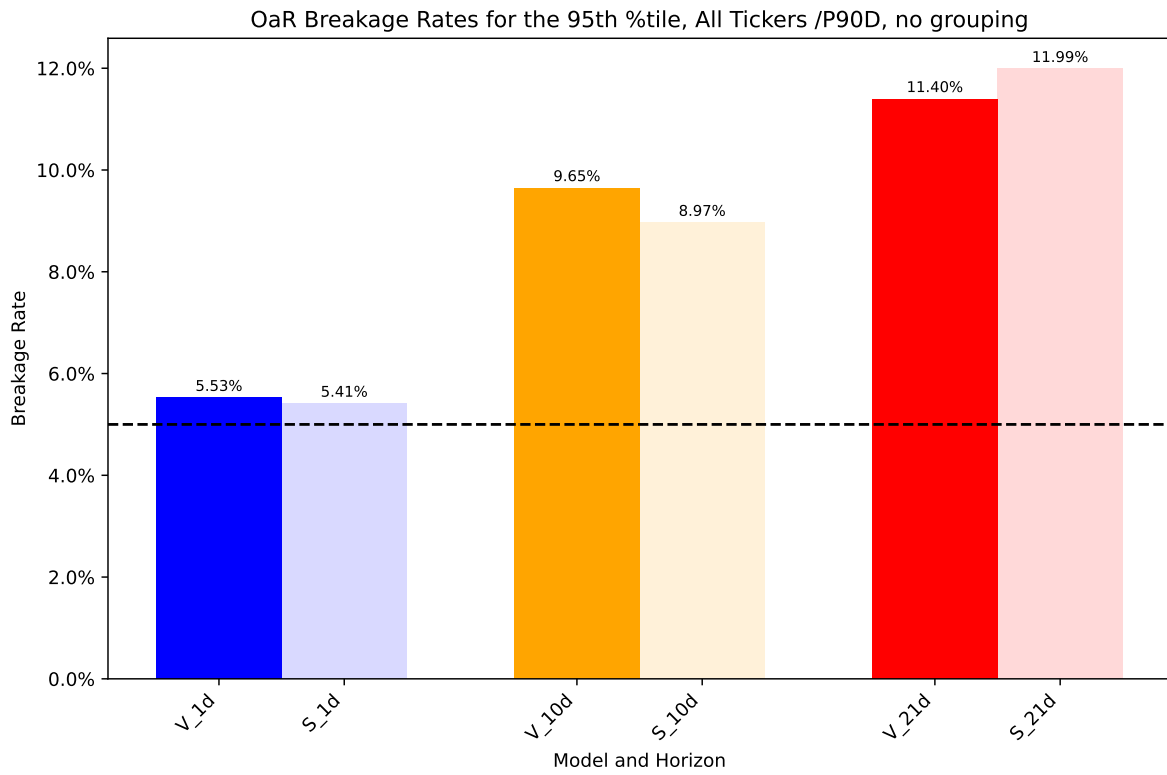
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across P365D:

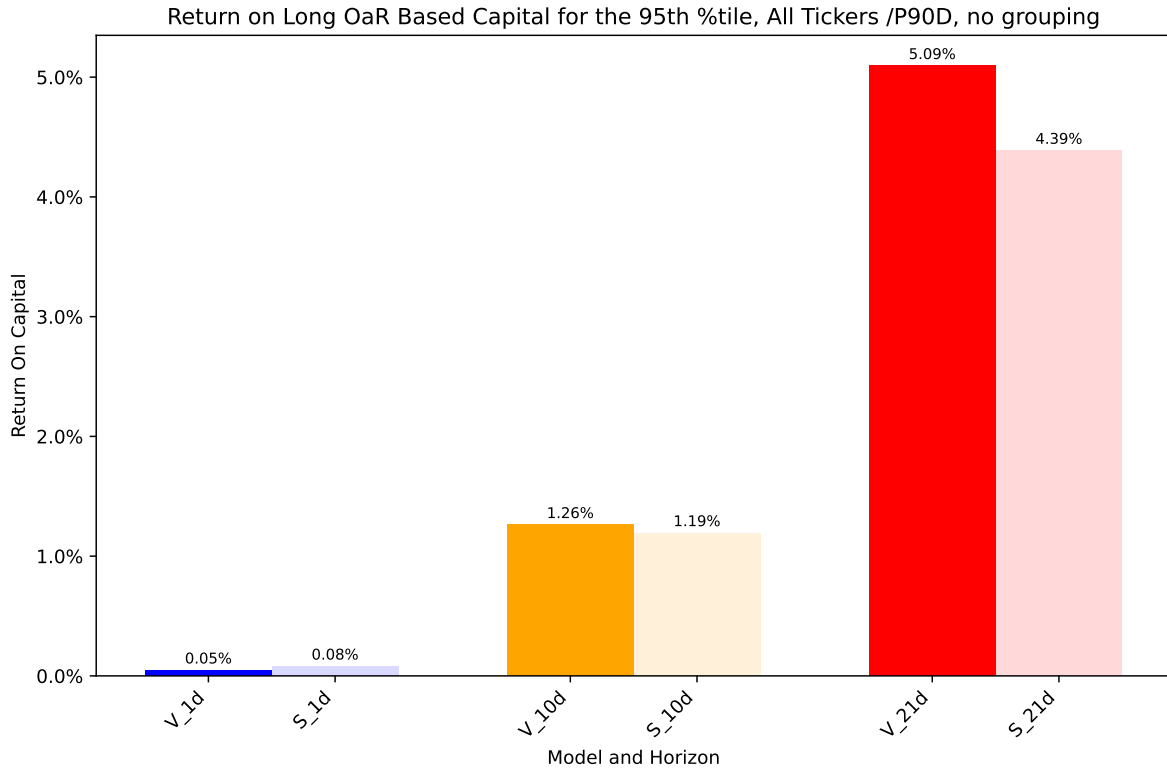
	1d	10d	21d	63d	126d
intercept	-0.02%	-0.09%	-0.22%	-0.80%	-2.72%
intercept_p_value	11.78%	33.56%	20.61%	11.00%	2.64%
slope	102.11%	110.72%	117.15%	123.29%	137.99%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%



## Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-05-28 through 2026-03-02





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

	1d	10d	21d
intercept	-0.06%	0.01%	0.28%
intercept_p_value	0.19%	80.66%	0.82%
slope	129.63%	104.55%	109.75%
slope_p_value	0.00%	0.00%	0.00%

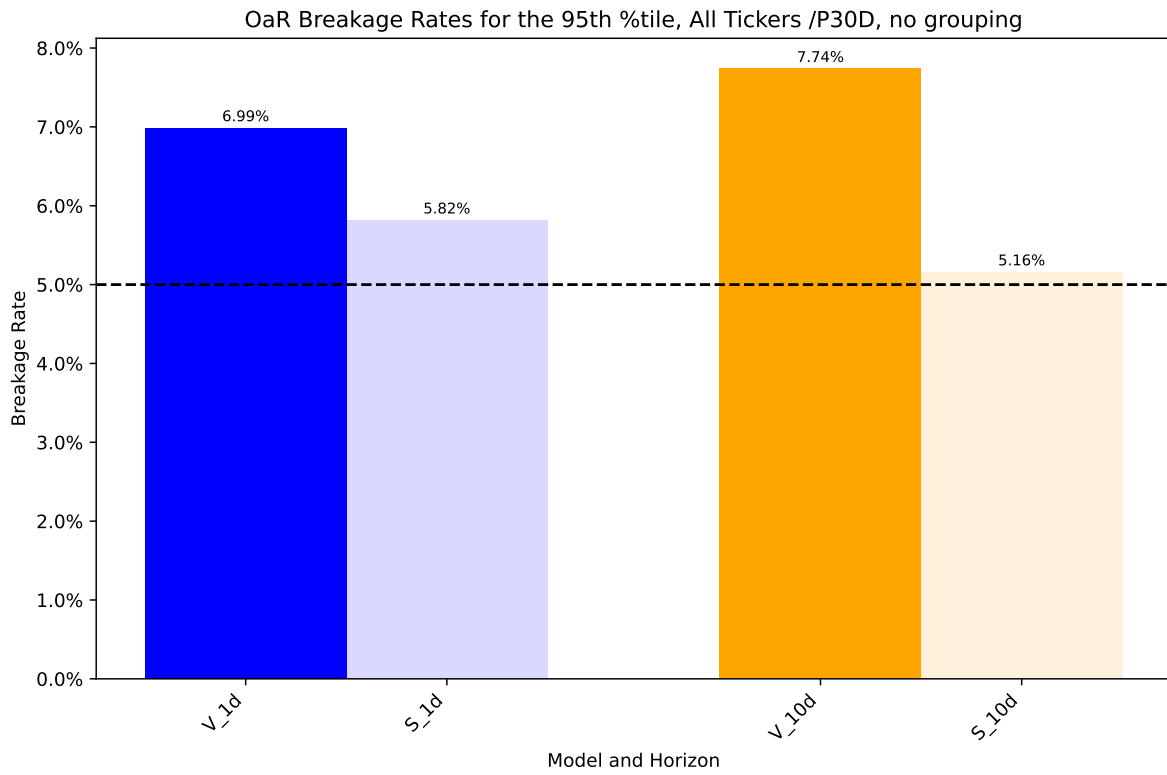
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across P90D:

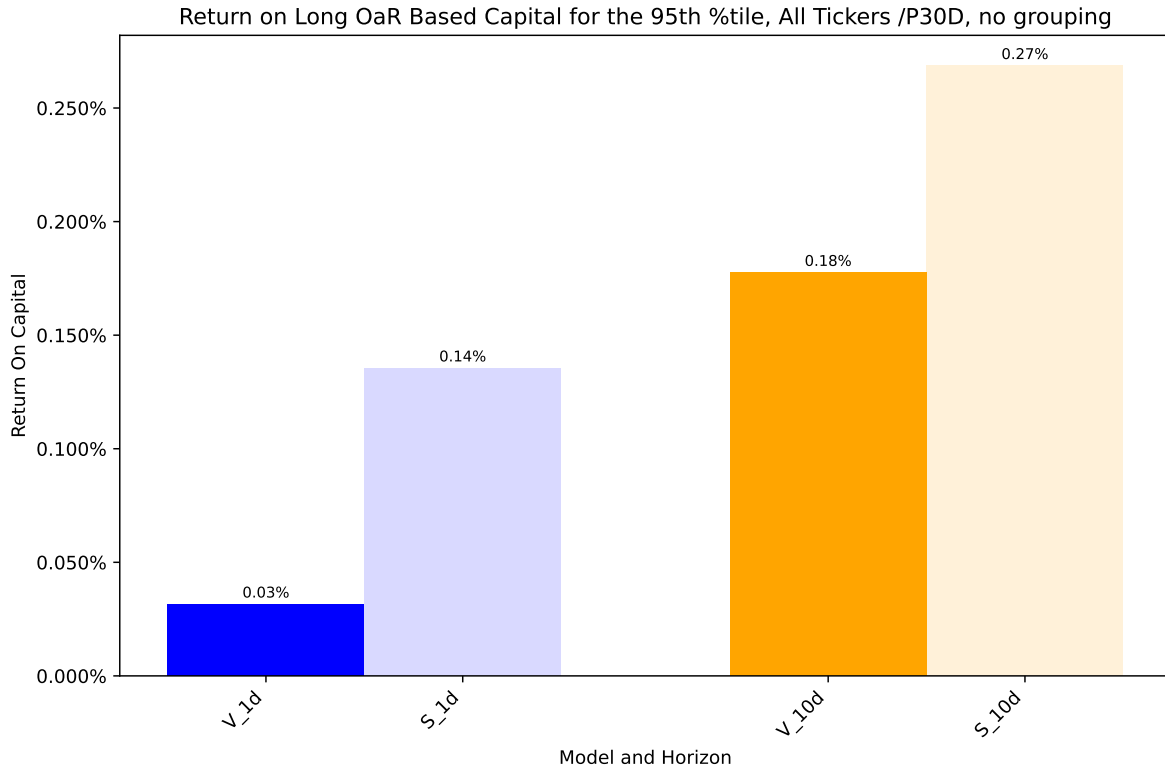
	1d	10d	21d
intercept	-0.00%	0.14%	-0.28%
intercept_p_value	98.14%	41.89%	54.31%
slope	114.03%	120.14%	132.40%
slope_p_value	0.00%	0.00%	0.00%



## Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-05-28 through 2026-04-30





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

	1d	10d
intercept	-0.14%	-0.10%
intercept_p_value	0.00%	22.17%
slope	128.11%	102.63%
slope_p_value	0.00%	0.00%

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

	1d	10d
intercept	-0.03%	-0.01%
intercept_p_value	34.64%	95.08%
slope	119.98%	105.81%
slope_p_value	0.00%	0.00%

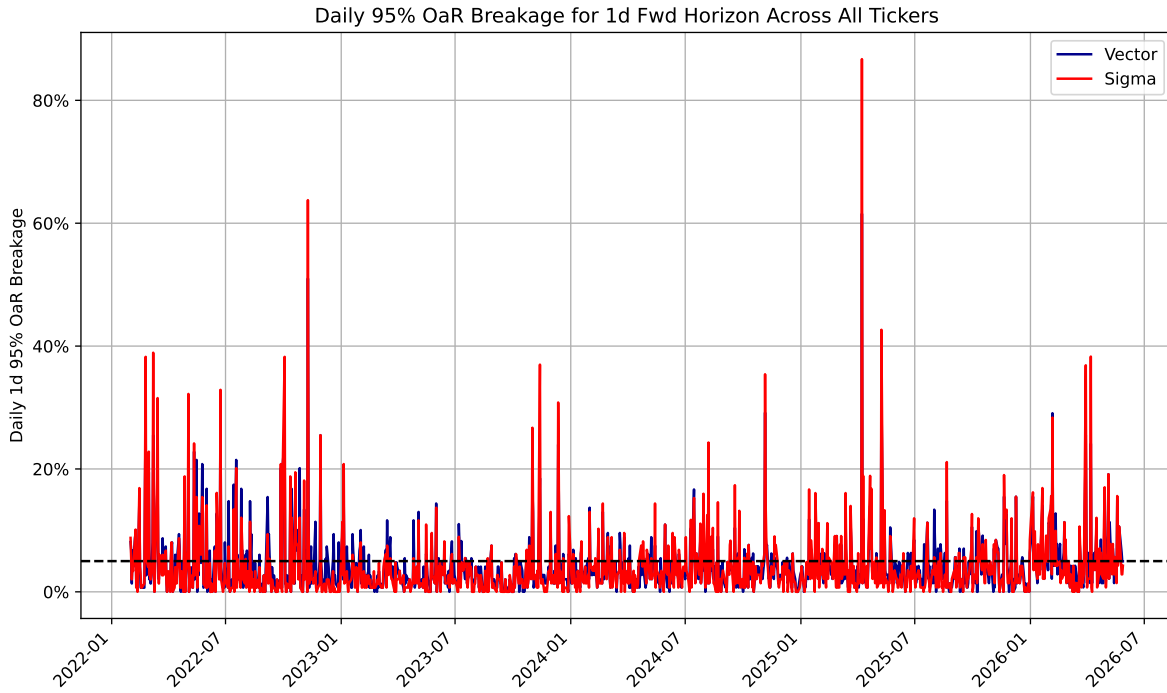


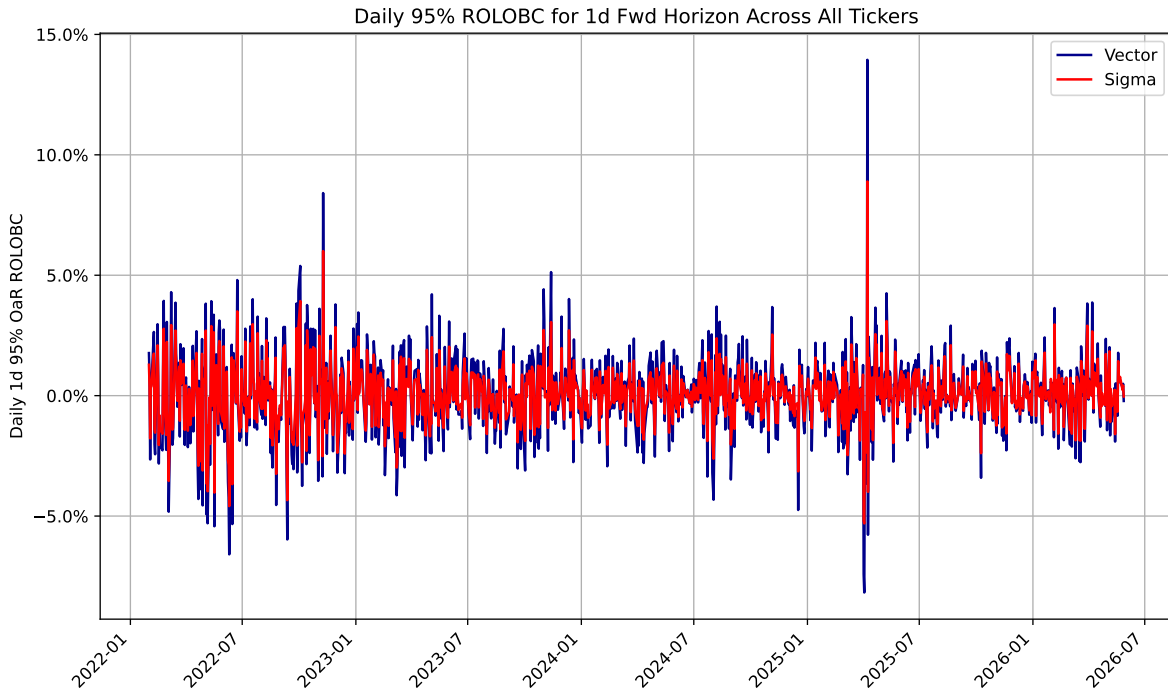
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## Daily Performance

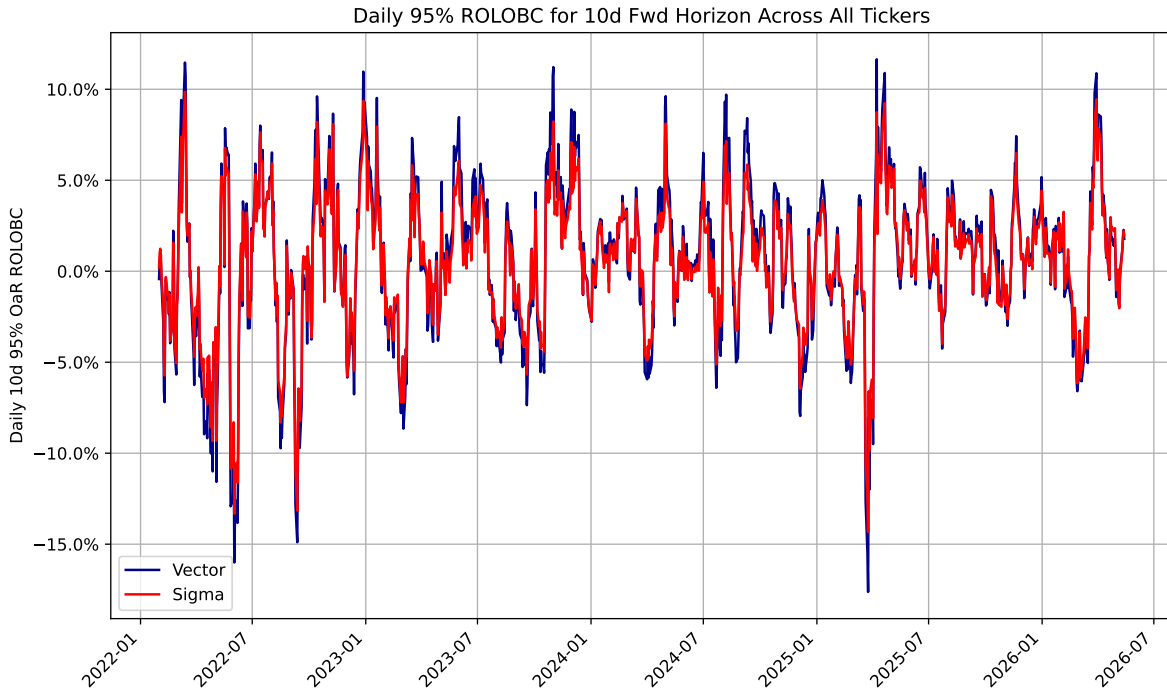
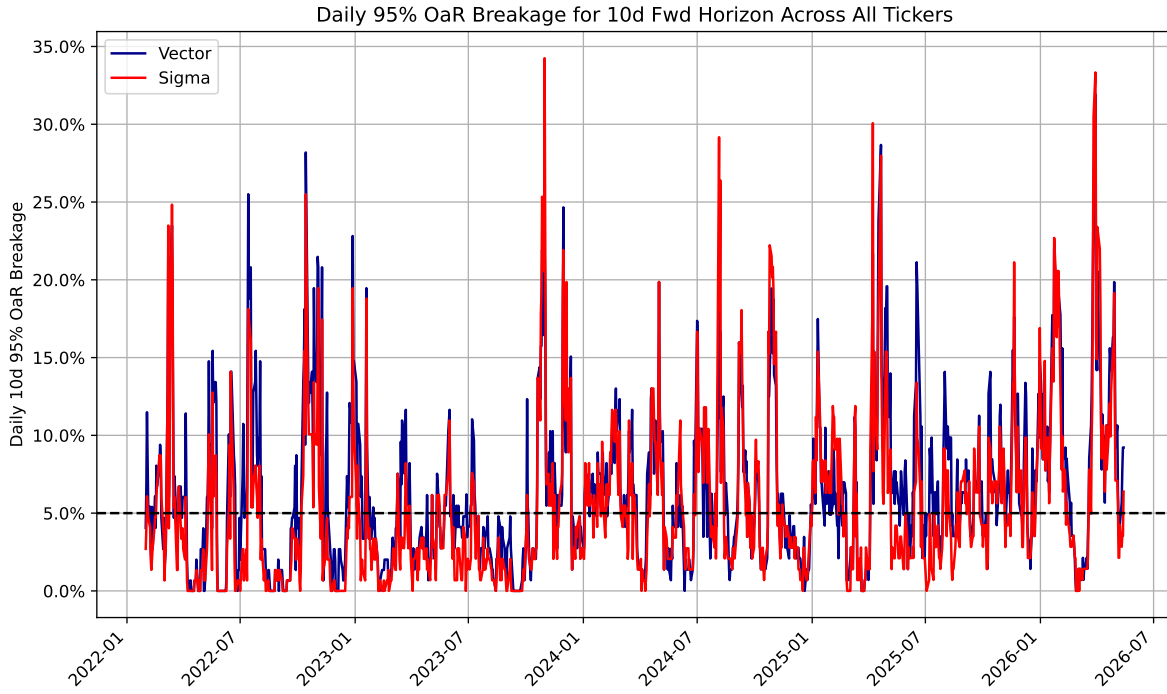
Here we look at the daily breakage and ROLOBC statistics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROLOBC outliers.

### 1d Horizon

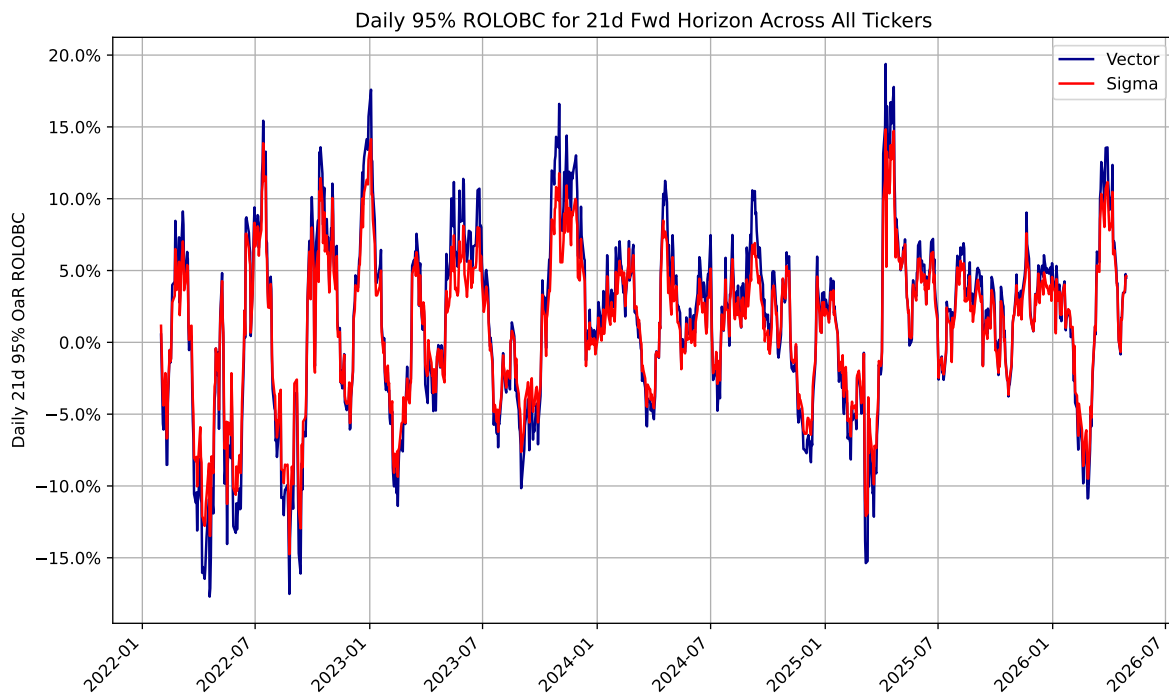
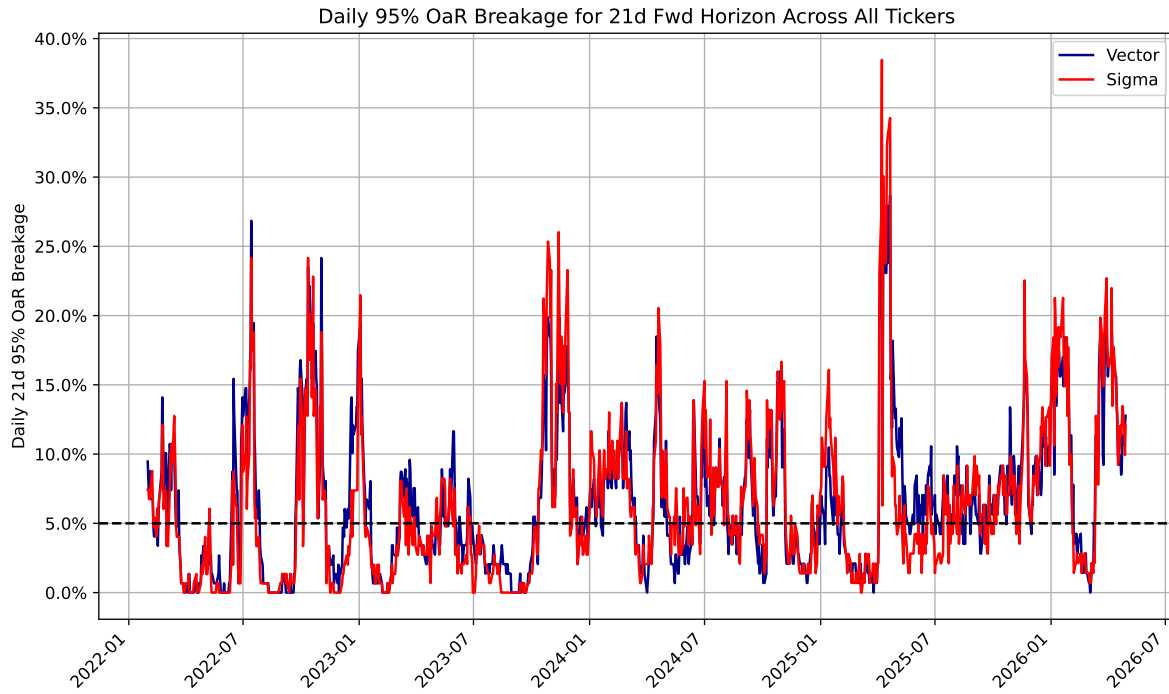




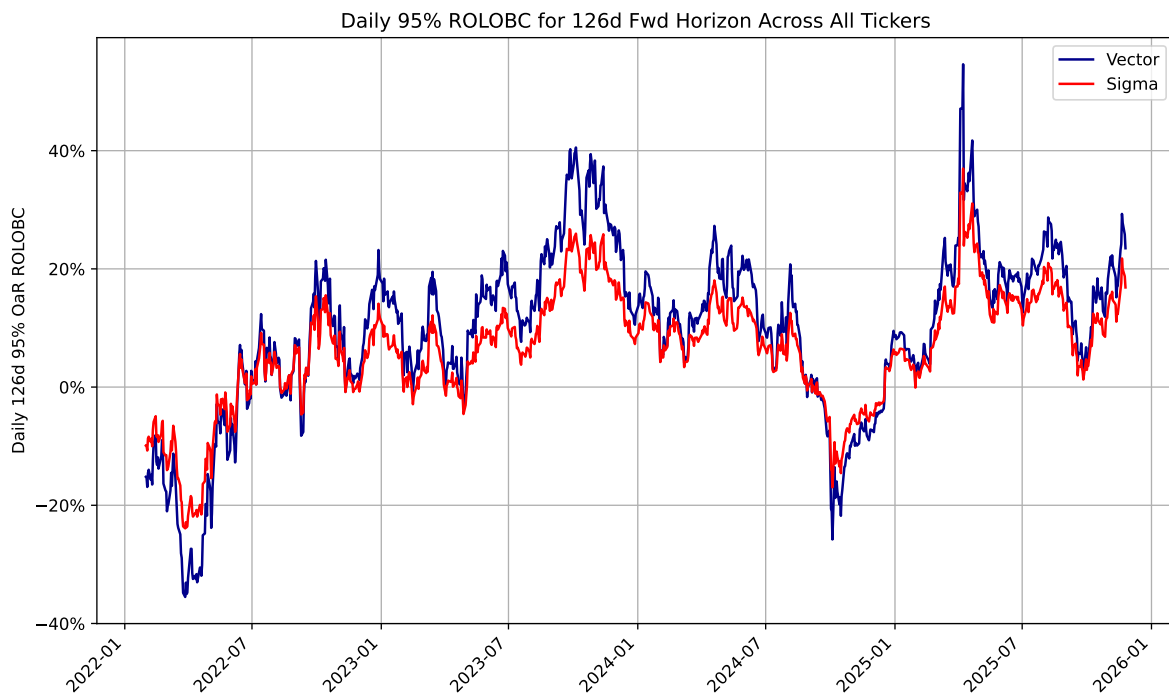
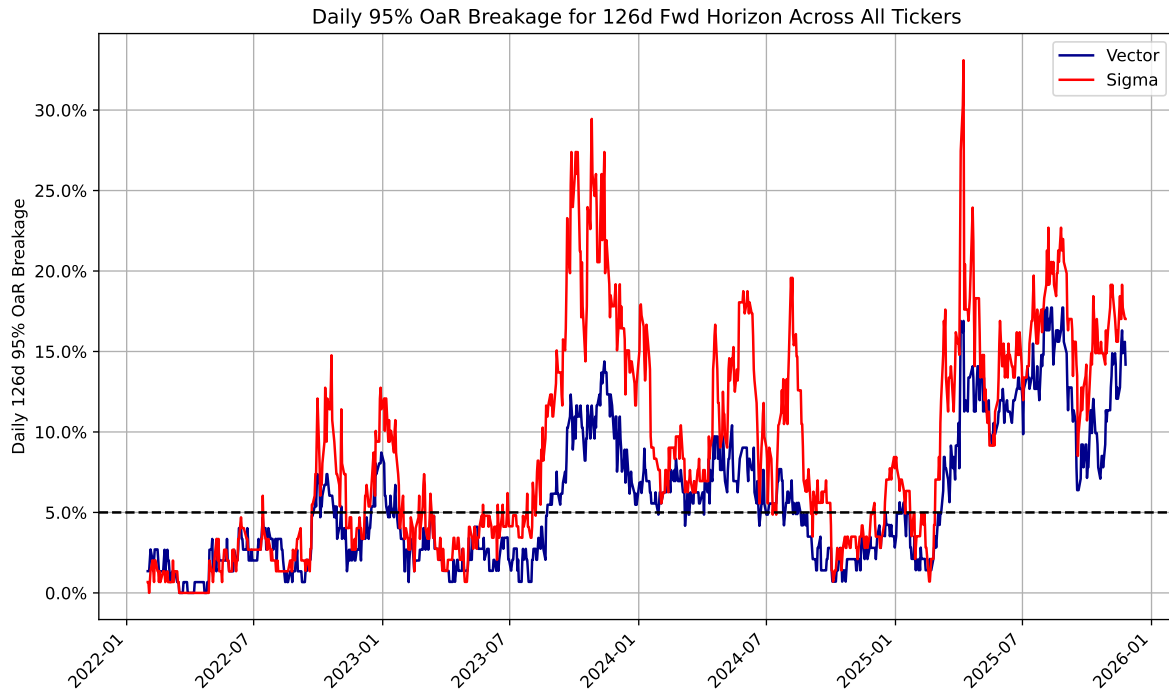
# 10d Horizon



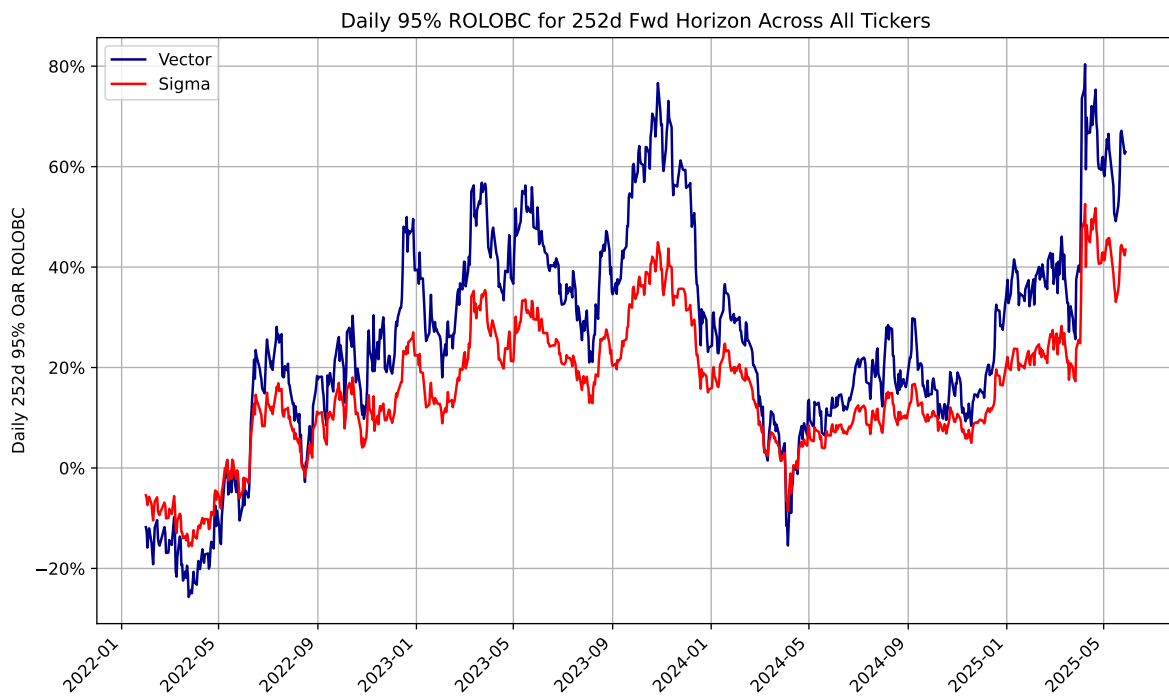
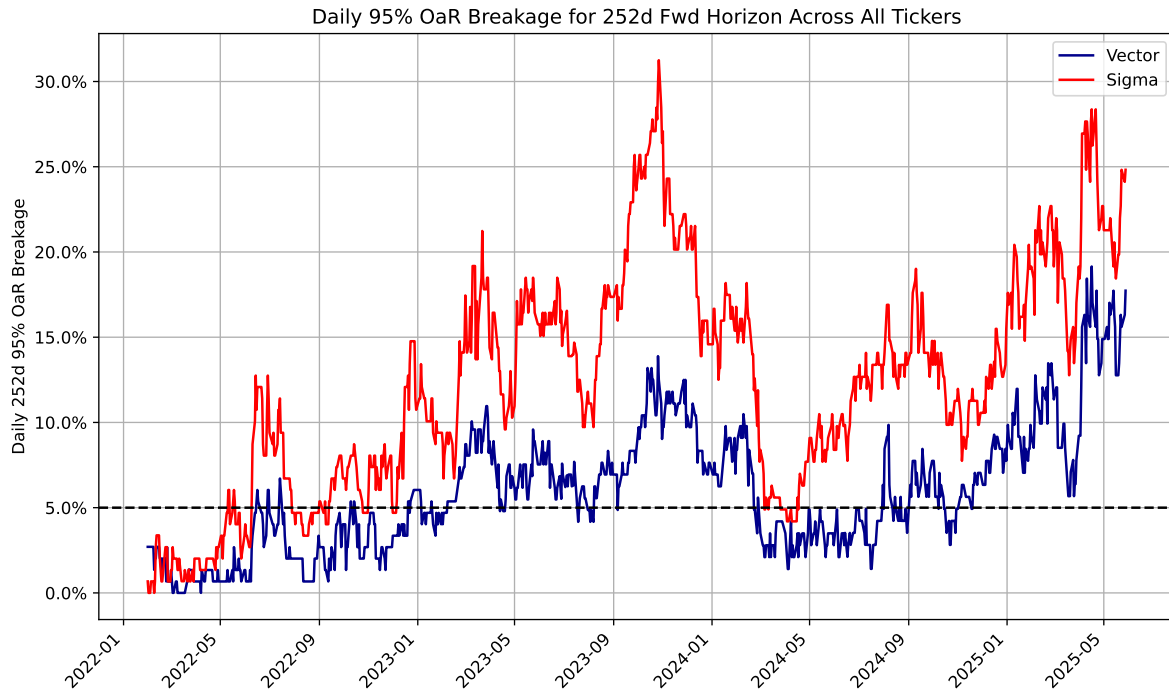
## 21d Horizon



## 63d Horizon



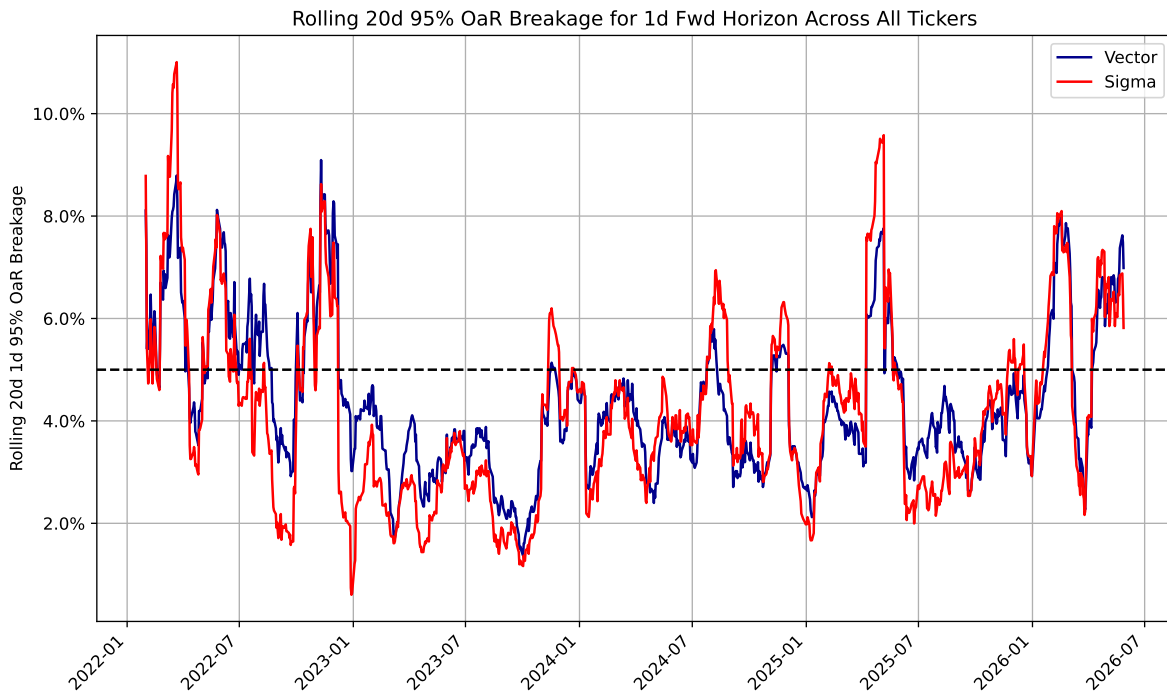
## 252d Horizon

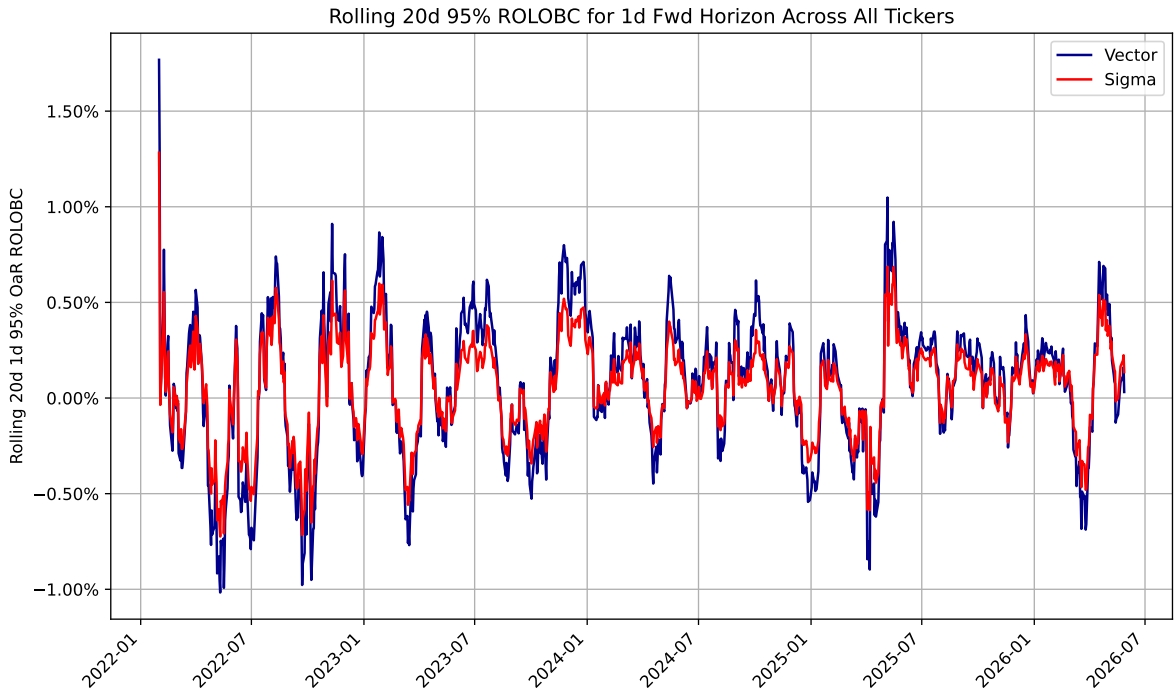


## Rolling 20d Performance

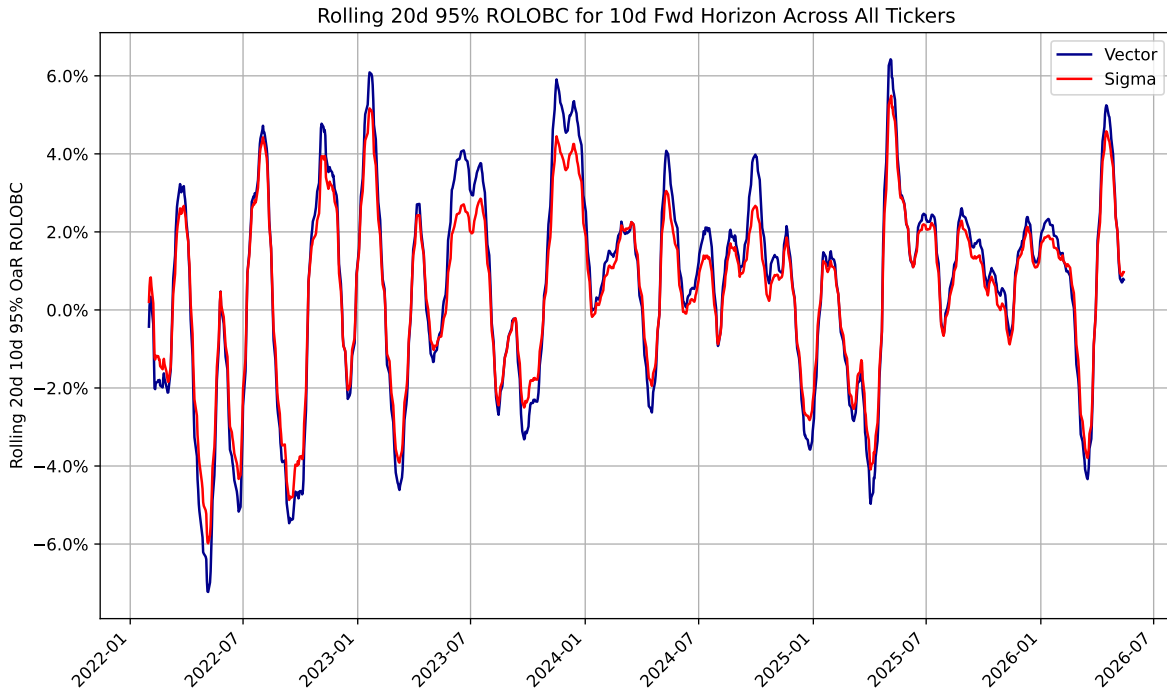
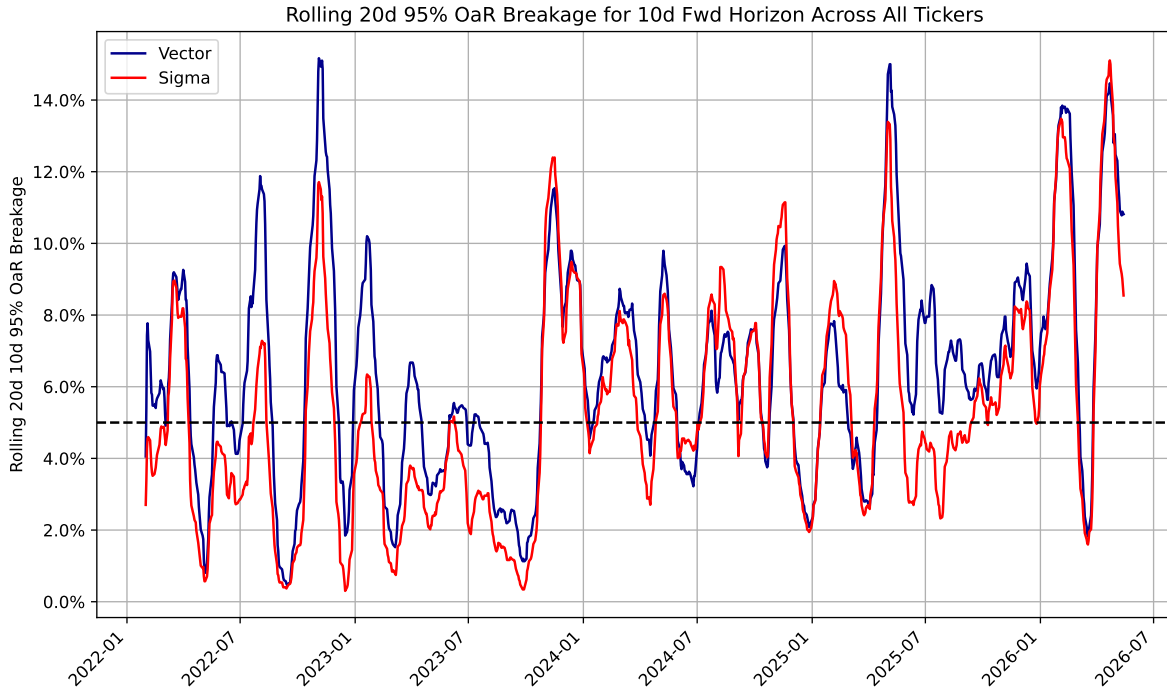
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statistics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

### 1d Horizon

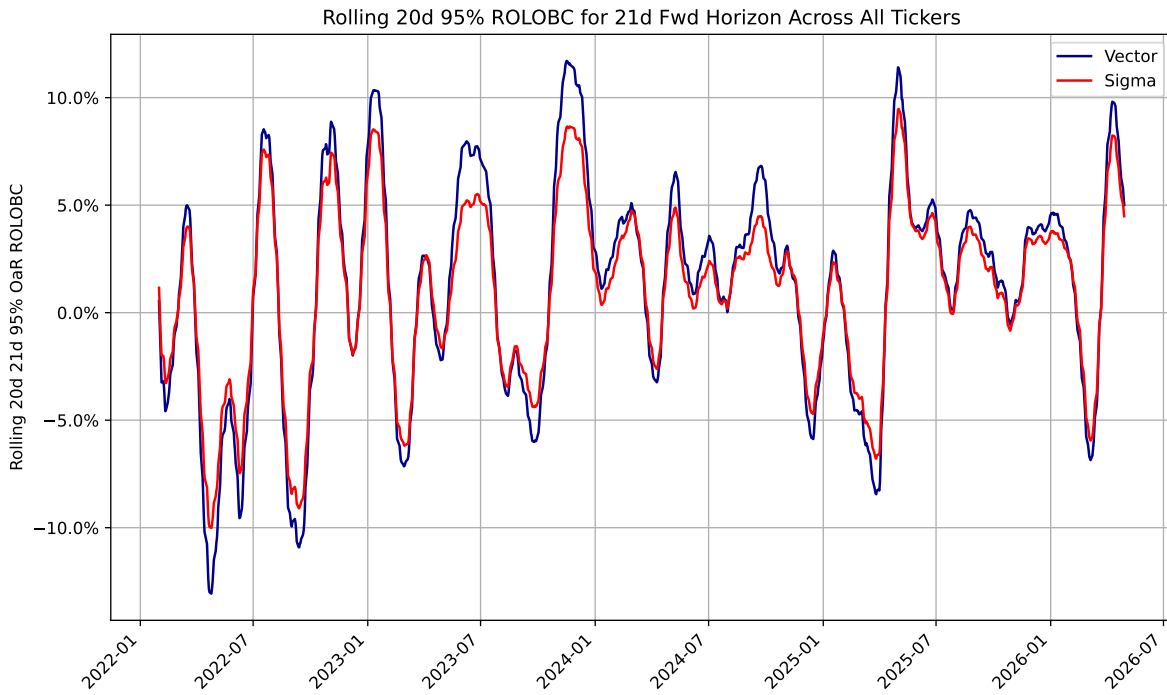
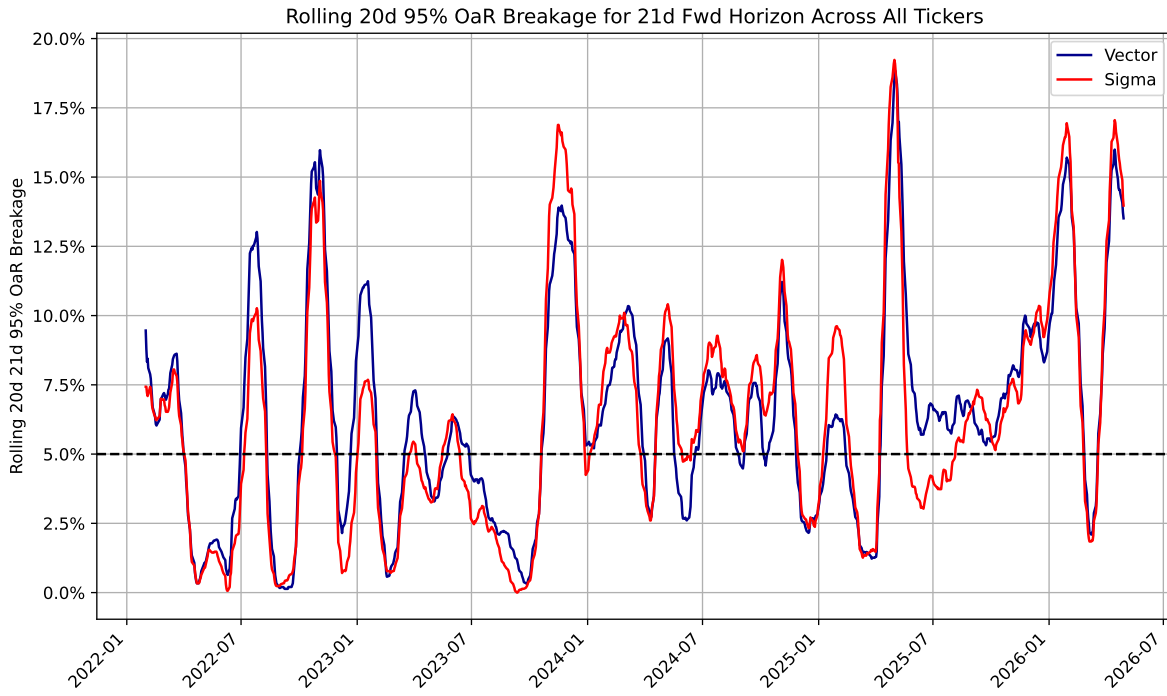




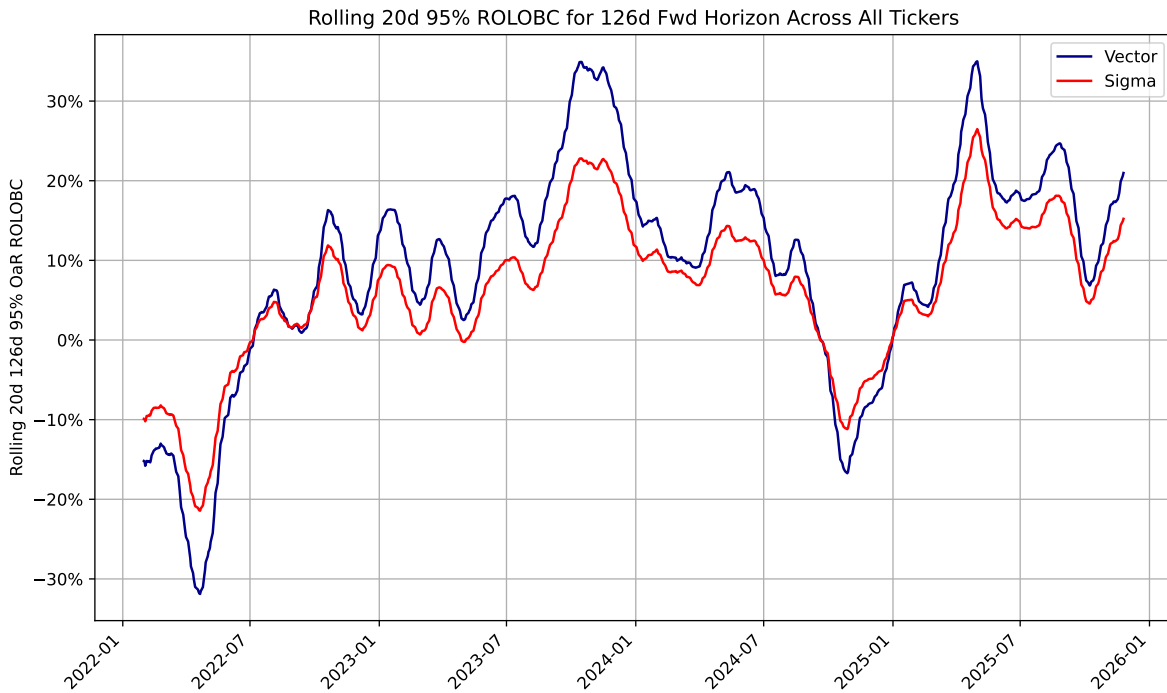
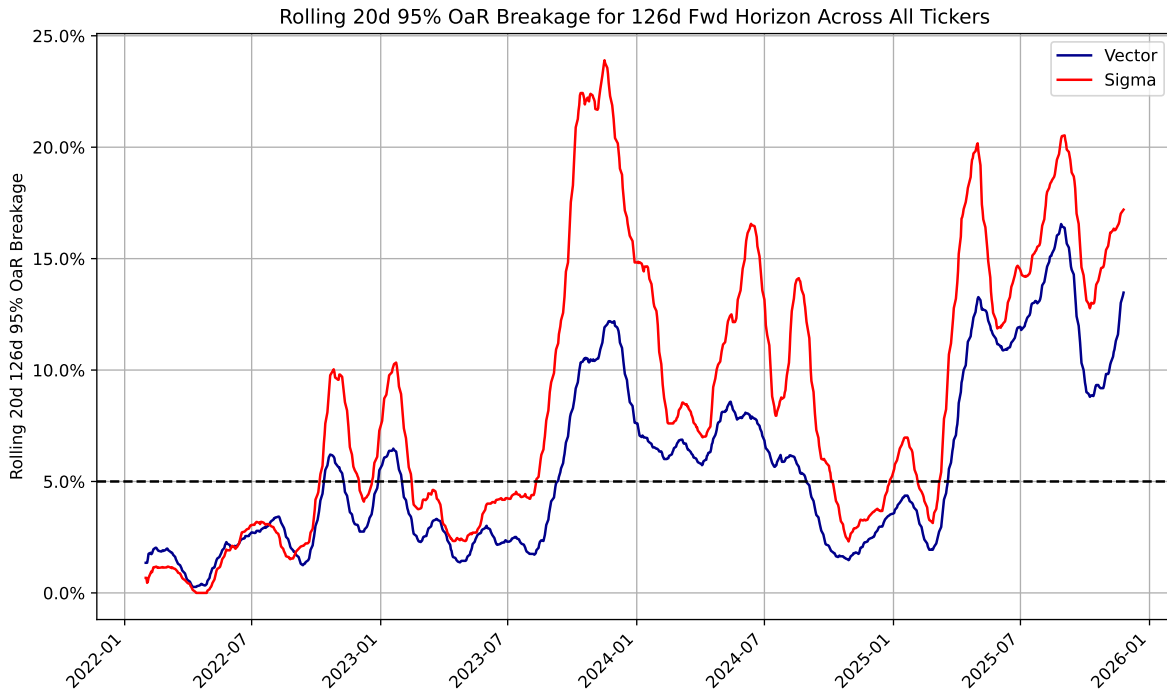
# 10d Horizon



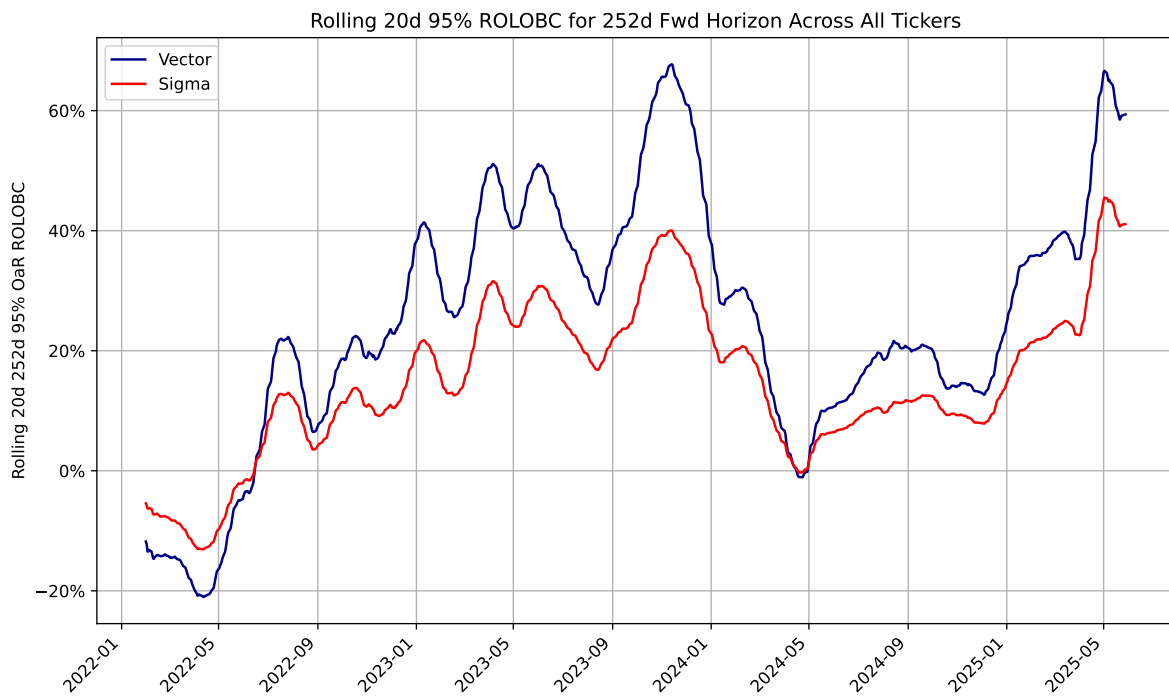
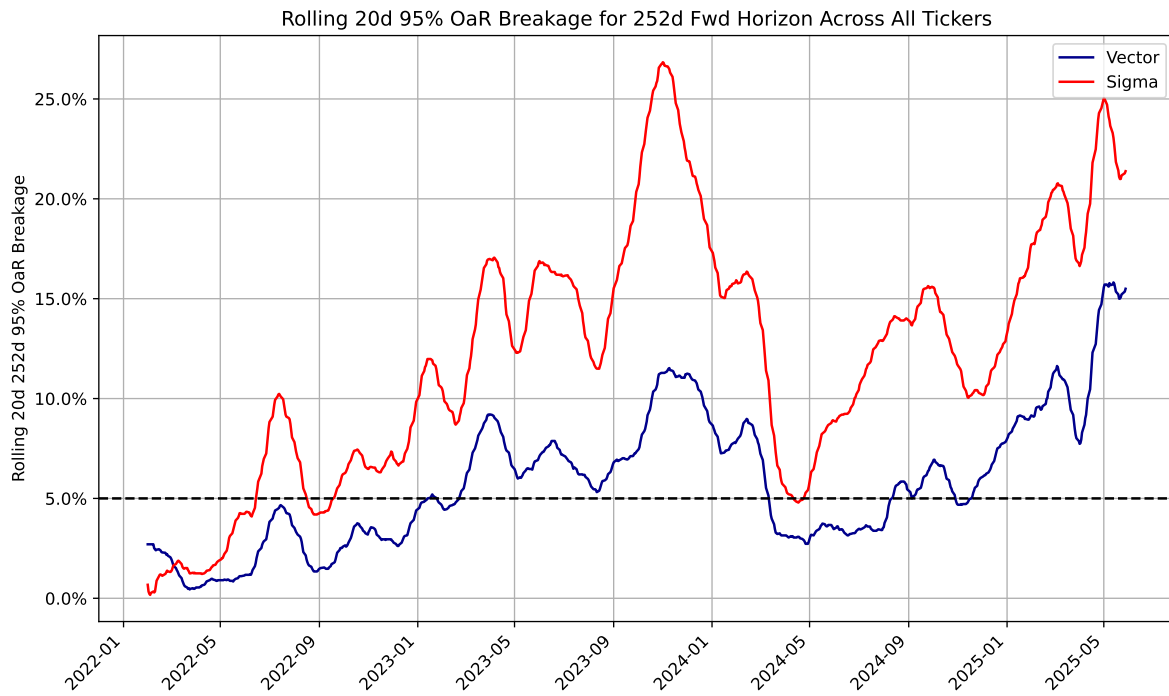
## 21d Horizon



## 63d Horizon



## 252d Horizon



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SBNY	16.55%	VST	8.66%
1.0	MSTR	15.12%	SLV	8.21%
1.0	SIVBQ	12.95%	WDC	8.11%
1.0	SLV	12.45%	MU	8.11%
1.0	GME	11.34%	GLD	7.65%
1.0	FRCB	10.07%	AVGO	6.73%
1.0	GNRC	10.05%	NVDA	6.54%
1.0	AVGO	9.95%	AMAT	6.45%
1.0	META	9.68%	MSTR	6.45%
1.0	CHTR	9.68%	NEM	6.27%
1.0	VST	9.49%	AMD	5.9%
1.0	B	9.4%	INTC	5.9%
1.0	HLT	8.48%	ON	5.81%
1.0	GILD	8.39%	FCX	5.71%
1.0	BUD	8.02%	TEVA	5.71%
1.0	NFLX	8.02%	PWR	5.71%
1.0	AA	8.02%	B	5.71%
1.0	WDC	7.93%	HLT	5.71%
1.0	ZTS	7.83%	PHM	5.62%
1.0	ORCL	7.74%	CAH	5.62%
1.0	CMA	7.37%	XOM	5.53%
1.0	TEVA	7.19%	GBTC	5.53%
1.0	TSLA	7.0%	DHI	5.53%
1.0	BALL	6.82%	TRGP	5.53%
1.0	INTU	6.82%	TXN	5.53%



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	18.77%	SLV	12.56%
10.0	WDC	17.66%	MU	12.27%
10.0	META	17.1%	VST	11.25%
10.0	SLV	16.74%	GLD	11.25%
10.0	KALU	16.36%	WDC	11.15%
10.0	TEVA	16.08%	CAH	10.97%
10.0	B	15.61%	NVDA	10.69%
10.0	VST	14.78%	LLY	10.5%
10.0	AVGO	14.31%	ORCL	10.41%
10.0	IRM	14.13%	B	10.04%
10.0	SIVBQ	13.97%	TEVA	9.85%
10.0	HCA	13.94%	IRM	9.76%
10.0	GILD	13.85%	INTC	9.48%
10.0	GNRC	13.01%	AMD	9.29%
10.0	CHTR	12.64%	GS	9.29%
10.0	GWV	12.64%	TRGP	9.2%
10.0	ORCL	12.45%	NVS	9.11%
10.0	GME	12.45%	AVGO	8.36%
10.0	TRGP	12.27%	GE	8.18%
10.0	NVS	11.9%	GWV	8.09%
10.0	GLD	11.71%	GOOGL	7.99%
10.0	TXN	11.62%	MSTR	7.9%
10.0	BUD	11.43%	NEM	7.71%
10.0	EXPE	11.43%	TSLA	7.53%
10.0	NEM	11.25%	PWR	7.43%



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	MSTR	19.34%	GLD	16.34%
21.0	AVGO	19.34%	CAH	14.93%
21.0	WDC	17.28%	WDC	13.99%
21.0	KALU	17.09%	TRGP	13.9%
21.0	META	16.53%	MU	13.33%
21.0	TEVA	16.34%	LLY	12.96%
21.0	B	15.96%	TEVA	12.86%
21.0	VST	15.77%	ORCL	12.86%
21.0	GNRC	15.68%	MSTR	12.68%
21.0	TRGP	15.31%	IRM	12.49%
21.0	IRM	15.12%	VST	12.11%
21.0	NVS	14.84%	NVDA	12.11%
21.0	SLV	14.1%	GE	11.92%
21.0	BUD	14.08%	PWR	11.74%
21.0	CHTR	13.99%	SLV	11.65%
21.0	ORCL	13.62%	AVGO	11.55%
21.0	NEM	13.24%	GS	11.46%
21.0	GILD	13.15%	AMD	11.17%
21.0	ISRG	13.05%	NVS	10.99%
21.0	HCA	12.86%	AMGN	10.8%
21.0	GWV	12.58%	GWV	10.52%
21.0	GME	12.49%	X	10.4%
21.0	EXPE	12.39%	CCL	10.33%
21.0	ETRN	12.14%	TSLA	10.05%
21.0	SIVBQ	11.85%	MS	10.05%



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	AVGO	28.74%	WDC	27.76%
63.0	WDC	24.54%	NVDA	25.71%
63.0	VST	24.24%	GLD	25.71%
63.0	META	23.07%	VST	23.95%
63.0	MSTR	20.72%	TRGP	23.26%
63.0	GILD	19.16%	CAH	22.58%
63.0	GLD	17.99%	MU	21.7%
63.0	TEVA	17.89%	LLY	19.55%
63.0	EXPE	17.3%	AVGO	18.87%
63.0	MU	17.2%	TEVA	18.57%
63.0	ETRN	16.7%	GBTC	18.08%
63.0	SLV	16.63%	SLV	16.54%
63.0	KALU	16.52%	ORCL	16.52%
63.0	BUD	15.74%	GE	16.42%
63.0	NEM	15.64%	ETRN	16.15%
63.0	IRM	15.64%	THC	15.44%
63.0	TRGP	15.25%	PWR	15.44%
63.0	CAH	13.98%	AMD	14.76%
63.0	B	13.78%	GOOGL	14.57%
63.0	HCA	13.2%	MSTR	14.37%
63.0	ORCL	13.0%	B	14.27%
63.0	CHTR	12.51%	GILD	14.27%
63.0	MSI	12.41%	NEM	13.78%
63.0	WFC	11.93%	PHM	13.39%
63.0	GNRC	11.93%	MRK	13.29%
63.0	SIVBQ	11.11%	CMG	13.0%
63.0	XOM	11.05%	HSBC	12.81%
63.0	THC	11.05%	IRM	12.61%
63.0	NVS	10.17%	META	12.41%
63.0	GOOGL	9.97%	KALU	12.22%



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	36.25%	GLD	45.21%
126.0	AVGO	33.12%	NVDA	39.17%
126.0	GLD	31.46%	VST	36.15%
126.0	MSTR	30.0%	GE	34.38%
126.0	WDC	26.15%	CAH	32.92%
126.0	TEVA	23.96%	TRGP	31.77%
126.0	TRGP	23.44%	AVGO	31.56%
126.0	GILD	22.71%	WDC	27.81%
126.0	META	22.4%	MU	26.77%
126.0	IRM	21.46%	TEVA	26.56%
126.0	GOOGL	20.52%	NEM	25.31%
126.0	NEM	20.21%	MSTR	24.79%
126.0	SLV	19.19%	LLY	24.48%
126.0	CAH	18.85%	GILD	23.44%
126.0	TMUS	18.23%	ORCL	21.77%
126.0	MU	17.4%	HSBC	21.77%
126.0	LW	16.67%	PHM	21.46%
126.0	NVDA	16.67%	SLV	20.75%
126.0	EXPE	15.94%	AMAT	20.52%
126.0	KALU	15.31%	GS	20.52%
126.0	GE	15.0%	THC	20.0%
126.0	MSI	14.58%	PWR	18.65%
126.0	LLY	13.96%	IRM	18.33%
126.0	B	13.02%	GBTC	17.92%
126.0	JAZZ	13.02%	META	17.71%
126.0	HCA	11.77%	GOOGL	17.4%
126.0	AA	11.56%	TMUS	16.98%
126.0	INTC	11.46%	B	15.62%
126.0	NVS	10.94%	ACGL	15.42%
126.0	WFC	10.73%	JPM	15.1%



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	AVGO	64.15%	GE	72.18%
252.0	VST	56.83%	AVGO	71.7%
252.0	GLD	45.32%	GLD	55.28%
252.0	MSTR	43.88%	VST	54.32%
252.0	NVDA	33.09%	NVDA	53.6%
252.0	META	31.18%	GS	45.56%
252.0	TRGP	31.06%	MSTR	43.76%
252.0	IRM	28.18%	PHM	43.17%
252.0	TEVA	27.34%	CAH	41.13%
252.0	CAH	25.18%	LLY	40.65%
252.0	WDC	22.9%	JPM	39.09%
252.0	LLY	22.42%	GBTC	38.25%
252.0	GILD	22.18%	META	37.65%
252.0	GS	20.5%	TRGP	36.21%
252.0	NEM	20.5%	TEVA	34.65%
252.0	SLV	18.94%	HSBC	34.41%
252.0	B	18.35%	PWR	34.05%
252.0	GE	17.99%	ORCL	33.09%
252.0	TMUS	17.15%	NFLX	33.09%
252.0	GOOGL	15.59%	TMUS	32.37%
252.0	TDG	15.59%	MU	31.53%
252.0	GWV	14.63%	WDC	31.53%
252.0	MU	13.19%	COST	30.94%
252.0	HSBC	12.11%	ACGL	30.58%
252.0	THC	11.75%	TDG	29.38%
252.0	ORCL	10.07%	GILD	27.46%
252.0	EXPE	10.07%	MS	25.54%
252.0	LW	10.07%	IRM	24.58%
252.0	KALU	9.35%	THC	24.34%
252.0	MSI	9.11%	GOOGL	23.5%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	QCOM	45.0%	QCOM	35.0%
1.0	NVDA	35.0%	INTC	25.0%
1.0	MU	35.0%	AMAT	25.0%
1.0	AMD	35.0%	MU	25.0%
1.0	WDC	35.0%	CSCO	20.0%
1.0	INTC	30.0%	CSTM	20.0%
1.0	QQQ	30.0%	CVS	20.0%
1.0	MRK	30.0%	AMD	20.0%
1.0	AVGO	30.0%	LUMN	20.0%
1.0	CSTM	25.0%	GE	15.0%
1.0	AA	20.0%	ORCL	15.0%
1.0	PWR	20.0%	ON	15.0%
1.0	VNO	20.0%	ELAN	15.0%
1.0	KALU	20.0%	BHP	15.0%
1.0	FCX	20.0%	FSUGY	15.0%
1.0	AMZN	20.0%	MSFT	15.0%
1.0	AMAT	20.0%	HLT	15.0%
1.0	BHP	15.0%	HON	15.0%
1.0	PCG	15.0%	WDC	15.0%
1.0	GNRC	15.0%	COST	10.0%
1.0	CLF	15.0%	MRK	10.0%
1.0	GWV	15.0%	GWV	10.0%
1.0	B	15.0%	FCX	10.0%
1.0	TXN	15.0%	LEN	10.0%
1.0	JAZZ	15.0%	NVDA	10.0%
1.0	CSCO	15.0%	EMB	10.0%
1.0	CNC	15.0%	KALU	10.0%
1.0	MSFT	15.0%	HSBC	10.0%
1.0	ORCL	15.0%	JAZZ	10.0%
1.0	CVS	15.0%	AAP	10.0%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	CSCO	90.91%	CSCO	90.91%
10.0	MU	81.82%	MNST	54.55%
10.0	TXN	72.73%	MU	54.55%
10.0	AMD	72.73%	ON	36.36%
10.0	WDC	63.64%	GWV	36.36%
10.0	MNST	54.55%	CVS	36.36%
10.0	CVS	45.45%	QCOM	36.36%
10.0	NVDA	45.45%	AMD	36.36%
10.0	QCOM	36.36%	CAH	27.27%
10.0	GWV	36.36%	FSUGY	27.27%
10.0	JAZZ	36.36%	NVDA	27.27%
10.0	AA	36.36%	COST	27.27%
10.0	AMC	36.36%	JAZZ	27.27%
10.0	FSUGY	27.27%	BBY	18.18%
10.0	MRK	27.27%	AAP	18.18%
10.0	QQQ	27.27%	AA	18.18%
10.0	BBY	27.27%	HLT	9.09%
10.0	CLF	27.27%	HON	9.09%
10.0	CNC	18.18%	CLF	9.09%
10.0	HLT	18.18%	ORCL	9.09%
10.0	AAP	18.18%	OXY	9.09%
10.0	ORCL	18.18%	GE	9.09%
10.0	GE	18.18%	INTC	9.09%
10.0	INTC	18.18%	FCX	9.09%
10.0	RIO	9.09%	QQQ	9.09%
10.0	HON	9.09%	LUMN	9.09%
10.0	AAPL	9.09%	MSFT	9.09%
10.0	CSTM	9.09%	MRK	9.09%
10.0	VNO	9.09%	RIO	9.09%
10.0	PCG	9.09%	BHP	9.09%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	WDC	29.03%	INTC	20.97%
1.0	INTC	22.58%	MU	17.74%
1.0	TXN	20.97%	CSTM	16.13%
1.0	MU	19.35%	QCOM	16.13%
1.0	QCOM	19.35%	WDC	16.13%
1.0	MRK	17.74%	AMD	14.52%
1.0	CSTM	17.74%	HSBC	12.9%
1.0	KALU	17.74%	HLT	12.9%
1.0	PWR	17.74%	BHP	12.9%
1.0	AA	16.13%	AMAT	12.9%
1.0	UNH	16.13%	KALU	12.9%
1.0	AMD	16.13%	ON	12.9%
1.0	FCX	14.52%	OXY	11.29%
1.0	GE	12.9%	EMB	11.29%
1.0	GWV	12.9%	CVS	11.29%
1.0	B	12.9%	AA	11.29%
1.0	META	12.9%	TXN	9.68%
1.0	AMAT	12.9%	GOOGL	9.68%
1.0	AVGO	11.29%	RIO	9.68%
1.0	ORCL	11.29%	CSCO	9.68%
1.0	NVDA	11.29%	CCL	9.68%
1.0	ON	11.29%	FCX	9.68%
1.0	QQQ	11.29%	MSFT	9.68%
1.0	VFC	11.29%	AVGO	9.68%
1.0	LNC	11.29%	AMZN	9.68%
1.0	JAZZ	11.29%	XOM	9.68%
1.0	AMZN	11.29%	TDG	8.06%
1.0	BUD	9.68%	GE	8.06%
1.0	GOOGL	9.68%	HYG	8.06%
1.0	GNRC	9.68%	INTU	8.06%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	TXN	62.26%	AMD	52.83%
10.0	WDC	62.26%	MU	50.94%
10.0	INTC	50.94%	INTC	49.06%
10.0	KALU	49.06%	ON	43.4%
10.0	UNH	47.17%	KALU	41.51%
10.0	AMD	43.4%	WDC	39.62%
10.0	CSTM	37.74%	CSCO	37.74%
10.0	ON	35.85%	GOOGL	37.74%
10.0	MU	33.96%	QCOM	33.96%
10.0	QCOM	33.96%	TXN	33.96%
10.0	AMZN	33.96%	QQQ	32.08%
10.0	CVS	32.08%	BUD	28.3%
10.0	IRM	30.19%	IRM	24.53%
10.0	BUD	30.19%	CVS	24.53%
10.0	AA	26.42%	BHP	24.53%
10.0	CNC	26.42%	RIO	24.53%
10.0	TSLA	24.53%	FCX	22.64%
10.0	CSCO	24.53%	MSFT	22.64%
10.0	GOOGL	24.53%	CNC	20.75%
10.0	ORCL	24.53%	TEVA	18.87%
10.0	AMC	24.53%	PWR	18.87%
10.0	GWV	22.64%	AMZN	18.87%
10.0	JAZZ	22.64%	MNST	18.87%
10.0	MNST	22.64%	GNRC	18.87%
10.0	TEVA	20.75%	AVGO	18.87%
10.0	GNRC	20.75%	OXY	18.87%
10.0	EXPE	20.75%	CSTM	16.98%
10.0	RIO	20.75%	AA	16.98%
10.0	PWR	20.75%	HSBC	16.98%
10.0	BAC	20.75%	JAZZ	16.98%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	INTC	88.1%	INTC	88.1%
21.0	TXN	83.33%	AMD	78.57%
21.0	WDC	83.33%	ON	76.19%
21.0	CSTM	69.05%	WDC	73.81%
21.0	UNH	69.05%	TXN	66.67%
21.0	AMD	64.29%	QQQ	59.52%
21.0	ON	64.29%	MU	59.52%
21.0	QCOM	59.52%	GOOGL	54.76%
21.0	KALU	54.76%	KALU	54.76%
21.0	IRM	52.38%	CSCO	54.76%
21.0	CNC	52.38%	QCOM	52.38%
21.0	CVS	50.0%	CNC	50.0%
21.0	MU	47.62%	PWR	45.24%
21.0	AMZN	45.24%	CSTM	45.24%
21.0	JAZZ	45.24%	AMZN	45.24%
21.0	GNRC	42.86%	UNH	40.48%
21.0	AMC	40.48%	GNRC	40.48%
21.0	BAC	38.1%	MS	40.48%
21.0	BXP	38.1%	MNST	35.71%
21.0	MS	38.1%	CDNS	35.71%
21.0	BUD	35.71%	SPY	35.71%
21.0	MNST	35.71%	AVGO	35.71%
21.0	GOOGL	33.33%	CVS	33.33%
21.0	HSBC	30.95%	BHP	33.33%
21.0	CSCO	28.57%	IRM	33.33%
21.0	PWR	28.57%	HSBC	26.19%
21.0	FITB	23.81%	AAPL	26.19%
21.0	TEVA	19.05%	RIO	23.81%
21.0	CDNS	19.05%	TEVA	23.81%
21.0	USB	14.29%	BAC	23.81%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	WDC	22.0%	SLV	17.67%
1.0	SLV	16.47%	WDC	16.4%
1.0	GILD	14.8%	MU	14.4%
1.0	AA	14.4%	INTC	12.4%
1.0	MU	13.6%	NEM	12.0%
1.0	INTC	12.8%	AA	11.2%
1.0	TXN	11.2%	CSTM	11.2%
1.0	CLF	11.2%	AMD	10.0%
1.0	NVS	10.8%	B	10.0%
1.0	GWV	10.8%	AMAT	10.0%
1.0	CSTM	10.4%	RIO	9.6%
1.0	GLD	10.4%	BHP	9.6%
1.0	GNRC	10.0%	GLD	8.8%
1.0	KALU	9.2%	X	8.33%
1.0	BUD	9.2%	XOM	8.0%
1.0	VFC	9.2%	KALU	8.0%
1.0	UNH	9.2%	DHI	7.6%
1.0	PWR	9.2%	HLT	7.6%
1.0	CMA	8.88%	CSCO	7.6%
1.0	AMZN	8.8%	LUMN	7.6%
1.0	FCX	8.8%	GOOGL	6.8%
1.0	TSLA	8.4%	NVS	6.8%
1.0	META	8.0%	AZN	6.8%
1.0	QQQ	8.0%	HSBC	6.8%
1.0	NEM	8.0%	ELAN	6.4%
1.0	ORCL	8.0%	PHM	6.4%
1.0	PCG	7.6%	CCL	6.4%
1.0	B	7.6%	GNRC	6.0%
1.0	AMD	7.6%	GWV	6.0%
1.0	EXPE	7.2%	WYNN	6.0%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	WDC	45.64%	WDC	31.12%
10.0	TXN	30.29%	MU	30.71%
10.0	KALU	30.29%	SLV	29.17%
10.0	SLV	29.17%	B	26.14%
10.0	MU	29.05%	INTC	24.9%
10.0	INTC	25.73%	AMD	21.58%
10.0	NVS	23.24%	GOOGL	19.92%
10.0	GNRC	22.82%	KALU	19.5%
10.0	B	21.99%	GNRC	18.67%
10.0	AMZN	20.75%	GLD	16.18%
10.0	GLD	20.75%	BHP	16.18%
10.0	GILD	20.33%	AMAT	16.18%
10.0	EXPE	19.92%	NEM	15.77%
10.0	FCX	19.92%	TEVA	14.52%
10.0	GOOGL	19.92%	CSCO	14.52%
10.0	CMA	19.38%	AA	14.11%
10.0	BUD	18.26%	RIO	14.11%
10.0	NEM	18.26%	AZN	13.69%
10.0	AA	17.01%	TXN	13.69%
10.0	CSTM	16.6%	XOM	12.45%
10.0	UNH	16.6%	ON	12.45%
10.0	THC	15.35%	ORCL	12.03%
10.0	AMD	14.94%	HSBC	12.03%
10.0	TEVA	14.52%	IRM	11.62%
10.0	ORCL	14.11%	JAZZ	11.2%
10.0	AZN	13.69%	MRK	10.79%
10.0	TSLA	13.28%	BUD	10.79%
10.0	ON	13.28%	CSTM	10.79%
10.0	GWV	13.28%	CMA	10.0%
10.0	JAZZ	12.86%	NVS	9.54%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	WDC	58.26%	WDC	46.52%
21.0	MU	37.83%	MU	41.3%
21.0	KALU	37.39%	B	34.78%
21.0	TXN	33.04%	INTC	31.3%
21.0	INTC	32.61%	SLV	31.0%
21.0	NVS	32.17%	GNRC	29.57%
21.0	CMA	30.2%	GOOGL	28.7%
21.0	GNRC	30.0%	AMD	28.26%
21.0	SLV	28.82%	KALU	24.78%
21.0	GOOGL	24.78%	GLD	23.04%
21.0	GLD	24.78%	NEM	23.04%
21.0	EXPE	23.91%	RIO	22.61%
21.0	B	23.48%	CSTM	22.17%
21.0	NEM	23.48%	TEVA	20.43%
21.0	JAZZ	20.87%	BHP	19.57%
21.0	BUD	20.0%	HSBC	18.7%
21.0	FCX	18.26%	TXN	16.52%
21.0	AMD	18.26%	CSCO	16.09%
21.0	CVS	17.39%	PWR	15.65%
21.0	HSBC	16.52%	ORCL	15.65%
21.0	GILD	15.65%	IRM	15.22%
21.0	RIO	15.65%	AA	14.78%
21.0	CSTM	15.22%	XOM	14.78%
21.0	HCA	15.22%	ON	13.91%
21.0	UNH	14.78%	OXY	13.91%
21.0	PWR	14.78%	JAZZ	13.91%
21.0	GSK	14.35%	AMAT	13.91%
21.0	AA	14.35%	FCX	13.48%
21.0	AVGO	14.35%	LVS	12.61%
21.0	VZ	13.91%	TRGP	12.61%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	WDC	98.94%	WDC	100.0%
63.0	MU	81.91%	MU	73.4%
63.0	SLV	65.78%	B	67.02%
63.0	B	54.79%	SLV	64.71%
63.0	GLD	52.66%	GOOGL	59.04%
63.0	INTC	47.87%	GLD	55.32%
63.0	KALU	47.34%	NEM	53.19%
63.0	EXPE	39.36%	CSTM	47.87%
63.0	CMA	39.25%	INTC	46.28%
63.0	JAZZ	38.83%	KALU	41.49%
63.0	NEM	37.77%	TEVA	40.43%
63.0	GOOGL	37.23%	AMAT	38.3%
63.0	AA	35.11%	RIO	36.17%
63.0	VZ	31.38%	AA	35.11%
63.0	TEVA	30.85%	CAH	33.51%
63.0	NVS	30.32%	TRGP	32.45%
63.0	XOM	29.79%	XOM	30.32%
63.0	TXN	27.13%	AMD	29.79%
63.0	GILD	26.6%	GNRC	28.19%
63.0	FCX	26.6%	JAZZ	27.13%
63.0	HCA	25.53%	VZ	27.13%
63.0	GNRC	22.87%	BHP	26.6%
63.0	ELAN	22.87%	PWR	25.53%
63.0	PWR	20.74%	MRK	24.47%
63.0	CSTM	19.68%	OXY	24.47%
63.0	GSK	19.68%	HSBC	23.94%
63.0	BUD	19.15%	FCX	22.87%
63.0	BALL	18.09%	TXN	22.87%
63.0	HSBC	17.55%	GSK	20.74%
63.0	AVGO	17.55%	LLY	19.68%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	SLV	100.0%	WDC	100.0%
126.0	WDC	100.0%	MU	100.0%
126.0	MU	100.0%	SLV	100.0%
126.0	JAZZ	93.6%	RIO	93.6%
126.0	AA	88.8%	TEVA	92.8%
126.0	KALU	84.8%	JAZZ	92.8%
126.0	GLD	84.0%	AA	88.8%
126.0	CMA	79.55%	AMAT	86.4%
126.0	INTC	76.0%	CMA	84.09%
126.0	CSTM	69.6%	INTC	82.4%
126.0	NVS	68.8%	KALU	81.6%
126.0	GOOGL	68.8%	CAH	77.6%
126.0	B	59.2%	HSBC	76.0%
126.0	NEM	56.8%	CSTM	75.2%
126.0	HSBC	55.2%	GOOGL	74.4%
126.0	TEVA	48.8%	NEM	71.2%
126.0	GILD	42.4%	GLD	69.6%
126.0	GSK	42.4%	XOM	64.8%
126.0	ELAN	41.6%	B	64.0%
126.0	XOM	40.0%	BHP	56.0%
126.0	FCX	39.2%	TRGP	54.4%
126.0	RIO	38.4%	MRK	51.2%
126.0	EXPE	37.6%	GSK	47.2%
126.0	HCA	36.8%	PWR	43.2%
126.0	BUD	32.8%	ELAN	40.8%
126.0	AVGO	26.4%	AZN	36.0%
126.0	TXN	20.8%	NVS	32.0%
126.0	PWR	20.0%	FCX	32.0%
126.0	AAPL	19.2%	BIIB	32.0%
126.0	ON	18.4%	MNST	30.4%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	AVGO	0.42%	MSTR	0.3%
1.0	NVDA	0.41%	MU	0.29%
1.0	X	0.38%	WDC	0.27%
1.0	MU	0.36%	NVDA	0.25%
1.0	VST	0.35%	VST	0.23%
1.0	AMD	0.34%	AVGO	0.23%
1.0	GE	0.31%	PWR	0.2%
1.0	CCL	0.29%	AMD	0.2%
1.0	TSLA	0.28%	TEVA	0.17%
1.0	PWR	0.28%	X	0.17%
1.0	GBTC	0.27%	LLY	0.16%
1.0	LLY	0.27%	GE	0.16%
1.0	WDC	0.26%	TRGP	0.16%
1.0	B	0.23%	GME	0.15%
1.0	AMAT	0.22%	AMAT	0.15%
1.0	CAH	0.2%	GBTC	0.14%
1.0	TRGP	0.2%	SLV	0.14%
1.0	ON	0.19%	INTC	0.14%
1.0	TDG	0.19%	CAH	0.14%
1.0	THC	0.18%	ORCL	0.13%
1.0	PHM	0.16%	ON	0.12%
1.0	SLV	0.16%	THC	0.12%
1.0	JAZZ	0.16%	ETRN	0.12%
1.0	DHI	0.15%	GOOGL	0.12%
1.0	CDNS	0.15%	GS	0.11%
1.0	FCX	0.14%	IRM	0.11%
1.0	CSTM	0.14%	CDNS	0.11%
1.0	ETRN	0.14%	CSTM	0.11%
1.0	HLT	0.14%	META	0.11%
1.0	TEVA	0.14%	NFLX	0.1%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	5.08%	MSTR	3.09%
10.0	AVGO	3.86%	MU	2.73%
10.0	MU	3.27%	WDC	2.68%
10.0	LLY	3.06%	NVDA	2.53%
10.0	PWR	2.92%	VST	2.23%
10.0	TSLA	2.91%	AVGO	2.19%
10.0	AMD	2.9%	PWR	2.05%
10.0	VST	2.54%	AMD	1.88%
10.0	CCL	2.47%	TEVA	1.74%
10.0	AMAT	2.41%	LLY	1.59%
10.0	GBTC	2.21%	X	1.58%
10.0	GE	2.08%	TRGP	1.57%
10.0	WDC	2.05%	INTC	1.5%
10.0	MSTR	1.82%	GE	1.49%
10.0	CAH	1.71%	ETRN	1.41%
10.0	TEVA	1.68%	AMAT	1.4%
10.0	SLV	1.68%	GBTC	1.38%
10.0	X	1.67%	CAH	1.38%
10.0	ETRN	1.52%	SLV	1.36%
10.0	CDNS	1.5%	GME	1.31%
10.0	PHM	1.49%	META	1.21%
10.0	QQQ	1.45%	THC	1.18%
10.0	TRGP	1.42%	IRM	1.15%
10.0	GS	1.42%	GOOGL	1.14%
10.0	HLT	1.39%	ORCL	1.14%
10.0	AZO	1.3%	NFLX	1.13%
10.0	THC	1.28%	GS	1.09%
10.0	INTC	1.27%	TSLA	1.07%
10.0	MSFT	1.24%	ON	1.07%
10.0	JPM	1.21%	CDNS	1.05%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	10.53%	MSTR	7.14%
21.0	MU	7.34%	WDC	5.78%
21.0	TSLA	7.21%	MU	5.64%
21.0	AMD	7.1%	NVDA	5.45%
21.0	PWR	6.39%	VST	4.83%
21.0	AVGO	6.22%	AVGO	4.61%
21.0	AMAT	5.95%	PWR	4.43%
21.0	VST	5.6%	AMD	4.15%
21.0	LLY	5.54%	TEVA	3.8%
21.0	GBTC	5.39%	ETRN	3.5%
21.0	CCL	5.32%	INTC	3.29%
21.0	MSTR	5.0%	TRGP	3.26%
21.0	WDC	4.43%	LLY	3.25%
21.0	GE	4.33%	GE	3.2%
21.0	TEVA	4.03%	X	3.17%
21.0	CAH	3.9%	GBTC	3.1%
21.0	PHM	3.58%	AMAT	2.95%
21.0	X	3.55%	CAH	2.89%
21.0	CDNS	3.44%	SLV	2.84%
21.0	SLV	3.38%	META	2.67%
21.0	QQQ	3.28%	NFLX	2.51%
21.0	ETRN	3.28%	THC	2.51%
21.0	TRGP	3.25%	GOOGL	2.49%
21.0	AZO	3.1%	ORCL	2.48%
21.0	CSTM	2.94%	IRM	2.47%
21.0	DHI	2.93%	TSLA	2.46%
21.0	THC	2.89%	GS	2.31%
21.0	GS	2.87%	ON	2.21%
21.0	INTC	2.82%	CDNS	2.17%
21.0	PCG	2.69%	GW	2.14%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	NVDA	32.43%	MSTR	20.13%
63.0	MSTR	27.51%	WDC	18.41%
63.0	MU	20.97%	NVDA	17.68%
63.0	AMAT	19.0%	MU	16.22%
63.0	CCL	18.46%	VST	16.04%
63.0	VST	18.15%	AVGO	13.64%
63.0	GBTC	17.99%	PWR	11.95%
63.0	PWR	17.82%	TEVA	10.46%
63.0	AMD	17.45%	GE	10.32%
63.0	WDC	15.93%	ETRN	10.28%
63.0	LLY	15.81%	GBTC	10.28%
63.0	CAH	13.33%	AMD	10.02%
63.0	AVGO	13.19%	META	9.5%
63.0	GE	13.04%	LLY	9.24%
63.0	PHM	12.14%	TRGP	9.2%
63.0	TEVA	11.91%	CAH	9.06%
63.0	TSLA	11.86%	NFLX	9.04%
63.0	TRGP	11.79%	AMAT	8.91%
63.0	THC	10.64%	SLV	8.83%
63.0	SLV	10.3%	THC	8.09%
63.0	GOOGL	10.05%	PHM	7.46%
63.0	DHI	9.63%	GOOGL	7.19%
63.0	ETRN	9.32%	ORCL	7.04%
63.0	NFLX	9.06%	GS	6.87%
63.0	QQQ	9.05%	HSBC	6.54%
63.0	CDNS	8.61%	INTC	6.33%
63.0	B	8.6%	CCL	6.19%
63.0	GS	8.47%	IRM	6.17%
63.0	JPM	8.3%	GLD	5.98%
63.0	PCG	8.11%	X	5.91%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	NVDA	82.16%	MSTR	49.65%
126.0	MU	61.64%	WDC	44.41%
126.0	GBTC	51.56%	NVDA	44.11%
126.0	MSTR	47.44%	MU	39.78%
126.0	AMAT	46.99%	VST	35.78%
126.0	VST	43.3%	AVGO	30.09%
126.0	WDC	40.13%	GBTC	29.06%
126.0	AMD	39.86%	GE	25.34%
126.0	GE	37.55%	TEVA	23.22%
126.0	PWR	37.28%	META	23.21%
126.0	PHM	34.05%	PWR	23.14%
126.0	CCL	32.74%	NFLX	22.15%
126.0	NFLX	31.44%	SLV	20.9%
126.0	THC	31.42%	AMD	20.56%
126.0	LLY	29.91%	THC	20.24%
126.0	AVGO	29.5%	AMAT	20.14%
126.0	CAH	27.11%	CAH	19.76%
126.0	SLV	25.79%	LLY	19.67%
126.0	ORCL	25.64%	TRGP	18.93%
126.0	TEVA	25.47%	ETRN	18.49%
126.0	DHI	25.1%	PHM	17.21%
126.0	B	24.22%	GOOGL	16.69%
126.0	TRGP	24.15%	ORCL	15.94%
126.0	TSLA	23.98%	GS	15.56%
126.0	QQQ	23.38%	B	15.31%
126.0	AMZN	22.97%	HSBC	14.1%
126.0	MS	22.47%	CCL	14.04%
126.0	META	22.12%	GLD	13.45%
126.0	GOOGL	21.9%	JPM	12.87%
126.0	JPM	21.31%	INTC	12.77%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	NVDA	234.13%	MSTR	169.5%
252.0	GBTC	185.71%	NVDA	119.97%
252.0	MSTR	167.29%	VST	106.7%
252.0	MU	154.85%	WDC	99.68%
252.0	WDC	115.01%	GBTC	92.97%
252.0	VST	110.4%	MU	84.18%
252.0	GE	110.11%	AVGO	77.04%
252.0	NFLX	109.66%	META	63.84%
252.0	AMD	98.38%	GE	61.17%
252.0	AVGO	95.75%	NFLX	57.68%
252.0	PWR	95.62%	PWR	49.14%
252.0	PHM	92.43%	THC	48.14%
252.0	AMAT	86.62%	AMD	44.91%
252.0	LLY	86.45%	TEVA	42.74%
252.0	CCL	85.66%	PHM	42.61%
252.0	THC	82.05%	LLY	42.44%
252.0	META	75.82%	TRGP	40.73%
252.0	AMZN	65.3%	SLV	39.52%
252.0	QQQ	63.93%	CAH	39.25%
252.0	GOOGL	63.75%	AMAT	38.62%
252.0	JPM	63.55%	CCL	37.5%
252.0	MS	61.03%	ORCL	37.21%
252.0	CDNS	59.9%	ETRN	35.78%
252.0	ORCL	59.35%	GOOGL	35.04%
252.0	ELAN	58.86%	GS	33.59%
252.0	CAH	58.83%	JPM	31.05%
252.0	DHI	58.47%	HSBC	30.96%
252.0	TRGP	57.76%	B	30.09%
252.0	ISRG	53.55%	TDG	29.52%
252.0	COST	53.46%	GLD	29.31%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	MU	2.51%	MU	3.39%
1.0	ORCL	1.8%	AMD	2.05%
1.0	AMD	1.79%	QCOM	1.86%
1.0	BBY	1.62%	ORCL	1.76%
1.0	LUMN	1.49%	CLF	1.52%
1.0	CSCO	1.48%	CSCO	1.43%
1.0	LLY	1.38%	BBY	1.35%
1.0	QCOM	1.28%	LUMN	1.24%
1.0	ON	1.25%	INTC	1.12%
1.0	CLF	0.94%	WDC	1.07%
1.0	TSLA	0.9%	AA	1.03%
1.0	CSTM	0.82%	ON	0.99%
1.0	AAPL	0.76%	LLY	0.86%
1.0	VST	0.74%	JAZZ	0.79%
1.0	FSUGY	0.73%	AMC	0.79%
1.0	CVS	0.7%	MNST	0.72%
1.0	TDG	0.69%	AMAT	0.7%
1.0	HON	0.67%	AAPL	0.7%
1.0	MNST	0.63%	TSLA	0.69%
1.0	AA	0.61%	FCX	0.69%
1.0	GS	0.6%	CDNS	0.66%
1.0	FCX	0.59%	VNO	0.63%
1.0	CDNS	0.58%	BHP	0.6%
1.0	CCL	0.55%	FSUGY	0.58%
1.0	AAP	0.55%	GE	0.58%
1.0	MOS	0.54%	CNC	0.54%
1.0	CNC	0.54%	GS	0.54%
1.0	GE	0.53%	HON	0.53%
1.0	ADBE	0.53%	MSFT	0.51%
1.0	HSBC	0.52%	CSTM	0.51%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	CSCO	26.81%	CSCO	22.22%
10.0	ON	16.69%	MU	19.36%
10.0	LUMN	16.34%	AMD	14.06%
10.0	MU	11.94%	QCOM	11.41%
10.0	LLY	11.79%	LUMN	10.26%
10.0	AMD	10.27%	ON	10.06%
10.0	QCOM	10.25%	BBY	8.93%
10.0	CAH	8.56%	MNST	8.43%
10.0	BBY	7.91%	LLY	7.27%
10.0	MNST	7.37%	JAZZ	7.21%
10.0	AAPL	6.36%	AA	6.86%
10.0	TRGP	5.87%	CLF	6.41%
10.0	GS	5.03%	TXN	6.2%
10.0	FSUGY	4.91%	CVS	6.18%
10.0	JAZZ	4.91%	AAPL	6.03%
10.0	MS	4.88%	CNC	5.22%
10.0	OXY	4.71%	TRGP	4.92%
10.0	AA	4.7%	GS	4.85%
10.0	BUD	4.69%	CAH	4.83%
10.0	AMAT	4.66%	WDC	4.83%
10.0	CVS	4.42%	INTC	4.75%
10.0	COST	4.36%	ORCL	4.73%
10.0	FCX	4.35%	HON	4.37%
10.0	HON	4.25%	GWG	4.35%
10.0	GWG	4.24%	FSUGY	4.2%
10.0	ORCL	4.23%	NVDA	4.18%
10.0	KHC	3.96%	BUD	4.05%
10.0	CLF	3.94%	AMAT	3.92%
10.0	CZR	3.89%	VNO	3.75%
10.0	TSLA	3.86%	MRK	3.75%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	AMD	2.07%	AMD	1.65%
1.0	MU	1.52%	INTC	1.65%
1.0	AVGO	1.43%	MU	1.53%
1.0	LUMN	1.27%	WDC	1.18%
1.0	INTC	1.11%	ON	1.04%
1.0	ON	1.06%	QCOM	1.02%
1.0	PWR	1.0%	LUMN	0.86%
1.0	WDC	0.97%	AMC	0.78%
1.0	QCOM	0.91%	ORCL	0.73%
1.0	CSCO	0.73%	CSCO	0.7%
1.0	AMC	0.65%	TXN	0.66%
1.0	CSTM	0.59%	AVGO	0.58%
1.0	KALU	0.54%	CNC	0.54%
1.0	ORCL	0.54%	KALU	0.53%
1.0	TXN	0.51%	CSTM	0.5%
1.0	BBY	0.5%	AMZN	0.44%
1.0	MS	0.5%	UNH	0.43%
1.0	VST	0.5%	BBY	0.42%
1.0	NVDA	0.49%	PWR	0.39%
1.0	CNC	0.49%	GOOGL	0.37%
1.0	GOOGL	0.48%	CDNS	0.37%
1.0	GNRC	0.46%	AA	0.37%
1.0	AMZN	0.45%	MS	0.37%
1.0	QQQ	0.43%	JAZZ	0.37%
1.0	SPY	0.36%	VNO	0.36%
1.0	CDNS	0.35%	AMAT	0.36%
1.0	VNO	0.33%	GNRC	0.36%
1.0	AAP	0.33%	CLF	0.35%
1.0	AAPL	0.33%	QQQ	0.32%
1.0	MSFT	0.32%	MSTR	0.32%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	AMD	23.47%	INTC	21.39%
10.0	MU	21.1%	AMD	18.07%
10.0	INTC	17.15%	MU	15.77%
10.0	ON	15.17%	ON	13.84%
10.0	AVGO	14.83%	WDC	13.31%
10.0	LUMN	11.23%	QCOM	10.81%
10.0	CSCO	10.91%	TXN	9.14%
10.0	QCOM	10.12%	CNC	8.72%
10.0	PWR	9.61%	CSCO	8.34%
10.0	WDC	8.65%	LUMN	8.16%
10.0	CNC	8.56%	AMC	7.87%
10.0	QQQ	7.79%	KALU	7.04%
10.0	GOOGL	7.53%	UNH	6.11%
10.0	NVDA	7.26%	CSTM	5.44%
10.0	AMAT	5.54%	PWR	5.44%
10.0	KALU	5.42%	AVGO	5.26%
10.0	TXN	5.32%	GOOGL	5.08%
10.0	GNRC	4.79%	ORCL	5.08%
10.0	CSTM	4.73%	JAZZ	4.85%
10.0	SPY	4.5%	AMZN	4.68%
10.0	MS	4.47%	GNRC	4.6%
10.0	BHP	4.24%	AMAT	4.55%
10.0	CDNS	4.17%	MSTR	4.22%
10.0	GS	3.98%	MS	4.14%
10.0	ORCL	3.44%	CDNS	4.05%
10.0	CLF	3.41%	CVS	3.73%
10.0	AAPL	3.38%	NVDA	3.68%
10.0	JAZZ	3.21%	CLF	3.52%
10.0	AMZN	3.19%	VNO	3.47%
10.0	VNO	3.19%	QQQ	3.46%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	AMD	76.44%	INTC	62.66%
21.0	MU	62.85%	AMD	48.88%
21.0	INTC	53.55%	MU	39.05%
21.0	AVGO	43.33%	ON	37.19%
21.0	ON	38.98%	WDC	32.6%
21.0	CSCO	28.4%	QCOM	28.91%
21.0	CNC	27.96%	CNC	27.86%
21.0	LUMN	27.06%	TXN	24.94%
21.0	WDC	25.55%	KALU	22.14%
21.0	QCOM	25.04%	AMC	22.07%
21.0	PWR	24.23%	LUMN	19.62%
21.0	QQQ	22.58%	UNH	17.57%
21.0	GOOGL	22.43%	CSCO	16.74%
21.0	NVDA	21.61%	CSTM	15.83%
21.0	KALU	17.77%	PWR	15.72%
21.0	CSTM	15.43%	AVGO	15.45%
21.0	GNRC	14.62%	GOOGL	14.75%
21.0	TXN	14.12%	GNRC	14.41%
21.0	VNO	14.04%	MSTR	14.11%
21.0	CDNS	13.94%	AMZN	13.54%
21.0	BHP	13.78%	ORCL	12.93%
21.0	SPY	12.84%	CLF	12.09%
21.0	MSTR	12.84%	CDNS	11.49%
21.0	AMAT	12.41%	JAZZ	11.34%
21.0	AMZN	12.15%	AMAT	10.67%
21.0	ORCL	11.82%	IRM	10.6%
21.0	RIO	11.41%	CVS	10.45%
21.0	MS	11.3%	MS	10.22%
21.0	PRGO	10.48%	NVDA	9.87%
21.0	AAPL	10.25%	VNO	9.55%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	LUMN	1.32%	MU	1.02%
1.0	MU	1.18%	WDC	1.02%
1.0	AMD	1.1%	INTC	0.81%
1.0	WDC	0.85%	AMD	0.7%
1.0	AMAT	0.77%	LUMN	0.54%
1.0	INTC	0.75%	AA	0.48%
1.0	AVGO	0.69%	ON	0.48%
1.0	CLF	0.65%	AMAT	0.46%
1.0	CSTM	0.58%	CSTM	0.46%
1.0	AA	0.56%	CLF	0.44%
1.0	PWR	0.54%	SLV	0.41%
1.0	SLV	0.54%	KALU	0.41%
1.0	TEVA	0.53%	GNRC	0.38%
1.0	B	0.48%	B	0.36%
1.0	BHP	0.47%	JAZZ	0.34%
1.0	GNRC	0.46%	NEM	0.34%
1.0	FSUGY	0.45%	GOOGL	0.33%
1.0	KALU	0.45%	TEVA	0.33%
1.0	ON	0.43%	PWR	0.32%
1.0	JAZZ	0.42%	AVGO	0.28%
1.0	RIO	0.39%	CMA	0.28%
1.0	GOOGL	0.37%	CSCO	0.28%
1.0	HSBC	0.36%	ELAN	0.27%
1.0	X	0.35%	FCX	0.26%
1.0	CSCO	0.35%	QCOM	0.26%
1.0	BIIB	0.35%	BHP	0.26%
1.0	NEM	0.34%	RIO	0.25%
1.0	LLY	0.34%	TXN	0.24%
1.0	OXY	0.34%	GS	0.23%
1.0	LVS	0.3%	FSUGY	0.21%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	LUMN	11.33%	WDC	10.08%
10.0	MU	10.85%	MU	9.61%
10.0	AMD	9.5%	INTC	8.69%
10.0	AMAT	8.16%	AMD	6.74%
10.0	INTC	7.88%	LUMN	4.92%
10.0	WDC	6.79%	AMAT	4.43%
10.0	SLV	6.04%	ON	4.22%
10.0	AVGO	5.77%	AA	4.19%
10.0	PWR	4.36%	CSTM	4.19%
10.0	BHP	4.21%	KALU	3.86%
10.0	CSTM	3.99%	GNRC	3.79%
10.0	AA	3.94%	SLV	3.77%
10.0	TEVA	3.93%	GOOGL	3.63%
10.0	GNRC	3.82%	JAZZ	3.46%
10.0	ON	3.8%	B	3.36%
10.0	NVDA	3.73%	NEM	3.24%
10.0	B	3.57%	PWR	3.23%
10.0	GOOGL	3.55%	TEVA	3.16%
10.0	CSCO	3.5%	CMA	3.15%
10.0	NEM	3.44%	CLF	2.75%
10.0	RIO	3.37%	CSCO	2.71%
10.0	CLF	3.2%	RIO	2.51%
10.0	KALU	2.98%	AVGO	2.49%
10.0	FSUGY	2.86%	BHP	2.44%
10.0	GS	2.75%	TXN	2.35%
10.0	JAZZ	2.68%	FCX	2.21%
10.0	BIIB	2.64%	TRGP	2.2%
10.0	ELAN	2.54%	ELAN	2.15%
10.0	MRK	2.5%	GS	2.11%
10.0	CMA	2.39%	QCOM	2.05%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MU	26.53%	WDC	22.29%
21.0	AMD	24.98%	MU	20.54%
21.0	AMAT	19.38%	INTC	19.71%
21.0	INTC	17.86%	AMD	14.73%
21.0	LUMN	17.8%	LUMN	9.91%
21.0	WDC	17.02%	AMAT	9.32%
21.0	CSTM	11.74%	CSTM	9.18%
21.0	SLV	11.7%	AA	8.86%
21.0	BHP	10.28%	ON	8.82%
21.0	AVGO	9.81%	KALU	8.76%
21.0	TEVA	9.68%	SLV	8.45%
21.0	PWR	9.44%	GOOGL	8.18%
21.0	GNRC	9.33%	GNRC	8.13%
21.0	B	9.17%	B	7.39%
21.0	ON	9.07%	TEVA	7.37%
21.0	GOOGL	8.83%	JAZZ	7.28%
21.0	AA	8.76%	PWR	7.24%
21.0	RIO	7.77%	CMA	7.0%
21.0	BIIB	7.66%	NEM	6.97%
21.0	CSCO	7.64%	CLF	5.8%
21.0	NEM	7.29%	RIO	5.73%
21.0	NVDA	7.25%	BHP	5.45%
21.0	CLF	6.63%	AVGO	5.22%
21.0	KALU	6.54%	TXN	4.91%
21.0	JAZZ	5.99%	ELAN	4.86%
21.0	TRGP	5.63%	CSCO	4.82%
21.0	FSUGY	5.51%	TRGP	4.48%
21.0	ELAN	5.42%	FCX	4.47%
21.0	QQQ	4.97%	VFC	4.3%
21.0	GS	4.91%	FSUGY	4.28%



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### 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MU	76.83%	WDC	76.96%
63.0	WDC	66.27%	MU	66.02%
63.0	AMAT	63.28%	INTC	51.51%
63.0	LUMN	61.35%	AA	32.11%
63.0	AMD	46.71%	SLV	31.48%
63.0	INTC	42.67%	AMAT	30.51%
63.0	CSTM	41.02%	LUMN	30.17%
63.0	B	39.72%	CSTM	29.3%
63.0	SLV	39.66%	AMD	28.63%
63.0	TEVA	36.21%	B	27.65%
63.0	BHP	35.28%	TEVA	26.26%
63.0	AA	30.46%	KALU	24.43%
63.0	NEM	28.53%	NEM	23.76%
63.0	GOOGL	28.16%	GOOGL	23.34%
63.0	BIIB	27.03%	JAZZ	21.85%
63.0	RIO	26.9%	CMA	19.64%
63.0	CAH	26.66%	PWR	19.18%
63.0	TRGP	25.49%	RIO	17.88%
63.0	PWR	20.8%	ON	17.24%
63.0	LLY	20.59%	ELAN	17.05%
63.0	JAZZ	20.07%	GNRC	16.02%
63.0	KALU	19.43%	BHP	15.42%
63.0	GNRC	18.83%	TRGP	15.23%
63.0	ON	18.6%	FCX	15.2%
63.0	ELAN	18.16%	VFC	14.07%
63.0	OXY	17.36%	MRK	13.3%
63.0	FSUGY	16.76%	BIIB	12.88%
63.0	CMA	16.47%	XOM	12.86%
63.0	MRK	16.43%	GLD	12.66%
63.0	XOM	15.94%	HSBC	12.39%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	MU	247.2%	WDC	212.91%
126.0	WDC	203.44%	MU	184.09%
126.0	AMAT	179.67%	INTC	108.78%
126.0	INTC	143.19%	SLV	88.13%
126.0	SLV	122.05%	AA	87.78%
126.0	B	115.97%	AMAT	78.62%
126.0	TEVA	106.72%	TEVA	72.78%
126.0	BHP	94.69%	CSTM	72.6%
126.0	AA	88.62%	B	70.51%
126.0	LUMN	87.33%	KALU	65.72%
126.0	CSTM	83.43%	NEM	56.61%
126.0	AMD	77.79%	LUMN	52.07%
126.0	RIO	72.28%	GOOGL	51.64%
126.0	TRGP	71.94%	JAZZ	48.41%
126.0	NEM	71.92%	AMD	46.77%
126.0	KALU	62.31%	CMA	45.73%
126.0	BIIB	62.05%	RIO	44.25%
126.0	CAH	60.01%	ON	41.68%
126.0	LLY	58.06%	FCX	40.08%
126.0	GOOGL	57.72%	VFC	38.14%
126.0	ON	57.62%	PWR	37.81%
126.0	FSUGY	48.45%	ELAN	36.06%
126.0	MRK	48.23%	BHP	35.11%
126.0	PWR	47.39%	MRK	34.86%
126.0	JAZZ	47.02%	TRGP	34.85%
126.0	CMA	40.44%	BIIB	31.3%
126.0	FCX	39.78%	GLD	30.03%
126.0	ELAN	38.81%	HSBC	29.5%
126.0	CNC	36.86%	CAH	29.43%
126.0	XOM	35.28%	GSK	29.08%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SIVBQ	-0.8%	SIVBQ	-0.78%
1.0	IEP	-0.4%	SBNY	-0.45%
1.0	SBNY	-0.38%	FRCB	-0.23%
1.0	NWL	-0.27%	AMC	-0.15%
1.0	UAA	-0.23%	IEP	-0.14%
1.0	CZR	-0.2%	NWL	-0.12%
1.0	GT	-0.18%	CHTR	-0.1%
1.0	FRCB	-0.17%	PRGO	-0.09%
1.0	CHTR	-0.15%	FIS	-0.07%
1.0	ZTS	-0.13%	ZTS	-0.07%
1.0	LNC	-0.11%	AAP	-0.06%
1.0	BXP	-0.1%	VFC	-0.06%
1.0	FIS	-0.1%	GT	-0.06%
1.0	AMC	-0.1%	BHC	-0.06%
1.0	PRGO	-0.09%	CMCSA	-0.05%
1.0	BALL	-0.08%	UAA	-0.05%
1.0	TLT	-0.08%	TLT	-0.04%
1.0	BIIB	-0.06%	NAVI	-0.04%
1.0	NAVI	-0.05%	ADBE	-0.04%
1.0	CMCSA	-0.05%	BXP	-0.04%
1.0	VFC	-0.05%	BALL	-0.03%
1.0	ADBE	-0.04%	CZR	-0.03%
1.0	INTU	-0.04%	KHC	-0.03%
1.0	AAP	-0.04%	LNC	-0.02%
1.0	UNH	-0.04%	INTU	-0.02%
1.0	KHC	-0.04%	CTLT	-0.01%
1.0	CTLT	-0.03%	FRA	-0.01%
1.0	GNRC	-0.03%	LQD	-0.01%
1.0	HD	-0.02%	MOS	-0.01%
1.0	SNY	-0.02%	PEP	-0.01%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SIVBQ	-4.46%	SBNY	-4.05%
10.0	IEP	-2.69%	SIVBQ	-3.9%
10.0	SBNY	-2.19%	FRCB	-2.19%
10.0	CZR	-1.89%	AMC	-1.65%
10.0	NWL	-1.58%	IEP	-1.37%
10.0	AMC	-1.43%	NWL	-1.11%
10.0	FRCB	-1.26%	CHTR	-0.94%
10.0	UAA	-0.95%	PRGO	-0.82%
10.0	ZTS	-0.92%	AAP	-0.71%
10.0	FIS	-0.83%	FIS	-0.7%
10.0	CHTR	-0.8%	VFC	-0.69%
10.0	VFC	-0.71%	ZTS	-0.68%
10.0	BXP	-0.63%	UAA	-0.67%
10.0	BALL	-0.62%	GT	-0.66%
10.0	INTU	-0.6%	CZR	-0.51%
10.0	ADBE	-0.6%	CMCSA	-0.51%
10.0	PRGO	-0.6%	NAVI	-0.5%
10.0	NAVI	-0.5%	BHC	-0.44%
10.0	TLT	-0.46%	TLT	-0.42%
10.0	AAP	-0.43%	ADBE	-0.41%
10.0	LNC	-0.43%	BXP	-0.4%
10.0	KHC	-0.42%	MOS	-0.31%
10.0	CMCSA	-0.38%	BALL	-0.3%
10.0	MOS	-0.27%	LNC	-0.29%
10.0	HD	-0.21%	KHC	-0.28%
10.0	FRA	-0.2%	CYH	-0.26%
10.0	VZ	-0.17%	BBY	-0.19%
10.0	BIIB	-0.17%	INTU	-0.18%
10.0	GT	-0.17%	FRA	-0.17%
10.0	UNH	-0.17%	LQD	-0.13%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SIVBQ	-9.97%	SBNY	-11.16%
21.0	SBNY	-6.13%	SIVBQ	-9.37%
21.0	IEP	-6.09%	FRCB	-6.02%
21.0	CZR	-4.61%	AMC	-3.92%
21.0	FRCB	-3.78%	IEP	-2.89%
21.0	NWL	-2.99%	NWL	-2.29%
21.0	AMC	-2.65%	CHTR	-1.89%
21.0	CHTR	-1.69%	PRGO	-1.68%
21.0	VFC	-1.68%	AAP	-1.42%
21.0	ADBE	-1.53%	VFC	-1.36%
21.0	UAA	-1.48%	FIS	-1.29%
21.0	PRGO	-1.46%	ZTS	-1.28%
21.0	INTU	-1.45%	BHC	-1.17%
21.0	ZTS	-1.27%	UAA	-1.17%
21.0	FIS	-1.17%	GT	-1.17%
21.0	BXP	-1.14%	CZR	-1.16%
21.0	KHC	-1.14%	NAVI	-1.05%
21.0	BALL	-1.13%	CMCSA	-1.0%
21.0	NAVI	-1.1%	BXP	-0.89%
21.0	TLT	-1.04%	TLT	-0.87%
21.0	AAP	-1.0%	ADBE	-0.74%
21.0	BHC	-0.88%	KHC	-0.71%
21.0	VZ	-0.71%	MOS	-0.68%
21.0	CLF	-0.7%	LNC	-0.66%
21.0	CYH	-0.7%	BALL	-0.56%
21.0	GT	-0.65%	BBY	-0.52%
21.0	CMCSA	-0.65%	CYH	-0.44%
21.0	BBY	-0.54%	FRA	-0.32%
21.0	FRA	-0.42%	LQD	-0.24%
21.0	MOS	-0.34%	LW	-0.2%



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## 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 2026-05-28

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	-19.78%	FRCB	-24.04%
63.0	FRCB	-18.2%	AMC	-15.64%
63.0	NWL	-12.98%	IEP	-9.75%
63.0	AMC	-7.61%	NWL	-7.75%
63.0	VFC	-7.22%	PRGO	-6.17%
63.0	PRGO	-7.17%	AAP	-4.7%
63.0	CZR	-6.94%	CHTR	-4.57%
63.0	AAP	-4.99%	CZR	-4.37%
63.0	UAA	-4.94%	VFC	-4.04%
63.0	CHTR	-4.51%	BHC	-3.93%
63.0	ADBE	-4.38%	MOS	-3.81%
63.0	GNRC	-4.26%	FIS	-3.49%
63.0	KHC	-3.81%	NAVI	-3.44%
63.0	CLF	-3.73%	BXP	-3.33%
63.0	BHC	-3.6%	UAA	-2.97%
63.0	BALL	-3.53%	ZTS	-2.88%
63.0	FIS	-3.21%	KHC	-2.87%
63.0	NAVI	-3.19%	GT	-2.78%
63.0	GT	-2.9%	CLF	-2.56%
63.0	BBY	-2.83%	CMCSA	-2.5%
63.0	ZTS	-2.78%	TLT	-2.33%
63.0	TLT	-2.62%	ADBE	-2.22%
63.0	MOS	-2.46%	LNC	-2.07%
63.0	BXP	-2.35%	CNC	-2.02%
63.0	CYH	-2.1%	BBY	-1.68%
63.0	CMCSA	-2.07%	UNH	-1.36%
63.0	CVS	-1.69%	BALL	-1.29%
63.0	VZ	-1.63%	FRA	-0.9%



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## 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 2026-05-28

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	-40.35%	AMC	-29.73%
126.0	NWL	-36.72%	IEP	-19.18%
126.0	VFC	-18.42%	NWL	-17.16%
126.0	AMC	-17.88%	PRGO	-11.66%
126.0	PRGO	-15.65%	AAP	-11.09%
126.0	AAP	-12.34%	CZR	-8.57%
126.0	CZR	-10.08%	CHTR	-8.47%
126.0	CHTR	-9.39%	MOS	-8.05%
126.0	GNRC	-9.35%	VFC	-6.61%
126.0	MOS	-8.94%	UAA	-6.02%
126.0	FIS	-8.72%	KHC	-5.92%
126.0	GT	-8.58%	FIS	-5.74%
126.0	KHC	-7.8%	CTLT	-5.69%
126.0	UAA	-7.73%	CNC	-5.4%
126.0	CLF	-7.36%	NAVI	-5.31%
126.0	BHC	-7.0%	BHC	-5.31%
126.0	CTLT	-6.66%	BXP	-5.28%
126.0	BALL	-6.07%	GT	-4.9%
126.0	ADBE	-5.96%	ZTS	-4.78%
126.0	TLT	-5.55%	CMCSA	-4.47%
126.0	CVS	-5.01%	TLT	-4.15%
126.0	BBY	-4.98%	UNH	-3.74%
126.0	UNH	-4.92%	CLF	-3.3%
126.0	CMCSA	-4.63%	ADBE	-2.49%
126.0	NAVI	-4.62%	BALL	-2.15%
126.0	BXP	-4.05%	LNC	-2.08%
126.0	ZTS	-3.97%	BBY	-2.07%



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## 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 2026-05-28

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	-83.68%	AMC	-54.62%
252.0	NWL	-75.57%	IEP	-39.78%
252.0	AMC	-47.04%	NWL	-30.85%
252.0	AAP	-32.99%	AAP	-23.09%
252.0	CZR	-29.96%	PRGO	-19.33%
252.0	VFC	-29.43%	VFC	-18.88%
252.0	CLF	-25.69%	CNC	-17.95%
252.0	PRGO	-25.37%	CZR	-17.22%
252.0	UAA	-24.57%	UAA	-14.87%
252.0	UNH	-23.38%	MOS	-14.53%
252.0	MOS	-23.25%	CHTR	-12.52%
252.0	GT	-22.55%	KHC	-11.72%
252.0	CNC	-21.35%	CLF	-10.69%
252.0	FIS	-16.79%	UNH	-10.37%
252.0	BHC	-16.16%	GT	-8.95%
252.0	KHC	-15.7%	BMY	-8.45%
252.0	CVS	-15.56%	BHC	-8.38%
252.0	CHTR	-13.1%	NAVI	-8.38%
252.0	CYH	-11.72%	TLT	-7.25%
252.0	TLT	-11.19%	CTLT	-6.24%
252.0	CTLT	-10.5%	CYH	-5.81%
252.0	BMY	-10.41%	CMCSA	-5.76%
252.0	GNRC	-9.91%	OXY	-5.72%
252.0	BALL	-9.77%	ZTS	-5.59%
252.0	NAVI	-7.08%	BXP	-5.44%
252.0	CMCSA	-6.29%	BIIB	-5.37%
252.0	LW	-6.29%	LW	-5.25%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	ZTS	-3.78%	ZTS	-1.79%
1.0	NWL	-2.03%	AZO	-1.13%
1.0	ORLY	-1.49%	NWL	-0.82%
1.0	GT	-1.47%	GME	-0.76%
1.0	AZO	-1.39%	GT	-0.7%
1.0	CHTR	-1.25%	HCA	-0.68%
1.0	POST	-1.2%	ORLY	-0.66%
1.0	UAA	-1.06%	POST	-0.65%
1.0	INTU	-0.85%	CHTR	-0.64%
1.0	ACGL	-0.82%	INTU	-0.63%
1.0	BALL	-0.82%	BALL	-0.53%
1.0	HCA	-0.74%	IEP	-0.51%
1.0	NAVI	-0.72%	PEP	-0.46%
1.0	GME	-0.68%	VFC	-0.44%
1.0	COST	-0.67%	EXPE	-0.44%
1.0	JPM	-0.65%	NFLX	-0.41%
1.0	BHC	-0.63%	CMCSA	-0.41%
1.0	IEP	-0.62%	MSI	-0.38%
1.0	TFC	-0.62%	LVS	-0.37%
1.0	VFC	-0.62%	FIS	-0.36%
1.0	CMG	-0.58%	ISRG	-0.35%
1.0	FIS	-0.57%	NAVI	-0.35%
1.0	OXY	-0.5%	LNC	-0.33%
1.0	MSI	-0.5%	TFC	-0.32%
1.0	WFC	-0.49%	CMG	-0.31%
1.0	PRGO	-0.45%	SNY	-0.31%
1.0	CMCSA	-0.44%	BHC	-0.3%
1.0	PEP	-0.43%	OXY	-0.3%
1.0	LVS	-0.43%	PRGO	-0.3%
1.0	VICI	-0.42%	SBUX	-0.3%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	ZTS	-25.85%	NWL	-15.5%
10.0	NWL	-16.22%	ZTS	-13.87%
10.0	INTU	-13.78%	INTU	-11.01%
10.0	AZO	-8.28%	GT	-9.82%
10.0	GME	-8.21%	MSTR	-9.72%
10.0	GT	-8.14%	GME	-7.94%
10.0	CHTR	-7.17%	VFC	-7.74%
10.0	VFC	-6.76%	UAA	-7.62%
10.0	MSTR	-6.46%	AZO	-7.19%
10.0	PRGO	-5.58%	CHTR	-7.0%
10.0	IEP	-5.37%	HCA	-6.75%
10.0	POST	-5.21%	EXPE	-6.64%
10.0	THC	-5.2%	IEP	-6.12%
10.0	BA	-5.12%	POST	-5.37%
10.0	ORLY	-4.98%	FIS	-4.6%
10.0	HCA	-4.88%	GBTC	-4.46%
10.0	UAA	-4.76%	NEM	-4.41%
10.0	LVS	-4.71%	LVS	-4.35%
10.0	NAVI	-4.63%	BALL	-4.33%
10.0	ELAN	-4.61%	WYNN	-4.26%
10.0	NEM	-4.19%	PRGO	-4.19%
10.0	PHM	-3.68%	ELAN	-4.02%
10.0	WYNN	-3.56%	PWR	-3.79%
10.0	FIS	-3.55%	BA	-3.72%
10.0	BALL	-3.55%	PEP	-3.63%
10.0	EXPE	-3.45%	CMCSA	-3.6%
10.0	TFC	-3.4%	ORLY	-3.51%
10.0	BHC	-3.29%	SLV	-3.41%
10.0	CYH	-3.25%	TEVA	-3.36%
10.0	WFC	-3.23%	NAVI	-3.22%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	ZTS	-1.71%	ZTS	-0.75%
1.0	CHTR	-1.23%	CHTR	-0.67%
1.0	GT	-1.0%	HCA	-0.53%
1.0	NWL	-0.98%	GT	-0.45%
1.0	UAA	-0.83%	THC	-0.45%
1.0	CAH	-0.79%	AZO	-0.43%
1.0	B	-0.67%	NWL	-0.37%
1.0	AZO	-0.57%	CMCSA	-0.32%
1.0	HCA	-0.55%	LEN	-0.31%
1.0	PCG	-0.53%	CYH	-0.31%
1.0	THC	-0.51%	BALL	-0.3%
1.0	SLV	-0.45%	INTU	-0.29%
1.0	LEN	-0.45%	MSI	-0.28%
1.0	ACGL	-0.44%	UAA	-0.27%
1.0	MSI	-0.42%	GLD	-0.24%
1.0	FIS	-0.42%	CPRT	-0.24%
1.0	NEM	-0.37%	PCG	-0.24%
1.0	CPRT	-0.36%	CAH	-0.24%
1.0	BALL	-0.36%	HD	-0.24%
1.0	PHM	-0.35%	PEP	-0.23%
1.0	CMG	-0.35%	ISRG	-0.23%
1.0	BHC	-0.34%	POST	-0.23%
1.0	POST	-0.33%	B	-0.23%
1.0	VICI	-0.31%	SLV	-0.23%
1.0	ELAN	-0.29%	FIS	-0.22%
1.0	INTU	-0.28%	GSK	-0.22%
1.0	LVS	-0.27%	TMUS	-0.21%
1.0	CMCSA	-0.26%	AMGN	-0.21%
1.0	ORLY	-0.26%	CMG	-0.21%
1.0	VFC	-0.25%	NEM	-0.2%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	ZTS	-12.68%	CHTR	-7.15%
10.0	CHTR	-7.15%	ZTS	-6.92%
10.0	MOS	-6.42%	HCA	-5.36%
10.0	HCA	-5.6%	INTU	-4.5%
10.0	CAH	-4.99%	THC	-4.5%
10.0	INTU	-4.84%	GT	-3.97%
10.0	PCG	-4.8%	CMCSA	-3.86%
10.0	GT	-4.76%	MOS	-3.57%
10.0	META	-3.74%	UAA	-3.33%
10.0	AZO	-3.71%	CYH	-3.11%
10.0	CMCSA	-3.55%	FIS	-2.94%
10.0	THC	-3.32%	MSI	-2.71%
10.0	PHM	-3.27%	LEN	-2.56%
10.0	HD	-3.16%	TMUS	-2.49%
10.0	MSI	-2.88%	HD	-2.45%
10.0	T	-2.8%	AZO	-2.32%
10.0	B	-2.73%	NWL	-2.27%
10.0	UAA	-2.68%	GLD	-2.25%
10.0	NWL	-2.68%	ISRG	-2.25%
10.0	CPRT	-2.63%	T	-2.17%
10.0	FIS	-2.47%	PCG	-2.16%
10.0	LEN	-2.28%	BALL	-2.13%
10.0	GME	-2.0%	AMGN	-2.11%
10.0	GLD	-1.79%	GILD	-1.86%
10.0	LVS	-1.75%	CPRT	-1.79%
10.0	ELAN	-1.72%	CAH	-1.74%
10.0	VICI	-1.69%	NFLX	-1.63%
10.0	CMG	-1.65%	GME	-1.62%
10.0	AMGN	-1.61%	PEP	-1.6%
10.0	BALL	-1.54%	PHM	-1.58%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	ZTS	-19.07%	CHTR	-15.66%
21.0	CHTR	-16.19%	ZTS	-13.45%
21.0	MOS	-13.24%	HCA	-10.03%
21.0	HCA	-11.09%	INTU	-8.55%
21.0	INTU	-9.6%	CMCSA	-7.6%
21.0	CAH	-9.21%	MOS	-7.56%
21.0	PCG	-9.11%	THC	-7.13%
21.0	GT	-7.3%	FIS	-5.85%
21.0	CMCSA	-7.12%	MSI	-5.63%
21.0	T	-6.56%	T	-5.56%
21.0	MSI	-5.88%	TMUS	-5.29%
21.0	FIS	-4.9%	CYH	-4.92%
21.0	HD	-4.82%	CAH	-4.81%
21.0	THC	-4.53%	LEN	-4.64%
21.0	ELAN	-4.51%	PCG	-4.64%
21.0	LEN	-4.27%	GT	-4.64%
21.0	CPRT	-4.19%	UAA	-4.53%
21.0	CYH	-3.9%	ISRG	-4.38%
21.0	UAA	-3.85%	HD	-4.21%
21.0	NFLX	-3.78%	AMGN	-4.15%
21.0	ISRG	-3.76%	ELAN	-3.8%
21.0	AZO	-3.73%	GILD	-3.5%
21.0	GILD	-3.45%	NFLX	-3.22%
21.0	VST	-3.41%	BALL	-3.0%
21.0	AMGN	-3.25%	GSK	-2.85%
21.0	PHM	-3.14%	VZ	-2.84%
21.0	ADBE	-3.01%	GLD	-2.68%
21.0	LVS	-2.79%	HON	-2.66%
21.0	TMUS	-2.7%	LVS	-2.26%
21.0	TLT	-2.42%	VST	-2.24%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	MSTR	-0.52%	CHTR	-0.35%
1.0	CHTR	-0.52%	PRGO	-0.31%
1.0	GT	-0.52%	INTU	-0.29%
1.0	ZTS	-0.45%	ZTS	-0.28%
1.0	PRGO	-0.39%	MSTR	-0.24%
1.0	FIS	-0.33%	FIS	-0.23%
1.0	INTU	-0.31%	AMC	-0.22%
1.0	UAA	-0.3%	GT	-0.21%
1.0	MOS	-0.29%	CPRT	-0.17%
1.0	CPRT	-0.28%	ADBE	-0.17%
1.0	CMG	-0.23%	NAVI	-0.15%
1.0	GBTC	-0.23%	CMG	-0.15%
1.0	ADBE	-0.2%	MOS	-0.13%
1.0	PCG	-0.18%	CMCSA	-0.12%
1.0	VNO	-0.18%	NFLX	-0.11%
1.0	NAVI	-0.17%	NWL	-0.11%
1.0	CMCSA	-0.17%	GBTC	-0.11%
1.0	NFLX	-0.16%	GME	-0.1%
1.0	IEP	-0.15%	TMUS	-0.09%
1.0	AMC	-0.15%	ISRG	-0.09%
1.0	GME	-0.15%	AZO	-0.08%
1.0	CYH	-0.14%	CYH	-0.07%
1.0	VICI	-0.13%	POST	-0.06%
1.0	TMUS	-0.1%	LW	-0.06%
1.0	ISRG	-0.1%	FRA	-0.05%
1.0	FRA	-0.1%	HD	-0.05%
1.0	CZR	-0.1%	TDG	-0.05%
1.0	JPM	-0.08%	VICI	-0.04%
1.0	COST	-0.08%	LEN	-0.04%
1.0	SNY	-0.08%	T	-0.04%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	MSTR	-3.59%	CHTR	-3.45%
10.0	ZTS	-3.33%	PRGO	-2.95%
10.0	GT	-3.2%	INTU	-2.88%
10.0	AMC	-3.05%	ZTS	-2.74%
10.0	CHTR	-3.0%	MSTR	-2.72%
10.0	MOS	-2.62%	FIS	-2.44%
10.0	PRGO	-2.57%	AMC	-2.3%
10.0	CPRT	-2.4%	GT	-2.26%
10.0	FIS	-2.35%	ADBE	-1.94%
10.0	INTU	-2.21%	NAVI	-1.75%
10.0	ADBE	-1.98%	MOS	-1.64%
10.0	NAVI	-1.8%	CPRT	-1.63%
10.0	VNO	-1.79%	CMG	-1.46%
10.0	CMG	-1.59%	CMCSA	-1.23%
10.0	NFLX	-1.53%	GBTC	-1.11%
10.0	GBTC	-1.53%	NFLX	-1.1%
10.0	VICI	-1.0%	NWL	-0.88%
10.0	CMCSA	-0.95%	TMUS	-0.84%
10.0	ISRG	-0.95%	GME	-0.81%
10.0	TMUS	-0.89%	ISRG	-0.74%
10.0	UAA	-0.87%	VNO	-0.71%
10.0	GME	-0.77%	LEN	-0.64%
10.0	IEP	-0.74%	LW	-0.6%
10.0	FRA	-0.7%	FRA	-0.59%
10.0	META	-0.66%	HD	-0.59%
10.0	SNY	-0.65%	TDG	-0.59%
10.0	HD	-0.64%	BXP	-0.58%
10.0	TDG	-0.61%	AZO	-0.44%
10.0	VST	-0.52%	VICI	-0.43%
10.0	AZO	-0.5%	POST	-0.43%



---

## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MSTR	-8.91%	CHTR	-7.07%
21.0	CPRT	-6.11%	PRGO	-6.15%
21.0	CHTR	-6.03%	INTU	-5.7%
21.0	PRGO	-5.7%	MSTR	-5.32%
21.0	INTU	-5.64%	ZTS	-5.11%
21.0	GT	-5.26%	FIS	-5.1%
21.0	ADBE	-5.07%	AMC	-4.85%
21.0	MOS	-4.89%	ADBE	-3.96%
21.0	ZTS	-4.83%	GT	-3.96%
21.0	AMC	-4.69%	NAVI	-3.68%
21.0	FIS	-4.42%	MOS	-3.56%
21.0	CMG	-4.14%	CMG	-3.43%
21.0	NFLX	-3.91%	CPRT	-3.38%
21.0	VNO	-3.7%	NFLX	-2.65%
21.0	GBTC	-3.5%	CMCSA	-2.54%
21.0	NAVI	-3.1%	GBTC	-2.2%
21.0	CMCSA	-2.53%	VNO	-1.63%
21.0	ISRG	-2.43%	TMUS	-1.57%
21.0	VST	-2.13%	LEN	-1.49%
21.0	VICI	-1.86%	TDG	-1.47%
21.0	UAA	-1.79%	LW	-1.34%
21.0	FRA	-1.54%	ISRG	-1.3%
21.0	TMUS	-1.37%	FRA	-1.29%
21.0	IEP	-1.2%	NWL	-1.24%
21.0	LW	-1.19%	BXP	-1.24%
21.0	LEN	-1.16%	VST	-1.13%
21.0	BXP	-1.06%	HD	-1.07%
21.0	MSFT	-1.02%	BBY	-1.01%
21.0	KHC	-1.01%	VICI	-1.01%
21.0	SNY	-0.99%	MSFT	-0.99%



---

## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	-49.33%	PRGO	-24.36%
63.0	PRGO	-26.96%	MSTR	-23.42%
63.0	GT	-20.54%	AMC	-21.44%
63.0	INTU	-20.12%	INTU	-17.8%
63.0	ORCL	-19.2%	CHTR	-15.37%
63.0	CPRT	-19.06%	FIS	-15.19%
63.0	NFLX	-18.18%	NAVI	-14.0%
63.0	FIS	-16.85%	GBTC	-12.19%
63.0	MOS	-16.16%	ADBE	-12.17%
63.0	ADBE	-16.04%	ZTS	-11.23%
63.0	GBTC	-15.64%	CMG	-10.88%
63.0	CMG	-13.7%	CPRT	-10.87%
63.0	VNO	-13.01%	GT	-10.41%
63.0	NAVI	-12.22%	MOS	-10.0%
63.0	CHTR	-11.44%	VNO	-8.86%
63.0	MSFT	-10.26%	NWL	-8.17%
63.0	ZTS	-8.49%	NFLX	-7.67%
63.0	NWL	-8.2%	LEN	-6.58%
63.0	LEN	-7.53%	MSFT	-6.46%
63.0	KHC	-7.17%	TDG	-6.25%
63.0	VICI	-7.15%	BXP	-6.1%
63.0	CMCSA	-6.98%	LW	-5.97%
63.0	VST	-6.88%	CMCSA	-5.94%
63.0	TMUS	-6.42%	VST	-5.75%
63.0	FRA	-6.32%	FRA	-5.57%
63.0	AMC	-5.68%	KHC	-5.44%
63.0	BHC	-5.59%	ORCL	-5.4%
63.0	TDG	-5.05%	TMUS	-5.33%
63.0	LW	-4.79%	VICI	-4.54%
63.0	IEP	-4.68%	META	-4.43%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	MSTR	-100.81%	MSTR	-52.05%
126.0	PRGO	-55.91%	AMC	-48.38%
126.0	INTU	-52.97%	PRGO	-44.08%
126.0	NFLX	-47.55%	INTU	-32.89%
126.0	CPRT	-39.01%	GBTC	-28.99%
126.0	ORCL	-36.37%	CHTR	-28.63%
126.0	MOS	-36.33%	ORCL	-26.65%
126.0	FIS	-35.18%	FIS	-26.21%
126.0	LEN	-31.49%	NAVI	-24.41%
126.0	VNO	-30.35%	NFLX	-23.59%
126.0	ADBE	-29.97%	ADBE	-22.45%
126.0	GBTC	-27.4%	ZTS	-21.54%
126.0	CMG	-25.44%	MOS	-21.11%
126.0	NWL	-24.53%	CPRT	-21.04%
126.0	GT	-23.71%	VNO	-20.42%
126.0	AMC	-23.68%	LW	-19.28%
126.0	MSFT	-20.5%	NWL	-18.98%
126.0	CHTR	-20.46%	CMG	-16.31%
126.0	NAVI	-18.69%	VST	-16.14%
126.0	ZTS	-17.85%	MSFT	-15.05%
126.0	TMUS	-17.02%	LEN	-14.01%
126.0	VICI	-16.9%	TMUS	-13.74%
126.0	LW	-15.66%	BXP	-13.48%
126.0	AZO	-14.69%	FRA	-11.86%
126.0	VST	-14.31%	GT	-11.56%
126.0	KHC	-12.84%	VICI	-11.18%
126.0	BBY	-11.42%	KHC	-10.6%
126.0	IEP	-11.03%	CMCSA	-10.54%
126.0	FRA	-10.79%	BBY	-10.05%
126.0	BHC	-10.51%	META	-10.04%



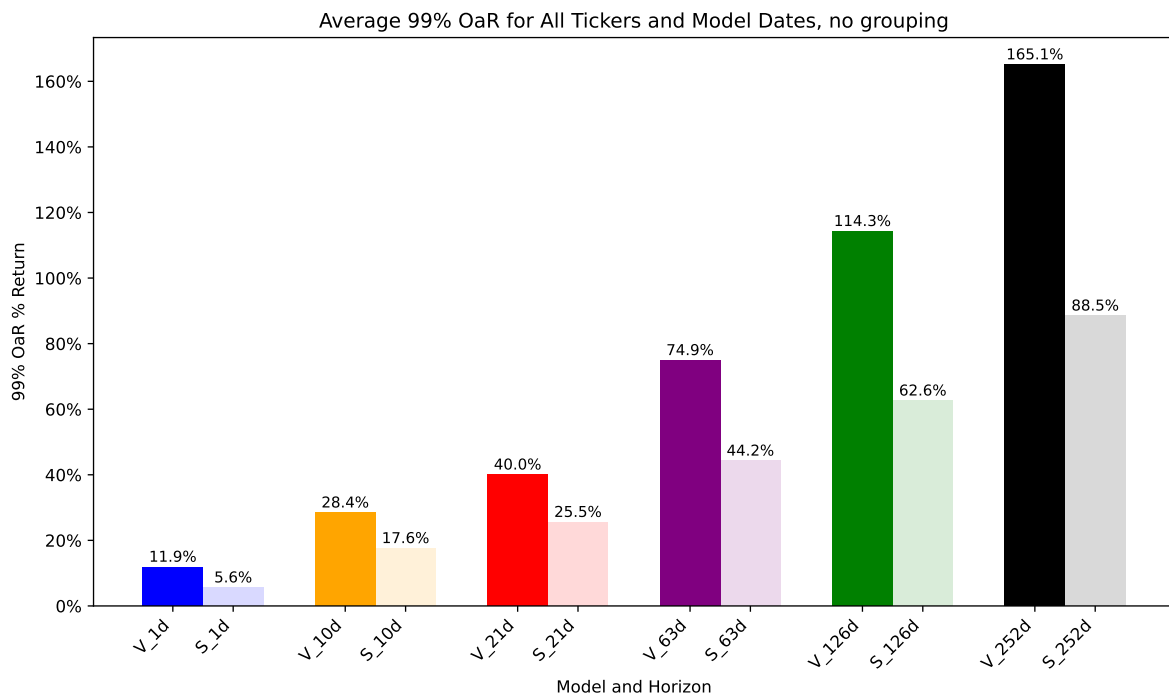
# 99% Opportunity At Risk (OaR)

## 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.

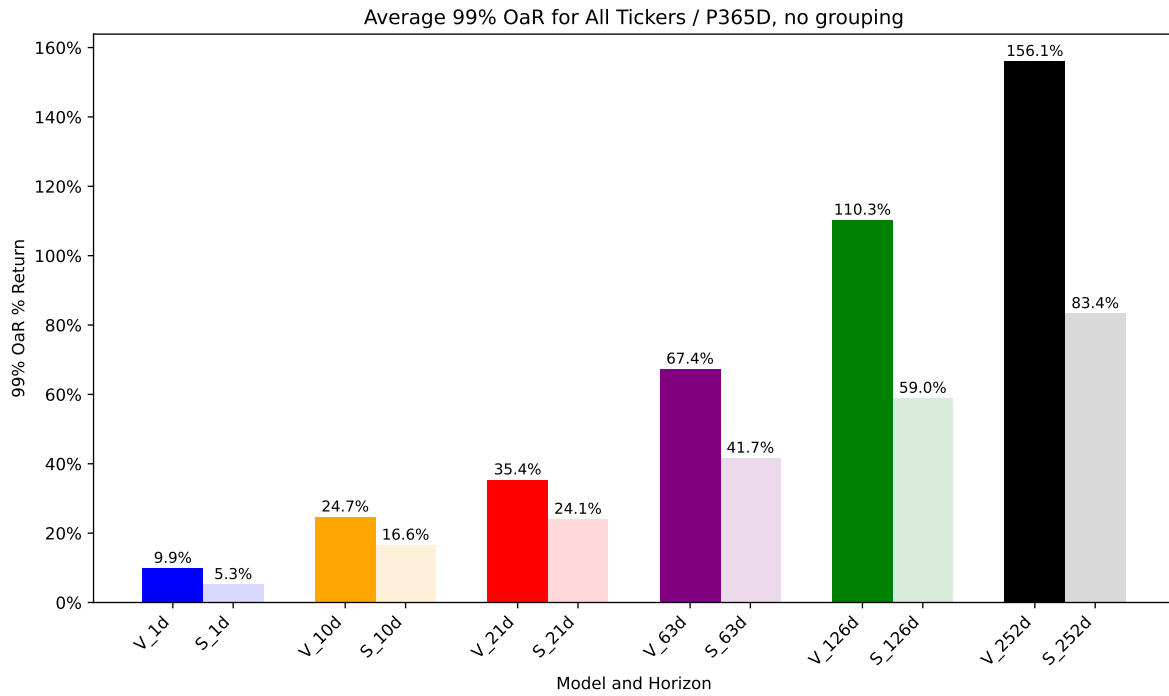
## All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-05-28



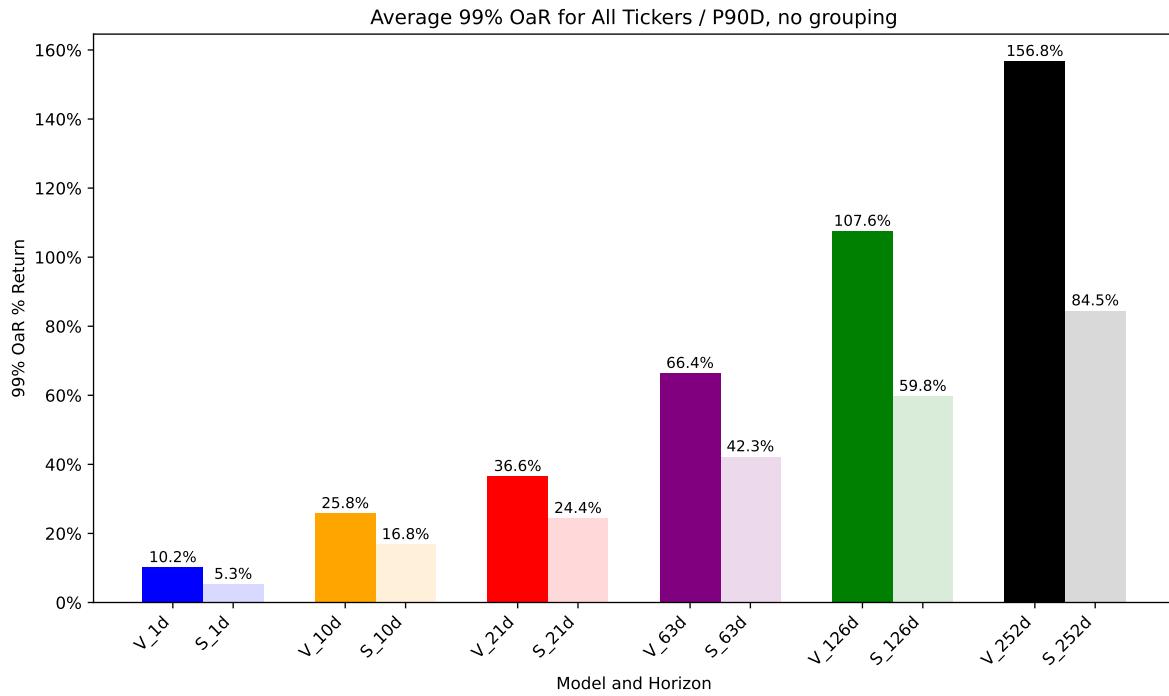
## Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-05-28 through 2025-05-30



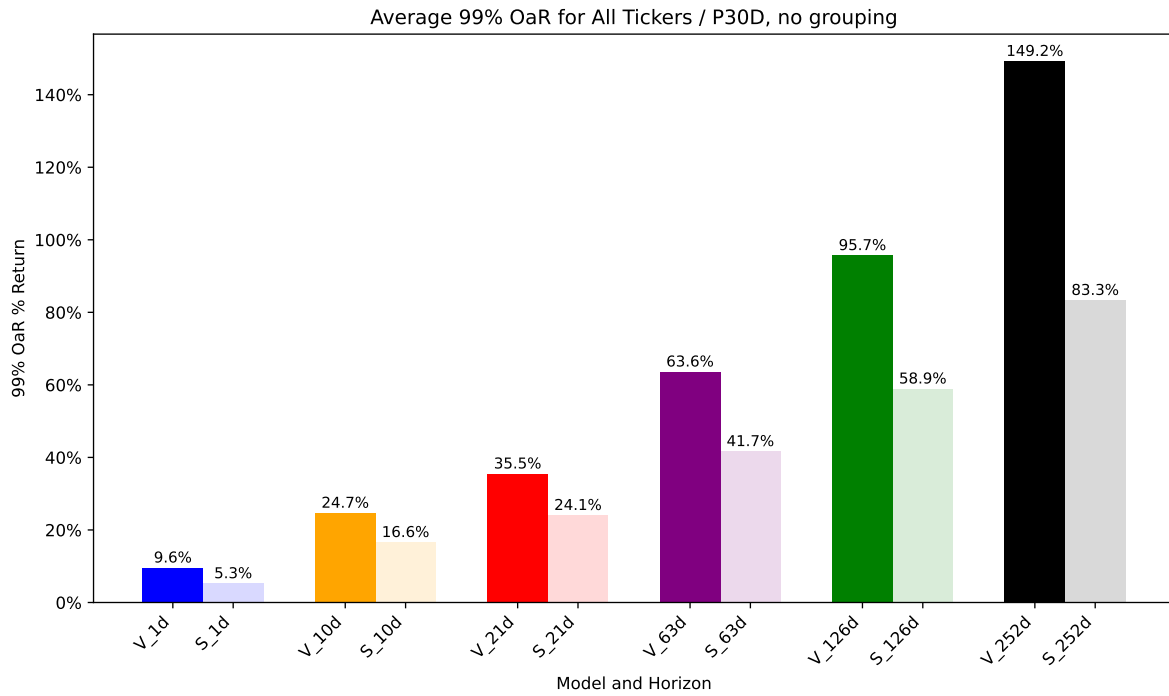
## Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-05-28 through 2026-03-02



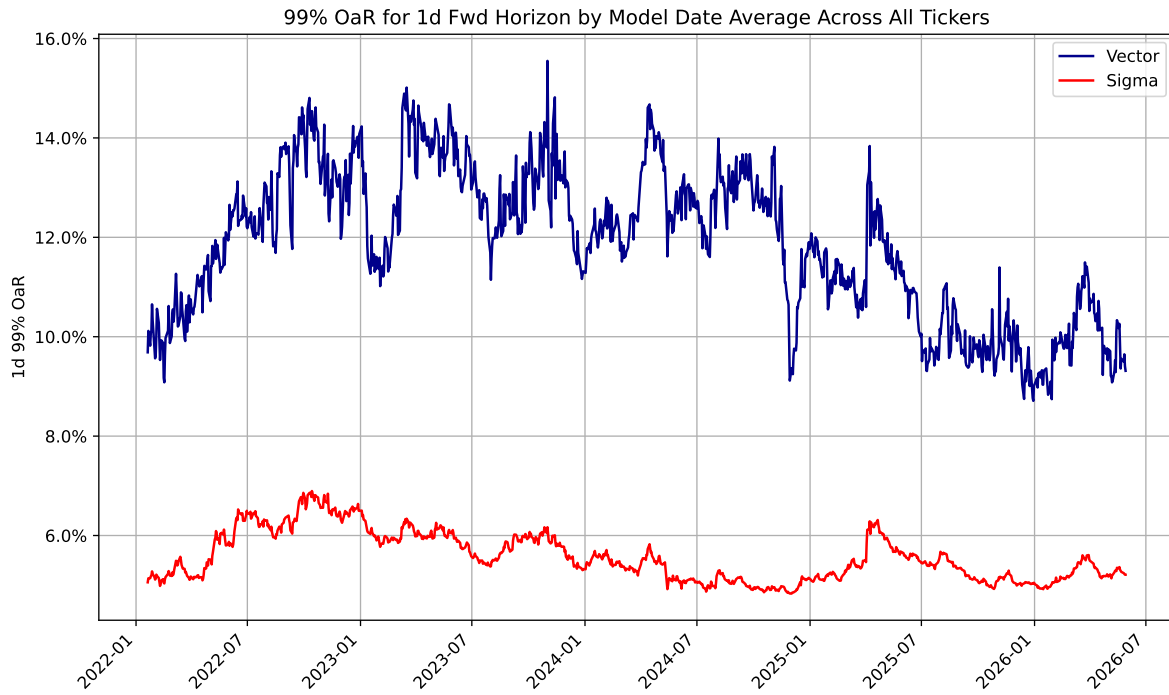
## Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-05-28 through 2026-04-30

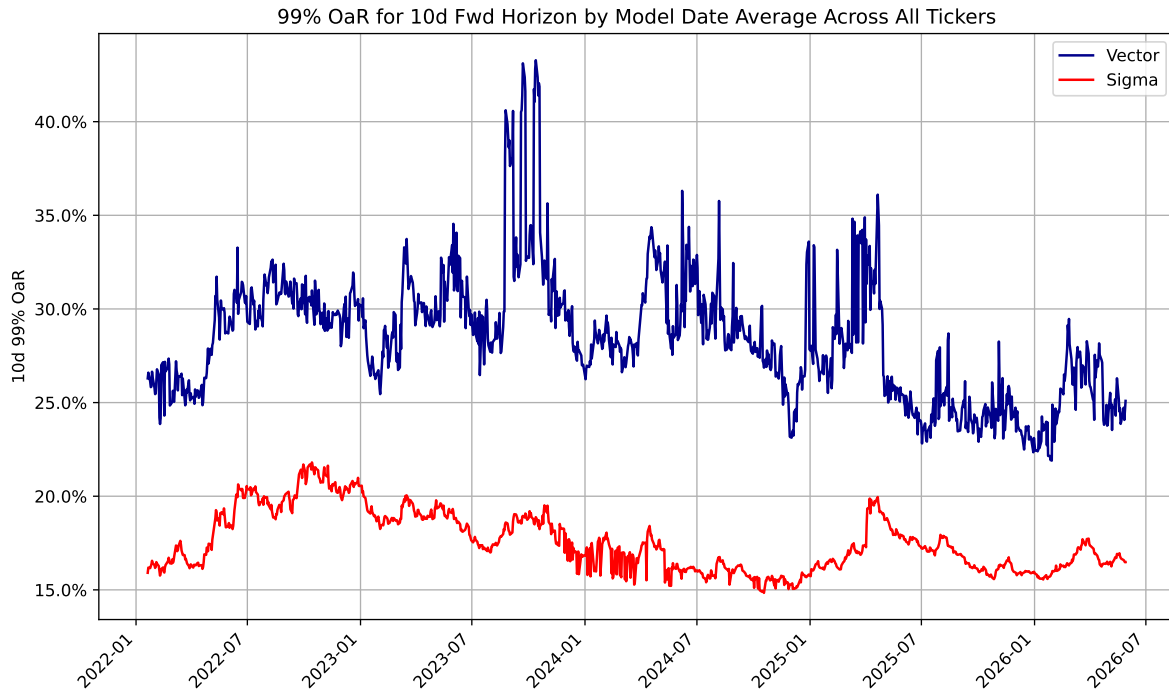


## Daily Levels

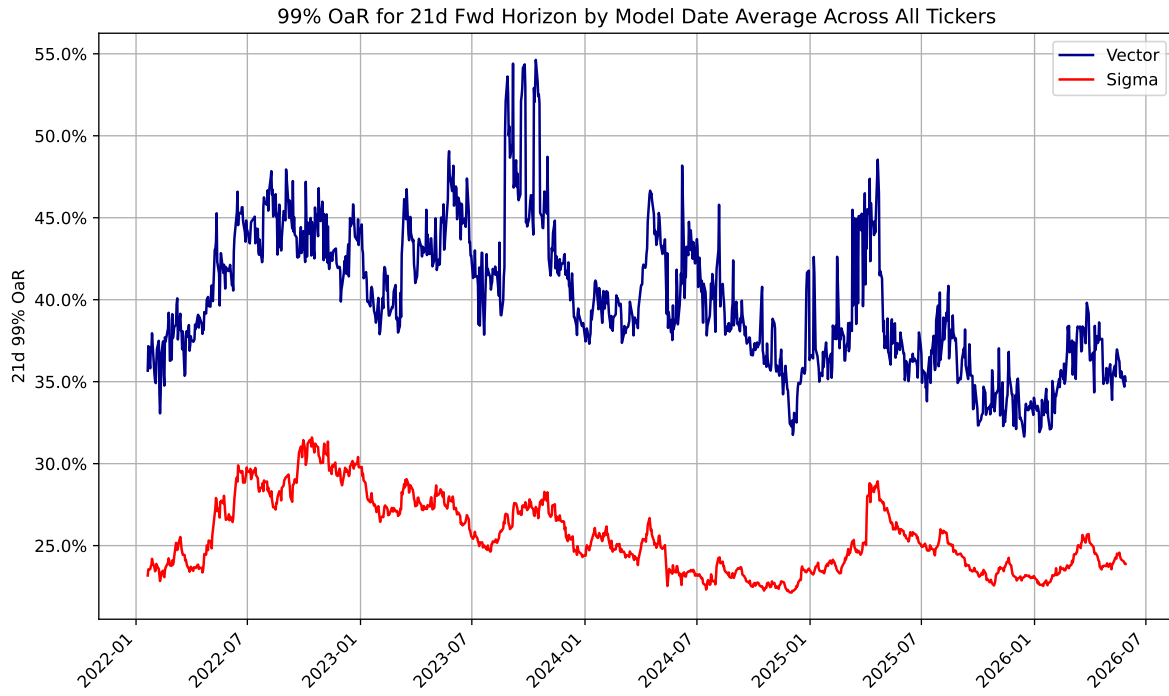
### 1d Horizon



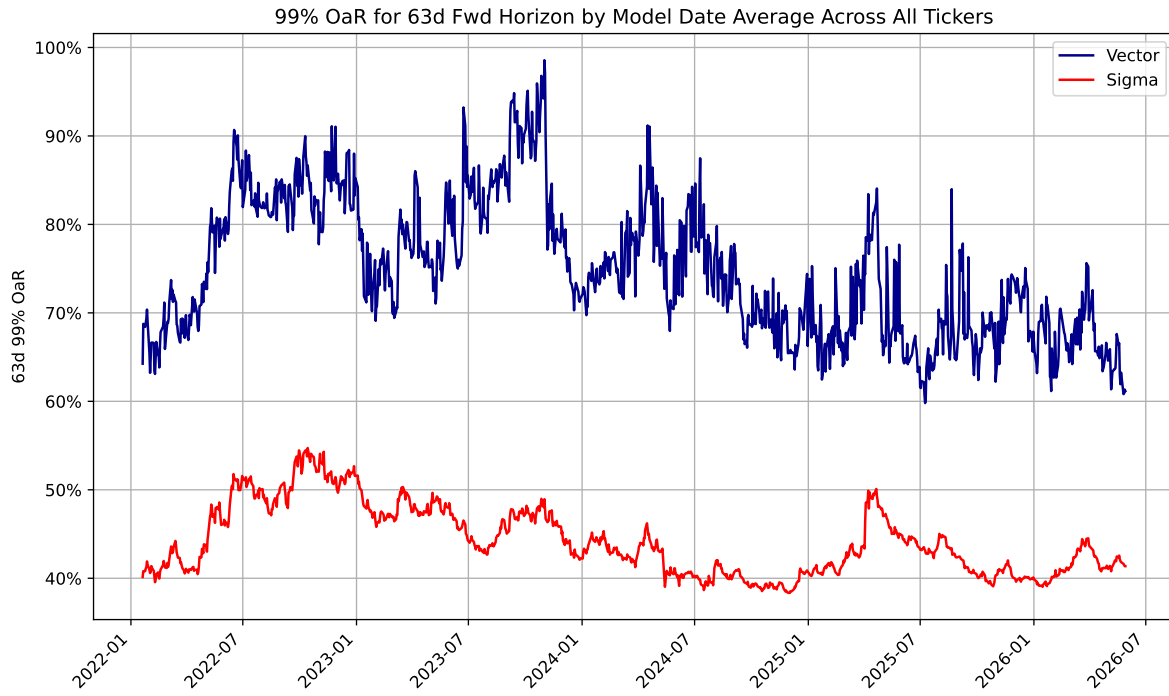
## 10d Horizon



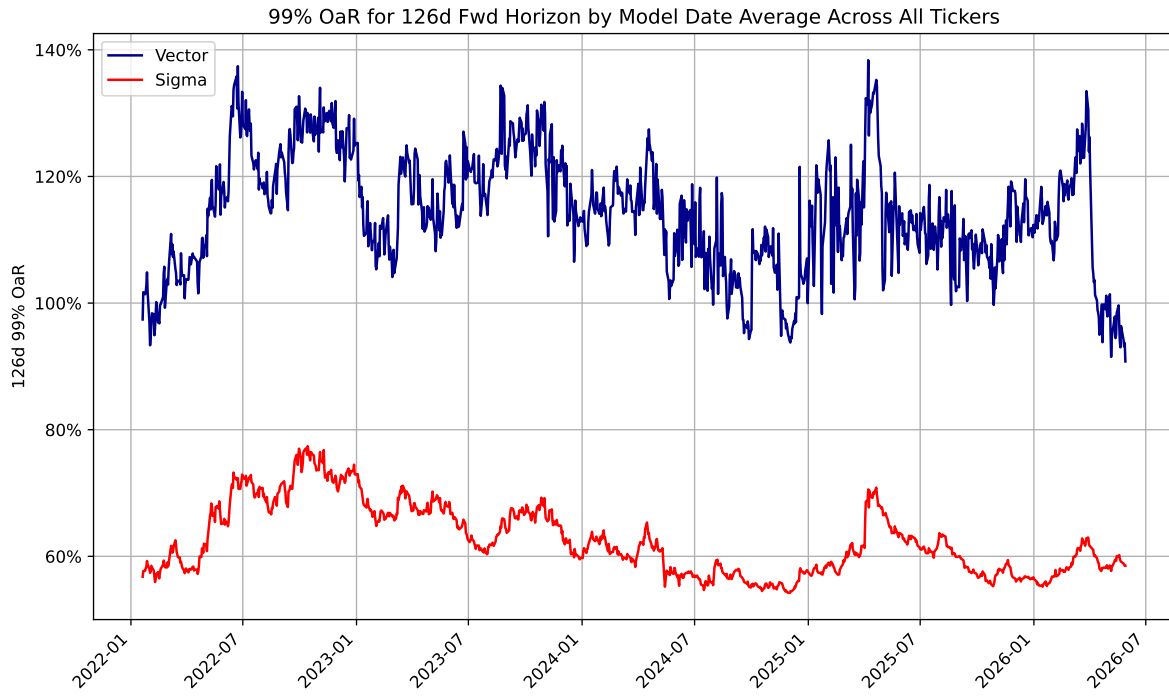
## 21d Horizon



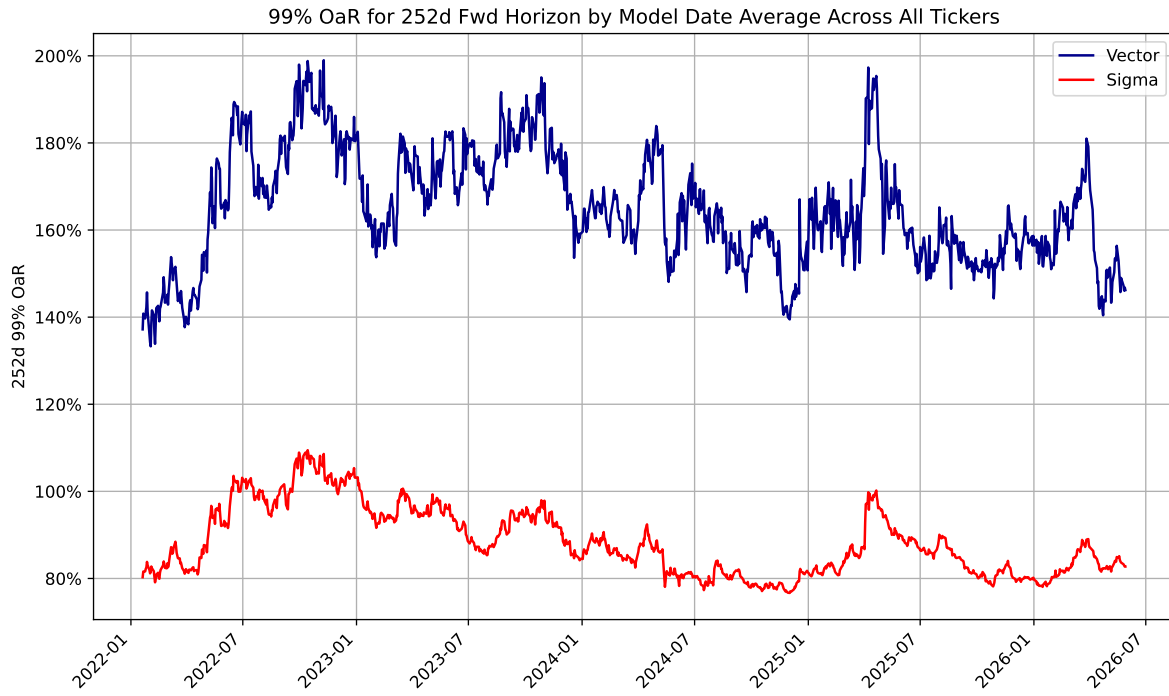
## 63d Horizon



## 126d Horizon



## 252d Horizon



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## 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.

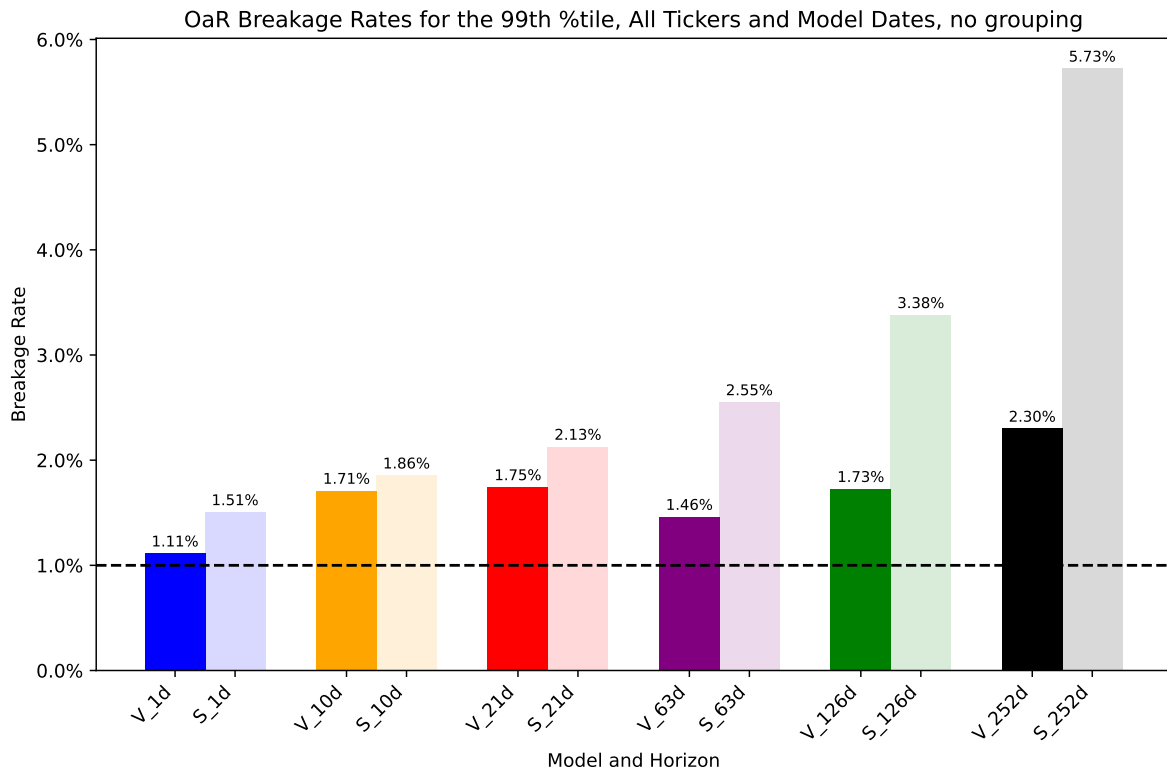
Alpha allows us to isolate ROLOBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROLOBC multiplier for the Vector Model and 1.00x. Alpha across TMD’s could be driven by OaR differentials between tickers and / or between dates. Thus we also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

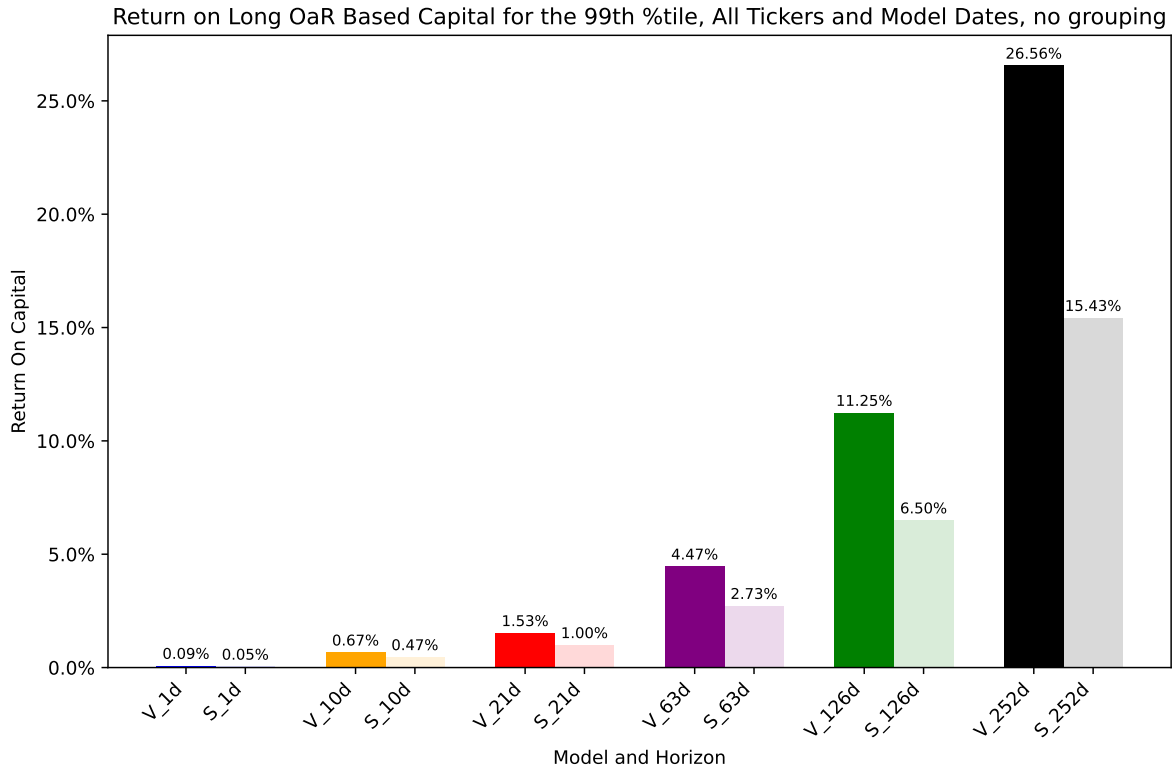
Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons > 1d overlap.



## All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-05-28





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

	1d	10d	21d	63d	126d	252d
intercept	-0.00%	-0.02%	0.03%	0.06%	0.22%	1.22%
intercept_p_value	79.93%	24.86%	16.84%	11.24%	0.04%	0.00%
slope	176.96%	147.50%	149.89%	161.48%	169.64%	164.20%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

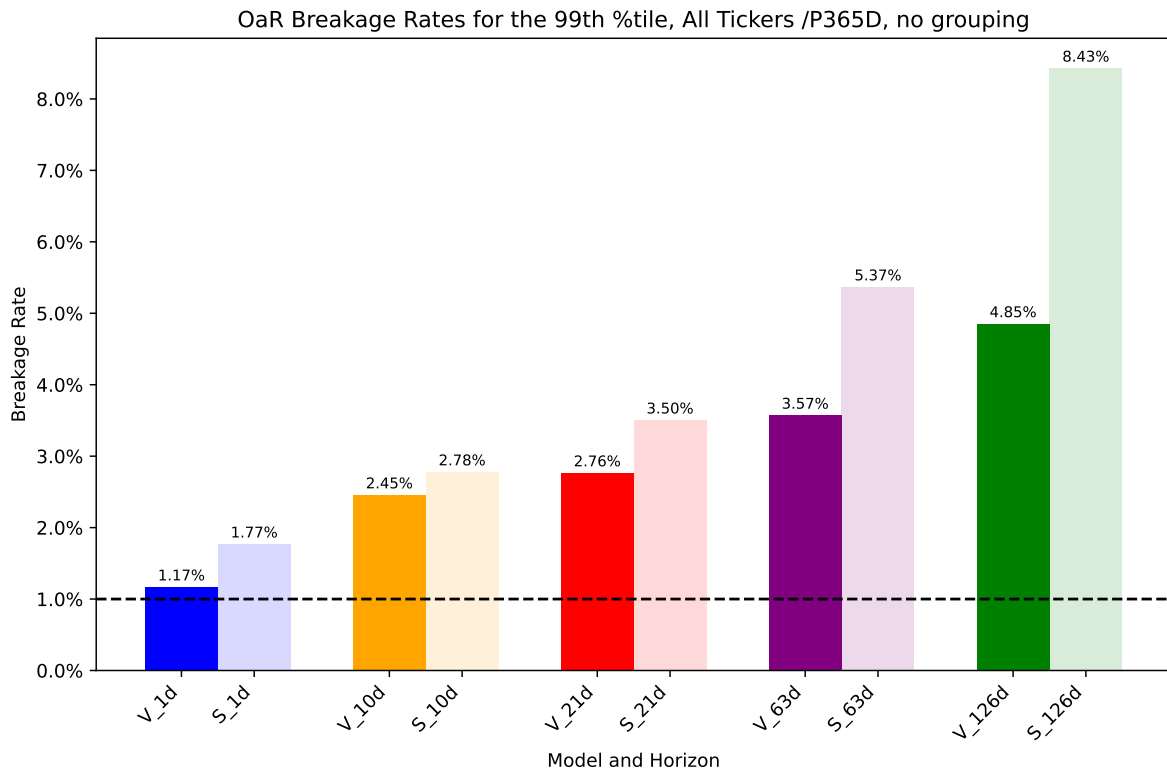
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across Model Dates:

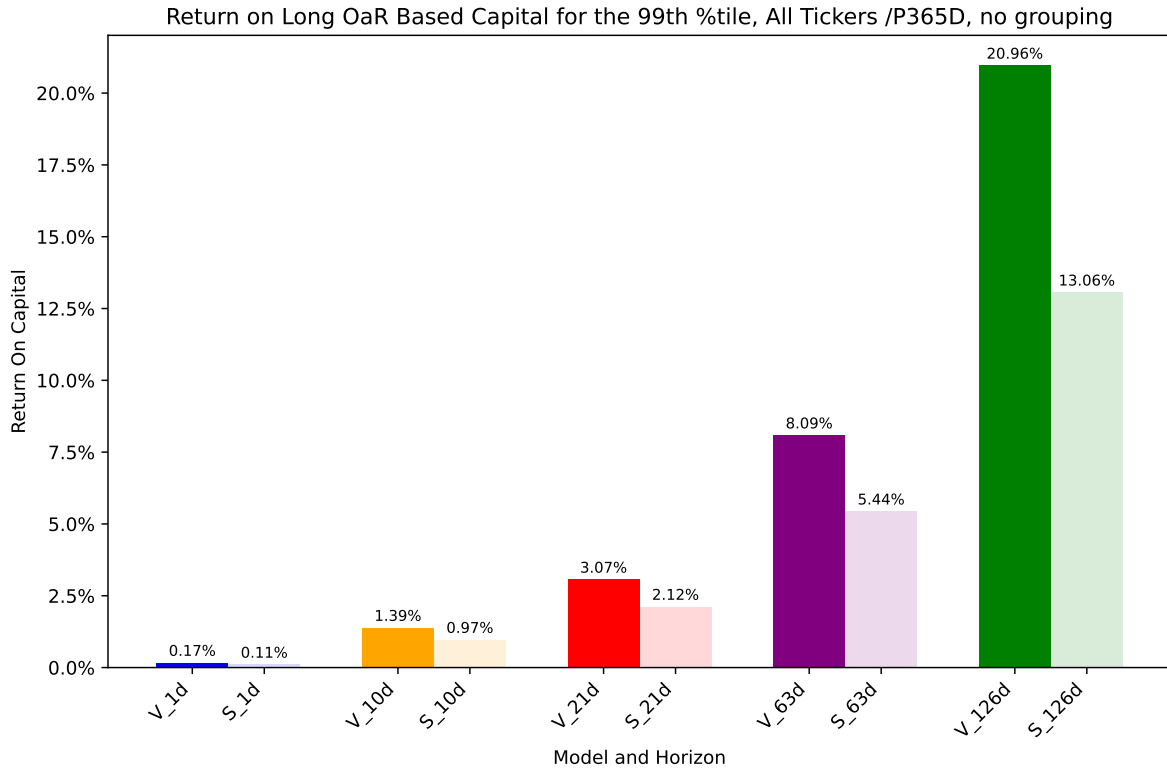
	1d	10d	21d	63d	126d	252d
intercept	-0.04%	-0.21%	-0.57%	-2.21%	-4.42%	-5.41%
intercept_p_value	0.00%	0.10%	0.01%	0.00%	0.00%	0.08%
slope	163.39%	148.18%	165.06%	181.03%	178.37%	166.98%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



## Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-05-28 through 2025-05-30





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

	1d	10d	21d	63d	126d
intercept	-0.01%	-0.00%	0.01%	-0.24%	-0.38%
intercept_p_value	20.23%	88.56%	84.19%	1.54%	8.50%
slope	172.39%	143.55%	144.09%	153.11%	163.38%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

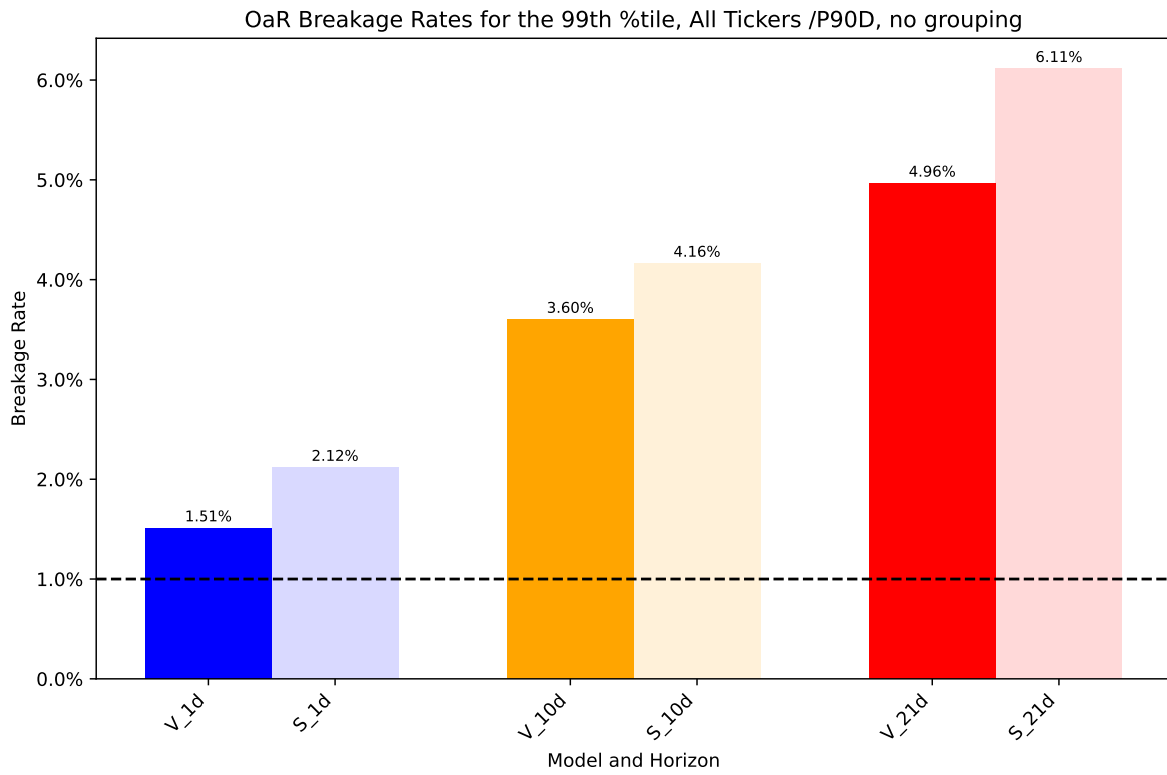
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across P365D:

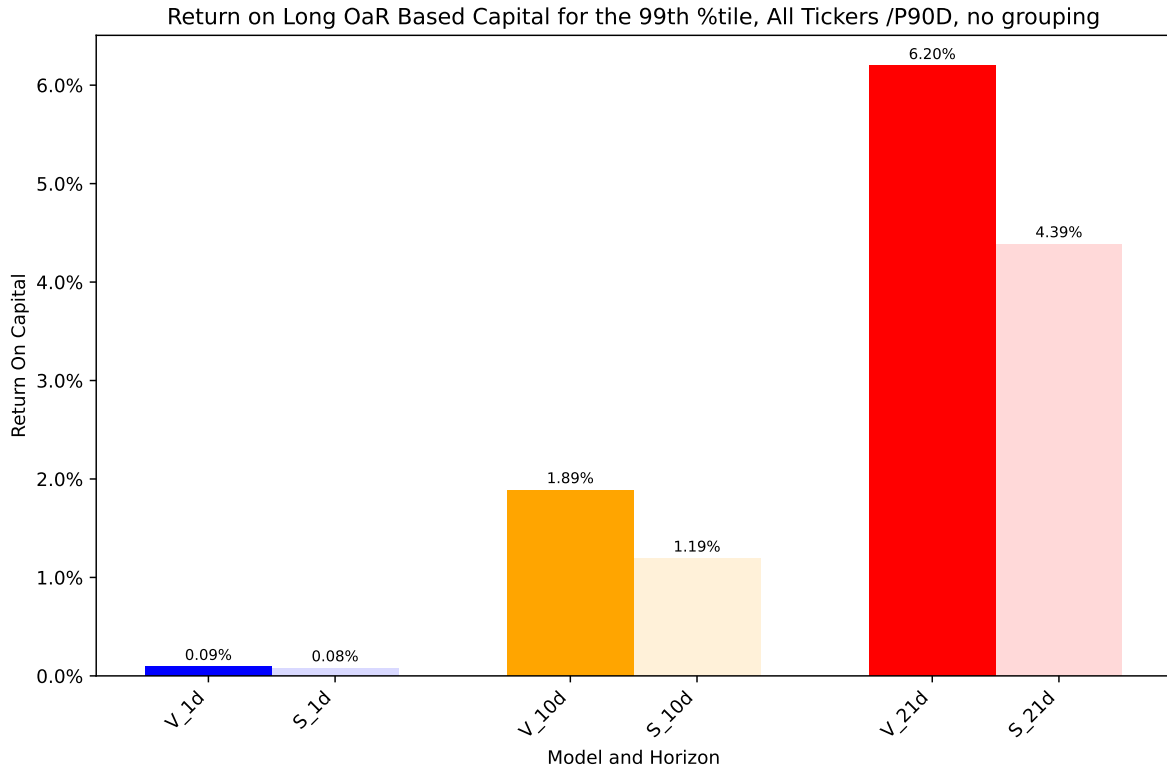
	1d	10d	21d	63d	126d
intercept	-0.02%	-0.09%	-0.22%	-0.80%	-2.72%
intercept_p_value	11.78%	33.56%	20.61%	11.00%	2.64%
slope	102.11%	110.72%	117.15%	123.29%	137.99%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%



## Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-05-28 through 2026-03-02





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

	1d	10d	21d
intercept	-0.04%	0.22%	0.05%
intercept_p_value	4.92%	0.25%	71.68%
slope	168.30%	140.10%	140.15%
slope_p_value	0.00%	0.00%	0.00%

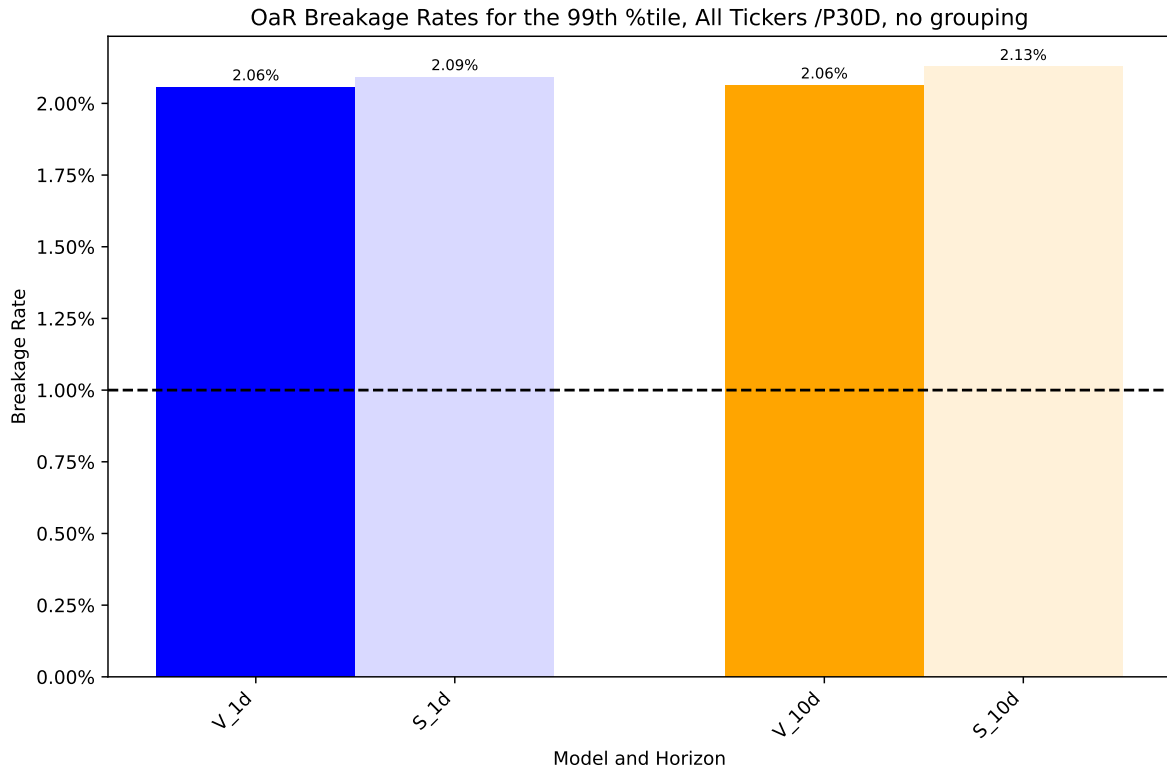
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across P90D:

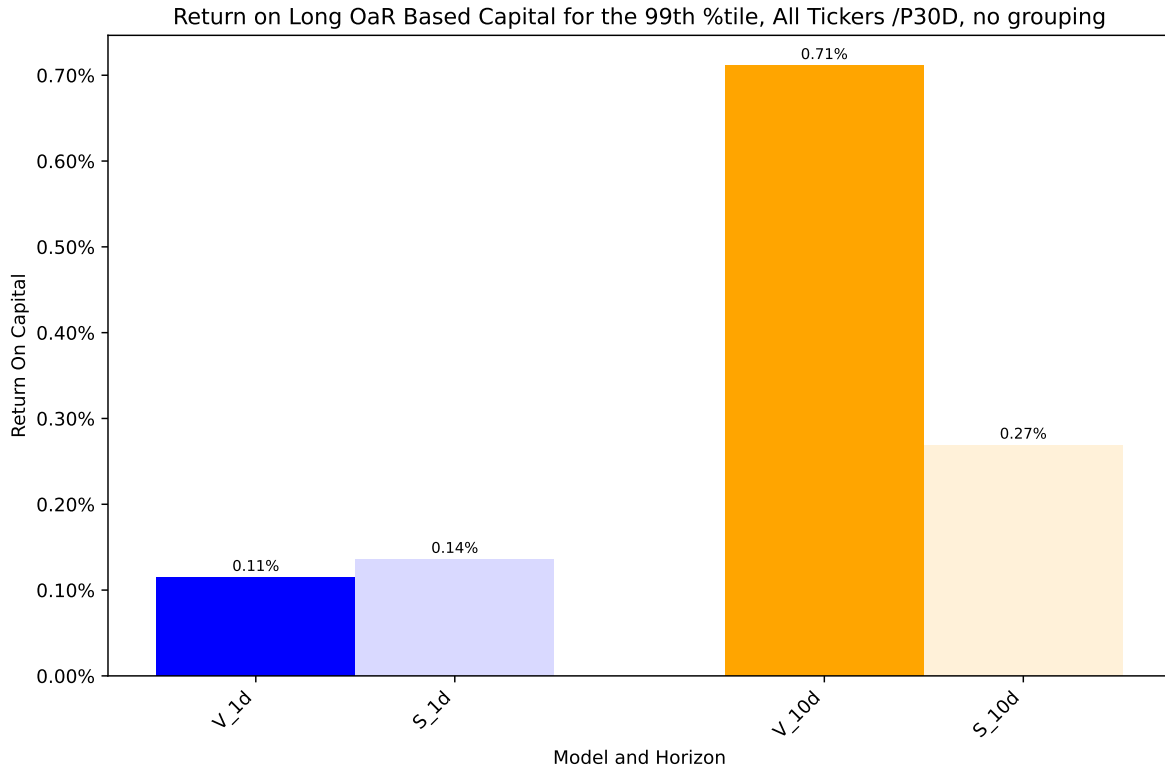
	1d	10d	21d
intercept	-0.00%	0.14%	-0.28%
intercept_p_value	98.14%	41.89%	54.31%
slope	114.03%	120.14%	132.40%
slope_p_value	0.00%	0.00%	0.00%



## Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-05-28 through 2026-04-30





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

	1d	10d
intercept	-0.11%	0.33%
intercept_p_value	0.62%	0.44%
slope	162.64%	140.91%
slope_p_value	0.00%	0.00%

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

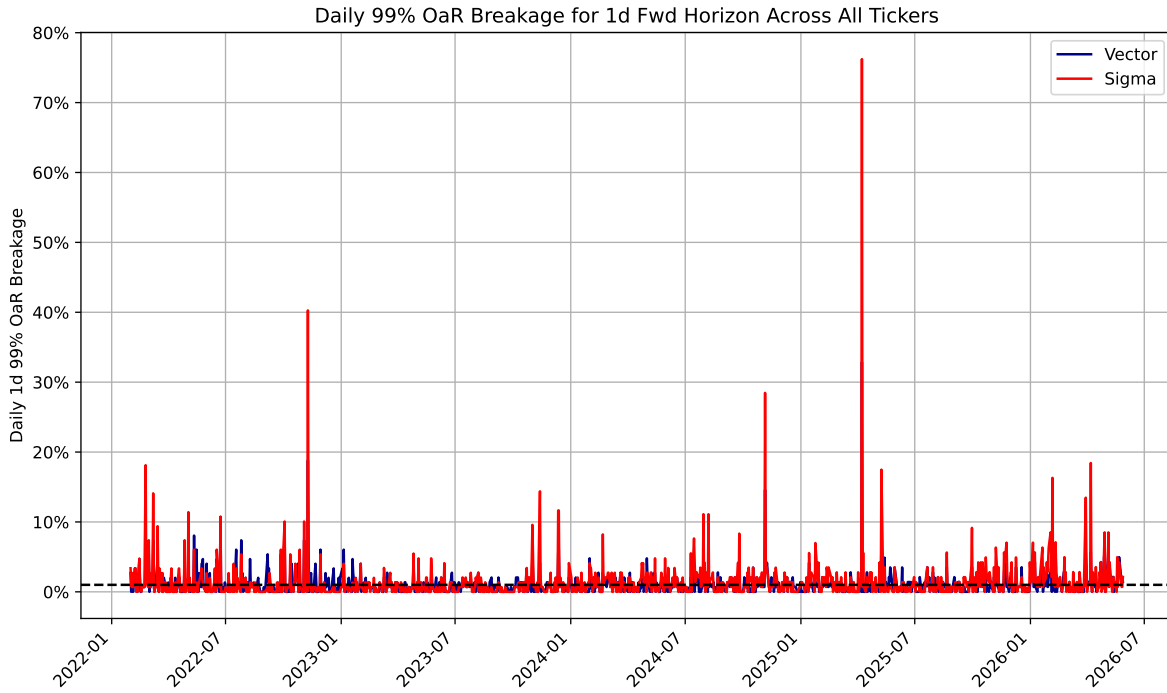
	1d	10d
intercept	-0.03%	-0.01%
intercept_p_value	34.64%	95.08%
slope	119.98%	105.81%
slope_p_value	0.00%	0.00%

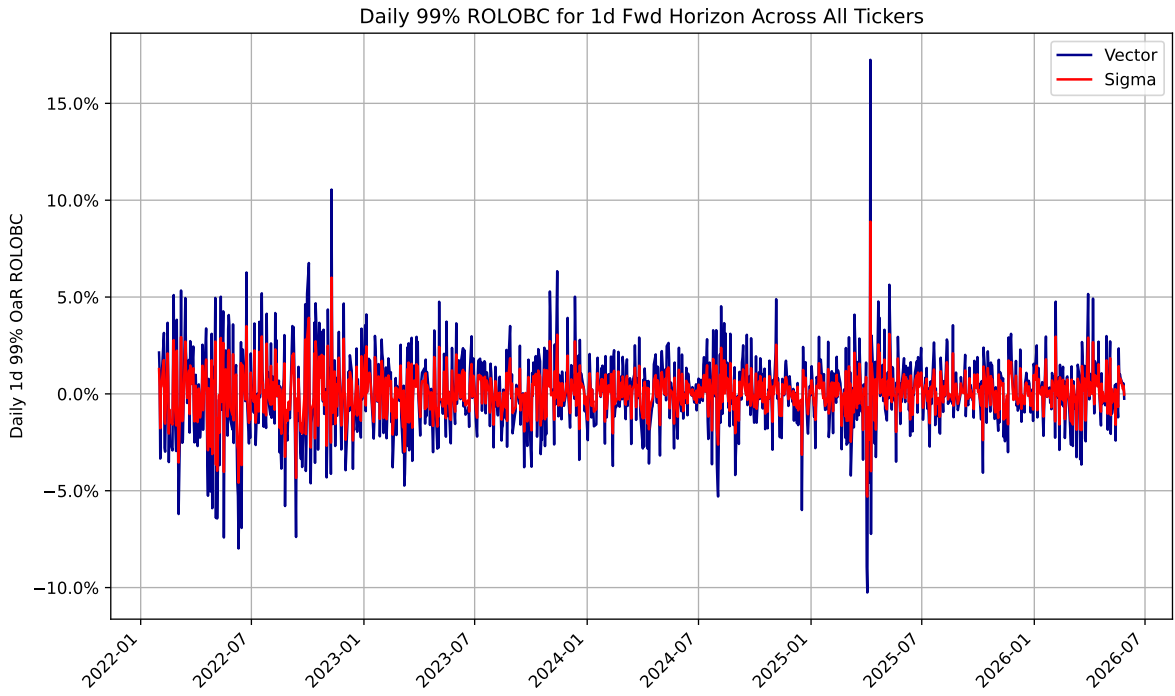


## Daily Performance

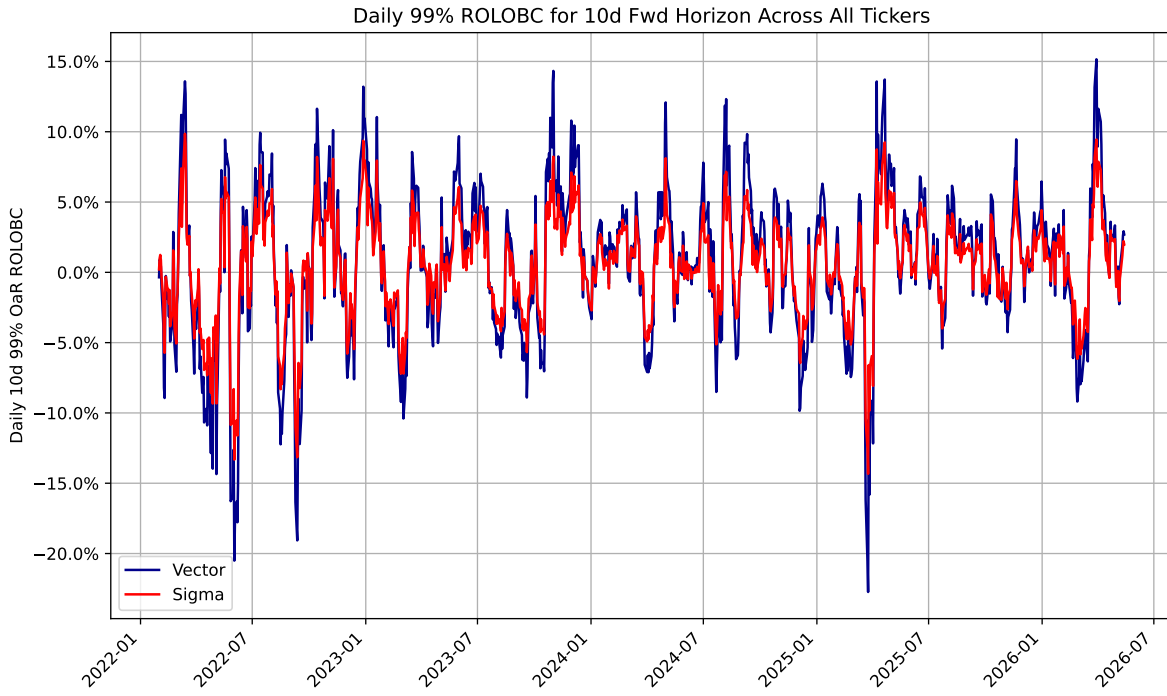
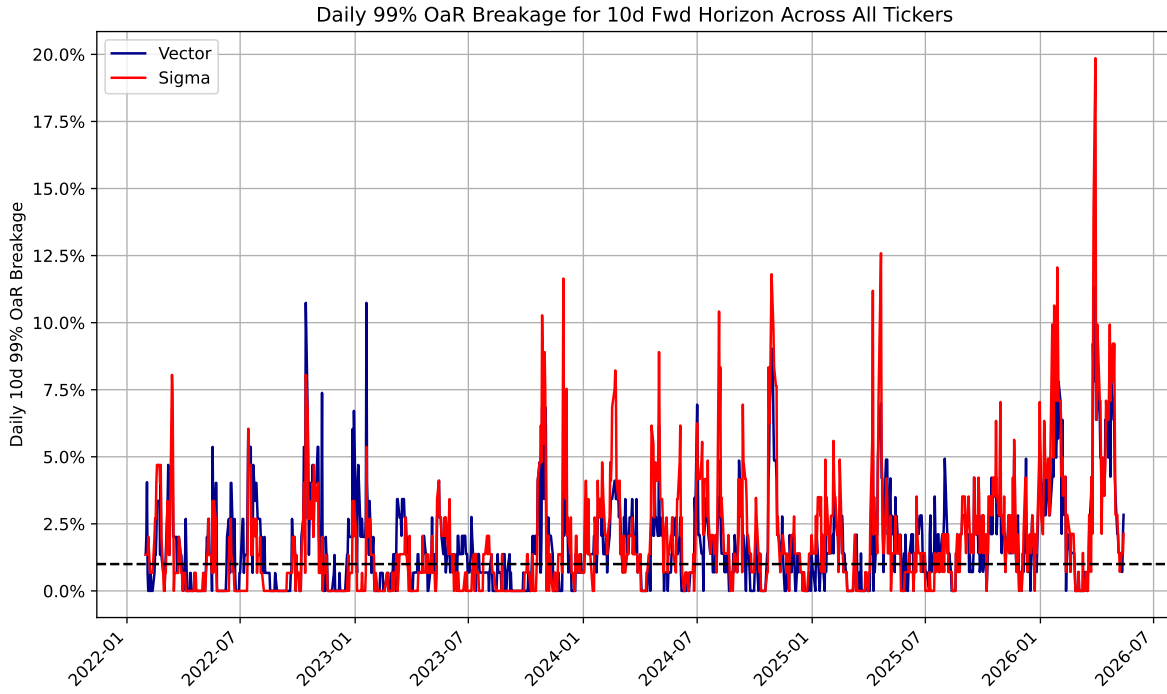
Here we look at the daily breakage and ROLOBC statistics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROLOBC outliers.

### 1d Horizon

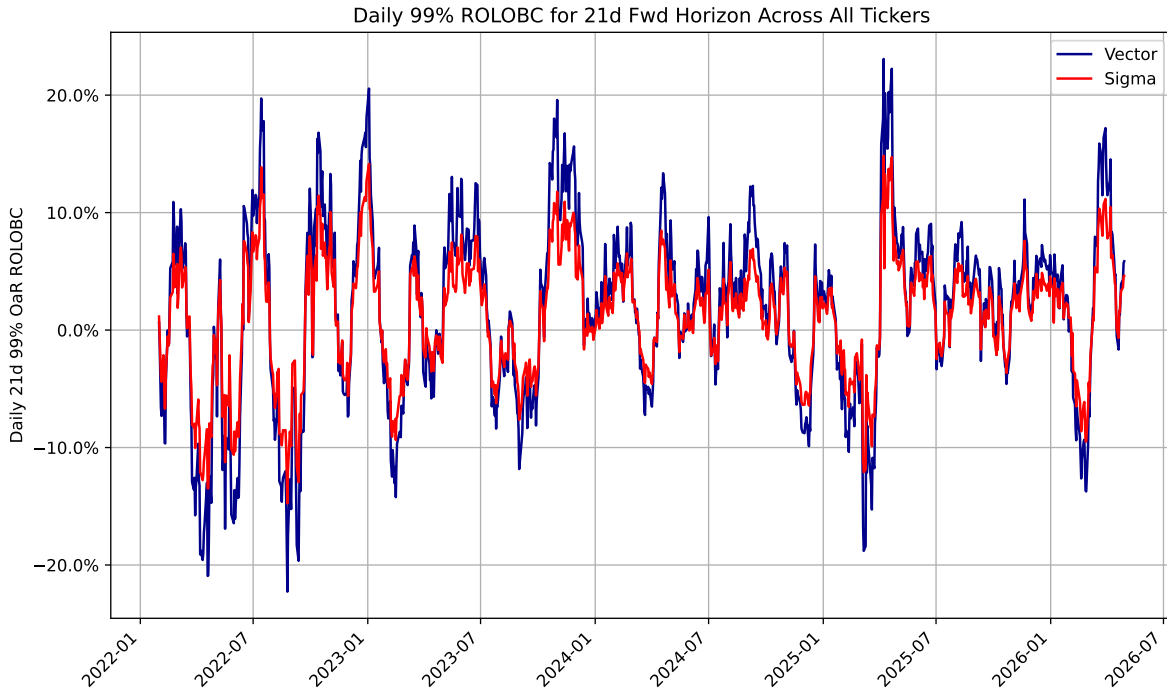
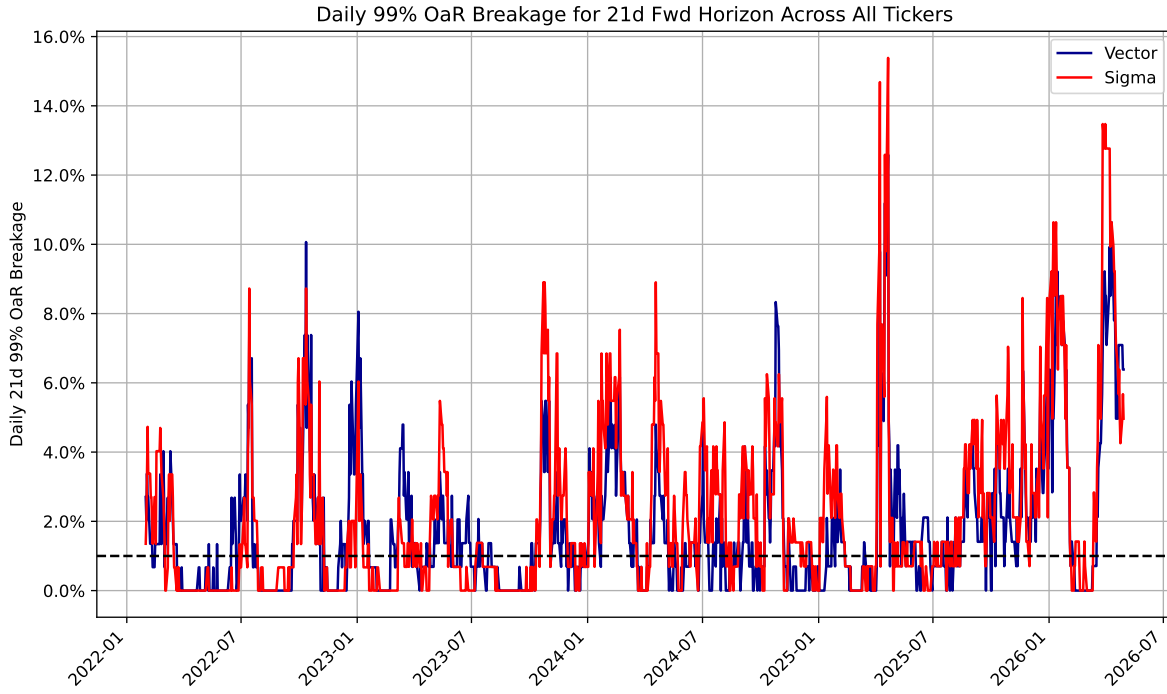




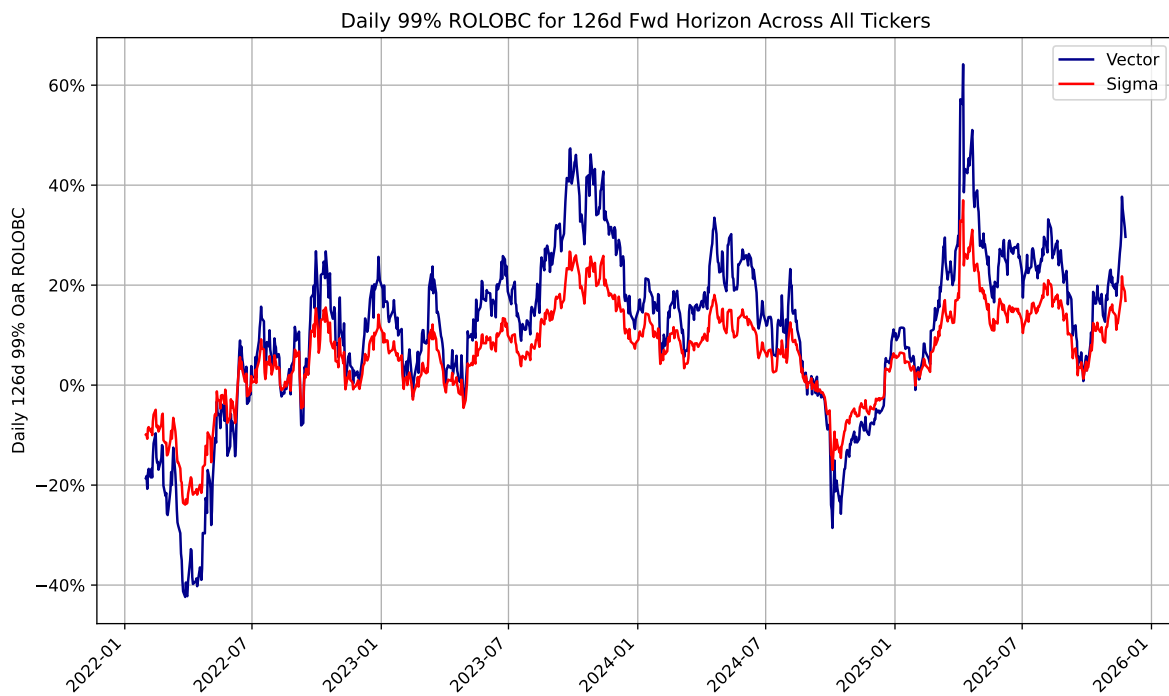
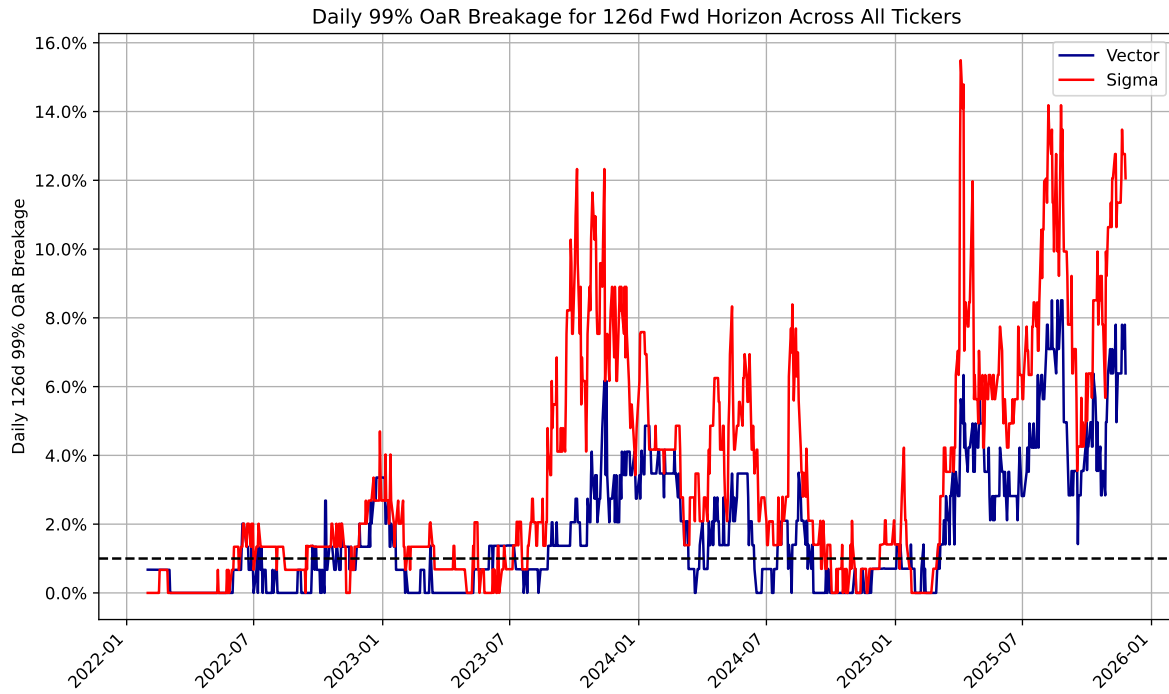
# 10d Horizon



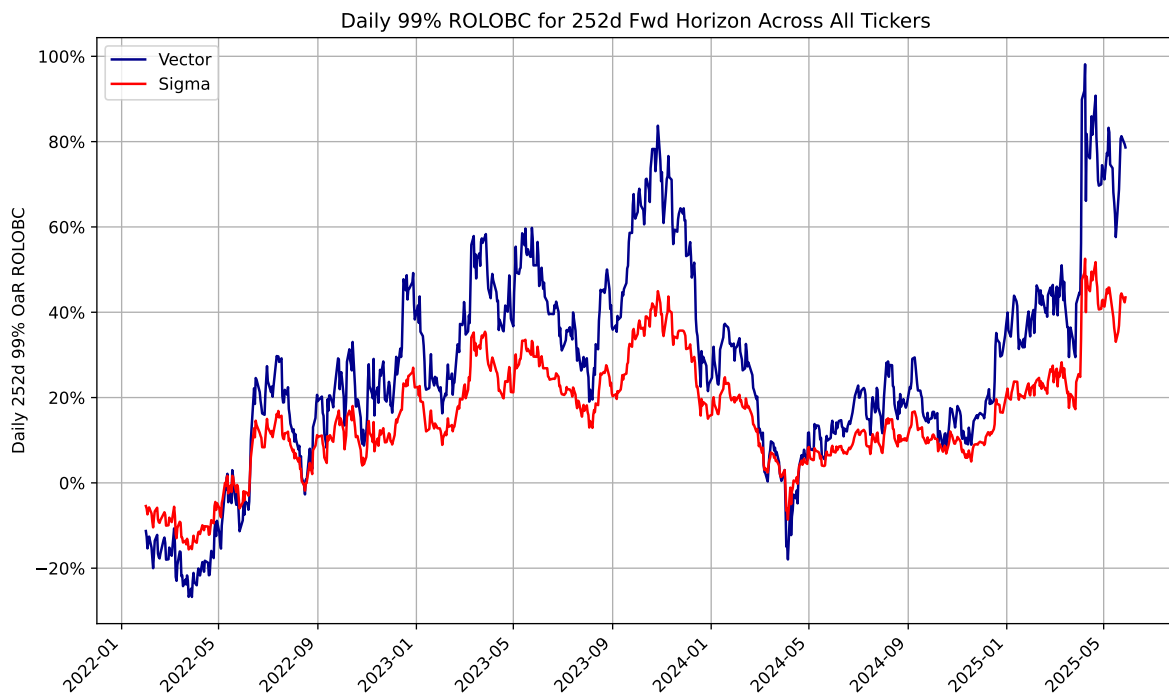
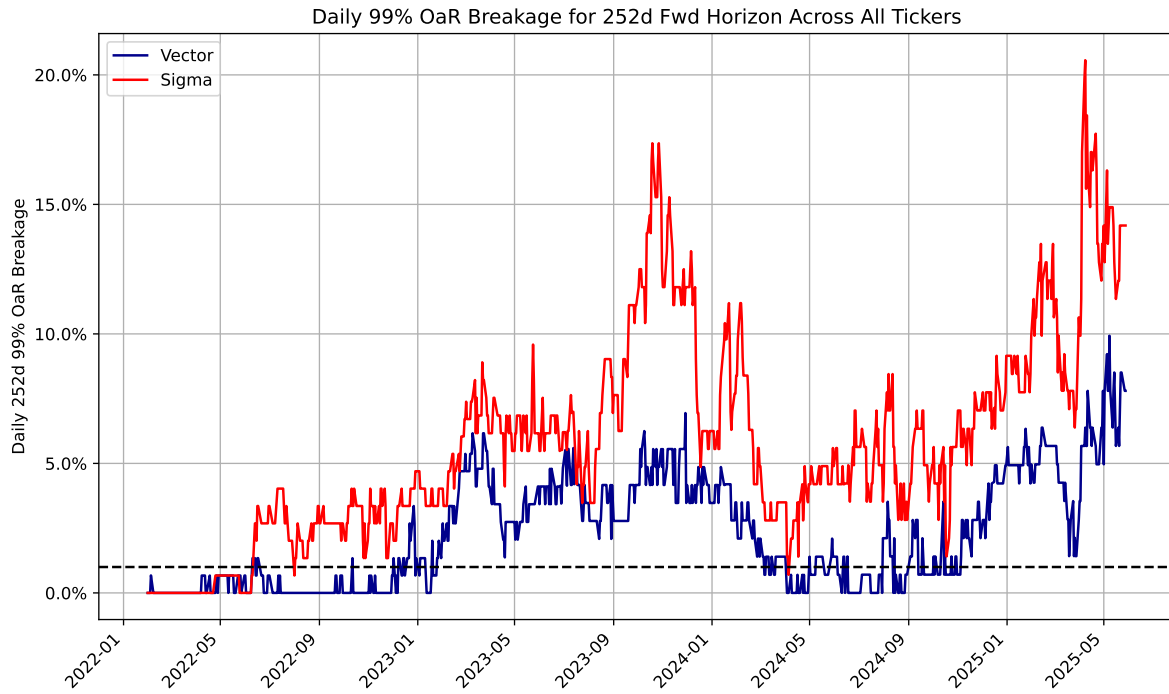
## 21d Horizon



## 63d Horizon



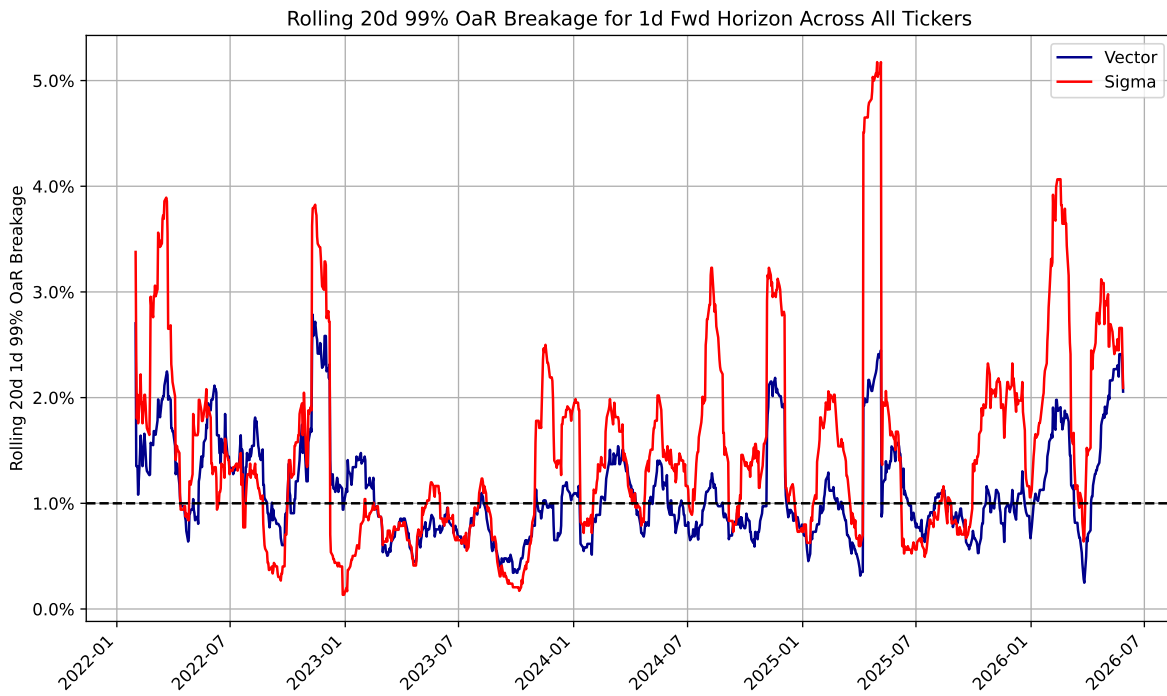
## 252d Horizon

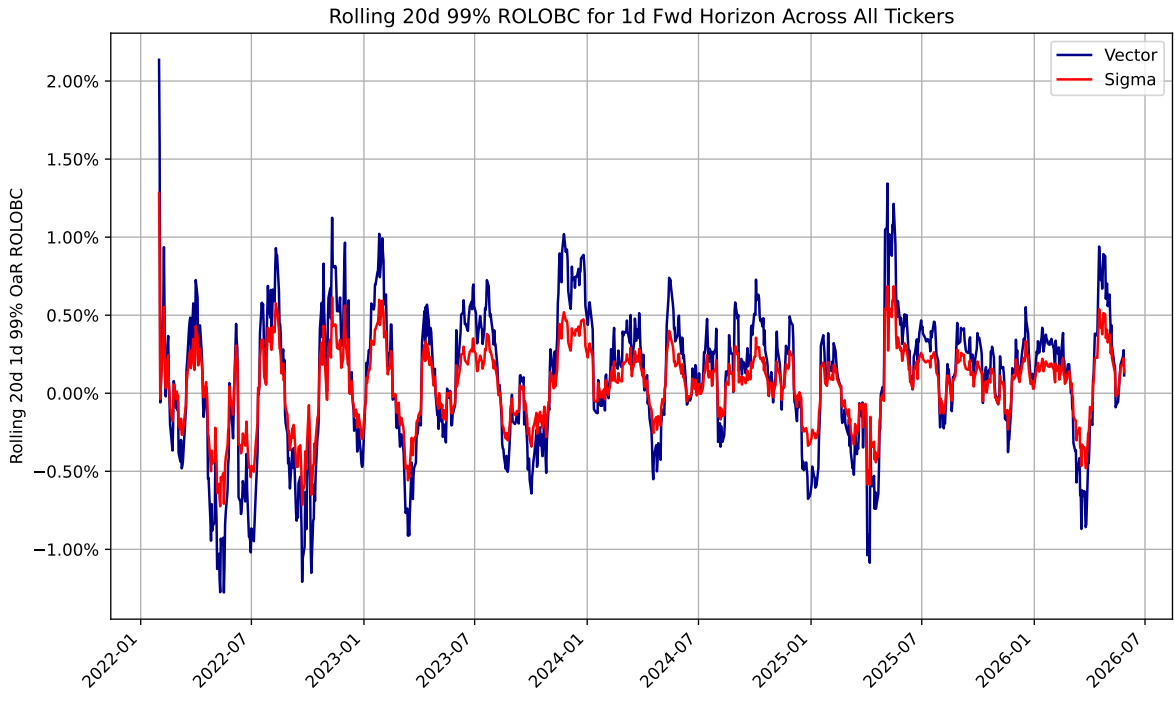


## Rolling 20d Performance

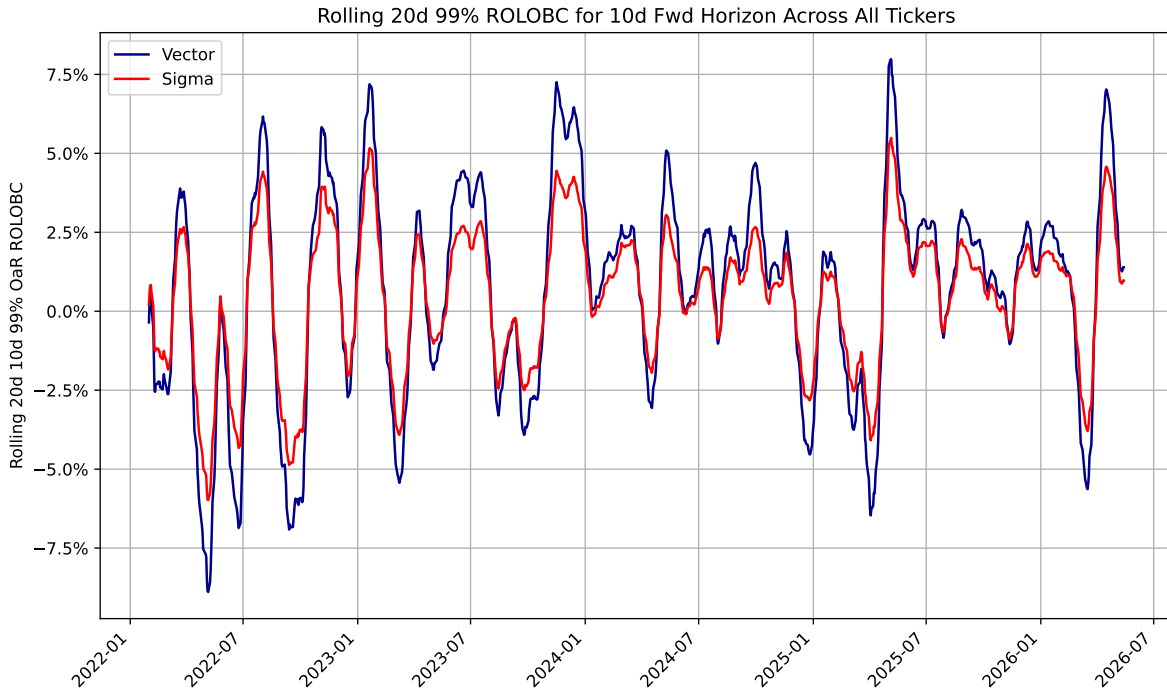
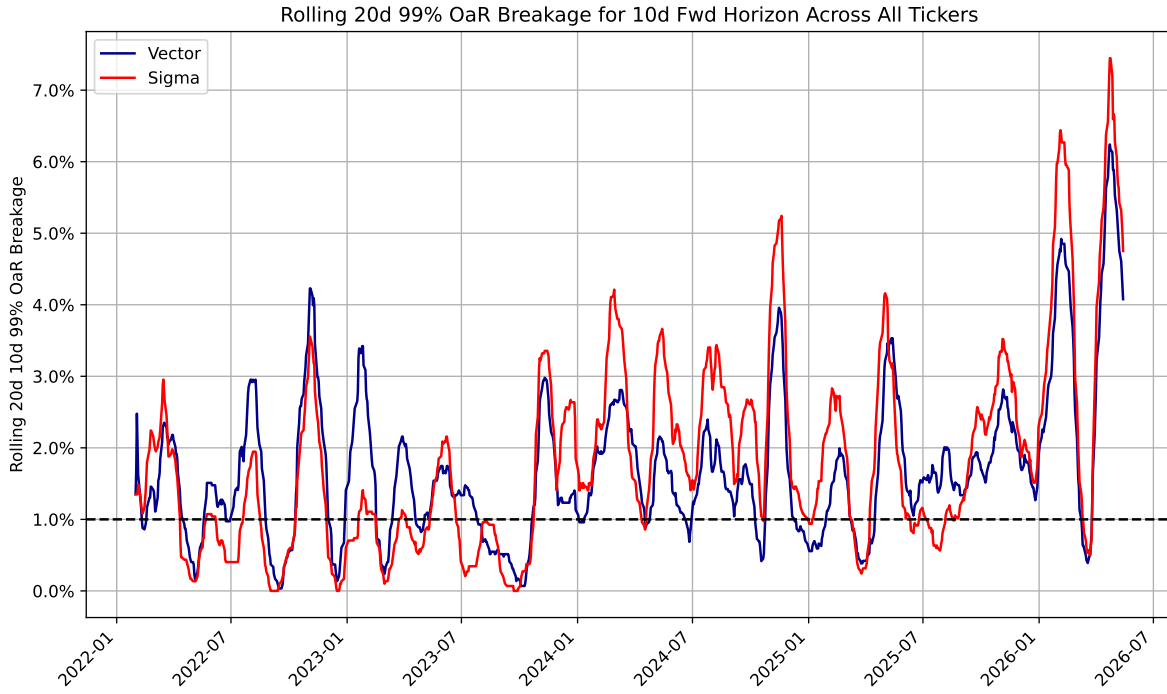
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statistics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

### 1d Horizon

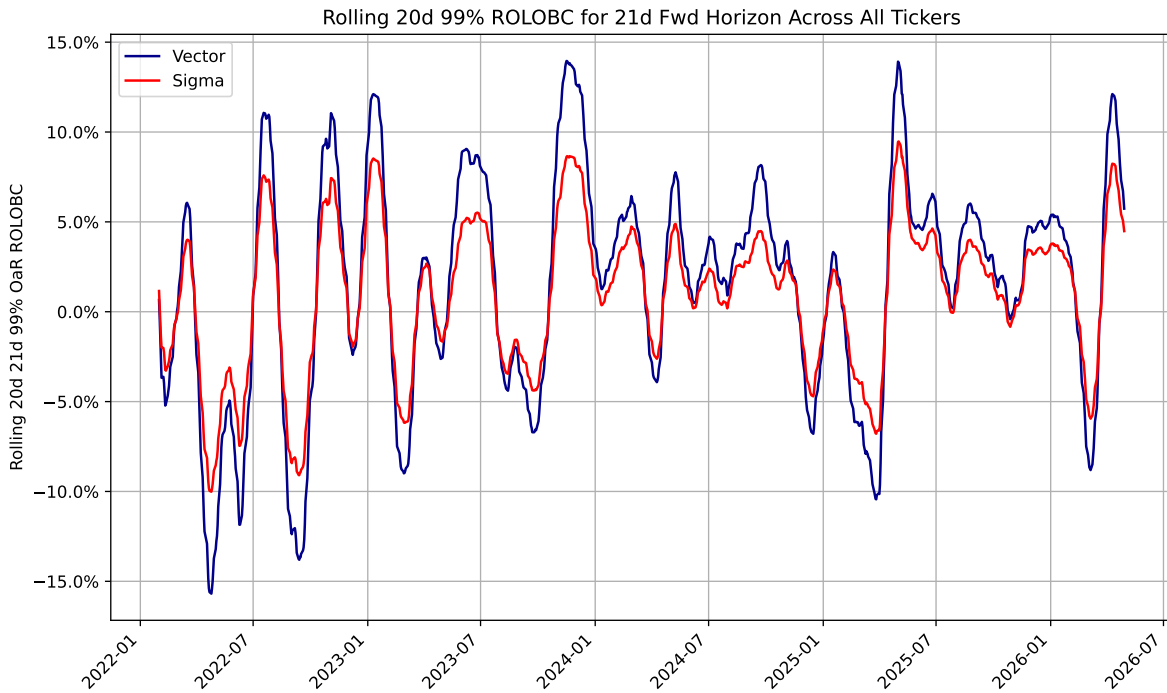
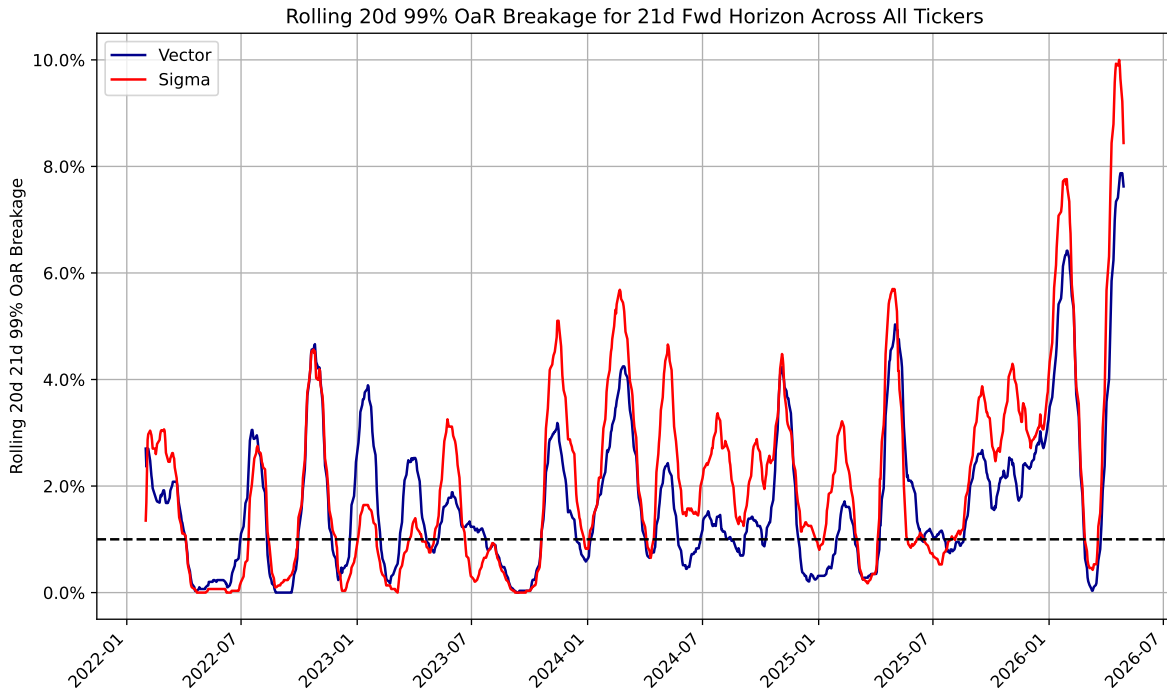




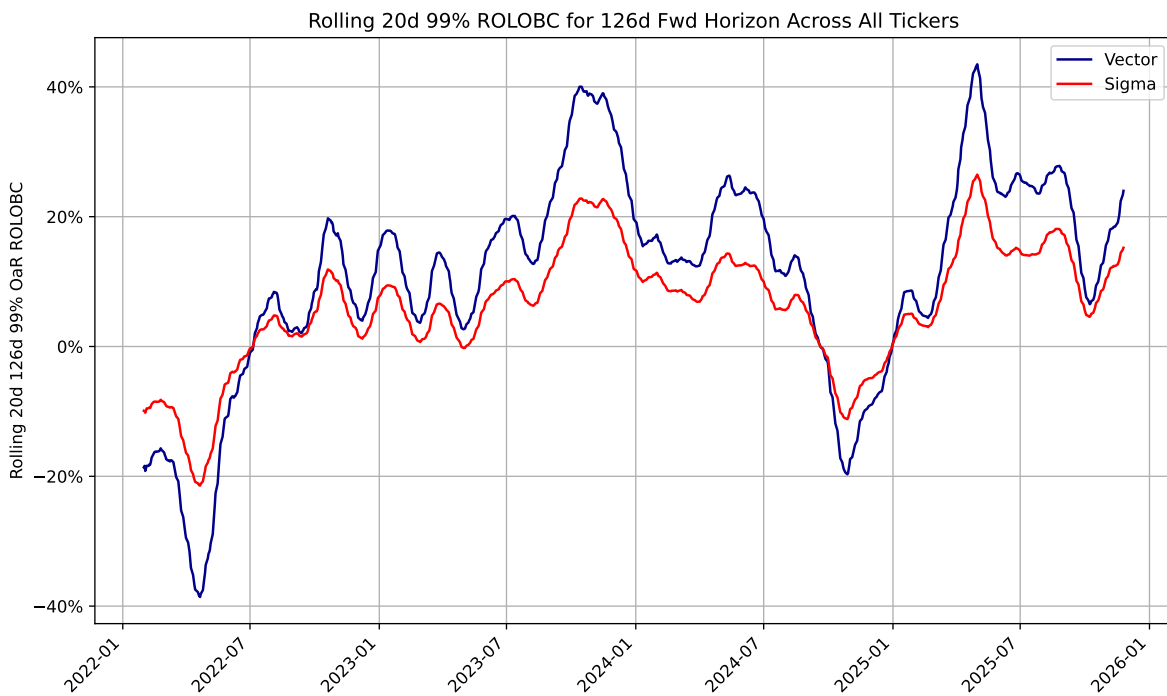
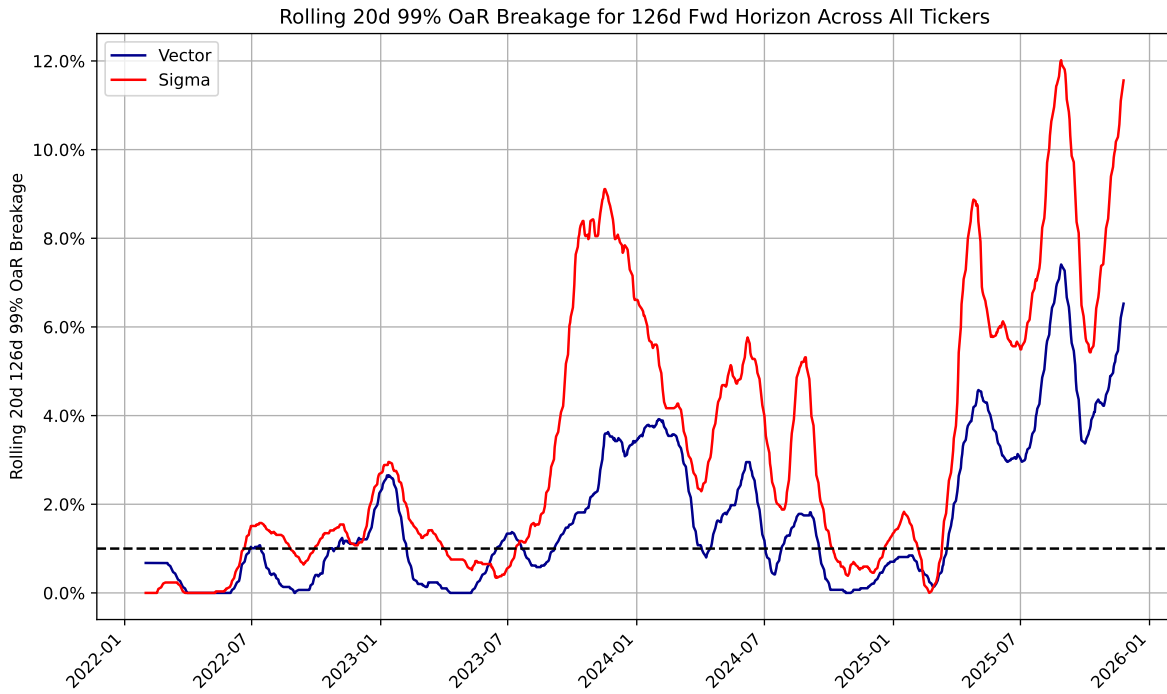
# 10d Horizon



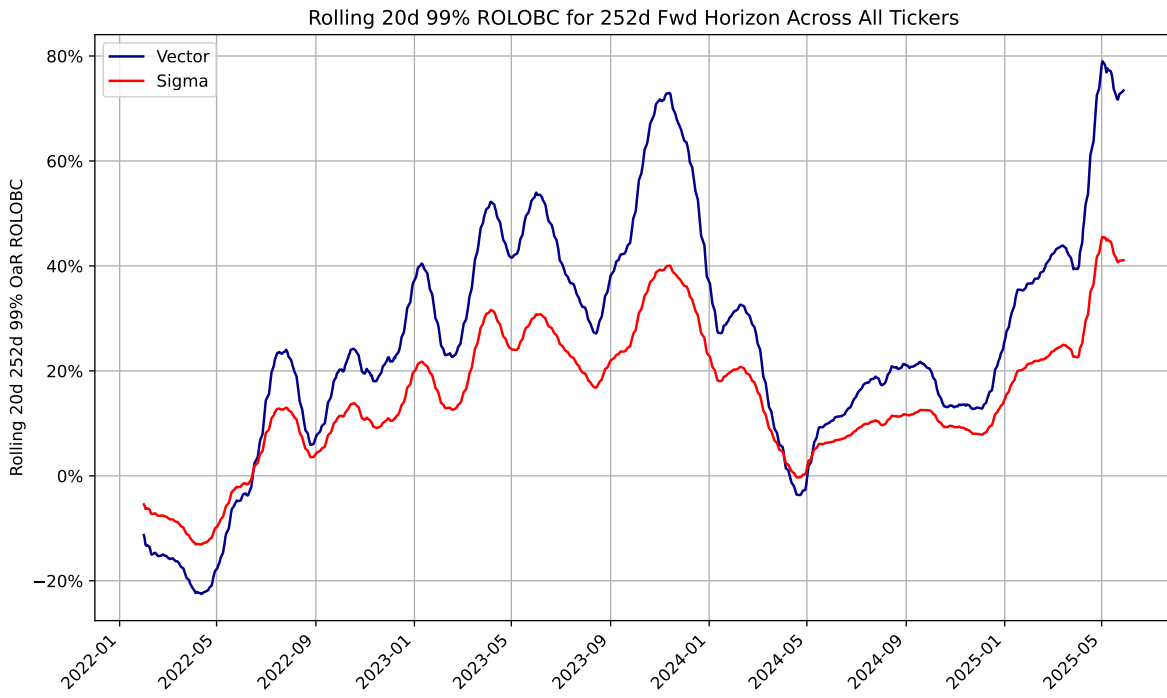
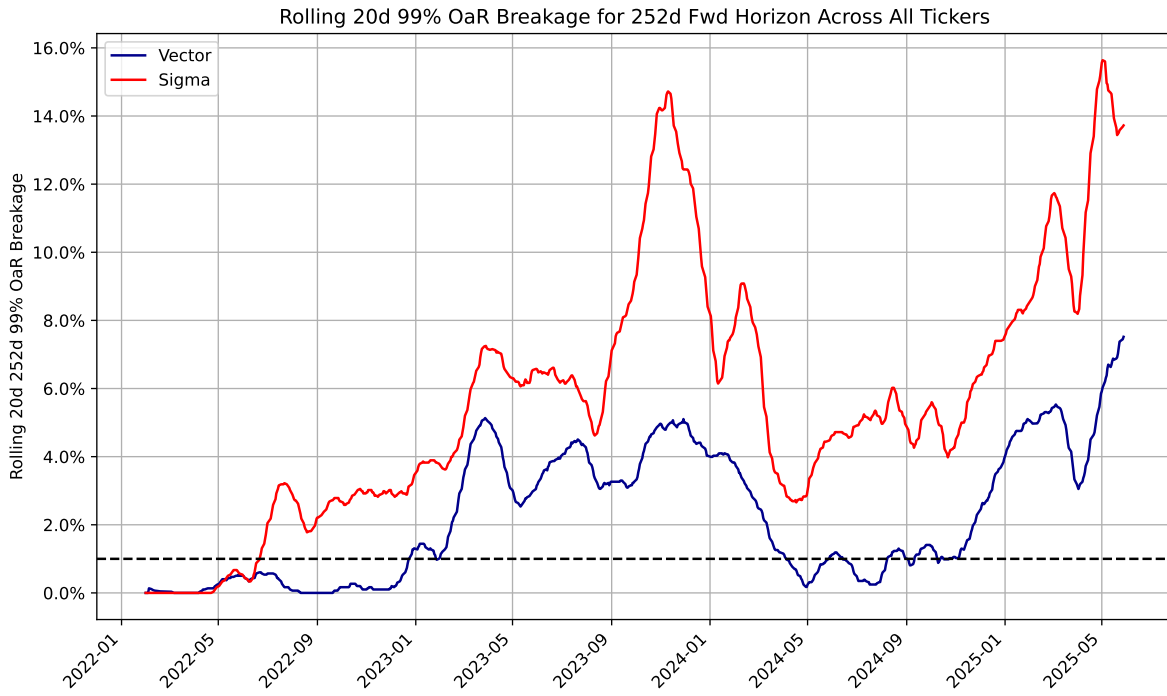
## 21d Horizon



## 63d Horizon



## 252d Horizon



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SIVBQ	6.83%	SLV	4.15%
1.0	GME	4.79%	VST	3.87%
1.0	AVGO	4.7%	WDC	3.78%
1.0	VST	4.15%	MU	3.41%
1.0	MSTR	4.15%	AVGO	2.86%
1.0	WDC	3.87%	MSTR	2.76%
1.0	FRCB	3.6%	B	2.67%
1.0	TSLA	3.5%	AMD	2.58%
1.0	META	3.41%	SIVBQ	2.52%
1.0	B	3.23%	NEM	2.49%
1.0	SLV	2.95%	CCL	2.49%
1.0	HLT	2.95%	INTC	2.49%
1.0	TEVA	2.76%	NVDA	2.49%
1.0	NFLX	2.76%	GLD	2.4%
1.0	BALL	2.58%	HSBC	2.21%
1.0	AA	2.58%	PWR	2.21%
1.0	ACGL	2.58%	LLY	2.21%
1.0	CHTR	2.58%	PHM	2.21%
1.0	SBNY	2.52%	KALU	2.12%
1.0	INTU	2.49%	GOOGL	2.12%
1.0	BUD	2.49%	ON	2.03%
1.0	GILD	2.49%	AA	2.03%
1.0	ZTS	2.3%	TEVA	1.94%
1.0	CMA	2.19%	GS	1.94%
1.0	OXY	2.12%	CSTM	1.94%
1.0	JAZZ	2.03%	IRM	1.94%
1.0	GWV	2.03%	AMGN	1.94%
1.0	AMC	2.03%	GILD	1.84%
1.0	ORCL	2.03%	UNH	1.84%
1.0	GLD	1.94%	GE	1.84%



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	10.5%	VST	6.69%
10.0	SIVBQ	9.93%	SLV	5.77%
10.0	WDC	7.81%	MU	5.48%
10.0	VST	7.34%	NVDA	5.2%
10.0	AVGO	7.25%	TEVA	5.11%
10.0	META	6.88%	ORCL	4.93%
10.0	GME	5.76%	WDC	4.93%
10.0	CHTR	5.48%	INTC	4.55%
10.0	GWV	5.11%	AVGO	4.55%
10.0	GNRC	4.83%	X	4.53%
10.0	KALU	4.74%	AMD	4.18%
10.0	GILD	4.65%	LLY	4.09%
10.0	INTC	4.55%	GLD	4.09%
10.0	SLV	4.28%	GWV	3.81%
10.0	IRM	4.28%	CAH	3.81%
10.0	EXPE	4.09%	IRM	3.72%
10.0	ORCL	4.0%	TMUS	3.53%
10.0	TXN	4.0%	GNRC	3.44%
10.0	ETRN	3.97%	MSTR	3.35%
10.0	ISRG	3.9%	GOOGL	3.25%
10.0	B	3.81%	GILD	3.25%
10.0	NVS	3.81%	PWR	3.25%
10.0	VZ	3.81%	TRGP	3.16%
10.0	SBNY	3.68%	AA	3.16%
10.0	BUD	3.62%	B	3.07%
10.0	TSLA	3.53%	AMGN	3.07%
10.0	NFLX	3.44%	MUB	2.98%
10.0	ZTS	3.44%	THC	2.97%
10.0	GLD	3.35%	TSLA	2.88%
10.0	HCA	3.35%	GBTC	2.88%



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	MSTR	11.08%	VST	8.45%
21.0	SIVBQ	9.63%	MU	8.26%
21.0	WDC	8.73%	NVDA	8.08%
21.0	CHTR	7.51%	TEVA	7.32%
21.0	VST	7.14%	WDC	6.67%
21.0	KALU	7.14%	SLV	6.48%
21.0	GNRC	6.76%	CAH	6.2%
21.0	GWW	6.76%	LLY	5.63%
21.0	AVGO	6.76%	INTC	5.63%
21.0	SLV	5.92%	AMD	5.63%
21.0	GILD	5.82%	MSTR	5.54%
21.0	META	5.73%	TRGP	5.35%
21.0	MU	5.54%	ORCL	5.26%
21.0	B	5.45%	AVGO	5.16%
21.0	GME	5.16%	GILD	5.07%
21.0	INTC	5.16%	GE	4.98%
21.0	ISRG	4.79%	B	4.98%
21.0	TXN	4.69%	ETRN	4.55%
21.0	BUD	4.23%	X	4.35%
21.0	ORCL	3.94%	PWR	4.32%
21.0	TRGP	3.85%	GBTC	4.23%
21.0	CAH	3.76%	TSLA	4.23%
21.0	VZ	3.76%	GWW	4.13%
21.0	JAZZ	3.57%	GLD	4.04%
21.0	TEVA	3.29%	GNRC	3.85%
21.0	WFC	3.29%	MOS	3.76%
21.0	NVDA	3.1%	THC	3.66%
21.0	XOM	3.1%	AMGN	3.66%
21.0	QCOM	3.1%	TMUS	3.66%
21.0	BALL	2.91%	TXN	3.66%



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	WDC	17.4%	WDC	19.16%
63.0	AVGO	11.73%	NVDA	16.23%
63.0	MU	10.75%	MU	16.03%
63.0	VST	10.26%	VST	15.44%
63.0	SLV	9.98%	SLV	11.45%
63.0	MSTR	7.82%	GLD	11.14%
63.0	SIVBQ	7.78%	B	10.95%
63.0	KALU	7.62%	MSTR	10.46%
63.0	ORCL	7.14%	TRGP	9.09%
63.0	EXPE	5.67%	GBTC	9.09%
63.0	NVDA	5.47%	CAH	8.7%
63.0	GME	5.38%	IRM	7.72%
63.0	IRM	5.28%	LLY	7.62%
63.0	GLD	4.99%	ORCL	7.14%
63.0	AA	4.89%	GILD	6.74%
63.0	WFC	4.59%	TMUS	6.35%
63.0	TRGP	4.3%	GOOGL	6.26%
63.0	B	3.81%	ETRN	5.99%
63.0	NEM	3.71%	AVGO	5.96%
63.0	GOOGL	3.71%	AMD	5.87%
63.0	BUD	3.62%	GE	5.77%
63.0	META	3.52%	DHI	5.57%
63.0	INTC	3.32%	MRK	5.47%
63.0	TMUS	3.32%	KALU	5.47%
63.0	CTLT	3.23%	NEM	5.28%
63.0	LW	3.23%	INTC	4.89%
63.0	HSBC	2.74%	CCL	4.79%
63.0	GILD	2.54%	TEVA	4.79%
63.0	NVS	2.54%	AA	4.59%
63.0	FCX	2.44%	ACGL	4.59%



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	24.06%	VST	26.77%
126.0	WDC	15.94%	NVDA	25.0%
126.0	MSTR	15.83%	MU	24.9%
126.0	MU	15.62%	WDC	21.98%
126.0	AVGO	14.58%	TRGP	20.31%
126.0	IRM	12.6%	GLD	18.65%
126.0	SLV	11.05%	SLV	16.58%
126.0	TRGP	9.38%	MSTR	14.27%
126.0	GOOGL	9.06%	B	14.17%
126.0	META	8.44%	GE	13.96%
126.0	KALU	7.81%	NEM	13.75%
126.0	NVDA	7.6%	THC	13.12%
126.0	GLD	6.98%	GOOGL	12.08%
126.0	NEM	6.56%	IRM	11.25%
126.0	MSI	6.35%	TMUS	11.25%
126.0	EXPE	5.94%	CAH	11.15%
126.0	LW	4.9%	LLY	10.83%
126.0	B	4.79%	TEVA	10.1%
126.0	NVS	4.79%	GBTC	9.69%
126.0	TEVA	4.48%	GILD	9.58%
126.0	AA	4.27%	ACGL	9.27%
126.0	BUD	4.06%	AMAT	9.06%
126.0	GSK	3.12%	RIO	8.75%
126.0	ACGL	2.71%	ORCL	8.65%
126.0	ORCL	2.6%	AA	8.65%
126.0	CAH	2.5%	AVGO	7.29%
126.0	OXY	2.4%	META	7.19%
126.0	TXN	2.19%	AMD	6.98%
126.0	GILD	2.08%	KALU	6.67%
126.0	TDG	2.08%	CMG	6.56%



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## 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 2026-05-28

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	AVGO	41.01%	VST	49.16%
252.0	VST	38.49%	NVDA	47.24%
252.0	MSTR	33.45%	GLD	47.12%
252.0	NVDA	31.65%	AVGO	46.16%
252.0	IRM	18.23%	MSTR	33.57%
252.0	WDC	15.71%	GE	33.33%
252.0	NEM	13.67%	LLY	29.62%
252.0	GLD	13.67%	CAH	27.22%
252.0	MU	12.23%	GBTC	24.7%
252.0	SLV	12.23%	HSEC	22.54%
252.0	LLY	11.87%	PHM	22.18%
252.0	B	11.27%	MU	21.58%
252.0	TEVA	7.19%	TRGP	20.62%
252.0	GWV	7.07%	WDC	19.18%
252.0	TRGP	6.35%	GS	18.71%
252.0	MSI	6.35%	B	18.23%
252.0	META	5.64%	TMUS	17.39%
252.0	GOOGL	4.8%	NEM	17.15%
252.0	LW	3.72%	GOOGL	16.67%
252.0	AA	3.6%	TEVA	16.55%
252.0	KALU	2.76%	SLV	15.95%
252.0	GNRC	2.76%	COST	15.71%
252.0	INTC	2.4%	IRM	15.59%
252.0	ORCL	2.28%	META	15.47%
252.0	GILD	2.28%	PWR	15.11%
252.0	WFC	2.04%	ACGL	14.51%
252.0	GSK	1.8%	NFLX	13.79%
252.0	THC	1.8%	MSI	12.23%
252.0	AMD	1.8%	THC	11.63%
252.0	TMUS	1.8%	JPM	11.39%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	WDC	30.0%	QCOM	20.0%
1.0	MU	25.0%	AMD	20.0%
1.0	AMD	20.0%	MU	15.0%
1.0	AVGO	15.0%	ON	15.0%
1.0	QCOM	15.0%	INTC	15.0%
1.0	INTC	15.0%	HSBC	10.0%
1.0	NVDA	10.0%	GE	10.0%
1.0	CLF	10.0%	CSCO	10.0%
1.0	GE	10.0%	B	10.0%
1.0	UNH	10.0%	CSTM	10.0%
1.0	AA	10.0%	WDC	10.0%
1.0	PCG	10.0%	KALU	5.0%
1.0	KALU	5.0%	GS	5.0%
1.0	GLD	5.0%	CVS	5.0%
1.0	GNRC	5.0%	RIO	5.0%
1.0	RIO	5.0%	LUMN	5.0%
1.0	ELAN	5.0%	FSUGY	5.0%
1.0	GS	5.0%	MRK	5.0%
1.0	ORCL	5.0%	OXY	5.0%
1.0	GWV	5.0%	GNRC	5.0%
1.0	CSTM	5.0%	ORLY	5.0%
1.0	CSCO	5.0%	ORCL	5.0%
1.0	CNC	5.0%	JAZZ	5.0%
1.0	MNST	5.0%	MS	5.0%
1.0	MSFT	5.0%	GWV	5.0%
1.0	JAZZ	5.0%	HLT	5.0%
1.0	AMC	5.0%	HON	5.0%
1.0	BUD	5.0%	MSFT	5.0%
1.0	TXN	5.0%	NVDA	5.0%
1.0	UAA	5.0%	MSI	5.0%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	CSCO	63.64%	CSCO	90.91%
10.0	MNST	45.45%	MNST	54.55%
10.0	MU	36.36%	CVS	36.36%
10.0	JAZZ	36.36%	MU	27.27%
10.0	AMD	27.27%	QCOM	18.18%
10.0	WDC	18.18%	BBY	18.18%
10.0	BBY	18.18%	ON	18.18%
10.0	GWV	18.18%	FSUGY	9.09%
10.0	GE	9.09%	INTC	9.09%
10.0	INTC	9.09%	AMD	9.09%
10.0	MRK	9.09%	NVDA	9.09%
10.0	NVDA	0.0%	AA	0.0%
10.0	NAVI	0.0%	NFLX	0.0%
10.0	NEM	0.0%	NVS	0.0%
10.0	NFLX	0.0%	ORCL	0.0%
10.0	AA	0.0%	NWL	0.0%
10.0	NVS	0.0%	NAVI	0.0%
10.0	MUB	0.0%	ORLY	0.0%
10.0	ON	0.0%	OXY	0.0%
10.0	ORCL	0.0%	PCG	0.0%
10.0	ORLY	0.0%	PEP	0.0%
10.0	OXY	0.0%	NEM	0.0%
10.0	PCG	0.0%	MSTR	0.0%
10.0	NWL	0.0%	MUB	0.0%
10.0	MS	0.0%	POST	0.0%
10.0	MSTR	0.0%	MSI	0.0%
10.0	MSI	0.0%	MSFT	0.0%
10.0	MSFT	0.0%	MS	0.0%
10.0	PHM	0.0%	MRK	0.0%
10.0	MOS	0.0%	MOS	0.0%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	WDC	16.13%	ON	12.9%
1.0	UNH	11.29%	INTC	11.29%
1.0	INTC	9.68%	MU	9.68%
1.0	MU	9.68%	CSTM	9.68%
1.0	QCOM	8.06%	AMD	9.68%
1.0	AMD	8.06%	QCOM	9.68%
1.0	AA	6.45%	HSBC	8.06%
1.0	NFLX	6.45%	WDC	8.06%
1.0	BUD	6.45%	RIO	6.45%
1.0	JAZZ	4.84%	KALU	6.45%
1.0	CNC	4.84%	CCL	6.45%
1.0	GE	4.84%	BHP	6.45%
1.0	ORCL	4.84%	AA	6.45%
1.0	TXN	4.84%	GE	4.84%
1.0	TSLA	4.84%	GS	4.84%
1.0	AVGO	4.84%	CSCO	4.84%
1.0	GLD	3.23%	ORLY	4.84%
1.0	CSTM	3.23%	OXY	4.84%
1.0	KALU	3.23%	MS	4.84%
1.0	META	3.23%	BUD	4.84%
1.0	MNST	3.23%	B	4.84%
1.0	UAA	3.23%	GOOGL	3.23%
1.0	AMC	3.23%	GNRC	3.23%
1.0	CLF	3.23%	HD	3.23%
1.0	EXPE	3.23%	META	3.23%
1.0	NVDA	3.23%	CVS	3.23%
1.0	ON	3.23%	MNST	3.23%
1.0	AMZN	3.23%	MOS	3.23%
1.0	PCG	3.23%	HLT	3.23%
1.0	PWR	3.23%	HON	3.23%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	INTC	47.17%	INTC	47.17%
10.0	TXN	37.74%	AMD	39.62%
10.0	UNH	32.08%	ON	32.08%
10.0	KALU	28.3%	GOOGL	26.42%
10.0	WDC	28.3%	TXN	26.42%
10.0	ON	24.53%	CSCO	24.53%
10.0	QCOM	22.64%	MU	24.53%
10.0	CNC	20.75%	QCOM	22.64%
10.0	GNRC	18.87%	KALU	22.64%
10.0	JAZZ	18.87%	MNST	18.87%
10.0	AMZN	16.98%	PWR	18.87%
10.0	BUD	15.09%	CNC	18.87%
10.0	MU	15.09%	WDC	16.98%
10.0	IRM	15.09%	GNRC	16.98%
10.0	AMD	15.09%	CVS	15.09%
10.0	META	15.09%	AMZN	15.09%
10.0	HSBC	13.21%	CSTM	13.21%
10.0	CSCO	13.21%	AA	13.21%
10.0	CSTM	11.32%	QQQ	13.21%
10.0	MNST	11.32%	AVGO	11.32%
10.0	NFLX	9.43%	BUD	11.32%
10.0	GSK	7.55%	RIO	9.43%
10.0	EXPE	7.55%	MSFT	9.43%
10.0	BAC	7.55%	TEVA	9.43%
10.0	CVS	7.55%	HLT	9.43%
10.0	VFC	5.66%	SPY	9.43%
10.0	B	5.66%	MS	9.43%
10.0	TEVA	3.77%	IRM	7.55%
10.0	AA	3.77%	HSBC	7.55%
10.0	GE	3.77%	META	5.66%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	INTC	83.33%	INTC	78.57%
21.0	TXN	59.52%	AMD	71.43%
21.0	QCOM	52.38%	ON	59.52%
21.0	WDC	52.38%	MU	57.14%
21.0	CNC	50.0%	TXN	54.76%
21.0	KALU	47.62%	QCOM	50.0%
21.0	ON	45.24%	KALU	45.24%
21.0	JAZZ	35.71%	CNC	45.24%
21.0	UNH	35.71%	CSCO	42.86%
21.0	GNRC	35.71%	WDC	35.71%
21.0	CSTM	28.57%	GOOGL	35.71%
21.0	MU	28.57%	QQQ	30.95%
21.0	AMZN	26.19%	PWR	28.57%
21.0	CSCO	23.81%	GNRC	26.19%
21.0	CVS	21.43%	AMZN	26.19%
21.0	AMD	19.05%	AVGO	23.81%
21.0	IRM	16.67%	CSTM	23.81%
21.0	BUD	14.29%	CVS	16.67%
21.0	META	7.14%	MNST	11.9%
21.0	FITB	4.76%	IRM	11.9%
21.0	BBY	2.38%	UNH	11.9%
21.0	PWR	2.38%	CDNS	9.52%
21.0	CDNS	2.38%	SPY	9.52%
21.0	GSK	2.38%	MS	7.14%
21.0	QQQ	2.38%	HLT	4.76%
21.0	MSI	0.0%	TEVA	4.76%
21.0	MRK	0.0%	HSBC	4.76%
21.0	PCG	0.0%	BUD	4.76%
21.0	OXY	0.0%	MSFT	4.76%
21.0	ORLY	0.0%	LLY	4.76%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	WDC	14.0%	WDC	9.6%
1.0	TSLA	6.0%	SLV	9.24%
1.0	GILD	5.6%	MU	6.8%
1.0	MU	5.2%	INTC	6.4%
1.0	PCG	5.2%	B	6.0%
1.0	AA	4.8%	CSTM	5.6%
1.0	GLD	4.8%	AMD	5.6%
1.0	GNRC	3.6%	NEM	5.6%
1.0	UNH	3.6%	AA	4.4%
1.0	SLV	3.21%	CCL	4.4%
1.0	CLF	3.2%	ON	4.4%
1.0	NVS	3.2%	LUMN	4.0%
1.0	TXN	3.2%	BHP	4.0%
1.0	INTC	3.2%	RIO	4.0%
1.0	NFLX	3.2%	KALU	4.0%
1.0	ORCL	3.2%	HSBC	3.6%
1.0	CMA	2.96%	CSCO	3.6%
1.0	GWV	2.4%	PHM	3.2%
1.0	AAP	2.4%	DHI	3.2%
1.0	JAZZ	2.4%	GS	2.8%
1.0	AMD	2.4%	QCOM	2.8%
1.0	AMC	2.4%	AZN	2.8%
1.0	AMZN	2.4%	BIIB	2.8%
1.0	AVGO	2.4%	GOOGL	2.8%
1.0	QCOM	2.4%	JAZZ	2.4%
1.0	NEM	2.0%	MRK	2.4%
1.0	VZ	2.0%	ORLY	2.4%
1.0	ELAN	1.6%	OXY	2.4%
1.0	FCX	1.6%	HD	2.4%
1.0	CSTM	1.6%	GSK	2.4%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	WDC	29.05%	SLV	18.33%
10.0	INTC	18.67%	INTC	18.26%
10.0	KALU	13.69%	WDC	15.77%
10.0	TXN	12.03%	MU	15.77%
10.0	GNRC	11.62%	GNRC	13.69%
10.0	MU	10.79%	AMD	13.28%
10.0	SLV	10.42%	GOOGL	12.03%
10.0	GLD	9.96%	B	9.96%
10.0	BUD	9.96%	AA	8.71%
10.0	JAZZ	9.13%	ORCL	8.3%
10.0	AA	8.3%	TEVA	7.88%
10.0	NVS	8.3%	CSCO	7.88%
10.0	AMZN	8.3%	ON	7.05%
10.0	CMA	8.12%	TXN	7.05%
10.0	UNH	7.05%	KALU	6.64%
10.0	EXPE	6.64%	AMAT	5.81%
10.0	ON	6.22%	GILD	4.98%
10.0	THC	5.81%	QCOM	4.98%
10.0	GILD	5.39%	GSK	4.98%
10.0	NFLX	5.39%	JAZZ	4.98%
10.0	AVGO	5.39%	AMZN	4.56%
10.0	HCA	4.98%	IRM	4.56%
10.0	QCOM	4.98%	GLD	4.56%
10.0	CNC	4.56%	XOM	4.56%
10.0	GOOGL	4.56%	CCL	4.56%
10.0	CAH	4.56%	CSTM	4.56%
10.0	PCG	4.56%	LVS	4.56%
10.0	IRM	4.15%	PWR	4.56%
10.0	UAA	4.15%	AZN	4.56%
10.0	VZ	4.15%	T	4.15%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	WDC	36.52%	MU	29.57%
21.0	INTC	23.91%	WDC	29.13%
21.0	KALU	22.61%	SLV	25.76%
21.0	SLV	21.4%	INTC	23.48%
21.0	MU	20.43%	AMD	22.61%
21.0	GNRC	17.83%	B	21.74%
21.0	JAZZ	15.65%	GNRC	17.83%
21.0	TXN	14.78%	GOOGL	12.17%
21.0	GLD	10.43%	TXN	11.74%
21.0	BUD	10.0%	ON	10.87%
21.0	QCOM	9.57%	KALU	10.43%
21.0	CNC	9.13%	TEVA	10.0%
21.0	GOOGL	9.13%	CSCO	9.57%
21.0	BALL	9.13%	JAZZ	9.13%
21.0	AA	9.13%	AA	9.13%
21.0	B	8.7%	QCOM	9.13%
21.0	THC	8.7%	CAH	9.13%
21.0	ON	8.26%	CNC	8.26%
21.0	VZ	8.26%	ORCL	8.26%
21.0	AMZN	7.39%	RIO	8.26%
21.0	TMUS	6.96%	GLD	8.26%
21.0	CMA	6.71%	XOM	8.26%
21.0	UNH	6.52%	VZ	7.83%
21.0	NVS	5.65%	BALL	7.39%
21.0	AAP	5.65%	GSK	6.96%
21.0	CAH	5.65%	CSTM	6.96%
21.0	GILD	5.65%	ISRG	6.09%
21.0	FCX	5.22%	AMAT	6.09%
21.0	EXPE	5.22%	GILD	5.65%
21.0	CSTM	5.22%	MSI	5.65%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	WDC	84.04%	WDC	95.74%
63.0	MU	55.85%	MU	64.36%
63.0	SLV	51.34%	B	57.98%
63.0	KALU	27.66%	SLV	56.15%
63.0	AA	26.6%	GOOGL	34.04%
63.0	GLD	25.0%	GLD	32.45%
63.0	INTC	18.09%	CAH	31.91%
63.0	NEM	17.55%	NEM	28.72%
63.0	AVGO	15.96%	AA	25.0%
63.0	B	15.96%	INTC	23.94%
63.0	EXPE	15.43%	TEVA	23.4%
63.0	NVS	13.83%	CSTM	23.4%
63.0	FCX	13.3%	XOM	23.4%
63.0	GOOGL	12.23%	KALU	22.34%
63.0	HSBC	11.17%	RIO	18.09%
63.0	GSK	10.64%	HSBC	13.83%
63.0	XOM	10.11%	AMAT	11.7%
63.0	PWR	9.04%	NVS	11.7%
63.0	AMZN	7.98%	ON	11.7%
63.0	WYNN	7.98%	AMD	10.64%
63.0	JAZZ	7.45%	BALL	10.64%
63.0	TXN	6.91%	FCX	9.57%
63.0	ORCL	6.91%	OXY	9.57%
63.0	ON	5.32%	BHP	9.04%
63.0	CSCO	4.79%	GNRC	8.51%
63.0	GNRC	4.26%	LUMN	7.45%
63.0	VZ	3.19%	JAZZ	6.91%
63.0	ELAN	2.66%	PWR	6.91%
63.0	GILD	2.13%	MSI	6.38%
63.0	BUD	1.6%	MRK	6.38%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	MU	89.6%	WDC	100.0%
126.0	WDC	77.6%	SLV	100.0%
126.0	SLV	77.42%	MU	99.2%
126.0	KALU	60.0%	RIO	67.2%
126.0	GOOGL	48.8%	AA	66.4%
126.0	GLD	42.4%	AMAT	62.4%
126.0	NVS	36.8%	B	60.0%
126.0	AA	32.8%	NEM	56.0%
126.0	AVGO	26.4%	KALU	51.2%
126.0	CMA	25.0%	GLD	50.4%
126.0	GSK	24.0%	GOOGL	50.4%
126.0	NEM	18.4%	TEVA	50.4%
126.0	TXN	16.8%	INTC	45.6%
126.0	CSTM	14.4%	CSTM	44.8%
126.0	JAZZ	14.4%	CAH	43.2%
126.0	GNRC	12.8%	HSBC	24.8%
126.0	INTC	11.2%	BHP	20.8%
126.0	EXPE	11.2%	TRGP	20.8%
126.0	XOM	9.6%	JAZZ	20.0%
126.0	HSBC	9.6%	XOM	18.4%
126.0	B	9.6%	TXN	17.6%
126.0	ON	8.0%	ON	16.8%
126.0	RIO	8.0%	PWR	16.8%
126.0	ELAN	6.4%	GSK	16.0%
126.0	HCA	5.6%	AMD	13.6%
126.0	AMD	3.2%	CSCO	12.0%
126.0	CSCO	0.8%	MRK	8.0%
126.0	GS	0.8%	GNRC	8.0%
126.0	GILD	0.8%	NVS	8.0%
126.0	ORCL	0.0%	EXPE	5.6%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NVDA	0.55%	MSTR	0.3%
1.0	X	0.45%	MU	0.29%
1.0	AVGO	0.44%	WDC	0.27%
1.0	MU	0.43%	NVDA	0.25%
1.0	PWR	0.43%	VST	0.23%
1.0	GBTC	0.38%	AVGO	0.23%
1.0	GE	0.37%	PWR	0.2%
1.0	LLY	0.37%	AMD	0.2%
1.0	VST	0.36%	TEVA	0.17%
1.0	AMD	0.35%	X	0.17%
1.0	WDC	0.33%	LLY	0.16%
1.0	CAH	0.28%	GE	0.16%
1.0	TRGP	0.28%	TRGP	0.16%
1.0	ON	0.27%	GME	0.15%
1.0	CCL	0.26%	AMAT	0.15%
1.0	AMAT	0.25%	GBTC	0.14%
1.0	TSLA	0.25%	SLV	0.14%
1.0	MSTR	0.25%	INTC	0.14%
1.0	SLV	0.24%	CAH	0.14%
1.0	CDNS	0.23%	ORCL	0.13%
1.0	B	0.22%	ON	0.12%
1.0	TDG	0.21%	THC	0.12%
1.0	HLT	0.2%	ETRN	0.12%
1.0	CSTM	0.2%	GOOGL	0.12%
1.0	JAZZ	0.19%	GS	0.11%
1.0	GS	0.19%	IRM	0.11%
1.0	PHM	0.18%	CDNS	0.11%
1.0	THC	0.18%	CSTM	0.11%
1.0	CSCO	0.17%	META	0.11%
1.0	ETRN	0.17%	NFLX	0.1%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	5.78%	MSTR	3.09%
10.0	MU	4.2%	MU	2.73%
10.0	AVGO	3.86%	WDC	2.68%
10.0	LLY	3.73%	NVDA	2.53%
10.0	PWR	3.66%	VST	2.23%
10.0	AMAT	3.16%	AVGO	2.19%
10.0	AMD	3.08%	PWR	2.05%
10.0	WDC	3.0%	AMD	1.88%
10.0	MSTR	2.93%	TEVA	1.74%
10.0	GBTC	2.86%	LLY	1.59%
10.0	TSLA	2.82%	X	1.58%
10.0	TEVA	2.72%	TRGP	1.57%
10.0	VST	2.71%	INTC	1.5%
10.0	CCL	2.57%	GE	1.49%
10.0	GE	2.43%	ETRN	1.41%
10.0	SLV	2.14%	AMAT	1.4%
10.0	X	2.09%	GBTC	1.38%
10.0	CSTM	2.06%	CAH	1.38%
10.0	TRGP	2.05%	SLV	1.36%
10.0	CAH	2.03%	GME	1.31%
10.0	GS	1.87%	META	1.21%
10.0	THC	1.82%	THC	1.18%
10.0	PHM	1.79%	IRM	1.15%
10.0	LUMN	1.72%	GOOGL	1.14%
10.0	COST	1.57%	ORCL	1.14%
10.0	ACGL	1.52%	NFLX	1.13%
10.0	INTC	1.5%	GS	1.09%
10.0	AZO	1.49%	TSLA	1.07%
10.0	HLT	1.48%	ON	1.07%
10.0	NEM	1.47%	CDNS	1.05%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	11.38%	MSTR	7.14%
21.0	AMD	9.63%	WDC	5.78%
21.0	MU	7.82%	MU	5.64%
21.0	ETRN	7.53%	NVDA	5.45%
21.0	MSTR	7.23%	VST	4.83%
21.0	GBTC	7.11%	AVGO	4.61%
21.0	TSLA	7.05%	PWR	4.43%
21.0	VST	7.01%	AMD	4.15%
21.0	AVGO	6.87%	TEVA	3.8%
21.0	PWR	6.8%	ETRN	3.5%
21.0	AMAT	6.46%	INTC	3.29%
21.0	LLY	6.02%	TRGP	3.26%
21.0	CCL	5.83%	LLY	3.25%
21.0	TEVA	5.8%	GE	3.2%
21.0	WDC	5.79%	X	3.17%
21.0	GE	5.31%	GBTC	3.1%
21.0	LUMN	4.62%	AMAT	2.95%
21.0	X	4.44%	CAH	2.89%
21.0	CAH	4.39%	SLV	2.84%
21.0	CDNS	4.17%	META	2.67%
21.0	TRGP	4.02%	NFLX	2.51%
21.0	SLV	3.85%	THC	2.51%
21.0	PHM	3.8%	GOOGL	2.49%
21.0	CSTM	3.68%	ORCL	2.48%
21.0	GOOGL	3.66%	IRM	2.47%
21.0	GS	3.63%	TSLA	2.46%
21.0	THC	3.49%	GS	2.31%
21.0	DHI	3.33%	ON	2.21%
21.0	AA	3.31%	CDNS	2.17%
21.0	AZO	3.3%	GWV	2.14%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	NVDA	36.08%	MSTR	20.13%
63.0	GBTC	30.12%	WDC	18.41%
63.0	MSTR	27.1%	NVDA	17.68%
63.0	AMD	25.35%	MU	16.22%
63.0	PWR	22.83%	VST	16.04%
63.0	VST	22.54%	AVGO	13.64%
63.0	MU	21.3%	PWR	11.95%
63.0	WDC	20.27%	TEVA	10.46%
63.0	LLY	20.03%	GE	10.32%
63.0	GE	19.36%	ETRN	10.28%
63.0	ETRN	18.76%	GBTC	10.28%
63.0	AMAT	18.41%	AMD	10.02%
63.0	CCL	17.57%	META	9.5%
63.0	TEVA	16.66%	LLY	9.24%
63.0	PHM	16.02%	TRGP	9.2%
63.0	LUMN	15.37%	CAH	9.06%
63.0	AVGO	15.32%	NFLX	9.04%
63.0	CAH	15.25%	AMAT	8.91%
63.0	B	14.28%	SLV	8.83%
63.0	TRGP	12.53%	THC	8.09%
63.0	GOOGL	11.56%	PHM	7.46%
63.0	THC	11.32%	GOOGL	7.19%
63.0	MS	11.21%	ORCL	7.04%
63.0	TSLA	11.16%	GS	6.87%
63.0	X	10.99%	HSBC	6.54%
63.0	SLV	10.95%	INTC	6.33%
63.0	JPM	10.89%	CCL	6.19%
63.0	CSTM	10.58%	IRM	6.17%
63.0	META	10.49%	GLD	5.98%
63.0	GS	10.44%	X	5.91%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	NVDA	87.91%	MSTR	49.65%
126.0	GBTC	78.0%	WDC	44.41%
126.0	WDC	64.38%	NVDA	44.11%
126.0	MU	62.07%	MU	39.78%
126.0	MSTR	57.38%	VST	35.78%
126.0	GE	48.65%	AVGO	30.09%
126.0	VST	48.62%	GBTC	29.06%
126.0	AMD	47.66%	GE	25.34%
126.0	PWR	47.41%	TEVA	23.22%
126.0	LLY	43.9%	META	23.21%
126.0	AMAT	43.8%	PWR	23.14%
126.0	PHM	40.78%	NFLX	22.15%
126.0	THC	38.93%	SLV	20.9%
126.0	CCL	38.66%	AMD	20.56%
126.0	TEVA	36.48%	THC	20.24%
126.0	B	34.46%	AMAT	20.14%
126.0	AVGO	34.38%	CAH	19.76%
126.0	CAH	34.26%	LLY	19.67%
126.0	NFLX	33.05%	TRGP	18.93%
126.0	ORCL	31.34%	ETRN	18.49%
126.0	LUMN	30.8%	PHM	17.21%
126.0	JPM	29.46%	GOOGL	16.69%
126.0	MS	28.26%	ORCL	15.94%
126.0	TRGP	28.18%	GS	15.56%
126.0	SLV	27.98%	B	15.31%
126.0	META	27.14%	HSBC	14.1%
126.0	TSLA	27.04%	CCL	14.04%
126.0	GOOGL	26.62%	GLD	13.45%
126.0	X	25.56%	JPM	12.87%
126.0	GS	25.22%	INTC	12.77%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	GBTC	211.11%	MSTR	169.5%
252.0	NVDA	201.99%	NVDA	119.97%
252.0	MSTR	188.78%	VST	106.7%
252.0	MU	158.24%	WDC	99.68%
252.0	WDC	145.66%	GBTC	92.97%
252.0	GE	141.11%	MU	84.18%
252.0	VST	119.62%	AVGO	77.04%
252.0	PHM	108.34%	META	63.84%
252.0	CCL	107.35%	GE	61.17%
252.0	THC	104.08%	NFLX	57.68%
252.0	NFLX	96.07%	PWR	49.14%
252.0	AVGO	91.39%	THC	48.14%
252.0	AMD	91.35%	AMD	44.91%
252.0	META	90.7%	TEVA	42.74%
252.0	AMAT	90.53%	PHM	42.61%
252.0	TRGP	84.15%	LLY	42.44%
252.0	PWR	82.63%	TRGP	40.73%
252.0	TEVA	70.25%	SLV	39.52%
252.0	LLY	68.89%	CAH	39.25%
252.0	SLV	68.41%	AMAT	38.62%
252.0	X	68.34%	CCL	37.5%
252.0	MS	66.66%	ORCL	37.21%
252.0	ORCL	66.07%	ETRN	35.78%
252.0	CAH	66.04%	GOOGL	35.04%
252.0	GOOGL	63.56%	GS	33.59%
252.0	GS	62.08%	JPM	31.05%
252.0	HSBC	61.49%	HSBC	30.96%
252.0	QQQ	60.97%	B	30.09%
252.0	JPM	58.42%	TDG	29.52%
252.0	ELAN	56.97%	GLD	29.31%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	MU	3.77%	MU	3.39%
1.0	LUMN	3.54%	AMD	2.05%
1.0	QCOM	3.53%	QCOM	1.86%
1.0	CSCO	2.92%	ORCL	1.76%
1.0	ON	2.65%	CLF	1.52%
1.0	AMD	2.25%	CSCO	1.43%
1.0	ORCL	2.19%	BBY	1.35%
1.0	LLY	1.82%	LUMN	1.24%
1.0	TSLA	1.81%	INTC	1.12%
1.0	BBY	1.63%	WDC	1.07%
1.0	CVS	1.39%	AA	1.03%
1.0	CLF	1.39%	ON	0.99%
1.0	CDNS	1.0%	LLY	0.86%
1.0	INTC	0.99%	JAZZ	0.79%
1.0	FSUGY	0.98%	AMC	0.79%
1.0	ADBE	0.95%	MNST	0.72%
1.0	FCX	0.93%	AMAT	0.7%
1.0	AA	0.87%	AAPL	0.7%
1.0	BIIB	0.85%	TSLA	0.69%
1.0	TDG	0.82%	FCX	0.69%
1.0	AAPL	0.78%	CDNS	0.66%
1.0	CSTM	0.77%	VNO	0.63%
1.0	MSFT	0.76%	BHP	0.6%
1.0	GE	0.75%	FSUGY	0.58%
1.0	VST	0.74%	GE	0.58%
1.0	HON	0.72%	CNC	0.54%
1.0	VNO	0.69%	GS	0.54%
1.0	ELAN	0.67%	HON	0.53%
1.0	BHP	0.65%	MSFT	0.51%
1.0	MNST	0.63%	CSTM	0.51%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	CSCO	40.54%	CSCO	22.22%
10.0	LUMN	28.36%	MU	19.36%
10.0	LLY	21.81%	AMD	14.06%
10.0	MU	21.69%	QCOM	11.41%
10.0	CVS	20.93%	LUMN	10.26%
10.0	QCOM	18.09%	ON	10.06%
10.0	ON	15.93%	BBY	8.93%
10.0	CAH	14.5%	MNST	8.43%
10.0	AMD	12.26%	LLY	7.27%
10.0	TRGP	11.8%	JAZZ	7.21%
10.0	MNST	10.16%	AA	6.86%
10.0	CLF	8.91%	CLF	6.41%
10.0	AMAT	8.35%	TXN	6.2%
10.0	OXY	8.31%	CVS	6.18%
10.0	BBY	8.06%	AAPL	6.03%
10.0	AA	7.89%	CNC	5.22%
10.0	FSUGY	7.67%	TRGP	4.92%
10.0	TSLA	7.41%	GS	4.85%
10.0	GS	6.83%	CAH	4.83%
10.0	NVDA	6.1%	WDC	4.83%
10.0	AAPL	6.04%	INTC	4.75%
10.0	HON	6.02%	ORCL	4.73%
10.0	MS	5.66%	HON	4.37%
10.0	TXN	5.47%	GWV	4.35%
10.0	KHC	5.4%	FSUGY	4.2%
10.0	BUD	5.35%	NVDA	4.18%
10.0	ORCL	5.14%	BUD	4.05%
10.0	FCX	5.1%	AMAT	3.92%
10.0	JAZZ	5.0%	VNO	3.75%
10.0	VNO	4.95%	MRK	3.75%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	AMD	2.52%	AMD	1.65%
1.0	LUMN	2.38%	INTC	1.65%
1.0	MU	2.02%	MU	1.53%
1.0	INTC	1.96%	WDC	1.18%
1.0	ON	1.94%	ON	1.04%
1.0	QCOM	1.66%	QCOM	1.02%
1.0	CSCO	1.55%	LUMN	0.86%
1.0	AVGO	1.52%	AMC	0.78%
1.0	WDC	1.16%	ORCL	0.73%
1.0	PWR	1.12%	CSCO	0.7%
1.0	CSTM	1.01%	TXN	0.66%
1.0	ORCL	0.76%	AVGO	0.58%
1.0	TXN	0.75%	CNC	0.54%
1.0	CDNS	0.75%	KALU	0.53%
1.0	NVDA	0.74%	CSTM	0.5%
1.0	KALU	0.67%	AMZN	0.44%
1.0	QQQ	0.62%	UNH	0.43%
1.0	AA	0.62%	BBY	0.42%
1.0	BBY	0.6%	PWR	0.39%
1.0	CNC	0.59%	GOOGL	0.37%
1.0	GOOGL	0.55%	CDNS	0.37%
1.0	AMC	0.53%	AA	0.37%
1.0	CVS	0.51%	MS	0.37%
1.0	MSTR	0.51%	JAZZ	0.37%
1.0	MS	0.5%	VNO	0.36%
1.0	AMAT	0.49%	AMAT	0.36%
1.0	GNRC	0.48%	GNRC	0.36%
1.0	AMZN	0.47%	CLF	0.35%
1.0	CLF	0.43%	QQQ	0.32%
1.0	TRGP	0.42%	MSTR	0.32%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	AMD	37.66%	INTC	21.39%
10.0	MU	32.71%	AMD	18.07%
10.0	INTC	20.15%	MU	15.77%
10.0	CSCO	15.91%	ON	13.84%
10.0	ON	15.58%	WDC	13.31%
10.0	AVGO	15.43%	QCOM	10.81%
10.0	LUMN	15.26%	TXN	9.14%
10.0	PWR	13.46%	CNC	8.72%
10.0	WDC	12.52%	CSCO	8.34%
10.0	QCOM	11.81%	LUMN	8.16%
10.0	GOOGL	11.79%	AMC	7.87%
10.0	AMAT	11.31%	KALU	7.04%
10.0	AMC	10.37%	UNH	6.11%
10.0	NVDA	9.06%	CSTM	5.44%
10.0	CNC	8.22%	PWR	5.44%
10.0	QQQ	7.88%	AVGO	5.26%
10.0	CVS	7.31%	GOOGL	5.08%
10.0	MS	6.69%	ORCL	5.08%
10.0	KALU	6.23%	JAZZ	4.85%
10.0	TXN	6.09%	AMZN	4.68%
10.0	CSTM	5.93%	GNRC	4.6%
10.0	CDNS	5.56%	AMAT	4.55%
10.0	VNO	5.49%	MSTR	4.22%
10.0	ORCL	5.4%	MS	4.14%
10.0	TRGP	5.2%	CDNS	4.05%
10.0	GNRC	5.04%	CVS	3.73%
10.0	SPY	5.0%	NVDA	3.68%
10.0	GS	4.99%	CLF	3.52%
10.0	AMZN	4.94%	VNO	3.47%
10.0	FCX	4.87%	QQQ	3.46%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	AMD	111.03%	INTC	62.66%
21.0	MU	72.0%	AMD	48.88%
21.0	INTC	67.24%	MU	39.05%
21.0	ON	45.34%	ON	37.19%
21.0	AVGO	43.18%	WDC	32.6%
21.0	LUMN	38.09%	QCOM	28.91%
21.0	CSCO	34.09%	CNC	27.86%
21.0	WDC	32.85%	TXN	24.94%
21.0	GOOGL	29.01%	KALU	22.14%
21.0	QCOM	27.09%	AMC	22.07%
21.0	AMC	25.18%	LUMN	19.62%
21.0	PWR	23.83%	UNH	17.57%
21.0	CNC	23.71%	CSCO	16.74%
21.0	KALU	21.95%	CSTM	15.83%
21.0	NVDA	19.98%	PWR	15.72%
21.0	QQQ	19.1%	AVGO	15.45%
21.0	AMAT	18.83%	GOOGL	14.75%
21.0	TEVA	18.61%	GNRC	14.41%
21.0	TXN	18.27%	MSTR	14.11%
21.0	GS	17.3%	AMZN	13.54%
21.0	MSTR	17.03%	ORCL	12.93%
21.0	VNO	16.36%	CLF	12.09%
21.0	PRGO	15.84%	CDNS	11.49%
21.0	FSUGY	15.62%	JAZZ	11.34%
21.0	ORCL	15.03%	AMAT	10.67%
21.0	CSTM	14.84%	IRM	10.6%
21.0	SPY	14.2%	CVS	10.45%
21.0	BHP	14.06%	MS	10.22%
21.0	MS	14.04%	NVDA	9.87%
21.0	AMZN	13.92%	VNO	9.55%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	LUMN	1.51%	MU	1.02%
1.0	MU	1.49%	WDC	1.02%
1.0	AMD	1.32%	INTC	0.81%
1.0	INTC	1.17%	AMD	0.7%
1.0	WDC	0.98%	LUMN	0.54%
1.0	CLF	0.98%	AA	0.48%
1.0	AMAT	0.96%	ON	0.48%
1.0	CSTM	0.9%	AMAT	0.46%
1.0	SLV	0.88%	CSTM	0.46%
1.0	AA	0.73%	CLF	0.44%
1.0	ON	0.71%	SLV	0.41%
1.0	AVGO	0.67%	KALU	0.41%
1.0	PWR	0.66%	GNRC	0.38%
1.0	BHP	0.65%	B	0.36%
1.0	TEVA	0.58%	JAZZ	0.34%
1.0	B	0.57%	NEM	0.34%
1.0	KALU	0.55%	GOOGL	0.33%
1.0	NVDA	0.55%	TEVA	0.33%
1.0	RIO	0.55%	PWR	0.32%
1.0	NEM	0.53%	AVGO	0.28%
1.0	GOOGL	0.51%	CMA	0.28%
1.0	GNRC	0.51%	CSCO	0.28%
1.0	JAZZ	0.5%	ELAN	0.27%
1.0	FSUGY	0.48%	FCX	0.26%
1.0	CSCO	0.48%	QCOM	0.26%
1.0	LLY	0.47%	BHP	0.26%
1.0	BIIB	0.46%	RIO	0.25%
1.0	X	0.44%	TXN	0.24%
1.0	HSBC	0.43%	GS	0.23%
1.0	BHC	0.41%	FSUGY	0.21%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	MU	14.48%	WDC	10.08%
10.0	LUMN	13.4%	MU	9.61%
10.0	AMD	11.99%	INTC	8.69%
10.0	AMAT	10.22%	AMD	6.74%
10.0	INTC	8.83%	LUMN	4.92%
10.0	WDC	8.33%	AMAT	4.43%
10.0	SLV	7.96%	ON	4.22%
10.0	CSTM	6.86%	AA	4.19%
10.0	PWR	6.19%	CSTM	4.19%
10.0	AVGO	5.8%	KALU	3.86%
10.0	BHP	5.7%	GNRC	3.79%
10.0	GNRC	5.67%	SLV	3.77%
10.0	GOOGL	5.37%	GOOGL	3.63%
10.0	CLF	5.36%	JAZZ	3.46%
10.0	TEVA	5.14%	B	3.36%
10.0	AA	4.89%	NEM	3.24%
10.0	CSCO	4.83%	PWR	3.23%
10.0	NVDA	4.73%	TEVA	3.16%
10.0	NEM	4.38%	CMA	3.15%
10.0	ON	4.25%	CLF	2.75%
10.0	B	4.21%	CSCO	2.71%
10.0	RIO	3.9%	RIO	2.51%
10.0	BIIB	3.89%	AVGO	2.49%
10.0	GS	3.68%	BHP	2.44%
10.0	CMA	3.36%	TXN	2.35%
10.0	TRGP	3.29%	FCX	2.21%
10.0	FSUGY	3.28%	TRGP	2.2%
10.0	KALU	3.16%	ELAN	2.15%
10.0	JAZZ	3.07%	GS	2.11%
10.0	LLY	2.75%	QCOM	2.05%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	AMD	32.56%	WDC	22.29%
21.0	MU	27.98%	MU	20.54%
21.0	LUMN	27.73%	INTC	19.71%
21.0	INTC	20.67%	AMD	14.73%
21.0	WDC	19.98%	LUMN	9.91%
21.0	AMAT	17.97%	AMAT	9.32%
21.0	TEVA	14.78%	CSTM	9.18%
21.0	CSTM	14.2%	AA	8.86%
21.0	SLV	13.36%	ON	8.82%
21.0	GOOGL	12.33%	KALU	8.76%
21.0	BHP	11.98%	SLV	8.45%
21.0	ON	11.63%	GOOGL	8.18%
21.0	B	10.83%	GNRC	8.13%
21.0	AA	10.67%	B	7.39%
21.0	GNRC	10.35%	TEVA	7.37%
21.0	AVGO	10.22%	JAZZ	7.28%
21.0	CLF	10.1%	PWR	7.24%
21.0	PWR	9.57%	CMA	7.0%
21.0	CSCO	8.87%	NEM	6.97%
21.0	NEM	8.75%	CLF	5.8%
21.0	RIO	8.51%	RIO	5.73%
21.0	BIIB	8.44%	BHP	5.45%
21.0	FSUGY	8.31%	AVGO	5.22%
21.0	KALU	7.54%	TXN	4.91%
21.0	LVS	7.5%	ELAN	4.86%
21.0	NVDA	7.19%	CSCO	4.82%
21.0	GS	6.82%	TRGP	4.48%
21.0	CMA	6.63%	FCX	4.47%
21.0	JAZZ	6.51%	VFC	4.3%
21.0	ELAN	6.39%	FSUGY	4.28%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	WDC	88.87%	WDC	76.96%
63.0	LUMN	87.87%	MU	66.02%
63.0	MU	79.22%	INTC	51.51%
63.0	AMD	78.1%	AA	32.11%
63.0	INTC	70.15%	SLV	31.48%
63.0	B	59.56%	AMAT	30.51%
63.0	AMAT	57.92%	LUMN	30.17%
63.0	TEVA	51.41%	CSTM	29.3%
63.0	CSTM	48.42%	AMD	28.63%
63.0	BHP	42.92%	B	27.65%
63.0	SLV	40.54%	TEVA	26.26%
63.0	NEM	37.3%	KALU	24.43%
63.0	AA	34.37%	NEM	23.76%
63.0	RIO	33.78%	GOOGL	23.34%
63.0	GOOGL	32.64%	JAZZ	21.85%
63.0	LLY	30.82%	CMA	19.64%
63.0	OXY	28.35%	PWR	19.18%
63.0	CAH	26.22%	RIO	17.88%
63.0	KALU	24.58%	ON	17.24%
63.0	FSUGY	24.11%	ELAN	17.05%
63.0	BIIB	23.39%	GNRC	16.02%
63.0	TRGP	22.64%	BHP	15.42%
63.0	ELAN	22.63%	TRGP	15.23%
63.0	JAZZ	22.3%	FCX	15.2%
63.0	PWR	21.79%	VFC	14.07%
63.0	CMA	21.52%	MRK	13.3%
63.0	ON	21.04%	BIIB	12.88%
63.0	GNRC	18.21%	XOM	12.86%
63.0	XOM	16.26%	GLD	12.66%
63.0	MRK	16.05%	HSBC	12.39%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	WDC	343.35%	WDC	212.91%
126.0	MU	239.16%	MU	184.09%
126.0	INTC	209.18%	INTC	108.78%
126.0	B	182.46%	SLV	88.13%
126.0	AMAT	169.95%	AA	87.78%
126.0	TEVA	141.79%	AMAT	78.62%
126.0	LUMN	126.44%	TEVA	72.78%
126.0	SLV	124.37%	CSTM	72.6%
126.0	NEM	115.01%	B	70.51%
126.0	AA	108.99%	KALU	65.72%
126.0	CSTM	107.16%	NEM	56.61%
126.0	AMD	103.09%	LUMN	52.07%
126.0	BHP	101.14%	GOOGL	51.64%
126.0	PWR	77.36%	JAZZ	48.41%
126.0	RIO	75.57%	AMD	46.77%
126.0	CAH	73.53%	CMA	45.73%
126.0	TRGP	70.49%	RIO	44.25%
126.0	GOOGL	69.63%	ON	41.68%
126.0	LLY	69.58%	FCX	40.08%
126.0	ON	63.24%	VFC	38.14%
126.0	FSUGY	60.18%	PWR	37.81%
126.0	KALU	58.9%	ELAN	36.06%
126.0	BIIB	54.39%	BHP	35.11%
126.0	JAZZ	53.1%	MRK	34.86%
126.0	MRK	51.29%	TRGP	34.85%
126.0	ELAN	47.9%	BIIB	31.3%
126.0	VFC	47.04%	GLD	30.03%
126.0	FCX	45.73%	HSBC	29.5%
126.0	CMA	44.51%	CAH	29.43%
126.0	OXY	43.49%	GSK	29.08%



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## 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 2026-05-28

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SIVBQ	-0.91%	SIVBQ	-0.78%
1.0	IEP	-0.42%	SBNY	-0.45%
1.0	NWL	-0.42%	FRCB	-0.23%
1.0	SBNY	-0.39%	AMC	-0.15%
1.0	FRCB	-0.19%	IEP	-0.14%
1.0	GT	-0.18%	NWL	-0.12%
1.0	UAA	-0.18%	CHTR	-0.1%
1.0	CHTR	-0.18%	PRGO	-0.09%
1.0	ZTS	-0.17%	FIS	-0.07%
1.0	AMC	-0.17%	ZTS	-0.07%
1.0	FIS	-0.16%	AAP	-0.06%
1.0	CZR	-0.14%	VFC	-0.06%
1.0	INTU	-0.14%	GT	-0.06%
1.0	PRGO	-0.13%	BHC	-0.06%
1.0	BXP	-0.1%	CMCSA	-0.05%
1.0	NAVI	-0.09%	UAA	-0.05%
1.0	BALL	-0.08%	TLT	-0.04%
1.0	CTLT	-0.07%	NAVI	-0.04%
1.0	TLT	-0.07%	ADBE	-0.04%
1.0	CMCSA	-0.06%	BXP	-0.04%
1.0	KHC	-0.06%	BALL	-0.03%
1.0	ADBE	-0.06%	CZR	-0.03%
1.0	AAP	-0.05%	KHC	-0.03%
1.0	UNH	-0.04%	LNC	-0.02%
1.0	BIIB	-0.03%	INTU	-0.02%
1.0	LNC	-0.03%	CTLT	-0.01%
1.0	GNRC	-0.03%	FRA	-0.01%
1.0	PEP	-0.02%	LQD	-0.01%
1.0	HD	-0.02%	MOS	-0.01%
1.0	FRA	-0.02%	PEP	-0.01%



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## 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 2026-05-28

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	-3.2%	FRCB	-2.19%
10.0	NWL	-2.69%	AMC	-1.65%
10.0	AMC	-2.17%	IEP	-1.37%
10.0	CZR	-1.7%	NWL	-1.11%
10.0	FRCB	-1.67%	CHTR	-0.94%
10.0	GT	-1.44%	PRGO	-0.82%
10.0	CYH	-1.05%	AAP	-0.71%
10.0	ZTS	-1.01%	FIS	-0.7%
10.0	CHTR	-0.99%	VFC	-0.69%
10.0	UAA	-0.95%	ZTS	-0.68%
10.0	FIS	-0.9%	UAA	-0.67%
10.0	PRGO	-0.9%	GT	-0.66%
10.0	INTU	-0.85%	CZR	-0.51%
10.0	BXP	-0.83%	CMCSA	-0.51%
10.0	AAP	-0.82%	NAVI	-0.5%
10.0	VFC	-0.81%	BHC	-0.44%
10.0	ADBE	-0.63%	TLT	-0.42%
10.0	NAVI	-0.54%	ADBE	-0.41%
10.0	CNC	-0.49%	BXP	-0.4%
10.0	VZ	-0.48%	MOS	-0.31%
10.0	BALL	-0.47%	BALL	-0.3%
10.0	HD	-0.45%	LNC	-0.29%
10.0	VNO	-0.42%	KHC	-0.28%
10.0	KHC	-0.4%	CYH	-0.26%
10.0	BBY	-0.39%	BBY	-0.19%
10.0	TLT	-0.37%	INTU	-0.18%
10.0	CMCSA	-0.31%	FRA	-0.17%
10.0	FRA	-0.25%	LQD	-0.13%



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## 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 2026-05-28

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	-6.04%	FRCB	-6.02%
21.0	NWL	-4.86%	AMC	-3.92%
21.0	FRCB	-4.48%	IEP	-2.89%
21.0	CZR	-3.24%	NWL	-2.29%
21.0	AMC	-2.64%	CHTR	-1.89%
21.0	GT	-2.64%	PRGO	-1.68%
21.0	CHTR	-2.24%	AAP	-1.42%
21.0	VFC	-2.14%	VFC	-1.36%
21.0	ADBE	-2.09%	FIS	-1.29%
21.0	AAP	-1.94%	ZTS	-1.28%
21.0	UAA	-1.69%	BHC	-1.17%
21.0	INTU	-1.63%	UAA	-1.17%
21.0	FIS	-1.61%	GT	-1.17%
21.0	PRGO	-1.6%	CZR	-1.16%
21.0	BXP	-1.56%	NAVI	-1.05%
21.0	ZTS	-1.55%	CMCSA	-1.0%
21.0	BALL	-1.43%	BXP	-0.89%
21.0	BBY	-1.37%	TLT	-0.87%
21.0	NAVI	-1.17%	ADBE	-0.74%
21.0	KHC	-0.96%	KHC	-0.71%
21.0	TLT	-0.95%	MOS	-0.68%
21.0	CYH	-0.93%	LNC	-0.66%
21.0	VZ	-0.69%	BALL	-0.56%
21.0	HD	-0.67%	BBY	-0.52%
21.0	CLF	-0.61%	CYH	-0.44%
21.0	FRA	-0.55%	FRA	-0.32%
21.0	CMCSA	-0.47%	LQD	-0.24%
21.0	GME	-0.47%	LW	-0.2%



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## 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 2026-05-28

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	-21.3%	AMC	-15.64%
63.0	NWL	-16.5%	IEP	-9.75%
63.0	AMC	-10.61%	NWL	-7.75%
63.0	PRGO	-9.83%	PRGO	-6.17%
63.0	CLF	-9.68%	AAP	-4.7%
63.0	BHC	-9.12%	CHTR	-4.57%
63.0	VFC	-8.05%	CZR	-4.37%
63.0	UAA	-7.03%	VFC	-4.04%
63.0	AAP	-6.59%	BHC	-3.93%
63.0	GT	-6.4%	MOS	-3.81%
63.0	CZR	-6.27%	FIS	-3.49%
63.0	FIS	-5.47%	NAVI	-3.44%
63.0	GNRC	-5.36%	BXP	-3.33%
63.0	CYH	-5.05%	UAA	-2.97%
63.0	KHC	-4.62%	ZTS	-2.88%
63.0	CHTR	-4.58%	KHC	-2.87%
63.0	MOS	-4.22%	GT	-2.78%
63.0	BALL	-4.04%	CLF	-2.56%
63.0	ZTS	-4.03%	CMCSA	-2.5%
63.0	BBY	-4.0%	TLT	-2.33%
63.0	ADBE	-3.85%	ADBE	-2.22%
63.0	CVS	-3.31%	LNC	-2.07%
63.0	TLT	-3.11%	CNC	-2.02%
63.0	NAVI	-3.11%	BBY	-1.68%
63.0	BXP	-2.65%	UNH	-1.36%
63.0	CMCSA	-2.44%	BALL	-1.29%
63.0	FRA	-2.29%	FRA	-0.9%



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## 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 2026-05-28

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	AMC	-42.29%	AMC	-29.73%
126.0	NWL	-41.47%	IEP	-19.18%
126.0	IEP	-41.23%	NWL	-17.16%
126.0	PRGO	-21.8%	PRGO	-11.66%
126.0	VFC	-20.61%	AAP	-11.09%
126.0	AAP	-14.6%	CZR	-8.57%
126.0	BHC	-13.28%	CHTR	-8.47%
126.0	UAA	-12.99%	MOS	-8.05%
126.0	CZR	-12.48%	VFC	-6.61%
126.0	MOS	-12.42%	UAA	-6.02%
126.0	CLF	-12.35%	KHC	-5.92%
126.0	CHTR	-12.0%	FIS	-5.74%
126.0	CTLT	-11.71%	CTLT	-5.69%
126.0	FIS	-10.61%	CNC	-5.4%
126.0	GT	-10.22%	NAVI	-5.31%
126.0	CNC	-10.19%	BHC	-5.31%
126.0	GNRC	-9.05%	BXP	-5.28%
126.0	KHC	-8.31%	GT	-4.9%
126.0	BALL	-7.18%	ZTS	-4.78%
126.0	ZTS	-7.03%	CMCSA	-4.47%
126.0	UNH	-6.95%	TLT	-4.15%
126.0	TLT	-6.41%	UNH	-3.74%
126.0	NAVI	-5.68%	CLF	-3.3%
126.0	GME	-5.3%	ADBE	-2.49%
126.0	BBY	-5.12%	BALL	-2.15%
126.0	BXP	-4.28%	LNC	-2.08%
126.0	CMCSA	-4.27%	BBY	-2.07%



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## 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 2026-05-28

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	-89.92%	AMC	-54.62%
252.0	NWL	-79.18%	IEP	-39.78%
252.0	AMC	-70.77%	NWL	-30.85%
252.0	AAP	-40.18%	AAP	-23.09%
252.0	VFC	-36.66%	PRGO	-19.33%
252.0	PRGO	-36.57%	VFC	-18.88%
252.0	CZR	-35.02%	CNC	-17.95%
252.0	CLF	-32.16%	CZR	-17.22%
252.0	MOS	-30.3%	UAA	-14.87%
252.0	UAA	-29.36%	MOS	-14.53%
252.0	GT	-27.25%	CHTR	-12.52%
252.0	CNC	-26.91%	KHC	-11.72%
252.0	BHC	-21.78%	CLF	-10.69%
252.0	UNH	-20.73%	UNH	-10.37%
252.0	KHC	-20.33%	GT	-8.95%
252.0	CTLT	-19.6%	BMY	-8.45%
252.0	CHTR	-16.64%	BHC	-8.38%
252.0	FIS	-12.96%	NAVI	-8.38%
252.0	TLT	-12.23%	TLT	-7.25%
252.0	OXY	-11.27%	CTLT	-6.24%
252.0	BMY	-10.97%	CYH	-5.81%
252.0	NAVI	-9.15%	CMCSA	-5.76%
252.0	CMCSA	-8.82%	OXY	-5.72%
252.0	CVS	-8.71%	ZTS	-5.59%
252.0	ZTS	-8.42%	BXP	-5.44%
252.0	CYH	-8.22%	BIIB	-5.37%
252.0	LW	-7.5%	LW	-5.25%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	ZTS	-4.22%	ZTS	-1.79%
1.0	NWL	-2.71%	AZO	-1.13%
1.0	AZO	-2.06%	NWL	-0.82%
1.0	ORLY	-1.75%	GME	-0.76%
1.0	GT	-1.64%	GT	-0.7%
1.0	POST	-1.37%	HCA	-0.68%
1.0	INTU	-1.31%	ORLY	-0.66%
1.0	CHTR	-1.16%	POST	-0.65%
1.0	HCA	-0.92%	CHTR	-0.64%
1.0	OXY	-0.92%	INTU	-0.63%
1.0	GME	-0.9%	BALL	-0.53%
1.0	PRGO	-0.9%	IEP	-0.51%
1.0	BHC	-0.84%	PEP	-0.46%
1.0	UAA	-0.84%	VFC	-0.44%
1.0	ACGL	-0.82%	EXPE	-0.44%
1.0	JPM	-0.81%	NFLX	-0.41%
1.0	TFC	-0.76%	CMCSA	-0.41%
1.0	BALL	-0.75%	MSI	-0.38%
1.0	NAVI	-0.73%	LVS	-0.37%
1.0	IEP	-0.7%	FIS	-0.36%
1.0	LVS	-0.7%	ISRG	-0.35%
1.0	MSI	-0.69%	NAVI	-0.35%
1.0	LNC	-0.67%	LNC	-0.33%
1.0	SNY	-0.67%	TFC	-0.32%
1.0	CMG	-0.65%	CMG	-0.31%
1.0	VFC	-0.62%	SNY	-0.31%
1.0	SBUX	-0.61%	BHC	-0.3%
1.0	COST	-0.59%	OXY	-0.3%
1.0	T	-0.55%	PRGO	-0.3%
1.0	PEP	-0.54%	SBUX	-0.3%



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### 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 2026-05-28 through 2026-04-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	ZTS	-24.45%	NWL	-15.5%
10.0	NWL	-24.29%	ZTS	-13.87%
10.0	INTU	-16.3%	INTU	-11.01%
10.0	GT	-15.53%	GT	-9.82%
10.0	AZO	-12.44%	MSTR	-9.72%
10.0	CHTR	-10.29%	GME	-7.94%
10.0	GME	-9.8%	VFC	-7.74%
10.0	THC	-7.22%	UAA	-7.62%
10.0	VFC	-7.11%	AZO	-7.19%
10.0	MSTR	-7.1%	CHTR	-7.0%
10.0	PRGO	-7.08%	HCA	-6.75%
10.0	HCA	-7.06%	EXPE	-6.64%
10.0	POST	-6.84%	IEP	-6.12%
10.0	IEP	-6.25%	POST	-5.37%
10.0	CYH	-6.15%	FIS	-4.6%
10.0	NAVI	-6.08%	GBTC	-4.46%
10.0	EXPE	-5.97%	NEM	-4.41%
10.0	UAA	-5.72%	LVS	-4.35%
10.0	NEM	-5.44%	BALL	-4.33%
10.0	GBTC	-5.38%	WYNN	-4.26%
10.0	BA	-5.35%	PRGO	-4.19%
10.0	LVS	-5.29%	ELAN	-4.02%
10.0	WFC	-5.29%	PWR	-3.79%
10.0	BHC	-5.06%	BA	-3.72%
10.0	ORLY	-5.05%	PEP	-3.63%
10.0	ELAN	-4.91%	CMCSA	-3.6%
10.0	B	-4.53%	ORLY	-3.51%
10.0	FIS	-4.18%	SLV	-3.41%
10.0	WYNN	-4.05%	TEVA	-3.36%
10.0	JPM	-3.87%	NAVI	-3.22%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	ZTS	-1.86%	ZTS	-0.75%
1.0	NWL	-1.33%	CHTR	-0.67%
1.0	CHTR	-1.31%	HCA	-0.53%
1.0	GT	-1.17%	GT	-0.45%
1.0	B	-1.02%	THC	-0.45%
1.0	INTU	-0.95%	AZO	-0.43%
1.0	AZO	-0.9%	NWL	-0.37%
1.0	THC	-0.9%	CMCSA	-0.32%
1.0	SLV	-0.87%	LEN	-0.31%
1.0	CAH	-0.79%	CYH	-0.31%
1.0	HCA	-0.77%	BALL	-0.3%
1.0	UAA	-0.72%	INTU	-0.29%
1.0	PCG	-0.7%	MSI	-0.28%
1.0	ACGL	-0.54%	UAA	-0.27%
1.0	MSI	-0.47%	GLD	-0.24%
1.0	LEN	-0.47%	CPRT	-0.24%
1.0	CPRT	-0.45%	PCG	-0.24%
1.0	NFLX	-0.41%	CAH	-0.24%
1.0	VICI	-0.39%	HD	-0.24%
1.0	GLD	-0.39%	PEP	-0.23%
1.0	PHM	-0.39%	ISRG	-0.23%
1.0	T	-0.38%	POST	-0.23%
1.0	FIS	-0.38%	B	-0.23%
1.0	PRGO	-0.37%	SLV	-0.23%
1.0	CMG	-0.37%	FIS	-0.22%
1.0	POST	-0.37%	GSK	-0.22%
1.0	BALL	-0.35%	TMUS	-0.21%
1.0	ORLY	-0.32%	AMGN	-0.21%
1.0	GSK	-0.3%	CMG	-0.21%
1.0	CMCSA	-0.29%	NEM	-0.2%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	ZTS	-11.25%	CHTR	-7.15%
10.0	CHTR	-10.57%	ZTS	-6.92%
10.0	HCA	-7.29%	HCA	-5.36%
10.0	GT	-7.19%	INTU	-4.5%
10.0	MOS	-6.68%	THC	-4.5%
10.0	B	-6.28%	GT	-3.97%
10.0	INTU	-5.56%	CMCSA	-3.86%
10.0	PCG	-5.44%	MOS	-3.57%
10.0	NWL	-5.35%	UAA	-3.33%
10.0	AZO	-5.01%	CYH	-3.11%
10.0	CAH	-4.01%	FIS	-2.94%
10.0	THC	-3.96%	MSI	-2.71%
10.0	CMCSA	-3.81%	LEN	-2.56%
10.0	PHM	-3.33%	TMUS	-2.49%
10.0	ADBE	-3.31%	HD	-2.45%
10.0	CPRT	-3.1%	AZO	-2.32%
10.0	HD	-3.1%	NWL	-2.27%
10.0	T	-3.05%	GLD	-2.25%
10.0	MSI	-2.98%	ISRG	-2.25%
10.0	LEN	-2.87%	T	-2.17%
10.0	UAA	-2.85%	PCG	-2.16%
10.0	META	-2.77%	BALL	-2.13%
10.0	FIS	-2.73%	AMGN	-2.11%
10.0	GME	-2.65%	GILD	-1.86%
10.0	GLD	-2.62%	CPRT	-1.79%
10.0	CYH	-2.37%	CAH	-1.74%
10.0	ISRG	-2.27%	NFLX	-1.63%
10.0	TLT	-1.99%	GME	-1.62%
10.0	LVS	-1.96%	PEP	-1.6%
10.0	GILD	-1.89%	PHM	-1.58%



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## 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 2026-05-28 through 2026-03-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	CHTR	-32.74%	CHTR	-15.66%
21.0	ZTS	-22.54%	ZTS	-13.45%
21.0	MOS	-13.66%	HCA	-10.03%
21.0	HCA	-13.66%	INTU	-8.55%
21.0	INTU	-12.91%	CMCSA	-7.6%
21.0	PCG	-12.91%	MOS	-7.56%
21.0	GT	-10.99%	THC	-7.13%
21.0	CAH	-10.58%	FIS	-5.85%
21.0	T	-7.61%	MSI	-5.63%
21.0	FIS	-7.37%	T	-5.56%
21.0	THC	-7.31%	TMUS	-5.29%
21.0	MSI	-6.88%	CYH	-4.92%
21.0	CMCSA	-6.5%	CAH	-4.81%
21.0	UAA	-5.98%	LEN	-4.64%
21.0	ISRG	-5.88%	PCG	-4.64%
21.0	CYH	-5.63%	GT	-4.64%
21.0	LEN	-5.52%	UAA	-4.53%
21.0	HD	-5.43%	ISRG	-4.38%
21.0	ADBE	-4.6%	HD	-4.21%
21.0	ELAN	-4.51%	AMGN	-4.15%
21.0	CPRT	-4.21%	ELAN	-3.8%
21.0	PHM	-4.03%	GILD	-3.5%
21.0	GILD	-4.02%	NFLX	-3.22%
21.0	NFLX	-3.84%	BALL	-3.0%
21.0	VST	-3.83%	GSK	-2.85%
21.0	TMUS	-3.78%	VZ	-2.84%
21.0	AMGN	-3.57%	GLD	-2.68%
21.0	LVS	-3.38%	HON	-2.66%
21.0	NVS	-3.04%	LVS	-2.26%
21.0	BALL	-3.03%	VST	-2.24%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	PRGO	-0.62%	CHTR	-0.35%
1.0	CHTR	-0.61%	PRGO	-0.31%
1.0	INTU	-0.6%	INTU	-0.29%
1.0	GT	-0.58%	ZTS	-0.28%
1.0	ZTS	-0.46%	MSTR	-0.24%
1.0	FIS	-0.45%	FIS	-0.23%
1.0	MSTR	-0.44%	AMC	-0.22%
1.0	CPRT	-0.37%	GT	-0.21%
1.0	AMC	-0.34%	CPRT	-0.17%
1.0	NFLX	-0.29%	ADBE	-0.17%
1.0	MOS	-0.29%	NAVI	-0.15%
1.0	CMG	-0.28%	CMG	-0.15%
1.0	NAVI	-0.27%	MOS	-0.13%
1.0	UAA	-0.26%	CMCSA	-0.12%
1.0	CMCSA	-0.22%	NFLX	-0.11%
1.0	PCG	-0.21%	NWL	-0.11%
1.0	IEP	-0.21%	GBTC	-0.11%
1.0	NWL	-0.2%	GME	-0.1%
1.0	VNO	-0.19%	TMUS	-0.09%
1.0	AZO	-0.15%	ISRG	-0.09%
1.0	ADBE	-0.15%	AZO	-0.08%
1.0	GME	-0.15%	CYH	-0.07%
1.0	VICI	-0.14%	POST	-0.06%
1.0	ISRG	-0.14%	LW	-0.06%
1.0	FRA	-0.12%	FRA	-0.05%
1.0	TMUS	-0.12%	HD	-0.05%
1.0	GBTC	-0.08%	TDG	-0.05%
1.0	SNY	-0.08%	VICI	-0.04%
1.0	COST	-0.08%	LEN	-0.04%
1.0	MSFT	-0.07%	T	-0.04%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	GT	-5.34%	CHTR	-3.45%
10.0	MSTR	-4.18%	PRGO	-2.95%
10.0	CHTR	-3.78%	INTU	-2.88%
10.0	PRGO	-3.76%	ZTS	-2.74%
10.0	AMC	-3.54%	MSTR	-2.72%
10.0	INTU	-3.05%	FIS	-2.44%
10.0	ZTS	-3.01%	AMC	-2.3%
10.0	FIS	-2.77%	GT	-2.26%
10.0	NFLX	-2.7%	ADBE	-1.94%
10.0	MOS	-2.69%	NAVI	-1.75%
10.0	ADBE	-2.59%	MOS	-1.64%
10.0	CPRT	-2.59%	CPRT	-1.63%
10.0	GBTC	-2.49%	CMG	-1.46%
10.0	VNO	-2.37%	CMCSA	-1.23%
10.0	CMG	-2.28%	GBTC	-1.11%
10.0	NAVI	-1.91%	NFLX	-1.1%
10.0	CMCSA	-1.36%	NWL	-0.88%
10.0	UAA	-1.33%	TMUS	-0.84%
10.0	ISRG	-1.28%	GME	-0.81%
10.0	NWL	-1.28%	ISRG	-0.74%
10.0	GME	-1.19%	VNO	-0.71%
10.0	VST	-1.16%	LEN	-0.64%
10.0	IEP	-1.02%	LW	-0.6%
10.0	TMUS	-0.93%	FRA	-0.59%
10.0	CNC	-0.93%	HD	-0.59%
10.0	VICI	-0.84%	TDG	-0.59%
10.0	FRA	-0.81%	BXP	-0.58%
10.0	AZO	-0.78%	AZO	-0.44%
10.0	T	-0.73%	VICI	-0.43%
10.0	SNY	-0.71%	POST	-0.43%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MSTR	-12.5%	CHTR	-7.07%
21.0	GT	-9.14%	PRGO	-6.15%
21.0	CHTR	-7.66%	INTU	-5.7%
21.0	ADBE	-6.87%	MSTR	-5.32%
21.0	PRGO	-6.39%	ZTS	-5.11%
21.0	INTU	-6.22%	FIS	-5.1%
21.0	FIS	-6.21%	AMC	-4.85%
21.0	CPRT	-6.01%	ADBE	-3.96%
21.0	AMC	-5.59%	GT	-3.96%
21.0	ZTS	-5.4%	NAVI	-3.68%
21.0	MOS	-5.3%	MOS	-3.56%
21.0	NFLX	-5.27%	CMG	-3.43%
21.0	CMG	-5.05%	CPRT	-3.38%
21.0	VNO	-4.39%	NFLX	-2.65%
21.0	NAVI	-4.24%	CMCSA	-2.54%
21.0	GBTC	-4.19%	GBTC	-2.2%
21.0	UAA	-3.24%	VNO	-1.63%
21.0	ISRG	-2.75%	TMUS	-1.57%
21.0	CMCSA	-2.7%	LEN	-1.49%
21.0	VST	-2.17%	TDG	-1.47%
21.0	T	-2.15%	LW	-1.34%
21.0	TMUS	-2.11%	ISRG	-1.3%
21.0	FRA	-1.78%	FRA	-1.29%
21.0	VICI	-1.58%	NWL	-1.24%
21.0	GME	-1.51%	BXP	-1.24%
21.0	BXP	-1.48%	VST	-1.13%
21.0	IEP	-1.42%	HD	-1.07%
21.0	TDG	-1.32%	BBY	-1.01%
21.0	SNY	-1.17%	VICI	-1.01%
21.0	HD	-1.07%	MSFT	-0.99%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	-56.1%	PRGO	-24.36%
63.0	PRGO	-34.93%	MSTR	-23.42%
63.0	GT	-24.77%	AMC	-21.44%
63.0	NFLX	-23.24%	INTU	-17.8%
63.0	FIS	-21.93%	CHTR	-15.37%
63.0	INTU	-20.4%	FIS	-15.19%
63.0	ADBE	-20.01%	NAVI	-14.0%
63.0	NWL	-19.61%	GBTC	-12.19%
63.0	MOS	-18.43%	ADBE	-12.17%
63.0	CPRT	-18.2%	ZTS	-11.23%
63.0	VNO	-18.06%	CMG	-10.88%
63.0	ORCL	-16.25%	CPRT	-10.87%
63.0	GBTC	-15.58%	GT	-10.41%
63.0	CMG	-13.75%	MOS	-10.0%
63.0	NAVI	-13.53%	VNO	-8.86%
63.0	CHTR	-13.35%	NWL	-8.17%
63.0	AMC	-12.59%	NFLX	-7.67%
63.0	ZTS	-11.81%	LEN	-6.58%
63.0	MSFT	-10.0%	MSFT	-6.46%
63.0	KHC	-9.06%	TDG	-6.25%
63.0	VICI	-7.81%	BXP	-6.1%
63.0	CMCSA	-7.63%	LW	-5.97%
63.0	TDG	-7.48%	CMCSA	-5.94%
63.0	TMUS	-7.24%	VST	-5.75%
63.0	BHC	-6.66%	FRA	-5.57%
63.0	FRA	-6.36%	KHC	-5.44%
63.0	VST	-6.32%	ORCL	-5.4%
63.0	IEP	-5.92%	TMUS	-5.33%
63.0	CCL	-4.6%	VICI	-4.54%
63.0	BXP	-4.39%	META	-4.43%



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## 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 2026-05-28 through 2025-05-30

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	AMC	-137.55%	MSTR	-52.05%
126.0	INTU	-81.71%	AMC	-48.38%
126.0	PRGO	-80.88%	PRGO	-44.08%
126.0	MSTR	-75.14%	INTU	-32.89%
126.0	NFLX	-56.25%	GBTC	-28.99%
126.0	MOS	-52.88%	CHTR	-28.63%
126.0	NWL	-51.23%	ORCL	-26.65%
126.0	FIS	-47.88%	FIS	-26.21%
126.0	VNO	-38.34%	NAVI	-24.41%
126.0	GBTC	-36.52%	NFLX	-23.59%
126.0	CPRT	-35.69%	ADBE	-22.45%
126.0	ORCL	-34.45%	ZTS	-21.54%
126.0	ZTS	-32.63%	MOS	-21.11%
126.0	ADBE	-29.89%	CPRT	-21.04%
126.0	GT	-29.44%	VNO	-20.42%
126.0	MSFT	-29.2%	LW	-19.28%
126.0	LEN	-28.61%	NWL	-18.98%
126.0	CMG	-26.78%	CMG	-16.31%
126.0	NAVI	-25.54%	VST	-16.14%
126.0	AZO	-24.7%	MSFT	-15.05%
126.0	CHTR	-22.94%	LEN	-14.01%
126.0	TMUS	-19.5%	TMUS	-13.74%
126.0	VICI	-18.81%	BXP	-13.48%
126.0	LW	-18.43%	FRA	-11.86%
126.0	KHC	-14.4%	GT	-11.56%
126.0	TDG	-14.39%	VICI	-11.18%
126.0	VST	-14.31%	KHC	-10.6%
126.0	ORLY	-12.18%	CMCSA	-10.54%
126.0	FRA	-11.84%	BBY	-10.05%
126.0	CMCSA	-11.72%	META	-10.04%



## 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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	SBNY	12.59%	SIVBQ	4.32%
1.0	GME	9.68%	GME	3.59%
1.0	MSTR	8.66%	TSLA	2.3%
1.0	SIVBQ	7.91%	META	2.3%
1.0	CHTR	6.82%	AVGO	1.84%
1.0	META	6.64%	FRCB	1.8%
1.0	GNRC	5.99%	AMC	1.75%
1.0	FRCB	5.76%	NFLX	1.66%
1.0	NFLX	5.35%	HLT	1.66%
1.0	BUD	4.61%	BALL	1.47%
1.0	SLV	4.24%	MSTR	1.38%
1.0	ZTS	4.24%	INTU	1.2%
1.0	VFC	4.24%	ACGL	1.2%
1.0	CMA	3.98%	BUD	1.2%
1.0	FRA	3.87%	CHTR	1.11%
1.0	CLF	3.78%	ZTS	1.01%
1.0	B	3.69%	TEVA	0.83%
1.0	AMC	3.5%	CMA	0.8%
1.0	ORCL	3.5%	SPY	0.74%
1.0	GILD	3.5%	SBNY	0.72%
1.0	AVGO	3.23%	GILD	0.65%
1.0	BALL	3.13%	AAP	0.55%
1.0	INTU	3.04%	FRA	0.55%
1.0	AA	2.86%	AA	0.55%
1.0	HLT	2.76%	B	0.55%



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## 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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	SIVBQ	12.13%	SIVBQ	9.56%
10.0	META	11.34%	MSTR	7.16%
10.0	MSTR	10.87%	META	4.83%
10.0	SBNY	10.66%	GME	4.74%
10.0	GME	9.29%	CHTR	3.9%
10.0	KALU	9.29%	SBNY	3.68%
10.0	HCA	8.74%	ZTS	2.97%
10.0	FRCB	8.09%	WDC	2.88%
10.0	BALL	8.09%	KALU	2.79%
10.0	CHTR	7.81%	AVGO	2.7%
10.0	GILD	6.69%	CMA	2.51%
10.0	GNRC	6.69%	AMC	2.42%
10.0	CMA	6.63%	VZ	2.23%
10.0	AMC	6.51%	ETRN	2.15%
10.0	WDC	6.51%	TXN	2.04%
10.0	TEVA	6.23%	HCA	2.04%
10.0	AVGO	5.95%	EXPE	1.95%
10.0	BXP	5.86%	XOM	1.77%
10.0	B	5.58%	BALL	1.67%
10.0	EXPE	5.58%	NVS	1.58%
10.0	VFC	5.48%	ISRG	1.58%
10.0	HD	5.48%	FRCB	1.47%
10.0	TDG	5.02%	GNRC	1.39%
10.0	ZTS	4.74%	GILD	1.39%
10.0	GW	4.55%	GW	1.3%



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## 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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	META	10.8%	SIVBQ	9.26%
21.0	GME	10.52%	CHTR	6.76%
21.0	FRCB	8.89%	MSTR	5.54%
21.0	CMA	8.43%	KALU	4.13%
21.0	KALU	8.17%	META	3.57%
21.0	GNRC	8.17%	GME	3.47%
21.0	SIVBQ	8.15%	GNRC	2.91%
21.0	AVGO	7.79%	ISRG	2.72%
21.0	CHTR	7.61%	GWV	2.63%
21.0	AMC	6.95%	ZTS	2.16%
21.0	EXPE	6.76%	CMA	2.13%
21.0	ZTS	6.67%	WDC	2.07%
21.0	MSTR	6.67%	SBNY	1.85%
21.0	B	6.01%	VZ	1.78%
21.0	HCA	5.92%	LW	1.69%
21.0	SBNY	5.56%	JAZZ	1.6%
21.0	ISRG	5.54%	AVGO	1.6%
21.0	LW	5.26%	AMC	1.5%
21.0	BXP	5.16%	AAPL	1.5%
21.0	BUD	5.16%	NEM	1.41%
21.0	BALL	4.98%	SNY	1.31%
21.0	VZ	4.79%	EXPE	1.31%
21.0	NAVI	4.79%	BALL	1.31%
21.0	VFC	4.69%	HD	1.31%
21.0	GILD	4.6%	TXN	1.03%



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## 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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	SIVBQ	11.11%	SIVBQ	7.78%
63.0	CHTR	10.85%	AVGO	5.77%
63.0	META	10.65%	EXPE	4.69%
63.0	AVGO	9.87%	GME	4.59%
63.0	EXPE	9.78%	CTLT	3.23%
63.0	LW	8.11%	LW	3.23%
63.0	CMA	6.69%	KALU	2.15%
63.0	MSTR	6.35%	GSK	1.66%
63.0	BUD	6.16%	AMZN	1.47%
63.0	GME	5.67%	WFC	1.37%
63.0	GILD	4.89%	CHTR	1.08%
63.0	VFC	4.79%	BXP	1.08%
63.0	CTLT	4.69%	TXN	0.88%
63.0	KALU	4.3%	HD	0.78%
63.0	SNY	4.2%	GWV	0.68%
63.0	XOM	4.01%	CMA	0.53%
63.0	GNRC	3.81%	AMC	0.49%
63.0	BALL	3.71%	FCX	0.49%
63.0	HCA	3.52%	AZO	0.39%
63.0	AAP	3.23%	VFC	0.39%
63.0	IRM	3.03%	KHC	0.29%
63.0	BXP	2.54%	SNY	0.29%
63.0	JAZZ	2.44%	BUD	0.29%
63.0	FRCB	2.22%	AA	0.29%
63.0	ZTS	2.15%	JAZZ	0.2%



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## 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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	LW	11.77%	AVGO	7.29%
126.0	VFC	9.17%	EXPE	5.1%
126.0	EXPE	7.08%	LW	4.9%
126.0	GME	5.52%	NVS	3.54%
126.0	MSTR	5.21%	BUD	2.71%
126.0	META	4.69%	MSI	2.4%
126.0	BALL	4.58%	OXY	1.67%
126.0	AAP	4.38%	MSTR	1.56%
126.0	CMA	4.21%	IRM	1.35%
126.0	BXP	4.06%	META	1.25%
126.0	CHTR	3.96%	VFC	1.15%
126.0	GOOGL	3.12%	KALU	1.15%
126.0	IRM	3.12%	BALL	1.15%
126.0	HCA	2.19%	CMA	1.14%
126.0	XOM	2.08%	GSK	1.04%
126.0	BUD	2.08%	GME	1.04%
126.0	CTLT	1.78%	ETRN	1.02%
126.0	KALU	1.56%	HCA	0.83%
126.0	AVGO	1.56%	GNRC	0.52%
126.0	TMUS	1.25%	ORLY	0.0%
126.0	NWL	1.15%	ZTS	0.0%
126.0	BAC	1.04%	PCG	0.0%
126.0	GNRC	1.04%	FSUGY	0.0%
126.0	AMC	0.83%	NWL	0.0%
126.0	KHC	0.83%	FRA	0.0%



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## 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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
252.0	EXPE	6.95%	GWV	3.72%
252.0	IRM	3.6%	LW	3.72%
252.0	GME	3.36%	IRM	2.64%
252.0	VST	2.52%	ORLY	1.44%
252.0	GNRC	1.56%	EXPE	1.2%
252.0	OXY	1.56%	GNRC	0.48%
252.0	BA	1.56%	CVS	0.36%
252.0	BALL	1.44%	XOM	0.12%
252.0	KEY	1.32%	QQQ	0.0%
252.0	CHTR	0.6%	PCG	0.0%
252.0	AAPL	0.12%	PEP	0.0%
252.0	MSTR	0.12%	GME	0.0%
252.0	ZTS	0.0%	POST	0.0%
252.0	CYH	0.0%	PRGO	0.0%
252.0	MUB	0.0%	FSUGY	0.0%
252.0	MOS	0.0%	SBNY	0.0%
252.0	CTLT	0.0%	SIVBQ	0.0%
252.0	LQD	0.0%	OXY	0.0%
252.0	NAVI	0.0%	FRA	0.0%
252.0	NWL	0.0%	FITB	0.0%
252.0	CZR	0.0%	FIS	0.0%
252.0	KHC	0.0%	SBUX	0.0%
252.0	EMB	0.0%	FRCB	0.0%
252.0	LNC	0.0%	ZTS	0.0%
252.0	FRA	0.0%	GT	0.0%



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### 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 2026-05-28 through 2026-04-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	NVDA	25.0%	WDC	20.0%
1.0	AVGO	20.0%	AVGO	15.0%
1.0	QQQ	20.0%	CLF	10.0%
1.0	MRK	20.0%	PCG	10.0%
1.0	WDC	20.0%	MU	10.0%
1.0	AMZN	20.0%	UNH	10.0%
1.0	PWR	15.0%	TXN	5.0%
1.0	AMD	15.0%	UAA	5.0%
1.0	QCOM	10.0%	BAC	5.0%
1.0	KALU	10.0%	AA	5.0%
1.0	FCX	10.0%	CNC	5.0%
1.0	AA	10.0%	NVDA	5.0%
1.0	CLF	10.0%	AMC	5.0%
1.0	GNRC	10.0%	GLD	5.0%
1.0	MU	10.0%	NFLX	0.0%
1.0	LNC	10.0%	MSFT	0.0%
1.0	IRM	10.0%	NEM	0.0%
1.0	CNC	10.0%	NAVI	0.0%
1.0	KEY	10.0%	NVS	0.0%
1.0	VNO	10.0%	NWL	0.0%
1.0	UNH	10.0%	MUB	0.0%
1.0	TSLA	5.0%	ORCL	0.0%
1.0	BAC	5.0%	MSTR	0.0%
1.0	JAZZ	5.0%	LW	0.0%
1.0	INTC	5.0%	MOS	0.0%



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### 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 2026-05-28 through 2026-04-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	TXN	72.73%	JAZZ	36.36%
10.0	WDC	63.64%	WDC	18.18%
10.0	AMC	36.36%	GWV	18.18%
10.0	AMD	36.36%	AMD	18.18%
10.0	MU	27.27%	MU	9.09%
10.0	MRK	18.18%	GE	9.09%
10.0	QQQ	18.18%	MRK	9.09%
10.0	NVDA	18.18%	LEN	0.0%
10.0	CNC	18.18%	KALU	0.0%
10.0	CLF	18.18%	PCG	0.0%
10.0	AA	18.18%	OXY	0.0%
10.0	AVGO	9.09%	ORLY	0.0%
10.0	GE	9.09%	ORCL	0.0%
10.0	JAZZ	9.09%	NWL	0.0%
10.0	VNO	9.09%	NVS	0.0%
10.0	CSTM	9.09%	NFLX	0.0%
10.0	CVS	9.09%	NEM	0.0%
10.0	HLT	9.09%	NAVI	0.0%
10.0	TSLA	9.09%	MUB	0.0%
10.0	ORCL	9.09%	JPM	0.0%
10.0	BBY	9.09%	MSTR	0.0%
10.0	BAC	9.09%	MSI	0.0%
10.0	INTC	9.09%	KHC	0.0%
10.0	B	9.09%	MSFT	0.0%
10.0	PCG	9.09%	MS	0.0%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	UNH	12.9%	UNH	9.68%
1.0	WDC	12.9%	WDC	8.06%
1.0	MRK	11.29%	NFLX	6.45%
1.0	PWR	11.29%	TSLA	4.84%
1.0	TXN	11.29%	AVGO	4.84%
1.0	LNC	9.68%	CLF	3.23%
1.0	VFC	9.68%	GLD	3.23%
1.0	NFLX	8.06%	UAA	3.23%
1.0	JAZZ	8.06%	BAC	3.23%
1.0	TSLA	8.06%	TXN	3.23%
1.0	B	8.06%	AMC	3.23%
1.0	META	6.45%	JAZZ	3.23%
1.0	CYH	4.84%	AMZN	1.61%
1.0	FCX	4.84%	GSK	1.61%
1.0	KEY	4.84%	ORCL	1.61%
1.0	GE	4.84%	PCG	1.61%
1.0	BUD	4.84%	CNC	1.61%
1.0	QQQ	4.84%	EXPE	1.61%
1.0	AA	4.84%	SLV	1.61%
1.0	IRM	4.84%	BUD	1.61%
1.0	KALU	4.84%	THC	1.61%
1.0	GSK	4.84%	NVDA	1.61%
1.0	GWV	4.84%	VFC	1.61%
1.0	THC	3.23%	MU	0.0%
1.0	FITB	3.23%	NEM	0.0%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	UNH	33.96%	UNH	32.08%
10.0	TXN	28.3%	JAZZ	16.98%
10.0	WDC	22.64%	WDC	11.32%
10.0	AMC	20.75%	TXN	11.32%
10.0	CSTM	20.75%	NFLX	9.43%
10.0	TSLA	20.75%	META	9.43%
10.0	EXPE	15.09%	GSK	7.55%
10.0	AMZN	15.09%	EXPE	7.55%
10.0	NFLX	13.21%	IRM	7.55%
10.0	AA	9.43%	B	5.66%
10.0	GLD	9.43%	KALU	5.66%
10.0	ORCL	9.43%	HSBC	5.66%
10.0	SBUX	9.43%	GLD	3.77%
10.0	BXP	9.43%	BUD	3.77%
10.0	KALU	7.55%	GWV	3.77%
10.0	GSK	7.55%	VFC	3.77%
10.0	CVS	7.55%	GE	1.89%
10.0	BAC	7.55%	LUMN	1.89%
10.0	JAZZ	5.66%	GNRC	1.89%
10.0	UAA	5.66%	CNC	1.89%
10.0	IRM	5.66%	MRK	1.89%
10.0	SNY	5.66%	ORCL	1.89%
10.0	CNC	5.66%	UAA	1.89%
10.0	HON	5.66%	BAC	1.89%
10.0	GWV	5.66%	AMZN	1.89%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	AMC	40.48%	JAZZ	35.71%
21.0	BXP	38.1%	UNH	23.81%
21.0	UNH	28.57%	WDC	16.67%
21.0	CSTM	23.81%	BUD	9.52%
21.0	JAZZ	23.81%	GNRC	9.52%
21.0	IRM	19.05%	CNC	4.76%
21.0	BUD	19.05%	FITB	4.76%
21.0	TXN	16.67%	META	4.76%
21.0	CVS	16.67%	TXN	4.76%
21.0	USB	14.29%	CVS	4.76%
21.0	BAC	14.29%	INTC	4.76%
21.0	TSLA	11.9%	CSTM	4.76%
21.0	NFLX	11.9%	IRM	4.76%
21.0	FITB	11.9%	GSK	2.38%
21.0	GSK	11.9%	KALU	2.38%
21.0	WDC	9.52%	QCOM	2.38%
21.0	VFC	7.14%	MSI	0.0%
21.0	MSTR	7.14%	NEM	0.0%
21.0	QCOM	7.14%	NVS	0.0%
21.0	HSBC	4.76%	NWL	0.0%
21.0	VNO	4.76%	NAVI	0.0%
21.0	CLF	4.76%	MUB	0.0%
21.0	GNRC	2.38%	MSTR	0.0%
21.0	GLD	2.38%	NFLX	0.0%
21.0	CNC	2.38%	AA	0.0%



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### 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	GILD	9.6%	TSLA	6.0%
1.0	VFC	8.4%	WDC	4.4%
1.0	CLF	7.2%	PCG	4.0%
1.0	UNH	7.2%	GILD	3.2%
1.0	TSLA	6.8%	GLD	2.4%
1.0	BUD	6.8%	UNH	2.4%
1.0	TXN	6.0%	AMC	2.4%
1.0	WDC	5.6%	NFLX	2.4%
1.0	CMA	5.33%	TXN	2.0%
1.0	NFLX	5.2%	AAP	1.6%
1.0	QQQ	5.2%	CLF	1.6%
1.0	META	4.8%	NWL	1.6%
1.0	GW	4.8%	AMZN	1.6%
1.0	AMZN	4.4%	ORCL	1.2%
1.0	PWR	4.4%	GNRC	1.2%
1.0	NVS	4.0%	NVS	1.2%
1.0	GNRC	4.0%	BAC	1.2%
1.0	BXP	3.6%	CMA	1.18%
1.0	KEY	3.6%	IEP	0.8%
1.0	AMC	3.6%	UAA	0.8%
1.0	LC	3.6%	ZTS	0.8%
1.0	AA	3.2%	MSTR	0.4%
1.0	CYH	3.2%	MSI	0.4%
1.0	FCX	3.2%	JPM	0.4%
1.0	AAP	2.8%	THC	0.4%



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### 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	TXN	16.6%	WDC	13.28%
10.0	AMZN	14.94%	KALU	7.05%
10.0	WDC	14.52%	BUD	6.64%
10.0	NVS	13.69%	NVS	6.64%
10.0	GILD	13.28%	UNH	6.22%
10.0	EXPE	11.62%	GLD	5.39%
10.0	FCX	11.62%	CMA	5.0%
10.0	UNH	10.79%	TXN	4.98%
10.0	KALU	10.79%	JAZZ	4.15%
10.0	AMC	10.79%	AMZN	3.73%
10.0	THC	9.54%	HCA	3.32%
10.0	CMA	9.38%	UAA	3.32%
10.0	TSLA	9.13%	VFC	2.9%
10.0	VFC	8.71%	TSLA	2.9%
10.0	TDG	8.71%	EXPE	2.9%
10.0	BXP	8.3%	AAP	2.49%
10.0	SBUX	8.3%	NAVI	2.07%
10.0	BUD	7.47%	TMUS	2.07%
10.0	CSTM	5.81%	META	2.07%
10.0	CLF	5.39%	VST	2.07%
10.0	GWV	4.98%	THC	2.07%
10.0	HON	4.98%	NFLX	2.07%
10.0	BAC	4.98%	AVGO	2.07%
10.0	CVS	4.56%	FCX	1.66%
10.0	GLD	4.56%	JPM	1.66%



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### 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	CMA	20.81%	KALU	12.17%
21.0	NVS	20.0%	WDC	7.39%
21.0	EXPE	16.96%	CMA	6.71%
21.0	TXN	16.52%	JAZZ	6.52%
21.0	KALU	12.61%	TMUS	6.09%
21.0	WDC	11.74%	BUD	6.09%
21.0	VFC	10.87%	AAP	5.65%
21.0	BXP	10.0%	THC	4.78%
21.0	TDG	10.0%	EXPE	4.35%
21.0	AMC	9.57%	FCX	3.48%
21.0	AAP	8.7%	UNH	3.48%
21.0	BUD	8.7%	UAA	3.48%
21.0	CVS	8.26%	TXN	3.04%
21.0	AVGO	7.83%	AMZN	2.61%
21.0	GILD	7.39%	GLD	2.17%
21.0	JAZZ	6.96%	BALL	1.74%
21.0	UAA	6.09%	NVS	1.74%
21.0	AMZN	5.22%	FITB	1.3%
21.0	GSK	5.22%	IRM	0.87%
21.0	FCX	4.78%	META	0.87%
21.0	BAC	4.78%	CNC	0.87%
21.0	CLF	4.78%	CVS	0.87%
21.0	HCA	4.78%	AZN	0.43%
21.0	SBUX	4.35%	ELAN	0.43%
21.0	VZ	4.35%	INTC	0.43%



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### 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	EXPE	29.79%	AVGO	15.96%
63.0	CMA	20.56%	EXPE	15.43%
63.0	GILD	19.68%	GSK	9.04%
63.0	AVGO	15.96%	AMZN	7.98%
63.0	TSLA	14.89%	WYNN	5.85%
63.0	HCA	13.83%	KALU	5.32%
63.0	THC	12.23%	ORCL	3.72%
63.0	NVS	12.23%	FCX	3.72%
63.0	JAZZ	11.7%	TXN	2.66%
63.0	VFC	11.17%	NVS	2.13%
63.0	PCG	11.17%	PWR	2.13%
63.0	AAP	11.17%	CVS	1.6%
63.0	BUD	9.04%	GILD	1.6%
63.0	MU	8.51%	AAPL	1.6%
63.0	CVS	8.51%	TSLA	1.6%
63.0	ELAN	7.98%	AA	1.6%
63.0	KALU	5.85%	CMA	0.93%
63.0	UNH	5.32%	THC	0.53%
63.0	CNC	5.32%	JAZZ	0.53%
63.0	AAPL	4.79%	PCG	0.53%
63.0	TXN	4.26%	TFC	0.0%
63.0	VZ	4.26%	MSFT	0.0%
63.0	FCX	3.72%	VICI	0.0%
63.0	BALL	2.66%	MS	0.0%
63.0	INTC	1.6%	MOS	0.0%



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### 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	NVS	36.8%	NVS	28.8%
126.0	GILD	35.2%	AVGO	26.4%
126.0	BUD	24.0%	CMA	22.73%
126.0	AVGO	23.2%	KALU	8.8%
126.0	GLD	14.4%	GSK	8.0%
126.0	EXPE	10.4%	EXPE	5.6%
126.0	PCG	10.4%	GNRC	4.8%
126.0	AAPL	9.6%	HCA	4.8%
126.0	WYNN	8.8%	ELAN	1.6%
126.0	HCA	8.8%	GS	0.8%
126.0	FCX	7.2%	GILD	0.8%
126.0	THC	6.4%	MSI	0.0%
126.0	VFC	5.6%	MSTR	0.0%
126.0	KALU	3.2%	ISRG	0.0%
126.0	CVS	2.4%	MUB	0.0%
126.0	QCOM	0.8%	MS	0.0%
126.0	JAZZ	0.8%	NAVI	0.0%
126.0	ELAN	0.8%	NFLX	0.0%
126.0	GS	0.8%	NVDA	0.0%
126.0	GNRC	0.8%	MSFT	0.0%
126.0	KEY	0.0%	LUMN	0.0%
126.0	NAVI	0.0%	MOS	0.0%
126.0	MU	0.0%	META	0.0%
126.0	NFLX	0.0%	LW	0.0%
126.0	NVDA	0.0%	ORCL	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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	EMB	-3.97%	CCL	-2.03%
1.0	MOS	-3.96%	HSBC	-2.03%
1.0	HYG	-3.78%	PHM	-1.84%
1.0	BHP	-3.59%	NVDA	-1.75%
1.0	VCSH	-3.5%	WYNN	-1.66%
1.0	PHM	-3.5%	LLY	-1.66%
1.0	DHI	-3.41%	LVS	-1.66%
1.0	HSBC	-3.23%	MU	-1.57%
1.0	MS	-3.13%	AMD	-1.57%
1.0	CCL	-3.04%	CSCO	-1.57%
1.0	AZN	-2.95%	T	-1.57%
1.0	ON	-2.76%	GE	-1.47%
1.0	CSCO	-2.76%	BHP	-1.47%
1.0	X	-2.72%	DHI	-1.38%
1.0	MUB	-2.68%	CDNS	-1.38%
1.0	AMAT	-2.67%	INTC	-1.38%
1.0	CAH	-2.67%	LUMN	-1.38%
1.0	TLT	-2.67%	HYG	-1.38%
1.0	LVS	-2.58%	MS	-1.38%
1.0	GE	-2.58%	ON	-1.38%
1.0	T	-2.58%	MUB	-1.29%
1.0	COST	-2.49%	MNST	-1.29%
1.0	VNO	-2.49%	COST	-1.29%
1.0	MSFT	-2.3%	AMAT	-1.29%
1.0	AMD	-2.3%	MOS	-1.29%



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## 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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	MUB	-6.42%	NVDA	-4.0%
10.0	LLY	-5.95%	LLY	-3.35%
10.0	CCL	-4.83%	AMD	-3.25%
10.0	NVDA	-4.74%	X	-3.22%
10.0	CSCO	-4.65%	MUB	-2.98%
10.0	MS	-4.46%	PWR	-2.88%
10.0	T	-4.28%	GBTC	-2.7%
10.0	COST	-4.28%	DHI	-2.7%
10.0	BHP	-4.09%	CPRT	-2.42%
10.0	AMAT	-4.09%	LUMN	-2.42%
10.0	AMD	-4.09%	MU	-2.42%
10.0	PHM	-4.0%	T	-2.32%
10.0	CDNS	-3.9%	MS	-2.23%
10.0	BA	-3.44%	TMUS	-2.23%
10.0	CAH	-3.16%	CCL	-2.14%
10.0	DHI	-3.16%	TEVA	-2.14%
10.0	JPM	-3.07%	LVS	-2.04%
10.0	CYH	-3.07%	CSCO	-1.95%
10.0	LUMN	-3.07%	COST	-1.86%
10.0	VCSH	-2.97%	PHM	-1.86%
10.0	FSUGY	-2.97%	BHP	-1.67%
10.0	GE	-2.88%	CDNS	-1.67%
10.0	CPRT	-2.79%	POST	-1.58%
10.0	MOS	-2.79%	SLV	-1.49%
10.0	CMG	-2.6%	WYNN	-1.49%



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## 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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	CCL	-8.26%	NVDA	-4.98%
21.0	LLY	-7.98%	AMD	-4.88%
21.0	MUB	-7.42%	ETRN	-4.38%
21.0	COST	-7.32%	GE	-4.23%
21.0	MS	-6.48%	TEVA	-4.04%
21.0	DHI	-6.1%	LLY	-3.94%
21.0	NVDA	-5.82%	GBTC	-3.94%
21.0	PHM	-5.45%	PWR	-3.85%
21.0	GE	-5.45%	DHI	-3.38%
21.0	AMAT	-5.07%	LUMN	-3.19%
21.0	CDNS	-4.98%	MUB	-3.1%
21.0	GLD	-4.88%	WYNN	-3.1%
21.0	AMD	-4.6%	X	-2.78%
21.0	JPM	-4.6%	LVS	-2.72%
21.0	PWR	-4.41%	MOS	-2.72%
21.0	AZN	-4.41%	MU	-2.72%
21.0	QQQ	-4.23%	CAH	-2.44%
21.0	T	-4.13%	BA	-2.35%
21.0	GBTC	-3.94%	T	-2.35%
21.0	LEN	-3.94%	AMAT	-2.25%
21.0	CAH	-3.94%	AMGN	-2.16%
21.0	BHP	-3.76%	TSLA	-1.97%
21.0	CMG	-3.66%	CCL	-1.97%
21.0	CPRT	-3.57%	TMUS	-1.88%
21.0	BA	-3.47%	COST	-1.78%



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## 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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	NVDA	-17.3%	NVDA	-10.75%
63.0	LLY	-11.05%	GBTC	-8.31%
63.0	DHI	-10.56%	CAH	-7.62%
63.0	GBTC	-10.56%	LLY	-7.62%
63.0	AMD	-10.46%	B	-7.14%
63.0	AMAT	-9.97%	GLD	-6.16%
63.0	CMG	-9.78%	ETRN	-5.99%
63.0	VNO	-9.29%	AMD	-5.87%
63.0	CCL	-9.29%	GE	-5.67%
63.0	PHM	-8.8%	DHI	-5.57%
63.0	CAH	-8.6%	MU	-5.28%
63.0	JPM	-8.02%	VST	-5.18%
63.0	LVS	-8.02%	TRGP	-4.79%
63.0	TRGP	-8.02%	MRK	-4.79%
63.0	GLD	-7.72%	MUB	-4.31%
63.0	GE	-7.33%	GILD	-4.2%
63.0	LUMN	-7.04%	CSTM	-4.11%
63.0	T	-6.65%	PHM	-4.11%
63.0	PWR	-6.55%	THC	-3.81%
63.0	HLT	-6.45%	CCL	-3.62%
63.0	COST	-6.45%	LUMN	-3.23%
63.0	CPRT	-6.06%	MS	-3.13%
63.0	MRK	-5.96%	TMUS	-3.03%
63.0	NFLX	-5.77%	ACGL	-3.03%
63.0	CSTM	-5.67%	MSTR	-2.64%



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## 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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	NVDA	-22.5%	NVDA	-17.4%
126.0	AMAT	-20.31%	GE	-13.23%
126.0	GE	-19.38%	THC	-11.67%
126.0	PHM	-19.06%	GLD	-11.67%
126.0	PWR	-15.1%	TRGP	-10.94%
126.0	JPM	-14.9%	LLY	-10.83%
126.0	CAH	-14.06%	GBTC	-9.69%
126.0	GLD	-13.75%	B	-9.38%
126.0	GS	-13.75%	MU	-9.27%
126.0	T	-13.33%	TMUS	-9.27%
126.0	COST	-12.92%	AMAT	-9.06%
126.0	MRK	-12.6%	CAH	-8.65%
126.0	GBTC	-12.6%	RIO	-7.71%
126.0	ORCL	-12.4%	GILD	-7.5%
126.0	HSBC	-12.19%	NEM	-7.19%
126.0	NFLX	-11.04%	ACGL	-6.56%
126.0	LLY	-10.52%	CMG	-6.56%
126.0	MS	-10.31%	ORCL	-6.04%
126.0	CSCO	-10.1%	WDC	-6.04%
126.0	THC	-9.58%	PWR	-5.94%
126.0	MSFT	-9.48%	PHM	-5.73%
126.0	AMD	-9.48%	AMD	-5.62%
126.0	MU	-9.38%	TEVA	-5.62%
126.0	CMG	-8.85%	SLV	-5.53%
126.0	AZN	-8.85%	X	-5.26%



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## 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 2026-05-28

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
252.0	GE	-54.2%	GLD	-33.45%
252.0	PHM	-39.69%	GE	-31.89%
252.0	JPM	-34.05%	CAH	-26.74%
252.0	GBTC	-33.09%	GBTC	-24.46%
252.0	NFLX	-30.34%	HSBC	-22.42%
252.0	PWR	-29.98%	PHM	-22.18%
252.0	COST	-27.82%	GS	-18.47%
252.0	MS	-25.42%	LLY	-17.75%
252.0	GS	-25.06%	COST	-15.71%
252.0	ACGL	-24.22%	TMUS	-15.59%
252.0	ORCL	-23.02%	NVDA	-15.59%
252.0	HSBC	-22.3%	PWR	-14.39%
252.0	NVDA	-20.5%	ACGL	-14.27%
252.0	T	-18.94%	TRGP	-14.27%
252.0	MU	-18.35%	NFLX	-13.19%
252.0	LLY	-18.23%	GOOGL	-11.87%
252.0	CSCO	-17.39%	VST	-10.67%
252.0	AMAT	-16.91%	JPM	-10.43%
252.0	CPRT	-16.91%	THC	-9.83%
252.0	CAH	-15.95%	META	-9.83%
252.0	DHI	-15.95%	T	-9.59%
252.0	ISRG	-15.71%	MU	-9.35%
252.0	TMUS	-15.23%	TEVA	-9.35%
252.0	AMD	-14.15%	AMAT	-8.27%
252.0	CMG	-14.15%	ETRN	-7.18%



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### 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 2026-05-28 through 2026-04-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	LUMN	-15.0%	ON	-15.0%
1.0	COST	-10.0%	HSBC	-10.0%
1.0	HSBC	-10.0%	B	-10.0%
1.0	HLT	-10.0%	CSCO	-5.0%
1.0	EMB	-10.0%	CVS	-5.0%
1.0	CPRT	-10.0%	CSTM	-5.0%
1.0	OXY	-10.0%	QCOM	-5.0%
1.0	TDG	-10.0%	FSUGY	-5.0%
1.0	INTU	-10.0%	CCL	-5.0%
1.0	VST	-5.0%	CAH	-5.0%
1.0	ON	-5.0%	MSI	-5.0%
1.0	HYG	-5.0%	MS	-5.0%
1.0	ADBE	-5.0%	ORLY	-5.0%
1.0	CSCO	-5.0%	MRK	-5.0%
1.0	CZR	-5.0%	LUMN	-5.0%
1.0	ELAN	-5.0%	XOM	-5.0%
1.0	MUB	-5.0%	ADBE	-5.0%
1.0	ORLY	-5.0%	HON	-5.0%
1.0	FSUGY	-5.0%	HLT	-5.0%
1.0	LQD	-5.0%	OXY	-5.0%
1.0	LLY	-5.0%	MOS	0.0%
1.0	LEN	-5.0%	LW	0.0%
1.0	HD	-5.0%	KEY	0.0%
1.0	AAPL	-5.0%	ORCL	0.0%
1.0	HON	-5.0%	KHC	0.0%



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### 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 2026-05-28 through 2026-04-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	ON	-36.36%	CVS	-36.36%
10.0	COST	-27.27%	CSCO	-27.27%
10.0	CAH	-18.18%	QCOM	-18.18%
10.0	FCX	-9.09%	ON	-18.18%
10.0	LUMN	-9.09%	FSUGY	-9.09%
10.0	OXY	-9.09%	MNST	-9.09%
10.0	KHC	0.0%	NVDA	-9.09%
10.0	IRM	0.0%	NAVI	0.0%
10.0	NWL	0.0%	NEM	0.0%
10.0	NVS	0.0%	NFLX	0.0%
10.0	NFLX	0.0%	NVS	0.0%
10.0	ZION	0.0%	NWL	0.0%
10.0	NEM	0.0%	ORCL	0.0%
10.0	NAVI	0.0%	ORLY	0.0%
10.0	MUB	0.0%	OXY	0.0%
10.0	MSTR	0.0%	MUB	0.0%
10.0	MSI	0.0%	MSTR	0.0%
10.0	JPM	0.0%	AA	0.0%
10.0	MSFT	0.0%	MSFT	0.0%
10.0	MS	0.0%	MS	0.0%
10.0	MOS	0.0%	MOS	0.0%
10.0	ORLY	0.0%	META	0.0%
10.0	META	0.0%	LW	0.0%
10.0	LW	0.0%	LVS	0.0%
10.0	LVS	0.0%	LUMN	0.0%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	OXY	-11.29%	ON	-9.68%
1.0	EMB	-11.29%	HSBC	-8.06%
1.0	HSBC	-9.68%	CSTM	-6.45%
1.0	XOM	-8.06%	CCL	-6.45%
1.0	HYG	-8.06%	B	-4.84%
1.0	BA	-8.06%	OXY	-4.84%
1.0	PHM	-6.45%	MS	-4.84%
1.0	BHP	-6.45%	BHP	-4.84%
1.0	TDG	-6.45%	ORLY	-4.84%
1.0	HD	-4.84%	RIO	-4.84%
1.0	INTU	-4.84%	TDG	-3.23%
1.0	TFC	-4.84%	HLT	-3.23%
1.0	HLT	-4.84%	SPY	-3.23%
1.0	RIO	-4.84%	QQQ	-3.23%
1.0	POST	-4.84%	INTU	-3.23%
1.0	CVS	-4.84%	EMB	-3.23%
1.0	VICI	-4.84%	CDNS	-3.23%
1.0	DHI	-4.84%	CSCO	-3.23%
1.0	AAPL	-4.84%	HD	-3.23%
1.0	MSFT	-4.84%	XOM	-3.23%
1.0	ORLY	-3.23%	BA	-3.23%
1.0	MOS	-3.23%	MOS	-3.23%
1.0	COST	-3.23%	KALU	-3.23%
1.0	LUMN	-3.23%	GS	-3.23%
1.0	CSCO	-3.23%	INTC	-1.61%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	QQQ	-24.53%	GOOGL	-26.42%
10.0	MSFT	-20.75%	AMD	-24.53%
10.0	BHP	-18.87%	PWR	-18.87%
10.0	AVGO	-16.98%	CSCO	-11.32%
10.0	MU	-16.98%	QQQ	-11.32%
10.0	EMB	-15.09%	AVGO	-11.32%
10.0	OXY	-15.09%	HLT	-9.43%
10.0	SPY	-15.09%	MS	-9.43%
10.0	CSCO	-13.21%	MSFT	-9.43%
10.0	GOOGL	-13.21%	MU	-9.43%
10.0	FCX	-9.43%	RIO	-9.43%
10.0	AMD	-9.43%	SPY	-9.43%
10.0	ON	-7.55%	AA	-9.43%
10.0	GS	-5.66%	CVS	-7.55%
10.0	COST	-5.66%	MNST	-7.55%
10.0	NEM	-5.66%	ON	-7.55%
10.0	CAH	-3.77%	FCX	-5.66%
10.0	RIO	-3.77%	BHP	-5.66%
10.0	HYG	-3.77%	TEVA	-5.66%
10.0	DHI	-3.77%	EMB	-3.77%
10.0	BA	-3.77%	OXY	-3.77%
10.0	AMAT	-3.77%	BA	-3.77%
10.0	LLY	-3.77%	NVDA	-3.77%
10.0	AAPL	-3.77%	ELAN	-1.89%
10.0	JPM	-3.77%	DHI	-1.89%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	QQQ	-57.14%	AMD	-52.38%
21.0	SPY	-35.71%	GOOGL	-35.71%
21.0	AVGO	-33.33%	QQQ	-28.57%
21.0	BHP	-33.33%	MU	-28.57%
21.0	CSCO	-26.19%	PWR	-26.19%
21.0	AAPL	-21.43%	AVGO	-23.81%
21.0	GOOGL	-21.43%	CSCO	-19.05%
21.0	PWR	-16.67%	ON	-14.29%
21.0	CDNS	-16.67%	MNST	-11.9%
21.0	BA	-14.29%	SPY	-9.52%
21.0	RIO	-14.29%	MS	-7.14%
21.0	AMD	-14.29%	CDNS	-7.14%
21.0	MSFT	-11.9%	FCX	-4.76%
21.0	MU	-11.9%	HSBC	-4.76%
21.0	TRGP	-11.9%	LLY	-4.76%
21.0	OXY	-11.9%	TEVA	-4.76%
21.0	ON	-11.9%	HLT	-4.76%
21.0	TFC	-11.9%	MSFT	-4.76%
21.0	GS	-9.52%	RIO	-2.38%
21.0	NVDA	-9.52%	NVDA	-2.38%
21.0	LLY	-9.52%	ORCL	-2.38%
21.0	HLT	-9.52%	TRGP	-2.38%
21.0	EMB	-4.76%	MSI	0.0%
21.0	DHI	-4.76%	NWL	0.0%
21.0	TEVA	-4.76%	NVS	0.0%



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## 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	X	-8.33%	SLV	-6.02%
1.0	BHP	-8.0%	B	-4.8%
1.0	RIO	-6.8%	CSTM	-4.0%
1.0	PHM	-5.2%	NEM	-3.6%
1.0	BIIB	-4.8%	LUMN	-3.6%
1.0	XOM	-4.4%	BHP	-3.6%
1.0	AMAT	-4.4%	RIO	-3.6%
1.0	DHI	-4.0%	HSBC	-3.2%
1.0	LUMN	-4.0%	AMD	-3.2%
1.0	MOS	-4.0%	PHM	-3.2%
1.0	NEM	-4.0%	INTC	-3.2%
1.0	HSBC	-3.6%	CSCO	-3.2%
1.0	EMB	-3.6%	DHI	-2.8%
1.0	OXY	-3.6%	KALU	-2.8%
1.0	POST	-3.6%	ON	-2.8%
1.0	AZO	-3.6%	CCL	-2.8%
1.0	CSCO	-3.2%	BIIB	-2.8%
1.0	MS	-3.2%	T	-2.4%
1.0	COST	-3.2%	ORLY	-2.4%
1.0	VICI	-3.2%	OXY	-2.4%
1.0	TEVA	-3.2%	GS	-2.4%
1.0	BA	-2.8%	AMAT	-2.4%
1.0	HYG	-2.8%	PEP	-2.0%
1.0	TFC	-2.8%	LEN	-2.0%
1.0	CAH	-2.8%	MRK	-2.0%



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## 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	BHP	-14.11%	AMD	-9.96%
10.0	AMAT	-12.03%	SLV	-7.92%
10.0	PHM	-7.05%	GOOGL	-7.47%
10.0	AMD	-6.64%	TEVA	-7.05%
10.0	RIO	-6.22%	ORCL	-6.64%
10.0	CSCO	-6.22%	B	-6.22%
10.0	LVS	-4.98%	CSCO	-4.98%
10.0	COST	-4.98%	AMAT	-4.98%
10.0	OXY	-4.98%	MU	-4.98%
10.0	MRK	-4.98%	LVS	-4.56%
10.0	BA	-4.56%	PWR	-4.56%
10.0	PEP	-4.15%	BHP	-4.15%
10.0	B	-4.15%	T	-4.15%
10.0	GS	-3.32%	CCL	-3.73%
10.0	EMB	-3.32%	PEP	-3.73%
10.0	DHI	-3.32%	RIO	-3.73%
10.0	LUMN	-3.32%	LUMN	-3.73%
10.0	AZO	-3.32%	MSI	-3.73%
10.0	BHC	-2.9%	AZN	-2.49%
10.0	TFC	-2.49%	COST	-2.49%
10.0	BMJ	-2.49%	MS	-2.49%
10.0	MUB	-2.49%	BHC	-2.49%
10.0	FSUGY	-2.49%	SPY	-2.07%
10.0	CCL	-2.07%	GNRC	-2.07%
10.0	MSFT	-2.07%	MSFT	-2.07%



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## 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	BHP	-19.57%	AMD	-19.13%
21.0	AMAT	-12.17%	B	-13.04%
21.0	B	-11.3%	TEVA	-10.0%
21.0	LVS	-10.0%	MU	-9.13%
21.0	AMD	-10.0%	ORCL	-6.96%
21.0	OXY	-9.57%	RIO	-6.52%
21.0	BA	-9.57%	AMAT	-6.09%
21.0	CSCO	-9.57%	CSCO	-5.22%
21.0	CCL	-9.13%	PEP	-5.22%
21.0	QQQ	-7.39%	T	-5.22%
21.0	CSTM	-6.96%	QQQ	-5.22%
21.0	RIO	-6.96%	MSI	-5.22%
21.0	TEVA	-6.52%	OXY	-4.78%
21.0	PEP	-6.52%	TRGP	-4.78%
21.0	LLY	-6.09%	PWR	-4.78%
21.0	GS	-6.09%	GSK	-4.78%
21.0	SPY	-5.65%	LLY	-4.78%
21.0	COST	-4.78%	LUMN	-4.78%
21.0	LNC	-4.78%	SLV	-4.37%
21.0	DHI	-4.78%	LVS	-4.35%
21.0	LEN	-4.35%	BHP	-3.91%
21.0	GOOGL	-3.91%	CAH	-3.48%
21.0	PHM	-3.91%	WYNN	-3.48%
21.0	AZN	-3.91%	XOM	-3.48%
21.0	TRGP	-3.91%	HSBC	-3.04%



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### 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	AMAT	-35.11%	B	-42.02%
63.0	CAH	-32.98%	CAH	-31.91%
63.0	CSTM	-28.19%	TEVA	-23.4%
63.0	TRGP	-26.06%	CSTM	-22.34%
63.0	BHP	-23.4%	GOOGL	-21.81%
63.0	RIO	-22.34%	RIO	-18.09%
63.0	GOOGL	-21.81%	XOM	-13.3%
63.0	LLY	-19.68%	WDC	-11.7%
63.0	AMD	-19.15%	AMAT	-11.7%
63.0	OXY	-15.43%	NEM	-11.17%
63.0	NEM	-15.43%	AMD	-10.64%
63.0	BYM	-13.83%	OXY	-9.57%
63.0	MNST	-12.23%	BALL	-9.57%
63.0	B	-12.23%	BHP	-9.04%
63.0	LUMN	-11.7%	MU	-8.51%
63.0	BIIB	-10.11%	GLD	-7.45%
63.0	GW	-9.57%	LUMN	-7.45%
63.0	TEVA	-9.57%	ON	-6.38%
63.0	IRM	-9.57%	MSI	-6.38%
63.0	MRK	-9.04%	INTC	-5.85%
63.0	HON	-7.98%	QCOM	-5.85%
63.0	PHM	-7.98%	TRGP	-5.32%
63.0	DHI	-7.45%	DHI	-5.32%
63.0	CSCO	-7.45%	LLY	-5.32%
63.0	HSBC	-6.38%	SLV	-4.81%



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### 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	AMAT	-84.8%	AMAT	-62.4%
126.0	CAH	-73.6%	RIO	-59.2%
126.0	RIO	-55.2%	TEVA	-50.4%
126.0	BHP	-55.2%	B	-50.4%
126.0	TRGP	-54.4%	CAH	-43.2%
126.0	TEVA	-44.0%	NEM	-37.6%
126.0	MRK	-40.0%	INTC	-34.4%
126.0	AZN	-36.0%	AA	-33.6%
126.0	BIIB	-32.0%	CSTM	-30.4%
126.0	MNST	-29.6%	SLV	-22.58%
126.0	XOM	-24.8%	WDC	-22.4%
126.0	PWR	-23.2%	TRGP	-20.8%
126.0	HSBC	-20.8%	BHP	-20.8%
126.0	LVS	-16.8%	PWR	-16.8%
126.0	AMD	-16.8%	HSBC	-15.2%
126.0	NEM	-14.4%	CSCO	-11.2%
126.0	CSCO	-13.6%	AMD	-10.4%
126.0	GWG	-12.8%	MU	-9.6%
126.0	OXY	-10.4%	ON	-8.8%
126.0	LLY	-8.0%	XOM	-8.8%
126.0	AMGN	-7.2%	GLD	-8.0%
126.0	INTC	-6.4%	MRK	-8.0%
126.0	FSUGY	-6.4%	MNST	-5.6%
126.0	IRM	-5.6%	JAZZ	-5.6%
126.0	GOOGL	-5.6%	LVS	-4.0%



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

### All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-05-28

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	X	0.21%	NVDA	0.3%
1.0	CCL	0.19%	X	0.29%
1.0	AVGO	0.19%	GBTC	0.24%
1.0	TSLA	0.18%	PWR	0.23%
1.0	GE	0.16%	AVGO	0.21%
1.0	NVDA	0.16%	GE	0.21%
1.0	AMD	0.13%	LLY	0.21%
1.0	B	0.13%	CCL	0.16%
1.0	GBTC	0.13%	AMD	0.15%
1.0	VST	0.12%	MU	0.15%
1.0	TDG	0.11%	TSLA	0.15%
1.0	LLY	0.11%	CAH	0.15%
1.0	JAZZ	0.09%	ON	0.14%
1.0	DHI	0.08%	TDG	0.13%
1.0	LVS	0.08%	JAZZ	0.13%
1.0	MU	0.08%	TRGP	0.12%
1.0	AMAT	0.07%	VST	0.12%
1.0	SBNY	0.07%	CDNS	0.12%
1.0	MSFT	0.07%	B	0.12%
1.0	PWR	0.07%	HLT	0.11%
1.0	CYH	0.07%	LVS	0.11%
1.0	ON	0.07%	AMAT	0.1%
1.0	AZO	0.07%	SLV	0.1%
1.0	PHM	0.07%	WYNN	0.1%
1.0	CAH	0.06%	QQQ	0.09%



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## 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 2026-05-28

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	NVDA	2.55%	NVDA	3.25%
10.0	SBNY	1.86%	LLY	2.14%
10.0	TSLA	1.84%	TSLA	1.75%
10.0	AVGO	1.67%	AMAT	1.75%
10.0	CCL	1.64%	CCL	1.73%
10.0	LLY	1.47%	AVGO	1.67%
10.0	AMD	1.02%	PWR	1.61%
10.0	AMAT	1.01%	GBTC	1.48%
10.0	FRCB	0.93%	MU	1.47%
10.0	PWR	0.87%	LUMN	1.2%
10.0	GBTC	0.83%	AMD	1.2%
10.0	MSFT	0.82%	CSTM	1.08%
10.0	BHC	0.77%	TEVA	0.98%
10.0	AZO	0.74%	GE	0.94%
10.0	QQQ	0.71%	AZO	0.93%
10.0	LVS	0.65%	PHM	0.82%
10.0	GE	0.59%	COST	0.82%
10.0	MU	0.53%	ACGL	0.79%
10.0	PHM	0.52%	GS	0.78%
10.0	HLT	0.52%	SLV	0.77%
10.0	T	0.51%	T	0.77%
10.0	GT	0.49%	DHI	0.73%
10.0	DHI	0.47%	QQQ	0.7%
10.0	ELAN	0.46%	PCG	0.69%
10.0	COST	0.46%	WYNN	0.69%



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## 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 2026-05-28

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	NVDA	5.08%	NVDA	5.93%
21.0	SBNY	5.03%	AMD	5.48%
21.0	TSLA	4.74%	TSLA	4.58%
21.0	CCL	3.44%	ETRN	4.03%
21.0	AMAT	3.0%	GBTC	4.01%
21.0	AMD	2.94%	CCL	3.95%
21.0	GBTC	2.29%	AMAT	3.5%
21.0	LLY	2.29%	LUMN	3.48%
21.0	FRCB	2.24%	SBNY	2.85%
21.0	PWR	1.97%	LLY	2.77%
21.0	AZO	1.79%	PWR	2.37%
21.0	PCG	1.71%	AVGO	2.26%
21.0	QQQ	1.71%	AA	2.25%
21.0	MU	1.7%	VST	2.19%
21.0	AVGO	1.61%	MU	2.18%
21.0	ELAN	1.51%	GE	2.11%
21.0	PHM	1.48%	TEVA	2.0%
21.0	DHI	1.44%	CDNS	2.0%
21.0	MSFT	1.31%	AZO	1.99%
21.0	AMC	1.27%	PCG	1.95%
21.0	CDNS	1.27%	DHI	1.84%
21.0	GE	1.13%	ELAN	1.8%
21.0	LVS	1.09%	CSTM	1.72%
21.0	CAH	1.02%	PHM	1.7%
21.0	CSTM	0.98%	LVS	1.57%



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## 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 2026-05-28

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	NVDA	14.75%	GBTC	19.84%
63.0	SBNY	13.02%	NVDA	18.4%
63.0	CCL	12.27%	AMD	15.33%
63.0	AMAT	10.08%	LUMN	12.14%
63.0	AMC	8.04%	CCL	11.38%
63.0	GBTC	7.71%	PWR	10.88%
63.0	AMD	7.43%	LLY	10.79%
63.0	MSTR	7.38%	AMAT	9.49%
63.0	LLY	6.57%	GE	9.04%
63.0	TSLA	6.0%	PHM	8.56%
63.0	PWR	5.87%	B	8.54%
63.0	FRCB	5.84%	ETRN	8.48%
63.0	ELAN	5.09%	MSTR	6.97%
63.0	PCG	4.94%	VST	6.49%
63.0	MU	4.75%	MS	6.25%
63.0	QQQ	4.71%	TEVA	6.2%
63.0	PHM	4.68%	CAH	6.19%
63.0	VNO	4.41%	ELAN	5.76%
63.0	DHI	4.39%	JPM	5.5%
63.0	CAH	4.28%	PCG	5.38%
63.0	AZO	3.78%	TSLA	5.3%
63.0	MSFT	3.76%	CSTM	5.16%
63.0	LVS	3.61%	MU	5.08%
63.0	AMZN	3.4%	X	5.07%
63.0	LUMN	3.23%	AMC	5.03%



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## 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 2026-05-28

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	NVDA	38.05%	GBTC	48.94%
126.0	AMAT	26.86%	NVDA	43.8%
126.0	GBTC	22.5%	AMD	27.1%
126.0	MU	21.86%	CCL	24.62%
126.0	AMD	19.29%	PWR	24.27%
126.0	SBNY	19.0%	LLY	24.23%
126.0	CCL	18.7%	AMAT	23.66%
126.0	PHM	16.84%	PHM	23.57%
126.0	PWR	14.14%	GE	23.32%
126.0	DHI	13.38%	LUMN	23.32%
126.0	QQQ	13.37%	MU	22.29%
126.0	AMZN	13.34%	WDC	19.97%
126.0	VNO	13.34%	B	19.15%
126.0	GE	12.22%	THC	18.69%
126.0	AMC	11.84%	MS	17.05%
126.0	TSLA	11.5%	JPM	16.59%
126.0	MS	11.26%	ORCL	15.39%
126.0	THC	11.18%	TSLA	14.56%
126.0	PCG	10.59%	CAH	14.5%
126.0	LLY	10.25%	TEVA	13.26%
126.0	ORCL	9.7%	X	13.25%
126.0	ELAN	9.68%	VST	12.84%
126.0	NFLX	9.3%	AMZN	12.64%
126.0	MSFT	9.15%	DHI	12.62%
126.0	B	8.9%	QQQ	12.42%



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## 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 2026-05-28

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
252.0	NVDA	114.16%	GBTC	118.14%
252.0	GBTC	92.74%	NVDA	82.02%
252.0	MU	70.67%	GE	79.95%
252.0	AMD	53.47%	MU	74.06%
252.0	NFLX	51.98%	CCL	69.85%
252.0	PHM	49.82%	PHM	65.74%
252.0	GE	48.95%	THC	55.94%
252.0	CCL	48.15%	AMAT	51.91%
252.0	AMAT	48.0%	AMD	46.44%
252.0	PWR	46.48%	WDC	45.99%
252.0	LLY	44.01%	TRGP	43.42%
252.0	ELAN	40.1%	MS	43.14%
252.0	QQQ	39.82%	X	41.64%
252.0	AMZN	39.72%	NFLX	38.39%
252.0	MS	37.52%	ELAN	38.21%
252.0	VNO	36.76%	QQQ	36.86%
252.0	CDNS	34.37%	PWR	33.49%
252.0	THC	33.91%	HSBC	30.54%
252.0	DHI	32.51%	T	29.77%
252.0	JPM	32.51%	SLV	28.89%
252.0	MSFT	32.3%	ORCL	28.85%
252.0	COST	29.77%	GOOGL	28.52%
252.0	GOOGL	28.71%	GS	28.5%
252.0	ACGL	27.43%	TEVA	27.51%
252.0	ISRG	25.54%	JPM	27.38%



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### 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 2026-05-28 through 2026-04-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	VST	0.61%	LUMN	2.3%
1.0	LLY	0.52%	QCOM	1.67%
1.0	HSBC	0.4%	ON	1.66%
1.0	MOS	0.39%	CSCO	1.49%
1.0	AAP	0.37%	TSLA	1.12%
1.0	CSTM	0.31%	LLY	0.96%
1.0	TDG	0.27%	CVS	0.92%
1.0	BBY	0.27%	BIIB	0.66%
1.0	HLT	0.26%	ADBE	0.66%
1.0	ON	0.26%	VST	0.62%
1.0	CYH	0.26%	TRGP	0.47%
1.0	HD	0.25%	ORCL	0.43%
1.0	LUMN	0.25%	FSUGY	0.4%
1.0	ADBE	0.23%	TDG	0.39%
1.0	CVS	0.23%	MU	0.38%
1.0	LW	0.22%	CDNS	0.34%
1.0	CCL	0.22%	MOS	0.33%
1.0	TSLA	0.21%	HSBC	0.3%
1.0	KHC	0.19%	BBY	0.28%
1.0	SPY	0.18%	KHC	0.28%
1.0	LNC	0.16%	PWR	0.27%
1.0	FSUGY	0.14%	CSTM	0.26%
1.0	KEY	0.14%	HLT	0.26%
1.0	BIIB	0.14%	AAP	0.26%
1.0	HON	0.14%	MSFT	0.25%



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### 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 2026-05-28 through 2026-04-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	ON	6.63%	CSCO	18.32%
10.0	LUMN	6.07%	LUMN	18.1%
10.0	CSCO	4.59%	CVS	14.75%
10.0	LLY	4.52%	LLY	14.54%
10.0	CAH	3.73%	CAH	9.67%
10.0	MSTR	3.26%	TRGP	6.87%
10.0	EXPE	3.19%	QCOM	6.68%
10.0	UAA	2.86%	ON	5.87%
10.0	COST	2.49%	OXY	5.54%
10.0	OXY	1.94%	AMAT	4.44%
10.0	HCA	1.87%	TSLA	4.26%
10.0	PWR	1.77%	FSUGY	3.47%
10.0	SLV	1.69%	VST	2.94%
10.0	GT	1.67%	KHC	2.81%
10.0	CZR	1.46%	MSTR	2.62%
10.0	KHC	1.37%	CLF	2.5%
10.0	GBTC	1.37%	MU	2.33%
10.0	GLD	1.31%	FCX	2.04%
10.0	FCX	1.3%	MS	1.98%
10.0	VST	1.29%	GS	1.98%
10.0	MS	1.2%	NVDA	1.92%
10.0	PEP	1.09%	UAA	1.9%
10.0	FIS	1.06%	HLT	1.86%
10.0	TDG	1.02%	CZR	1.78%
10.0	VFC	0.98%	MNST	1.73%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	AVGO	0.85%	LUMN	1.52%
1.0	PWR	0.61%	AVGO	0.94%
1.0	VST	0.5%	ON	0.89%
1.0	AMD	0.42%	AMD	0.86%
1.0	LUMN	0.41%	CSCO	0.85%
1.0	CYH	0.4%	PWR	0.73%
1.0	NVDA	0.23%	QCOM	0.63%
1.0	SPY	0.2%	CSTM	0.51%
1.0	GE	0.2%	MU	0.48%
1.0	OXY	0.16%	NVDA	0.48%
1.0	HON	0.16%	ADBE	0.37%
1.0	HSBC	0.14%	CDNS	0.37%
1.0	MS	0.13%	VST	0.37%
1.0	ADBE	0.12%	CVS	0.32%
1.0	SBUX	0.12%	INTC	0.31%
1.0	LW	0.12%	TRGP	0.31%
1.0	MSFT	0.11%	QQQ	0.3%
1.0	ISRG	0.11%	HLT	0.27%
1.0	QQQ	0.11%	CYH	0.26%
1.0	GOOGL	0.11%	AA	0.25%
1.0	GNRC	0.11%	BIIB	0.22%
1.0	CSTM	0.09%	GE	0.22%
1.0	BBY	0.08%	KEY	0.19%
1.0	BAC	0.08%	TEVA	0.19%
1.0	GBTC	0.08%	MSTR	0.19%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	AVGO	9.57%	AMD	19.58%
10.0	AMD	5.39%	MU	16.93%
10.0	MU	5.33%	AVGO	10.17%
10.0	QQQ	4.33%	PWR	8.03%
10.0	PWR	4.17%	CSCO	7.57%
10.0	NVDA	3.58%	LUMN	7.1%
10.0	LUMN	3.07%	AMAT	6.76%
10.0	SPY	2.6%	GOOGL	6.71%
10.0	CSCO	2.57%	NVDA	5.38%
10.0	GOOGL	2.45%	QQQ	4.42%
10.0	MSFT	1.98%	FCX	3.92%
10.0	CYH	1.97%	CVS	3.58%
10.0	SLV	1.75%	SLV	3.48%
10.0	PRGO	1.53%	OXY	3.1%
10.0	OXY	1.52%	SPY	3.09%
10.0	FCX	1.44%	TRGP	2.79%
10.0	BHP	1.37%	LLY	2.65%
10.0	ON	1.34%	MS	2.56%
10.0	THC	1.17%	AMC	2.5%
10.0	TMUS	1.17%	PRGO	2.38%
10.0	LLY	1.1%	HLT	2.29%
10.0	GE	1.08%	VNO	2.02%
10.0	HON	1.05%	FSUGY	1.83%
10.0	AMAT	0.99%	BHP	1.78%
10.0	JPM	0.99%	ON	1.75%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	AVGO	27.88%	AMD	62.15%
21.0	AMD	27.55%	MU	32.95%
21.0	MU	23.8%	AVGO	27.73%
21.0	QQQ	13.26%	LUMN	18.47%
21.0	NVDA	11.74%	CSCO	17.35%
21.0	CSCO	11.66%	GOOGL	14.25%
21.0	PWR	8.5%	TEVA	10.51%
21.0	GOOGL	7.67%	NVDA	10.11%
21.0	LUMN	7.44%	FSUGY	9.93%
21.0	SPY	7.32%	QQQ	9.78%
21.0	MSFT	5.19%	PRGO	9.61%
21.0	BHP	4.75%	GS	9.35%
21.0	VNO	4.49%	SPY	8.68%
21.0	PRGO	4.25%	AMAT	8.16%
21.0	RIO	3.23%	ON	8.15%
21.0	NWL	3.16%	PWR	8.1%
21.0	BA	2.95%	LLY	7.44%
21.0	THC	2.6%	VNO	6.8%
21.0	TMUS	2.59%	MSFT	6.32%
21.0	LLY	2.46%	FCX	5.05%
21.0	TRGP	2.45%	BHP	5.03%
21.0	CDNS	2.45%	KEY	4.72%
21.0	JPM	2.39%	INTC	4.58%
21.0	AAPL	2.32%	MS	3.82%
21.0	GS	2.17%	TRGP	3.74%



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## 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	LUMN	0.78%	LUMN	0.98%
1.0	AVGO	0.41%	AMD	0.62%
1.0	AMD	0.4%	CLF	0.54%
1.0	AMAT	0.3%	AMAT	0.49%
1.0	FSUGY	0.24%	SLV	0.48%
1.0	PWR	0.23%	MU	0.47%
1.0	CLF	0.21%	CSTM	0.45%
1.0	BHP	0.21%	BHP	0.39%
1.0	TEVA	0.2%	AVGO	0.38%
1.0	LVS	0.19%	INTC	0.36%
1.0	OXY	0.18%	NVDA	0.35%
1.0	X	0.18%	PWR	0.35%
1.0	PHM	0.17%	BHC	0.3%
1.0	VST	0.17%	RIO	0.3%
1.0	BIIB	0.16%	LLY	0.28%
1.0	HSBC	0.16%	BIIB	0.28%
1.0	MU	0.16%	X	0.27%
1.0	LLY	0.15%	FSUGY	0.27%
1.0	RIO	0.14%	LVS	0.27%
1.0	CSTM	0.13%	TEVA	0.25%
1.0	SLV	0.13%	AA	0.25%
1.0	BMV	0.12%	HSBC	0.24%
1.0	B	0.12%	ON	0.23%
1.0	PEP	0.12%	KEY	0.22%
1.0	SPY	0.12%	B	0.21%



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## 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	LUMN	6.41%	LUMN	8.48%
10.0	AMAT	3.73%	AMAT	5.79%
10.0	AVGO	3.27%	AMD	5.25%
10.0	AMD	2.76%	MU	4.87%
10.0	SLV	2.27%	SLV	4.19%
10.0	BHP	1.77%	AVGO	3.31%
10.0	NVDA	1.75%	BHP	3.26%
10.0	CYH	1.56%	PWR	2.95%
10.0	NWL	1.56%	NVDA	2.75%
10.0	MU	1.24%	CSTM	2.67%
10.0	PWR	1.13%	CLF	2.62%
10.0	PHM	1.05%	BIIB	2.17%
10.0	QQQ	1.05%	CSCO	2.13%
10.0	BIIB	0.92%	TEVA	1.99%
10.0	FSUGY	0.88%	GNRC	1.88%
10.0	RIO	0.86%	LNC	1.81%
10.0	CSCO	0.79%	GOOGL	1.74%
10.0	TEVA	0.77%	GS	1.57%
10.0	LVS	0.76%	RIO	1.39%
10.0	MRK	0.72%	KEY	1.37%
10.0	INTU	0.67%	FSUGY	1.31%
10.0	GS	0.64%	LW	1.26%
10.0	LNC	0.61%	LLY	1.2%
10.0	LLY	0.61%	QQQ	1.17%
10.0	LW	0.61%	CAH	1.14%



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## 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	AMD	10.25%	AMD	17.83%
21.0	AMAT	10.06%	LUMN	17.82%
21.0	LUMN	7.89%	AMAT	8.65%
21.0	MU	5.99%	MU	7.44%
21.0	BHP	4.83%	TEVA	7.41%
21.0	AVGO	4.59%	BHP	6.53%
21.0	BIIB	3.75%	LVS	5.04%
21.0	NWL	3.35%	CSTM	5.03%
21.0	NVDA	3.31%	AVGO	5.0%
21.0	SLV	3.25%	SLV	4.91%
21.0	PHM	2.86%	BIIB	4.53%
21.0	CSCO	2.81%	CLF	4.3%
21.0	CSTM	2.56%	GOOGL	4.14%
21.0	CAH	2.5%	CSCO	4.05%
21.0	LVS	2.38%	FSUGY	4.03%
21.0	TEVA	2.31%	LNC	3.76%
21.0	QQQ	2.23%	GE	3.7%
21.0	PWR	2.2%	B	3.45%
21.0	LNC	2.19%	NVDA	3.25%
21.0	RIO	2.04%	PEP	3.07%
21.0	TFC	1.95%	LLY	3.03%
21.0	B	1.79%	CAH	2.95%
21.0	PEP	1.65%	ON	2.81%
21.0	CYH	1.65%	RIO	2.78%
21.0	LLY	1.49%	GS	2.71%



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### 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	AMAT	32.77%	LUMN	57.69%
63.0	LUMN	31.17%	AMD	49.47%
63.0	BHP	19.86%	B	31.91%
63.0	AMD	18.07%	BHP	27.5%
63.0	CAH	15.83%	AMAT	27.41%
63.0	AMC	15.76%	TEVA	25.15%
63.0	BIIB	14.15%	LLY	20.55%
63.0	B	12.07%	CSTM	19.12%
63.0	CSTM	11.72%	INTC	18.64%
63.0	MU	10.81%	OXY	17.04%
63.0	LLY	10.31%	RIO	15.9%
63.0	TRGP	10.26%	CAH	15.39%
63.0	TEVA	9.94%	FSUGY	14.06%
63.0	RIO	9.02%	NEM	13.54%
63.0	SLV	8.18%	MU	13.2%
63.0	FSUGY	6.71%	WDC	11.91%
63.0	OXY	6.06%	BIIB	10.51%
63.0	GOOGL	4.82%	GOOGL	9.3%
63.0	NEM	4.77%	SLV	9.05%
63.0	CSCO	4.65%	AMC	8.84%
63.0	LNC	4.54%	TRGP	7.42%
63.0	PCG	3.96%	ZION	6.8%
63.0	CHTR	3.93%	LNC	6.67%
63.0	NVDA	3.6%	PCG	6.54%
63.0	PHM	3.55%	GE	6.4%



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## 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	AMAT	101.05%	WDC	130.44%
126.0	MU	63.11%	B	111.95%
126.0	BHP	59.58%	INTC	100.4%
126.0	B	45.46%	AMAT	91.33%
126.0	TRGP	37.09%	LUMN	74.36%
126.0	LUMN	35.26%	TEVA	69.0%
126.0	INTC	34.41%	BHP	66.03%
126.0	TEVA	33.94%	NEM	58.41%
126.0	SLV	33.92%	AMD	56.31%
126.0	LLY	31.07%	MU	55.07%
126.0	AMD	31.01%	CAH	44.09%
126.0	BIIB	30.75%	LLY	42.59%
126.0	CAH	30.57%	PWR	39.55%
126.0	RIO	28.04%	FSUGY	36.4%
126.0	AMC	24.7%	SLV	36.24%
126.0	FSUGY	24.67%	TRGP	35.64%
126.0	ON	15.95%	CSTM	34.56%
126.0	NEM	15.31%	RIO	31.32%
126.0	GWV	14.99%	OXY	26.94%
126.0	MRK	13.37%	BIIB	23.09%
126.0	AZN	12.27%	UAA	21.85%
126.0	CSTM	10.83%	ON	21.56%
126.0	CNC	10.79%	AA	21.21%
126.0	MNST	10.62%	GOOGL	17.98%
126.0	OXY	10.5%	MRK	16.43%



## 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 2026-05-28

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	IEP	-0.26%	NWL	-0.3%
1.0	MSTR	-0.24%	IEP	-0.28%
1.0	UAA	-0.18%	SIVBQ	-0.14%
1.0	CZR	-0.17%	UAA	-0.13%
1.0	NWL	-0.15%	GT	-0.12%
1.0	GT	-0.12%	INTU	-0.12%
1.0	GNRC	-0.09%	CZR	-0.11%
1.0	LNC	-0.08%	ZTS	-0.1%
1.0	META	-0.07%	FIS	-0.09%
1.0	NFLX	-0.07%	GNRC	-0.08%
1.0	BXP	-0.07%	CHTR	-0.08%
1.0	ZTS	-0.06%	BXP	-0.07%
1.0	BIIB	-0.06%	META	-0.07%
1.0	ORCL	-0.06%	MSTR	-0.06%
1.0	CHTR	-0.05%	CTLT	-0.06%
1.0	BALL	-0.05%	BALL	-0.05%
1.0	BA	-0.04%	NAVI	-0.05%
1.0	AAPL	-0.04%	PRGO	-0.04%
1.0	TLT	-0.04%	BIIB	-0.04%
1.0	UNH	-0.04%	UNH	-0.04%
1.0	GME	-0.03%	KHC	-0.03%
1.0	TEVA	-0.03%	TLT	-0.03%
1.0	INTC	-0.03%	AAPL	-0.02%
1.0	AA	-0.03%	USB	-0.02%
1.0	FIS	-0.03%	BA	-0.02%



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## 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 2026-05-28

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	CZR	-1.38%	IEP	-1.83%
10.0	IEP	-1.32%	NWL	-1.58%
10.0	MSTR	-1.27%	SIVBQ	-1.44%
10.0	ORCL	-0.74%	CZR	-1.19%
10.0	META	-0.72%	GME	-0.89%
10.0	WDC	-0.63%	GT	-0.79%
10.0	GNRC	-0.58%	CYH	-0.79%
10.0	SIVBQ	-0.56%	INTU	-0.67%
10.0	NFLX	-0.53%	ORCL	-0.65%
10.0	NWL	-0.47%	META	-0.61%
10.0	INTU	-0.42%	CNC	-0.56%
10.0	AA	-0.39%	ETRN	-0.55%
10.0	GOOGL	-0.38%	VNO	-0.53%
10.0	MS	-0.35%	AMC	-0.52%
10.0	BALL	-0.32%	VZ	-0.48%
10.0	GME	-0.31%	CLF	-0.44%
10.0	KALU	-0.3%	NFLX	-0.43%
10.0	UAA	-0.28%	BXP	-0.43%
10.0	AAPL	-0.28%	HD	-0.42%
10.0	ZTS	-0.25%	BAC	-0.33%
10.0	HCA	-0.24%	ZTS	-0.33%
10.0	BXP	-0.23%	KALU	-0.31%
10.0	INTC	-0.23%	ON	-0.28%
10.0	CMA	-0.23%	UAA	-0.28%
10.0	BIIB	-0.21%	GNRC	-0.27%



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## 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 2026-05-28

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	CZR	-3.45%	IEP	-3.16%
21.0	IEP	-3.2%	GME	-2.57%
21.0	MSTR	-2.13%	NWL	-2.56%
21.0	GME	-1.64%	CZR	-2.08%
21.0	WDC	-1.35%	SIVBQ	-2.05%
21.0	INTU	-1.25%	GT	-1.47%
21.0	GNRC	-1.22%	GNRC	-1.45%
21.0	META	-1.2%	INTU	-1.43%
21.0	ORCL	-1.02%	ADBE	-1.35%
21.0	CLF	-1.0%	CLF	-0.9%
21.0	LUMN	-0.94%	BALL	-0.87%
21.0	KALU	-0.91%	BBY	-0.85%
21.0	ADBE	-0.79%	NFLX	-0.84%
21.0	VZ	-0.7%	META	-0.79%
21.0	NWL	-0.7%	VFC	-0.78%
21.0	SIVBQ	-0.6%	HD	-0.7%
21.0	BAC	-0.57%	VZ	-0.68%
21.0	BALL	-0.57%	BXP	-0.66%
21.0	FSUGY	-0.5%	ISRG	-0.63%
21.0	INTC	-0.48%	KALU	-0.62%
21.0	CMA	-0.47%	FITB	-0.58%
21.0	AAPL	-0.46%	KEY	-0.57%
21.0	NFLX	-0.46%	UAA	-0.52%
21.0	KHC	-0.43%	AAP	-0.52%
21.0	ISRG	-0.43%	BAC	-0.5%



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## 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 2026-05-28

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	IEP	-10.03%	SIVBQ	-17.54%
63.0	GNRC	-6.54%	IEP	-11.55%
63.0	NWL	-5.23%	NWL	-8.75%
63.0	META	-4.48%	GNRC	-7.64%
63.0	VFC	-3.19%	CLF	-7.12%
63.0	GME	-2.97%	BHC	-5.18%
63.0	SIVBQ	-2.85%	CYH	-4.43%
63.0	CZR	-2.56%	GME	-4.23%
63.0	WDC	-2.48%	UAA	-4.06%
63.0	BALL	-2.23%	VFC	-4.02%
63.0	ADBE	-2.16%	PRGO	-3.66%
63.0	INTC	-2.12%	GT	-3.62%
63.0	UAA	-1.97%	BALL	-2.75%
63.0	VZ	-1.66%	CVS	-2.7%
63.0	AA	-1.5%	BBY	-2.32%
63.0	CYH	-1.47%	AA	-2.02%
63.0	INTU	-1.35%	FIS	-1.98%
63.0	ON	-1.25%	KEY	-1.97%
63.0	CLF	-1.17%	CZR	-1.9%
63.0	BBY	-1.15%	AAP	-1.89%
63.0	KALU	-1.1%	KHC	-1.75%
63.0	CVS	-1.07%	ADBE	-1.63%
63.0	ORCL	-1.07%	VZ	-1.59%
63.0	PRGO	-1.0%	FRA	-1.39%
63.0	ETRN	-0.97%	ZTS	-1.15%



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## 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 2026-05-28

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	IEP	-21.17%	FRCB	-74.45%
126.0	NWL	-19.56%	NWL	-24.3%
126.0	SIVBQ	-14.35%	SIVBQ	-23.49%
126.0	VFC	-11.81%	IEP	-22.05%
126.0	GNRC	-11.31%	VFC	-14.0%
126.0	FRCB	-7.86%	AMC	-12.57%
126.0	WDC	-4.28%	GNRC	-11.01%
126.0	CLF	-4.07%	PRGO	-10.14%
126.0	PRGO	-3.99%	CLF	-9.05%
126.0	BALL	-3.92%	BHC	-7.97%
126.0	GT	-3.68%	UAA	-6.97%
126.0	CVS	-3.58%	GME	-6.95%
126.0	ADBE	-3.48%	CTLT	-6.01%
126.0	GME	-3.36%	GT	-5.32%
126.0	VZ	-3.32%	SBNY	-5.31%
126.0	CYH	-3.02%	BALL	-5.03%
126.0	FIS	-2.98%	FIS	-4.87%
126.0	BBY	-2.91%	CNC	-4.79%
126.0	CMA	-2.38%	MOS	-4.37%
126.0	MSTR	-2.21%	CZR	-3.91%
126.0	AA	-2.18%	CHTR	-3.53%
126.0	IRM	-1.97%	AAP	-3.52%
126.0	KHC	-1.88%	UNH	-3.21%
126.0	UAA	-1.71%	BBY	-3.05%
126.0	BHC	-1.69%	CMA	-2.91%



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## 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 2026-05-28

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	NWL	-44.72%	SIVBQ	-55.92%
252.0	IEP	-43.9%	IEP	-50.15%
252.0	GNRC	-16.98%	NWL	-48.33%
252.0	CLF	-15.0%	CLF	-21.47%
252.0	GT	-13.6%	GT	-18.3%
252.0	SBNY	-13.3%	CZR	-17.8%
252.0	UNH	-13.01%	VFC	-17.78%
252.0	CZR	-12.73%	PRGO	-17.24%
252.0	FIS	-12.24%	AAP	-17.09%
252.0	CVS	-10.95%	AMC	-16.15%
252.0	VFC	-10.55%	MOS	-15.77%
252.0	AAP	-9.9%	UAA	-14.49%
252.0	UAA	-9.7%	GNRC	-13.61%
252.0	AA	-9.02%	BHC	-13.4%
252.0	MOS	-8.72%	CTLT	-13.37%
252.0	BHC	-7.78%	UNH	-10.37%
252.0	BALL	-7.07%	CNC	-8.96%
252.0	KEY	-6.59%	KHC	-8.6%
252.0	PRGO	-6.04%	FIS	-8.41%
252.0	CYH	-5.91%	KEY	-6.71%
252.0	GME	-5.35%	OXY	-5.55%
252.0	IRM	-4.88%	LCN	-5.29%
252.0	ADBE	-4.75%	TLT	-4.98%



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### 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 2026-05-28 through 2026-04-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	ZTS	-1.99%	ZTS	-2.43%
1.0	NWL	-1.21%	NWL	-1.88%
1.0	MU	-0.89%	ORLY	-1.09%
1.0	ORLY	-0.83%	GT	-0.94%
1.0	UAA	-0.83%	AZO	-0.93%
1.0	GT	-0.77%	POST	-0.73%
1.0	INTC	-0.72%	INTU	-0.68%
1.0	WDC	-0.71%	OXY	-0.62%
1.0	B	-0.66%	WDC	-0.61%
1.0	AMAT	-0.64%	UAA	-0.61%
1.0	CHTR	-0.61%	PRGO	-0.6%
1.0	CLF	-0.58%	JPM	-0.59%
1.0	QCOM	-0.58%	ACGL	-0.55%
1.0	POST	-0.55%	BHC	-0.53%
1.0	ACGL	-0.55%	CHTR	-0.52%
1.0	JPM	-0.43%	TFC	-0.44%
1.0	AA	-0.42%	AMC	-0.4%
1.0	COST	-0.39%	NAVI	-0.38%
1.0	NAVI	-0.38%	JAZZ	-0.37%
1.0	JAZZ	-0.35%	B	-0.36%
1.0	NVDA	-0.33%	SNY	-0.36%
1.0	BHC	-0.33%	CMG	-0.34%
1.0	SLV	-0.3%	VICI	-0.34%
1.0	AMC	-0.3%	LNC	-0.34%
1.0	TFC	-0.3%	LVS	-0.32%



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### 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 2026-05-28 through 2026-04-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	ZTS	-11.99%	ZTS	-10.58%
10.0	MU	-7.42%	NWL	-8.79%
10.0	AMD	-3.79%	GT	-5.72%
10.0	WDC	-3.27%	INTU	-5.29%
10.0	TXN	-3.24%	AZO	-5.25%
10.0	AMC	-3.22%	THC	-4.14%
10.0	INTU	-2.77%	CYH	-3.94%
10.0	CNC	-2.59%	CHTR	-3.29%
10.0	CLF	-2.47%	B	-3.14%
10.0	PHM	-2.44%	WFC	-3.01%
10.0	JAZZ	-2.3%	PRGO	-2.88%
10.0	AA	-2.15%	NAVI	-2.86%
10.0	THC	-2.12%	BHC	-2.38%
10.0	CVS	-1.76%	CNC	-2.23%
10.0	ORLY	-1.46%	JAZZ	-2.2%
10.0	NAVI	-1.41%	WDC	-2.13%
10.0	BA	-1.39%	PHM	-2.03%
10.0	PRGO	-1.39%	JPM	-2.02%
10.0	MRK	-1.37%	GME	-1.86%
10.0	JPM	-1.24%	TLT	-1.83%
10.0	VNO	-1.21%	AMD	-1.8%
10.0	QCOM	-1.16%	AMC	-1.67%
10.0	HD	-1.15%	BA	-1.63%
10.0	BAC	-1.14%	ORLY	-1.54%
10.0	AZO	-1.1%	POST	-1.47%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	ZTS	-0.96%	ZTS	-1.11%
1.0	NWL	-0.61%	NWL	-0.96%
1.0	CHTR	-0.56%	B	-0.79%
1.0	CAH	-0.56%	GT	-0.72%
1.0	UAA	-0.55%	INTU	-0.66%
1.0	GT	-0.55%	SLV	-0.65%
1.0	INTC	-0.54%	CHTR	-0.64%
1.0	B	-0.44%	CAH	-0.55%
1.0	PCG	-0.29%	AZO	-0.47%
1.0	UNH	-0.25%	PCG	-0.46%
1.0	ACGL	-0.25%	THC	-0.45%
1.0	SLV	-0.23%	UAA	-0.44%
1.0	WDC	-0.22%	ACGL	-0.35%
1.0	ELAN	-0.21%	VICI	-0.28%
1.0	FIS	-0.2%	UNH	-0.26%
1.0	ORCL	-0.2%	AMC	-0.25%
1.0	VICI	-0.2%	PRGO	-0.25%
1.0	BHC	-0.2%	MRK	-0.24%
1.0	PHM	-0.18%	HCA	-0.23%
1.0	NEM	-0.17%	NFLX	-0.23%
1.0	MRK	-0.16%	CPRT	-0.21%
1.0	TXN	-0.15%	PHM	-0.21%
1.0	TDG	-0.15%	T	-0.2%
1.0	AZO	-0.15%	ORLY	-0.19%
1.0	CMG	-0.14%	MSI	-0.19%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	ZTS	-5.75%	B	-4.76%
10.0	AMC	-5.23%	ZTS	-4.33%
10.0	WDC	-4.66%	CHTR	-3.41%
10.0	INTC	-4.24%	PCG	-3.29%
10.0	TXN	-3.82%	GT	-3.22%
10.0	META	-3.26%	MOS	-3.11%
10.0	CAH	-3.26%	NWL	-3.08%
10.0	UNH	-3.23%	TXN	-3.05%
10.0	MOS	-2.85%	AZO	-2.69%
10.0	PCG	-2.64%	META	-2.28%
10.0	TSLA	-2.1%	CAH	-2.27%
10.0	PHM	-1.69%	UNH	-2.18%
10.0	JAZZ	-1.64%	HCA	-1.93%
10.0	ORCL	-1.63%	PHM	-1.75%
10.0	KALU	-1.61%	ADBE	-1.73%
10.0	AMZN	-1.49%	BUD	-1.47%
10.0	AZO	-1.39%	CPRT	-1.32%
10.0	BAC	-1.32%	INTC	-1.24%
10.0	B	-1.21%	JAZZ	-1.21%
10.0	VICI	-1.1%	TLT	-1.15%
10.0	MSTR	-1.09%	INTU	-1.06%
10.0	CPRT	-0.85%	GME	-1.03%
10.0	CVS	-0.83%	VICI	-0.95%
10.0	GT	-0.79%	WFC	-0.92%
10.0	HD	-0.71%	T	-0.88%



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## 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 2026-05-28 through 2026-03-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	AMC	-14.62%	CHTR	-17.08%
21.0	TXN	-10.82%	ZTS	-9.09%
21.0	UNH	-9.42%	PCG	-8.27%
21.0	INTC	-9.1%	TXN	-6.67%
21.0	WDC	-7.05%	GT	-6.35%
21.0	MOS	-5.68%	MOS	-6.1%
21.0	ZTS	-5.62%	UNH	-5.82%
21.0	PCG	-4.47%	CAH	-5.77%
21.0	CAH	-4.41%	INTU	-4.36%
21.0	KALU	-4.37%	CNC	-4.15%
21.0	JAZZ	-4.24%	HCA	-3.63%
21.0	QCOM	-3.87%	JAZZ	-3.34%
21.0	CVS	-3.02%	ADBE	-3.05%
21.0	CLF	-2.98%	NWL	-2.99%
21.0	GT	-2.66%	CPRT	-2.15%
21.0	BXP	-2.19%	T	-2.05%
21.0	CPRT	-2.13%	B	-1.99%
21.0	AZO	-1.85%	PHM	-1.91%
21.0	B	-1.75%	GME	-1.82%
21.0	META	-1.71%	QCOM	-1.81%
21.0	IRM	-1.53%	BUD	-1.76%
21.0	ADBE	-1.46%	VST	-1.59%
21.0	FITB	-1.39%	FIS	-1.52%
21.0	AMZN	-1.39%	ISRG	-1.5%
21.0	BAC	-1.36%	UAA	-1.45%



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### 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	GT	-0.31%	GT	-0.37%
1.0	UAA	-0.31%	INTU	-0.31%
1.0	MSTR	-0.28%	PRGO	-0.31%
1.0	PCG	-0.18%	UAA	-0.26%
1.0	CZR	-0.18%	CHTR	-0.25%
1.0	ZTS	-0.17%	FIS	-0.22%
1.0	CHTR	-0.16%	PCG	-0.22%
1.0	WDC	-0.16%	CPRT	-0.2%
1.0	CNC	-0.16%	MSTR	-0.2%
1.0	MOS	-0.16%	IEP	-0.18%
1.0	VNO	-0.16%	CNC	-0.18%
1.0	JPM	-0.14%	NFLX	-0.17%
1.0	IEP	-0.13%	ZTS	-0.17%
1.0	UNH	-0.13%	VNO	-0.17%
1.0	GBTC	-0.12%	MOS	-0.16%
1.0	ORCL	-0.12%	CZR	-0.13%
1.0	CPRT	-0.11%	CMG	-0.13%
1.0	FIS	-0.11%	NAVI	-0.12%
1.0	GILD	-0.09%	AMC	-0.12%
1.0	VICI	-0.09%	UNH	-0.12%
1.0	CMG	-0.08%	CMCSA	-0.11%
1.0	VFC	-0.08%	VICI	-0.1%
1.0	PRGO	-0.08%	THC	-0.09%
1.0	CYH	-0.08%	NWL	-0.08%
1.0	IRM	-0.07%	MSFT	-0.08%



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### 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	WDC	-3.29%	GT	-3.08%
10.0	ORCL	-1.56%	CNC	-2.33%
10.0	VNO	-1.08%	WDC	-1.76%
10.0	MOS	-0.99%	VNO	-1.67%
10.0	EXPE	-0.97%	NFLX	-1.6%
10.0	VFC	-0.95%	MSTR	-1.46%
10.0	GT	-0.94%	GBTC	-1.38%
10.0	KALU	-0.89%	AMC	-1.24%
10.0	MSTR	-0.87%	EXPE	-1.11%
10.0	INTC	-0.82%	MOS	-1.05%
10.0	UNH	-0.81%	UAA	-1.04%
10.0	JAZZ	-0.77%	ORCL	-1.02%
10.0	CPRT	-0.76%	CPRT	-0.95%
10.0	CMA	-0.76%	VST	-0.89%
10.0	AMC	-0.75%	CMG	-0.81%
10.0	TXN	-0.63%	PRGO	-0.81%
10.0	CZR	-0.62%	IEP	-0.75%
10.0	TSLA	-0.59%	KALU	-0.7%
10.0	UAA	-0.59%	ADBE	-0.65%
10.0	ZTS	-0.59%	CZR	-0.62%
10.0	CNC	-0.58%	BUD	-0.57%
10.0	VICI	-0.56%	ISRG	-0.54%
10.0	AMZN	-0.56%	PCG	-0.53%
10.0	FCX	-0.54%	UNH	-0.44%
10.0	META	-0.48%	GILD	-0.41%



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## 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	WDC	-5.27%	MSTR	-7.18%
21.0	MSTR	-3.58%	GT	-5.18%
21.0	CPRT	-2.73%	UAA	-3.09%
21.0	EXPE	-2.33%	ADBE	-2.91%
21.0	ORCL	-2.26%	VNO	-2.76%
21.0	KALU	-2.22%	CPRT	-2.63%
21.0	CMA	-2.13%	NFLX	-2.62%
21.0	VNO	-2.08%	CNC	-2.39%
21.0	VFC	-2.07%	ORCL	-2.38%
21.0	UNH	-1.91%	WDC	-2.31%
21.0	INTC	-1.85%	GBTC	-1.99%
21.0	TXN	-1.83%	EXPE	-1.88%
21.0	UAA	-1.64%	MOS	-1.75%
21.0	CZR	-1.39%	BUD	-1.67%
21.0	MOS	-1.33%	CMG	-1.62%
21.0	GBTC	-1.3%	ISRG	-1.45%
21.0	GT	-1.3%	T	-1.42%
21.0	JAZZ	-1.29%	VFC	-1.4%
21.0	NFLX	-1.26%	KALU	-1.22%
21.0	ISRG	-1.12%	IEP	-1.13%
21.0	ADBE	-1.11%	FIS	-1.11%
21.0	VST	-1.0%	VST	-1.04%
21.0	FCX	-0.97%	GME	-0.92%
21.0	IEP	-0.9%	CVS	-0.89%
21.0	CVS	-0.89%	JAZZ	-0.77%



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## 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	MSTR	-25.9%	MSTR	-32.68%
63.0	ORCL	-13.8%	NFLX	-15.57%
63.0	WDC	-10.69%	GT	-14.36%
63.0	NFLX	-10.51%	NWL	-11.44%
63.0	GT	-10.13%	ORCL	-10.85%
63.0	INTC	-8.84%	PRGO	-10.58%
63.0	CPRT	-8.19%	VNO	-9.19%
63.0	MOS	-6.16%	CLF	-8.85%
63.0	VFC	-5.81%	MOS	-8.44%
63.0	KALU	-4.99%	ADBE	-7.84%
63.0	EXPE	-4.82%	CPRT	-7.34%
63.0	VNO	-4.14%	FIS	-6.74%
63.0	ADBE	-3.87%	VFC	-5.52%
63.0	MSFT	-3.8%	EXPE	-4.78%
63.0	GBTC	-3.45%	CDNS	-4.0%
63.0	CMA	-3.17%	CCL	-3.95%
63.0	NVS	-3.0%	WYNN	-3.76%
63.0	BUD	-2.93%	KHC	-3.62%
63.0	ISRG	-2.83%	MSFT	-3.53%
63.0	CMG	-2.82%	BHC	-3.48%
63.0	VICI	-2.61%	GBTC	-3.39%
63.0	PRGO	-2.6%	VICI	-3.27%
63.0	BHC	-2.41%	CMG	-2.86%
63.0	GILD	-2.36%	INTU	-2.61%
63.0	INTU	-2.33%	IEP	-2.32%



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## 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 2026-05-28 through 2025-05-30

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	MSTR	-48.76%	AMC	-89.16%
126.0	NFLX	-23.96%	INTU	-48.82%
126.0	INTU	-20.08%	PRGO	-36.8%
126.0	CPRT	-17.97%	NFLX	-32.67%
126.0	LEN	-17.48%	NWL	-32.25%
126.0	MOS	-15.22%	MOS	-31.77%
126.0	VFC	-12.67%	MSTR	-23.09%
126.0	GT	-12.15%	FIS	-21.67%
126.0	PRGO	-11.83%	VNO	-17.92%
126.0	VNO	-9.93%	GT	-17.88%
126.0	ORCL	-9.72%	AZO	-15.24%
126.0	WDC	-9.47%	CPRT	-14.65%
126.0	CMG	-9.13%	LEN	-14.6%
126.0	FIS	-8.97%	MSFT	-14.16%
126.0	ADBE	-7.52%	ZTS	-11.09%
126.0	NVS	-6.95%	CMG	-10.46%
126.0	EXPE	-6.0%	ORCL	-7.8%
126.0	VICI	-5.72%	ORLY	-7.66%
126.0	NWL	-5.55%	VICI	-7.62%
126.0	MSFT	-5.45%	GBTC	-7.53%
126.0	CMA	-5.29%	ADBE	-7.44%
126.0	BHC	-5.28%	KALU	-6.82%
126.0	AZO	-5.22%	BHC	-6.32%
126.0	GILD	-5.11%	TDG	-6.05%
126.0	ORLY	-4.56%	NVS	-5.97%



## Appendix 5: Kupiec and Christoferson Tests for Sigma

The Kupiec Proportion of Failures test statistic (listed as OaR\_kStat in the table below), and its probability (OaR\_pValK) are used to test the null hypothesis that the OaR model breakage is consistent with expectations. The test statistic is calculated by comparing the number of OaR breaks experienced to the expected number of breaks given the total number of observations and the specified probability level. Breakage was measured at the individual ticker-model date level. The 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 2026-05-28. Note that for horizon periods greater than 1d we exclude enough model dates to assure no overlap between observation periods.

Model	Pctile	Horizon	OaR_kStat	OaR_pValK	OaR_chrStat	OaR_pValChr
Sigma	95	1	228.98	0	8.51	0
Sigma	95	10	0.4	0.53	2.62	0.11
Sigma	95	21	38.64	0	0.08	0.78
Sigma	95	63	24.85	0	0.08	0.77
Sigma	95	126	5.86	0.02	0.54	0.46
Sigma	95	252	36.82	0	nan	0
Sigma	99	1	354.88	0	18.26	0
Sigma	99	10	85.21	0	1.1	0.29
Sigma	99	21	83.2	0	1.89	0.17
Sigma	99	63	51.93	0	nan	0
Sigma	99	126	28.65	0	0.17	0.68
Sigma	99	252	51.06	0	nan	0

