

VecViz Opportunity At Risk (OaR) Performance Report

see vecviz.com for important disclosures, terms & conditions

30 April 2026

Table of contents

Introduction	8
Evaluation of OaR Estimates	8
OaR Breakage Ratios	8
ROLOBC and its drivers	9
Addressing The Tradeoff Between OaR Breakage and ROLOBC	10
Determining the drivers of ROLOBC alpha	10
ROLOBC Beta	10
Vector Model Input and Calculation Details	11
Sigma Details	12
Using this report	13
Important considerations about the analytics and performance metrics presented in this report:	13
Opportunity At Risk (OaR) Report Cards	15
Sigma Comparison Report Card:	15
Vector Model Statistical Testing Report Card:	15
Combined Summary Report Card By Objective:	16
95% Opportunity At Risk (OaR)	19
Historic Average Levels	19
All Out of Sample Model Dates	19
Prior 365 Calendar Days (P365D)	20
Prior 90 Calendar Days (P90D)	21
Prior 30 Calendar Days (P30D)	22
Daily Levels	23
1d Horizon	23

10d Horizon	24
21d Horizon	25
63d Horizon	26
126d Horizon	27
252d Horizon	28
Performance Summary	29
All Out of Sample Model Dates	30
Prior 365 Calendar Days (P365D)	32
Prior 90 Calendar Days (P90D)	34
Prior 30 Calendar Days (P30D)	36
Daily Performance	38
1d Horizon	38
10d Horizon	40
21d Horizon	41
63d Horizon	42
252d Horizon	43
Rolling 20d Performance	44
1d Horizon	44
10d Horizon	46
21d Horizon	47
63d Horizon	48
252d Horizon	49
Top 30 Tickers By OaR Breakage	50
All TMD: 1d	50
All TMD: 10d	51
All TMD: 21d	52
All TMD: 63d	53
All TMD: 126d	54
All TMD: 252d	55
P30D: 1d	56
P30D: 10d	57
P90D: 1d	58
P90D: 10d	59
P90D: 21d	60
P365D: 1d	61
P365D: 10d	62
P365D: 21d	63
P365D: 63d	64
P365D: 126d	65
Top 30 Tickers By ROLOBC	66
All TMD: 1d	66
All TMD: 10d	67
All TMD: 21d	68



All TMD: 63d	69
All TMD: 126d	70
All TMD: 252d	71
P30D: 1d	72
P30D: 10d	73
P90D: 1d	74
P90D: 10d	75
P90D: 21d	76
P365D: 1d	77
P365D: 10d	78
P365D: 21d	79
P365D: 63d	80
P365D: 126d	81
Bottom 30 Tickers By ROLOBC	82
All TMD: 1d	82
All TMD: 10d	83
All TMD: 21d	84
All TMD: 63d	85
All TMD: 126d	86
All TMD: 252d	87
P30D: 1d	88
P30D: 10d	89
P90D: 1d	90
P90D: 10d	91
P90D: 21d	92
P365D: 1d	93
P365D: 10d	94
P365D: 21d	95
P365D: 63d	96
P365D: 126d	97
99% Opportunity At Risk (OaR)	98
Historic Average Levels	98
All Out of Sample Model Dates	98
Prior 365 Calendar Days (P365D)	99
Prior 90 Calendar Days (P90D)	100
Prior 30 Calendar Days (P30D)	101
Daily Levels	102
1d Horizon	102
10d Horizon	103
21d Horizon	104
63d Horizon	105
126d Horizon	106



252d Horizon	107
Performance Summary	108
All Out of Sample Model Dates	109
Prior 365 Calendar Days (P365D)	111
Prior 90 Calendar Days (P90D)	113
Prior 30 Calendar Days (P30D)	115
Daily Performance	117
1d Horizon	117
10d Horizon	119
21d Horizon	120
63d Horizon	121
252d Horizon	122
Rolling 20d Performance	123
1d Horizon	123
10d Horizon	125
21d Horizon	126
63d Horizon	127
252d Horizon	128
Top 30 Tickers By OaR Breakage	129
All TMD: 1d	129
All TMD: 10d	130
All TMD: 21d	131
All TMD: 63d	132
All TMD: 126d	133
All TMD: 252d	134
P30D: 1d	135
P30D: 10d	136
P90D: 1d	137
P90D: 10d	138
P90D: 21d	139
P365D: 1d	140
P365D: 10d	141
P365D: 21d	142
P365D: 63d	143
P365D: 126d	144
Top 30 Tickers By ROLOBC	145
All TMD: 1d	145
All TMD: 10d	146
All TMD: 21d	147
All TMD: 63d	148
All TMD: 126d	149
All TMD: 252d	150
P30D: 1d	151



P30D: 10d	152
P90D: 1d	153
P90D: 10d	154
P90D: 21d	155
P365D: 1d	156
P365D: 10d	157
P365D: 21d	158
P365D: 63d	159
P365D: 126d	160
Bottom 30 Tickers By ROLOBC	161
All TMD: 1d	161
All TMD: 10d	162
All TMD: 21d	163
All TMD: 63d	164
All TMD: 126d	165
All TMD: 252d	166
P30D: 1d	167
P30D: 10d	168
P90D: 1d	169
P90D: 10d	170
P90D: 21d	171
P365D: 1d	172
P365D: 10d	173
P365D: 21d	174
P365D: 63d	175
P365D: 126d	176

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

Breakage	177
All TMD: 1d	177
All TMD: 10d	178
All TMD: 21d	179
All TMD: 63d	180
All TMD: 126d	181
All TMD: 252d	182
P30D: 1d	183
P30D: 10d	184
P90D: 1d	185
P90D: 10d	186
P90D: 21d	187
P365D: 1d	188
P365D: 10d	189
P365D: 21d	190



P365D: 63d	191
P365D: 126d	192

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

OaR Breakage	193
All TMD: 1d	193
All TMD: 10d	194
All TMD: 21d	195
All TMD: 63d	196
All TMD: 126d	197
All TMD: 252d	198
P30D: 1d	199
P30D: 10d	200
P90D: 1d	201
P90D: 10d	202
P90D: 21d	203
P365D: 1d	204
P365D: 10d	205
P365D: 21d	206
P365D: 63d	207
P365D: 126d	208

Appendix 3: Top 25 Ticker Level Differences in VM vs. Sigma 95% and 99% ROLOBC209

All TMD: 1d	209
All TMD: 10d	210
All TMD: 21d	211
All TMD: 63d	212
All TMD: 126d	213
All TMD: 252d	214
P30D: 1d	215
P30D: 10d	216
P90D: 1d	217
P90D: 10d	218
P90D: 21d	219
P365D: 1d	220
P365D: 10d	221
P365D: 21d	222
P365D: 63d	223
P365D: 126d	224

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

ROLOBC	225
All TMD: 1d	225



All TMD: 10d	226
All TMD: 21d	227
All TMD: 63d	228
All TMD: 126d	229
All TMD: 252d	230
P30D: 1d	231
P30D: 10d	232
P90D: 1d	233
P90D: 10d	234
P90D: 21d	235
P365D: 1d	236
P365D: 10d	237
P365D: 21d	238
P365D: 63d	239
P365D: 126d	240

Appendix 5: Kupiec and Christoferson Tests for Sigma 241

<function nt.chdir(path)>



Introduction

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

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

Evaluation of OaR Estimates

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

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

OaR Breakage Ratios

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

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



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

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

ROLOBC and its drivers

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

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

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

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



Addressing The Tradeoff Between OaR Breakage and ROLOBC

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

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

Determining the drivers of ROLOBC alpha

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

ROLOBC Beta

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

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



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

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

Vector Model Input and Calculation Details

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

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

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

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

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



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

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

Sigma Details

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

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

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

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

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

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

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



Using this report

This report is ~200 pages long. Some tips to help you navigate: 1) Clicking on the page headings in the Table of Contents will instantly take you to the corresponding page.

2) Use Ctrl-F to search for tickers of interest, to see what Top/Bottom contributor lists they land on, and for what horizons 3) Click Ctrl-Home to return to the Table of Contents

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

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



-
- 6) We are not considering transaction costs. The turnover and therefore transaction costs experienced by Vector Model ROLOBC based investors resulting in the change in the ratio between Vector Model and Sigma OaR is completely ignored.
 - 7) We are not incorporating any financing charges or margin-related costs for implied “levered” ROLOBC positions.
 - 8) Note that OaR for both the Vector Model and Sigma as presented in this report assumes that prices are floored at \$0.01. Since the coverage universe for this report includes only listed equities, that assumption is likely appropriate. However, if the Vector Model were applied to commodities or perhaps other potentially illiquid securities we would likely have to remove that floor for such tickers, and the resulting impact on model performance for such tickers has not yet been researched.

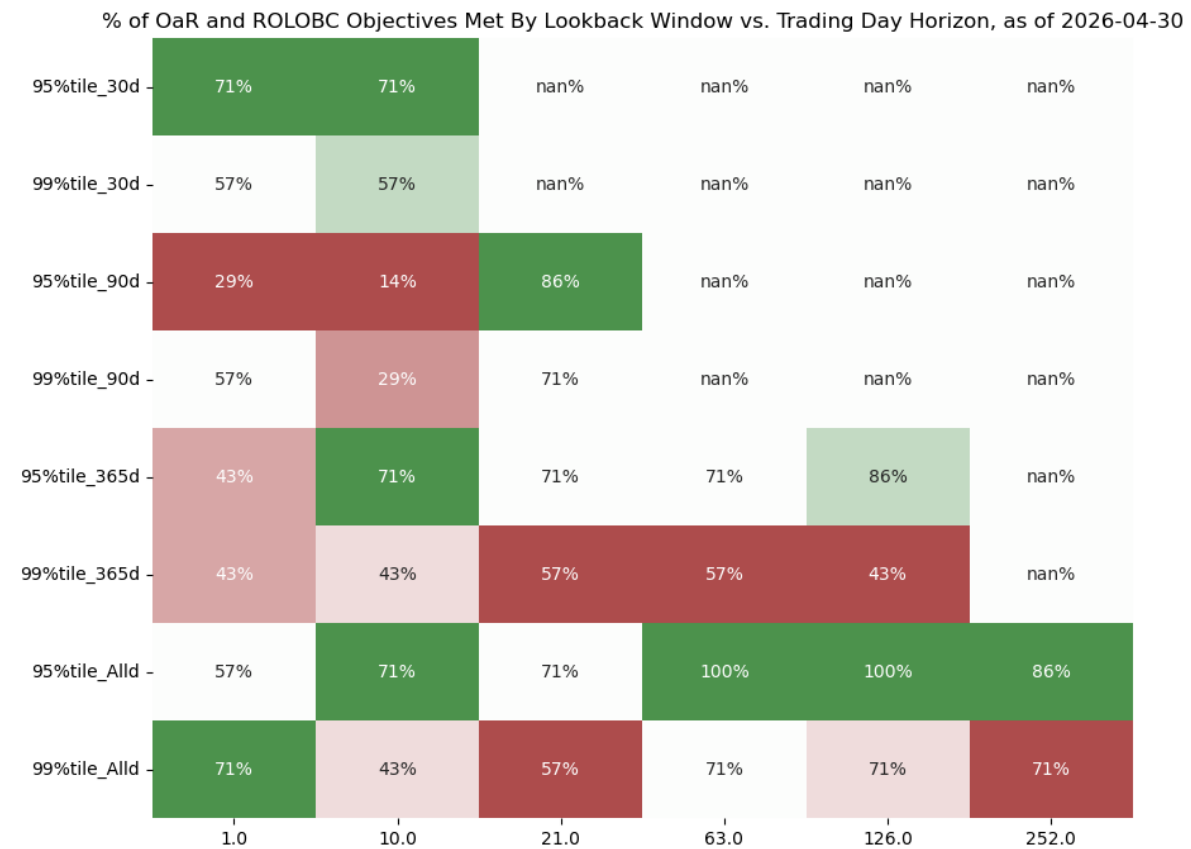
Thus, in summary, with the exception of the Kupiec and Christoferson tests, all metrics presented in this report are presented and are to be considered on a comparative basis. Are Vector Model OaR breakage rates closer to target than Sigma’s? Does Vector Model ROLOBC outperform Sigma ROLOBC? Is the relative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



Opportunity At Risk (OaR) Report Cards

Period examined: AllD = 2022-01-31 through 2026-04-29 while 365D /90D/ 30D include the 365/90/30 days ended 2026-04-29, respectively.

Sigma Comparison Report Card:



Vector Model Statistical Testing Report Card:

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



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

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

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

Period examined: 2022-01-31 through 2026-04-29. Note that for horizon periods greater than 1d we exclude enough model dates to assure no overlap between observation periods.

Model	Pctile	Horizon	OaR_kStat	OaR_pValK	OaR_chrStat	OaR_pValChr
Vector	95	1	163.75	0	3.44	0.06
Vector	95	10	43.76	0	3.59	0.06
Vector	95	21	45	0	0.48	0.49
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	14.45	0	4.18	0.04
Vector	99	10	54.26	0	3.91	0.05
Vector	99	21	35.89	0	2.38	0.12
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 2026-04-29.



OaR and ROLOBC Criteria	Average Score(%)
1. Closer to Target OaR Breakage Than Sigma	34.38
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	100
3. Less Volatile OaR Breakage Across Tickers Than Sigma	43.75
4. Higher ROLOBC Than Sigma	90.62
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	59.38
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	75
Overall Comparison to Sigma Average	62.5
Kupiec Test of VaR Proximity to Target	16.6667
Christoferson Test of OaR Date Independence	58.3333

OaR and ROLOBC Criteria By Fwd Hzn	1D	10D	21D	63D	126D	252D
1. Closer to Target OaR Breakage Than Sigma	87.5	0	16.67	25	25	50
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	100	100	100	100	100	100
3. Less Volatile OaR Breakage Across Tickers Than Sigma	12.5	12.5	33.33	100	100	100
4. Higher ROLOBC Than Sigma	87.5	87.5	83.33	100	100	100
5. Higher ROLOBC Than Sigma, Adj. for Avg. VM-Sigma OaR Diff.	0	37.5	66.67	50	50	0
6. Alpha of ROLOBC vs Sigma >0, Across Tickers and Model Dates	37.5	50	83.33	50	75	100
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	50	62.5	100	100	75	100
TotalScore	53.57	50	69.05	75	75	78.57

OaR and ROLOBC Criteria Across Lookback Window	30D	90D	365D	AllD
1. Closer to Target OaR Breakage Than Sigma	25	50	20	41.67
2. Less Volatile OaR Breakage Across Model Dates Than Sigma	100	100	100	100
3. Less Volatile OaR Breakage Across Tickers Than Sigma	0	33.33	60	50
4. Higher ROLOBC Than Sigma	100	50	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	100	33.33	30	83.33



OaR and ROLOBC Criteria Across Lookback Window	30D	90D	365D	AllD
7. Alpha of ROLOBC vs Sigma >0, By Ticker, Across Model Dates	100	33.33	60	100
TotalScore	64.29	47.62	58.57	72.62



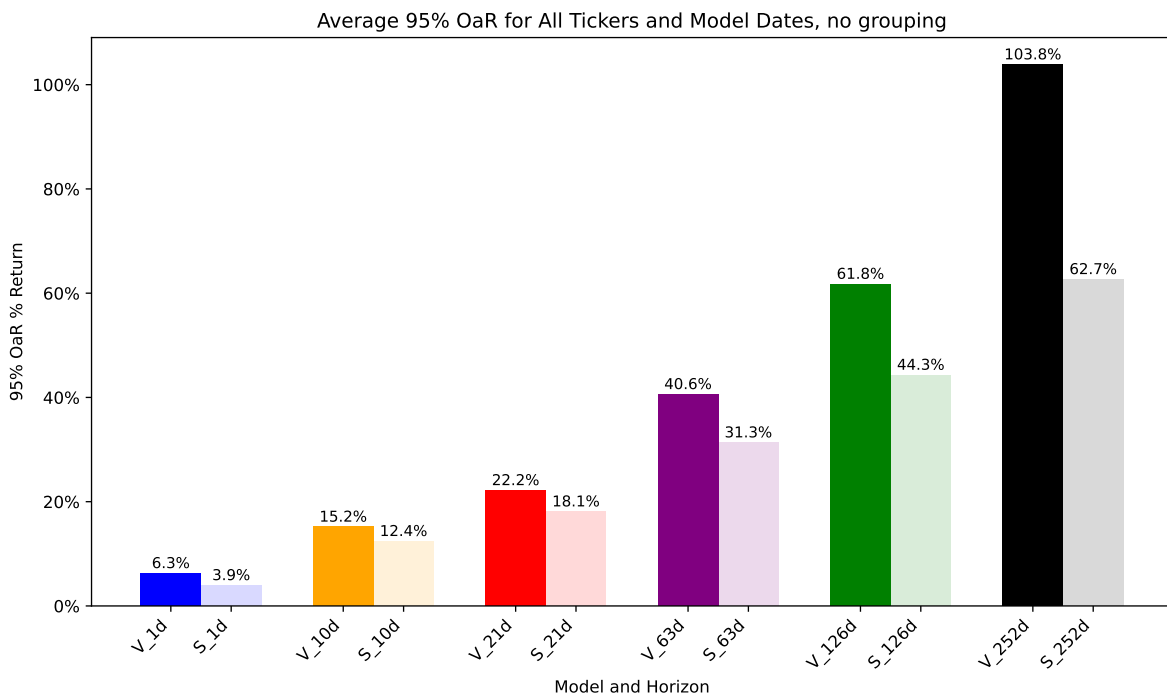
95% Opportunity At Risk (OaR)

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.

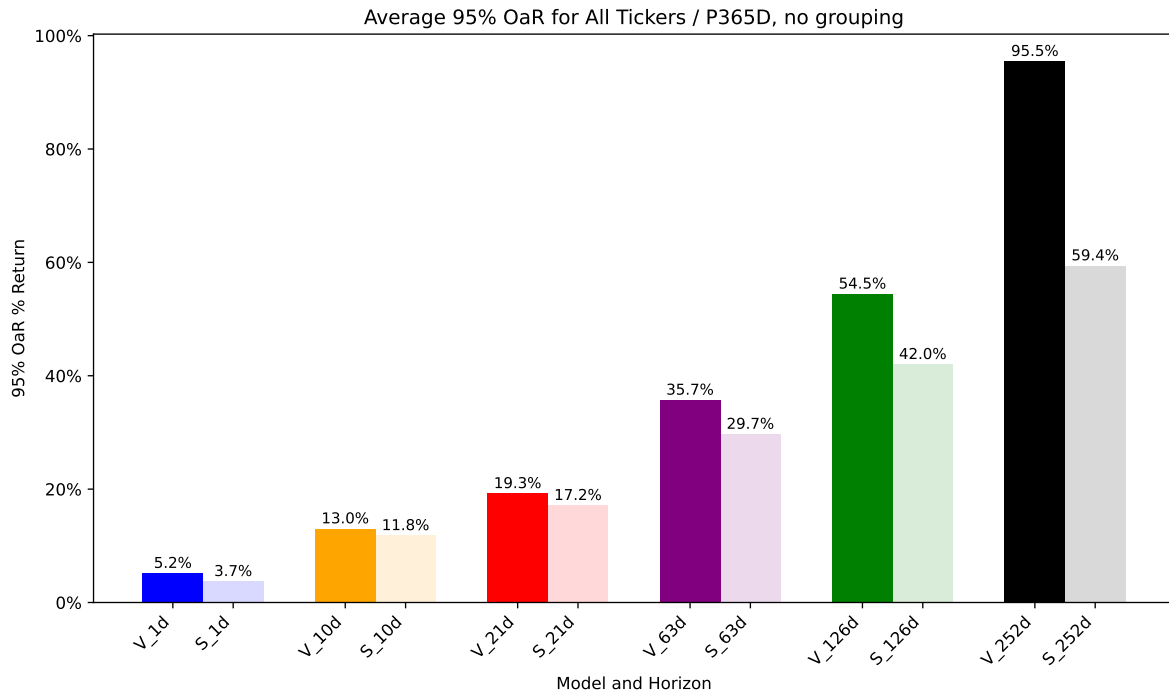
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-04-29



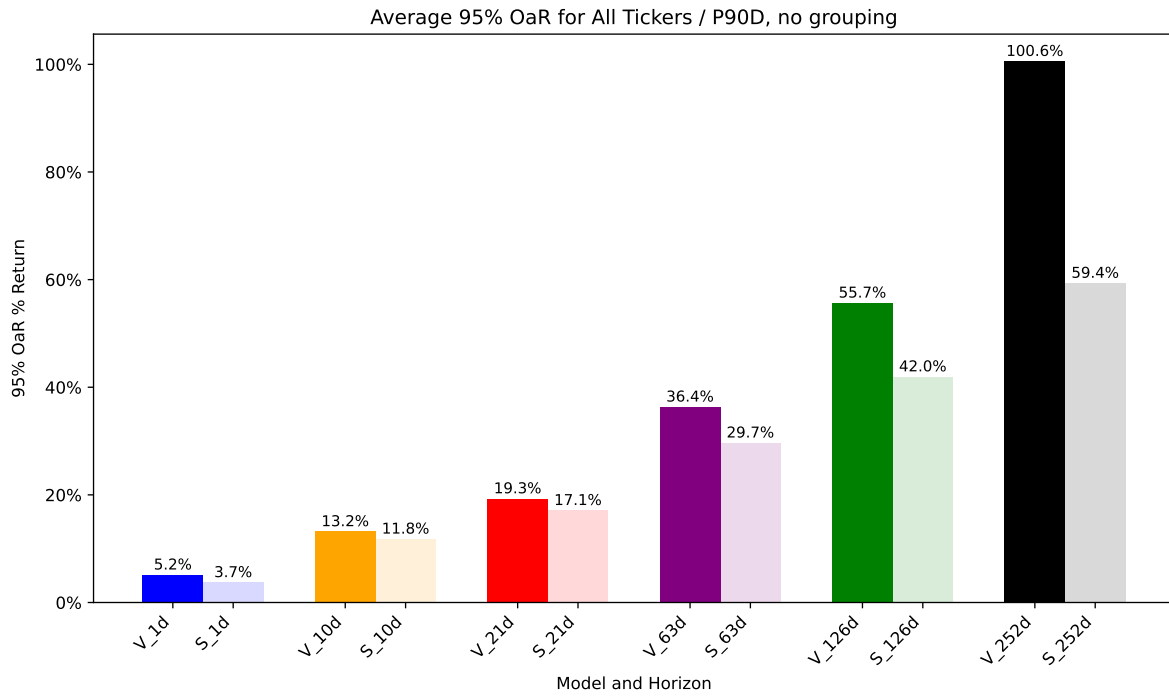
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-04-29 through 2025-05-01



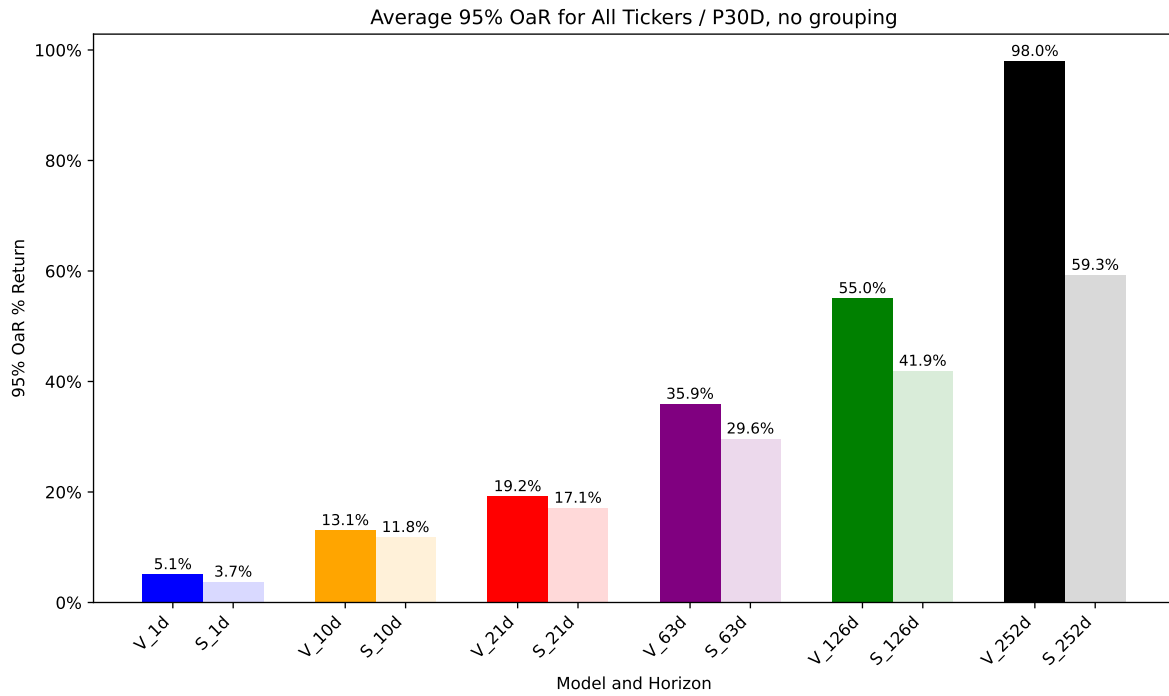
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-04-29 through 2026-02-02



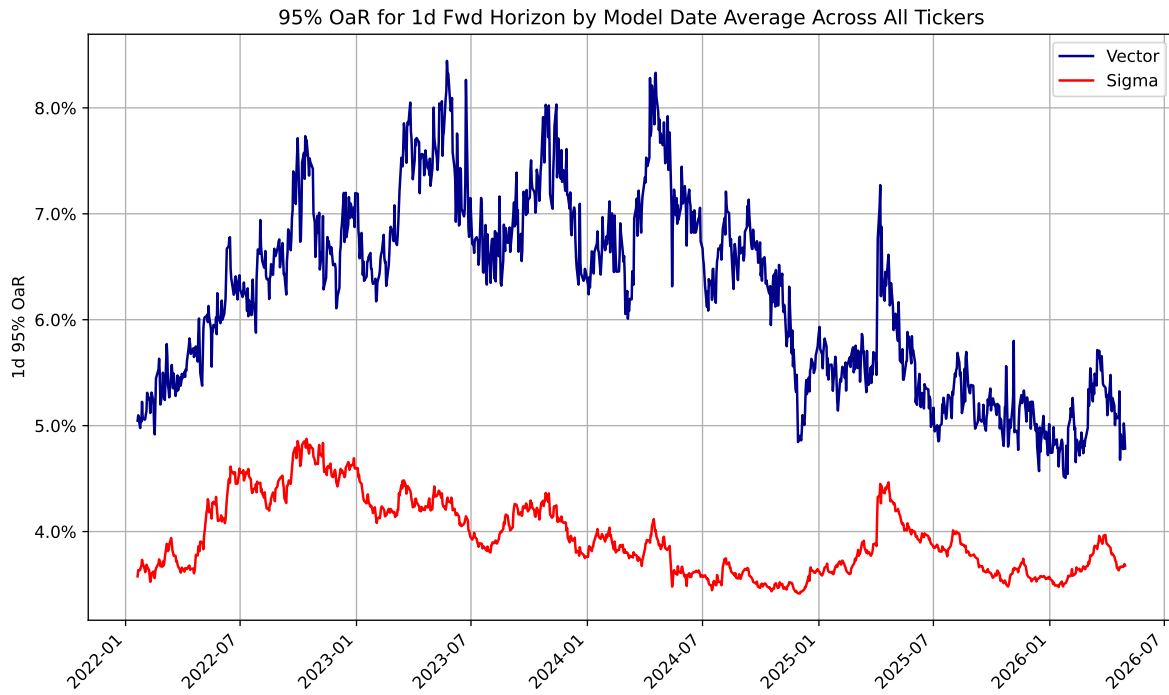
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-04-29 through 2026-04-01

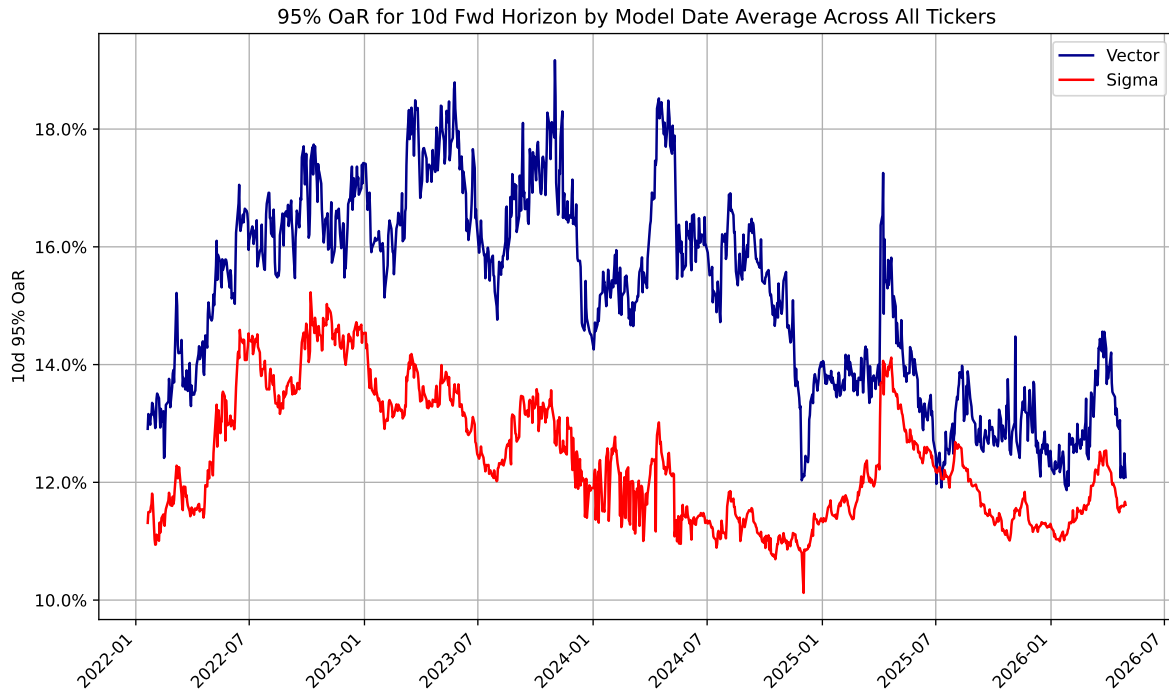


Daily Levels

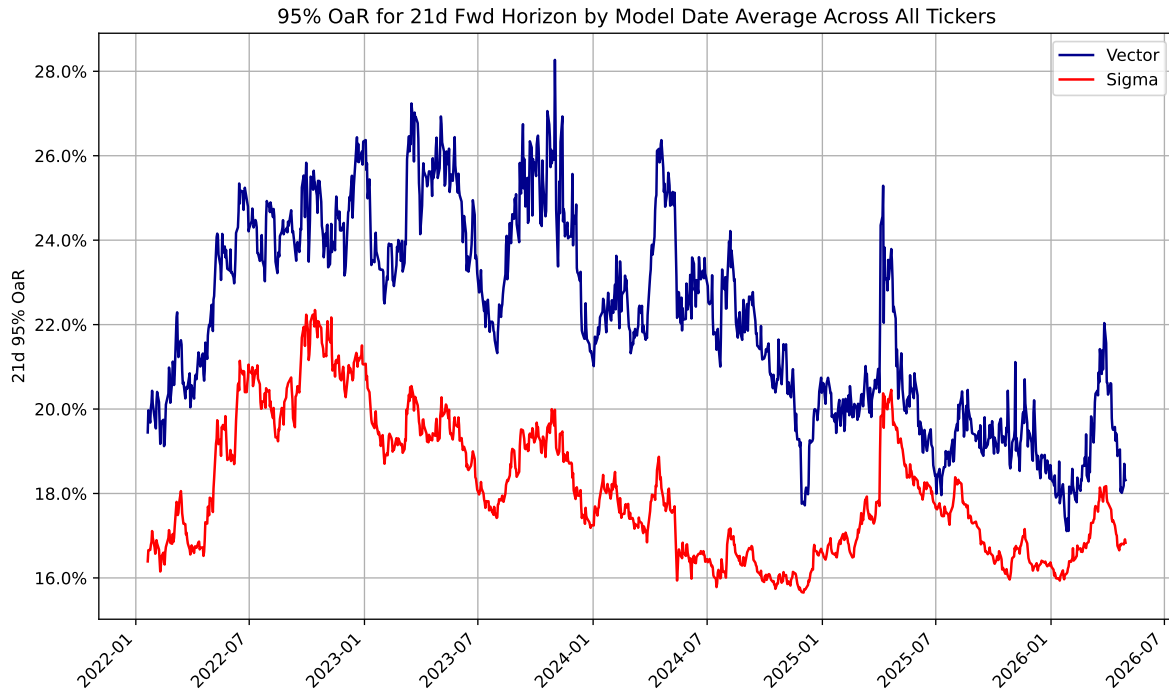
1d Horizon



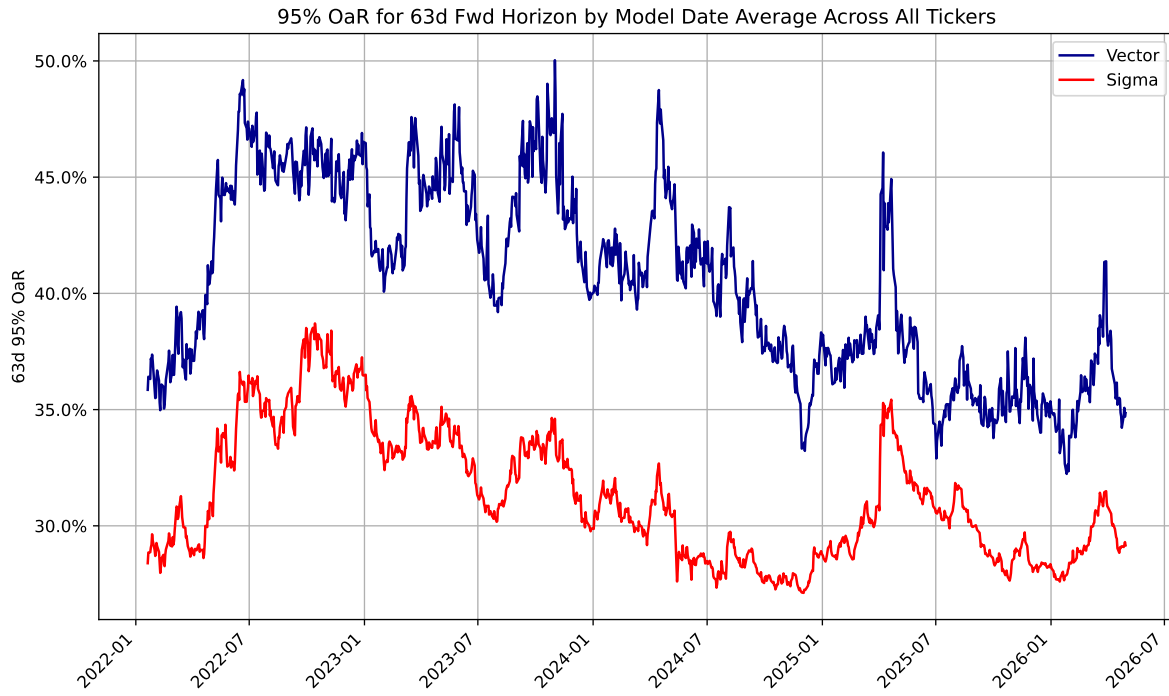
10d Horizon



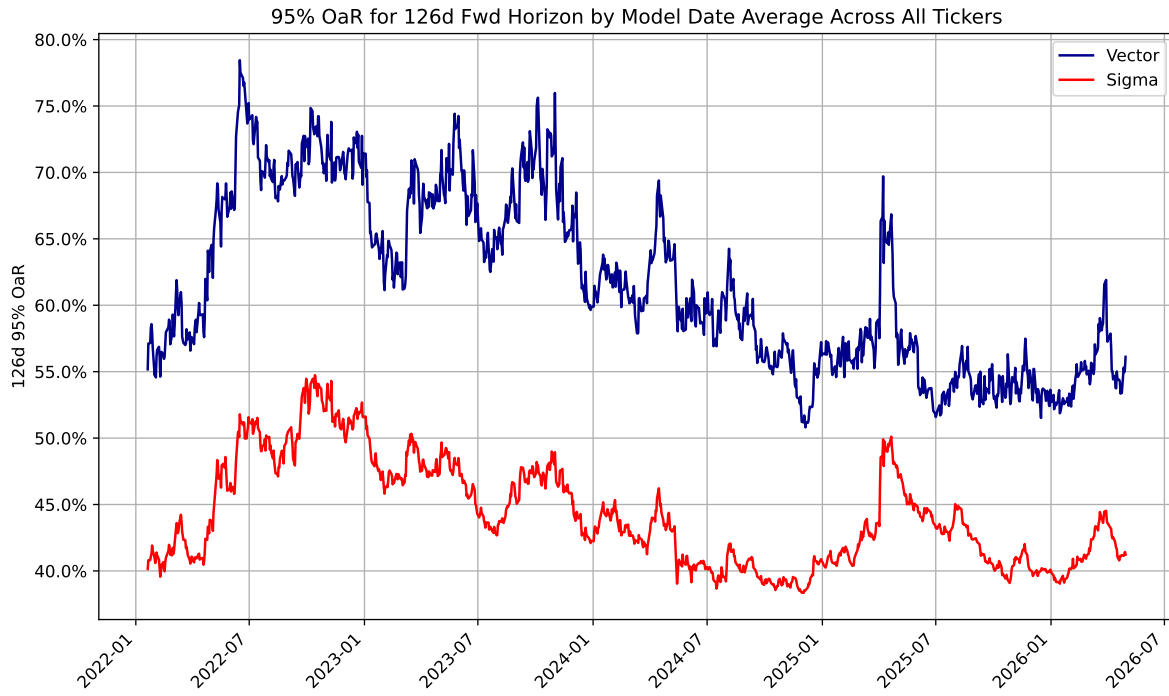
21d Horizon



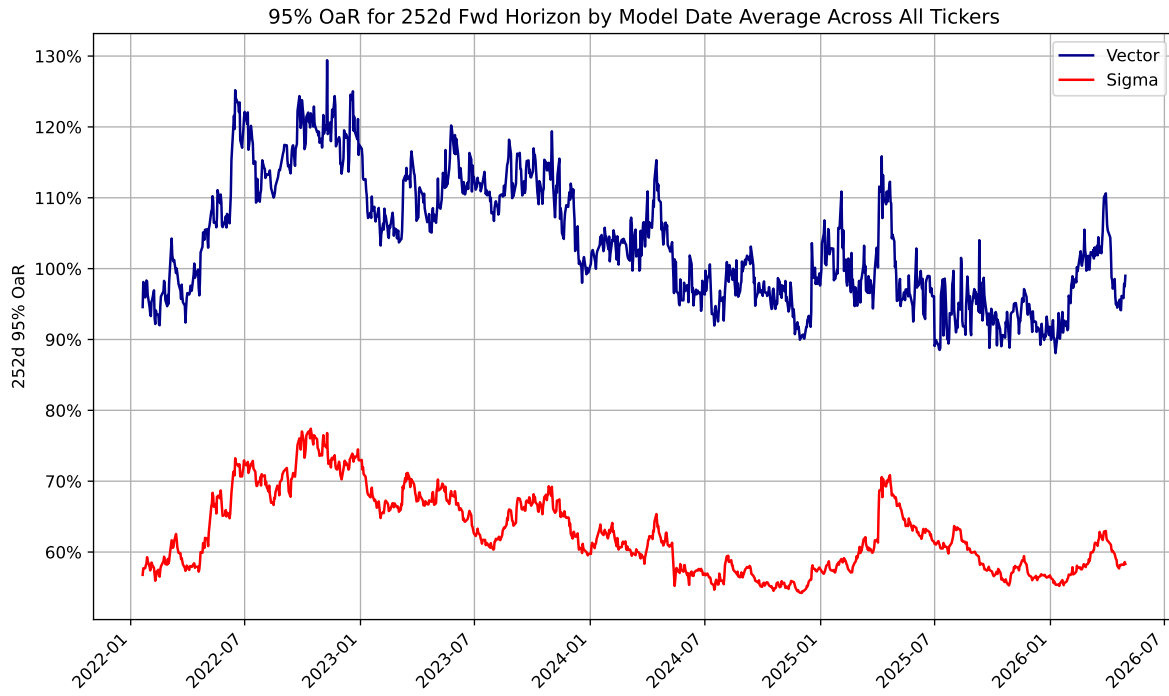
63d Horizon



126d Horizon



252d Horizon



Performance Summary

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

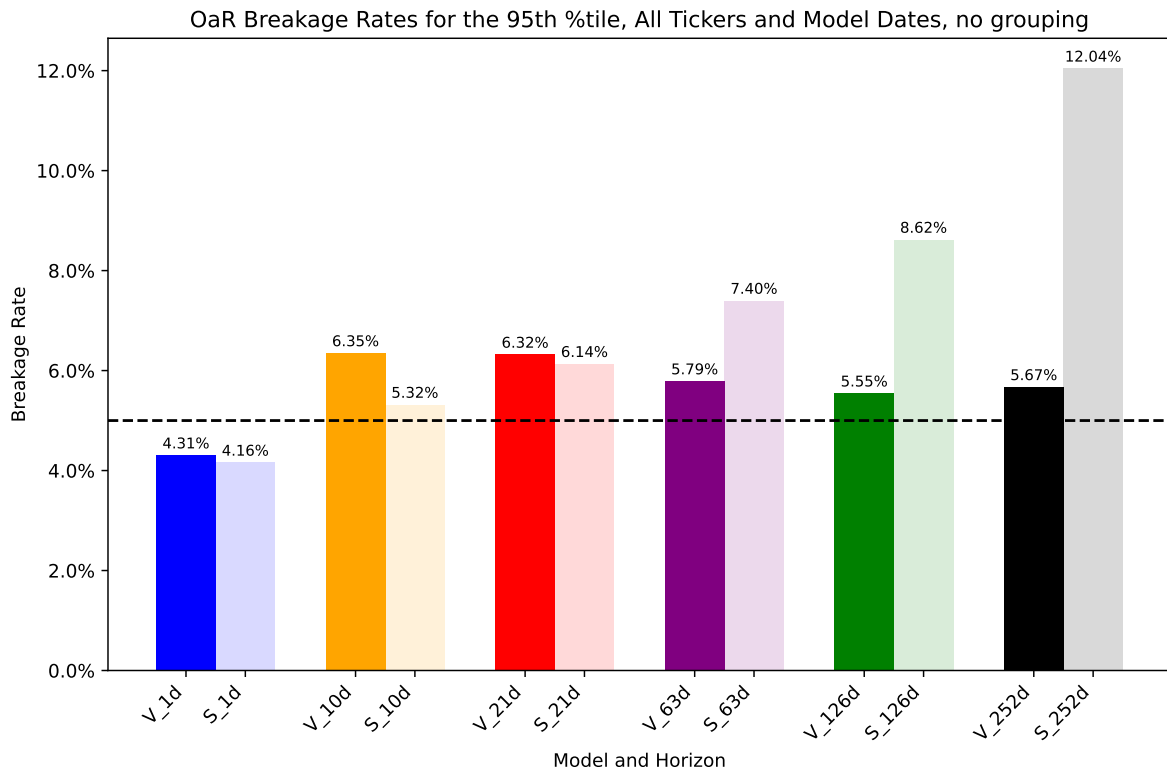
ROLOBC comparisons are made on the basis of outright ROLOBC and the alpha of Vector Model ROLOBC to underlying ticker returns (the proxy for Sigma ROLOBC). As discussed in the Introduction, ROLOBC for Sigma is presumed to be the return of the underlying ticker, and for the Vector Model it is based on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

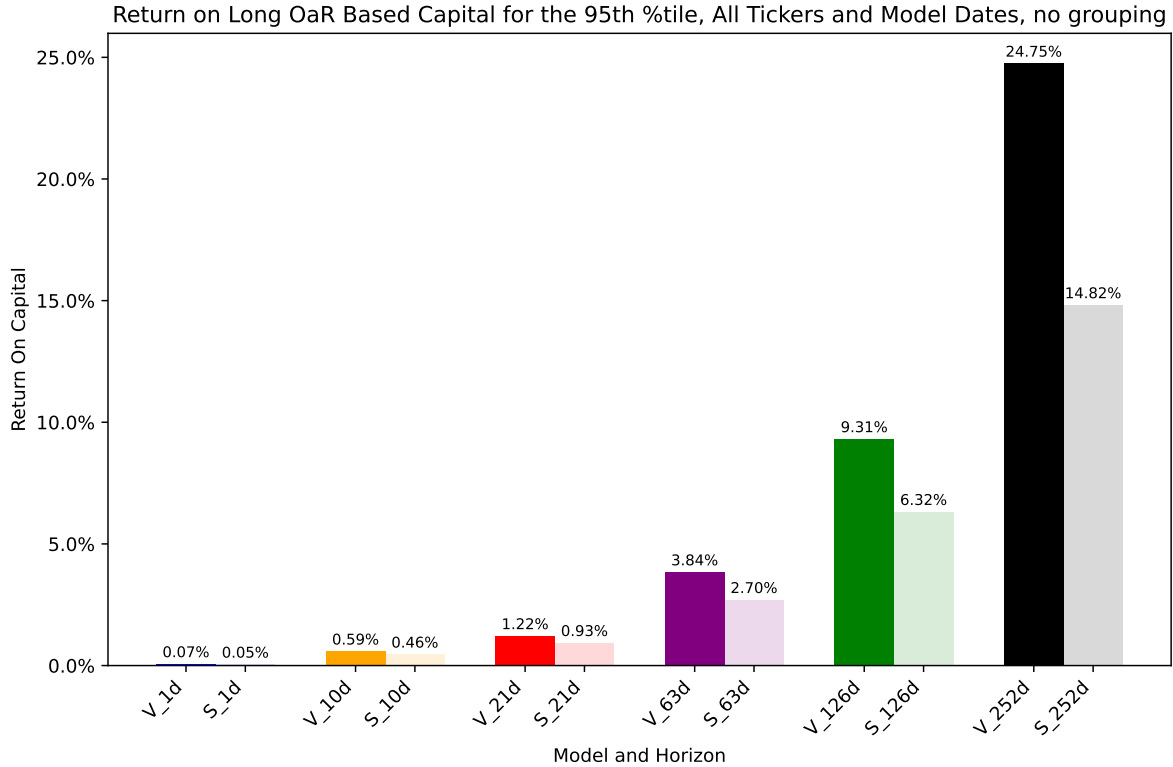
Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons > 1d overlap.



All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-04-29





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%	0.04%	0.09%	0.23%	0.63%	3.02%
intercept_p_value	52.52%	0.41%	0.00%	0.00%	0.00%	0.00%
slope	143.86%	118.78%	120.91%	133.59%	137.29%	146.62%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

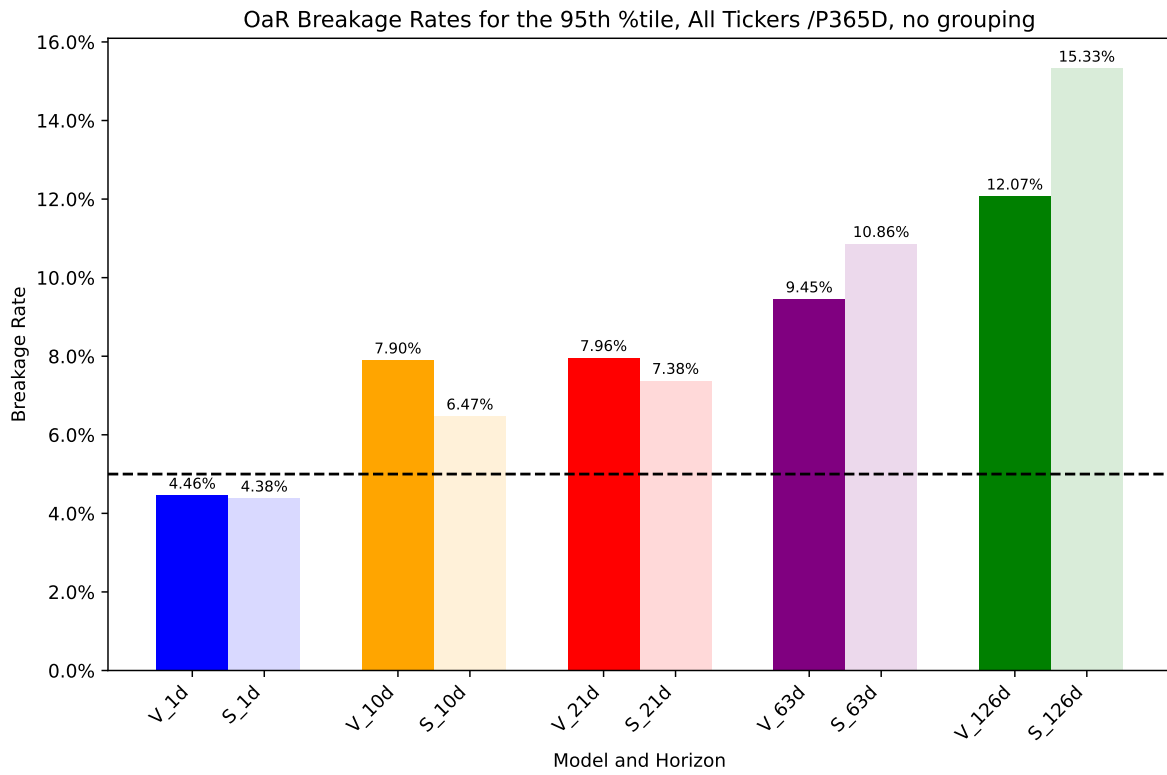
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across Model Dates:

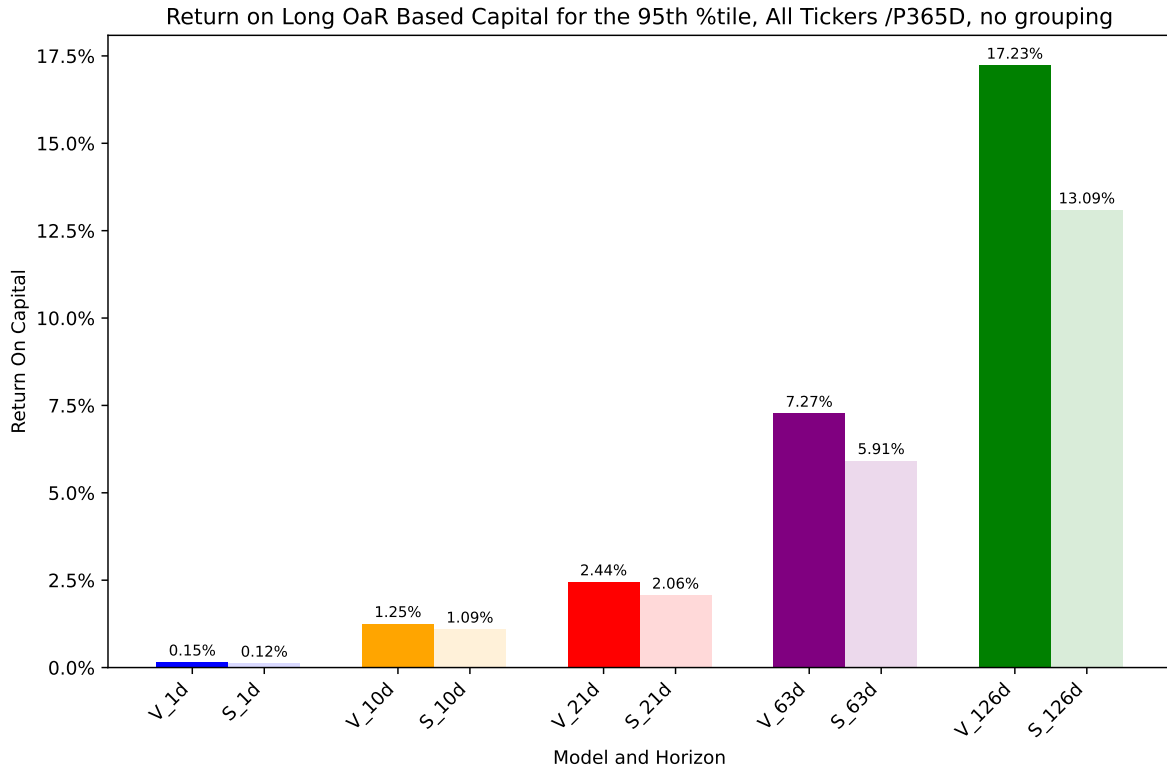
	1d	10d	21d	63d	126d	252d
intercept	-0.04%	-0.21%	-0.57%	-2.23%	-4.35%	-5.29%
intercept_p_value	0.00%	0.07%	0.00%	0.00%	0.00%	0.08%
slope	164.88%	150.08%	166.33%	181.32%	178.53%	164.79%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-04-29 through 2025-05-01





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

	1d	10d	21d	63d	126d
intercept	-0.01%	0.04%	0.08%	-0.02%	0.74%
intercept_p_value	23.51%	5.21%	0.99%	81.98%	0.00%
slope	136.61%	110.48%	114.48%	123.15%	126.00%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

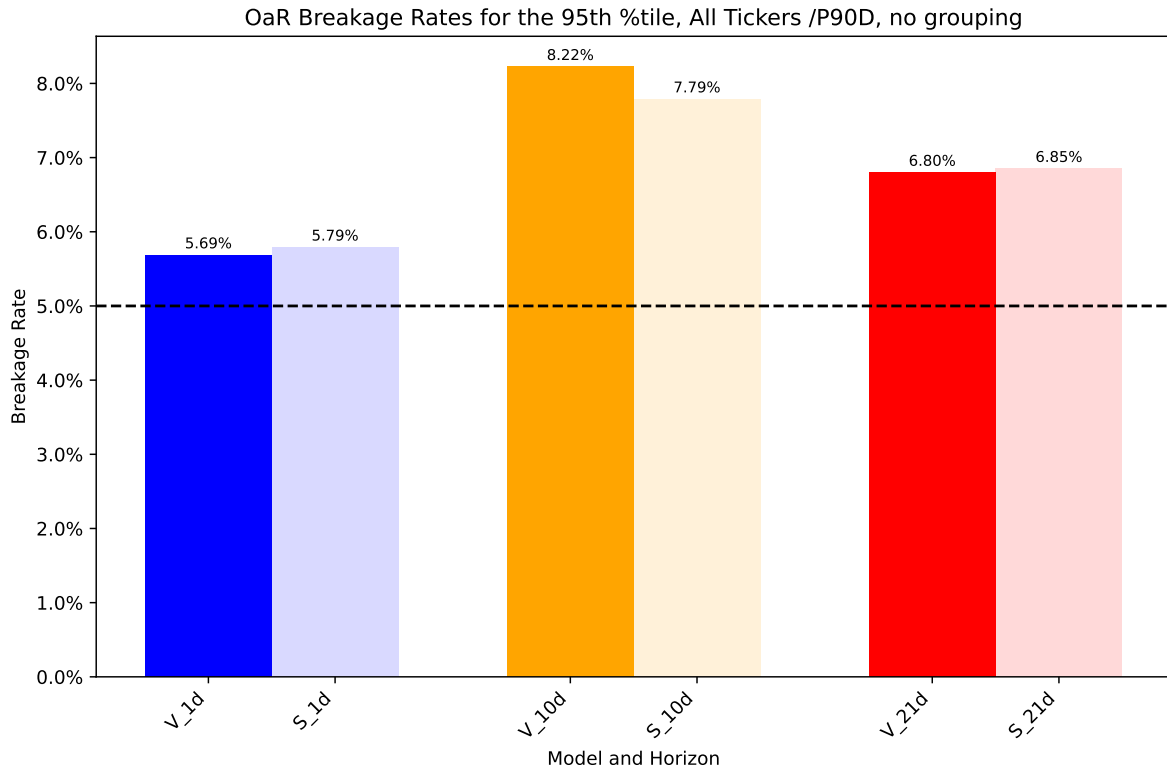
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across P365D:

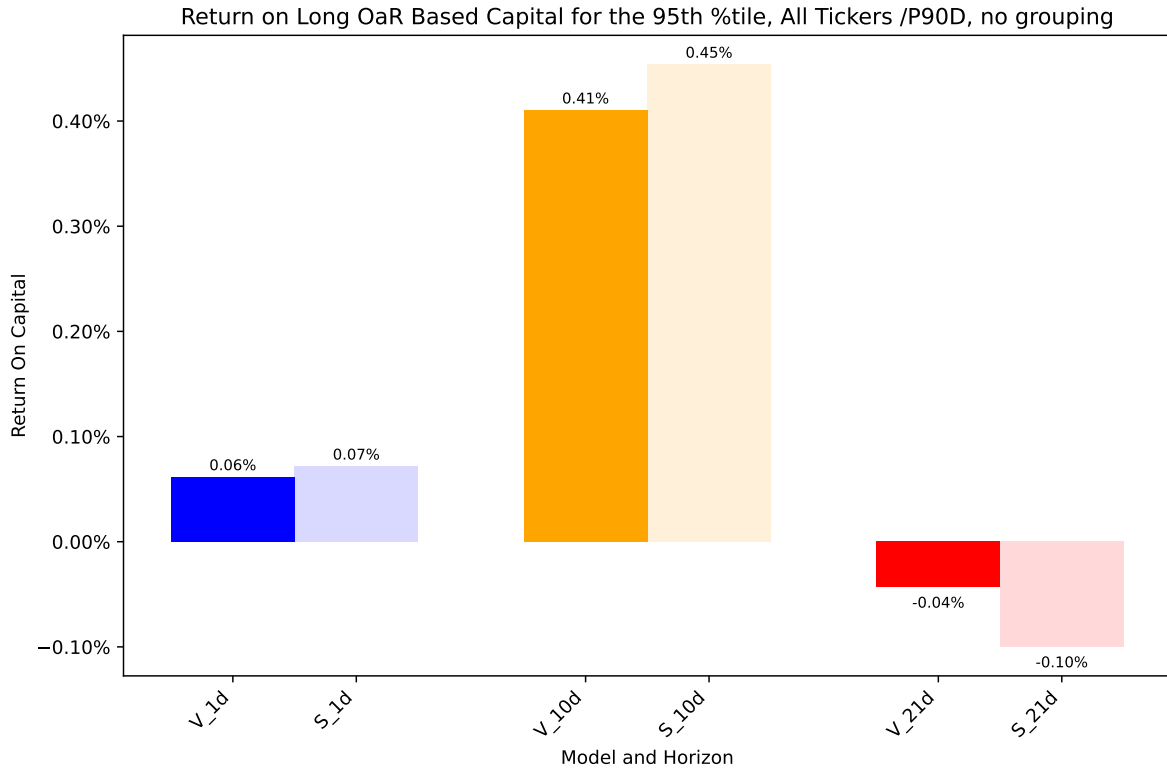
	1d	10d	21d	63d	126d
intercept	-0.00%	-0.03%	-0.14%	-1.13%	-3.51%
intercept_p_value	89.00%	76.12%	39.11%	3.01%	0.85%
slope	94.49%	109.62%	113.05%	127.87%	144.90%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-04-29 through 2026-02-02





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

	1d	10d	21d
intercept	-0.03%	-0.07%	0.07%
intercept_p_value	9.37%	21.07%	42.83%
slope	128.99%	105.26%	109.27%
slope_p_value	0.00%	0.00%	0.00%

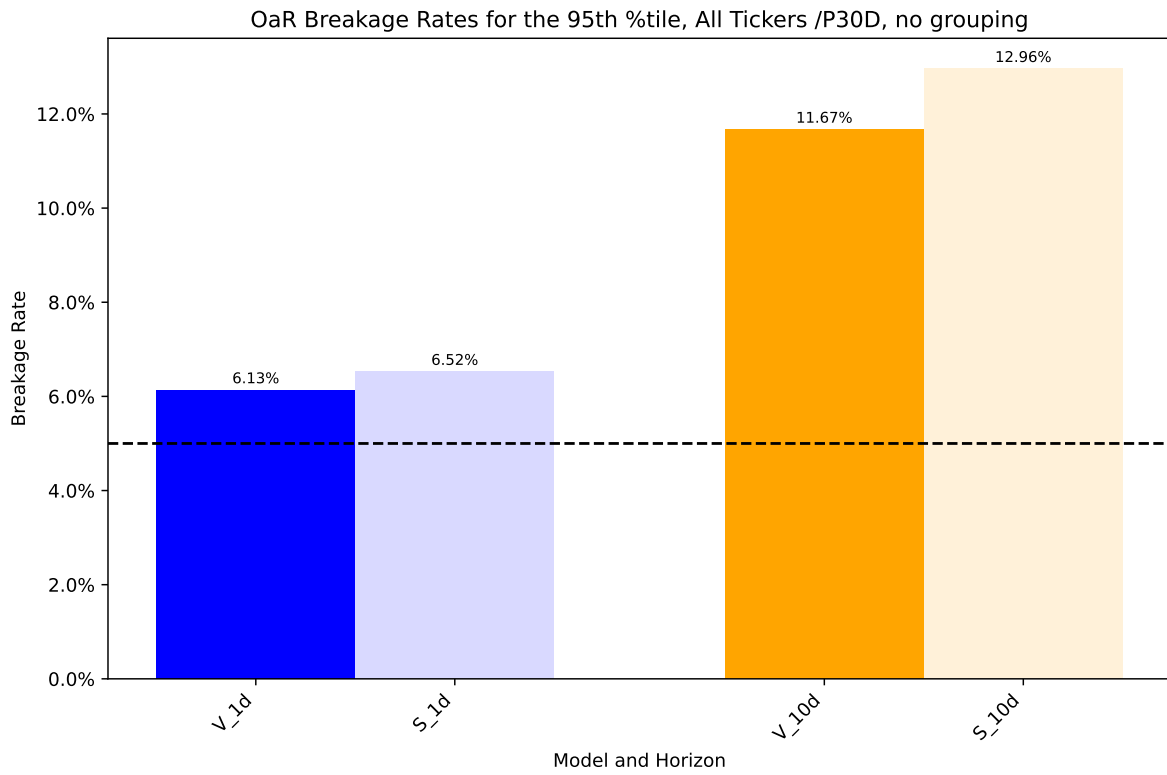
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across P90D:

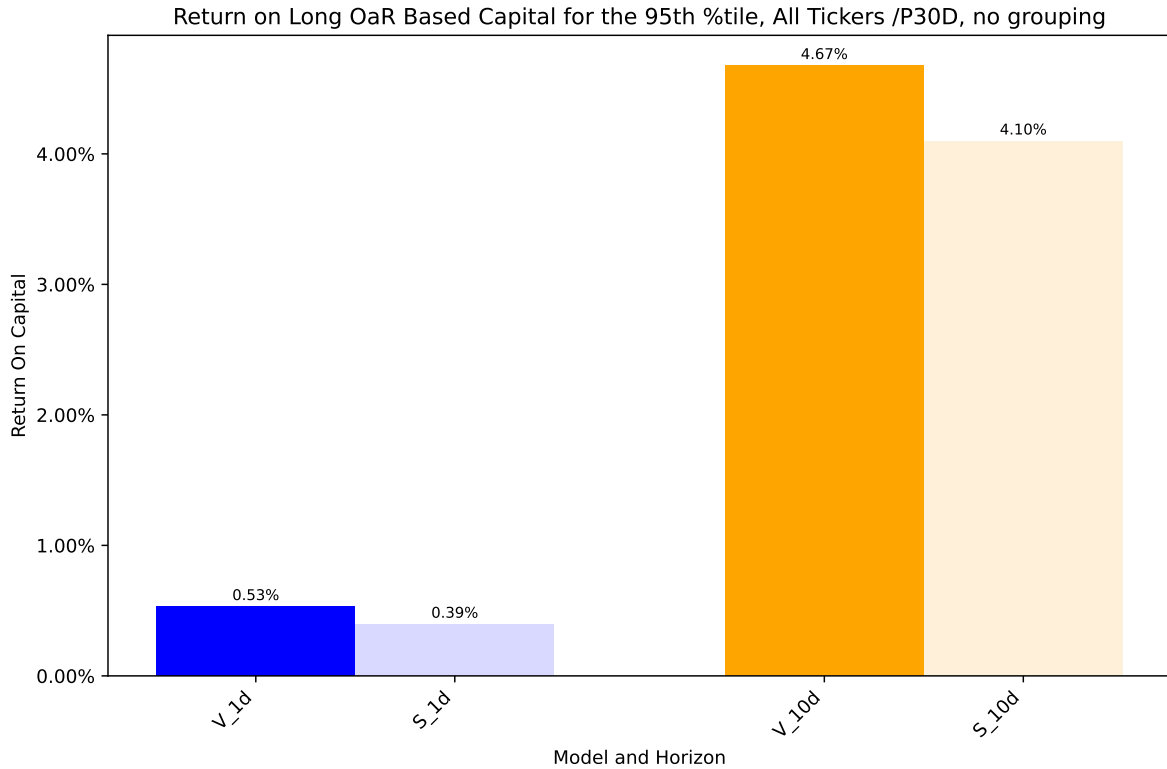
	1d	10d	21d
intercept	-0.01%	0.20%	0.28%
intercept_p_value	63.02%	20.76%	31.16%
slope	110.21%	127.52%	123.00%
slope_p_value	0.00%	0.00%	0.00%



Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-04-29 through 2026-04-01





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

	1d	10d
intercept	0.03%	0.43%
intercept_p_value	26.42%	0.88%
slope	125.66%	103.74%
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:

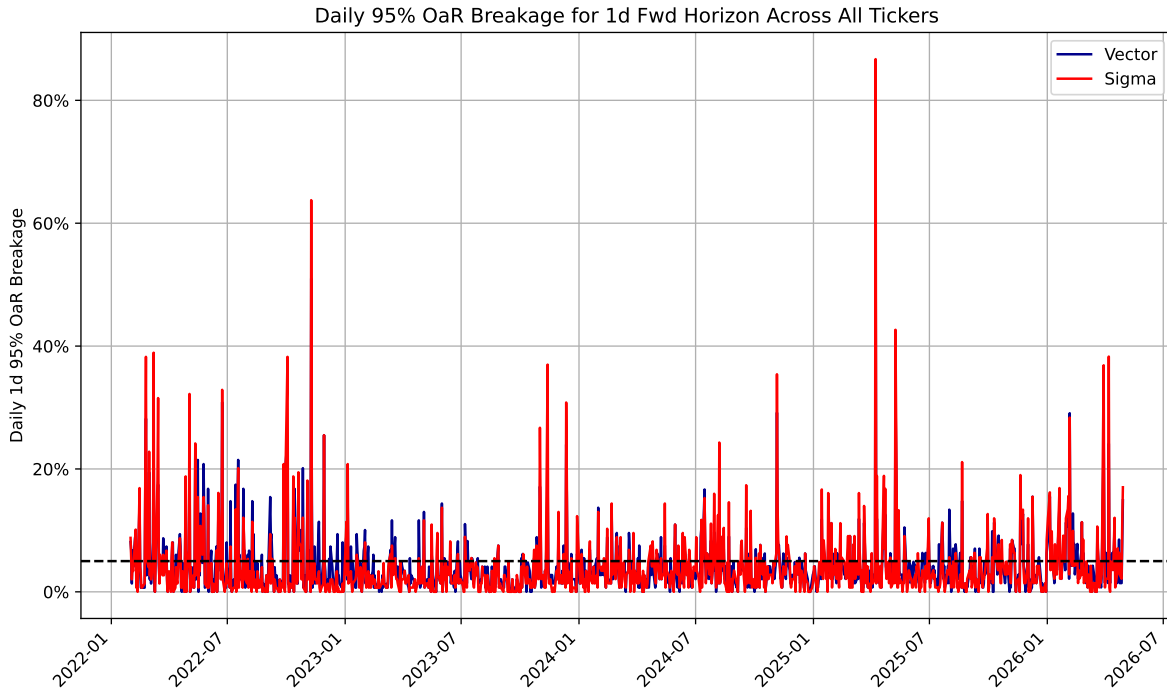
	1d	10d
intercept	-0.00%	-0.54%
intercept_p_value	93.92%	32.10%
slope	119.79%	149.59%
slope_p_value	0.00%	0.00%

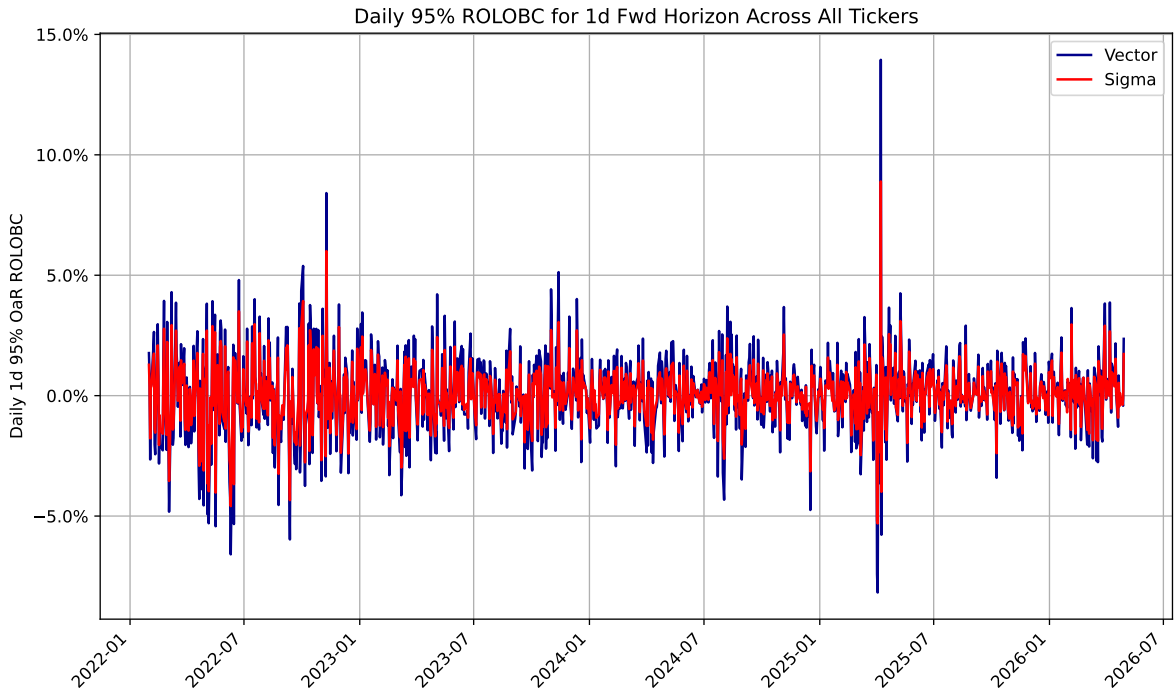


Daily Performance

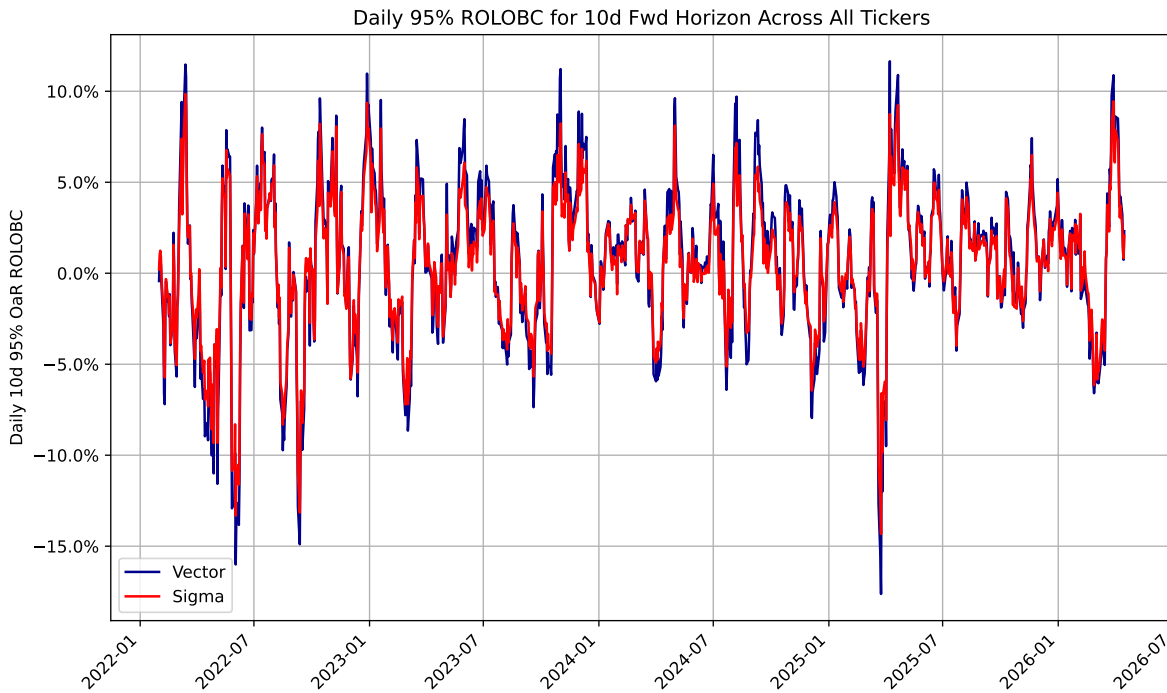
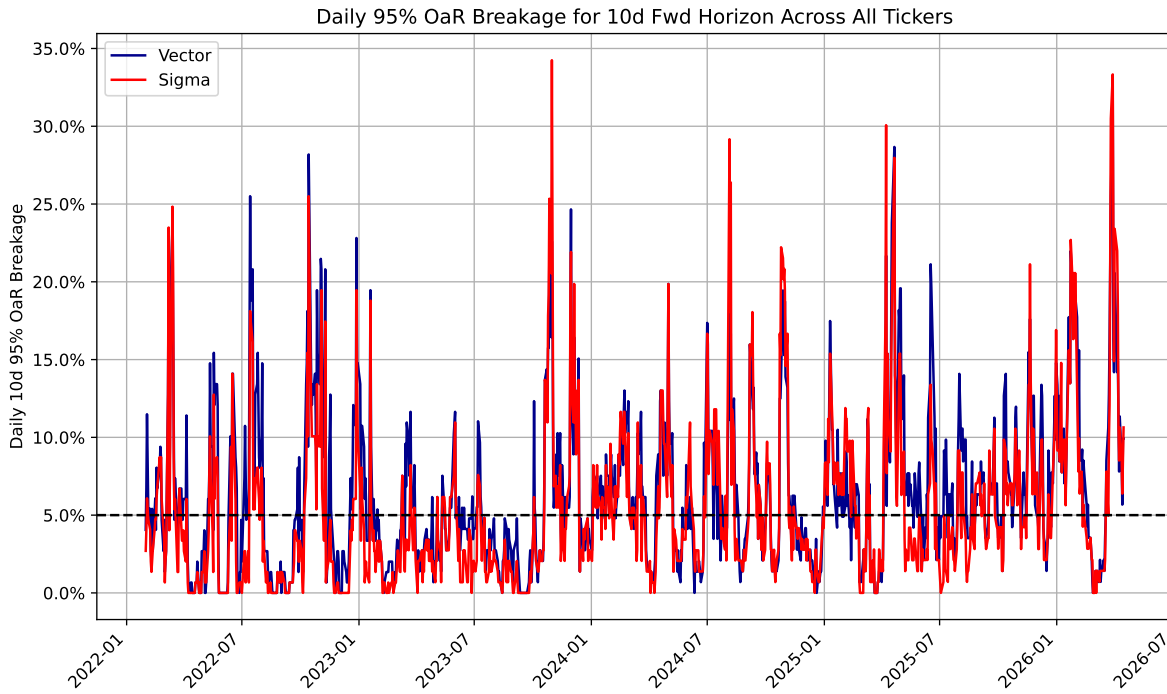
Here we look at the daily breakage and ROLOBC statistics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROLOBC outliers.

1d Horizon

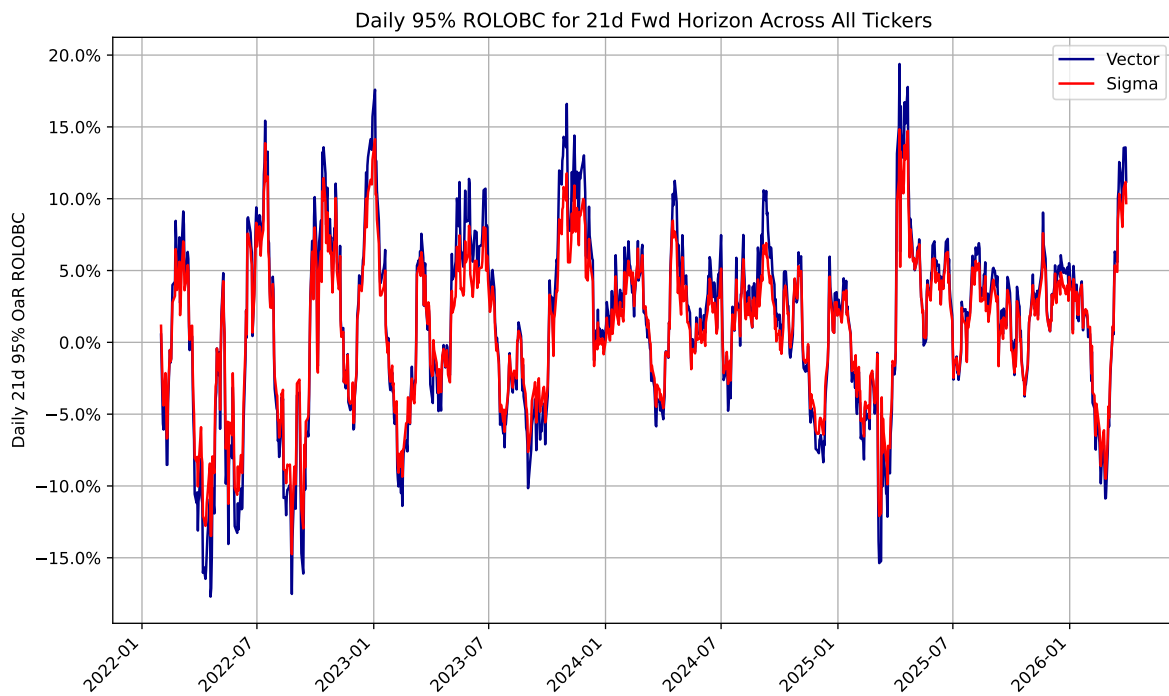
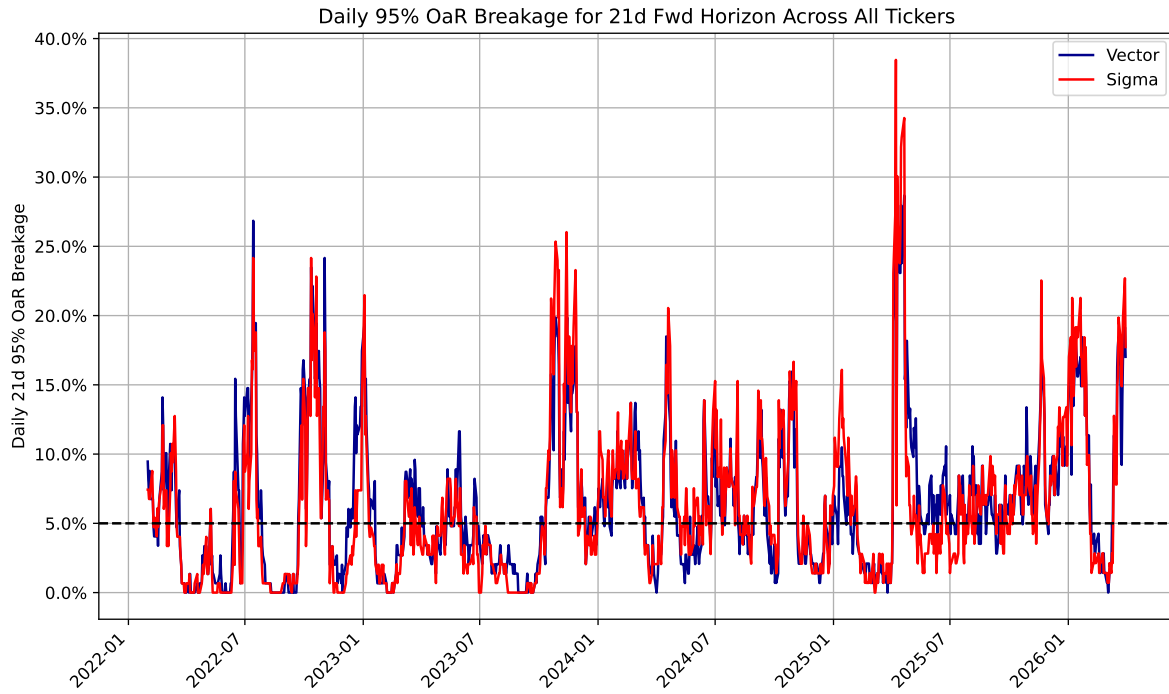




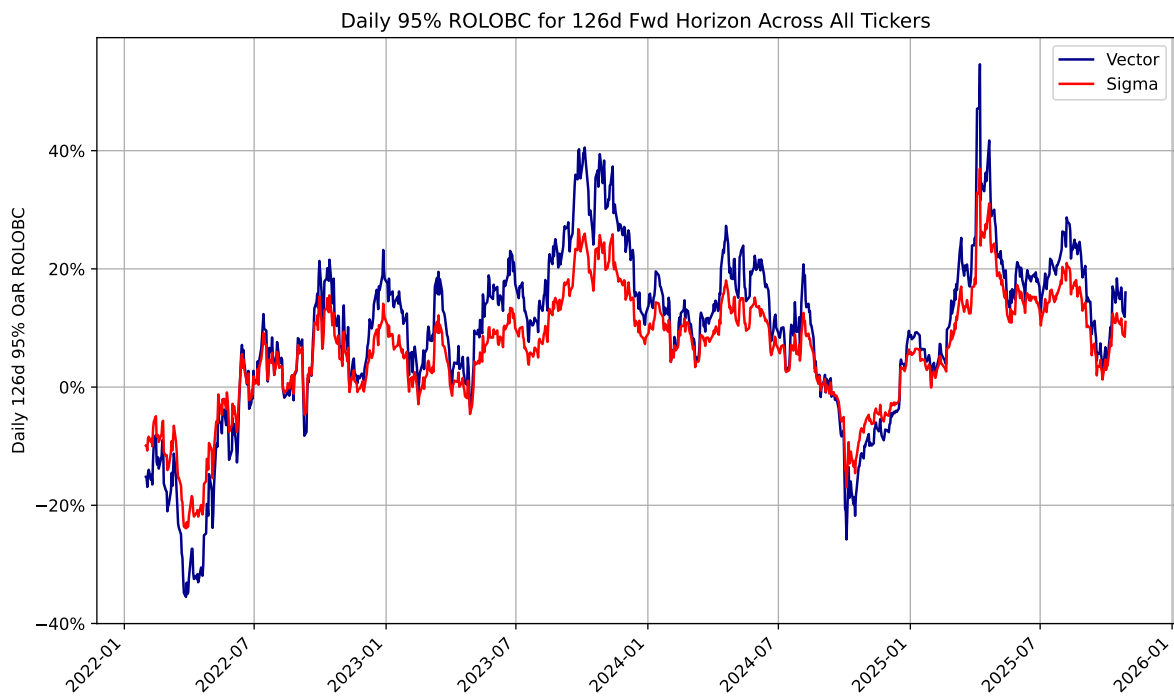
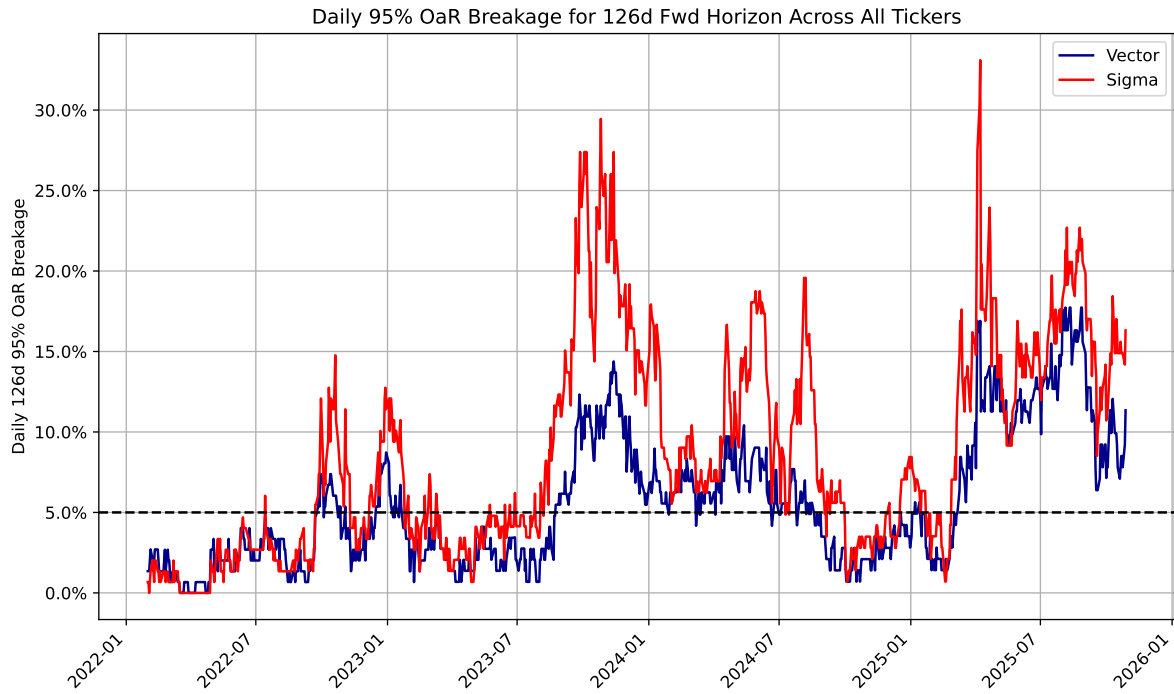
10d Horizon



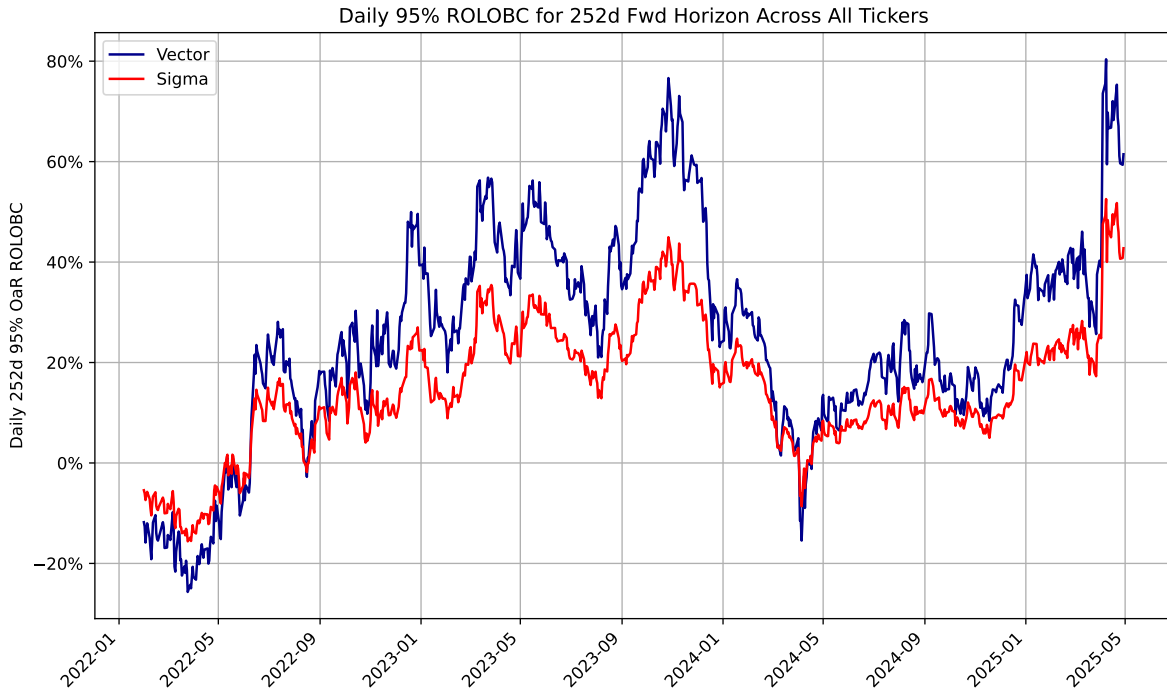
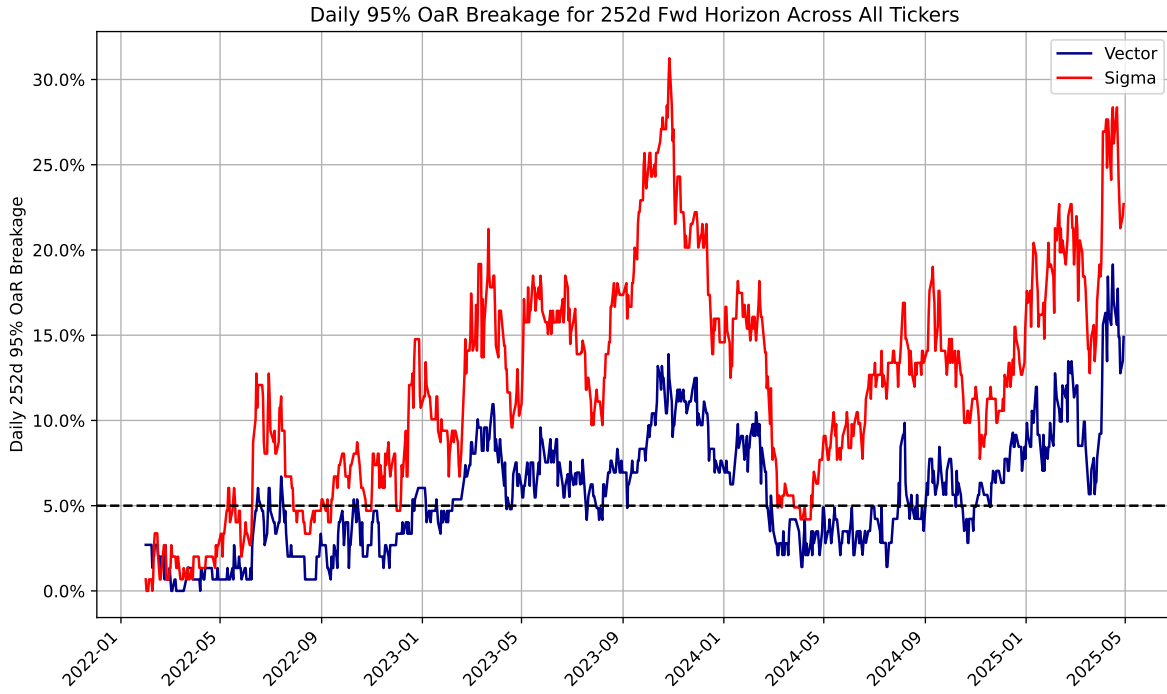
21d Horizon



63d Horizon



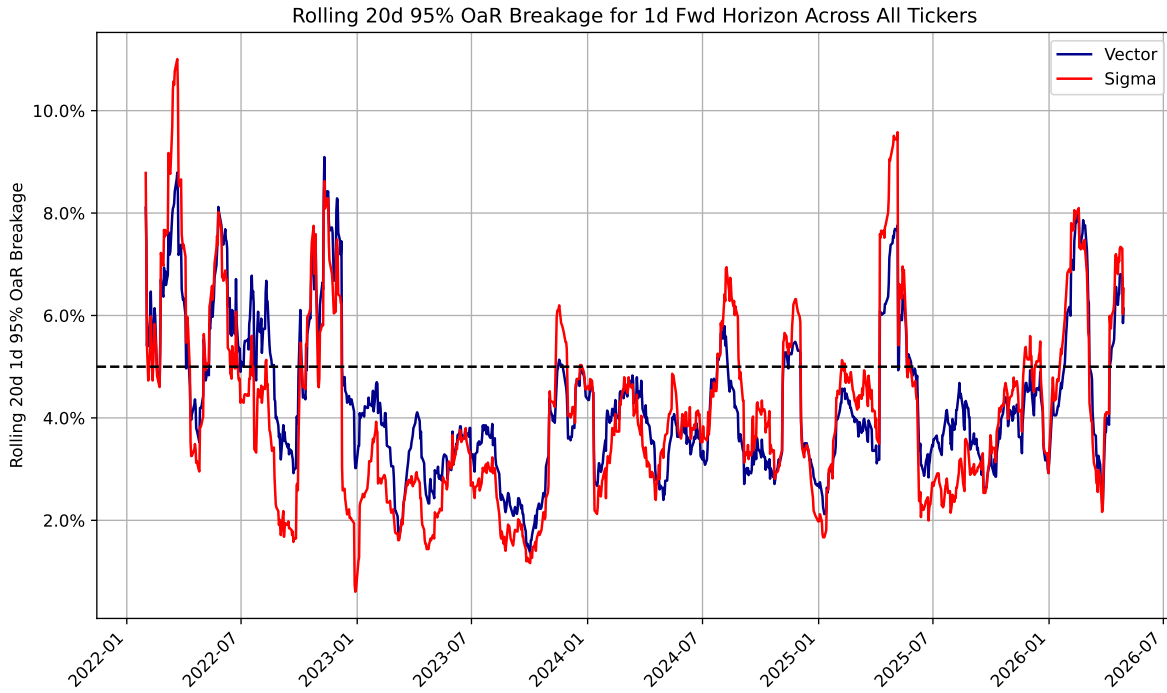
252d Horizon

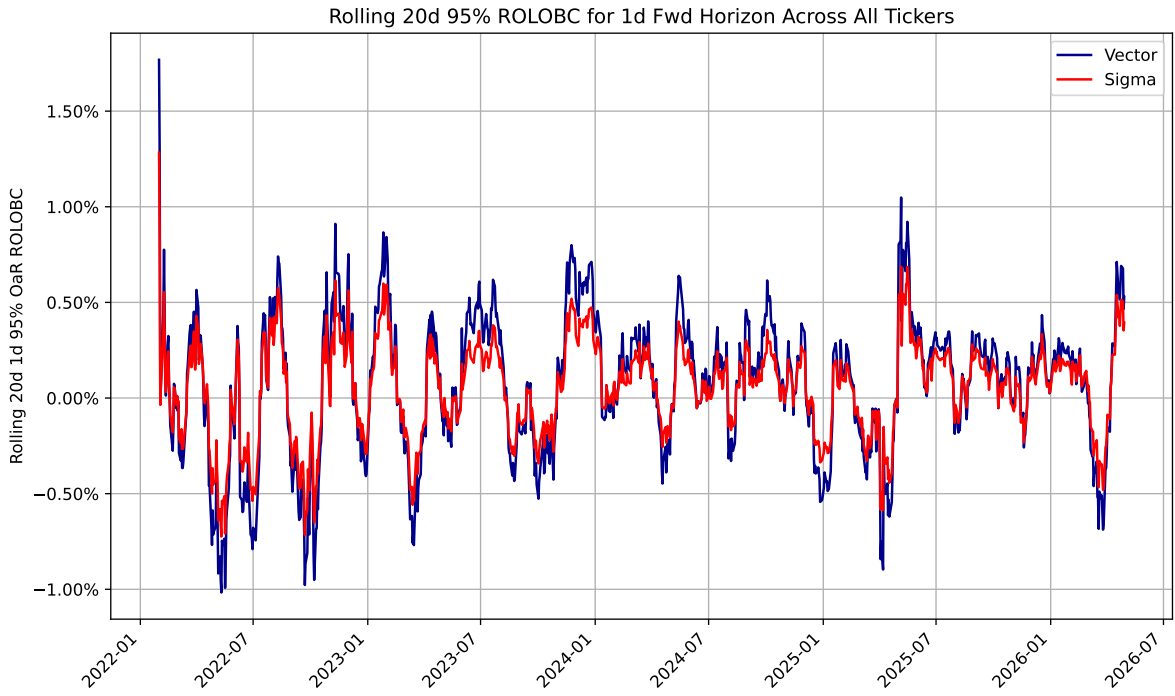


Rolling 20d Performance

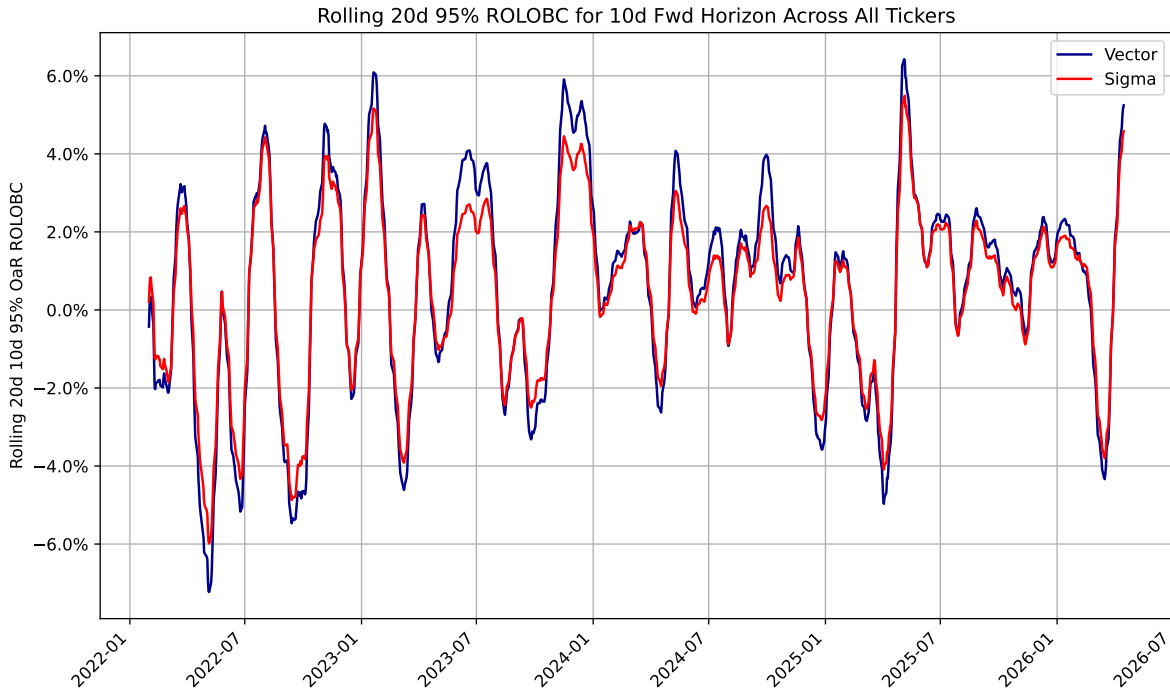
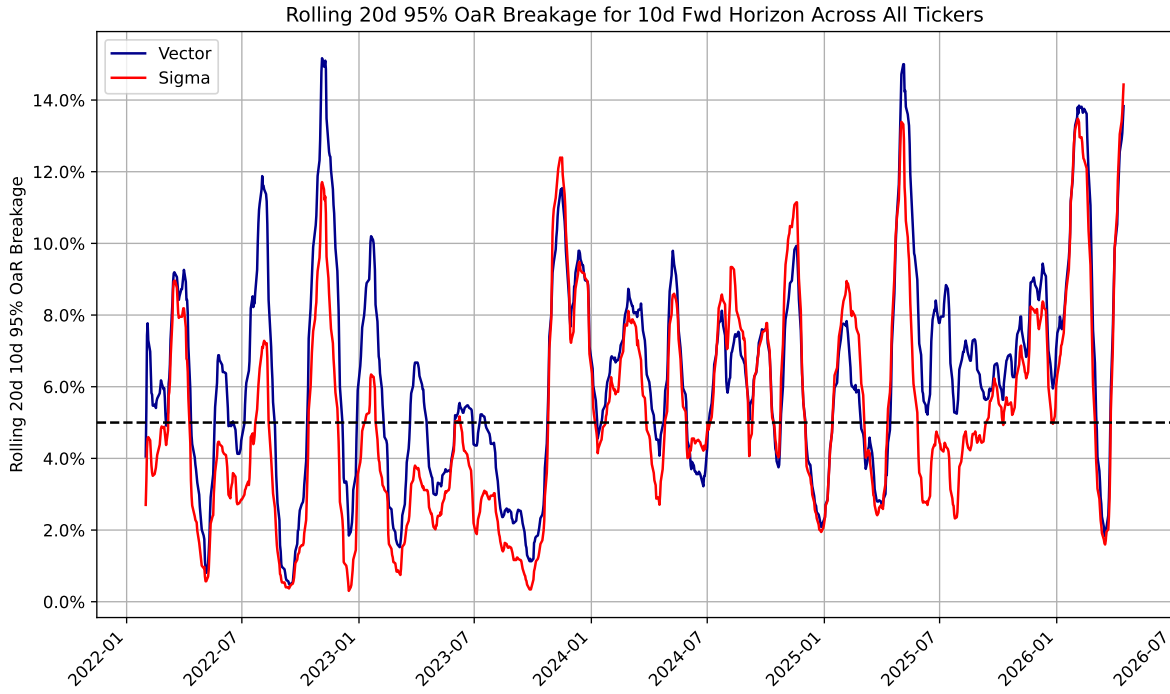
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statistics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

1d Horizon

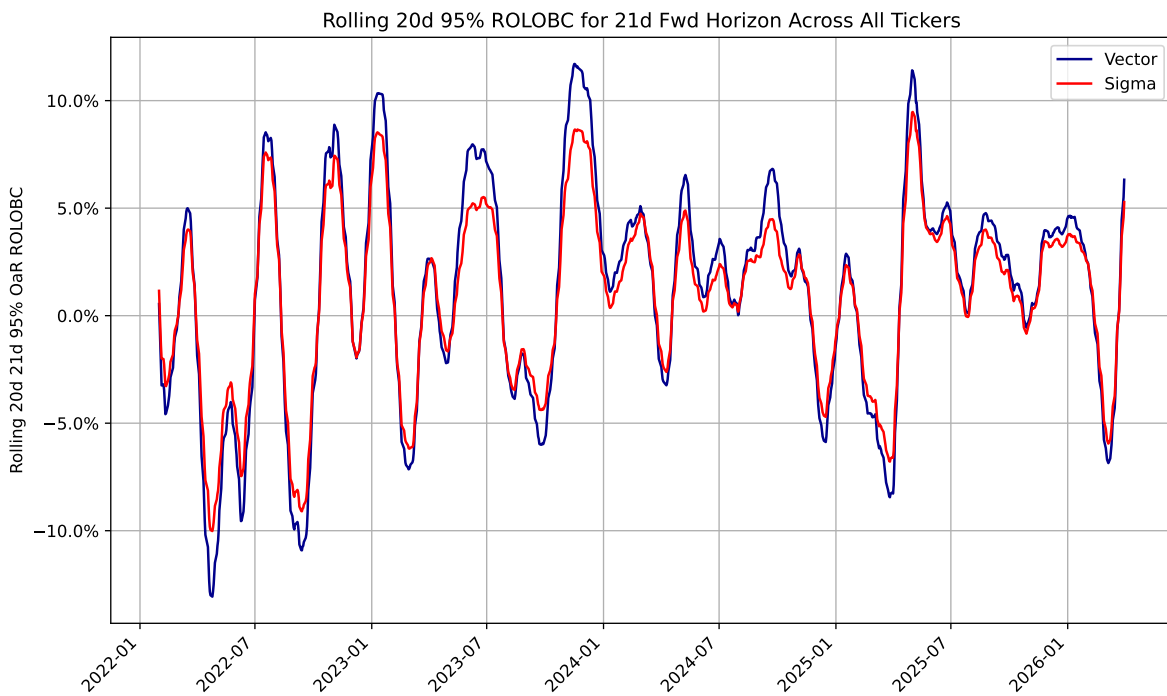
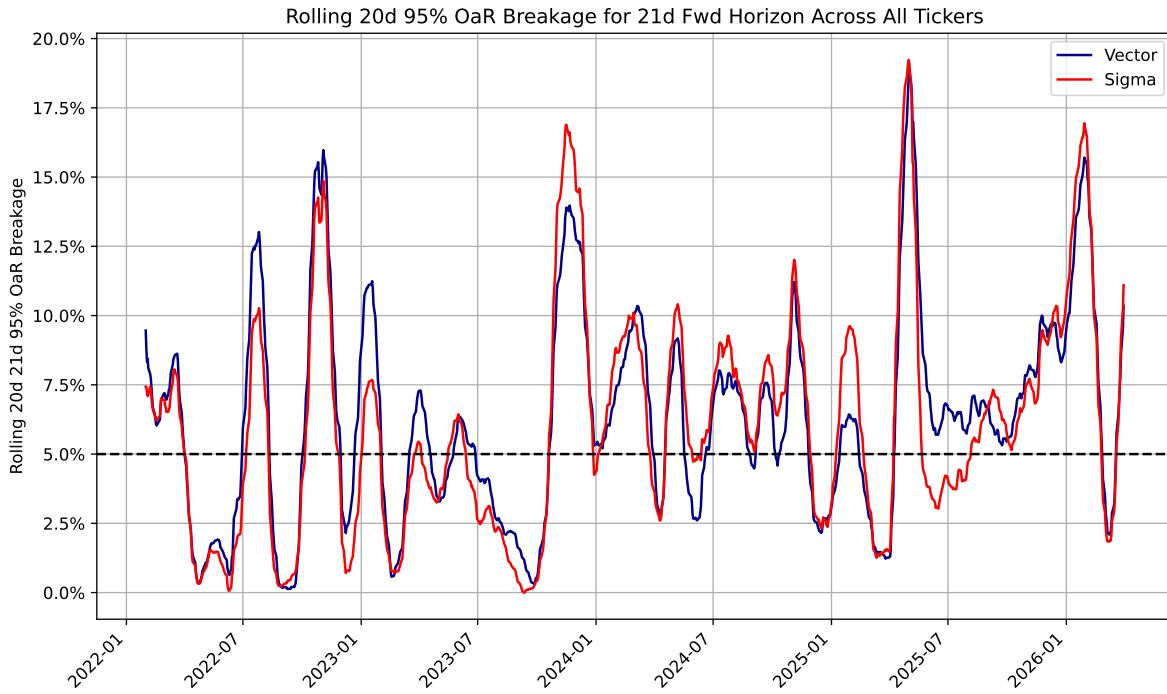




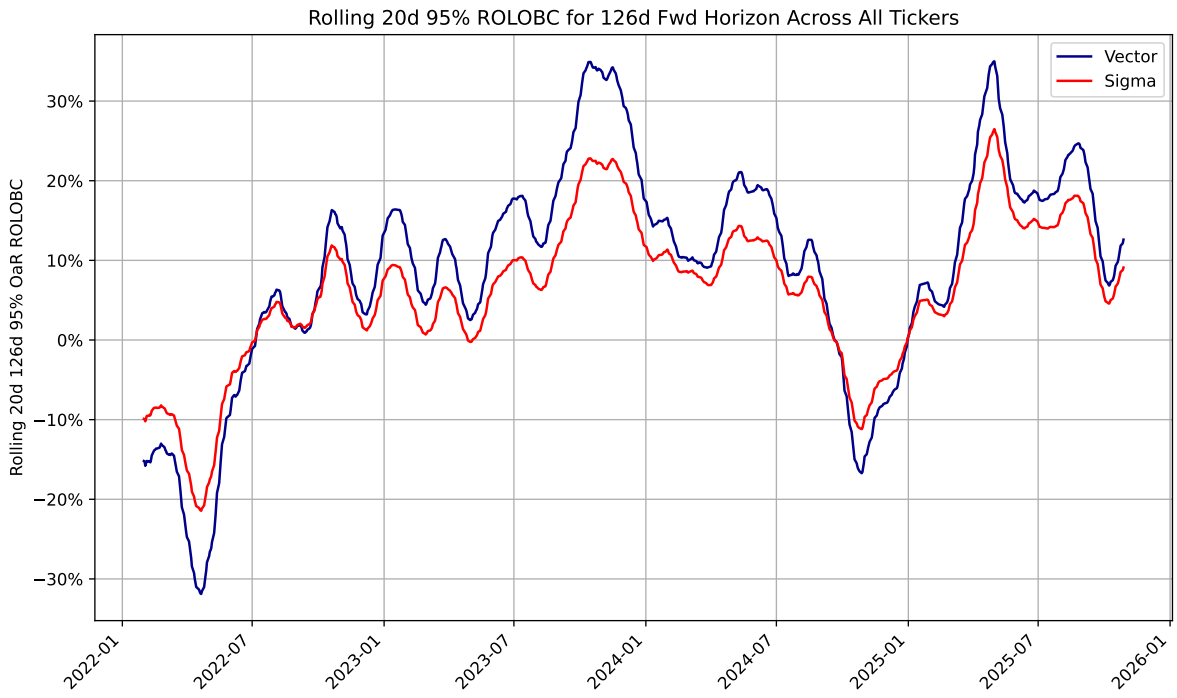
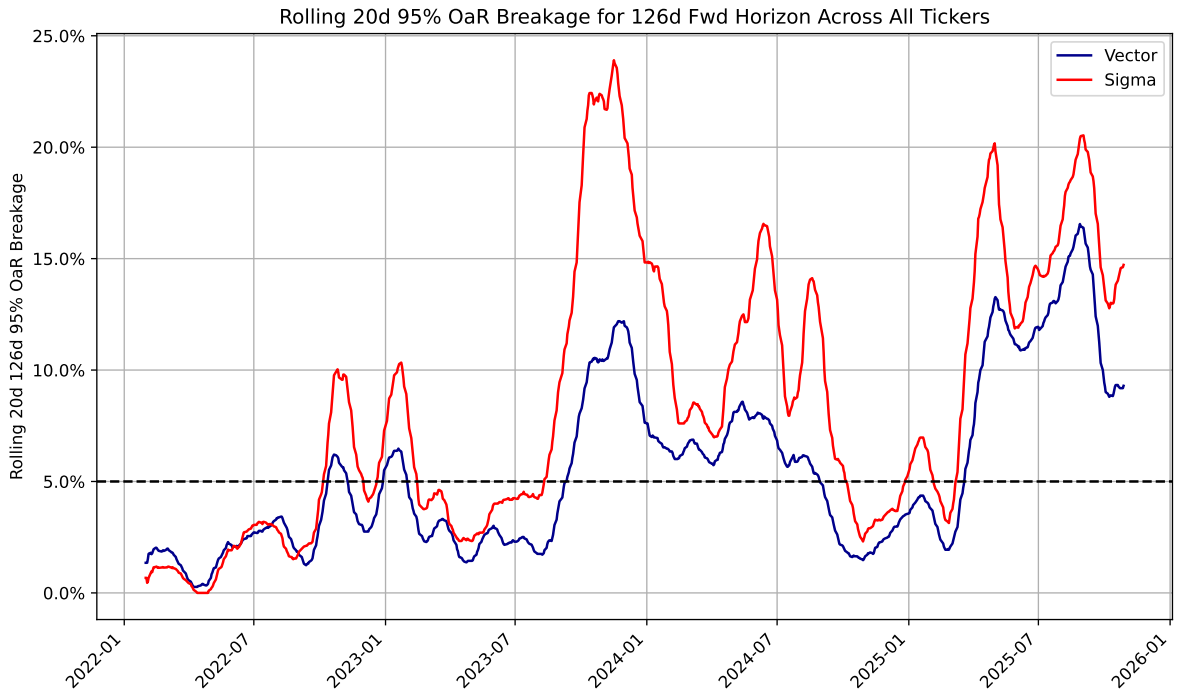
10d Horizon



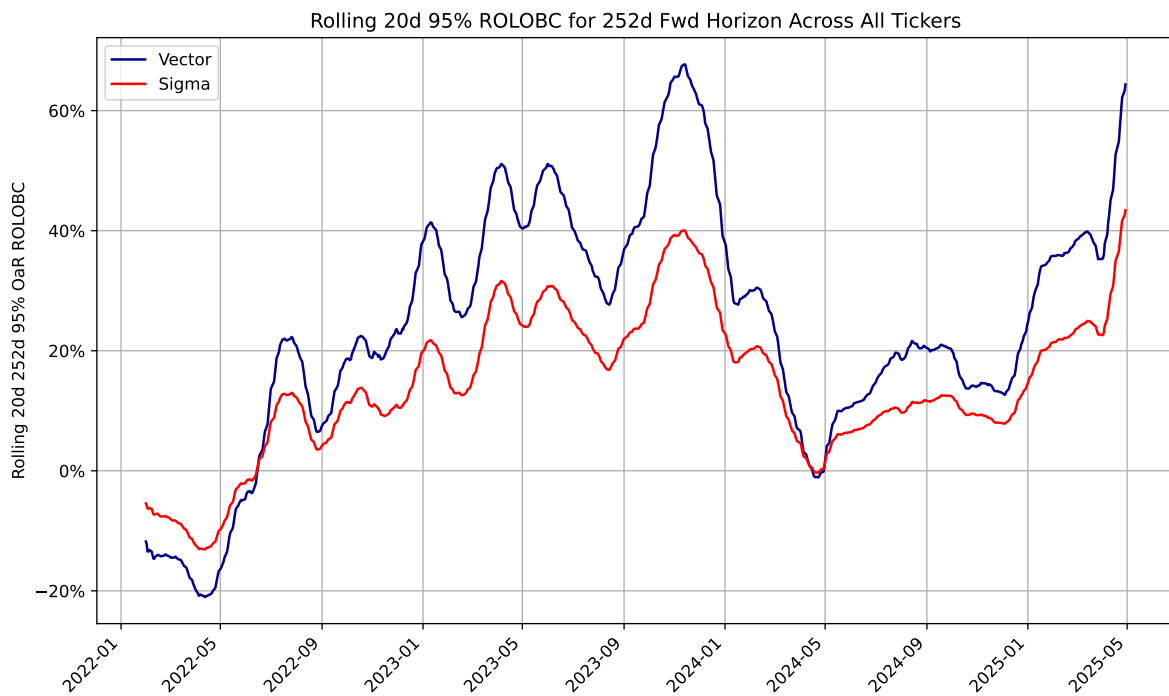
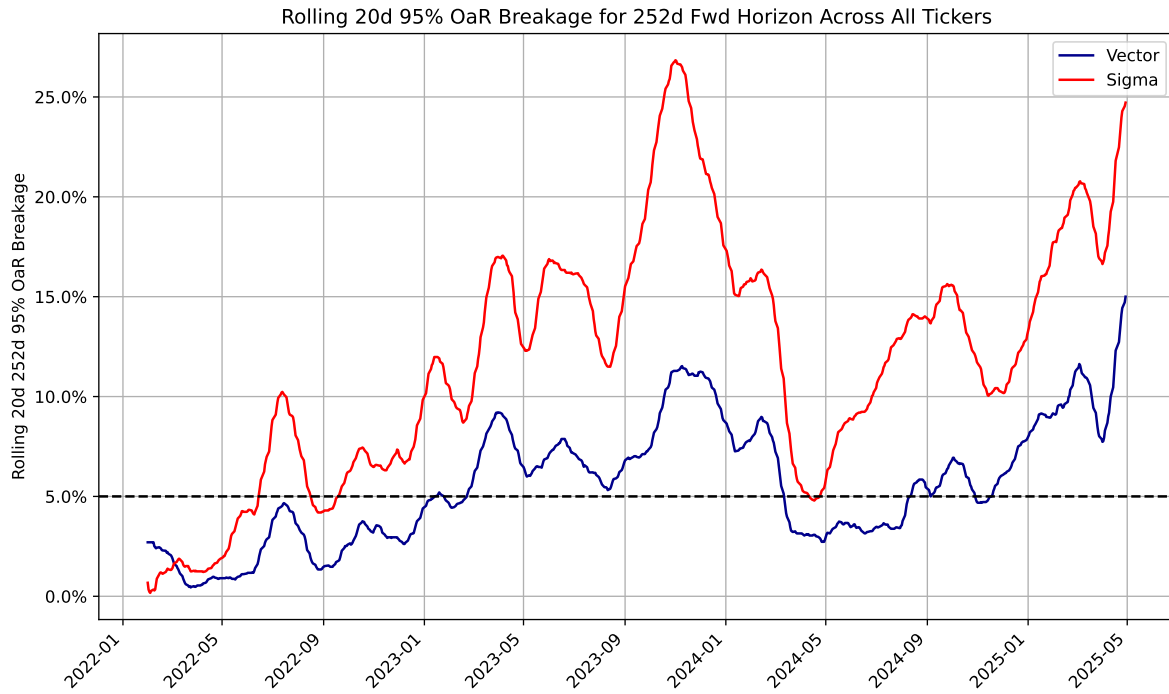
21d Horizon



63d Horizon



252d Horizon



Top 30 Tickers By OaR Breakage

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SBNY	16.55%	VST	8.73%
1.0	MSTR	15.4%	SLV	8.27%
1.0	SIVBQ	12.95%	WDC	7.98%
1.0	SLV	12.5%	MU	7.79%
1.0	GME	11.55%	GLD	7.7%
1.0	FRCB	10.07%	AVGO	6.67%
1.0	GNRC	9.95%	MSTR	6.57%
1.0	CHTR	9.86%	NVDA	6.48%
1.0	META	9.67%	NEM	6.29%
1.0	VST	9.67%	AMAT	6.1%
1.0	AVGO	9.58%	TEVA	5.82%
1.0	B	9.3%	PWR	5.73%
1.0	HLT	8.54%	AMD	5.63%
1.0	GILD	8.36%	CAH	5.63%
1.0	NFLX	8.17%	B	5.63%
1.0	BUD	8.08%	PHM	5.63%
1.0	ZTS	7.98%	FCX	5.63%
1.0	AA	7.79%	ON	5.63%
1.0	ORCL	7.61%	GBTC	5.63%
1.0	WDC	7.42%	TRGP	5.54%
1.0	CMA	7.37%	NVS	5.54%
1.0	TEVA	7.23%	DHI	5.54%
1.0	TSLA	7.04%	HLT	5.54%
1.0	INTU	6.95%	INTC	5.54%
1.0	BALL	6.85%	XOM	5.45%



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 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	19.13%	SLV	12.7%
10.0	META	17.42%	VST	11.46%
10.0	SLV	17.06%	GLD	11.46%
10.0	WDC	16.48%	MU	11.08%
10.0	KALU	16.19%	CAH	10.89%
10.0	TEVA	15.62%	WDC	10.7%
10.0	B	15.53%	NVDA	10.61%
10.0	VST	15.06%	LLY	10.51%
10.0	AVGO	14.49%	ORCL	10.51%
10.0	HCA	14.2%	B	9.94%
10.0	GILD	14.11%	GS	9.47%
10.0	SIVBQ	13.97%	TEVA	9.38%
10.0	IRM	13.64%	IRM	9.38%
10.0	CHTR	12.88%	NVS	9.28%
10.0	GME	12.69%	TRGP	9.09%
10.0	GNRC	12.5%	INTC	8.71%
10.0	GWV	12.41%	AVGO	8.52%
10.0	ORCL	12.31%	AMD	8.24%
10.0	TRGP	12.22%	GE	8.24%
10.0	NVS	12.12%	MSTR	8.05%
10.0	GLD	11.93%	NEM	7.86%
10.0	EXPE	11.65%	GWV	7.77%
10.0	NEM	11.46%	TSLA	7.48%
10.0	BUD	11.08%	MS	7.48%
10.0	SBNY	10.66%	AMAT	7.39%



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 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	AVGO	19.62%	GLD	16.65%
21.0	MSTR	19.14%	CAH	15.22%
21.0	META	16.84%	TRGP	13.68%
21.0	KALU	16.46%	LLY	12.82%
21.0	B	16.27%	WDC	12.73%
21.0	VST	16.08%	MSTR	12.63%
21.0	TEVA	15.98%	ORCL	12.63%
21.0	WDC	15.69%	TEVA	12.34%
21.0	TRGP	15.6%	VST	12.34%
21.0	NVS	15.12%	NVDA	12.25%
21.0	GNRC	14.45%	GE	12.15%
21.0	SLV	14.37%	IRM	12.06%
21.0	CHTR	14.26%	SLV	11.88%
21.0	IRM	14.07%	MU	11.67%
21.0	BUD	13.68%	GS	11.67%
21.0	NEM	13.49%	AVGO	11.39%
21.0	GILD	13.4%	NVS	11.2%
21.0	ORCL	13.4%	AMGN	11.0%
21.0	ISRG	13.3%	GWG	10.53%
21.0	HCA	13.11%	CCL	10.53%
21.0	GME	12.73%	PWR	10.43%
21.0	GWG	12.63%	X	10.4%
21.0	EXPE	12.63%	TSLA	10.14%
21.0	ETRN	12.14%	B	10.14%
21.0	SIVBQ	11.85%	MS	9.95%



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 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	AVGO	29.31%	WDC	26.32%
63.0	VST	24.73%	GLD	26.22%
63.0	META	23.53%	NVDA	26.22%
63.0	WDC	23.03%	VST	24.43%
63.0	MSTR	21.14%	TRGP	23.43%
63.0	GILD	19.54%	CAH	23.03%
63.0	GLD	18.34%	MU	20.34%
63.0	TEVA	18.25%	LLY	19.94%
63.0	EXPE	17.65%	AVGO	19.14%
63.0	SLV	16.97%	TEVA	18.94%
63.0	ETRN	16.7%	GBTC	18.44%
63.0	BUD	16.05%	SLV	16.87%
63.0	NEM	15.95%	GE	16.75%
63.0	MU	15.85%	ORCL	16.75%
63.0	KALU	15.75%	ETRN	16.15%
63.0	IRM	15.25%	THC	15.75%
63.0	TRGP	14.56%	MSTR	14.66%
63.0	CAH	14.26%	B	14.56%
63.0	B	14.06%	GILD	14.56%
63.0	HCA	13.46%	NEM	14.06%
63.0	ORCL	13.16%	PWR	13.86%
63.0	CHTR	12.76%	PHM	13.66%
63.0	MSI	12.66%	GOOGL	13.66%
63.0	WFC	12.16%	MRK	13.56%
63.0	THC	11.27%	CMG	13.26%
63.0	XOM	11.27%	AMD	13.16%
63.0	SIVBQ	11.11%	HSBC	13.06%
63.0	GNRC	10.57%	META	12.66%
63.0	NVS	10.37%	CCL	12.26%
63.0	GOOGL	10.17%	IRM	11.96%



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 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	37.02%	GLD	46.17%
126.0	AVGO	33.83%	NVDA	40.0%
126.0	GLD	31.7%	VST	36.91%
126.0	MSTR	30.64%	GE	35.11%
126.0	WDC	24.57%	CAH	33.62%
126.0	TEVA	23.94%	AVGO	32.23%
126.0	TRGP	23.94%	TRGP	30.32%
126.0	GILD	23.19%	WDC	26.28%
126.0	META	22.87%	TEVA	25.85%
126.0	IRM	21.91%	NEM	25.32%
126.0	NEM	20.64%	MSTR	25.32%
126.0	CAH	19.26%	MU	25.21%
126.0	GOOGL	18.83%	LLY	25.0%
126.0	TMUS	18.62%	GILD	23.94%
126.0	SLV	17.47%	ORCL	22.23%
126.0	NVDA	17.02%	PHM	21.91%
126.0	LW	17.02%	GS	20.96%
126.0	EXPE	16.28%	THC	20.43%
126.0	MU	15.64%	HSBC	20.32%
126.0	GE	15.32%	SLV	19.06%
126.0	MSI	14.89%	AMAT	18.83%
126.0	LLY	14.26%	GBTC	18.3%
126.0	KALU	13.51%	META	18.09%
126.0	B	13.3%	IRM	17.98%
126.0	HCA	12.02%	TMUS	17.34%
126.0	JAZZ	11.17%	PWR	16.91%
126.0	WFC	10.96%	GOOGL	16.06%
126.0	THC	10.64%	B	15.74%
126.0	ELAN	10.36%	ACGL	15.74%
126.0	XOM	10.0%	JPM	15.43%



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 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	AVGO	63.27%	GE	73.96%
252.0	VST	58.23%	AVGO	72.48%
252.0	GLD	45.09%	VST	55.65%
252.0	MSTR	44.96%	NVDA	54.91%
252.0	NVDA	33.91%	GLD	54.18%
252.0	META	31.94%	MSTR	44.84%
252.0	TRGP	31.82%	GS	44.47%
252.0	IRM	28.87%	PHM	44.23%
252.0	TEVA	26.54%	CAH	41.89%
252.0	CAH	25.8%	LLY	41.65%
252.0	LLY	22.97%	JPM	40.05%
252.0	GILD	22.73%	GBTC	39.19%
252.0	WDC	21.01%	META	38.57%
252.0	GS	20.76%	TRGP	35.63%
252.0	NEM	18.55%	NFLX	33.91%
252.0	GE	18.43%	ORCL	33.91%
252.0	TMUS	17.57%	TMUS	33.17%
252.0	SLV	16.95%	TEVA	33.05%
252.0	B	16.34%	HSBC	32.8%
252.0	TDG	15.97%	PWR	32.43%
252.0	GWV	14.99%	COST	31.7%
252.0	GOOGL	13.51%	ACGL	31.33%
252.0	THC	12.04%	TDG	30.1%
252.0	MU	11.06%	MU	29.85%
252.0	HSBC	10.44%	WDC	29.85%
252.0	ORCL	10.32%	GILD	28.13%
252.0	LW	10.32%	IRM	25.18%
252.0	EXPE	10.2%	THC	24.94%
252.0	MSI	9.34%	MS	24.45%
252.0	WFC	8.48%	GWV	21.87%



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 2026-04-29 through 2026-04-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	TXN	35.0%	INTC	20.0%
1.0	UNH	30.0%	MU	20.0%
1.0	INTC	25.0%	KALU	20.0%
1.0	NFLX	20.0%	ON	20.0%
1.0	GOOGL	20.0%	AMD	20.0%
1.0	ON	20.0%	AMZN	20.0%
1.0	WDC	20.0%	TEVA	15.0%
1.0	JAZZ	20.0%	VZ	15.0%
1.0	GWW	15.0%	TDG	15.0%
1.0	LNC	15.0%	HLT	15.0%
1.0	MU	15.0%	BHP	15.0%
1.0	MSTR	15.0%	WDC	15.0%
1.0	QCOM	15.0%	GOOGL	15.0%
1.0	FCX	15.0%	TXN	15.0%
1.0	MRK	15.0%	CVS	15.0%
1.0	BUD	15.0%	AVGO	15.0%
1.0	MNST	15.0%	QCOM	15.0%
1.0	KALU	15.0%	RIO	15.0%
1.0	TMUS	15.0%	DHI	15.0%
1.0	CSTM	15.0%	POST	15.0%
1.0	IRM	15.0%	CSTM	15.0%
1.0	B	15.0%	INTU	10.0%
1.0	TSLA	15.0%	GWW	10.0%
1.0	KEY	15.0%	HCA	10.0%
1.0	AMD	15.0%	HD	10.0%
1.0	GE	10.0%	TMUS	10.0%
1.0	META	10.0%	HSBC	10.0%
1.0	GNRC	10.0%	TRGP	10.0%
1.0	FIS	10.0%	GNRC	10.0%
1.0	EXPE	10.0%	IRM	10.0%



P30D: 10d

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

Period examined: All model dates from 2026-04-29 through 2026-04-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	UNH	100.0%	ON	100.0%
10.0	TXN	100.0%	AMD	100.0%
10.0	ON	100.0%	TXN	100.0%
10.0	KALU	100.0%	KALU	90.91%
10.0	INTC	81.82%	INTC	81.82%
10.0	BXP	72.73%	MSFT	81.82%
10.0	AMZN	72.73%	QQQ	72.73%
10.0	AMD	72.73%	MU	63.64%
10.0	WDC	72.73%	WDC	63.64%
10.0	ORCL	63.64%	ORCL	63.64%
10.0	MSTR	63.64%	CSCO	54.55%
10.0	EXPE	63.64%	AMZN	54.55%
10.0	TSLA	63.64%	AVGO	54.55%
10.0	IRM	45.45%	CDNS	45.45%
10.0	QCOM	45.45%	QCOM	45.45%
10.0	VFC	45.45%	UNH	45.45%
10.0	CDNS	36.36%	GOOGL	45.45%
10.0	META	36.36%	VFC	45.45%
10.0	MS	36.36%	MSTR	45.45%
10.0	LUMN	27.27%	META	36.36%
10.0	HLT	27.27%	EMB	36.36%
10.0	CNC	27.27%	SPY	36.36%
10.0	AMC	27.27%	IRM	36.36%
10.0	GOOGL	18.18%	MS	36.36%
10.0	GNRC	18.18%	DHI	27.27%
10.0	CSTM	18.18%	EXPE	27.27%
10.0	FCX	18.18%	HLT	27.27%
10.0	TEVA	18.18%	CNC	27.27%
10.0	SBUX	18.18%	NVDA	27.27%
10.0	HSBC	18.18%	LUMN	27.27%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	WDC	26.23%	CSTM	18.03%
1.0	UNH	21.31%	RIO	16.39%
1.0	AA	19.67%	WDC	16.39%
1.0	GE	19.67%	XOM	16.39%
1.0	TXN	19.67%	AA	16.39%
1.0	PWR	19.67%	BHP	14.75%
1.0	CSTM	18.03%	INTC	14.75%
1.0	NFLX	16.39%	MU	13.11%
1.0	INTC	16.39%	HSBC	13.11%
1.0	TMUS	14.75%	KALU	13.11%
1.0	AMAT	14.75%	NEM	11.48%
1.0	KALU	14.75%	GLD	11.48%
1.0	GLD	14.75%	AMD	11.48%
1.0	GNRC	14.75%	AMZN	9.84%
1.0	FCX	13.11%	AMAT	9.84%
1.0	LNC	13.11%	VZ	9.84%
1.0	CDNS	13.11%	FCX	9.84%
1.0	ON	11.48%	GOOGL	9.84%
1.0	MSTR	11.48%	GWV	9.84%
1.0	GWV	11.48%	ON	9.84%
1.0	BUD	11.48%	HLT	9.84%
1.0	GSK	11.48%	IRM	9.84%
1.0	HON	11.48%	OXY	9.84%
1.0	MRK	11.48%	SBUX	8.2%
1.0	XOM	9.84%	CSCO	8.2%
1.0	TRGP	9.84%	MS	8.2%
1.0	MU	9.84%	SLV	8.2%
1.0	HLT	9.84%	GNRC	8.2%
1.0	ORCL	9.84%	MSFT	8.2%
1.0	META	9.84%	FITB	8.2%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	KALU	40.38%	KALU	38.46%
10.0	NFLX	36.54%	OXY	32.69%
10.0	WDC	36.54%	ON	30.77%
10.0	TXN	34.62%	INTC	30.77%
10.0	UNH	34.62%	BHP	30.77%
10.0	EXPE	32.69%	AMD	28.85%
10.0	ON	30.77%	WDC	26.92%
10.0	INTC	30.77%	IRM	26.92%
10.0	CSTM	28.85%	TXN	25.0%
10.0	AMZN	26.92%	NFLX	25.0%
10.0	IRM	26.92%	MU	23.08%
10.0	FCX	25.0%	QQQ	21.15%
10.0	GNRC	23.08%	GOOGL	21.15%
10.0	TRGP	23.08%	MSFT	21.15%
10.0	PWR	23.08%	FCX	19.23%
10.0	GSK	23.08%	HSBC	19.23%
10.0	BUD	23.08%	CSTM	19.23%
10.0	BAC	19.23%	AMZN	19.23%
10.0	GLD	19.23%	AVGO	19.23%
10.0	THC	19.23%	AMAT	19.23%
10.0	ORCL	19.23%	AZN	19.23%
10.0	AZN	19.23%	RIO	17.31%
10.0	HSBC	17.31%	GNRC	17.31%
10.0	CZR	17.31%	NEM	17.31%
10.0	AA	17.31%	CZR	17.31%
10.0	AMC	17.31%	EMB	15.38%
10.0	BXP	15.38%	META	15.38%
10.0	JAZZ	15.38%	BUD	15.38%
10.0	RIO	15.38%	SPY	15.38%
10.0	META	15.38%	MSI	15.38%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	NFLX	41.46%	OXY	56.1%
21.0	INTC	41.46%	INTC	41.46%
21.0	CSTM	41.46%	CSTM	39.02%
21.0	BAC	36.59%	WDC	36.59%
21.0	TXN	36.59%	MS	34.15%
21.0	WDC	36.59%	NFLX	34.15%
21.0	AMC	36.59%	AMD	31.71%
21.0	UNH	36.59%	AMZN	31.71%
21.0	MS	31.71%	KALU	31.71%
21.0	AMZN	31.71%	ON	29.27%
21.0	HSBC	31.71%	HSBC	26.83%
21.0	KALU	31.71%	AVGO	26.83%
21.0	PWR	26.83%	IRM	26.83%
21.0	ON	26.83%	BAC	24.39%
21.0	OXY	24.39%	TXN	24.39%
21.0	FITB	24.39%	BHP	24.39%
21.0	IRM	19.51%	TFC	21.95%
21.0	BXP	19.51%	RIO	21.95%
21.0	BUD	19.51%	CZR	19.51%
21.0	EXPE	19.51%	SPY	19.51%
21.0	PCG	17.07%	UNH	19.51%
21.0	CZR	17.07%	QQQ	19.51%
21.0	TMUS	17.07%	HLT	19.51%
21.0	THC	17.07%	BA	14.63%
21.0	GSK	17.07%	GOOGL	14.63%
21.0	AMD	17.07%	KEY	14.63%
21.0	USB	14.63%	THC	14.63%
21.0	VFC	14.63%	MSFT	12.2%
21.0	QCOM	12.2%	PWR	12.2%
21.0	GNRC	12.2%	GNRC	12.2%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	WDC	19.6%	SLV	17.27%
1.0	SLV	18.47%	WDC	15.2%
1.0	GILD	16.0%	MU	12.8%
1.0	AA	13.2%	NEM	11.6%
1.0	MU	12.0%	AA	10.8%
1.0	NVS	12.0%	INTC	10.4%
1.0	TXN	11.2%	CSTM	10.0%
1.0	GLD	10.8%	GLD	10.0%
1.0	BUD	10.4%	RIO	9.2%
1.0	INTC	10.4%	B	9.2%
1.0	TSLA	10.0%	AMAT	8.4%
1.0	CLF	10.0%	BHP	8.4%
1.0	VFC	9.6%	AMD	8.4%
1.0	UNH	9.6%	KALU	8.0%
1.0	GWV	9.6%	NVS	8.0%
1.0	NEM	9.2%	AZN	8.0%
1.0	GNRC	8.8%	HLT	7.6%
1.0	CMA	8.47%	XOM	7.2%
1.0	CSTM	8.4%	GOOGL	7.2%
1.0	META	8.0%	DHI	7.2%
1.0	KALU	7.6%	CSCO	6.8%
1.0	AMZN	7.6%	HSBC	6.8%
1.0	PWR	7.6%	AZO	6.8%
1.0	FCX	7.6%	BIIB	6.8%
1.0	ON	7.2%	WYNN	6.4%
1.0	GOOGL	7.2%	CCL	6.4%
1.0	EXPE	7.2%	TEVA	6.4%
1.0	NFLX	6.8%	AMGN	6.4%
1.0	AAP	6.8%	PHM	6.4%
1.0	ORCL	6.8%	X	6.25%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	X	43.48%	X	43.48%
10.0	WDC	41.08%	SLV	30.83%
10.0	SLV	32.5%	WDC	28.22%
10.0	TXN	28.22%	MU	26.56%
10.0	KALU	28.22%	B	25.31%
10.0	MU	25.31%	INTC	20.75%
10.0	NVS	24.9%	KALU	18.67%
10.0	GILD	23.65%	GOOGL	17.01%
10.0	B	21.99%	GLD	16.6%
10.0	AMZN	21.58%	AMAT	16.18%
10.0	INTC	21.16%	AMD	16.18%
10.0	GLD	20.75%	NEM	15.77%
10.0	NEM	20.33%	GNRC	15.35%
10.0	GNRC	19.92%	BHP	14.52%
10.0	FCX	19.92%	TXN	13.69%
10.0	EXPE	19.92%	AZN	13.69%
10.0	BUD	19.5%	AA	13.28%
10.0	GOOGL	18.67%	ORCL	12.45%
10.0	CMA	17.22%	XOM	12.45%
10.0	THC	15.35%	RIO	12.45%
10.0	HCA	14.94%	HSBC	12.03%
10.0	AA	14.94%	TEVA	11.62%
10.0	AVGO	14.52%	NVS	10.79%
10.0	TSLA	14.11%	CSTM	10.79%
10.0	UNH	14.11%	MRK	10.37%
10.0	AMC	14.11%	GSK	10.37%
10.0	AZN	13.69%	CSCO	9.96%
10.0	ON	13.69%	ON	9.96%
10.0	ORCL	13.69%	LVS	9.96%
10.0	CSTM	13.28%	HCA	9.54%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	X	91.67%	X	100.0%
21.0	WDC	52.17%	WDC	39.57%
21.0	MU	37.39%	B	36.09%
21.0	SLV	34.93%	MU	35.65%
21.0	KALU	33.04%	SLV	32.31%
21.0	NVS	33.04%	NEM	23.91%
21.0	TXN	29.57%	GLD	23.04%
21.0	NEM	28.7%	GNRC	23.04%
21.0	CMA	26.63%	INTC	22.61%
21.0	B	26.52%	RIO	22.17%
21.0	GLD	24.78%	GOOGL	21.74%
21.0	INTC	23.91%	AMD	21.3%
21.0	EXPE	23.91%	CSTM	20.87%
21.0	GNRC	23.04%	KALU	20.43%
21.0	AVGO	22.61%	ORCL	18.7%
21.0	GOOGL	20.87%	HSBC	18.7%
21.0	BUD	20.43%	BHP	17.39%
21.0	AAP	18.7%	TEVA	16.96%
21.0	GILD	18.7%	XOM	14.78%
21.0	FCX	18.26%	AA	14.35%
21.0	ORCL	16.96%	OXY	13.91%
21.0	HSBC	16.52%	AMAT	13.48%
21.0	HCA	16.52%	FCX	13.48%
21.0	RIO	15.65%	CCL	13.48%
21.0	GSK	14.78%	NVS	13.04%
21.0	AA	13.91%	LVS	12.61%
21.0	VZ	13.91%	AMGN	12.17%
21.0	AMZN	13.91%	IRM	12.17%
21.0	JAZZ	13.04%	PEP	11.74%
21.0	AMGN	13.04%	BALL	10.87%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	WDC	92.55%	WDC	97.87%
63.0	MU	72.87%	B	73.94%
63.0	SLV	68.98%	SLV	64.71%
63.0	B	63.83%	MU	63.83%
63.0	GLD	52.66%	NEM	61.7%
63.0	NEM	47.87%	GLD	55.32%
63.0	EXPE	43.62%	GOOGL	54.79%
63.0	CMA	41.73%	TEVA	40.43%
63.0	KALU	41.49%	CSTM	38.3%
63.0	GOOGL	37.77%	RIO	36.17%
63.0	INTC	37.23%	AMAT	35.64%
63.0	AA	35.11%	INTC	35.64%
63.0	NVS	34.04%	KALU	35.11%
63.0	VZ	31.38%	AA	35.11%
63.0	TEVA	30.85%	GNRC	34.57%
63.0	GILD	30.32%	CAH	33.51%
63.0	JAZZ	29.79%	TRGP	30.85%
63.0	XOM	29.79%	XOM	30.32%
63.0	AVGO	28.19%	AMD	30.32%
63.0	FCX	26.6%	VZ	27.13%
63.0	HCA	25.53%	MRK	24.47%
63.0	GNRC	25.0%	BHP	23.94%
63.0	ELAN	23.94%	HSBC	23.94%
63.0	ORCL	20.21%	FCX	22.87%
63.0	GSK	19.68%	OXY	21.28%
63.0	AAP	19.68%	GSK	20.74%
63.0	BUD	19.15%	ORCL	20.21%
63.0	BALL	18.09%	LLY	19.68%
63.0	HSBC	17.55%	JAZZ	19.68%
63.0	TXN	16.49%	NVS	18.09%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	SLV	100.0%	MU	100.0%
126.0	MU	100.0%	SLV	100.0%
126.0	WDC	100.0%	WDC	100.0%
126.0	GLD	92.0%	CAH	93.6%
126.0	CMA	84.38%	JAZZ	88.0%
126.0	JAZZ	84.0%	GLD	84.0%
126.0	B	75.2%	NEM	83.2%
126.0	AA	72.8%	TEVA	83.2%
126.0	NEM	72.8%	B	78.4%
126.0	KALU	70.4%	GOOGL	77.6%
126.0	GOOGL	68.8%	RIO	77.6%
126.0	INTC	64.8%	AA	72.8%
126.0	ELAN	57.6%	AMAT	72.0%
126.0	NVS	57.6%	INTC	71.2%
126.0	CSTM	53.6%	KALU	65.6%
126.0	HSBC	50.4%	HSBC	61.6%
126.0	EXPE	48.8%	CSTM	59.2%
126.0	GILD	48.0%	CMA	57.81%
126.0	HCA	45.6%	ELAN	56.8%
126.0	TEVA	44.8%	MRK	51.2%
126.0	AVGO	42.4%	XOM	48.8%
126.0	GSK	42.4%	GSK	48.8%
126.0	XOM	32.8%	AZN	44.8%
126.0	RIO	29.6%	BHP	40.0%
126.0	AAPL	28.8%	TRGP	38.4%
126.0	FCX	25.6%	BIIB	35.2%
126.0	WYNN	19.2%	EXPE	34.4%
126.0	BUD	17.6%	HCA	33.6%
126.0	CAH	15.2%	NVS	32.8%
126.0	AMD	14.4%	LVS	32.8%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	AVGO	0.42%	MSTR	0.31%
1.0	NVDA	0.42%	WDC	0.25%
1.0	X	0.38%	NVDA	0.25%
1.0	VST	0.34%	VST	0.24%
1.0	MU	0.32%	MU	0.23%
1.0	GE	0.31%	AVGO	0.22%
1.0	AMD	0.31%	PWR	0.21%
1.0	PWR	0.28%	TEVA	0.17%
1.0	CCL	0.28%	GME	0.17%
1.0	GBTC	0.28%	X	0.17%
1.0	TSLA	0.26%	AMD	0.17%
1.0	WDC	0.26%	TRGP	0.16%
1.0	LLY	0.25%	GBTC	0.15%
1.0	B	0.24%	GE	0.15%
1.0	AMAT	0.22%	LLY	0.15%
1.0	TRGP	0.21%	SLV	0.14%
1.0	CAH	0.2%	AMAT	0.14%
1.0	THC	0.18%	CAH	0.14%
1.0	TDG	0.18%	THC	0.12%
1.0	ON	0.17%	GOOGL	0.12%
1.0	PHM	0.17%	INTC	0.12%
1.0	SLV	0.16%	ETRN	0.12%
1.0	DHI	0.16%	IRM	0.11%
1.0	JAZZ	0.15%	NFLX	0.11%
1.0	ORLY	0.15%	ON	0.11%
1.0	AZO	0.14%	META	0.11%
1.0	ETRN	0.14%	GS	0.11%
1.0	CDNS	0.14%	PHM	0.1%
1.0	TEVA	0.14%	HSBC	0.1%
1.0	FCX	0.14%	CSTM	0.1%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	5.12%	MSTR	3.17%
10.0	AVGO	3.9%	NVDA	2.51%
10.0	TSLA	2.88%	WDC	2.51%
10.0	LLY	2.86%	VST	2.32%
10.0	MU	2.74%	MU	2.23%
10.0	PWR	2.72%	AVGO	2.21%
10.0	VST	2.64%	PWR	1.93%
10.0	CCL	2.54%	TEVA	1.7%
10.0	AMD	2.51%	X	1.58%
10.0	AMAT	2.35%	TRGP	1.5%
10.0	GBTC	2.25%	AMD	1.49%
10.0	GE	2.07%	GE	1.47%
10.0	WDC	2.01%	LLY	1.47%
10.0	MSTR	1.85%	GME	1.45%
10.0	CAH	1.85%	CAH	1.42%
10.0	SLV	1.68%	GBTC	1.41%
10.0	X	1.67%	ETRN	1.41%
10.0	PHM	1.66%	SLV	1.38%
10.0	TEVA	1.65%	AMAT	1.34%
10.0	ETRN	1.52%	META	1.3%
10.0	AZO	1.44%	THC	1.21%
10.0	CDNS	1.44%	NFLX	1.21%
10.0	HLT	1.42%	IRM	1.1%
10.0	GS	1.39%	PHM	1.07%
10.0	THC	1.34%	GS	1.05%
10.0	QQQ	1.34%	ORCL	1.04%
10.0	TRGP	1.32%	GOOGL	1.04%
10.0	JPM	1.29%	INTC	1.04%
10.0	DHI	1.26%	TSLA	0.98%
10.0	MSFT	1.26%	HSBC	0.98%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	10.3%	MSTR	6.88%
21.0	TSLA	7.1%	NVDA	5.35%
21.0	VST	5.83%	WDC	5.21%
21.0	AMAT	5.83%	VST	5.0%
21.0	AVGO	5.73%	AVGO	4.46%
21.0	PWR	5.73%	MU	4.45%
21.0	CCL	5.5%	PWR	4.02%
21.0	MU	5.43%	TEVA	3.63%
21.0	AMD	5.41%	ETRN	3.5%
21.0	GBTC	5.38%	GE	3.24%
21.0	LLY	5.28%	X	3.17%
21.0	MSTR	4.75%	TRGP	3.15%
21.0	GE	4.38%	LLY	3.1%
21.0	CAH	4.25%	CAH	3.08%
21.0	WDC	4.05%	GBTC	3.04%
21.0	TEVA	3.88%	AMD	3.0%
21.0	PHM	3.81%	SLV	2.84%
21.0	X	3.55%	AMAT	2.81%
21.0	SLV	3.38%	META	2.8%
21.0	AZO	3.28%	NFLX	2.74%
21.0	ETRN	3.28%	THC	2.59%
21.0	CDNS	3.09%	PHM	2.25%
21.0	DHI	3.06%	GME	2.25%
21.0	TRGP	3.04%	IRM	2.25%
21.0	THC	2.98%	TSLA	2.25%
21.0	PCG	2.96%	GS	2.24%
21.0	CSTM	2.85%	GOOGL	2.16%
21.0	GS	2.79%	ORCL	2.15%
21.0	QQQ	2.78%	HSEC	2.06%
21.0	HLT	2.74%	GWV	2.05%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	NVDA	32.31%	MSTR	19.86%
63.0	MSTR	27.33%	NVDA	17.71%
63.0	CCL	19.23%	WDC	17.29%
63.0	MU	19.22%	VST	16.5%
63.0	AMAT	18.79%	MU	14.87%
63.0	VST	18.7%	AVGO	13.34%
63.0	GBTC	18.04%	PWR	11.32%
63.0	PWR	17.59%	GE	10.68%
63.0	LLY	16.18%	TEVA	10.63%
63.0	WDC	14.79%	ETRN	10.28%
63.0	AMD	14.19%	GBTC	10.23%
63.0	CAH	14.0%	META	9.83%
63.0	GE	13.46%	CAH	9.49%
63.0	PHM	13.12%	LLY	9.46%
63.0	AVGO	12.57%	SLV	9.1%
63.0	TEVA	12.11%	NFLX	9.03%
63.0	TSLA	12.04%	TRGP	8.98%
63.0	TRGP	11.68%	AMAT	8.61%
63.0	THC	10.98%	THC	8.51%
63.0	SLV	10.56%	AMD	8.02%
63.0	DHI	10.2%	PHM	7.91%
63.0	GOOGL	9.54%	GS	6.92%
63.0	ETRN	9.32%	GOOGL	6.87%
63.0	B	9.18%	CCL	6.68%
63.0	NFLX	8.98%	ORCL	6.65%
63.0	QQQ	8.66%	HSBC	6.63%
63.0	JPM	8.52%	GLD	6.26%
63.0	GS	8.5%	GILD	6.11%
63.0	PCG	8.48%	B	6.1%
63.0	CDNS	8.13%	TSLA	5.94%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	NVDA	83.48%	MSTR	51.15%
126.0	MU	55.81%	NVDA	44.77%
126.0	GBTC	53.11%	WDC	40.81%
126.0	MSTR	49.31%	VST	36.89%
126.0	VST	44.64%	MU	35.79%
126.0	AMAT	44.18%	AVGO	30.34%
126.0	GE	38.36%	GBTC	30.11%
126.0	AMD	38.29%	GE	25.9%
126.0	PWR	36.33%	META	23.74%
126.0	WDC	36.18%	NFLX	23.04%
126.0	PHM	34.91%	TEVA	22.66%
126.0	CCL	33.49%	PWR	22.17%
126.0	NFLX	33.12%	THC	20.82%
126.0	THC	32.19%	CAH	20.24%
126.0	LLY	30.42%	SLV	20.14%
126.0	AVGO	29.54%	LLY	19.99%
126.0	CAH	27.77%	AMD	19.15%
126.0	ORCL	26.99%	AMAT	18.75%
126.0	DHI	25.66%	ETRN	18.49%
126.0	SLV	24.66%	TRGP	18.09%
126.0	TSLA	24.51%	PHM	17.62%
126.0	TEVA	24.48%	ORCL	16.64%
126.0	B	24.16%	GOOGL	16.28%
126.0	QQQ	23.25%	GS	15.44%
126.0	AMZN	23.25%	B	15.24%
126.0	META	22.62%	CCL	14.38%
126.0	MS	22.46%	HSBC	13.79%
126.0	TRGP	22.0%	GLD	13.46%
126.0	JPM	21.81%	JPM	13.18%
126.0	GOOGL	21.55%	HCA	12.84%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	NVDA	236.54%	MSTR	175.05%
252.0	GBTC	190.83%	NVDA	121.14%
252.0	MSTR	172.84%	VST	109.27%
252.0	MU	133.86%	GBTC	95.86%
252.0	NFLX	113.49%	WDC	79.54%
252.0	VST	113.05%	AVGO	76.63%
252.0	GE	111.68%	MU	68.25%
252.0	AVGO	97.0%	META	65.44%
252.0	PHM	94.06%	GE	61.82%
252.0	PWR	91.83%	NFLX	59.69%
252.0	WDC	87.66%	THC	48.84%
252.0	CCL	87.02%	PWR	47.27%
252.0	AMD	86.71%	PHM	43.32%
252.0	LLY	86.16%	LLY	42.63%
252.0	THC	83.04%	TEVA	41.15%
252.0	AMAT	82.15%	TRGP	40.22%
252.0	META	77.76%	CAH	39.5%
252.0	AMZN	65.7%	AMD	38.44%
252.0	QQQ	64.08%	CCL	37.88%
252.0	JPM	63.84%	ORCL	37.55%
252.0	CDNS	60.81%	SLV	37.12%
252.0	MS	60.8%	ETRN	35.78%
252.0	GOOGL	60.15%	AMAT	35.49%
252.0	ORCL	59.92%	GS	32.85%
252.0	DHI	59.04%	GOOGL	32.47%
252.0	CAH	58.61%	JPM	31.38%
252.0	ELAN	57.9%	TDG	30.62%
252.0	TRGP	56.4%	HSBC	30.31%
252.0	ISRG	55.68%	ISRG	29.18%
252.0	COST	54.69%	GLD	29.07%



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 2026-04-29 through 2026-04-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	AVGO	4.25%	INTC	3.61%
1.0	AMD	4.1%	AMD	2.72%
1.0	MU	3.38%	ON	2.51%
1.0	PWR	2.95%	CNC	2.38%
1.0	WDC	2.78%	AMC	2.14%
1.0	INTC	2.76%	WDC	1.94%
1.0	ON	2.66%	TXN	1.91%
1.0	CNC	2.36%	QCOM	1.82%
1.0	LUMN	2.12%	MU	1.78%
1.0	AMC	2.05%	MSTR	1.6%
1.0	QCOM	1.95%	UNH	1.55%
1.0	NVDA	1.79%	AVGO	1.48%
1.0	GOOGL	1.72%	GNRC	1.41%
1.0	QQQ	1.61%	PWR	1.38%
1.0	KALU	1.51%	KALU	1.36%
1.0	NAVI	1.49%	GOOGL	1.33%
1.0	GNRC	1.44%	LUMN	1.18%
1.0	TXN	1.41%	AMZN	1.17%
1.0	MSTR	1.41%	IRM	1.15%
1.0	MSFT	1.35%	CLF	1.12%
1.0	SPY	1.33%	CDNS	0.87%
1.0	SBUX	1.32%	CSCO	0.82%
1.0	VNO	1.31%	VNO	0.8%
1.0	AMZN	1.29%	SBUX	0.79%
1.0	CSCO	1.25%	TEVA	0.79%
1.0	PRGO	1.25%	NWL	0.77%
1.0	TEVA	1.14%	CVS	0.72%
1.0	IRM	1.06%	CSTM	0.71%
1.0	LW	1.02%	MS	0.7%
1.0	DHI	1.01%	BXP	0.69%



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 2026-04-29 through 2026-04-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	AVGO	47.28%	ON	34.5%
10.0	AMD	46.45%	AMD	30.54%
10.0	MU	40.9%	INTC	30.11%
10.0	ON	33.46%	MSTR	27.53%
10.0	NVDA	25.04%	AMC	25.36%
10.0	LUMN	22.99%	TXN	21.36%
10.0	QQQ	21.3%	LUMN	18.49%
10.0	MSTR	20.36%	KALU	18.29%
10.0	MSFT	19.54%	WDC	18.19%
10.0	CNC	18.9%	MU	17.88%
10.0	INTC	18.39%	CNC	17.81%
10.0	WDC	18.27%	AVGO	16.24%
10.0	PWR	16.07%	ORCL	15.89%
10.0	AMC	15.68%	UNH	15.71%
10.0	CDNS	15.46%	CDNS	13.4%
10.0	GOOGL	14.61%	QCOM	12.53%
10.0	NAVI	13.13%	AMZN	12.01%
10.0	TXN	12.99%	VFC	11.44%
10.0	DHI	12.96%	MSFT	10.42%
10.0	NWL	11.99%	NWL	10.28%
10.0	CSCO	11.88%	GNRC	10.22%
10.0	ORCL	11.83%	NVDA	10.13%
10.0	SPY	11.73%	DHI	9.76%
10.0	KALU	11.49%	GOOGL	9.48%
10.0	VNO	11.03%	VNO	9.3%
10.0	QCOM	10.81%	BXP	9.11%
10.0	PHM	10.39%	CLF	9.01%
10.0	PRGO	10.03%	EXPE	8.75%
10.0	GNRC	9.95%	PWR	8.7%
10.0	VFC	8.61%	META	8.25%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	OXY	1.35%	INTC	1.21%
1.0	AVGO	1.28%	WDC	0.89%
1.0	PWR	1.23%	ON	0.87%
1.0	MU	1.04%	GNRC	0.76%
1.0	AMD	0.98%	PWR	0.73%
1.0	INTC	0.86%	AMD	0.7%
1.0	ON	0.8%	IRM	0.59%
1.0	WDC	0.77%	OXY	0.57%
1.0	GNRC	0.73%	CZR	0.57%
1.0	IRM	0.69%	CSTM	0.52%
1.0	AMAT	0.63%	KALU	0.48%
1.0	VST	0.6%	TRGP	0.45%
1.0	CZR	0.52%	UNH	0.45%
1.0	CSTM	0.51%	CNC	0.45%
1.0	CNC	0.47%	MSTR	0.44%
1.0	BHP	0.47%	AVGO	0.42%
1.0	QCOM	0.43%	TXN	0.41%
1.0	KALU	0.43%	MU	0.37%
1.0	TRGP	0.39%	AAP	0.37%
1.0	AAP	0.39%	AMAT	0.36%
1.0	NVDA	0.35%	JAZZ	0.34%
1.0	SBUX	0.35%	QCOM	0.31%
1.0	JAZZ	0.35%	CDNS	0.26%
1.0	COST	0.32%	SBUX	0.25%
1.0	AMZN	0.32%	BHP	0.25%
1.0	TXN	0.32%	NFLX	0.24%
1.0	CSCO	0.31%	CSCO	0.24%
1.0	AA	0.29%	AMC	0.22%
1.0	BMV	0.28%	AA	0.22%
1.0	CDNS	0.26%	GOOGL	0.21%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	AVGO	14.99%	INTC	10.7%
10.0	AMD	12.85%	AMD	8.51%
10.0	INTC	9.09%	ON	8.22%
10.0	MU	8.72%	WDC	8.04%
10.0	ON	7.42%	CZR	6.81%
10.0	OXY	7.38%	AMC	6.59%
10.0	CZR	6.57%	MSTR	6.11%
10.0	PWR	6.48%	CSTM	5.14%
10.0	WDC	6.31%	AVGO	4.98%
10.0	NVDA	5.87%	MU	4.95%
10.0	AMAT	5.2%	UNH	4.85%
10.0	IRM	5.05%	OXY	4.8%
10.0	QQQ	4.91%	PWR	4.71%
10.0	CSTM	4.81%	AMAT	4.36%
10.0	GNRC	4.7%	IRM	4.21%
10.0	CNC	4.38%	KALU	4.18%
10.0	BHP	4.0%	GNRC	4.08%
10.0	MSTR	3.84%	JAZZ	3.92%
10.0	KALU	3.46%	AMZN	3.77%
10.0	CDNS	3.13%	NFLX	3.65%
10.0	MSFT	2.96%	TXN	3.34%
10.0	AMZN	2.88%	LUMN	3.3%
10.0	JAZZ	2.83%	ORCL	2.99%
10.0	GOOGL	2.62%	CDNS	2.79%
10.0	CSCO	2.54%	TRGP	2.64%
10.0	SPY	2.47%	CNC	2.6%
10.0	LUMN	2.39%	NVDA	2.41%
10.0	GBTC	2.22%	AA	2.28%
10.0	UNH	2.19%	BHP	2.27%
10.0	AA	2.05%	EXPE	2.26%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	AMD	29.02%	INTC	24.35%
21.0	AVGO	27.04%	AMD	17.1%
21.0	INTC	22.73%	WDC	15.96%
21.0	OXY	15.53%	CZR	14.76%
21.0	CZR	14.8%	AMC	14.65%
21.0	WDC	14.3%	ON	11.95%
21.0	ON	13.06%	OXY	10.66%
21.0	CSTM	12.92%	CSTM	10.62%
21.0	MU	9.1%	NFLX	9.84%
21.0	NVDA	8.07%	AVGO	8.94%
21.0	NFLX	7.95%	UNH	7.97%
21.0	KALU	7.55%	KALU	7.94%
21.0	LUMN	7.49%	AMZN	7.8%
21.0	AMZN	7.47%	MSTR	7.61%
21.0	PWR	7.34%	PWR	7.18%
21.0	AMAT	7.02%	JAZZ	7.13%
21.0	AA	6.89%	AA	6.9%
21.0	MSTR	6.58%	EXPE	6.32%
21.0	CSCO	6.5%	MU	6.14%
21.0	QQQ	6.22%	AMAT	5.86%
21.0	IRM	6.07%	IRM	5.16%
21.0	JAZZ	5.76%	LUMN	5.03%
21.0	CNC	5.39%	TRGP	4.7%
21.0	BHP	4.77%	TXN	4.41%
21.0	GOOGL	4.64%	GBTC	4.15%
21.0	GNRC	4.23%	ORCL	3.84%
21.0	HLT	4.18%	CSCO	3.22%
21.0	GBTC	4.06%	NVDA	3.1%
21.0	TRGP	3.89%	MS	3.05%
21.0	ORCL	3.65%	GOOGL	3.0%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	LUMN	1.35%	WDC	1.0%
1.0	X	1.08%	MU	0.83%
1.0	AMD	1.04%	X	0.81%
1.0	MU	1.01%	INTC	0.71%
1.0	WDC	0.89%	AMD	0.59%
1.0	AMAT	0.81%	LUMN	0.49%
1.0	INTC	0.71%	CSTM	0.47%
1.0	AVGO	0.71%	AA	0.44%
1.0	CSTM	0.6%	AMAT	0.43%
1.0	PWR	0.58%	ON	0.43%
1.0	AA	0.55%	KALU	0.41%
1.0	SLV	0.55%	SLV	0.4%
1.0	B	0.55%	ELAN	0.38%
1.0	TEVA	0.53%	GNRC	0.38%
1.0	LVS	0.48%	GOOGL	0.37%
1.0	GNRC	0.47%	TEVA	0.36%
1.0	KALU	0.46%	PWR	0.35%
1.0	ELAN	0.45%	NEM	0.35%
1.0	NVDA	0.45%	B	0.34%
1.0	BHP	0.44%	AAP	0.34%
1.0	AAP	0.43%	AVGO	0.34%
1.0	BIIB	0.42%	CMA	0.28%
1.0	OXY	0.4%	TXN	0.26%
1.0	CLF	0.4%	NVDA	0.26%
1.0	GOOGL	0.37%	JAZZ	0.25%
1.0	HSBC	0.37%	VFC	0.23%
1.0	RIO	0.36%	RIO	0.23%
1.0	FSUGY	0.36%	FCX	0.23%
1.0	NEM	0.35%	EXPE	0.22%
1.0	ON	0.34%	BHP	0.22%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	X	13.8%	X	11.83%
10.0	LUMN	10.4%	WDC	9.89%
10.0	MU	9.02%	MU	8.19%
10.0	AMD	8.25%	INTC	6.44%
10.0	AMAT	7.96%	AMD	5.46%
10.0	WDC	7.01%	CSTM	4.46%
10.0	INTC	6.15%	LUMN	4.3%
10.0	SLV	6.11%	AA	4.26%
10.0	AVGO	5.94%	AMAT	4.23%
10.0	NVDA	5.56%	SLV	4.1%
10.0	CSTM	4.62%	KALU	4.08%
10.0	AA	4.07%	ON	4.03%
10.0	BHP	3.88%	B	3.61%
10.0	B	3.81%	NEM	3.56%
10.0	TEVA	3.76%	GOOGL	3.45%
10.0	NEM	3.65%	AAP	3.37%
10.0	AAP	3.65%	GNRC	3.29%
10.0	PWR	3.6%	ELAN	3.22%
10.0	ELAN	3.58%	AVGO	3.16%
10.0	GNRC	3.41%	TEVA	2.98%
10.0	KALU	3.23%	CMA	2.95%
10.0	BIIB	3.22%	PWR	2.87%
10.0	GOOGL	3.05%	JAZZ	2.87%
10.0	ON	3.02%	FCX	2.53%
10.0	RIO	2.95%	NVDA	2.46%
10.0	GS	2.89%	RIO	2.2%
10.0	CLF	2.63%	EXPE	2.2%
10.0	LVS	2.59%	BHP	2.17%
10.0	HSBC	2.5%	VFC	2.15%
10.0	MRK	2.46%	GS	2.15%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	X	28.41%	X	27.75%
21.0	MU	19.15%	WDC	21.01%
21.0	AMAT	18.99%	MU	17.02%
21.0	AMD	18.4%	INTC	13.03%
21.0	WDC	16.3%	AMD	10.59%
21.0	LUMN	16.08%	AA	9.49%
21.0	CSTM	12.45%	CSTM	9.28%
21.0	INTC	12.4%	SLV	9.08%
21.0	SLV	11.96%	AMAT	8.98%
21.0	B	9.9%	LUMN	8.46%
21.0	AA	9.43%	B	8.35%
21.0	BHP	9.02%	KALU	8.02%
21.0	TEVA	8.73%	NEM	7.95%
21.0	NVDA	8.38%	ON	7.0%
21.0	BIIB	7.97%	GOOGL	6.94%
21.0	GNRC	7.95%	GNRC	6.4%
21.0	NEM	7.9%	ELAN	6.39%
21.0	AVGO	7.59%	TEVA	6.39%
21.0	ON	7.29%	CMA	6.32%
21.0	ELAN	7.08%	JAZZ	5.97%
21.0	GOOGL	6.8%	PWR	5.76%
21.0	CAH	6.53%	AAP	5.6%
21.0	PWR	6.52%	FCX	5.54%
21.0	RIO	6.42%	AVGO	5.52%
21.0	LVS	6.15%	RIO	4.73%
21.0	KALU	6.1%	BHP	4.51%
21.0	CLF	5.84%	EXPE	4.43%
21.0	JAZZ	5.32%	NVDA	4.32%
21.0	MRK	5.31%	GS	4.28%
21.0	PHM	5.3%	HSBC	4.21%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MU	68.66%	WDC	75.39%
63.0	WDC	66.93%	MU	60.23%
63.0	AMAT	61.32%	INTC	36.86%
63.0	LUMN	59.41%	SLV	33.73%
63.0	B	44.24%	AA	32.24%
63.0	SLV	41.33%	B	32.13%
63.0	CSTM	40.06%	AMAT	28.76%
63.0	AMD	36.28%	LUMN	28.2%
63.0	TEVA	36.06%	NEM	28.04%
63.0	BHP	34.06%	CSTM	27.68%
63.0	INTC	33.89%	TEVA	26.16%
63.0	NEM	32.04%	GOOGL	23.3%
63.0	AA	30.21%	AMD	23.07%
63.0	BIIB	29.27%	ELAN	22.43%
63.0	CAH	28.89%	KALU	21.9%
63.0	GOOGL	27.88%	CMA	19.64%
63.0	RIO	25.72%	JAZZ	19.19%
63.0	GNRC	24.51%	GNRC	19.07%
63.0	ELAN	24.03%	RIO	17.07%
63.0	TRGP	23.97%	FCX	16.48%
63.0	LLY	19.77%	PWR	16.12%
63.0	FSUGY	19.1%	VFC	15.24%
63.0	PWR	18.9%	BHP	14.84%
63.0	MRK	17.92%	MRK	14.41%
63.0	JAZZ	17.65%	GLD	13.81%
63.0	KALU	16.58%	GSK	13.66%
63.0	XOM	16.07%	BIIB	13.6%
63.0	CMA	15.76%	TRGP	13.26%
63.0	HSBC	15.73%	HSBC	13.25%
63.0	PHM	15.66%	XOM	12.88%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	MU	220.76%	WDC	214.91%
126.0	WDC	212.87%	MU	172.53%
126.0	AMAT	162.77%	SLV	87.59%
126.0	B	126.52%	INTC	86.99%
126.0	LUMN	119.11%	B	82.25%
126.0	SLV	118.88%	AA	81.06%
126.0	INTC	104.4%	AMAT	71.98%
126.0	TEVA	103.56%	TEVA	71.34%
126.0	AMD	87.52%	LUMN	70.87%
126.0	AA	84.13%	NEM	61.88%
126.0	BHP	73.64%	CSTM	60.23%
126.0	NEM	71.2%	GOOGL	58.2%
126.0	BIIB	70.17%	KALU	56.18%
126.0	CSTM	69.31%	AMD	51.86%
126.0	GOOGL	68.72%	ELAN	49.42%
126.0	CAH	67.97%	JAZZ	46.51%
126.0	LLY	67.84%	CMA	42.99%
126.0	RIO	60.75%	RIO	38.81%
126.0	KALU	56.34%	VFC	37.18%
126.0	ELAN	53.15%	CAH	35.4%
126.0	TRGP	52.98%	MRK	33.53%
126.0	FSUGY	49.11%	BIIB	33.16%
126.0	JAZZ	46.67%	EXPE	33.11%
126.0	MRK	46.14%	FCX	32.48%
126.0	LVS	41.18%	PWR	32.06%
126.0	AZN	40.08%	GLD	31.75%
126.0	PWR	39.14%	GSK	31.66%
126.0	CMA	35.75%	LLY	31.47%
126.0	GSK	33.61%	HSBC	28.38%
126.0	GLD	33.52%	BHP	28.25%



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 2026-04-29

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	-0.23%	AMC	-0.17%
1.0	UAA	-0.22%	IEP	-0.14%
1.0	CZR	-0.2%	NWL	-0.1%
1.0	FRCB	-0.17%	CHTR	-0.09%
1.0	GT	-0.15%	PRGO	-0.08%
1.0	CHTR	-0.13%	AAP	-0.07%
1.0	BXP	-0.11%	FIS	-0.07%
1.0	AMC	-0.11%	VFC	-0.05%
1.0	LNC	-0.11%	BHC	-0.05%
1.0	FIS	-0.09%	GT	-0.05%
1.0	PRGO	-0.09%	ADBE	-0.05%
1.0	TLT	-0.08%	UAA	-0.05%
1.0	BALL	-0.07%	CMCSA	-0.04%
1.0	ZTS	-0.06%	TLT	-0.04%
1.0	BIIB	-0.06%	BXP	-0.04%
1.0	ADBE	-0.05%	CZR	-0.04%
1.0	AAP	-0.05%	ZTS	-0.04%
1.0	CMCSA	-0.05%	NAVI	-0.03%
1.0	KHC	-0.05%	KHC	-0.03%
1.0	NAVI	-0.04%	BALL	-0.02%
1.0	GNRC	-0.04%	BBY	-0.02%
1.0	UNH	-0.04%	LNC	-0.02%
1.0	VFC	-0.04%	CTLT	-0.01%
1.0	CTLT	-0.03%	MOS	-0.01%
1.0	HD	-0.03%	FRA	-0.01%
1.0	INTU	-0.03%	LQD	-0.01%
1.0	SNY	-0.02%	EMB	-0.01%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SIVBQ	-4.46%	SBNY	-4.05%
10.0	IEP	-2.7%	SIVBQ	-3.9%
10.0	SBNY	-2.19%	FRCB	-2.19%
10.0	CZR	-1.96%	AMC	-1.6%
10.0	NWL	-1.49%	IEP	-1.34%
10.0	AMC	-1.36%	NWL	-1.01%
10.0	FRCB	-1.26%	PRGO	-0.78%
10.0	UAA	-0.87%	CHTR	-0.68%
10.0	FIS	-0.78%	AAP	-0.68%
10.0	BXP	-0.67%	FIS	-0.63%
10.0	ADBE	-0.63%	UAA	-0.55%
10.0	VFC	-0.59%	VFC	-0.54%
10.0	BALL	-0.55%	CZR	-0.54%
10.0	CHTR	-0.55%	GT	-0.51%
10.0	PRGO	-0.53%	NAVI	-0.44%
10.0	KHC	-0.53%	BXP	-0.44%
10.0	INTU	-0.46%	ADBE	-0.43%
10.0	TLT	-0.43%	TLT	-0.41%
10.0	AAP	-0.42%	BHC	-0.41%
10.0	NAVI	-0.4%	CMCSA	-0.4%
10.0	LNC	-0.39%	ZTS	-0.37%
10.0	ZTS	-0.34%	KHC	-0.35%
10.0	CMCSA	-0.27%	MOS	-0.26%
10.0	BIIB	-0.22%	CNC	-0.25%
10.0	UNH	-0.22%	LNC	-0.25%
10.0	GNRC	-0.21%	CYH	-0.24%
10.0	VZ	-0.2%	BBY	-0.23%
10.0	FRA	-0.2%	BALL	-0.21%
10.0	MOS	-0.18%	FRA	-0.17%
10.0	CNC	-0.16%	LQD	-0.12%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SIVBQ	-9.97%	SBNY	-11.16%
21.0	IEP	-6.19%	SIVBQ	-9.37%
21.0	SBNY	-6.13%	FRCB	-6.02%
21.0	CZR	-4.77%	AMC	-4.01%
21.0	FRCB	-3.78%	IEP	-2.95%
21.0	NWL	-3.12%	NWL	-2.36%
21.0	AMC	-2.65%	PRGO	-1.71%
21.0	ADBE	-1.62%	AAP	-1.41%
21.0	VFC	-1.61%	CHTR	-1.36%
21.0	PRGO	-1.49%	VFC	-1.26%
21.0	UAA	-1.39%	CZR	-1.22%
21.0	INTU	-1.34%	FIS	-1.2%
21.0	KHC	-1.28%	BHC	-1.16%
21.0	BXP	-1.26%	BXP	-1.06%
21.0	CHTR	-1.14%	UAA	-1.04%
21.0	FIS	-1.09%	NAVI	-1.03%
21.0	NAVI	-1.06%	GT	-0.98%
21.0	BALL	-1.04%	TLT	-0.85%
21.0	AAP	-1.0%	CMCSA	-0.82%
21.0	TLT	-0.99%	ADBE	-0.8%
21.0	CLF	-0.96%	KHC	-0.8%
21.0	BHC	-0.83%	ZTS	-0.78%
21.0	VZ	-0.75%	CNC	-0.69%
21.0	GNRC	-0.63%	LNC	-0.65%
21.0	CYH	-0.62%	MOS	-0.53%
21.0	CNC	-0.57%	BBY	-0.47%
21.0	BBY	-0.55%	BALL	-0.42%
21.0	ZTS	-0.53%	CYH	-0.36%
21.0	CMCSA	-0.47%	FRA	-0.34%
21.0	FRA	-0.44%	UNH	-0.24%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	SIVBQ	-36.58%	SBNY	-37.59%
63.0	SBNY	-24.57%	SIVBQ	-33.73%
63.0	IEP	-20.15%	FRCB	-24.04%
63.0	FRCB	-18.2%	AMC	-16.29%
63.0	NWL	-12.89%	IEP	-9.93%
63.0	AMC	-8.41%	NWL	-7.65%
63.0	CZR	-8.13%	PRGO	-5.85%
63.0	VFC	-7.2%	CZR	-5.14%
63.0	PRGO	-6.93%	AAP	-4.83%
63.0	AAP	-5.12%	CHTR	-3.97%
63.0	GNRC	-4.81%	BHC	-3.86%
63.0	UAA	-4.51%	VFC	-3.85%
63.0	ADBE	-4.21%	MOS	-3.47%
63.0	CHTR	-3.9%	BXP	-3.32%
63.0	KHC	-3.78%	FIS	-3.31%
63.0	CLF	-3.71%	NAVI	-3.28%
63.0	BHC	-3.4%	KHC	-2.85%
63.0	BALL	-3.37%	CNC	-2.81%
63.0	NAVI	-2.97%	UAA	-2.62%
63.0	FIS	-2.97%	CLF	-2.52%
63.0	BBY	-2.78%	TLT	-2.29%
63.0	TLT	-2.54%	ZTS	-2.29%
63.0	BXP	-2.33%	CMCSA	-2.18%
63.0	ZTS	-2.22%	GT	-2.17%
63.0	CYH	-2.0%	ADBE	-2.13%
63.0	CVS	-1.94%	UNH	-2.09%
63.0	MOS	-1.8%	LNC	-1.93%
63.0	UNH	-1.77%	BBY	-1.58%
63.0	CMCSA	-1.77%	BALL	-1.08%
63.0	VZ	-1.63%	CVS	-1.0%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	SIVBQ	-79.5%	SIVBQ	-65.15%
126.0	FRCB	-59.03%	SBNY	-64.8%
126.0	SBNY	-45.8%	FRCB	-51.17%
126.0	IEP	-40.94%	AMC	-29.57%
126.0	NWL	-37.92%	IEP	-19.48%
126.0	VFC	-19.13%	NWL	-17.87%
126.0	AMC	-17.91%	AAP	-11.54%
126.0	PRGO	-15.43%	PRGO	-11.38%
126.0	AAP	-12.7%	CZR	-9.58%
126.0	CZR	-11.56%	CHTR	-8.03%
126.0	GNRC	-11.2%	MOS	-7.97%
126.0	CHTR	-9.08%	VFC	-7.15%
126.0	MOS	-8.77%	CNC	-6.74%
126.0	UAA	-8.6%	UAA	-6.72%
126.0	FIS	-8.2%	KHC	-5.94%
126.0	GT	-7.93%	CTLT	-5.69%
126.0	KHC	-7.82%	FIS	-5.19%
126.0	CLF	-7.49%	BHC	-5.11%
126.0	CTLT	-6.66%	BXP	-5.06%
126.0	BALL	-6.64%	NAVI	-4.81%
126.0	BHC	-6.62%	GT	-4.62%
126.0	UNH	-5.58%	CMCSA	-4.41%
126.0	TLT	-5.51%	ZTS	-4.19%
126.0	CVS	-5.4%	UNH	-4.18%
126.0	ADBE	-5.26%	TLT	-4.12%
126.0	CNC	-4.69%	CLF	-3.36%
126.0	CMCSA	-4.59%	BALL	-2.61%
126.0	BBY	-4.56%	BMY	-2.19%
126.0	VZ	-4.38%	ADBE	-2.02%
126.0	NAVI	-4.16%	LNC	-1.86%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	FRCB	-207.49%	SBNY	-95.75%
252.0	SIVBQ	-176.51%	SIVBQ	-95.29%
252.0	SBNY	-109.04%	FRCB	-91.61%
252.0	IEP	-84.94%	AMC	-54.76%
252.0	NWL	-76.56%	IEP	-40.49%
252.0	AMC	-47.66%	NWL	-30.95%
252.0	AAP	-34.9%	AAP	-25.02%
252.0	VFC	-31.04%	VFC	-20.16%
252.0	CZR	-30.59%	PRGO	-18.39%
252.0	CLF	-28.33%	CNC	-18.27%
252.0	UAA	-24.94%	CZR	-17.6%
252.0	PRGO	-24.75%	UAA	-15.02%
252.0	UNH	-24.43%	MOS	-14.1%
252.0	CNC	-21.75%	CLF	-12.2%
252.0	MOS	-21.47%	KHC	-11.63%
252.0	GT	-20.24%	CHTR	-11.27%
252.0	CVS	-17.51%	UNH	-10.96%
252.0	BHC	-17.31%	BMY	-9.17%
252.0	KHC	-15.62%	BHC	-8.98%
252.0	FIS	-15.18%	GT	-8.09%
252.0	GNRC	-14.02%	NAVI	-7.7%
252.0	CHTR	-12.7%	TLT	-7.39%
252.0	TLT	-11.42%	BIIB	-6.89%
252.0	CYH	-11.4%	OXY	-6.81%
252.0	BMY	-11.27%	CTLT	-6.24%
252.0	CTLT	-10.5%	CVS	-5.79%
252.0	BALL	-10.22%	CYH	-5.49%
252.0	AA	-8.63%	BXP	-5.34%
252.0	OXY	-6.74%	CMCSA	-5.24%
252.0	NAVI	-6.64%	LW	-4.94%



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 2026-04-29 through 2026-04-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	CHTR	-1.88%	CHTR	-1.1%
1.0	CAH	-1.38%	MOS	-0.64%
1.0	MOS	-1.36%	AA	-0.57%
1.0	MRK	-0.66%	MRK	-0.49%
1.0	AZN	-0.56%	CAH	-0.46%
1.0	THC	-0.55%	HCA	-0.41%
1.0	B	-0.47%	INTU	-0.4%
1.0	AA	-0.44%	T	-0.38%
1.0	GILD	-0.42%	GILD	-0.34%
1.0	PCG	-0.41%	AZN	-0.34%
1.0	BBY	-0.38%	THC	-0.33%
1.0	GSK	-0.35%	B	-0.33%
1.0	FCX	-0.34%	GSK	-0.32%
1.0	SLV	-0.31%	PCG	-0.32%
1.0	ZTS	-0.27%	HON	-0.3%
1.0	HON	-0.25%	BBY	-0.28%
1.0	HCA	-0.25%	NVS	-0.23%
1.0	ELAN	-0.25%	FCX	-0.21%
1.0	NFLX	-0.21%	TMUS	-0.19%
1.0	T	-0.21%	XOM	-0.19%
1.0	NVS	-0.16%	GLD	-0.16%
1.0	SNY	-0.16%	ELAN	-0.14%
1.0	VZ	-0.14%	CYH	-0.13%
1.0	XOM	-0.14%	VZ	-0.12%
1.0	TSLA	-0.12%	SNY	-0.12%
1.0	GLD	-0.1%	CMCSA	-0.12%
1.0	TMUS	-0.1%	OXY	-0.1%
1.0	NEM	-0.1%	AMGN	-0.09%
1.0	FIS	-0.1%	ZTS	-0.09%
1.0	LVS	-0.09%	SLV	-0.08%



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 2026-04-29 through 2026-04-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	PCG	-12.16%	AA	-8.23%
10.0	CAH	-10.49%	NFLX	-6.98%
10.0	MOS	-10.3%	HCA	-6.42%
10.0	AA	-7.08%	MRK	-5.94%
10.0	THC	-6.84%	CHTR	-5.85%
10.0	HCA	-6.67%	PCG	-5.81%
10.0	CHTR	-6.58%	MOS	-5.68%
10.0	MRK	-6.5%	CYH	-5.38%
10.0	NFLX	-5.91%	GILD	-5.22%
10.0	LLY	-5.4%	HON	-5.05%
10.0	AZN	-4.88%	AZN	-4.66%
10.0	GILD	-4.52%	CAH	-4.24%
10.0	T	-4.01%	THC	-4.11%
10.0	NVS	-3.8%	GE	-3.96%
10.0	B	-3.55%	GSK	-3.85%
10.0	XOM	-3.37%	B	-3.85%
10.0	ELAN	-3.37%	NVS	-3.84%
10.0	KHC	-3.13%	XOM	-3.61%
10.0	CYH	-3.08%	LLY	-3.42%
10.0	OXY	-2.78%	OXY	-3.14%
10.0	HON	-2.64%	T	-3.07%
10.0	ABBV	-2.45%	ABBV	-2.87%
10.0	NEM	-2.4%	ELAN	-2.77%
10.0	WFC	-2.26%	NEM	-2.58%
10.0	GSK	-2.25%	KHC	-2.22%
10.0	GE	-2.02%	TDG	-2.0%
10.0	VZ	-1.63%	WFC	-1.91%
10.0	ZTS	-1.6%	TMUS	-1.87%
10.0	FCX	-1.36%	BBY	-1.79%
10.0	BBY	-1.27%	FCX	-1.4%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	GT	-1.04%	CLF	-0.4%
1.0	UAA	-0.69%	GT	-0.4%
1.0	CHTR	-0.61%	TDG	-0.32%
1.0	CCL	-0.52%	CHTR	-0.32%
1.0	TDG	-0.49%	INTU	-0.31%
1.0	CAH	-0.44%	CPRT	-0.28%
1.0	CPRT	-0.44%	LEN	-0.28%
1.0	ADBE	-0.43%	FIS	-0.28%
1.0	LNC	-0.41%	CCL	-0.26%
1.0	LEN	-0.38%	PRGO	-0.26%
1.0	PRGO	-0.37%	ADBE	-0.25%
1.0	ELAN	-0.37%	B	-0.23%
1.0	B	-0.34%	HD	-0.21%
1.0	ZTS	-0.34%	META	-0.2%
1.0	FIS	-0.34%	MOS	-0.2%
1.0	NWL	-0.33%	HCA	-0.2%
1.0	VNO	-0.32%	CAH	-0.19%
1.0	ORCL	-0.32%	CMG	-0.18%
1.0	LLY	-0.3%	WFC	-0.17%
1.0	CMG	-0.28%	LNC	-0.15%
1.0	MOS	-0.28%	LLY	-0.14%
1.0	WFC	-0.27%	TSLA	-0.13%
1.0	META	-0.27%	ELAN	-0.13%
1.0	TSLA	-0.27%	CYH	-0.13%
1.0	CLF	-0.25%	GILD	-0.13%
1.0	GBTC	-0.22%	ZTS	-0.12%
1.0	NAVI	-0.21%	CMCSA	-0.12%
1.0	GILD	-0.2%	ISRG	-0.12%
1.0	HD	-0.2%	BBY	-0.12%
1.0	GSK	-0.19%	NAVI	-0.11%



P90D: 10d

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

Period examined: All model dates from 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	GT	-11.3%	GT	-5.51%
10.0	MOS	-6.4%	CLF	-3.98%
10.0	CPRT	-4.58%	LEN	-3.93%
10.0	LLY	-3.95%	MOS	-3.48%
10.0	CCL	-3.44%	CPRT	-2.89%
10.0	LEN	-3.08%	CCL	-2.89%
10.0	TSLA	-3.0%	PRGO	-2.79%
10.0	B	-2.92%	LLY	-2.64%
10.0	PHM	-2.88%	HD	-2.43%
10.0	CAH	-2.74%	GILD	-2.29%
10.0	AMC	-2.63%	B	-2.09%
10.0	TDG	-2.61%	WFC	-2.05%
10.0	HCA	-2.61%	CHTR	-2.01%
10.0	META	-2.4%	HCA	-1.98%
10.0	KHC	-2.4%	CMG	-1.82%
10.0	PCG	-2.39%	ABBV	-1.77%
10.0	FITB	-2.39%	CYH	-1.74%
10.0	CMG	-2.34%	KHC	-1.71%
10.0	HD	-2.33%	ELAN	-1.7%
10.0	CHTR	-2.11%	TDG	-1.67%
10.0	BAC	-2.02%	LW	-1.62%
10.0	LNC	-2.02%	ADBE	-1.6%
10.0	UAA	-1.98%	CMCSA	-1.57%
10.0	ELAN	-1.95%	HON	-1.5%
10.0	WFC	-1.9%	TSLA	-1.45%
10.0	GILD	-1.88%	NAVI	-1.43%
10.0	NAVI	-1.84%	CAH	-1.41%
10.0	ADBE	-1.72%	BBY	-1.39%
10.0	BUD	-1.71%	ZTS	-1.29%
10.0	AZO	-1.59%	LNC	-1.29%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	GT	-18.16%	GT	-11.58%
21.0	CPRT	-13.58%	LEN	-11.35%
21.0	MOS	-13.13%	CLF	-8.55%
21.0	LEN	-12.39%	PRGO	-7.83%
21.0	B	-12.14%	MOS	-7.29%
21.0	PHM	-8.6%	UAA	-6.85%
21.0	CCL	-8.56%	CCL	-6.56%
21.0	LLY	-8.54%	CPRT	-6.52%
21.0	UAA	-8.44%	THC	-6.24%
21.0	ADBE	-6.69%	B	-6.23%
21.0	KHC	-5.76%	HD	-6.17%
21.0	AZO	-5.75%	LLY	-5.86%
21.0	HCA	-5.62%	NWL	-5.55%
21.0	HD	-5.45%	CYH	-5.53%
21.0	FITB	-5.43%	LW	-5.44%
21.0	CMG	-5.36%	TSLA	-4.98%
21.0	MNST	-5.33%	PHM	-4.79%
21.0	BHC	-5.3%	HCA	-4.71%
21.0	TSLA	-5.21%	CMCSA	-4.67%
21.0	ELAN	-5.21%	GILD	-4.67%
21.0	NWL	-5.18%	ELAN	-4.66%
21.0	LW	-5.06%	CMG	-4.62%
21.0	BUD	-4.66%	GE	-4.61%
21.0	USB	-4.54%	ABBV	-4.59%
21.0	GILD	-4.23%	BXP	-4.27%
21.0	ISRG	-4.15%	ADBE	-4.2%
21.0	ABBV	-4.14%	TDG	-4.12%
21.0	CAH	-4.12%	MNST	-4.11%
21.0	NAVI	-4.01%	KHC	-3.97%
21.0	PCG	-3.99%	TEVA	-3.81%



P365D: 1d

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

Period examined: All model dates from 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	MSTR	-0.59%	CHTR	-0.29%
1.0	CHTR	-0.41%	PRGO	-0.26%
1.0	CPRT	-0.36%	MSTR	-0.24%
1.0	GT	-0.35%	CPRT	-0.23%
1.0	PRGO	-0.31%	FIS	-0.19%
1.0	FIS	-0.29%	INTU	-0.16%
1.0	UNH	-0.25%	AMC	-0.15%
1.0	ADBE	-0.21%	ADBE	-0.15%
1.0	CMG	-0.19%	CMG	-0.13%
1.0	UAA	-0.17%	GT	-0.12%
1.0	IEP	-0.16%	ZTS	-0.11%
1.0	VNO	-0.15%	NAVI	-0.09%
1.0	GBTC	-0.15%	TMUS	-0.08%
1.0	AMC	-0.14%	KHC	-0.08%
1.0	INTU	-0.14%	CMCSA	-0.07%
1.0	PCG	-0.13%	MOS	-0.07%
1.0	CMCSA	-0.13%	TDG	-0.07%
1.0	ZTS	-0.12%	GBTC	-0.06%
1.0	MOS	-0.12%	NFLX	-0.05%
1.0	CNC	-0.12%	VNO	-0.05%
1.0	NFLX	-0.11%	SNY	-0.05%
1.0	TMUS	-0.1%	LEN	-0.05%
1.0	CZR	-0.1%	FRA	-0.04%
1.0	SNY	-0.09%	ISRG	-0.03%
1.0	NAVI	-0.09%	LW	-0.03%
1.0	VICI	-0.09%	NWL	-0.03%
1.0	KHC	-0.08%	VICI	-0.03%
1.0	LEN	-0.08%	HD	-0.02%
1.0	FRA	-0.07%	BXP	-0.02%
1.0	GME	-0.07%	BBY	-0.02%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	MSTR	-4.1%	MSTR	-2.84%
10.0	CPRT	-3.11%	PRGO	-2.6%
10.0	GT	-2.38%	CPRT	-2.35%
10.0	AMC	-2.25%	CHTR	-2.26%
10.0	PRGO	-2.13%	FIS	-1.93%
10.0	FIS	-1.88%	ADBE	-1.7%
10.0	ADBE	-1.87%	INTU	-1.59%
10.0	CHTR	-1.83%	GT	-1.43%
10.0	VNO	-1.79%	NAVI	-1.28%
10.0	KHC	-1.29%	CMG	-1.24%
10.0	CMG	-1.27%	ZTS	-1.07%
10.0	NAVI	-1.23%	MOS	-0.93%
10.0	NFLX	-1.18%	VNO	-0.92%
10.0	MOS	-1.17%	AMC	-0.91%
10.0	GBTC	-1.13%	KHC	-0.91%
10.0	IEP	-1.1%	TMUS	-0.88%
10.0	TMUS	-1.01%	GBTC	-0.8%
10.0	VICI	-0.86%	CMCSA	-0.66%
10.0	ISRG	-0.72%	TDG	-0.57%
10.0	TDG	-0.72%	NFLX	-0.56%
10.0	INTU	-0.7%	FRA	-0.51%
10.0	UNH	-0.64%	ISRG	-0.42%
10.0	CNC	-0.63%	LEN	-0.39%
10.0	FRA	-0.61%	CNC	-0.38%
10.0	ZTS	-0.55%	SNY	-0.36%
10.0	SNY	-0.49%	VICI	-0.36%
10.0	CZR	-0.46%	BBY	-0.34%
10.0	CMCSA	-0.42%	BXP	-0.29%
10.0	ORCL	-0.35%	NWL	-0.28%
10.0	BBY	-0.27%	IEP	-0.25%



P365D: 21d

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

Period examined: All model dates from 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MSTR	-11.1%	MSTR	-7.45%
21.0	CPRT	-7.76%	PRGO	-6.07%
21.0	PRGO	-5.65%	CPRT	-4.94%
21.0	ADBE	-5.33%	CHTR	-4.76%
21.0	VNO	-4.51%	FIS	-4.34%
21.0	AMC	-4.16%	ADBE	-4.21%
21.0	GT	-3.97%	AMC	-4.08%
21.0	FIS	-3.74%	INTU	-3.9%
21.0	GBTC	-3.68%	NAVI	-3.27%
21.0	INTU	-3.68%	GT	-3.15%
21.0	CHTR	-3.52%	CMG	-2.76%
21.0	CMG	-3.25%	ZTS	-2.56%
21.0	NAVI	-2.67%	VNO	-2.48%
21.0	NFLX	-2.49%	GBTC	-2.48%
21.0	IEP	-2.31%	MOS	-2.28%
21.0	KHC	-2.3%	TMUS	-1.77%
21.0	ISRG	-2.29%	KHC	-1.74%
21.0	MOS	-2.13%	CMCSA	-1.61%
21.0	TMUS	-1.8%	NWL	-1.47%
21.0	VICI	-1.73%	TDG	-1.29%
21.0	CMCSA	-1.6%	BXP	-1.22%
21.0	FRA	-1.43%	CNC	-1.21%
21.0	MSFT	-1.39%	NFLX	-1.2%
21.0	ZTS	-1.27%	FRA	-1.14%
21.0	CNC	-1.21%	LEN	-1.13%
21.0	CZR	-1.09%	ISRG	-1.1%
21.0	BXP	-1.01%	VICI	-0.92%
21.0	TDG	-0.94%	LW	-0.91%
21.0	GME	-0.91%	GME	-0.89%
21.0	SNY	-0.85%	BBY	-0.79%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	-54.26%	MSTR	-27.78%
63.0	PRGO	-26.0%	AMC	-23.23%
63.0	NFLX	-19.06%	PRGO	-23.05%
63.0	CPRT	-18.97%	INTU	-15.91%
63.0	INTU	-17.6%	CHTR	-15.39%
63.0	FIS	-16.38%	FIS	-14.82%
63.0	ADBE	-16.21%	NAVI	-13.05%
63.0	GT	-16.14%	ADBE	-12.82%
63.0	GBTC	-16.09%	GBTC	-12.34%
63.0	ORCL	-15.11%	CPRT	-11.75%
63.0	VNO	-14.54%	CMG	-11.08%
63.0	CMG	-13.62%	VNO	-9.81%
63.0	MOS	-13.03%	GT	-8.97%
63.0	NAVI	-10.92%	ZTS	-8.31%
63.0	CHTR	-9.73%	NFLX	-8.3%
63.0	MSFT	-9.71%	MOS	-7.96%
63.0	AMC	-9.18%	NWL	-7.04%
63.0	NWL	-6.75%	BXP	-5.59%
63.0	KHC	-6.57%	TDG	-5.36%
63.0	VICI	-5.86%	MSFT	-5.2%
63.0	CMCSA	-5.78%	KHC	-5.05%
63.0	ZTS	-5.58%	FRA	-4.66%
63.0	TMUS	-5.31%	CMCSA	-4.53%
63.0	FRA	-5.27%	LW	-4.24%
63.0	ISRG	-4.69%	TMUS	-4.17%
63.0	CZR	-4.69%	VICI	-3.74%
63.0	IEP	-4.37%	CZR	-3.53%
63.0	BXP	-4.27%	IEP	-3.43%
63.0	TDG	-4.25%	QCOM	-2.57%
63.0	LW	-2.66%	ORCL	-2.18%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	MSTR	-103.59%	MSTR	-56.02%
126.0	PRGO	-59.13%	PRGO	-46.96%
126.0	MOS	-45.2%	AMC	-45.4%
126.0	INTU	-43.91%	CHTR	-31.66%
126.0	NFLX	-41.5%	NWL	-27.7%
126.0	CPRT	-38.96%	GBTC	-26.64%
126.0	CMG	-37.4%	INTU	-26.2%
126.0	NWL	-37.35%	FIS	-24.07%
126.0	FIS	-34.0%	MOS	-23.14%
126.0	VNO	-29.89%	CPRT	-22.98%
126.0	GT	-27.24%	CMG	-22.97%
126.0	ADBE	-27.07%	NAVI	-21.44%
126.0	GBTC	-24.87%	ADBE	-21.35%
126.0	AMC	-22.05%	NFLX	-21.29%
126.0	CHTR	-20.66%	ZTS	-19.98%
126.0	ORCL	-20.62%	VNO	-19.82%
126.0	TMUS	-18.33%	ORCL	-16.44%
126.0	LEN	-17.83%	TMUS	-14.59%
126.0	VICI	-17.15%	GT	-13.53%
126.0	ZTS	-16.49%	CMCSA	-12.85%
126.0	NAVI	-15.73%	LW	-12.5%
126.0	CZR	-14.53%	KHC	-11.46%
126.0	MSFT	-14.52%	VICI	-11.39%
126.0	KHC	-13.6%	FRA	-10.93%
126.0	CMCSA	-12.37%	MSFT	-10.5%
126.0	IEP	-11.58%	VST	-10.2%
126.0	AZO	-10.54%	CZR	-9.89%
126.0	LW	-10.08%	META	-9.85%
126.0	FRA	-9.51%	BXP	-9.8%
126.0	TDG	-9.35%	TDG	-8.17%



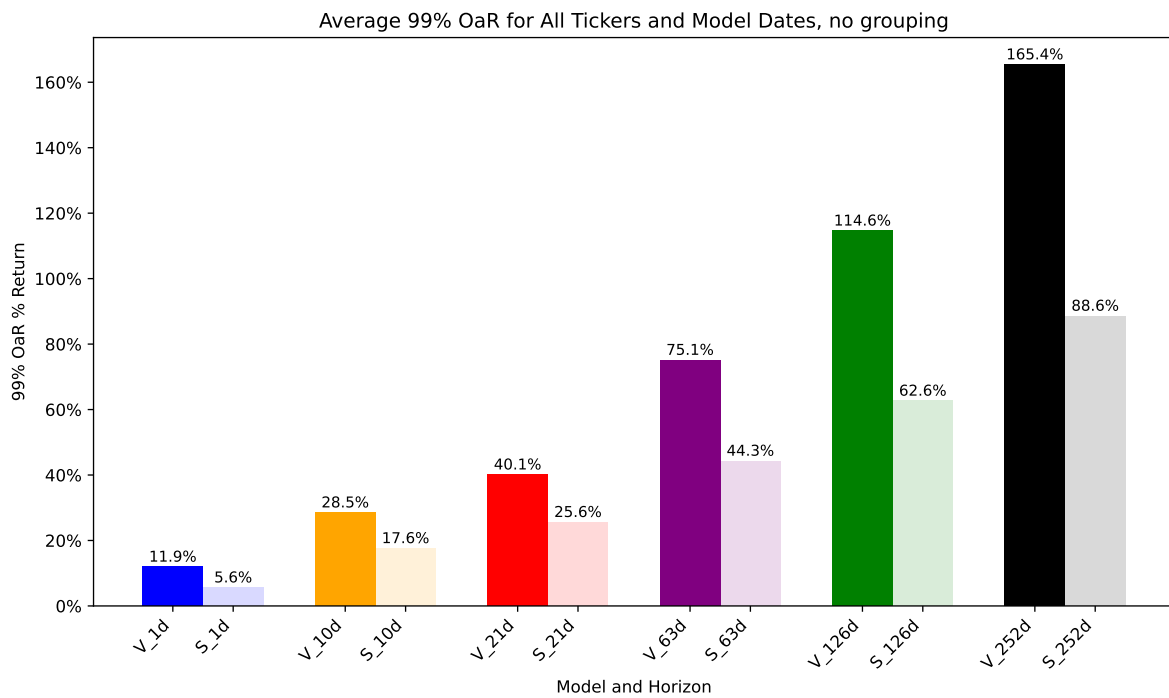
99% Opportunity At Risk (OaR)

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.

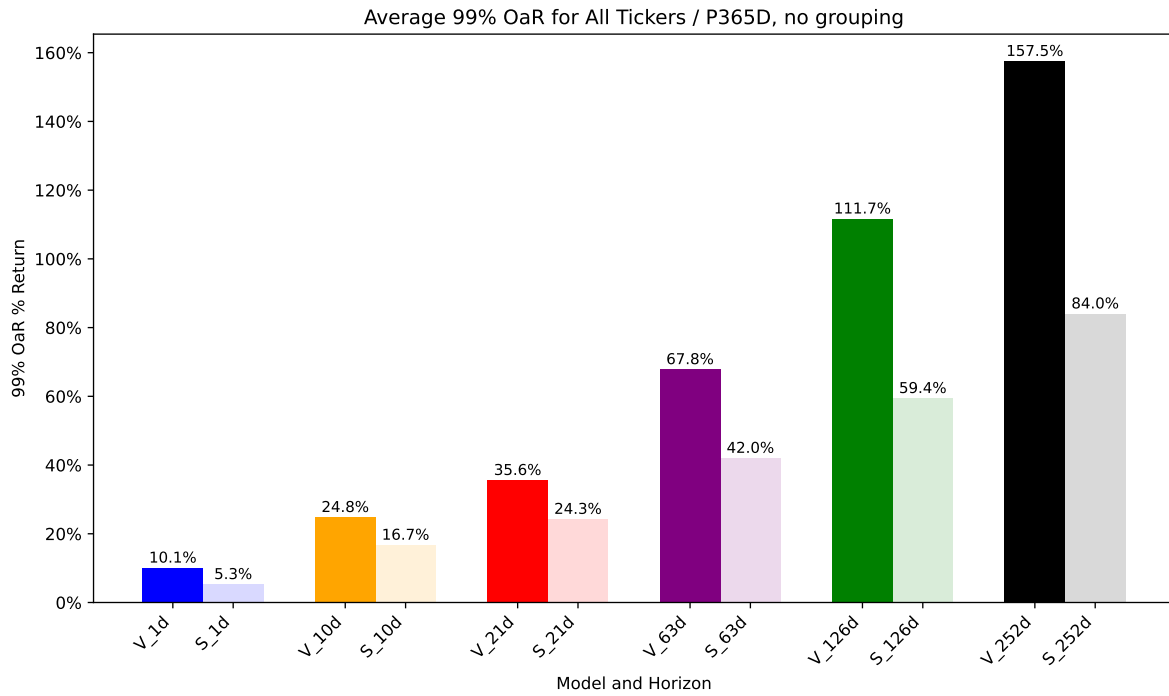
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-04-29



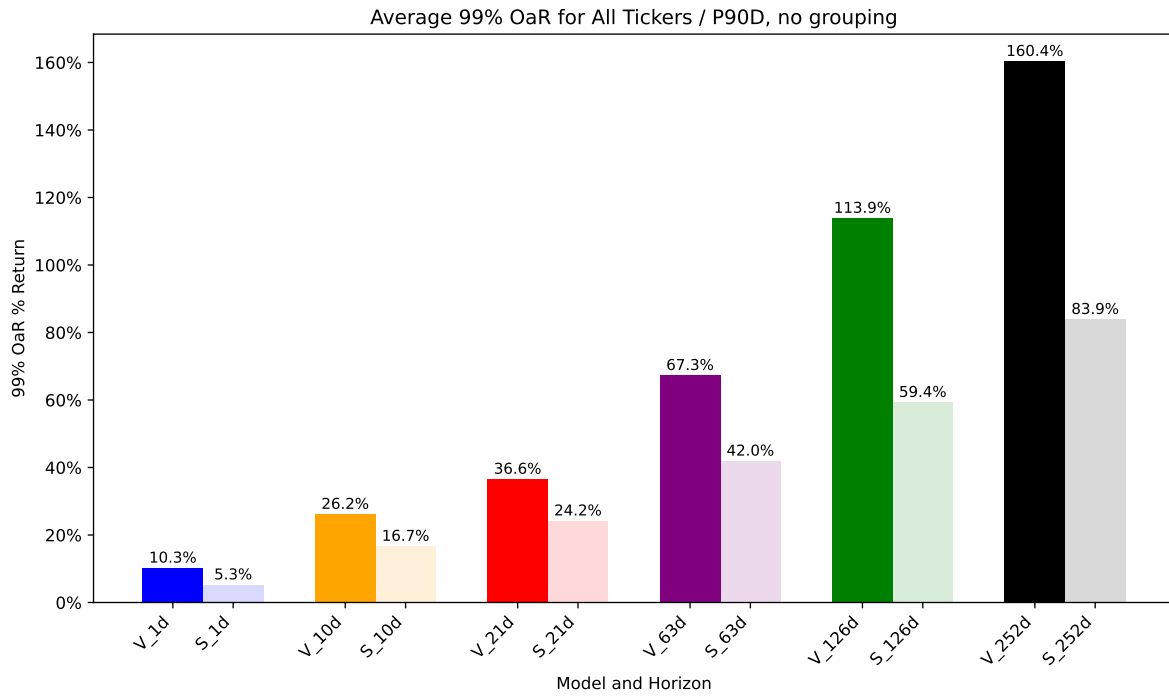
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-04-29 through 2025-05-01



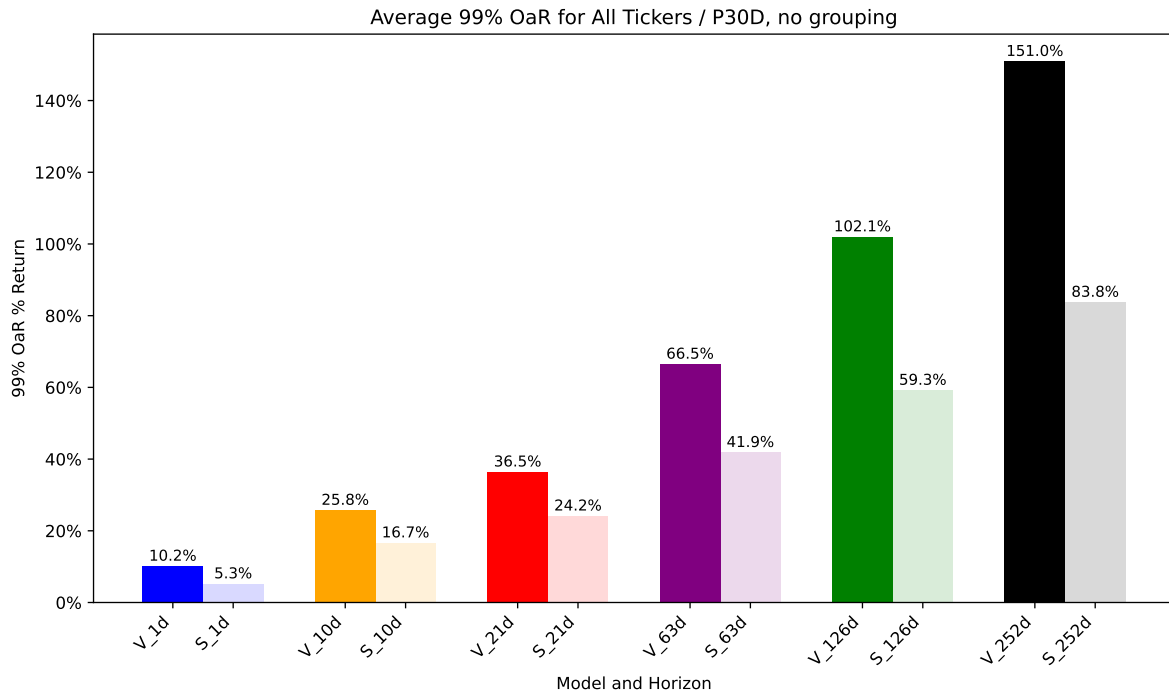
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-04-29 through 2026-02-02



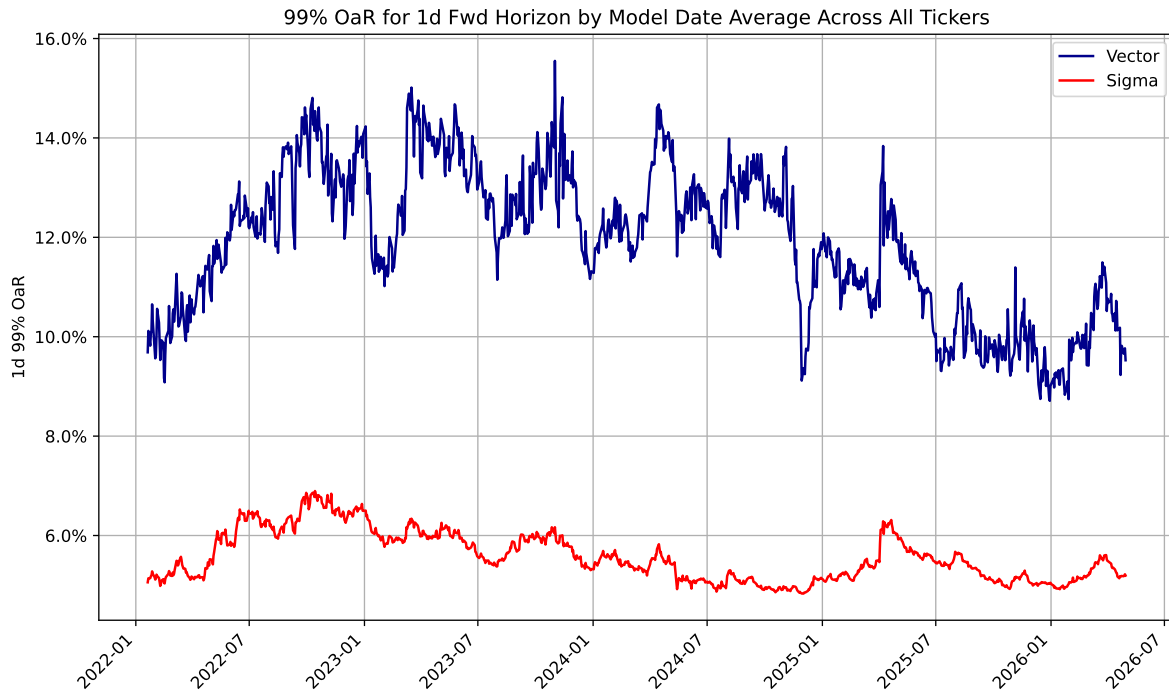
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-04-29 through 2026-04-01

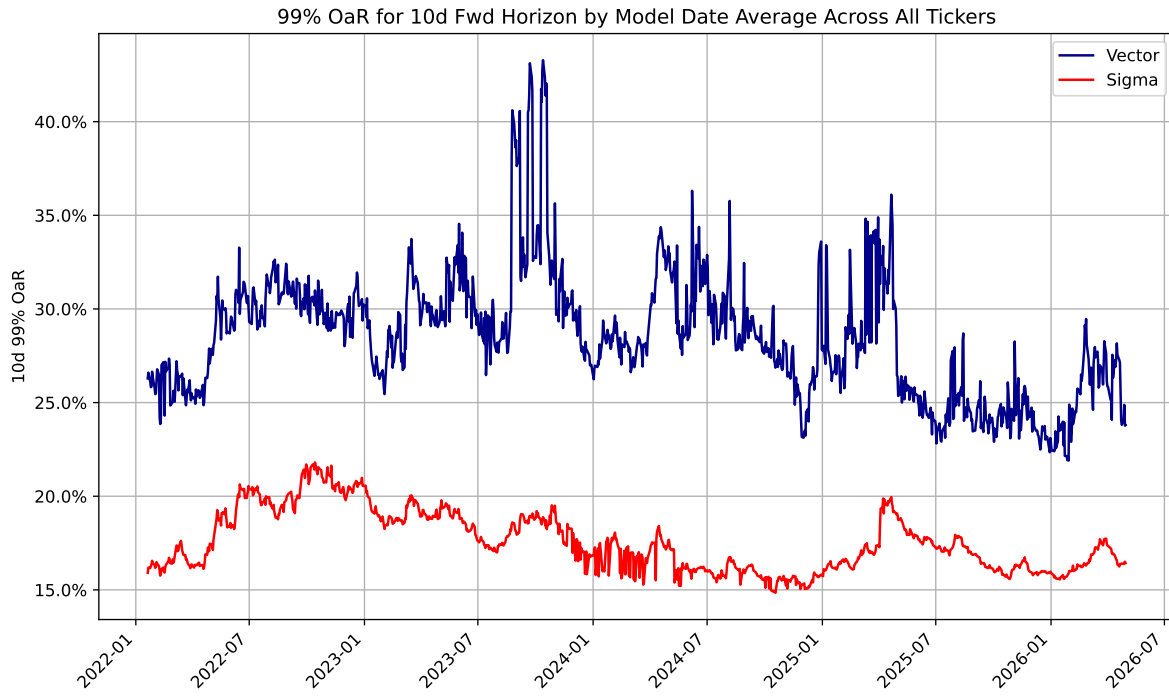


Daily Levels

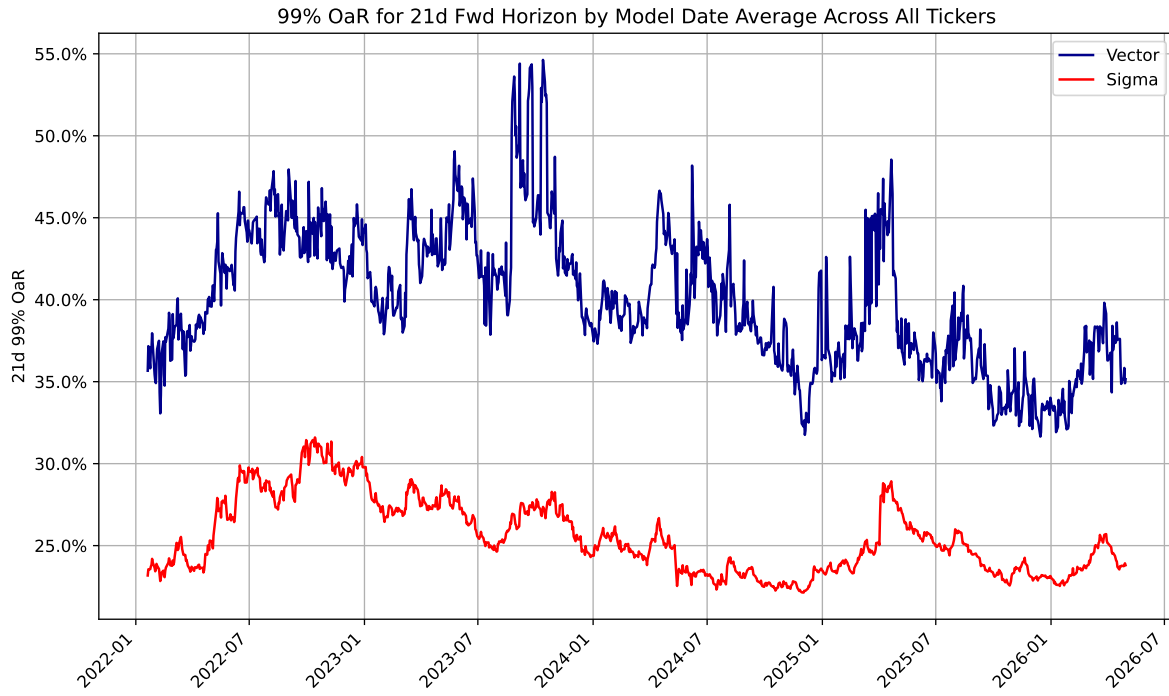
1d Horizon



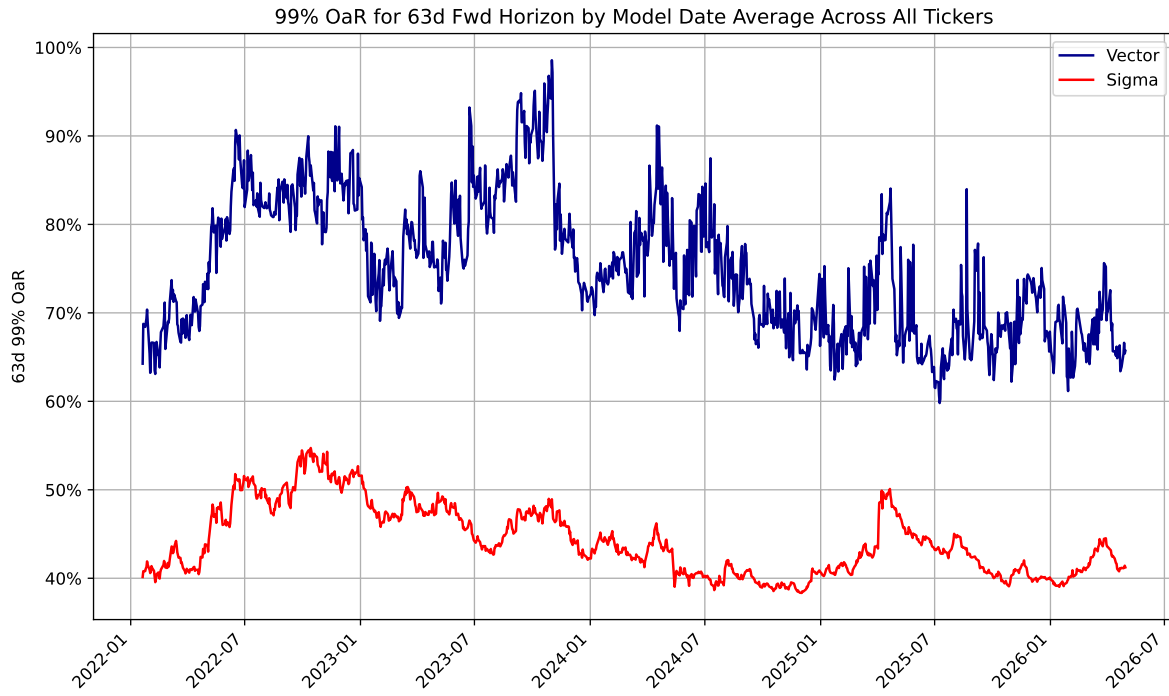
10d Horizon



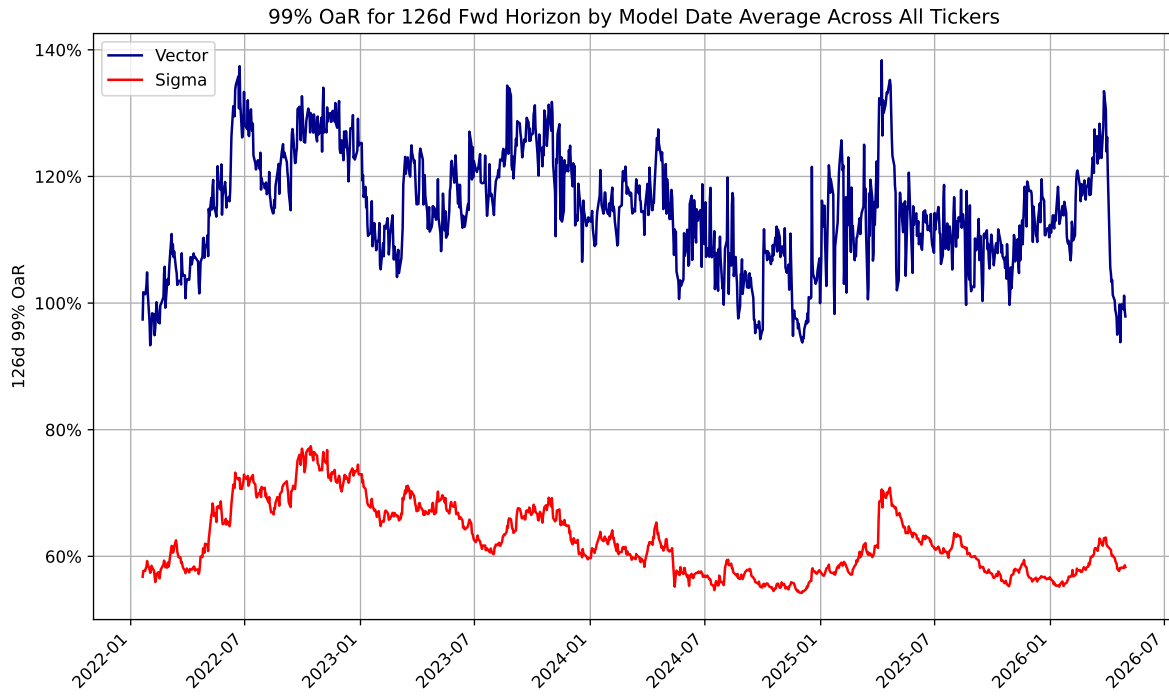
21d Horizon



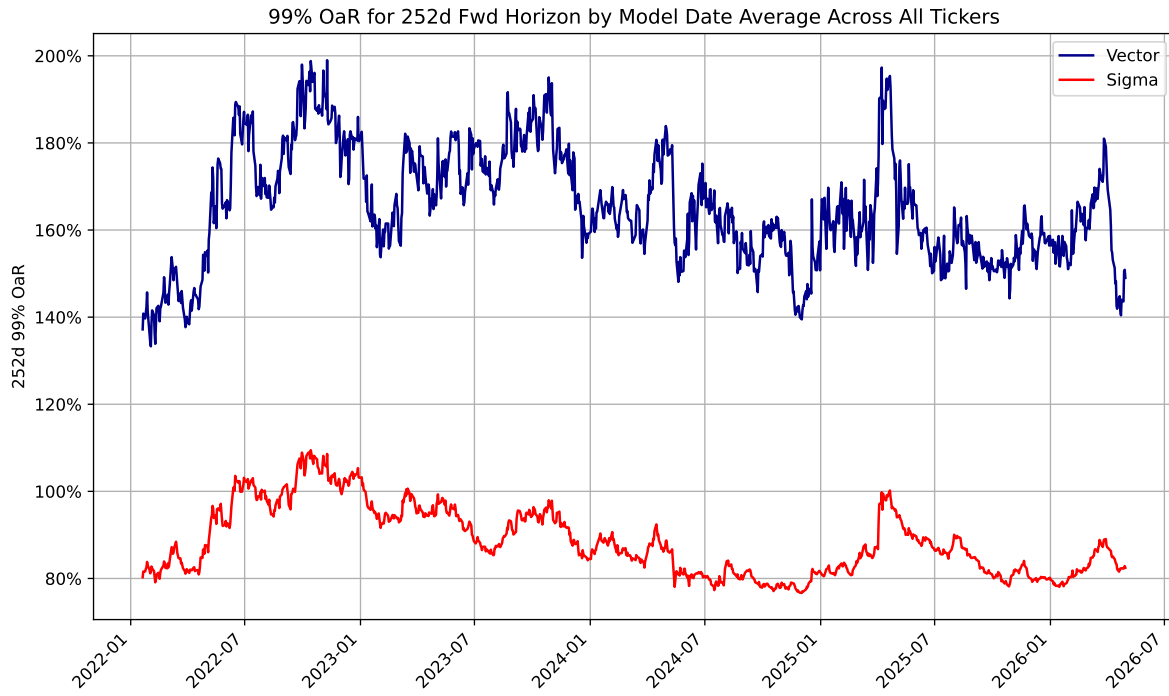
63d Horizon



126d Horizon



252d Horizon



Performance Summary

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

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

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

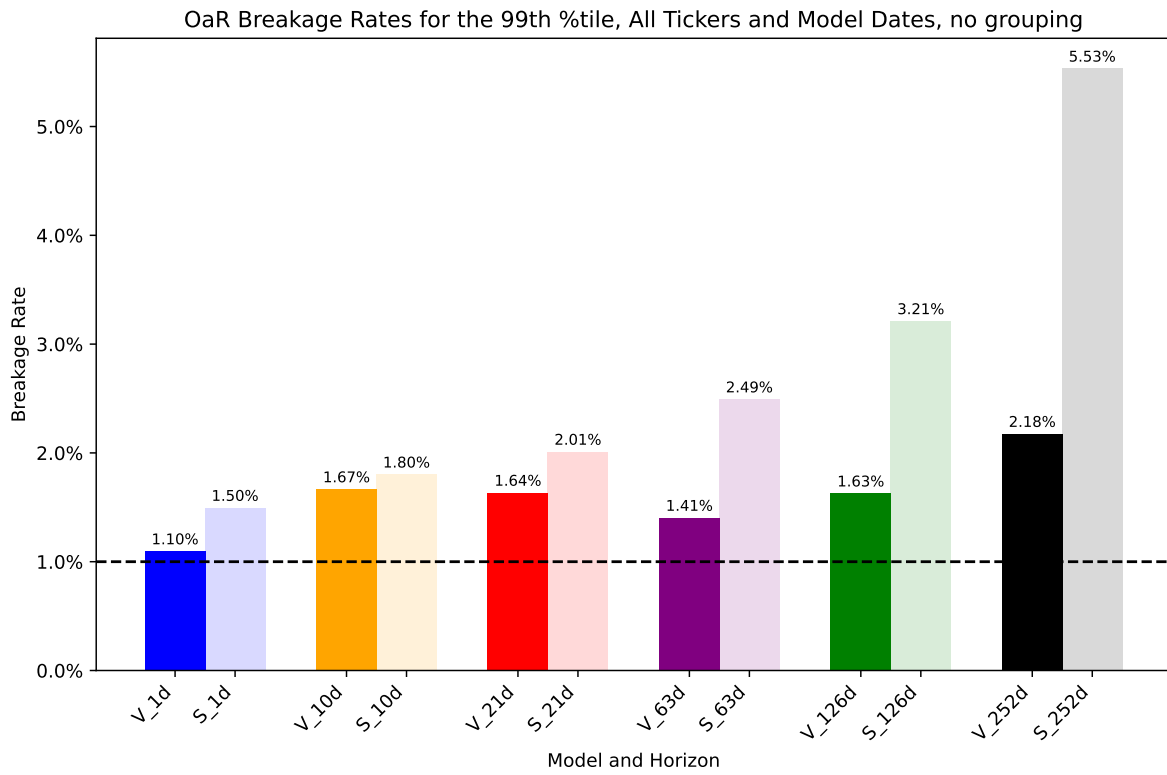
Alpha allows us to isolate ROLOBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROLOBC multiplier for the Vector Model and 1.00x. Alpha across TMD’s could be driven by OaR differentials between tickers and / or between dates. Thus we also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

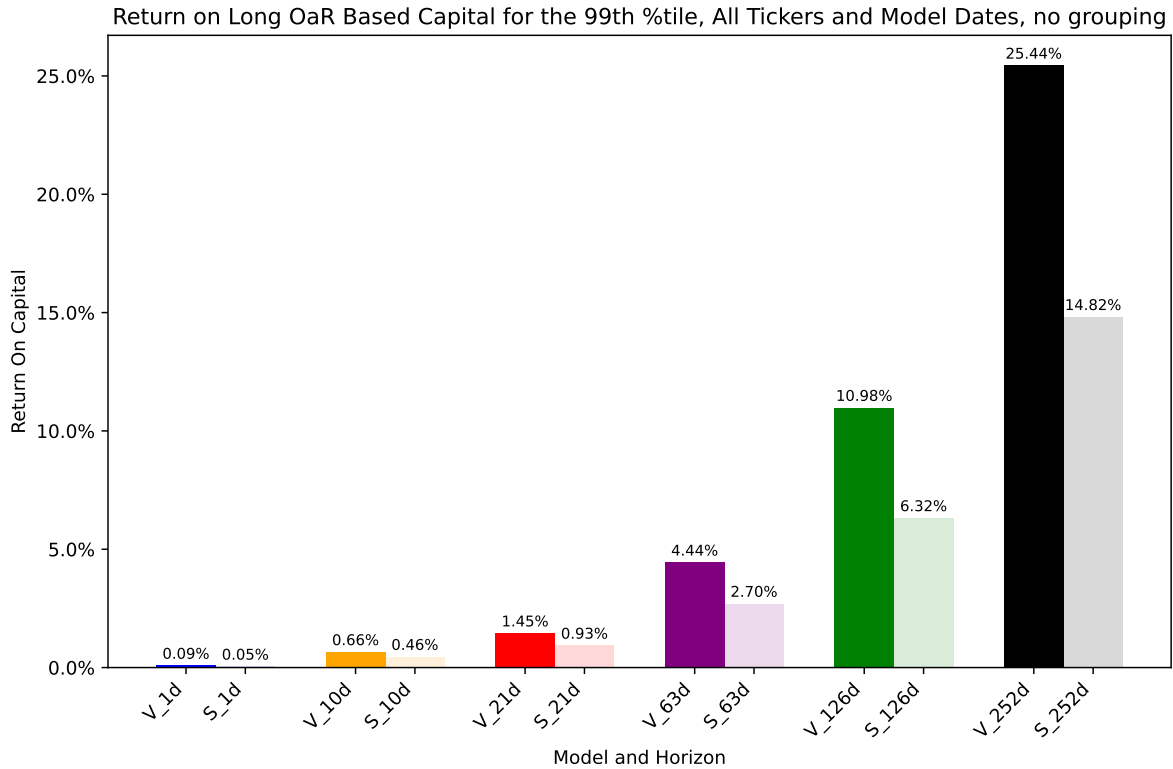
Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons > 1d overlap.



All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-04-29





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%	0.05%	0.07%	0.22%	1.54%
intercept_p_value	89.47%	21.87%	4.75%	6.89%	0.03%	0.00%
slope	177.25%	147.89%	150.40%	161.67%	170.21%	161.27%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

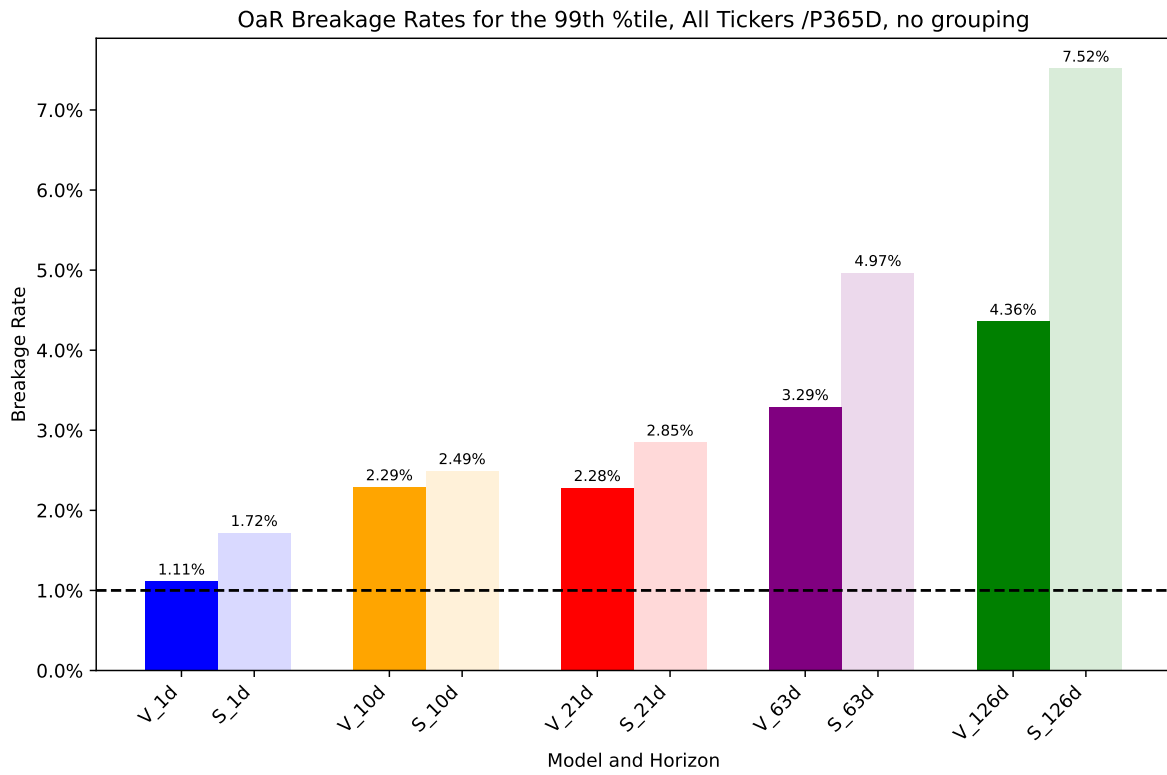
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across Model Dates:

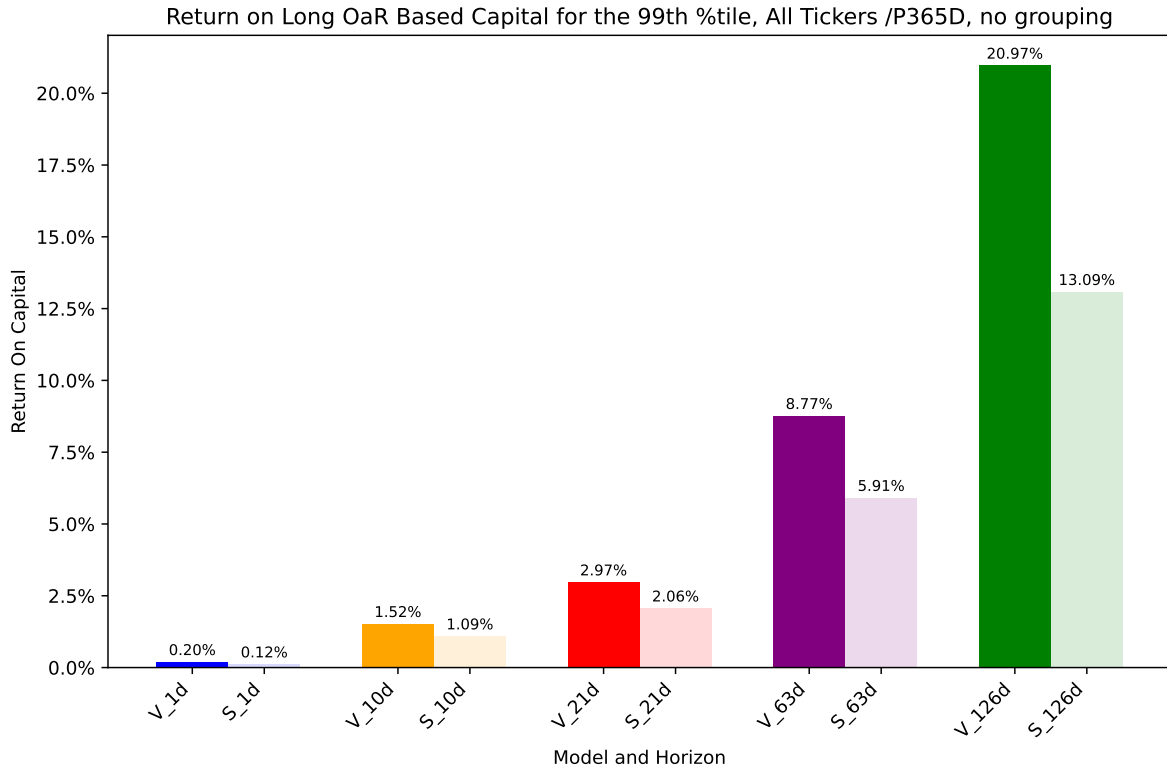
	1d	10d	21d	63d	126d	252d
intercept	-0.04%	-0.21%	-0.57%	-2.23%	-4.35%	-5.29%
intercept_p_value	0.00%	0.07%	0.00%	0.00%	0.00%	0.08%
slope	164.88%	150.08%	166.33%	181.32%	178.53%	164.79%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-04-29 through 2025-05-01





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

	1d	10d	21d	63d	126d
intercept	-0.01%	-0.05%	-0.01%	-0.18%	-0.62%
intercept_p_value	52.35%	5.93%	84.30%	5.79%	0.26%
slope	173.67%	144.35%	144.40%	151.29%	164.99%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

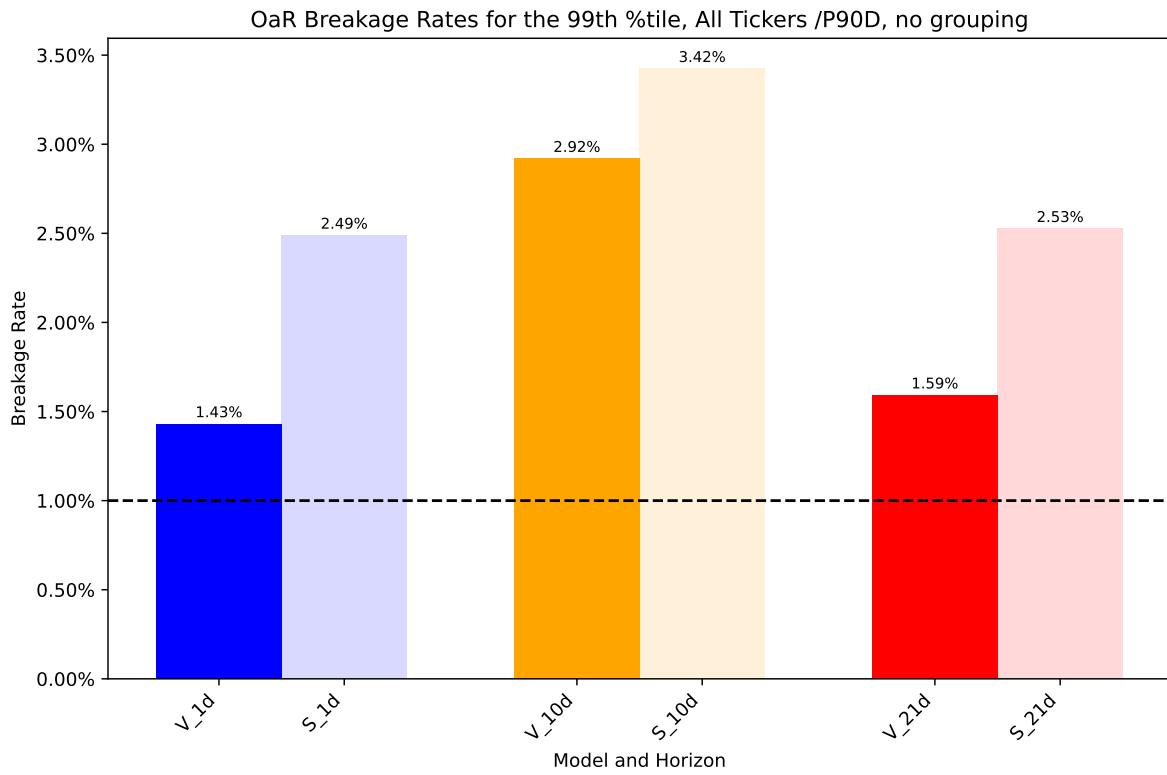
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across P365D:

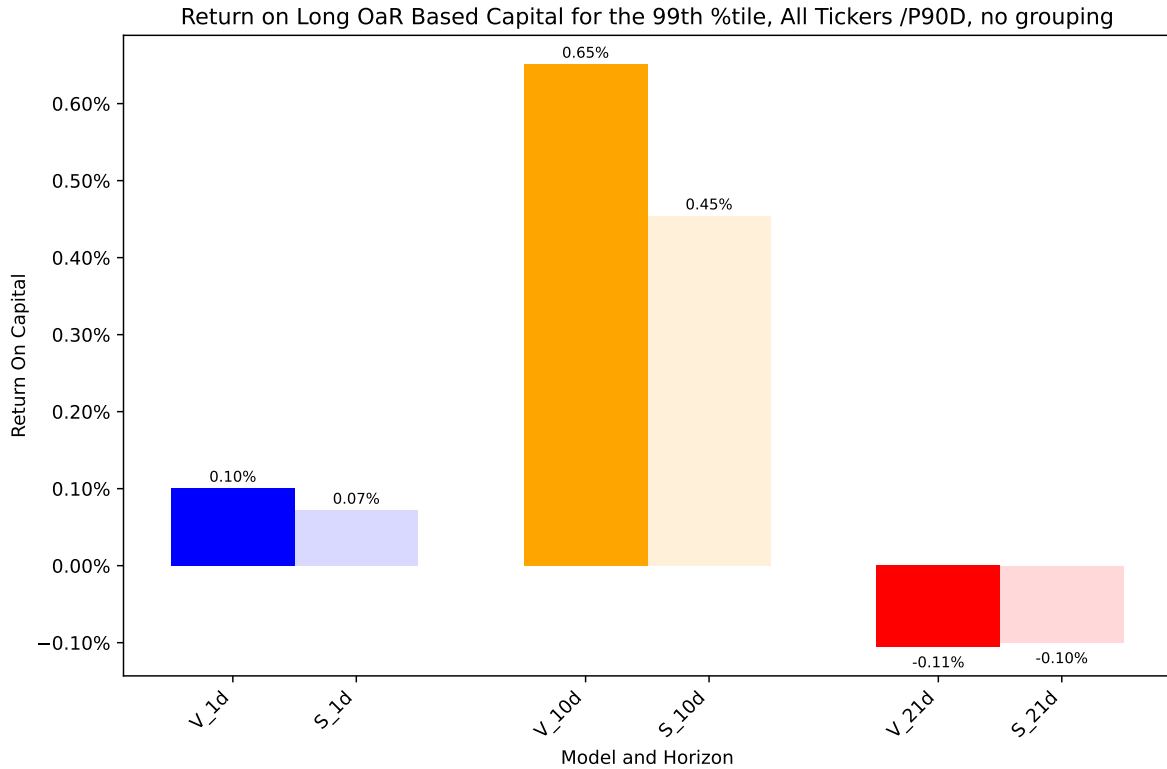
	1d	10d	21d	63d	126d
intercept	-0.00%	-0.03%	-0.14%	-1.13%	-3.51%
intercept_p_value	89.00%	76.12%	39.11%	3.01%	0.85%
slope	94.49%	109.62%	113.05%	127.87%	144.90%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-04-29 through 2026-02-02





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

	1d	10d	21d
intercept	-0.02%	-0.00%	0.04%
intercept_p_value	35.93%	98.32%	71.68%
slope	167.18%	143.74%	144.28%
slope_p_value	0.00%	0.00%	0.00%

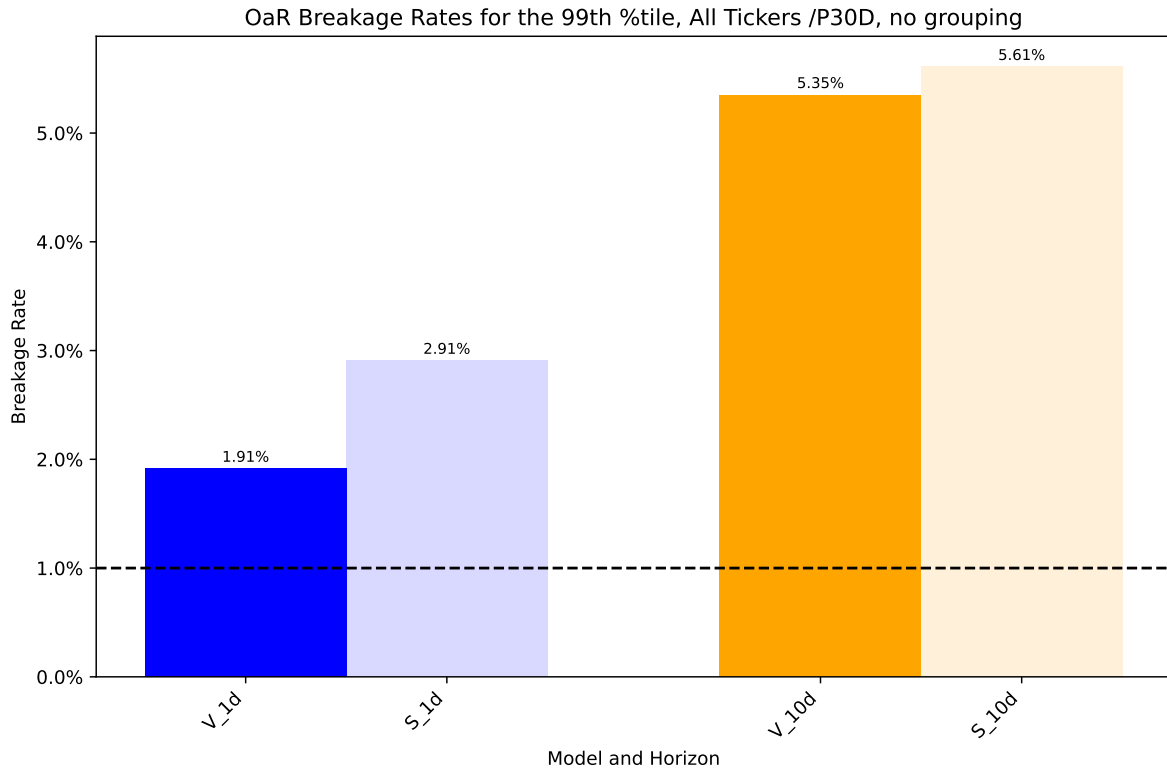
Average Alpha (intercept) and Beta (slope) of Vector Model ROLIBC regressed upon corresponding actual returns, by ticker across P90D:

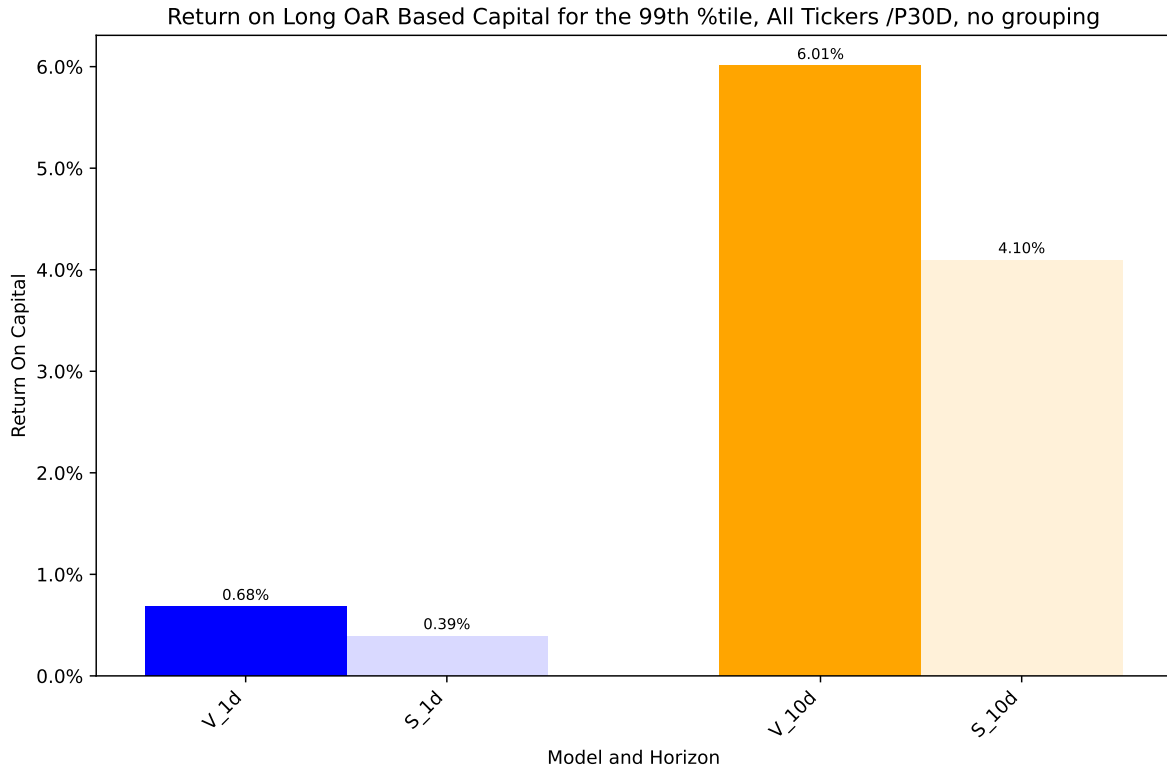
	1d	10d	21d
intercept	-0.01%	0.20%	0.28%
intercept_p_value	63.02%	20.76%	31.16%
slope	110.21%	127.52%	123.00%
slope_p_value	0.00%	0.00%	0.00%



Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-04-29 through 2026-04-01





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

	1d	10d
intercept	0.03%	0.37%
intercept_p_value	36.94%	7.96%
slope	164.92%	137.63%
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:

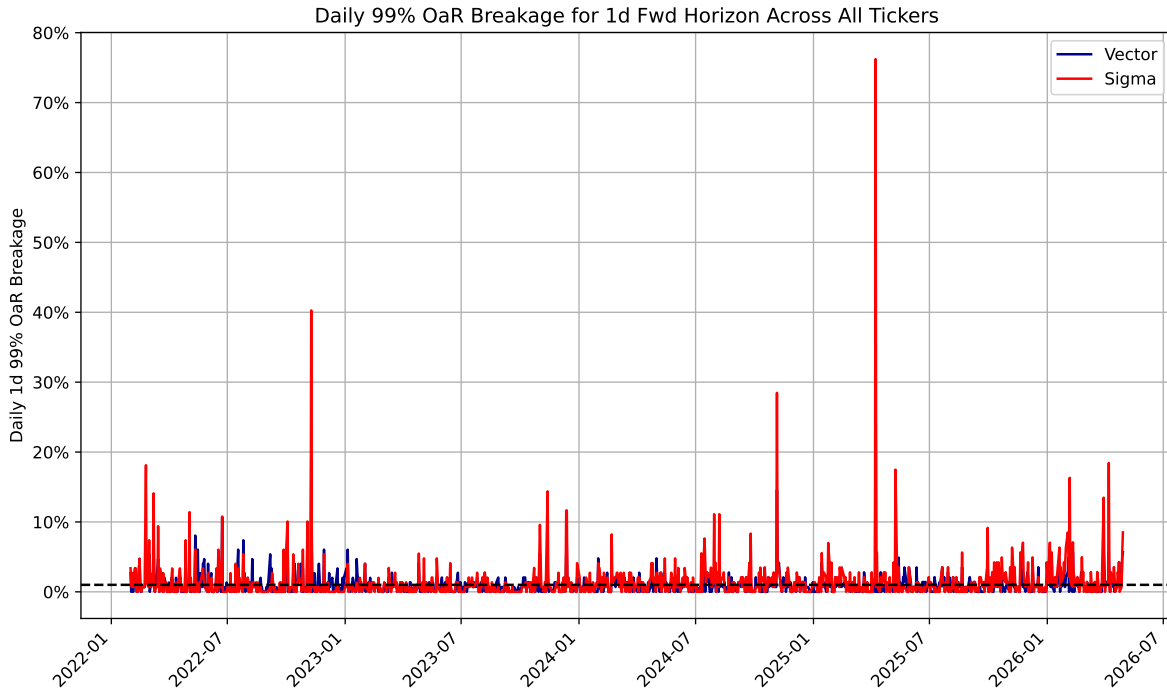
	1d	10d
intercept	-0.00%	-0.54%
intercept_p_value	93.92%	32.10%
slope	119.79%	149.59%
slope_p_value	0.00%	0.00%

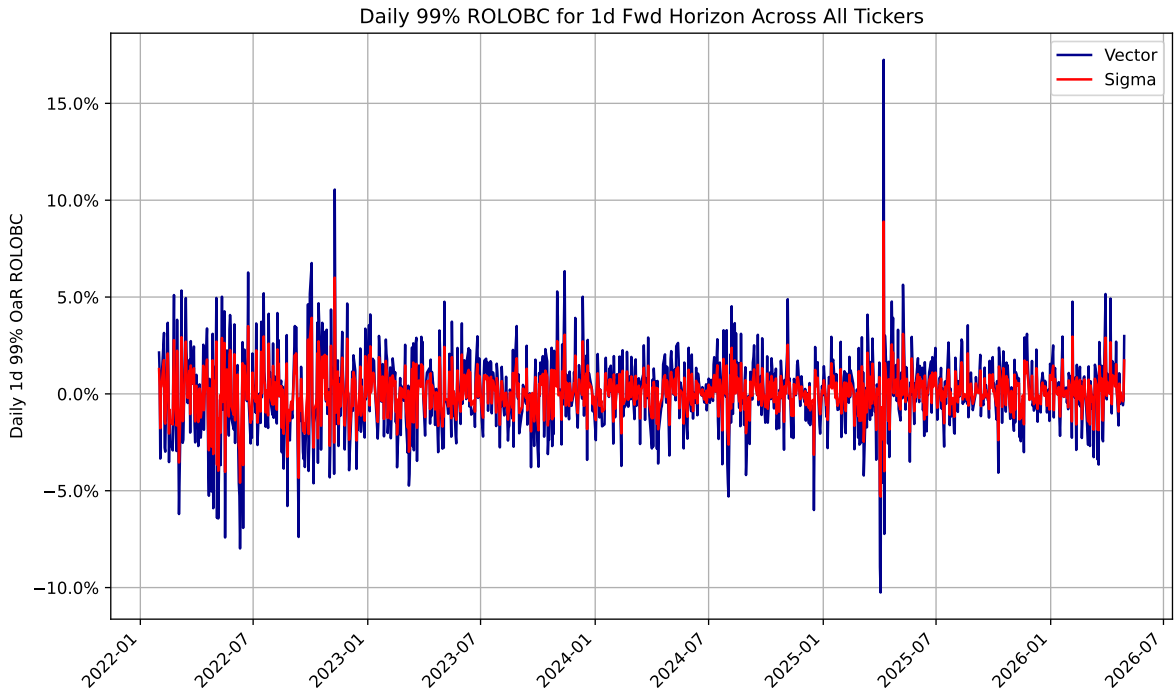


Daily Performance

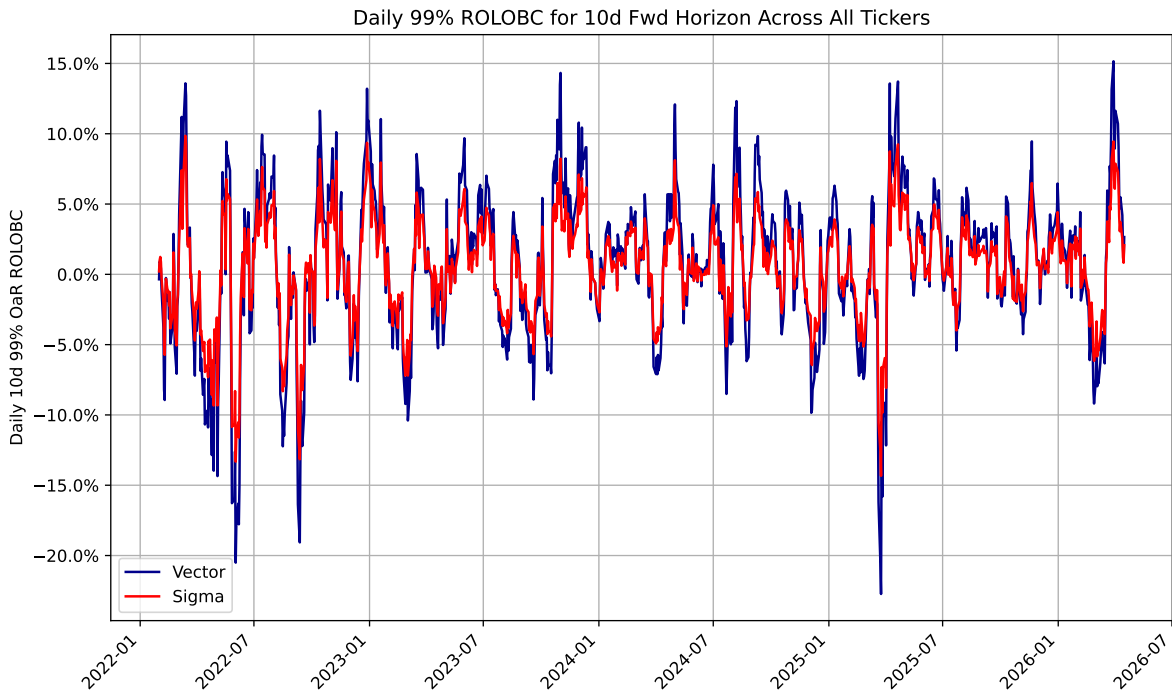
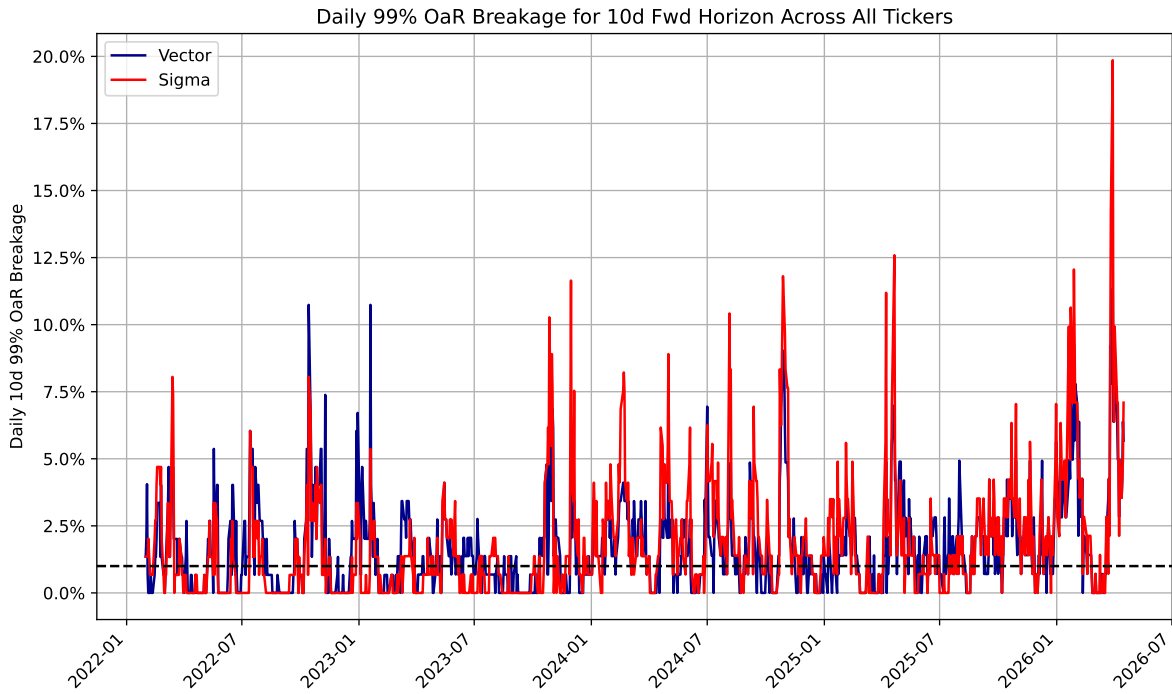
Here we look at the daily breakage and ROLOBC statistics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROLOBC outliers.

1d Horizon

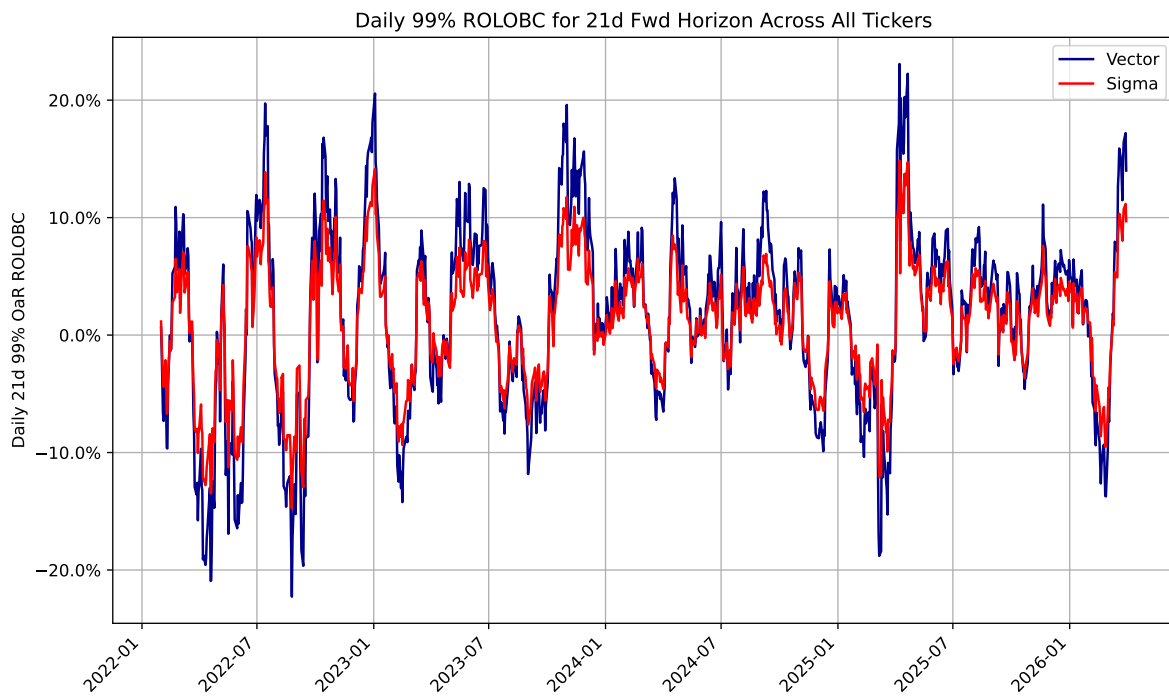
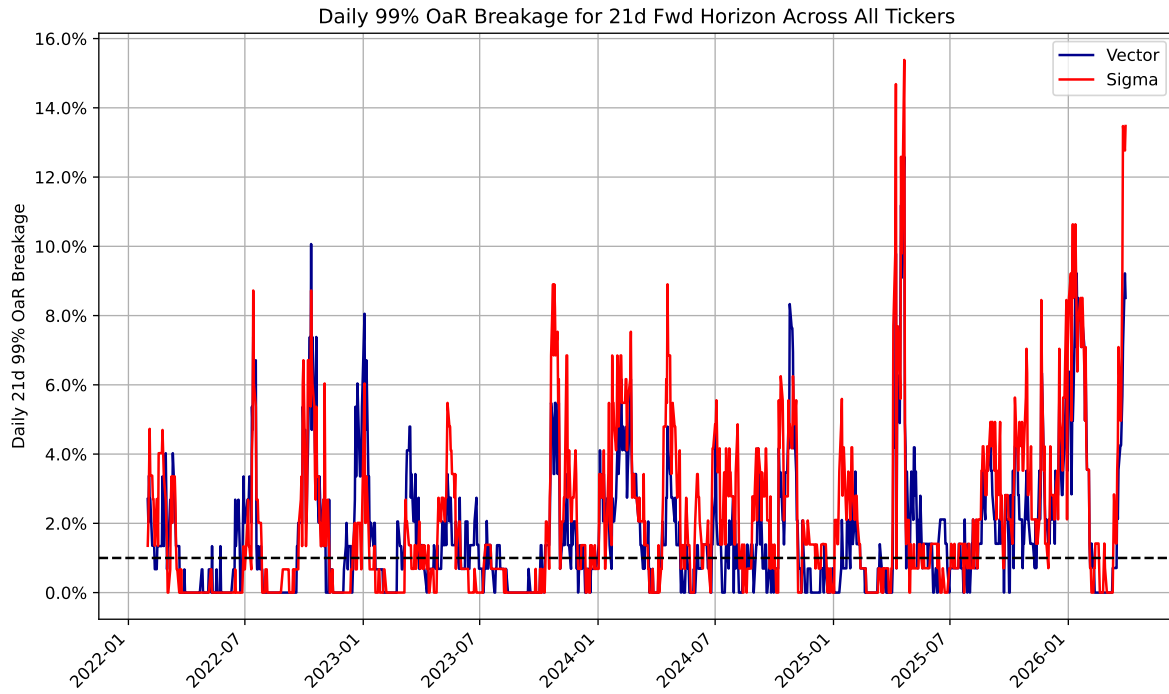




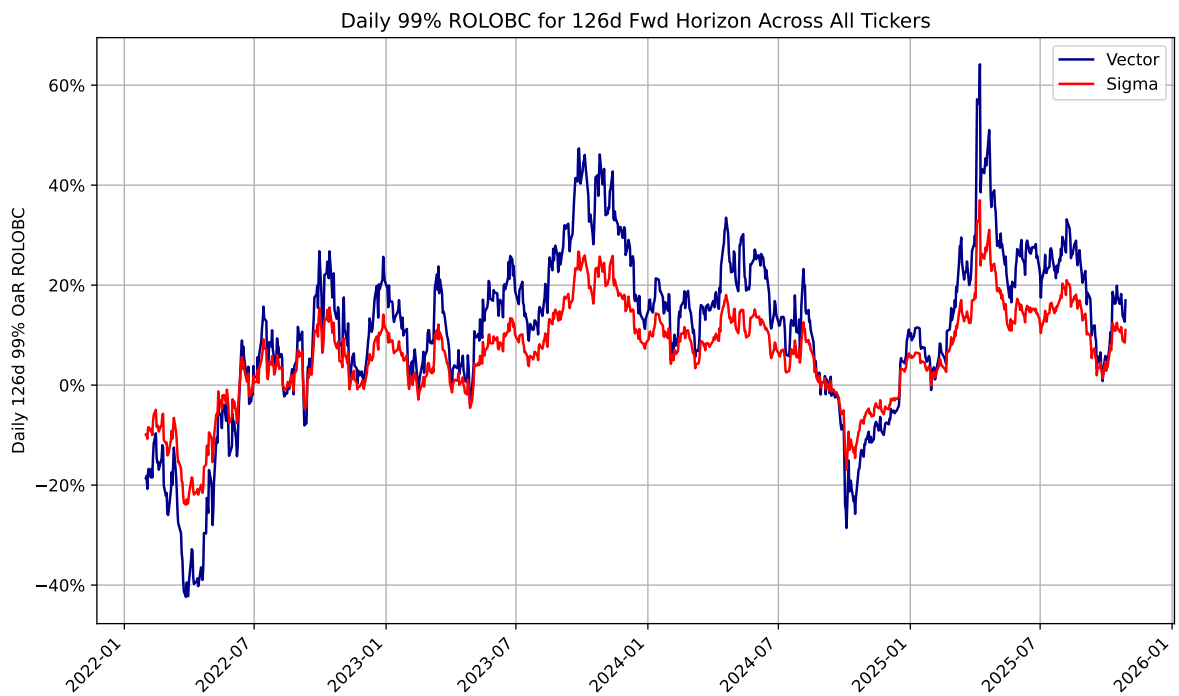
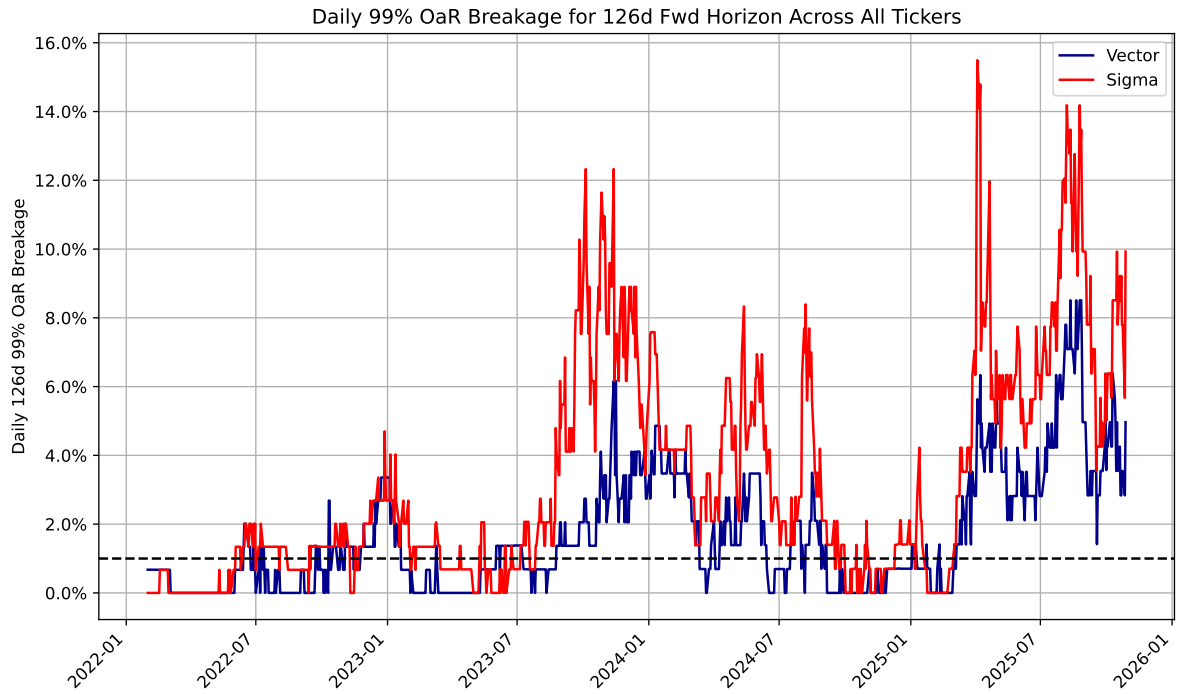
10d Horizon



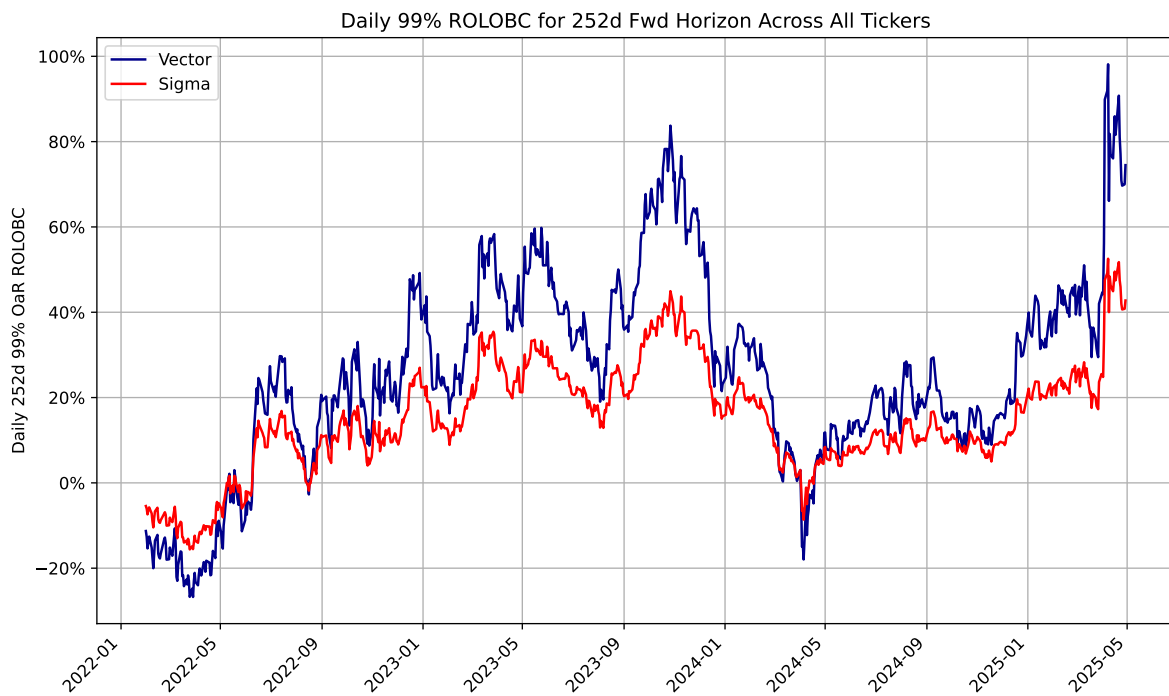
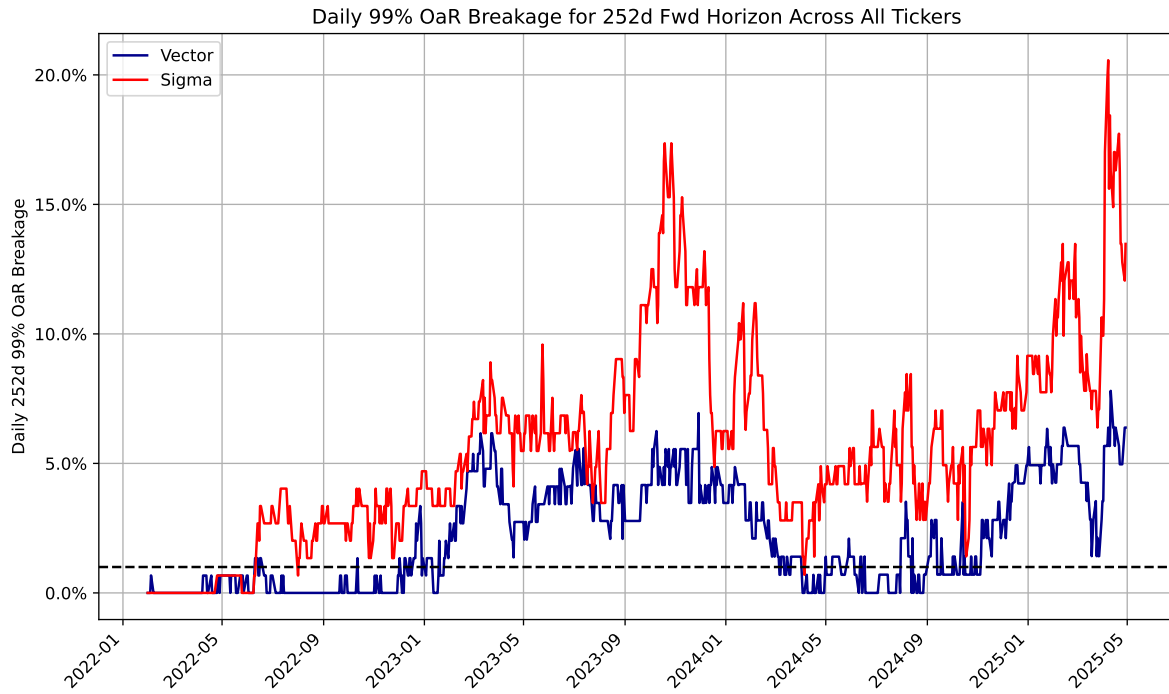
21d Horizon



63d Horizon



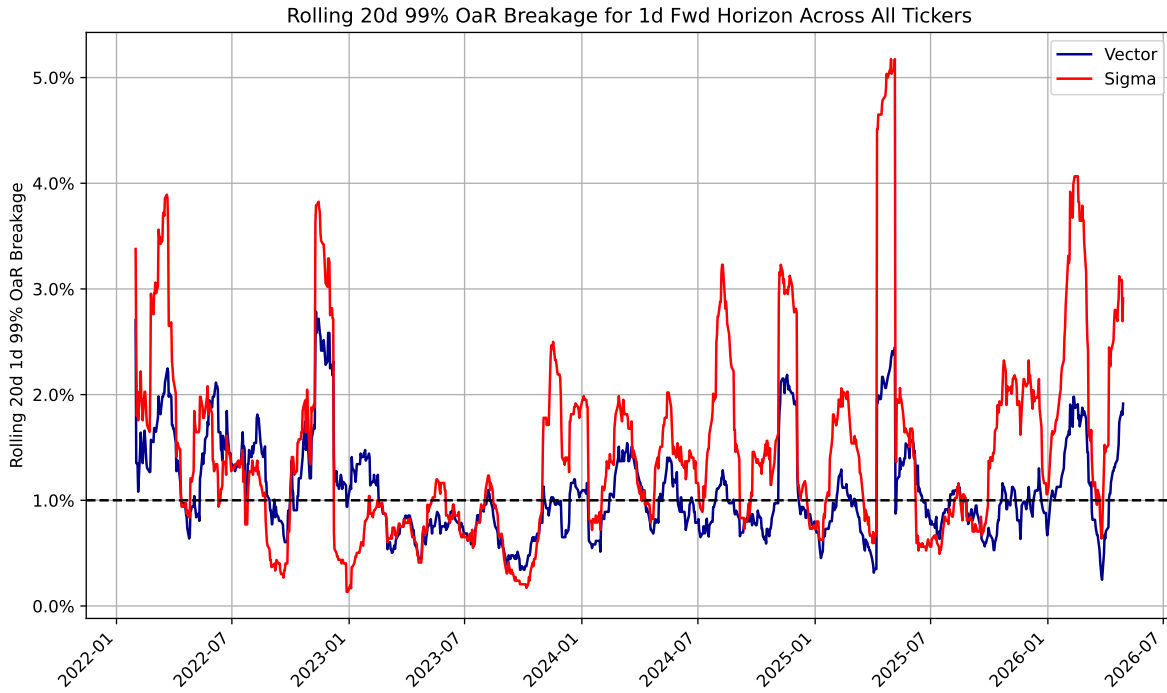
252d Horizon

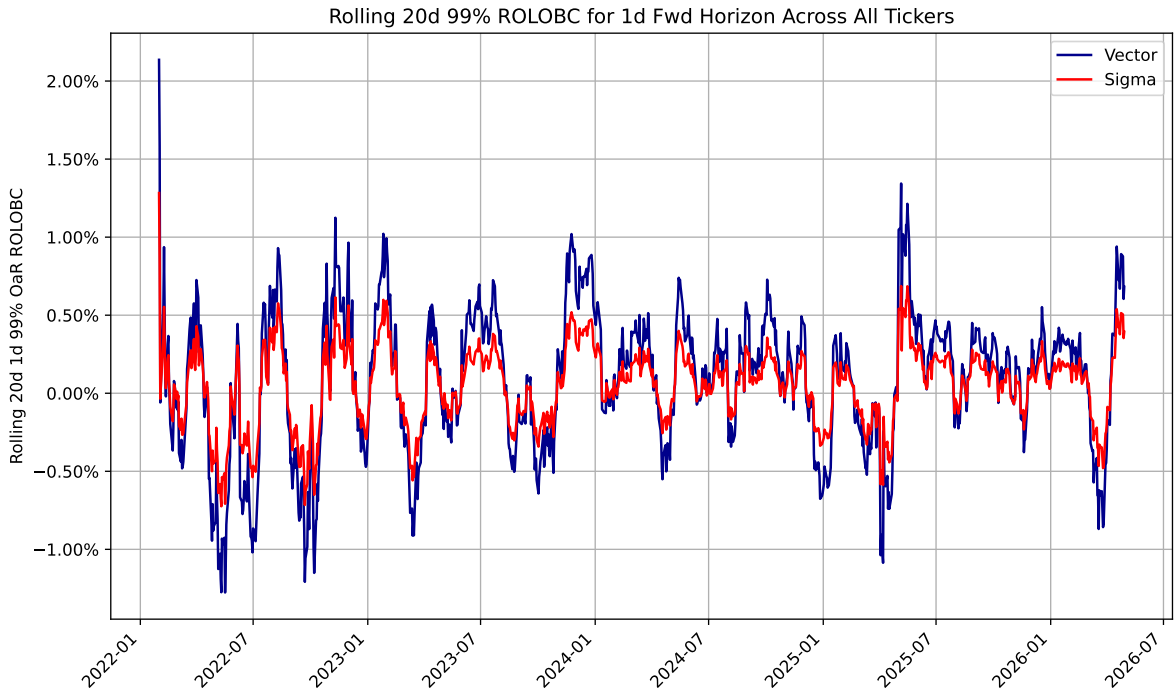


Rolling 20d Performance

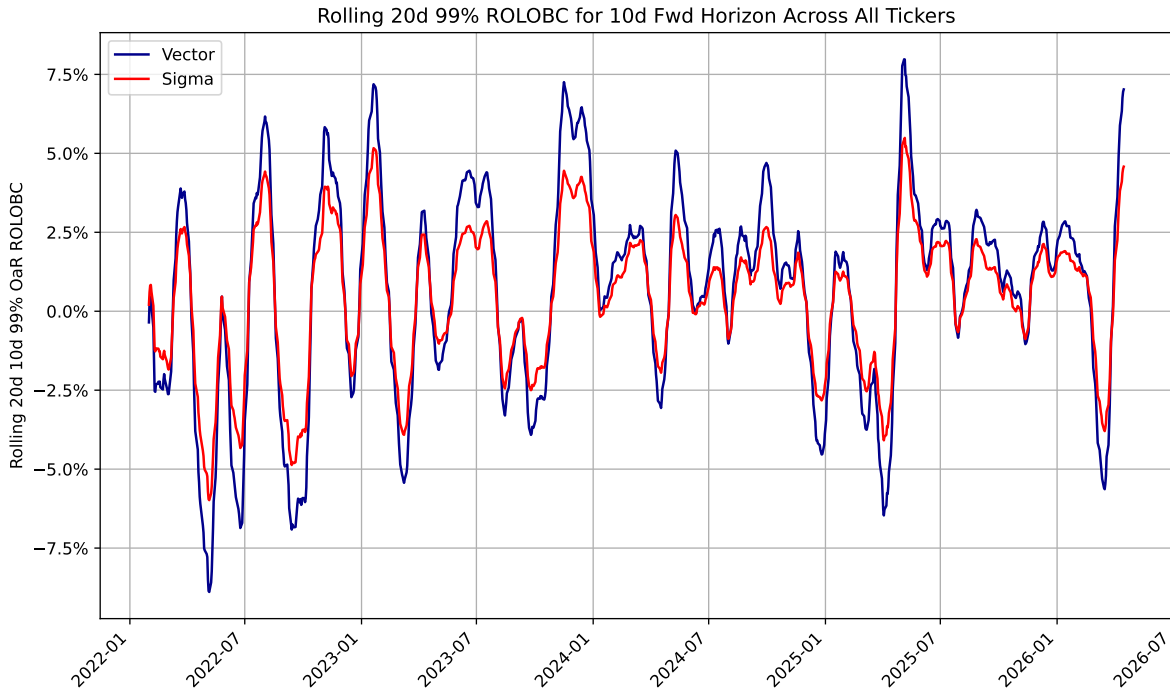
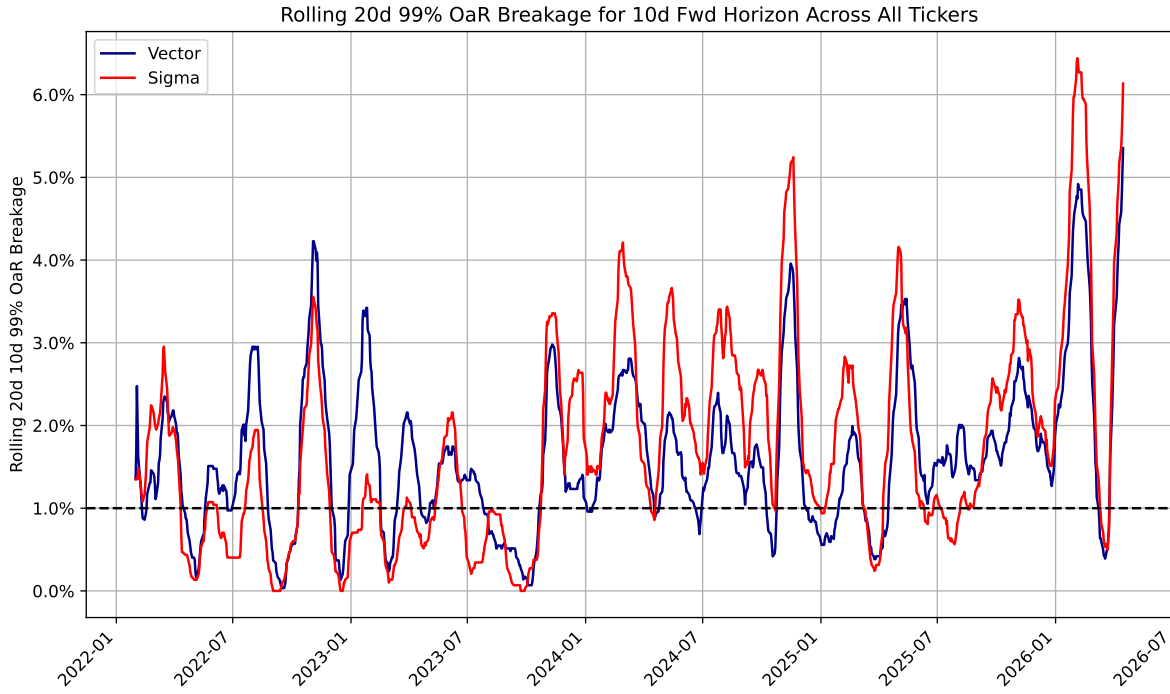
Here we look at 20 day rolling moving averages of the breakage and ROLOBC statistics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

1d Horizon

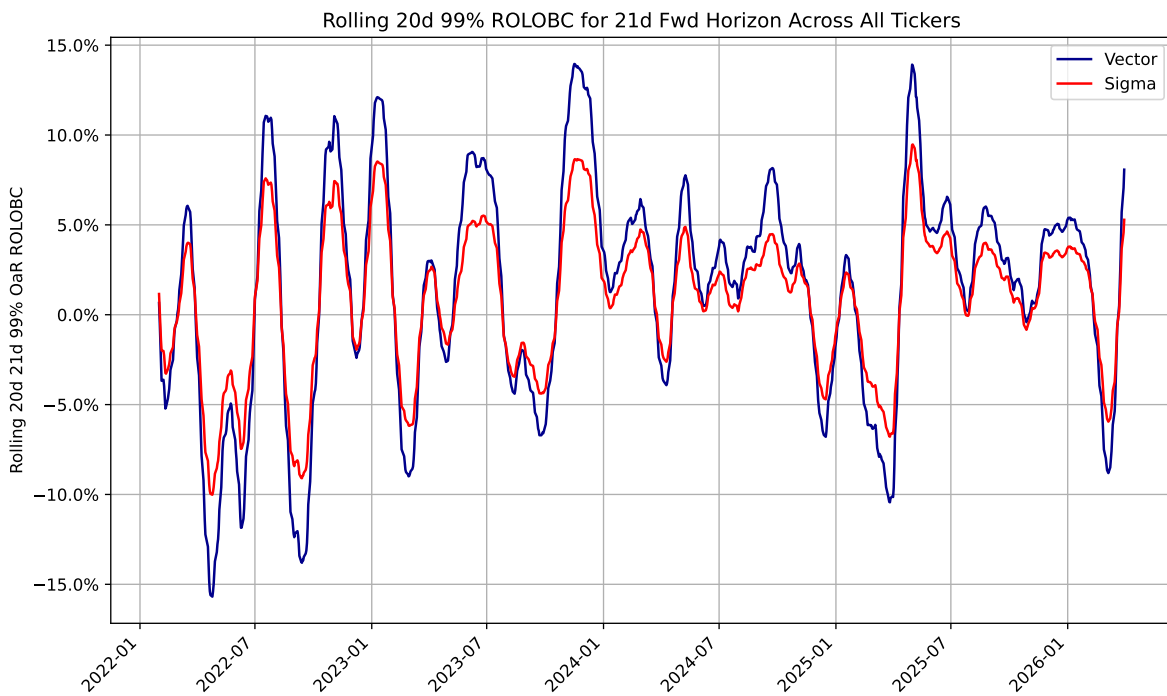
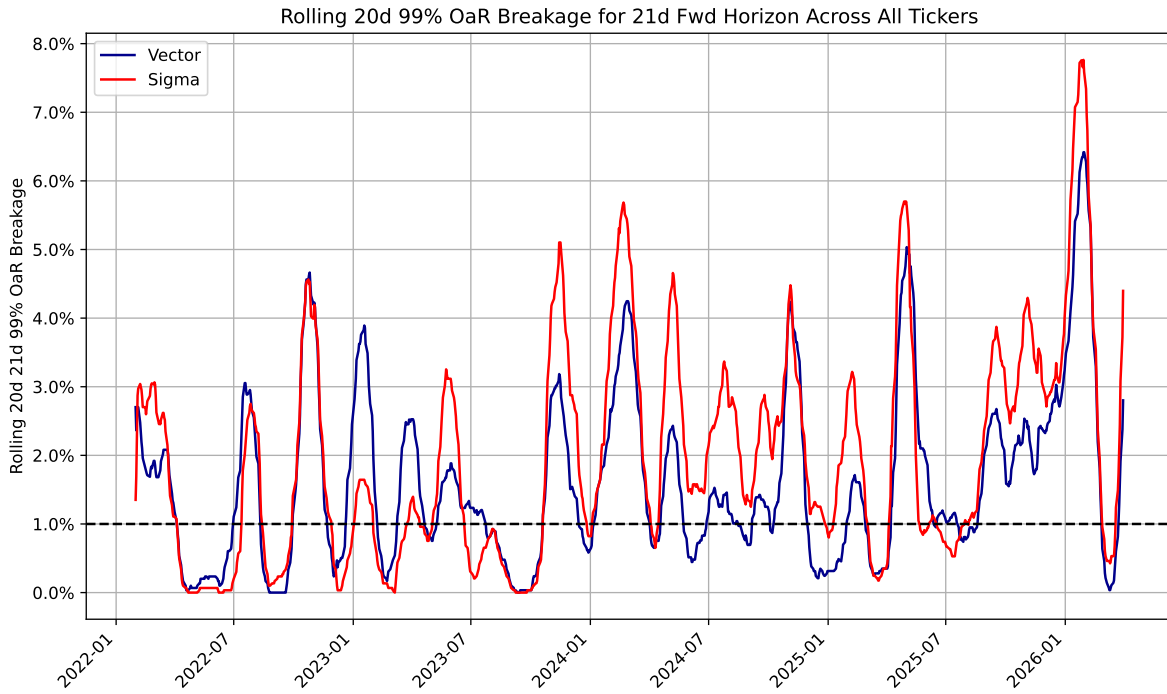




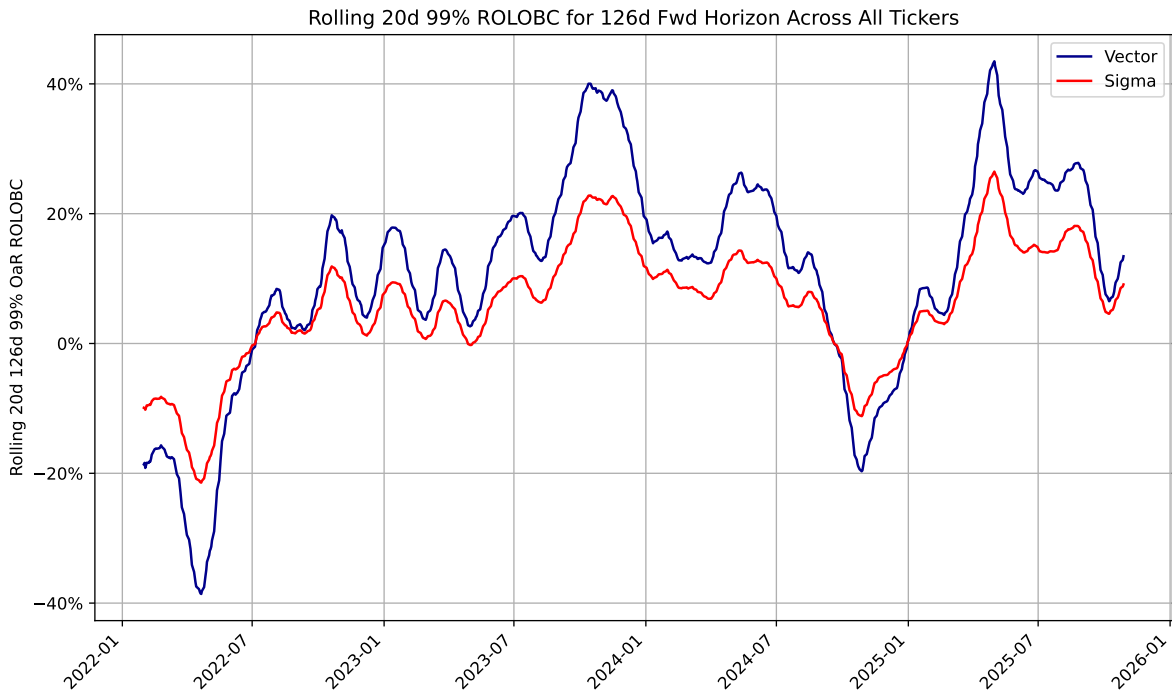
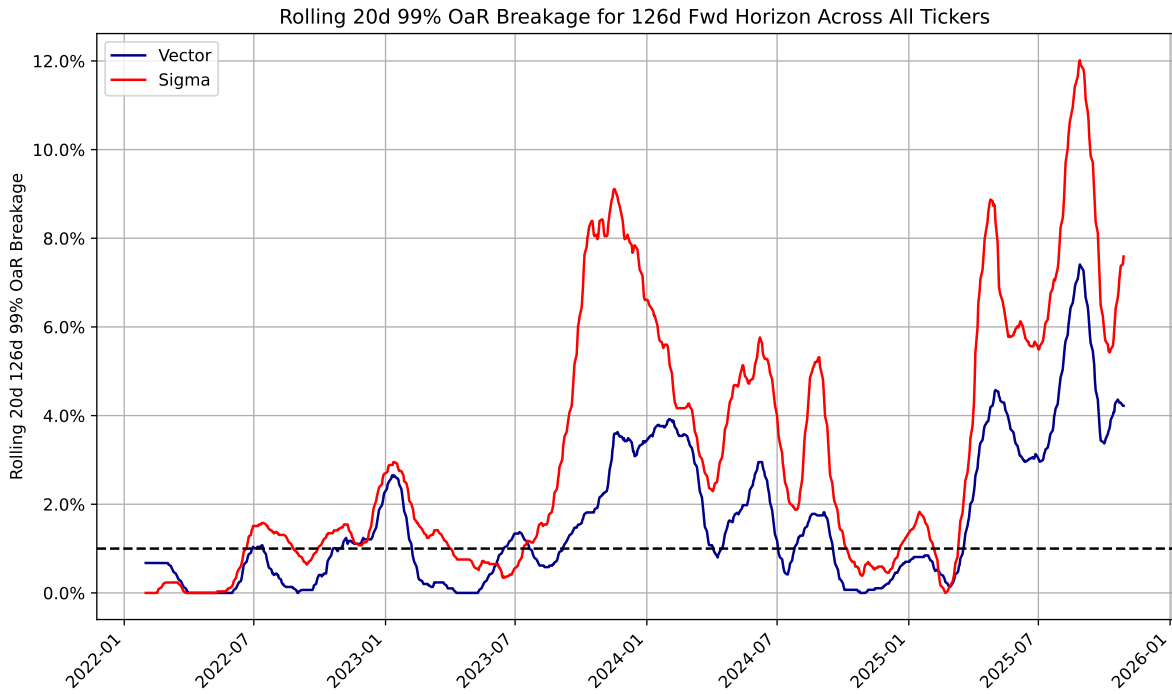
10d Horizon



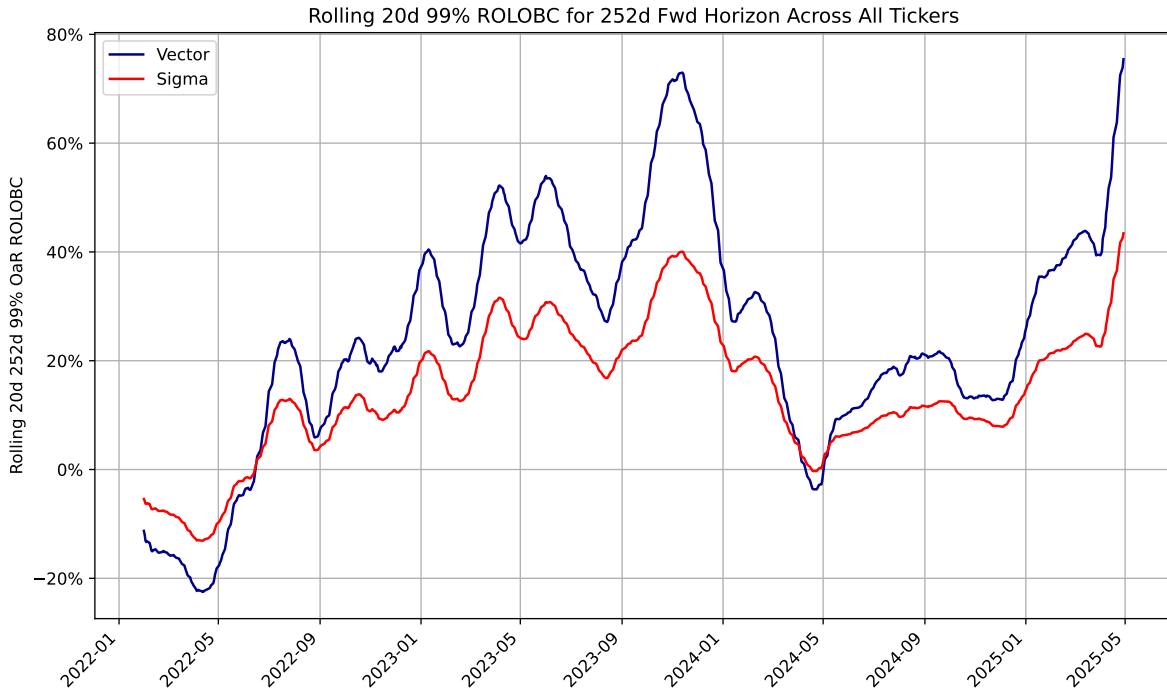
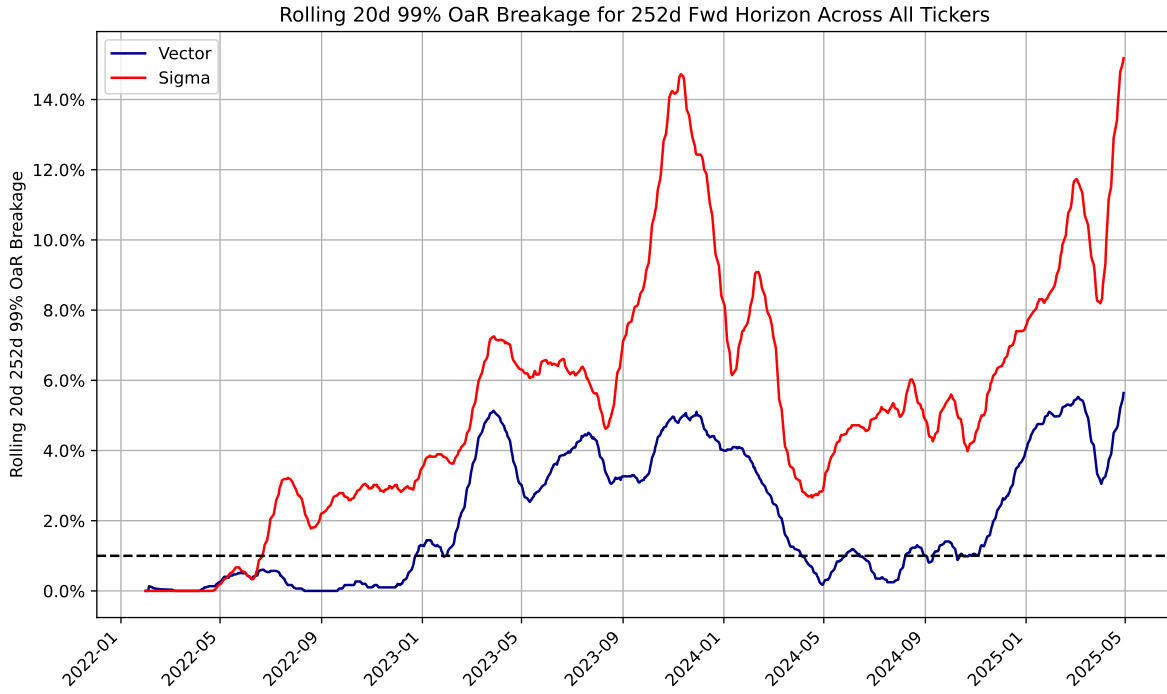
21d Horizon



63d Horizon



252d Horizon



Top 30 Tickers By OaR Breakage

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	SIVBQ	6.83%	SLV	4.23%
1.0	GME	4.88%	VST	3.94%
1.0	AVGO	4.51%	WDC	3.66%
1.0	VST	4.23%	MU	3.19%
1.0	MSTR	4.23%	AVGO	2.91%
1.0	FRCB	3.6%	MSTR	2.82%
1.0	TSLA	3.57%	B	2.54%
1.0	META	3.47%	NEM	2.54%
1.0	WDC	3.38%	SIVBQ	2.52%
1.0	B	3.29%	GLD	2.44%
1.0	SLV	3.01%	CCL	2.44%
1.0	HLT	3.0%	NVDA	2.44%
1.0	TEVA	2.82%	INTC	2.25%
1.0	NFLX	2.82%	PHM	2.25%
1.0	BALL	2.63%	PWR	2.25%
1.0	CHTR	2.63%	LLY	2.25%
1.0	ACGL	2.63%	AMD	2.25%
1.0	INTU	2.54%	GOOGL	2.16%
1.0	GILD	2.54%	HSBC	2.07%
1.0	SBNY	2.52%	KALU	2.07%
1.0	BUD	2.44%	TEVA	1.97%
1.0	AA	2.44%	IRM	1.97%
1.0	ZTS	2.35%	AMGN	1.97%
1.0	CMA	2.19%	AA	1.97%
1.0	OXY	2.16%	GS	1.88%
1.0	ORCL	1.97%	GSK	1.88%
1.0	JAZZ	1.97%	GILD	1.88%
1.0	AMC	1.97%	UNH	1.88%
1.0	GWV	1.97%	FRCB	1.8%
1.0	GNRC	1.88%	SBNY	1.8%



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 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	MSTR	10.7%	VST	6.82%
10.0	SIVBQ	9.93%	SLV	5.88%
10.0	VST	7.48%	NVDA	5.21%
10.0	AVGO	7.39%	ORCL	5.02%
10.0	META	7.01%	TEVA	4.73%
10.0	WDC	6.91%	WDC	4.73%
10.0	GME	5.87%	AVGO	4.64%
10.0	CHTR	5.59%	MU	4.55%
10.0	GWV	5.02%	X	4.53%
10.0	GILD	4.73%	GLD	4.17%
10.0	KALU	4.55%	LLY	4.07%
10.0	SLV	4.36%	GWV	3.88%
10.0	GNRC	4.17%	CAH	3.88%
10.0	EXPE	4.17%	IRM	3.69%
10.0	ORCL	4.07%	INTC	3.69%
10.0	IRM	3.98%	TMUS	3.6%
10.0	ISRG	3.98%	MSTR	3.41%
10.0	ETRN	3.97%	AMD	3.31%
10.0	NVS	3.88%	GILD	3.31%
10.0	VZ	3.88%	AA	3.22%
10.0	B	3.69%	TRGP	3.22%
10.0	INTC	3.69%	B	3.12%
10.0	SBNY	3.68%	AMGN	3.12%
10.0	TSLA	3.6%	MUB	3.03%
10.0	BUD	3.6%	THC	3.03%
10.0	TXN	3.6%	GBTC	2.94%
10.0	NFLX	3.5%	TSLA	2.94%
10.0	ZTS	3.5%	GNRC	2.84%
10.0	HCA	3.41%	NFLX	2.75%
10.0	GLD	3.41%	DHI	2.75%



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 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	MSTR	11.29%	VST	8.61%
21.0	SIVBQ	9.63%	NVDA	8.23%
21.0	CHTR	7.66%	TEVA	7.37%
21.0	VST	7.27%	SLV	6.61%
21.0	WDC	6.99%	MU	6.51%
21.0	GWV	6.89%	CAH	6.32%
21.0	AVGO	6.89%	WDC	5.93%
21.0	KALU	6.32%	MSTR	5.65%
21.0	SLV	6.03%	LLY	5.55%
21.0	GILD	5.93%	TRGP	5.36%
21.0	META	5.84%	ORCL	5.26%
21.0	B	5.55%	GILD	5.17%
21.0	GNRC	5.55%	GE	5.07%
21.0	GME	5.26%	B	5.07%
21.0	ISRG	4.88%	AVGO	4.98%
21.0	MU	4.5%	ETRN	4.55%
21.0	ORCL	4.02%	X	4.35%
21.0	BUD	4.02%	TSLA	4.31%
21.0	TRGP	3.92%	GBTC	4.31%
21.0	CAH	3.83%	GWV	4.21%
21.0	VZ	3.83%	GLD	4.11%
21.0	TEVA	3.35%	INTC	3.92%
21.0	INTC	3.35%	MOS	3.83%
21.0	WFC	3.35%	AMD	3.83%
21.0	NVDA	3.16%	AMGN	3.73%
21.0	XOM	3.16%	TMUS	3.73%
21.0	TXN	3.06%	THC	3.73%
21.0	BALL	2.97%	MUB	3.54%
21.0	NEM	2.78%	DHI	3.44%
21.0	NVS	2.78%	PWR	3.35%



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 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	WDC	15.85%	WDC	17.65%
63.0	AVGO	11.96%	NVDA	16.55%
63.0	VST	10.47%	VST	15.75%
63.0	SLV	10.18%	MU	14.66%
63.0	MU	9.47%	SLV	11.68%
63.0	MSTR	7.98%	GLD	11.37%
63.0	SIVBQ	7.78%	B	11.17%
63.0	KALU	7.38%	MSTR	10.67%
63.0	ORCL	7.28%	GBTC	9.27%
63.0	EXPE	5.78%	TRGP	9.27%
63.0	NVDA	5.58%	CAH	8.87%
63.0	GME	5.48%	LLY	7.78%
63.0	IRM	5.38%	IRM	7.38%
63.0	GLD	5.08%	ORCL	7.28%
63.0	AA	4.99%	GILD	6.88%
63.0	WFC	4.69%	TMUS	6.48%
63.0	TRGP	4.39%	GOOGL	6.28%
63.0	B	3.89%	AVGO	6.08%
63.0	NEM	3.79%	ETRN	5.99%
63.0	GOOGL	3.79%	GE	5.88%
63.0	BUD	3.69%	DHI	5.68%
63.0	META	3.59%	MRK	5.58%
63.0	TMUS	3.39%	NEM	5.38%
63.0	LW	3.29%	KALU	5.38%
63.0	CTLT	3.23%	TEVA	4.89%
63.0	HSBC	2.79%	CCL	4.89%
63.0	GILD	2.59%	ACGL	4.69%
63.0	NVS	2.59%	AA	4.69%
63.0	FCX	2.49%	MUB	4.39%
63.0	XOM	2.39%	XOM	4.39%



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 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	VST	24.57%	VST	27.34%
126.0	MSTR	16.17%	NVDA	25.53%
126.0	AVGO	14.89%	MU	23.3%
126.0	WDC	14.15%	WDC	20.32%
126.0	MU	13.83%	TRGP	19.04%
126.0	IRM	12.87%	GLD	19.04%
126.0	TRGP	9.57%	SLV	14.8%
126.0	SLV	9.37%	MSTR	14.57%
126.0	GOOGL	9.26%	B	14.47%
126.0	META	8.62%	GE	14.26%
126.0	NVDA	7.77%	NEM	14.04%
126.0	GLD	7.13%	THC	13.4%
126.0	NEM	6.7%	GOOGL	12.34%
126.0	MSI	6.49%	TMUS	11.49%
126.0	EXPE	6.06%	IRM	11.38%
126.0	KALU	5.85%	CAH	11.38%
126.0	LW	5.0%	LLY	11.06%
126.0	B	4.89%	GBTC	9.89%
126.0	NVS	4.57%	GILD	9.79%
126.0	TEVA	4.57%	TEVA	9.79%
126.0	BUD	4.15%	ACGL	9.47%
126.0	GSK	3.19%	ORCL	8.83%
126.0	ACGL	2.77%	AA	7.66%
126.0	ORCL	2.66%	AVGO	7.45%
126.0	CAH	2.55%	META	7.34%
126.0	OXY	2.45%	AMAT	7.23%
126.0	AA	2.34%	RIO	6.81%
126.0	TDG	2.13%	CMG	6.7%
126.0	GILD	2.13%	AMD	5.85%
126.0	TMUS	2.02%	PHM	5.85%



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 2026-04-29

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
252.0	AVGO	39.56%	VST	50.37%
252.0	VST	39.43%	NVDA	48.4%
252.0	MSTR	34.28%	AVGO	47.3%
252.0	NVDA	32.43%	GLD	46.68%
252.0	IRM	18.67%	MSTR	34.4%
252.0	GLD	14.0%	GE	34.15%
252.0	WDC	13.64%	LLY	30.34%
252.0	NEM	13.14%	CAH	27.89%
252.0	LLY	12.16%	GBTC	25.31%
252.0	SLV	10.44%	PHM	22.73%
252.0	MU	10.07%	TRGP	21.13%
252.0	B	9.09%	HSBC	21.13%
252.0	TEVA	7.37%	MU	19.66%
252.0	GWV	7.25%	GS	19.16%
252.0	TRGP	6.51%	TMUS	17.81%
252.0	MSI	6.51%	WDC	17.2%
252.0	META	5.77%	TEVA	16.22%
252.0	LW	3.81%	B	16.22%
252.0	KALU	2.58%	COST	16.09%
252.0	GOOGL	2.46%	IRM	15.97%
252.0	GILD	2.33%	META	15.85%
252.0	ORCL	2.33%	NEM	15.11%
252.0	AA	2.21%	ACGL	14.86%
252.0	WFC	2.09%	GOOGL	14.62%
252.0	GSK	1.84%	NFLX	14.13%
252.0	TMUS	1.84%	SLV	13.88%
252.0	THC	1.84%	PWR	13.02%
252.0	NVS	1.72%	MSI	12.53%
252.0	GE	1.47%	THC	11.92%
252.0	ORLY	1.47%	JPM	11.67%



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 2026-04-29 through 2026-04-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	UNH	25.0%	ON	20.0%
1.0	INTC	15.0%	INTC	15.0%
1.0	NFLX	15.0%	BUD	10.0%
1.0	AMZN	10.0%	RIO	10.0%
1.0	CNC	10.0%	MU	10.0%
1.0	BUD	10.0%	MS	10.0%
1.0	TSLA	10.0%	HD	10.0%
1.0	TXN	10.0%	TDG	10.0%
1.0	JAZZ	10.0%	CCL	10.0%
1.0	QCOM	10.0%	CDNS	10.0%
1.0	WDC	10.0%	AMD	10.0%
1.0	FCX	5.0%	SBUX	10.0%
1.0	EXPE	5.0%	QCOM	10.0%
1.0	PWR	5.0%	KALU	10.0%
1.0	TEVA	5.0%	CNC	10.0%
1.0	FIS	5.0%	QQQ	5.0%
1.0	SBUX	5.0%	ISRG	5.0%
1.0	CVS	5.0%	GS	5.0%
1.0	ON	5.0%	GOOGL	5.0%
1.0	NEM	5.0%	GE	5.0%
1.0	ORCL	5.0%	SPY	5.0%
1.0	GOOGL	5.0%	T	5.0%
1.0	HON	5.0%	TEVA	5.0%
1.0	GNRC	5.0%	GNRC	5.0%
1.0	GE	5.0%	HLT	5.0%
1.0	CMCSA	5.0%	PWR	5.0%
1.0	ISRG	5.0%	ORCL	5.0%
1.0	KALU	5.0%	MSFT	5.0%
1.0	META	5.0%	NEM	5.0%
1.0	TMUS	5.0%	MNST	5.0%



P30D: 10d

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

Period examined: All model dates from 2026-04-29 through 2026-04-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	ON	100.0%	ON	100.0%
10.0	TXN	100.0%	AMD	90.91%
10.0	UNH	90.91%	INTC	81.82%
10.0	INTC	81.82%	TXN	81.82%
10.0	AMZN	45.45%	KALU	54.55%
10.0	KALU	45.45%	MSFT	45.45%
10.0	EXPE	36.36%	AMZN	45.45%
10.0	META	36.36%	QQQ	36.36%
10.0	QCOM	27.27%	GOOGL	27.27%
10.0	VFC	27.27%	CNC	27.27%
10.0	CNC	27.27%	AVGO	27.27%
10.0	IRM	27.27%	HLT	27.27%
10.0	GNRC	18.18%	SPY	18.18%
10.0	BAC	18.18%	GNRC	18.18%
10.0	WDC	18.18%	IRM	18.18%
10.0	ORCL	18.18%	MS	18.18%
10.0	NFLX	9.09%	CDNS	9.09%
10.0	LUMN	9.09%	PWR	9.09%
10.0	HSBC	9.09%	QCOM	9.09%
10.0	UAA	9.09%	VFC	9.09%
10.0	NAVI	0.0%	META	9.09%
10.0	NEM	0.0%	WDC	9.09%
10.0	NVS	0.0%	DHI	9.09%
10.0	NVDA	0.0%	ORCL	9.09%
10.0	NWL	0.0%	NVS	0.0%
10.0	ORLY	0.0%	NVDA	0.0%
10.0	MUB	0.0%	NFLX	0.0%
10.0	AA	0.0%	NEM	0.0%
10.0	MU	0.0%	ORLY	0.0%
10.0	MSTR	0.0%	NWL	0.0%



P90D: 1d

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

Period examined: All model dates from 2026-04-29 through 2026-02-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	NFLX	13.11%	CSTM	11.48%
1.0	WDC	9.84%	WDC	9.84%
1.0	UNH	8.2%	BHP	8.2%
1.0	ORCL	6.56%	ON	8.2%
1.0	GNRC	6.56%	KALU	8.2%
1.0	PWR	6.56%	RIO	8.2%
1.0	TSLA	4.92%	IRM	6.56%
1.0	GLD	4.92%	HSBC	6.56%
1.0	INTC	4.92%	CCL	6.56%
1.0	JAZZ	4.92%	PWR	6.56%
1.0	CSTM	4.92%	INTC	6.56%
1.0	BUD	4.92%	MU	6.56%
1.0	AA	4.92%	CDNS	4.92%
1.0	UAA	4.92%	GS	4.92%
1.0	TMUS	3.28%	GOOGL	4.92%
1.0	ON	3.28%	AA	4.92%
1.0	GSK	3.28%	BUD	4.92%
1.0	EXPE	3.28%	GNRC	4.92%
1.0	IEP	3.28%	CSCO	4.92%
1.0	ADBE	3.28%	CZR	4.92%
1.0	META	3.28%	OXY	4.92%
1.0	CNC	3.28%	GSK	4.92%
1.0	THC	3.28%	BIIB	4.92%
1.0	AMGN	3.28%	FCX	4.92%
1.0	GILD	3.28%	AMAT	4.92%
1.0	QCOM	3.28%	VZ	4.92%
1.0	AMZN	3.28%	BALL	4.92%
1.0	BMY	3.28%	NEM	4.92%
1.0	TXN	3.28%	INTU	4.92%
1.0	PCG	3.28%	AMD	4.92%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	TXN	28.85%	INTC	28.85%
10.0	INTC	28.85%	KALU	23.08%
10.0	UNH	26.92%	ON	23.08%
10.0	NFLX	25.0%	AMD	21.15%
10.0	KALU	23.08%	TXN	19.23%
10.0	ON	23.08%	IRM	17.31%
10.0	AMZN	17.31%	GNRC	17.31%
10.0	GNRC	15.38%	NFLX	15.38%
10.0	EXPE	15.38%	AMZN	15.38%
10.0	BUD	15.38%	AA	13.46%
10.0	META	15.38%	GOOGL	13.46%
10.0	HSBC	13.46%	CSTM	13.46%
10.0	PCG	13.46%	MSI	13.46%
10.0	THC	13.46%	QQQ	13.46%
10.0	WDC	11.54%	AVGO	11.54%
10.0	TMUS	11.54%	WDC	11.54%
10.0	IRM	9.62%	THC	11.54%
10.0	GSK	9.62%	PCG	9.62%
10.0	UAA	7.69%	OXY	9.62%
10.0	CVS	7.69%	HLT	9.62%
10.0	CZR	7.69%	SPY	9.62%
10.0	CSTM	7.69%	MSFT	9.62%
10.0	BAC	7.69%	MS	9.62%
10.0	QCOM	5.77%	BHP	9.62%
10.0	CNC	5.77%	CZR	7.69%
10.0	VFC	5.77%	RIO	7.69%
10.0	GE	3.85%	AMAT	7.69%
10.0	GLD	3.85%	INTU	7.69%
10.0	ORCL	3.85%	HSBC	7.69%
10.0	JAZZ	3.85%	BUD	5.77%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	INTC	36.59%	INTC	34.15%
21.0	KALU	24.39%	OXY	26.83%
21.0	UNH	19.51%	KALU	24.39%
21.0	ON	19.51%	AMD	24.39%
21.0	THC	17.07%	ON	24.39%
21.0	TXN	17.07%	CSTM	24.39%
21.0	CSTM	14.63%	TXN	19.51%
21.0	AMZN	14.63%	AVGO	17.07%
21.0	CNC	7.32%	WDC	14.63%
21.0	BUD	7.32%	AMZN	14.63%
21.0	META	7.32%	GOOGL	12.2%
21.0	TMUS	7.32%	MU	9.76%
21.0	QCOM	4.88%	QQQ	9.76%
21.0	FITB	4.88%	MS	7.32%
21.0	WDC	4.88%	UNH	7.32%
21.0	GSK	2.44%	THC	7.32%
21.0	GNRC	2.44%	SPY	7.32%
21.0	BALL	2.44%	CNC	7.32%
21.0	GLD	2.44%	NFLX	4.88%
21.0	TRGP	2.44%	GNRC	4.88%
21.0	IRM	2.44%	FCX	4.88%
21.0	CVS	2.44%	HLT	4.88%
21.0	NVDA	0.0%	CZR	4.88%
21.0	LUMN	0.0%	HSBC	4.88%
21.0	NWL	0.0%	MSFT	4.88%
21.0	NVS	0.0%	MSI	2.44%
21.0	NFLX	0.0%	NVDA	2.44%
21.0	LQD	0.0%	META	2.44%
21.0	ORCL	0.0%	QCOM	2.44%
21.0	ORLY	0.0%	CSCO	2.44%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
1.0	WDC	11.6%	SLV	9.24%
1.0	TSLA	6.8%	WDC	8.8%
1.0	GILD	6.4%	MU	5.6%
1.0	GLD	4.8%	NEM	5.6%
1.0	PCG	4.4%	INTC	5.2%
1.0	SLV	4.02%	B	5.2%
1.0	AA	4.0%	CSTM	4.8%
1.0	UNH	3.6%	CCL	4.4%
1.0	MU	3.6%	AA	4.0%
1.0	TXN	3.2%	AMD	4.0%
1.0	NVS	3.2%	LUMN	3.6%
1.0	NFLX	3.2%	KALU	3.6%
1.0	GNRC	3.2%	BHP	3.6%
1.0	X	3.12%	RIO	3.6%
1.0	AMC	2.8%	CSCO	3.2%
1.0	AMZN	2.8%	GLD	3.2%
1.0	ORCL	2.8%	PHM	3.2%
1.0	AAP	2.8%	ON	3.2%
1.0	CMA	2.65%	BIIB	3.2%
1.0	CLF	2.4%	DHI	3.2%
1.0	NEM	2.4%	X	3.12%
1.0	VZ	2.4%	AMAT	2.8%
1.0	ZTS	2.4%	AZN	2.8%
1.0	BUD	2.0%	GOOGL	2.8%
1.0	META	2.0%	GILD	2.8%
1.0	GWV	2.0%	TEVA	2.8%
1.0	JAZZ	2.0%	HD	2.8%
1.0	INTC	2.0%	HSBC	2.8%
1.0	VFC	1.6%	T	2.8%
1.0	PWR	1.6%	GS	2.4%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
10.0	WDC	24.48%	X	43.48%
10.0	INTC	14.52%	SLV	18.33%
10.0	KALU	12.45%	WDC	14.52%
10.0	TXN	12.03%	INTC	14.11%
10.0	SLV	11.67%	MU	11.2%
10.0	GLD	9.96%	GNRC	10.79%
10.0	BUD	9.96%	B	9.96%
10.0	AVGO	8.71%	GOOGL	9.13%
10.0	X	8.7%	AMD	9.13%
10.0	AA	8.3%	AA	8.71%
10.0	NVS	8.3%	ORCL	8.71%
10.0	GNRC	8.3%	KALU	6.64%
10.0	AMZN	8.3%	TEVA	5.81%
10.0	GILD	7.88%	GILD	5.81%
10.0	AAP	7.88%	TXN	5.81%
10.0	MU	7.47%	AMAT	5.81%
10.0	CMA	7.22%	AAP	5.39%
10.0	HCA	6.64%	ON	4.98%
10.0	EXPE	6.64%	GSK	4.98%
10.0	TSLA	6.22%	GLD	4.56%
10.0	UNH	6.22%	XOM	4.56%
10.0	ON	5.81%	CCL	4.56%
10.0	THC	5.81%	JAZZ	4.56%
10.0	NFLX	5.39%	AZN	4.56%
10.0	JAZZ	4.98%	LVS	4.56%
10.0	ELAN	4.56%	CSTM	4.56%
10.0	PCG	4.56%	AMZN	4.56%
10.0	CAH	4.56%	ELAN	4.56%
10.0	GOOGL	4.56%	IRM	4.15%
10.0	META	4.15%	LUMN	4.15%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
21.0	WDC	27.83%	SLV	25.76%
21.0	SLV	22.27%	WDC	25.22%
21.0	KALU	18.26%	B	21.74%
21.0	MU	16.52%	MU	20.87%
21.0	INTC	15.22%	X	16.67%
21.0	AVGO	12.17%	INTC	15.22%
21.0	GNRC	11.74%	GNRC	13.91%
21.0	GLD	10.43%	AMD	13.91%
21.0	TXN	10.0%	ORCL	12.61%
21.0	B	9.57%	TEVA	9.57%
21.0	GOOGL	9.13%	JAZZ	9.13%
21.0	BALL	9.13%	AA	9.13%
21.0	JAZZ	9.13%	CAH	9.13%
21.0	AA	9.13%	RIO	8.26%
21.0	THC	8.7%	XOM	8.26%
21.0	BUD	8.7%	GLD	8.26%
21.0	X	8.33%	VZ	7.83%
21.0	AAP	8.26%	GOOGL	7.83%
21.0	VZ	8.26%	BALL	7.39%
21.0	GILD	8.26%	GSK	6.96%
21.0	TMUS	6.96%	CSTM	6.96%
21.0	CMA	5.92%	KALU	6.52%
21.0	NVS	5.65%	ISRG	6.09%
21.0	CAH	5.65%	AMAT	6.09%
21.0	AMZN	5.22%	MSI	5.65%
21.0	FCX	5.22%	GILD	5.65%
21.0	EXPE	5.22%	TXN	5.22%
21.0	XOM	4.78%	TRGP	5.22%
21.0	ISRG	4.78%	PEP	5.22%
21.0	UAA	3.48%	T	5.22%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
63.0	WDC	73.94%	WDC	85.64%
63.0	SLV	51.34%	B	59.57%
63.0	MU	47.87%	SLV	56.15%
63.0	AA	26.6%	MU	55.32%
63.0	AVGO	26.06%	GOOGL	33.51%
63.0	KALU	25.53%	GLD	32.45%
63.0	GLD	25.0%	CAH	31.91%
63.0	NEM	20.21%	NEM	28.72%
63.0	B	19.68%	AA	25.0%
63.0	EXPE	15.43%	TEVA	23.4%
63.0	NVS	13.83%	XOM	23.4%
63.0	FCX	13.3%	KALU	21.28%
63.0	ORCL	12.23%	CSTM	18.09%
63.0	GOOGL	12.23%	RIO	18.09%
63.0	HSBC	11.17%	GNRC	17.02%
63.0	GSK	10.64%	HSBC	13.83%
63.0	XOM	10.11%	INTC	13.3%
63.0	WYNN	9.04%	NVS	11.7%
63.0	INTC	7.45%	ORCL	11.7%
63.0	JAZZ	7.45%	AMAT	11.7%
63.0	GNRC	5.85%	BALL	10.64%
63.0	VZ	3.19%	OXY	9.57%
63.0	ELAN	2.66%	FCX	9.57%
63.0	GILD	2.13%	BHP	9.04%
63.0	CVS	1.6%	LUMN	7.45%
63.0	TXN	1.6%	DHI	7.45%
63.0	TSLA	1.6%	MSI	6.38%
63.0	AAPL	1.6%	MRK	6.38%
63.0	BUD	1.6%	LLY	5.32%
63.0	MRK	1.6%	TRGP	5.32%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	OaRBreak_V	Ticker_S	OaRBreak_S
126.0	MU	89.6%	WDC	100.0%
126.0	WDC	70.4%	MU	99.2%
126.0	SLV	64.52%	SLV	99.19%
126.0	GOOGL	55.2%	B	76.0%
126.0	KALU	44.0%	NEM	68.8%
126.0	AVGO	42.4%	GOOGL	66.4%
126.0	GLD	42.4%	AA	57.6%
126.0	NVS	34.4%	CAH	54.4%
126.0	B	25.6%	GLD	52.8%
126.0	GSK	24.0%	RIO	51.2%
126.0	NEM	24.0%	AMAT	47.2%
126.0	AA	17.6%	TEVA	46.4%
126.0	CMA	17.19%	KALU	35.2%
126.0	EXPE	11.2%	INTC	29.6%
126.0	ELAN	9.6%	CSTM	28.8%
126.0	HSBC	9.6%	HSBC	21.6%
126.0	CSTM	8.0%	AMD	17.6%
126.0	XOM	8.0%	GSK	16.0%
126.0	RIO	8.0%	XOM	16.0%
126.0	HCA	5.6%	JAZZ	15.2%
126.0	AMD	4.0%	MRK	8.0%
126.0	JAZZ	4.0%	NVS	8.0%
126.0	INTC	3.2%	TRGP	8.0%
126.0	ORCL	0.8%	ELAN	8.0%
126.0	GILD	0.8%	BHP	7.2%
126.0	GS	0.8%	LVS	6.4%
126.0	TXN	0.8%	MNST	5.6%
126.0	MNST	0.0%	EXPE	5.6%
126.0	ORLY	0.0%	ORCL	2.4%
126.0	MS	0.0%	TXN	1.6%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	NVDA	0.56%	MSTR	0.31%
1.0	X	0.45%	WDC	0.25%
1.0	AVGO	0.44%	NVDA	0.25%
1.0	PWR	0.43%	VST	0.24%
1.0	GBTC	0.39%	MU	0.23%
1.0	MU	0.37%	AVGO	0.22%
1.0	GE	0.36%	PWR	0.21%
1.0	VST	0.35%	TEVA	0.17%
1.0	LLY	0.34%	GME	0.17%
1.0	WDC	0.33%	X	0.17%
1.0	AMD	0.32%	AMD	0.17%
1.0	CAH	0.29%	TRGP	0.16%
1.0	TRGP	0.28%	GBTC	0.15%
1.0	CCL	0.25%	GE	0.15%
1.0	MSTR	0.25%	LLY	0.15%
1.0	AMAT	0.25%	SLV	0.14%
1.0	SLV	0.24%	AMAT	0.14%
1.0	ON	0.22%	CAH	0.14%
1.0	TSLA	0.22%	THC	0.12%
1.0	B	0.22%	GOOGL	0.12%
1.0	CDNS	0.21%	INTC	0.12%
1.0	HLT	0.2%	ETRN	0.12%
1.0	TDG	0.2%	IRM	0.11%
1.0	ORLY	0.2%	NFLX	0.11%
1.0	PHM	0.19%	ON	0.11%
1.0	JAZZ	0.19%	META	0.11%
1.0	CSTM	0.19%	GS	0.11%
1.0	THC	0.19%	PHM	0.1%
1.0	GS	0.18%	HSBC	0.1%
1.0	JPM	0.17%	CSTM	0.1%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	NVDA	5.79%	MSTR	3.17%
10.0	AVGO	3.88%	NVDA	2.51%
10.0	MU	3.35%	WDC	2.51%
10.0	PWR	3.34%	VST	2.32%
10.0	LLY	3.34%	MU	2.23%
10.0	AMAT	3.02%	AVGO	2.21%
10.0	MSTR	2.99%	PWR	1.93%
10.0	WDC	2.97%	TEVA	1.7%
10.0	GBTC	2.93%	X	1.58%
10.0	VST	2.8%	TRGP	1.5%
10.0	TSLA	2.73%	AMD	1.49%
10.0	TEVA	2.7%	GE	1.47%
10.0	CCL	2.66%	LLY	1.47%
10.0	AMD	2.61%	GME	1.45%
10.0	GE	2.44%	CAH	1.42%
10.0	CAH	2.11%	GBTC	1.41%
10.0	X	2.09%	ETRN	1.41%
10.0	SLV	2.08%	SLV	1.38%
10.0	CSTM	2.06%	AMAT	1.34%
10.0	PHM	1.96%	META	1.3%
10.0	THC	1.88%	THC	1.21%
10.0	GS	1.83%	NFLX	1.21%
10.0	TRGP	1.83%	IRM	1.1%
10.0	AZO	1.69%	PHM	1.07%
10.0	ACGL	1.62%	GS	1.05%
10.0	DHI	1.58%	ORCL	1.04%
10.0	COST	1.55%	GOOGL	1.04%
10.0	NEM	1.54%	INTC	1.04%
10.0	HLT	1.52%	TSLA	0.98%
10.0	JPM	1.46%	HSBC	0.98%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	NVDA	11.21%	MSTR	6.88%
21.0	ETRN	7.53%	NVDA	5.35%
21.0	VST	7.29%	WDC	5.21%
21.0	AMD	7.28%	VST	5.0%
21.0	GBTC	7.12%	AVGO	4.46%
21.0	MSTR	6.9%	MU	4.45%
21.0	TSLA	6.81%	PWR	4.02%
21.0	AVGO	6.38%	TEVA	3.63%
21.0	AMAT	6.23%	ETRN	3.5%
21.0	PWR	6.15%	GE	3.24%
21.0	CCL	6.04%	X	3.17%
21.0	MU	5.72%	TRGP	3.15%
21.0	LLY	5.49%	LLY	3.1%
21.0	WDC	5.45%	CAH	3.08%
21.0	GE	5.39%	GBTC	3.04%
21.0	TEVA	5.39%	AMD	3.0%
21.0	CAH	4.79%	SLV	2.84%
21.0	X	4.44%	AMAT	2.81%
21.0	PHM	4.01%	META	2.8%
21.0	LUMN	3.89%	NFLX	2.74%
21.0	CDNS	3.84%	THC	2.59%
21.0	SLV	3.83%	PHM	2.25%
21.0	TRGP	3.78%	GME	2.25%
21.0	THC	3.63%	IRM	2.25%
21.0	CSTM	3.61%	TSLA	2.25%
21.0	AZO	3.5%	GS	2.24%
21.0	DHI	3.5%	GOOGL	2.16%
21.0	GS	3.49%	ORCL	2.15%
21.0	AA	3.44%	HSEC	2.06%
21.0	PCG	3.3%	GW	2.05%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	NVDA	36.23%	MSTR	19.86%
63.0	GBTC	30.37%	NVDA	17.71%
63.0	MSTR	26.89%	WDC	17.29%
63.0	VST	23.17%	VST	16.5%
63.0	PWR	22.56%	MU	14.87%
63.0	LLY	20.47%	AVGO	13.34%
63.0	GE	19.94%	PWR	11.32%
63.0	MU	19.73%	GE	10.68%
63.0	AMD	19.64%	TEVA	10.63%
63.0	WDC	19.19%	ETRN	10.28%
63.0	ETRN	18.76%	GBTC	10.23%
63.0	CCL	18.6%	META	9.83%
63.0	AMAT	18.18%	CAH	9.49%
63.0	PHM	17.09%	LLY	9.46%
63.0	TEVA	16.9%	SLV	9.1%
63.0	CAH	15.95%	NFLX	9.03%
63.0	B	14.95%	TRGP	8.98%
63.0	AVGO	14.64%	AMAT	8.61%
63.0	LUMN	14.43%	THC	8.51%
63.0	TRGP	12.47%	AMD	8.02%
63.0	THC	11.7%	PHM	7.91%
63.0	TSLA	11.34%	GS	6.92%
63.0	SLV	11.22%	GOOGL	6.87%
63.0	JPM	11.18%	CCL	6.68%
63.0	MS	11.06%	ORCL	6.65%
63.0	X	10.99%	HSBC	6.63%
63.0	META	10.89%	GLD	6.26%
63.0	GOOGL	10.74%	GILD	6.11%
63.0	GS	10.49%	B	6.1%
63.0	CSTM	9.91%	TSLA	5.94%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	NVDA	89.23%	MSTR	51.15%
126.0	GBTC	80.25%	NVDA	44.77%
126.0	WDC	61.14%	WDC	40.81%
126.0	MSTR	59.29%	VST	36.89%
126.0	MU	57.09%	MU	35.79%
126.0	VST	50.01%	AVGO	30.34%
126.0	GE	49.71%	GBTC	30.11%
126.0	AMD	46.14%	GE	25.9%
126.0	PWR	45.45%	META	23.74%
126.0	LLY	44.7%	NFLX	23.04%
126.0	PHM	41.75%	TEVA	22.66%
126.0	AMAT	41.39%	PWR	22.17%
126.0	THC	39.96%	THC	20.82%
126.0	CCL	39.56%	CAH	20.24%
126.0	TEVA	35.57%	SLV	20.14%
126.0	CAH	35.09%	LLY	19.99%
126.0	NFLX	34.96%	AMD	19.15%
126.0	AVGO	34.45%	AMAT	18.75%
126.0	B	34.44%	ETRN	18.49%
126.0	ORCL	32.65%	TRGP	18.09%
126.0	LUMN	31.11%	PHM	17.62%
126.0	JPM	30.15%	ORCL	16.64%
126.0	MS	27.95%	GOOGL	16.28%
126.0	META	27.76%	GS	15.44%
126.0	TSLA	27.63%	B	15.24%
126.0	SLV	27.05%	CCL	14.38%
126.0	TRGP	26.19%	HSBC	13.79%
126.0	GOOGL	25.78%	GLD	13.46%
126.0	X	25.56%	JPM	13.18%
126.0	GS	25.01%	HCA	12.84%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	GBTC	217.06%	MSTR	175.05%
252.0	NVDA	204.58%	NVDA	121.14%
252.0	MSTR	194.57%	VST	109.27%
252.0	GE	143.19%	GBTC	95.86%
252.0	MU	135.49%	WDC	79.54%
252.0	VST	122.49%	AVGO	76.63%
252.0	PHM	110.09%	MU	68.25%
252.0	CCL	109.2%	META	65.44%
252.0	THC	105.9%	GE	61.82%
252.0	WDC	101.52%	NFLX	59.69%
252.0	NFLX	99.24%	THC	48.84%
252.0	META	92.96%	PWR	47.27%
252.0	AVGO	92.78%	PHM	43.32%
252.0	AMAT	85.32%	LLY	42.63%
252.0	TRGP	83.1%	TEVA	41.15%
252.0	PWR	80.32%	TRGP	40.22%
252.0	AMD	77.31%	CAH	39.5%
252.0	LLY	68.87%	AMD	38.44%
252.0	X	68.34%	CCL	37.88%
252.0	ORCL	66.84%	ORCL	37.55%
252.0	CAH	66.48%	SLV	37.12%
252.0	MS	65.42%	ETRN	35.78%
252.0	TEVA	65.19%	AMAT	35.49%
252.0	SLV	63.19%	GS	32.85%
252.0	GS	61.13%	GOOGL	32.47%
252.0	QQQ	60.15%	JPM	31.38%
252.0	GOOGL	59.91%	TDG	30.62%
252.0	HSBC	59.13%	HSBC	30.31%
252.0	JPM	58.91%	ISRG	29.18%
252.0	ELAN	55.52%	GLD	29.07%



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 2026-04-29 through 2026-04-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	MU	5.37%	INTC	3.61%
1.0	AMD	4.79%	AMD	2.72%
1.0	AVGO	4.65%	ON	2.51%
1.0	INTC	4.56%	CNC	2.38%
1.0	ON	4.34%	AMC	2.14%
1.0	LUMN	3.29%	WDC	1.94%
1.0	PWR	3.29%	TXN	1.91%
1.0	WDC	3.17%	QCOM	1.82%
1.0	CNC	2.98%	MU	1.78%
1.0	NVDA	2.61%	MSTR	1.6%
1.0	CSCO	2.45%	UNH	1.55%
1.0	GOOGL	2.15%	AVGO	1.48%
1.0	CDNS	2.1%	GNRC	1.41%
1.0	TXN	2.04%	PWR	1.38%
1.0	MSTR	2.02%	KALU	1.36%
1.0	QCOM	2.02%	GOOGL	1.33%
1.0	QQQ	1.95%	LUMN	1.18%
1.0	AMC	1.9%	AMZN	1.17%
1.0	NWL	1.88%	IRM	1.15%
1.0	KALU	1.83%	CLF	1.12%
1.0	IRM	1.7%	CDNS	0.87%
1.0	TEVA	1.6%	CSCO	0.82%
1.0	GNRC	1.6%	VNO	0.8%
1.0	DHI	1.58%	SBUX	0.79%
1.0	LW	1.55%	TEVA	0.79%
1.0	SBUX	1.49%	NWL	0.77%
1.0	NAVI	1.4%	CVS	0.72%
1.0	SPY	1.4%	CSTM	0.71%
1.0	MSFT	1.36%	MS	0.7%
1.0	VNO	1.35%	BXP	0.69%



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 2026-04-29 through 2026-04-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	AMD	88.51%	ON	34.5%
10.0	MU	49.96%	AMD	30.54%
10.0	AVGO	48.63%	INTC	30.11%
10.0	ON	33.55%	MSTR	27.53%
10.0	AMC	31.7%	AMC	25.36%
10.0	LUMN	29.66%	TXN	21.36%
10.0	NVDA	28.8%	LUMN	18.49%
10.0	INTC	27.95%	KALU	18.29%
10.0	MSTR	26.0%	WDC	18.19%
10.0	NWL	23.28%	MU	17.88%
10.0	GOOGL	23.2%	CNC	17.81%
10.0	QQQ	20.83%	AVGO	16.24%
10.0	CDNS	20.61%	ORCL	15.89%
10.0	PWR	20.43%	UNH	15.71%
10.0	MSFT	19.49%	CDNS	13.4%
10.0	WDC	19.05%	QCOM	12.53%
10.0	NAVI	18.44%	AMZN	12.01%
10.0	KALU	18.16%	VFC	11.44%
10.0	VNO	17.4%	MSFT	10.42%
10.0	ORCL	16.77%	NWL	10.28%
10.0	CNC	16.73%	GNRC	10.22%
10.0	CSCO	16.42%	NVDA	10.13%
10.0	DHI	14.39%	DHI	9.76%
10.0	SPY	13.75%	GOOGL	9.48%
10.0	TXN	13.53%	VNO	9.3%
10.0	MS	13.12%	BXP	9.11%
10.0	PRGO	12.78%	CLF	9.01%
10.0	AMAT	12.06%	EXPE	8.75%
10.0	PHM	11.52%	PWR	8.7%
10.0	AMZN	11.39%	META	8.25%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	INTC	1.55%	INTC	1.21%
1.0	OXY	1.47%	WDC	0.89%
1.0	PWR	1.42%	ON	0.87%
1.0	AMD	1.33%	GNRC	0.76%
1.0	AVGO	1.32%	PWR	0.73%
1.0	ON	1.29%	AMD	0.7%
1.0	CSTM	1.09%	IRM	0.59%
1.0	MU	0.97%	OXY	0.57%
1.0	IRM	0.94%	CZR	0.57%
1.0	WDC	0.92%	CSTM	0.52%
1.0	GNRC	0.89%	KALU	0.48%
1.0	AA	0.84%	TRGP	0.45%
1.0	AMAT	0.82%	UNH	0.45%
1.0	CZR	0.75%	CNC	0.45%
1.0	BHP	0.73%	MSTR	0.44%
1.0	TRGP	0.68%	AVGO	0.42%
1.0	KALU	0.67%	TXN	0.41%
1.0	NVDA	0.65%	MU	0.37%
1.0	CNC	0.63%	AAP	0.37%
1.0	TXN	0.53%	AMAT	0.36%
1.0	CDNS	0.5%	JAZZ	0.34%
1.0	SBUX	0.46%	QCOM	0.31%
1.0	VST	0.45%	CDNS	0.26%
1.0	JAZZ	0.44%	SBUX	0.25%
1.0	MSTR	0.43%	BHP	0.25%
1.0	AAP	0.42%	NFLX	0.24%
1.0	QCOM	0.37%	CSCO	0.24%
1.0	VZ	0.37%	AMC	0.22%
1.0	LUMN	0.36%	AA	0.22%
1.0	HLT	0.35%	GOOGL	0.21%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	AMD	23.54%	INTC	10.7%
10.0	AVGO	15.31%	AMD	8.51%
10.0	MU	13.37%	ON	8.22%
10.0	INTC	10.98%	WDC	8.04%
10.0	OXY	10.15%	CZR	6.81%
10.0	AMAT	10.01%	AMC	6.59%
10.0	WDC	9.48%	MSTR	6.11%
10.0	PWR	9.02%	CSTM	5.14%
10.0	CZR	7.86%	AVGO	4.98%
10.0	ON	7.34%	MU	4.95%
10.0	NVDA	7.31%	UNH	4.85%
10.0	GNRC	6.8%	OXY	4.8%
10.0	CSTM	6.65%	PWR	4.71%
10.0	MSTR	5.31%	AMAT	4.36%
10.0	GOOGL	5.27%	IRM	4.21%
10.0	IRM	5.08%	KALU	4.18%
10.0	BHP	4.79%	GNRC	4.08%
10.0	QQQ	4.71%	JAZZ	3.92%
10.0	CDNS	4.35%	AMZN	3.77%
10.0	AMZN	4.0%	NFLX	3.65%
10.0	FCX	3.9%	TXN	3.34%
10.0	CNC	3.88%	LUMN	3.3%
10.0	SLV	3.82%	ORCL	2.99%
10.0	HLT	3.78%	CDNS	2.79%
10.0	AMC	3.72%	TRGP	2.64%
10.0	JAZZ	3.67%	CNC	2.6%
10.0	CSCO	3.6%	NVDA	2.41%
10.0	KALU	3.56%	AA	2.28%
10.0	AA	3.41%	BHP	2.27%
10.0	ORCL	3.24%	EXPE	2.26%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	AMD	44.79%	INTC	24.35%
21.0	AVGO	27.07%	AMD	17.1%
21.0	WDC	22.04%	WDC	15.96%
21.0	INTC	21.53%	CZR	14.76%
21.0	CZR	20.24%	AMC	14.65%
21.0	OXY	18.15%	ON	11.95%
21.0	ON	17.34%	OXY	10.66%
21.0	NFLX	16.21%	CSTM	10.62%
21.0	MU	13.48%	NFLX	9.84%
21.0	CSTM	13.08%	AVGO	8.94%
21.0	AMAT	10.46%	UNH	7.97%
21.0	AA	9.28%	KALU	7.94%
21.0	MSTR	8.95%	AMZN	7.8%
21.0	GOOGL	8.82%	MSTR	7.61%
21.0	AMZN	8.57%	PWR	7.18%
21.0	KALU	7.89%	JAZZ	7.13%
21.0	CSCO	7.86%	AA	6.9%
21.0	PWR	7.8%	EXPE	6.32%
21.0	NVDA	7.76%	MU	6.14%
21.0	IRM	6.99%	AMAT	5.86%
21.0	FCX	6.57%	IRM	5.16%
21.0	JAZZ	6.38%	LUMN	5.03%
21.0	TXN	5.8%	TRGP	4.7%
21.0	QQQ	5.58%	TXN	4.41%
21.0	HLT	5.52%	GBTC	4.15%
21.0	ORCL	4.85%	ORCL	3.84%
21.0	GNRC	4.83%	CSCO	3.22%
21.0	EXPE	4.46%	NVDA	3.1%
21.0	TRGP	4.44%	MS	3.05%
21.0	GBTC	4.25%	GOOGL	3.0%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	X	1.57%	WDC	1.0%
1.0	LUMN	1.38%	MU	0.83%
1.0	MU	1.25%	X	0.81%
1.0	AMD	1.24%	INTC	0.71%
1.0	INTC	1.08%	AMD	0.59%
1.0	WDC	1.06%	LUMN	0.49%
1.0	AMAT	1.0%	CSTM	0.47%
1.0	CSTM	0.94%	AA	0.44%
1.0	SLV	0.89%	AMAT	0.43%
1.0	NVDA	0.77%	ON	0.43%
1.0	AA	0.72%	KALU	0.41%
1.0	AVGO	0.71%	SLV	0.4%
1.0	PWR	0.69%	ELAN	0.38%
1.0	BHP	0.63%	GNRC	0.38%
1.0	B	0.59%	GOOGL	0.37%
1.0	KALU	0.59%	TEVA	0.36%
1.0	TEVA	0.58%	PWR	0.35%
1.0	ELAN	0.57%	NEM	0.35%
1.0	LVS	0.57%	B	0.34%
1.0	NEM	0.56%	AAP	0.34%
1.0	AAP	0.54%	AVGO	0.34%
1.0	GOOGL	0.54%	CMA	0.28%
1.0	GNRC	0.53%	TXN	0.26%
1.0	RIO	0.53%	NVDA	0.26%
1.0	CLF	0.52%	JAZZ	0.25%
1.0	ON	0.51%	VFC	0.23%
1.0	BIIB	0.49%	RIO	0.23%
1.0	HSBC	0.47%	FCX	0.23%
1.0	OXY	0.43%	EXPE	0.22%
1.0	CCL	0.42%	BHP	0.22%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	X	24.21%	X	11.83%
10.0	LUMN	11.78%	WDC	9.89%
10.0	MU	11.39%	MU	8.19%
10.0	AMD	10.39%	INTC	6.44%
10.0	AMAT	9.7%	AMD	5.46%
10.0	WDC	8.96%	CSTM	4.46%
10.0	SLV	7.82%	LUMN	4.3%
10.0	CSTM	7.73%	AA	4.26%
10.0	INTC	6.82%	AMAT	4.23%
10.0	NVDA	6.53%	SLV	4.1%
10.0	AVGO	5.97%	KALU	4.08%
10.0	BHP	5.4%	ON	4.03%
10.0	GNRC	5.32%	B	3.61%
10.0	AA	5.15%	NEM	3.56%
10.0	TEVA	5.07%	GOOGL	3.45%
10.0	GOOGL	5.06%	AAP	3.37%
10.0	PWR	4.98%	GNRC	3.29%
10.0	BIIB	4.85%	ELAN	3.22%
10.0	NEM	4.66%	AVGO	3.16%
10.0	B	4.63%	TEVA	2.98%
10.0	AAP	3.8%	CMA	2.95%
10.0	ELAN	3.8%	PWR	2.87%
10.0	GS	3.78%	JAZZ	2.87%
10.0	CLF	3.75%	FCX	2.53%
10.0	ON	3.7%	NVDA	2.46%
10.0	RIO	3.46%	RIO	2.2%
10.0	KALU	3.39%	EXPE	2.2%
10.0	CMA	3.13%	BHP	2.17%
10.0	KEY	3.04%	VFC	2.15%
10.0	LVS	3.03%	GS	2.15%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	X	38.36%	X	27.75%
21.0	LUMN	24.63%	WDC	21.01%
21.0	AMD	22.92%	MU	17.02%
21.0	WDC	20.22%	INTC	13.03%
21.0	MU	19.65%	AMD	10.59%
21.0	AMAT	17.19%	AA	9.49%
21.0	CSTM	15.21%	CSTM	9.28%
21.0	SLV	13.61%	SLV	9.08%
21.0	TEVA	12.59%	AMAT	8.98%
21.0	INTC	12.53%	LUMN	8.46%
21.0	B	11.62%	B	8.35%
21.0	AA	11.54%	KALU	8.02%
21.0	ON	10.68%	NEM	7.95%
21.0	BHP	10.51%	ON	7.0%
21.0	GOOGL	10.28%	GOOGL	6.94%
21.0	NEM	9.55%	GNRC	6.4%
21.0	GNRC	9.41%	ELAN	6.39%
21.0	LVS	9.16%	TEVA	6.39%
21.0	BIIB	8.73%	CMA	6.32%
21.0	CLF	8.63%	JAZZ	5.97%
21.0	NVDA	8.43%	PWR	5.76%
21.0	ELAN	8.4%	AAP	5.6%
21.0	AVGO	7.98%	FCX	5.54%
21.0	CAH	7.27%	AVGO	5.52%
21.0	RIO	7.25%	RIO	4.73%
21.0	GS	6.82%	BHP	4.51%
21.0	PWR	6.78%	EXPE	4.43%
21.0	KALU	6.68%	NVDA	4.32%
21.0	GE	6.65%	GS	4.28%
21.0	GSK	6.34%	HSBC	4.21%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	WDC	92.08%	WDC	75.39%
63.0	LUMN	83.35%	MU	60.23%
63.0	MU	71.9%	INTC	36.86%
63.0	B	64.45%	SLV	33.73%
63.0	AMD	57.7%	AA	32.24%
63.0	AMAT	55.95%	B	32.13%
63.0	INTC	52.21%	AMAT	28.76%
63.0	TEVA	51.09%	LUMN	28.2%
63.0	CSTM	47.06%	NEM	28.04%
63.0	SLV	42.68%	CSTM	27.68%
63.0	NEM	41.95%	TEVA	26.16%
63.0	BHP	40.76%	GOOGL	23.3%
63.0	AA	33.46%	AMD	23.07%
63.0	RIO	32.61%	ELAN	22.43%
63.0	GOOGL	30.62%	KALU	21.9%
63.0	ELAN	29.77%	CMA	19.64%
63.0	LLY	29.11%	JAZZ	19.19%
63.0	CAH	28.4%	GNRC	19.07%
63.0	FSUGY	27.11%	RIO	17.07%
63.0	OXY	26.06%	FCX	16.48%
63.0	BIIB	25.53%	PWR	16.12%
63.0	GNRC	22.72%	VFC	15.24%
63.0	KALU	21.88%	BHP	14.84%
63.0	TRGP	21.21%	MRK	14.41%
63.0	PWR	20.34%	GLD	13.81%
63.0	CMA	20.23%	GSK	13.66%
63.0	LVS	19.35%	BIIB	13.6%
63.0	JAZZ	19.12%	TRGP	13.26%
63.0	MRK	17.56%	HSBC	13.25%
63.0	GLD	16.74%	XOM	12.88%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	WDC	380.45%	WDC	214.91%
126.0	MU	220.14%	MU	172.53%
126.0	B	191.43%	SLV	87.59%
126.0	LUMN	169.96%	INTC	86.99%
126.0	AMAT	155.73%	B	82.25%
126.0	INTC	152.2%	AA	81.06%
126.0	TEVA	141.34%	AMAT	71.98%
126.0	SLV	124.82%	TEVA	71.34%
126.0	AMD	123.53%	LUMN	70.87%
126.0	NEM	121.29%	NEM	61.88%
126.0	AA	105.22%	CSTM	60.23%
126.0	CSTM	90.86%	GOOGL	58.2%
126.0	CAH	85.17%	KALU	56.18%
126.0	LLY	82.93%	AMD	51.86%
126.0	BHP	81.33%	ELAN	49.42%
126.0	GOOGL	77.0%	JAZZ	46.51%
126.0	ELAN	65.46%	CMA	42.99%
126.0	PWR	64.13%	RIO	38.81%
126.0	FSUGY	63.28%	VFC	37.18%
126.0	BIIB	62.83%	CAH	35.4%
126.0	RIO	58.06%	MRK	33.53%
126.0	JAZZ	53.36%	BIIB	33.16%
126.0	KALU	52.48%	EXPE	33.11%
126.0	TRGP	51.97%	FCX	32.48%
126.0	MRK	48.73%	PWR	32.06%
126.0	LVS	46.45%	GLD	31.75%
126.0	VFC	45.3%	GSK	31.66%
126.0	HSBC	40.07%	LLY	31.47%
126.0	AZN	40.05%	HSBC	28.38%
126.0	CMA	39.83%	BHP	28.25%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	SIVBQ	-0.91%	SIVBQ	-0.78%
1.0	IEP	-0.41%	SBNY	-0.45%
1.0	SBNY	-0.39%	FRCB	-0.23%
1.0	NWL	-0.38%	AMC	-0.17%
1.0	FRCB	-0.19%	IEP	-0.14%
1.0	AMC	-0.18%	NWL	-0.1%
1.0	UAA	-0.17%	CHTR	-0.09%
1.0	FIS	-0.16%	PRGO	-0.08%
1.0	CHTR	-0.16%	AAP	-0.07%
1.0	GT	-0.15%	FIS	-0.07%
1.0	CZR	-0.15%	VFC	-0.05%
1.0	INTU	-0.11%	BHC	-0.05%
1.0	PRGO	-0.11%	GT	-0.05%
1.0	BXP	-0.11%	ADBE	-0.05%
1.0	ZTS	-0.09%	UAA	-0.05%
1.0	ADBE	-0.07%	CMCSA	-0.04%
1.0	NAVI	-0.07%	TLT	-0.04%
1.0	TLT	-0.07%	BXP	-0.04%
1.0	CTLT	-0.07%	CZR	-0.04%
1.0	KHC	-0.07%	ZTS	-0.04%
1.0	BALL	-0.07%	NAVI	-0.03%
1.0	AAP	-0.06%	KHC	-0.03%
1.0	CMCSA	-0.06%	BALL	-0.02%
1.0	BIIB	-0.05%	BBY	-0.02%
1.0	UNH	-0.03%	LNC	-0.02%
1.0	GNRC	-0.03%	CTLT	-0.01%
1.0	MOS	-0.02%	MOS	-0.01%
1.0	HD	-0.02%	FRA	-0.01%
1.0	LNC	-0.02%	LQD	-0.01%
1.0	BBY	-0.02%	EMB	-0.01%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	SIVBQ	-5.34%	SBNY	-4.05%
10.0	SBNY	-3.67%	SIVBQ	-3.9%
10.0	IEP	-3.2%	FRCB	-2.19%
10.0	NWL	-2.59%	AMC	-1.6%
10.0	AMC	-2.1%	IEP	-1.34%
10.0	CZR	-1.77%	NWL	-1.01%
10.0	FRCB	-1.67%	PRGO	-0.78%
10.0	GT	-1.2%	CHTR	-0.68%
10.0	CYH	-1.01%	AAP	-0.68%
10.0	BXP	-0.87%	FIS	-0.63%
10.0	UAA	-0.86%	UAA	-0.55%
10.0	FIS	-0.84%	VFC	-0.54%
10.0	PRGO	-0.82%	CZR	-0.54%
10.0	AAP	-0.81%	GT	-0.51%
10.0	CNC	-0.75%	NAVI	-0.44%
10.0	INTU	-0.69%	BXP	-0.44%
10.0	VFC	-0.68%	ADBE	-0.43%
10.0	ADBE	-0.66%	TLT	-0.41%
10.0	CHTR	-0.59%	BHC	-0.41%
10.0	KHC	-0.53%	CMCSA	-0.4%
10.0	VNO	-0.53%	ZTS	-0.37%
10.0	VZ	-0.52%	KHC	-0.35%
10.0	ZTS	-0.49%	MOS	-0.26%
10.0	CLF	-0.44%	CNC	-0.25%
10.0	BBY	-0.44%	LNC	-0.25%
10.0	NAVI	-0.41%	CYH	-0.24%
10.0	BALL	-0.4%	BBY	-0.23%
10.0	HD	-0.36%	BALL	-0.21%
10.0	TLT	-0.31%	FRA	-0.17%
10.0	FRA	-0.25%	LQD	-0.12%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	SIVBQ	-11.42%	SBNY	-11.16%
21.0	SBNY	-8.31%	SIVBQ	-9.37%
21.0	IEP	-6.15%	FRCB	-6.02%
21.0	NWL	-4.93%	AMC	-4.01%
21.0	FRCB	-4.48%	IEP	-2.95%
21.0	CZR	-3.38%	NWL	-2.36%
21.0	AMC	-2.67%	PRGO	-1.71%
21.0	ADBE	-2.23%	AAP	-1.41%
21.0	GT	-2.19%	CHTR	-1.36%
21.0	VFC	-1.97%	VFC	-1.26%
21.0	AAP	-1.94%	CZR	-1.22%
21.0	BXP	-1.73%	FIS	-1.2%
21.0	PRGO	-1.65%	BHC	-1.16%
21.0	UAA	-1.53%	BXP	-1.06%
21.0	INTU	-1.5%	UAA	-1.04%
21.0	FIS	-1.49%	NAVI	-1.03%
21.0	BBY	-1.39%	GT	-0.98%
21.0	BALL	-1.32%	TLT	-0.85%
21.0	NAVI	-1.12%	CMCSA	-0.82%
21.0	KHC	-1.11%	ADBE	-0.8%
21.0	CHTR	-1.09%	KHC	-0.8%
21.0	CLF	-1.0%	ZTS	-0.78%
21.0	CNC	-0.92%	CNC	-0.69%
21.0	TLT	-0.9%	LNC	-0.65%
21.0	CYH	-0.8%	MOS	-0.53%
21.0	GNRC	-0.8%	BBY	-0.47%
21.0	VZ	-0.73%	BALL	-0.42%
21.0	ZTS	-0.68%	CYH	-0.36%
21.0	CVS	-0.65%	FRA	-0.34%
21.0	FRA	-0.58%	UNH	-0.24%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	SIVBQ	-51.27%	SBNY	-37.59%
63.0	SBNY	-33.22%	SIVBQ	-33.73%
63.0	FRCB	-25.04%	FRCB	-24.04%
63.0	IEP	-21.69%	AMC	-16.29%
63.0	NWL	-16.07%	IEP	-9.93%
63.0	AMC	-11.74%	NWL	-7.65%
63.0	PRGO	-9.49%	PRGO	-5.85%
63.0	CLF	-9.45%	CZR	-5.14%
63.0	BHC	-9.03%	AAP	-4.83%
63.0	VFC	-7.99%	CHTR	-3.97%
63.0	CZR	-7.34%	BHC	-3.86%
63.0	AAP	-6.74%	VFC	-3.85%
63.0	UAA	-6.62%	MOS	-3.47%
63.0	GNRC	-6.05%	BXP	-3.32%
63.0	FIS	-5.3%	FIS	-3.31%
63.0	CYH	-4.84%	NAVI	-3.28%
63.0	GT	-4.76%	KHC	-2.85%
63.0	KHC	-4.56%	CNC	-2.81%
63.0	BBY	-3.96%	UAA	-2.62%
63.0	CVS	-3.79%	CLF	-2.52%
63.0	CHTR	-3.71%	TLT	-2.29%
63.0	ADBE	-3.66%	ZTS	-2.29%
63.0	MOS	-3.56%	CMCSA	-2.18%
63.0	BALL	-3.44%	GT	-2.17%
63.0	ZTS	-3.17%	ADBE	-2.13%
63.0	TLT	-3.02%	UNH	-2.09%
63.0	NAVI	-2.92%	LNC	-1.93%
63.0	BXP	-2.63%	BBY	-1.58%
63.0	UNH	-2.34%	BALL	-1.08%
63.0	FRA	-2.23%	CVS	-1.0%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	FRCB	-125.62%	SIVBQ	-65.15%
126.0	SIVBQ	-88.65%	SBNY	-64.8%
126.0	SBNY	-70.11%	FRCB	-51.17%
126.0	NWL	-43.38%	AMC	-29.57%
126.0	IEP	-41.84%	IEP	-19.48%
126.0	AMC	-40.82%	NWL	-17.87%
126.0	PRGO	-21.61%	AAP	-11.54%
126.0	VFC	-21.59%	PRGO	-11.38%
126.0	AAP	-15.01%	CZR	-9.58%
126.0	UAA	-14.18%	CHTR	-8.03%
126.0	CZR	-13.96%	MOS	-7.97%
126.0	BHC	-12.86%	VFC	-7.15%
126.0	CLF	-12.61%	CNC	-6.74%
126.0	MOS	-12.21%	UAA	-6.72%
126.0	CNC	-11.81%	KHC	-5.94%
126.0	CTLT	-11.71%	CTLT	-5.69%
126.0	CHTR	-11.46%	FIS	-5.19%
126.0	GNRC	-10.64%	BHC	-5.11%
126.0	FIS	-9.73%	BXP	-5.06%
126.0	GT	-9.6%	NAVI	-4.81%
126.0	KHC	-8.27%	GT	-4.62%
126.0	BALL	-8.01%	CMCSA	-4.41%
126.0	UNH	-7.55%	ZTS	-4.19%
126.0	ZTS	-6.42%	UNH	-4.18%
126.0	TLT	-6.4%	TLT	-4.12%
126.0	GME	-5.55%	CLF	-3.36%
126.0	NAVI	-5.05%	BALL	-2.61%
126.0	BBY	-4.74%	BMV	-2.19%
126.0	CMCSA	-4.2%	ADBE	-2.02%
126.0	BXP	-4.1%	LNC	-1.86%



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 2026-04-29

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
252.0	FRCB	-207.06%	SBNY	-95.75%
252.0	SBNY	-152.31%	SIVBQ	-95.29%
252.0	SIVBQ	-151.21%	FRCB	-91.61%
252.0	IEP	-91.34%	AMC	-54.76%
252.0	NWL	-79.31%	IEP	-40.49%
252.0	AMC	-69.72%	NWL	-30.95%
252.0	AAP	-42.6%	AAP	-25.02%
252.0	VFC	-39.03%	VFC	-20.16%
252.0	CZR	-35.8%	PRGO	-18.39%
252.0	PRGO	-35.4%	CNC	-18.27%
252.0	CLF	-35.3%	CZR	-17.6%
252.0	UAA	-29.59%	UAA	-15.02%
252.0	MOS	-28.69%	MOS	-14.1%
252.0	CNC	-27.37%	CLF	-12.2%
252.0	GT	-24.69%	KHC	-11.63%
252.0	BHC	-23.26%	CHTR	-11.27%
252.0	UNH	-21.97%	UNH	-10.96%
252.0	KHC	-20.16%	BMY	-9.17%
252.0	CTLT	-19.6%	BHC	-8.98%
252.0	CHTR	-15.26%	GT	-8.09%
252.0	OXY	-14.39%	NAVI	-7.7%
252.0	TLT	-12.49%	TLT	-7.39%
252.0	BMY	-11.97%	BIIB	-6.89%
252.0	FIS	-11.1%	OXY	-6.81%
252.0	CVS	-10.22%	CTLT	-6.24%
252.0	GNRC	-9.98%	CVS	-5.79%
252.0	CMCSA	-8.38%	CYH	-5.49%
252.0	NAVI	-8.3%	BXP	-5.34%
252.0	CYH	-7.55%	CMCSA	-5.24%
252.0	ZTS	-7.51%	LW	-4.94%



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 2026-04-29 through 2026-04-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	CHTR	-1.85%	CHTR	-1.1%
1.0	INTU	-1.76%	MOS	-0.64%
1.0	MOS	-1.53%	AA	-0.57%
1.0	CAH	-1.37%	MRK	-0.49%
1.0	THC	-1.18%	CAH	-0.46%
1.0	MRK	-1.16%	HCA	-0.41%
1.0	NFLX	-0.95%	INTU	-0.4%
1.0	T	-0.81%	T	-0.38%
1.0	AZN	-0.78%	GILD	-0.34%
1.0	PCG	-0.76%	AZN	-0.34%
1.0	B	-0.73%	THC	-0.33%
1.0	AA	-0.61%	B	-0.33%
1.0	GILD	-0.56%	GSK	-0.32%
1.0	HCA	-0.51%	PCG	-0.32%
1.0	SLV	-0.47%	HON	-0.3%
1.0	BBY	-0.44%	BBY	-0.28%
1.0	GSK	-0.37%	NVS	-0.23%
1.0	GLD	-0.32%	FCX	-0.21%
1.0	HON	-0.29%	TMUS	-0.19%
1.0	ZTS	-0.26%	XOM	-0.19%
1.0	TSLA	-0.25%	GLD	-0.16%
1.0	FCX	-0.22%	ELAN	-0.14%
1.0	OXY	-0.18%	CYH	-0.13%
1.0	NVS	-0.17%	VZ	-0.12%
1.0	ELAN	-0.17%	SNY	-0.12%
1.0	VZ	-0.16%	CMCSA	-0.12%
1.0	SNY	-0.15%	OXY	-0.1%
1.0	XOM	-0.13%	AMGN	-0.09%
1.0	TLT	-0.12%	ZTS	-0.09%
1.0	BMY	-0.11%	SLV	-0.08%



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 2026-04-29 through 2026-04-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	PCG	-15.65%	AA	-8.23%
10.0	HCA	-11.36%	NFLX	-6.98%
10.0	CAH	-11.01%	HCA	-6.42%
10.0	MOS	-10.81%	MRK	-5.94%
10.0	THC	-9.58%	CHTR	-5.85%
10.0	AA	-9.13%	PCG	-5.81%
10.0	NFLX	-9.1%	MOS	-5.68%
10.0	CHTR	-8.45%	CYH	-5.38%
10.0	MRK	-8.26%	GILD	-5.22%
10.0	LLY	-6.76%	HON	-5.05%
10.0	CYH	-6.22%	AZN	-4.66%
10.0	GILD	-5.48%	CAH	-4.24%
10.0	B	-4.76%	THC	-4.11%
10.0	AZN	-4.63%	GE	-3.96%
10.0	T	-4.56%	GSK	-3.85%
10.0	HON	-4.55%	B	-3.85%
10.0	KHC	-4.45%	NVS	-3.84%
10.0	NVS	-4.42%	XOM	-3.61%
10.0	XOM	-3.4%	LLY	-3.42%
10.0	ELAN	-3.4%	OXY	-3.14%
10.0	NEM	-3.23%	T	-3.07%
10.0	GSK	-3.19%	ABBV	-2.87%
10.0	OXY	-2.85%	ELAN	-2.77%
10.0	ABBV	-2.51%	NEM	-2.58%
10.0	GE	-2.39%	KHC	-2.22%
10.0	WFC	-2.01%	TDG	-2.0%
10.0	SNY	-1.32%	WFC	-1.91%
10.0	TRGP	-1.31%	TMUS	-1.87%
10.0	BBY	-1.25%	BBY	-1.79%
10.0	ZTS	-1.22%	FCX	-1.4%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	GT	-1.17%	CLF	-0.4%
1.0	INTU	-0.81%	GT	-0.4%
1.0	UAA	-0.68%	TDG	-0.32%
1.0	B	-0.62%	CHTR	-0.32%
1.0	CPRT	-0.6%	INTU	-0.31%
1.0	TDG	-0.57%	CPRT	-0.28%
1.0	CHTR	-0.51%	LEN	-0.28%
1.0	FIS	-0.51%	FIS	-0.28%
1.0	CAH	-0.49%	CCL	-0.26%
1.0	NWL	-0.49%	PRGO	-0.26%
1.0	AMC	-0.49%	ADBE	-0.25%
1.0	PRGO	-0.49%	B	-0.23%
1.0	TSLA	-0.48%	HD	-0.21%
1.0	LNC	-0.48%	META	-0.2%
1.0	LEN	-0.46%	MOS	-0.2%
1.0	META	-0.46%	HCA	-0.2%
1.0	THC	-0.45%	CAH	-0.19%
1.0	WFC	-0.45%	CMG	-0.18%
1.0	MOS	-0.36%	WFC	-0.17%
1.0	CCL	-0.36%	LNC	-0.15%
1.0	NAVI	-0.35%	LLY	-0.14%
1.0	ADBE	-0.33%	TSLA	-0.13%
1.0	CMG	-0.32%	ELAN	-0.13%
1.0	HCA	-0.32%	CYH	-0.13%
1.0	EXPE	-0.31%	GILD	-0.13%
1.0	ORCL	-0.3%	ZTS	-0.12%
1.0	ZTS	-0.29%	CMCSA	-0.12%
1.0	VNO	-0.28%	ISRG	-0.12%
1.0	ELAN	-0.26%	BBY	-0.12%
1.0	MRK	-0.26%	NAVI	-0.11%



P90D: 10d

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

Period examined: All model dates from 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	GT	-14.2%	GT	-5.51%
10.0	LLY	-7.69%	CLF	-3.98%
10.0	MOS	-6.28%	LEN	-3.93%
10.0	B	-6.19%	MOS	-3.48%
10.0	LEN	-5.82%	CPRT	-2.89%
10.0	NWL	-5.61%	CCL	-2.89%
10.0	CCL	-5.34%	PRGO	-2.79%
10.0	CPRT	-5.26%	LLY	-2.64%
10.0	PHM	-4.69%	HD	-2.43%
10.0	CLF	-4.48%	GILD	-2.29%
10.0	BUD	-4.13%	B	-2.09%
10.0	ADBE	-3.41%	WFC	-2.05%
10.0	CAH	-2.88%	CHTR	-2.01%
10.0	CHTR	-2.81%	HCA	-1.98%
10.0	KHC	-2.71%	CMG	-1.82%
10.0	TSLA	-2.7%	ABBV	-1.77%
10.0	HD	-2.57%	CYH	-1.74%
10.0	UAA	-2.56%	KHC	-1.71%
10.0	GILD	-2.55%	ELAN	-1.7%
10.0	HCA	-2.48%	TDG	-1.67%
10.0	WFC	-2.39%	LW	-1.62%
10.0	NVS	-2.38%	ADBE	-1.6%
10.0	CMG	-2.23%	CMCSA	-1.57%
10.0	PCG	-1.98%	HON	-1.5%
10.0	META	-1.93%	TSLA	-1.45%
10.0	ELAN	-1.85%	NAVI	-1.43%
10.0	VNO	-1.79%	CAH	-1.41%
10.0	BHC	-1.79%	BBY	-1.39%
10.0	LNC	-1.79%	ZTS	-1.29%
10.0	USB	-1.75%	LNC	-1.29%



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 2026-04-29 through 2026-02-02

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	GT	-26.96%	GT	-11.58%
21.0	PHM	-15.67%	LEN	-11.35%
21.0	LEN	-15.22%	CLF	-8.55%
21.0	NWL	-14.97%	PRGO	-7.83%
21.0	LLY	-14.54%	MOS	-7.29%
21.0	B	-13.48%	UAA	-6.85%
21.0	CPRT	-13.41%	CCL	-6.56%
21.0	MOS	-13.15%	CPRT	-6.52%
21.0	BUD	-12.32%	THC	-6.24%
21.0	UAA	-11.23%	B	-6.23%
21.0	ADBE	-9.85%	HD	-6.17%
21.0	CCL	-8.92%	LLY	-5.86%
21.0	CLF	-8.25%	NWL	-5.55%
21.0	NVS	-7.49%	CYH	-5.53%
21.0	MNST	-7.44%	LW	-5.44%
21.0	USB	-7.36%	TSLA	-4.98%
21.0	CHTR	-7.07%	PHM	-4.79%
21.0	LW	-6.81%	HCA	-4.71%
21.0	HD	-6.39%	CMCSA	-4.67%
21.0	ISRG	-5.63%	GILD	-4.67%
21.0	ELAN	-5.47%	ELAN	-4.66%
21.0	HCA	-5.46%	CMG	-4.62%
21.0	GE	-5.41%	GE	-4.61%
21.0	BXP	-5.32%	ABBV	-4.59%
21.0	CAH	-5.2%	BXP	-4.27%
21.0	TDG	-5.04%	ADBE	-4.2%
21.0	TSLA	-5.03%	TDG	-4.12%
21.0	CMG	-4.96%	MNST	-4.11%
21.0	BIIB	-4.82%	KHC	-3.97%
21.0	GILD	-4.82%	TEVA	-3.81%



P365D: 1d

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

Period examined: All model dates from 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
1.0	CHTR	-0.51%	CHTR	-0.29%
1.0	PRGO	-0.49%	PRGO	-0.26%
1.0	MSTR	-0.48%	MSTR	-0.24%
1.0	CPRT	-0.48%	CPRT	-0.23%
1.0	FIS	-0.39%	FIS	-0.19%
1.0	GT	-0.37%	INTU	-0.16%
1.0	INTU	-0.33%	AMC	-0.15%
1.0	AMC	-0.33%	ADBE	-0.15%
1.0	NFLX	-0.23%	CMG	-0.13%
1.0	CMG	-0.23%	GT	-0.12%
1.0	UNH	-0.23%	ZTS	-0.11%
1.0	IEP	-0.21%	NAVI	-0.09%
1.0	VNO	-0.2%	TMUS	-0.08%
1.0	ADBE	-0.19%	KHC	-0.08%
1.0	NAVI	-0.19%	CMCSA	-0.07%
1.0	CMCSA	-0.17%	MOS	-0.07%
1.0	PCG	-0.17%	TDG	-0.07%
1.0	CNC	-0.13%	GBTC	-0.06%
1.0	UAA	-0.12%	NFLX	-0.05%
1.0	MOS	-0.12%	VNO	-0.05%
1.0	TMUS	-0.11%	SNY	-0.05%
1.0	KHC	-0.11%	LEN	-0.05%
1.0	TDG	-0.11%	FRA	-0.04%
1.0	ZTS	-0.1%	ISRG	-0.03%
1.0	SNY	-0.09%	LW	-0.03%
1.0	MSFT	-0.09%	NWL	-0.03%
1.0	FRA	-0.09%	VICI	-0.03%
1.0	VICI	-0.09%	HD	-0.02%
1.0	CZR	-0.07%	BXP	-0.02%
1.0	ISRG	-0.07%	BBY	-0.02%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
10.0	MSTR	-4.58%	MSTR	-2.84%
10.0	GT	-3.97%	PRGO	-2.6%
10.0	CPRT	-3.41%	CPRT	-2.35%
10.0	PRGO	-3.21%	CHTR	-2.26%
10.0	AMC	-2.68%	FIS	-1.93%
10.0	VNO	-2.57%	ADBE	-1.7%
10.0	CNC	-2.49%	INTU	-1.59%
10.0	ADBE	-2.28%	GT	-1.43%
10.0	FIS	-2.18%	NAVI	-1.28%
10.0	NFLX	-2.12%	CMG	-1.24%
10.0	CMG	-1.99%	ZTS	-1.07%
10.0	CHTR	-1.97%	MOS	-0.93%
10.0	GBTC	-1.94%	VNO	-0.92%
10.0	KHC	-1.6%	AMC	-0.91%
10.0	IEP	-1.46%	KHC	-0.91%
10.0	INTU	-1.28%	TMUS	-0.88%
10.0	NAVI	-1.17%	GBTC	-0.8%
10.0	TMUS	-1.05%	CMCSA	-0.66%
10.0	ISRG	-0.98%	TDG	-0.57%
10.0	MOS	-0.86%	NFLX	-0.56%
10.0	CMCSA	-0.81%	FRA	-0.51%
10.0	FRA	-0.71%	ISRG	-0.42%
10.0	VICI	-0.67%	LEN	-0.39%
10.0	PCG	-0.62%	CNC	-0.38%
10.0	SNY	-0.55%	SNY	-0.36%
10.0	ZTS	-0.5%	VICI	-0.36%
10.0	GME	-0.49%	BBY	-0.34%
10.0	CZR	-0.46%	BXP	-0.29%
10.0	BXP	-0.44%	NWL	-0.28%
10.0	BBY	-0.39%	IEP	-0.25%



P365D: 21d

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

Period examined: All model dates from 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
21.0	MSTR	-15.22%	MSTR	-7.45%
21.0	CPRT	-7.49%	PRGO	-6.07%
21.0	ADBE	-7.22%	CPRT	-4.94%
21.0	GT	-7.14%	CHTR	-4.76%
21.0	PRGO	-6.45%	FIS	-4.34%
21.0	AMC	-5.21%	ADBE	-4.21%
21.0	FIS	-5.14%	AMC	-4.08%
21.0	VNO	-5.13%	INTU	-3.9%
21.0	GBTC	-4.42%	NAVI	-3.27%
21.0	CMG	-4.29%	GT	-3.15%
21.0	INTU	-3.86%	CMG	-2.76%
21.0	NAVI	-3.73%	ZTS	-2.56%
21.0	NFLX	-3.22%	VNO	-2.48%
21.0	CNC	-2.79%	GBTC	-2.48%
21.0	IEP	-2.69%	MOS	-2.28%
21.0	ISRG	-2.65%	TMUS	-1.77%
21.0	TMUS	-2.61%	KHC	-1.74%
21.0	CHTR	-2.38%	CMCSA	-1.61%
21.0	KHC	-2.29%	NWL	-1.47%
21.0	MOS	-2.29%	TDG	-1.29%
21.0	GME	-2.05%	BXP	-1.22%
21.0	CMCSA	-1.88%	CNC	-1.21%
21.0	FRA	-1.64%	NFLX	-1.2%
21.0	VICI	-1.48%	FRA	-1.14%
21.0	UAA	-1.42%	LEN	-1.13%
21.0	BXP	-1.41%	ISRG	-1.1%
21.0	TDG	-1.39%	VICI	-0.92%
21.0	ZTS	-1.25%	LW	-0.91%
21.0	T	-1.2%	GME	-0.89%
21.0	MSFT	-1.16%	BBY	-0.79%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
63.0	MSTR	-61.25%	MSTR	-27.78%
63.0	PRGO	-33.62%	AMC	-23.23%
63.0	NFLX	-24.36%	PRGO	-23.05%
63.0	FIS	-22.05%	INTU	-15.91%
63.0	ADBE	-20.19%	CHTR	-15.39%
63.0	VNO	-19.85%	FIS	-14.82%
63.0	GT	-19.46%	NAVI	-13.05%
63.0	CPRT	-17.99%	ADBE	-12.82%
63.0	AMC	-17.76%	GBTC	-12.34%
63.0	INTU	-16.89%	CPRT	-11.75%
63.0	GBTC	-16.0%	CMG	-11.08%
63.0	NWL	-15.92%	VNO	-9.81%
63.0	MOS	-15.06%	GT	-8.97%
63.0	CMG	-13.03%	ZTS	-8.31%
63.0	ORCL	-12.85%	NFLX	-8.3%
63.0	NAVI	-12.36%	MOS	-7.96%
63.0	CHTR	-10.09%	NWL	-7.04%
63.0	MSFT	-9.65%	BXP	-5.59%
63.0	KHC	-8.27%	TDG	-5.36%
63.0	ZTS	-7.16%	MSFT	-5.2%
63.0	CDNS	-6.44%	KHC	-5.05%
63.0	TDG	-6.41%	FRA	-4.66%
63.0	VICI	-6.39%	CMCSA	-4.53%
63.0	TMUS	-5.9%	LW	-4.24%
63.0	CMCSA	-5.84%	TMUS	-4.17%
63.0	CZR	-5.83%	VICI	-3.74%
63.0	IEP	-5.56%	CZR	-3.53%
63.0	FRA	-5.27%	IEP	-3.43%
63.0	BXP	-3.93%	QCOM	-2.57%
63.0	ISRG	-2.71%	ORCL	-2.18%



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 2026-04-29 through 2025-05-01

Horizon	Ticker_V	ROLOBC_V	Ticker_S	ROLOBC_S
126.0	AMC	-127.07%	MSTR	-56.02%
126.0	PRGO	-88.77%	PRGO	-46.96%
126.0	MSTR	-77.71%	AMC	-45.4%
126.0	NWL	-74.02%	CHTR	-31.66%
126.0	INTU	-63.46%	NWL	-27.7%
126.0	MOS	-60.94%	GBTC	-26.64%
126.0	NFLX	-48.8%	INTU	-26.2%
126.0	FIS	-43.86%	FIS	-24.07%
126.0	CMG	-38.9%	MOS	-23.14%
126.0	VNO	-37.37%	CPRT	-22.98%
126.0	CPRT	-35.62%	CMG	-22.97%
126.0	GT	-35.25%	NAVI	-21.44%
126.0	GBTC	-33.27%	ADBE	-21.35%
126.0	ZTS	-30.66%	NFLX	-21.29%
126.0	ADBE	-27.59%	ZTS	-19.98%
126.0	MSFT	-23.11%	VNO	-19.82%
126.0	NAVI	-21.22%	ORCL	-16.44%
126.0	TMUS	-21.1%	TMUS	-14.59%
126.0	CHTR	-20.36%	GT	-13.53%
126.0	ORCL	-20.22%	CMCSA	-12.85%
126.0	AZO	-19.62%	LW	-12.5%
126.0	VICI	-19.04%	KHC	-11.46%
126.0	CZR	-17.44%	VICI	-11.39%
126.0	KHC	-14.7%	FRA	-10.93%
126.0	CMCSA	-14.24%	MSFT	-10.5%
126.0	LEN	-13.8%	VST	-10.2%
126.0	TDG	-13.55%	CZR	-9.89%
126.0	GME	-12.68%	META	-9.85%
126.0	LW	-11.87%	BXP	-9.8%
126.0	T	-11.6%	TDG	-8.17%



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 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	SBNY	12.59%	SIVBQ	4.32%
1.0	GME	9.86%	GME	3.66%
1.0	MSTR	8.83%	META	2.35%
1.0	SIVBQ	7.91%	TSLA	2.35%
1.0	CHTR	6.95%	FRCB	1.8%
1.0	META	6.67%	HLT	1.78%
1.0	GNRC	5.92%	AMC	1.69%
1.0	FRCB	5.76%	NFLX	1.69%
1.0	NFLX	5.45%	AVGO	1.6%
1.0	BUD	4.69%	BALL	1.5%
1.0	ZTS	4.32%	MSTR	1.41%
1.0	SLV	4.23%	ACGL	1.22%
1.0	VFC	4.23%	BUD	1.22%
1.0	CMA	3.98%	INTU	1.22%
1.0	FRA	3.94%	CHTR	1.13%
1.0	CLF	3.66%	ZTS	1.03%
1.0	B	3.66%	TEVA	0.85%
1.0	ORCL	3.57%	CMA	0.8%
1.0	GILD	3.47%	B	0.75%
1.0	AMC	3.47%	SPY	0.75%
1.0	BALL	3.29%	SBNY	0.72%
1.0	INTU	3.29%	GILD	0.66%
1.0	HLT	3.0%	AAP	0.56%
1.0	AVGO	2.91%	FRA	0.56%
1.0	AAP	2.72%	JAZZ	0.47%



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 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	SIVBQ	12.13%	SIVBQ	9.56%
10.0	META	11.55%	MSTR	7.29%
10.0	MSTR	11.08%	META	4.92%
10.0	SBNY	10.66%	GME	4.83%
10.0	GME	9.47%	CHTR	3.98%
10.0	KALU	9.19%	SBNY	3.68%
10.0	HCA	8.9%	ZTS	3.03%
10.0	BALL	8.24%	AVGO	2.75%
10.0	FRCB	8.09%	KALU	2.56%
10.0	CHTR	7.95%	CMA	2.51%
10.0	GNRC	6.82%	AMC	2.46%
10.0	GILD	6.82%	VZ	2.27%
10.0	CMA	6.63%	WDC	2.18%
10.0	AMC	6.25%	ETRN	2.15%
10.0	TEVA	6.25%	HCA	2.08%
10.0	BXP	5.97%	TXN	1.99%
10.0	AVGO	5.97%	EXPE	1.99%
10.0	WDC	5.78%	XOM	1.8%
10.0	EXPE	5.68%	BALL	1.7%
10.0	B	5.59%	NVS	1.61%
10.0	VFC	5.59%	ISRG	1.61%
10.0	HD	5.59%	FRCB	1.47%
10.0	TDG	5.11%	GILD	1.42%
10.0	ZTS	4.83%	VFC	1.33%
10.0	BUD	4.64%	GNRC	1.33%



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 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	META	11.0%	SIVBQ	9.26%
21.0	GME	10.72%	CHTR	6.89%
21.0	FRCB	8.89%	MSTR	5.65%
21.0	CMA	8.43%	KALU	4.11%
21.0	KALU	8.33%	META	3.64%
21.0	GNRC	8.23%	GME	3.54%
21.0	AVGO	8.23%	ISRG	2.78%
21.0	SIVBQ	8.15%	GWV	2.68%
21.0	CHTR	7.75%	GNRC	2.49%
21.0	AMC	6.89%	ZTS	2.2%
21.0	EXPE	6.89%	CMA	2.13%
21.0	ZTS	6.79%	AVGO	1.91%
21.0	MSTR	6.51%	SBNY	1.85%
21.0	B	6.12%	VZ	1.82%
21.0	HCA	6.03%	LW	1.72%
21.0	ISRG	5.65%	AMC	1.53%
21.0	SBNY	5.56%	AAPL	1.53%
21.0	LW	5.36%	NEM	1.44%
21.0	BUD	5.26%	SNY	1.34%
21.0	BALL	5.07%	EXPE	1.34%
21.0	VZ	4.88%	HD	1.34%
21.0	NAVI	4.88%	BALL	1.34%
21.0	VFC	4.78%	WDC	1.05%
21.0	GILD	4.69%	ORLY	0.96%
21.0	BXP	4.5%	TXN	0.77%



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 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	SIVBQ	11.11%	SIVBQ	7.78%
63.0	CHTR	11.07%	AVGO	5.88%
63.0	META	10.87%	EXPE	4.79%
63.0	AVGO	10.17%	GME	4.69%
63.0	EXPE	9.97%	LW	3.29%
63.0	LW	8.28%	CTLT	3.23%
63.0	CMA	6.69%	KALU	1.99%
63.0	MSTR	6.48%	GSK	1.69%
63.0	BUD	6.28%	WFC	1.4%
63.0	GME	5.78%	CHTR	1.1%
63.0	GILD	4.99%	BXP	1.1%
63.0	VFC	4.89%	HD	0.8%
63.0	CTLT	4.69%	GWV	0.7%
63.0	KALU	4.49%	JAZZ	0.7%
63.0	SNY	4.29%	CMA	0.53%
63.0	XOM	4.09%	AMC	0.5%
63.0	BALL	3.79%	TXN	0.5%
63.0	HCA	3.59%	FCX	0.5%
63.0	AAP	3.29%	VFC	0.4%
63.0	IRM	3.29%	AZO	0.4%
63.0	GNRC	3.09%	AA	0.3%
63.0	BXP	2.59%	KHC	0.3%
63.0	FRCB	2.22%	SNY	0.3%
63.0	JAZZ	2.19%	BUD	0.3%
63.0	ZTS	2.19%	ZTS	0.2%



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 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	LW	12.02%	AVGO	7.45%
126.0	VFC	9.36%	EXPE	5.21%
126.0	EXPE	7.23%	LW	5.0%
126.0	GME	5.64%	NVS	3.3%
126.0	MSTR	5.32%	BUD	2.77%
126.0	META	4.79%	MSI	2.45%
126.0	BALL	4.68%	OXY	1.7%
126.0	AAP	4.47%	MSTR	1.6%
126.0	CMA	4.21%	IRM	1.49%
126.0	BXP	4.15%	META	1.28%
126.0	CHTR	4.04%	VFC	1.17%
126.0	IRM	3.94%	KALU	1.17%
126.0	XOM	3.3%	BALL	1.17%
126.0	GOOGL	2.77%	CMA	1.14%
126.0	HCA	2.23%	GSK	1.06%
126.0	CTLT	1.78%	GME	1.06%
126.0	KALU	1.6%	ETRN	1.02%
126.0	AVGO	1.6%	HCA	0.85%
126.0	TMUS	1.28%	ORLY	0.0%
126.0	NWL	1.17%	ZTS	0.0%
126.0	BAC	1.06%	PCG	0.0%
126.0	BUD	1.06%	FSUGY	0.0%
126.0	GNRC	0.96%	FRCB	0.0%
126.0	AMC	0.85%	FITB	0.0%
126.0	KHC	0.85%	FIS	0.0%



All TMD: 252d

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

Period examined: All model dates from 2022-01-31 through 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
252.0	EXPE	7.0%	GWG	3.81%
252.0	IRM	3.69%	LW	3.81%
252.0	GME	3.44%	IRM	2.7%
252.0	VST	2.58%	ORLY	1.47%
252.0	OXY	1.6%	EXPE	1.23%
252.0	GNRC	1.6%	GNRC	0.74%
252.0	BA	1.6%	XOM	0.12%
252.0	BALL	1.47%	OXY	0.0%
252.0	KEY	1.35%	PCG	0.0%
252.0	CHTR	0.61%	PEP	0.0%
252.0	AAPL	0.25%	GME	0.0%
252.0	MSTR	0.12%	POST	0.0%
252.0	LQD	0.0%	PRGO	0.0%
252.0	CTLT	0.0%	ZTS	0.0%
252.0	MOS	0.0%	GT	0.0%
252.0	MUB	0.0%	SBNY	0.0%
252.0	NAVI	0.0%	FSUGY	0.0%
252.0	CYH	0.0%	FRCB	0.0%
252.0	NWL	0.0%	FRA	0.0%
252.0	CZR	0.0%	FITB	0.0%
252.0	LUMN	0.0%	FIS	0.0%
252.0	ZTS	0.0%	SBUX	0.0%
252.0	EMB	0.0%	SIVBQ	0.0%
252.0	LNC	0.0%	QQQ	0.0%
252.0	CNC	0.0%	HD	0.0%



P30D: 1d

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

Period examined: All model dates from 2026-04-29 through 2026-04-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	NFLX	20.0%	UNH	20.0%
1.0	JAZZ	20.0%	NFLX	15.0%
1.0	UNH	20.0%	TSLA	10.0%
1.0	TXN	20.0%	JAZZ	10.0%
1.0	LNC	15.0%	UAA	5.0%
1.0	B	15.0%	TXN	5.0%
1.0	TSLA	10.0%	WDC	5.0%
1.0	BXP	10.0%	AMC	5.0%
1.0	CYH	10.0%	AMZN	5.0%
1.0	VFC	10.0%	BAC	5.0%
1.0	KEY	10.0%	EXPE	5.0%
1.0	ELAN	5.0%	MOS	0.0%
1.0	MNST	5.0%	META	0.0%
1.0	FIS	5.0%	MNST	0.0%
1.0	MRK	5.0%	MSI	0.0%
1.0	MSTR	5.0%	MRK	0.0%
1.0	FCX	5.0%	LVS	0.0%
1.0	AA	5.0%	MSTR	0.0%
1.0	LUMN	5.0%	MUB	0.0%
1.0	ORCL	5.0%	NAVI	0.0%
1.0	GOOGL	5.0%	NEM	0.0%
1.0	GSK	5.0%	LW	0.0%
1.0	IRM	5.0%	IEP	0.0%
1.0	GWV	5.0%	LUMN	0.0%
1.0	INTC	5.0%	INTC	0.0%



P30D: 10d

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

Period examined: All model dates from 2026-04-29 through 2026-04-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	TSLA	63.64%	UNH	90.91%
10.0	UNH	54.55%	EXPE	36.36%
10.0	BXP	45.45%	META	27.27%
10.0	EXPE	36.36%	QCOM	18.18%
10.0	CSTM	18.18%	BAC	18.18%
10.0	SBUX	18.18%	VFC	18.18%
10.0	UAA	18.18%	TXN	18.18%
10.0	BUD	18.18%	WDC	9.09%
10.0	MSTR	18.18%	HSBC	9.09%
10.0	AMC	18.18%	NFLX	9.09%
10.0	AMZN	18.18%	IRM	9.09%
10.0	FIS	9.09%	ORCL	9.09%
10.0	MNST	9.09%	LUMN	9.09%
10.0	WDC	9.09%	UAA	9.09%
10.0	KEY	9.09%	NAVI	0.0%
10.0	KALU	9.09%	MUB	0.0%
10.0	BALL	9.09%	MU	0.0%
10.0	IRM	9.09%	AA	0.0%
10.0	MUB	0.0%	NEM	0.0%
10.0	NAVI	0.0%	MSI	0.0%
10.0	AA	0.0%	NVDA	0.0%
10.0	NEM	0.0%	NVS	0.0%
10.0	NFLX	0.0%	NWL	0.0%
10.0	MSI	0.0%	MSTR	0.0%
10.0	NWL	0.0%	LW	0.0%



P90D: 1d

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

Period examined: All model dates from 2026-04-29 through 2026-02-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	UNH	18.03%	NFLX	9.84%
1.0	GE	13.11%	UNH	6.56%
1.0	TXN	13.11%	ORCL	4.92%
1.0	NFLX	13.11%	TSLA	4.92%
1.0	PWR	11.48%	IEP	3.28%
1.0	WDC	9.84%	GLD	3.28%
1.0	HON	9.84%	JAZZ	3.28%
1.0	LNC	9.84%	UAA	3.28%
1.0	TMUS	9.84%	CLF	1.64%
1.0	VFC	8.2%	CYH	1.64%
1.0	CYH	8.2%	THC	1.64%
1.0	CDNS	6.56%	BAC	1.64%
1.0	IEP	6.56%	TXN	1.64%
1.0	JAZZ	6.56%	VFC	1.64%
1.0	MRK	6.56%	AMZN	1.64%
1.0	BUD	6.56%	GNRC	1.64%
1.0	GNRC	6.56%	ADBE	1.64%
1.0	TSLA	6.56%	AMC	1.64%
1.0	TRGP	4.92%	LEN	0.0%
1.0	ORCL	4.92%	MNST	0.0%
1.0	AMAT	4.92%	NAVI	0.0%
1.0	THC	4.92%	MUB	0.0%
1.0	PEP	4.92%	AAP	0.0%
1.0	B	4.92%	MSTR	0.0%
1.0	META	4.92%	MSI	0.0%



P90D: 10d

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

Period examined: All model dates from 2026-04-29 through 2026-02-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	UNH	21.15%	UNH	26.92%
10.0	EXPE	19.23%	EXPE	9.62%
10.0	PWR	17.31%	NFLX	9.62%
10.0	GLD	17.31%	BUD	9.62%
10.0	TRGP	17.31%	TXN	9.62%
10.0	TSLA	13.46%	META	9.62%
10.0	AMC	13.46%	CVS	7.69%
10.0	NFLX	11.54%	TMUS	7.69%
10.0	HON	11.54%	GSK	5.77%
10.0	TXN	9.62%	HSBC	5.77%
10.0	BXP	9.62%	VFC	3.85%
10.0	CSTM	9.62%	GLD	3.85%
10.0	WDC	9.62%	QCOM	3.85%
10.0	GSK	9.62%	PCG	3.85%
10.0	BUD	7.69%	UAA	3.85%
10.0	AMZN	7.69%	THC	1.92%
10.0	TMUS	5.77%	GE	1.92%
10.0	THC	5.77%	LUMN	1.92%
10.0	ORCL	5.77%	ORCL	1.92%
10.0	FCX	5.77%	JAZZ	1.92%
10.0	SNY	5.77%	BAC	1.92%
10.0	CVS	5.77%	AMZN	1.92%
10.0	UAA	5.77%	HON	1.92%
10.0	BALL	5.77%	TRGP	1.92%
10.0	NVS	5.77%	B	1.92%



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 2026-04-29 through 2026-02-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	AMC	36.59%	UNH	12.2%
21.0	BUD	19.51%	THC	9.76%
21.0	BXP	19.51%	BUD	7.32%
21.0	EXPE	17.07%	TMUS	7.32%
21.0	UNH	17.07%	META	4.88%
21.0	USB	14.63%	FITB	4.88%
21.0	PWR	14.63%	BALL	2.44%
21.0	GSK	14.63%	QCOM	2.44%
21.0	TMUS	14.63%	GLD	2.44%
21.0	PCG	12.2%	CVS	2.44%
21.0	BAC	12.2%	GSK	2.44%
21.0	TXN	12.2%	INTC	2.44%
21.0	FITB	12.2%	KEY	0.0%
21.0	GLD	9.76%	AAP	0.0%
21.0	QCOM	7.32%	NAVI	0.0%
21.0	VFC	7.32%	MUB	0.0%
21.0	NFLX	7.32%	MSTR	0.0%
21.0	HSBC	4.88%	MRK	0.0%
21.0	UAA	4.88%	MOS	0.0%
21.0	JAZZ	4.88%	MNST	0.0%
21.0	HON	2.44%	INTU	0.0%
21.0	CSTM	2.44%	LW	0.0%
21.0	BMJ	2.44%	IRM	0.0%
21.0	MSTR	2.44%	LVS	0.0%
21.0	AMGN	2.44%	KHC	0.0%



P365D: 1d

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

Period examined: All model dates from 2026-04-29 through 2025-05-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	GILD	10.0%	TSLA	6.8%
1.0	VFC	8.8%	GILD	3.6%
1.0	TSLA	8.4%	PCG	3.2%
1.0	BUD	8.0%	WDC	2.8%
1.0	UNH	6.8%	AMC	2.8%
1.0	CLF	6.4%	NFLX	2.4%
1.0	TXN	6.0%	AAP	2.0%
1.0	NFLX	5.2%	UNH	2.0%
1.0	CMA	4.76%	ZTS	1.6%
1.0	WDC	4.4%	TXN	1.6%
1.0	META	4.4%	GLD	1.6%
1.0	GWV	4.0%	AMZN	1.6%
1.0	NVS	4.0%	GNRC	1.2%
1.0	QQQ	4.0%	NWL	1.2%
1.0	AMC	4.0%	ORCL	1.2%
1.0	ZTS	3.6%	VFC	1.2%
1.0	BXP	3.6%	CMA	1.06%
1.0	AAP	3.2%	CLF	0.8%
1.0	VST	3.2%	ADBE	0.8%
1.0	PWR	3.2%	IEP	0.8%
1.0	KEY	2.8%	BUD	0.8%
1.0	AMZN	2.8%	NVS	0.8%
1.0	THC	2.8%	MSI	0.8%
1.0	TMUS	2.8%	BAC	0.8%
1.0	GNRC	2.8%	MSTR	0.4%



P365D: 10d

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

Period examined: All model dates from 2026-04-29 through 2025-05-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	AMZN	15.77%	WDC	9.96%
10.0	TXN	14.52%	BUD	7.88%
10.0	GILD	14.11%	NVS	6.64%
10.0	NVS	14.11%	TSLA	6.22%
10.0	AMC	13.28%	TXN	6.22%
10.0	WDC	12.86%	KALU	5.81%
10.0	FCX	12.45%	AVGO	5.39%
10.0	BUD	12.03%	UNH	5.39%
10.0	EXPE	11.62%	GLD	5.39%
10.0	TSLA	10.37%	HCA	4.98%
10.0	VFC	9.54%	CMA	4.44%
10.0	KALU	9.54%	AMZN	3.73%
10.0	THC	9.54%	UAA	3.32%
10.0	BXP	9.13%	VFC	2.9%
10.0	TDG	8.71%	EXPE	2.9%
10.0	CMA	8.33%	META	2.49%
10.0	UNH	8.3%	AAP	2.49%
10.0	SBUX	8.3%	NFLX	2.07%
10.0	AVGO	6.64%	VST	2.07%
10.0	HON	5.39%	THC	2.07%
10.0	HCA	5.39%	NAVI	2.07%
10.0	GWV	4.98%	TMUS	2.07%
10.0	NEM	4.56%	GILD	2.07%
10.0	VZ	4.56%	CVS	1.66%
10.0	GNRC	4.56%	FCX	1.66%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	NVS	20.0%	KALU	11.74%
21.0	TXN	20.0%	AVGO	9.13%
21.0	CMA	18.34%	TMUS	6.09%
21.0	AVGO	16.96%	CMA	5.92%
21.0	EXPE	16.96%	BUD	5.65%
21.0	KALU	12.61%	TXN	4.78%
21.0	WDC	12.61%	THC	4.78%
21.0	BUD	12.17%	EXPE	4.35%
21.0	AMC	11.3%	AAP	3.91%
21.0	VFC	10.87%	FCX	3.48%
21.0	TDG	10.0%	UAA	3.48%
21.0	GILD	8.7%	WDC	2.61%
21.0	AAP	8.7%	GILD	2.61%
21.0	BXP	8.26%	AMZN	2.61%
21.0	AMZN	7.83%	GLD	2.17%
21.0	UAA	6.09%	BALL	1.74%
21.0	HCA	6.09%	ZTS	1.74%
21.0	AAPL	5.65%	UNH	1.3%
21.0	SBUX	5.65%	FITB	1.3%
21.0	CVS	5.65%	GOOGL	1.3%
21.0	JPM	4.78%	NVS	1.3%
21.0	FCX	4.78%	TSLA	0.87%
21.0	NEM	4.78%	META	0.87%
21.0	GSK	4.35%	QCOM	0.43%
21.0	BAC	4.35%	MNST	0.43%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	EXPE	34.04%	AVGO	26.06%
63.0	CMA	25.98%	EXPE	15.43%
63.0	AVGO	25.53%	GSK	9.04%
63.0	GILD	22.34%	WYNN	6.91%
63.0	NVS	15.96%	KALU	4.26%
63.0	TSLA	14.89%	FCX	3.72%
63.0	HCA	13.83%	JAZZ	3.19%
63.0	THC	12.23%	NVS	2.13%
63.0	AAP	12.23%	AA	1.6%
63.0	PCG	11.17%	GILD	1.6%
63.0	VFC	11.17%	TSLA	1.6%
63.0	JAZZ	10.11%	CVS	1.6%
63.0	BUD	9.04%	AAPL	1.6%
63.0	MU	9.04%	CMA	0.79%
63.0	ELAN	9.04%	THC	0.53%
63.0	QQQ	8.51%	TXN	0.53%
63.0	ORLY	7.98%	ORCL	0.53%
63.0	KALU	6.38%	PCG	0.53%
63.0	AAPL	4.79%	MSFT	0.53%
63.0	SLV	4.28%	IRM	0.0%
63.0	VZ	4.26%	NAVI	0.0%
63.0	FCX	3.72%	MUB	0.0%
63.0	MSFT	3.19%	MSTR	0.0%
63.0	BALL	2.66%	MS	0.0%
63.0	TXN	2.66%	INTU	0.0%



P365D: 126d

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

Period examined: All model dates from 2026-04-29 through 2025-05-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	GILD	40.8%	AVGO	42.4%
126.0	AVGO	32.8%	NVS	26.4%
126.0	CMA	26.56%	CMA	15.62%
126.0	NVS	24.8%	KALU	8.8%
126.0	AAPL	16.0%	GSK	8.0%
126.0	BUD	16.0%	EXPE	5.6%
126.0	EXPE	14.4%	HCA	4.8%
126.0	HCA	12.0%	ELAN	1.6%
126.0	WYNN	11.2%	GS	0.8%
126.0	PCG	10.4%	GILD	0.8%
126.0	GLD	8.0%	ISRG	0.0%
126.0	THC	6.4%	MSFT	0.0%
126.0	VFC	5.6%	MSI	0.0%
126.0	KALU	4.8%	NAVI	0.0%
126.0	FCX	3.2%	MSTR	0.0%
126.0	TSLA	2.4%	MUB	0.0%
126.0	CVS	1.6%	MOS	0.0%
126.0	AMZN	1.6%	NFLX	0.0%
126.0	ELAN	0.8%	NVDA	0.0%
126.0	NAVI	0.0%	MS	0.0%
126.0	MU	0.0%	LQD	0.0%
126.0	MUB	0.0%	META	0.0%
126.0	MSI	0.0%	LW	0.0%
126.0	NFLX	0.0%	ORLY	0.0%
126.0	MSTR	0.0%	LNC	0.0%



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

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	MOS	-4.04%	CCL	-1.97%
1.0	EMB	-3.85%	HSBC	-1.88%
1.0	HYG	-3.76%	PHM	-1.88%
1.0	BHP	-3.66%	NVDA	-1.88%
1.0	PHM	-3.47%	MU	-1.78%
1.0	VCSH	-3.47%	LLY	-1.69%
1.0	DHI	-3.47%	LVS	-1.69%
1.0	MS	-3.19%	WYNN	-1.69%
1.0	HSBC	-3.1%	AMD	-1.6%
1.0	AZN	-3.0%	T	-1.6%
1.0	CCL	-3.0%	GE	-1.5%
1.0	CSCO	-2.72%	BHP	-1.5%
1.0	TLT	-2.72%	CSCO	-1.5%
1.0	VNO	-2.72%	DHI	-1.41%
1.0	CAH	-2.72%	CDNS	-1.41%
1.0	ON	-2.72%	HYG	-1.41%
1.0	X	-2.72%	INTC	-1.41%
1.0	MUB	-2.63%	MUB	-1.32%
1.0	GE	-2.63%	COST	-1.31%
1.0	LVS	-2.63%	LUMN	-1.31%
1.0	T	-2.63%	MNST	-1.31%
1.0	AMD	-2.63%	MOS	-1.31%
1.0	AMAT	-2.63%	MS	-1.31%
1.0	NVDA	-2.54%	AMAT	-1.31%
1.0	MSFT	-2.35%	SLV	-1.22%



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 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	MUB	-6.54%	NVDA	-3.98%
10.0	LLY	-5.87%	LLY	-3.31%
10.0	NVDA	-5.21%	X	-3.22%
10.0	CCL	-4.92%	AMD	-3.12%
10.0	CSCO	-4.64%	MUB	-3.03%
10.0	MS	-4.55%	DHI	-2.75%
10.0	AMD	-4.36%	GBTC	-2.75%
10.0	T	-4.36%	CPRT	-2.46%
10.0	AMAT	-4.17%	LUMN	-2.46%
10.0	BHP	-4.07%	T	-2.37%
10.0	CDNS	-4.07%	TMUS	-2.27%
10.0	PHM	-4.07%	MS	-2.27%
10.0	COST	-4.07%	CCL	-2.18%
10.0	BA	-3.5%	MU	-2.18%
10.0	DHI	-3.22%	PWR	-2.08%
10.0	JPM	-3.12%	LVS	-2.08%
10.0	CYH	-3.12%	COST	-1.89%
10.0	CAH	-3.03%	PHM	-1.89%
10.0	FSUGY	-3.03%	TEVA	-1.89%
10.0	LUMN	-3.03%	CDNS	-1.7%
10.0	GE	-3.03%	POST	-1.61%
10.0	VCSH	-3.03%	SLV	-1.52%
10.0	VNO	-2.94%	BHP	-1.52%
10.0	MOS	-2.84%	WYNN	-1.52%
10.0	CPRT	-2.84%	CSCO	-1.42%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	CCL	-8.42%	NVDA	-5.07%
21.0	LLY	-7.75%	ETRN	-4.38%
21.0	MUB	-7.57%	GE	-4.31%
21.0	COST	-7.37%	GBTC	-4.02%
21.0	MS	-6.6%	TEVA	-4.02%
21.0	DHI	-6.22%	LLY	-3.83%
21.0	NVDA	-5.84%	AMD	-3.83%
21.0	PHM	-5.55%	DHI	-3.44%
21.0	GE	-5.55%	LUMN	-3.25%
21.0	AMAT	-5.07%	MUB	-3.16%
21.0	GLD	-4.98%	WYNN	-3.16%
21.0	CDNS	-4.88%	PWR	-2.97%
21.0	AMD	-4.69%	X	-2.78%
21.0	JPM	-4.69%	LVS	-2.78%
21.0	AZN	-4.5%	MOS	-2.78%
21.0	T	-4.21%	CAH	-2.49%
21.0	CAH	-4.02%	T	-2.39%
21.0	LEN	-4.02%	BA	-2.39%
21.0	GBTC	-4.02%	AMAT	-2.3%
21.0	PWR	-4.02%	AMGN	-2.2%
21.0	CMG	-3.73%	MU	-2.01%
21.0	CPRT	-3.64%	CCL	-2.01%
21.0	VNO	-3.64%	TSLA	-2.01%
21.0	BA	-3.54%	TMUS	-1.91%
21.0	LVS	-3.54%	GSK	-1.82%



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 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	NVDA	-17.65%	NVDA	-10.97%
63.0	LLY	-11.27%	GBTC	-8.47%
63.0	DHI	-10.77%	LLY	-7.78%
63.0	GBTC	-10.77%	CAH	-7.78%
63.0	AMD	-10.47%	B	-7.28%
63.0	CMG	-9.97%	GLD	-6.28%
63.0	AMAT	-9.97%	ETRN	-5.99%
63.0	CCL	-9.47%	GE	-5.78%
63.0	VNO	-9.47%	DHI	-5.68%
63.0	PHM	-8.97%	VST	-5.28%
63.0	TRGP	-8.87%	MU	-5.18%
63.0	CAH	-8.77%	TRGP	-4.89%
63.0	LVS	-8.18%	MRK	-4.89%
63.0	JPM	-8.18%	MUB	-4.39%
63.0	GLD	-7.88%	GILD	-4.29%
63.0	GE	-7.48%	AMD	-4.29%
63.0	LUMN	-7.18%	PHM	-4.19%
63.0	PWR	-6.78%	THC	-3.89%
63.0	T	-6.78%	CCL	-3.69%
63.0	HLT	-6.58%	CSTM	-3.39%
63.0	COST	-6.58%	LUMN	-3.29%
63.0	CPRT	-6.18%	MS	-3.19%
63.0	MRK	-6.08%	TMUS	-3.09%
63.0	NFLX	-5.88%	ACGL	-3.09%
63.0	CSTM	-5.68%	MSTR	-2.69%



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 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	NVDA	-22.98%	NVDA	-17.77%
126.0	GE	-19.79%	GE	-13.51%
126.0	PHM	-19.47%	GLD	-11.91%
126.0	AMAT	-18.72%	THC	-11.91%
126.0	PWR	-15.43%	LLY	-11.06%
126.0	JPM	-15.21%	GBTC	-9.89%
126.0	GLD	-14.47%	B	-9.57%
126.0	CAH	-14.36%	TMUS	-9.47%
126.0	GS	-14.04%	TRGP	-9.47%
126.0	T	-13.62%	MU	-9.47%
126.0	COST	-13.19%	CAH	-8.83%
126.0	GBTC	-12.87%	GILD	-7.66%
126.0	ORCL	-12.66%	NEM	-7.34%
126.0	MRK	-12.66%	AMAT	-7.23%
126.0	NFLX	-11.28%	ACGL	-6.7%
126.0	HSBC	-11.17%	CMG	-6.7%
126.0	LLY	-10.74%	WDC	-6.17%
126.0	MS	-10.53%	ORCL	-6.17%
126.0	THC	-9.79%	PHM	-5.85%
126.0	MSFT	-9.68%	RIO	-5.74%
126.0	CSCO	-9.68%	SLV	-5.43%
126.0	MU	-9.57%	AA	-5.32%
126.0	AMD	-9.26%	X	-5.26%
126.0	CMG	-9.04%	TEVA	-5.21%
126.0	AZN	-9.04%	AMD	-4.89%



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 2026-04-29

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
252.0	GE	-55.53%	GLD	-32.68%
252.0	PHM	-40.66%	GE	-32.68%
252.0	JPM	-34.89%	CAH	-27.4%
252.0	GBTC	-33.91%	GBTC	-25.06%
252.0	NFLX	-31.08%	PHM	-22.73%
252.0	PWR	-28.99%	HSBC	-21.01%
252.0	COST	-28.5%	GS	-18.92%
252.0	ACGL	-24.82%	LLY	-18.18%
252.0	MS	-24.45%	COST	-16.09%
252.0	GS	-23.71%	TMUS	-15.97%
252.0	ORCL	-23.59%	NVDA	-15.97%
252.0	HSBC	-22.36%	ACGL	-14.62%
252.0	NVDA	-21.01%	TRGP	-14.62%
252.0	T	-19.41%	NFLX	-13.51%
252.0	MU	-18.8%	PWR	-13.02%
252.0	LLY	-18.67%	GOOGL	-12.16%
252.0	CSCO	-17.81%	VST	-10.93%
252.0	CPRT	-17.32%	JPM	-10.69%
252.0	AMAT	-17.32%	META	-10.07%
252.0	DHI	-16.34%	THC	-10.07%
252.0	CAH	-16.09%	T	-9.83%
252.0	ISRG	-16.09%	MU	-9.58%
252.0	TMUS	-15.6%	TEVA	-8.85%
252.0	CMG	-14.5%	AVGO	-7.74%
252.0	AMD	-14.37%	ETRN	-7.18%



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 2026-04-29 through 2026-04-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	POST	-15.0%	ON	-15.0%
1.0	BHP	-15.0%	MU	-10.0%
1.0	RIO	-10.0%	RIO	-10.0%
1.0	EMB	-10.0%	CDNS	-10.0%
1.0	BA	-10.0%	CCL	-10.0%
1.0	VICI	-10.0%	HD	-10.0%
1.0	AVGO	-10.0%	MS	-10.0%
1.0	AMZN	-10.0%	TDG	-10.0%
1.0	NVDA	-10.0%	AMD	-5.0%
1.0	MSFT	-10.0%	ORLY	-5.0%
1.0	VZ	-10.0%	PCG	-5.0%
1.0	TEVA	-10.0%	PHM	-5.0%
1.0	TDG	-10.0%	EMB	-5.0%
1.0	PHM	-10.0%	GS	-5.0%
1.0	CVS	-10.0%	DHI	-5.0%
1.0	INTU	-10.0%	QQQ	-5.0%
1.0	DHI	-10.0%	CSTM	-5.0%
1.0	OXY	-10.0%	CSCO	-5.0%
1.0	PCG	-5.0%	SBUX	-5.0%
1.0	CSCO	-5.0%	SPY	-5.0%
1.0	KHC	-5.0%	CHTR	-5.0%
1.0	MSI	-5.0%	KALU	-5.0%
1.0	GT	-5.0%	NVS	-5.0%
1.0	HCA	-5.0%	ADBE	-5.0%
1.0	HD	-5.0%	T	-5.0%



P30D: 10d

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

Period examined: All model dates from 2026-04-29 through 2026-04-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	MSFT	-81.82%	AMD	-90.91%
10.0	QQQ	-72.73%	MSFT	-45.45%
10.0	MU	-63.64%	QQQ	-36.36%
10.0	CSCO	-54.55%	HLT	-27.27%
10.0	AVGO	-54.55%	GOOGL	-27.27%
10.0	EMB	-36.36%	AVGO	-27.27%
10.0	SPY	-36.36%	SPY	-18.18%
10.0	NVDA	-27.27%	MS	-18.18%
10.0	AMD	-27.27%	PWR	-9.09%
10.0	GOOGL	-27.27%	CDNS	-9.09%
10.0	VNO	-18.18%	DHI	-9.09%
10.0	BHP	-18.18%	KALU	-9.09%
10.0	DHI	-18.18%	NEM	0.0%
10.0	PHM	-9.09%	NVDA	0.0%
10.0	CMCSA	-9.09%	MUB	0.0%
10.0	CDNS	-9.09%	MU	0.0%
10.0	ORLY	-9.09%	MSTR	0.0%
10.0	MS	0.0%	MSI	0.0%
10.0	ORCL	0.0%	NVS	0.0%
10.0	JPM	0.0%	NAVI	0.0%
10.0	KHC	0.0%	AA	0.0%
10.0	ON	0.0%	MOS	0.0%
10.0	NWL	0.0%	NWL	0.0%
10.0	NVS	0.0%	MNST	0.0%
10.0	LEN	0.0%	LW	0.0%



P90D: 1d

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

Period examined: All model dates from 2026-04-29 through 2026-02-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	BHP	-13.11%	BHP	-8.2%
1.0	RIO	-9.84%	RIO	-8.2%
1.0	BA	-8.2%	CSTM	-6.56%
1.0	MSFT	-8.2%	HSBC	-6.56%
1.0	EMB	-8.2%	KALU	-6.56%
1.0	OXY	-8.2%	INTU	-4.92%
1.0	AVGO	-6.56%	BIIB	-4.92%
1.0	CSCO	-6.56%	IRM	-4.92%
1.0	XOM	-6.56%	ON	-4.92%
1.0	PHM	-6.56%	CSCO	-4.92%
1.0	HYG	-6.56%	CDNS	-4.92%
1.0	NVDA	-4.92%	OXY	-4.92%
1.0	NEM	-4.92%	GS	-4.92%
1.0	DHI	-4.92%	AMAT	-4.92%
1.0	SLV	-4.92%	MU	-4.92%
1.0	T	-4.92%	CCL	-4.92%
1.0	SPY	-4.92%	CZR	-3.28%
1.0	TFC	-4.92%	DHI	-3.28%
1.0	VICI	-4.92%	SPY	-3.28%
1.0	AZN	-4.92%	EMB	-3.28%
1.0	AMZN	-4.92%	T	-3.28%
1.0	MS	-4.92%	TDG	-3.28%
1.0	VZ	-4.92%	MS	-3.28%
1.0	POST	-4.92%	QQQ	-3.28%
1.0	AAPL	-4.92%	HD	-3.28%



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 2026-04-29 through 2026-02-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	BHP	-28.85%	AMD	-21.15%
10.0	QQQ	-21.15%	GOOGL	-13.46%
10.0	MSFT	-21.15%	MSI	-13.46%
10.0	MU	-19.23%	QQQ	-13.46%
10.0	OXY	-19.23%	AVGO	-11.54%
10.0	AVGO	-19.23%	AA	-9.62%
10.0	EMB	-15.38%	HLT	-9.62%
10.0	SPY	-15.38%	MS	-9.62%
10.0	AMD	-13.46%	MSFT	-9.62%
10.0	CSCO	-11.54%	SPY	-9.62%
10.0	GOOGL	-11.54%	BHP	-9.62%
10.0	NVDA	-9.62%	OXY	-9.62%
10.0	INTU	-5.77%	INTU	-7.69%
10.0	GS	-5.77%	IRM	-7.69%
10.0	NEM	-5.77%	RIO	-7.69%
10.0	HYG	-3.85%	FCX	-5.77%
10.0	AMAT	-3.85%	CSTM	-5.77%
10.0	VNO	-3.85%	NVS	-3.85%
10.0	JPM	-3.85%	BA	-3.85%
10.0	BA	-3.85%	MU	-3.85%
10.0	PHM	-3.85%	EMB	-3.85%
10.0	MUB	-1.92%	PWR	-3.85%
10.0	DHI	-1.92%	AMAT	-3.85%
10.0	CMCSA	-1.92%	GNRC	-1.92%
10.0	MOS	-1.92%	NEM	-1.92%



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 2026-04-29 through 2026-02-02

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	OXY	-31.71%	OXY	-26.83%
21.0	AVGO	-26.83%	AMD	-24.39%
21.0	BHP	-24.39%	AVGO	-17.07%
21.0	SPY	-19.51%	GOOGL	-12.2%
21.0	QQQ	-19.51%	QQQ	-9.76%
21.0	BA	-14.63%	WDC	-9.76%
21.0	AMD	-14.63%	CSTM	-9.76%
21.0	RIO	-12.2%	MU	-9.76%
21.0	TFC	-12.2%	MS	-7.32%
21.0	CDNS	-12.2%	SPY	-7.32%
21.0	INTU	-12.2%	MSFT	-4.88%
21.0	MSFT	-12.2%	HLT	-4.88%
21.0	CSCO	-9.76%	ON	-4.88%
21.0	GS	-9.76%	NFLX	-4.88%
21.0	HLT	-9.76%	CZR	-4.88%
21.0	NVDA	-7.32%	FCX	-4.88%
21.0	IRM	-7.32%	HSEC	-4.88%
21.0	DHI	-4.88%	PWR	-2.44%
21.0	EMB	-4.88%	NVDA	-2.44%
21.0	GOOGL	-4.88%	RIO	-2.44%
21.0	KEY	-4.88%	MSI	-2.44%
21.0	MSI	-2.44%	PCG	-2.44%
21.0	MU	-2.44%	CSCO	-2.44%
21.0	FCX	-2.44%	TEVA	-2.44%
21.0	TEVA	-2.44%	XOM	-2.44%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
1.0	BHP	-8.0%	SLV	-5.22%
1.0	RIO	-6.8%	B	-4.0%
1.0	BIIB	-5.6%	CSTM	-3.6%
1.0	PHM	-5.2%	RIO	-3.6%
1.0	MOS	-4.8%	BHP	-3.6%
1.0	AZO	-4.4%	CSCO	-3.2%
1.0	AMAT	-4.0%	INTC	-3.2%
1.0	DHI	-4.0%	PHM	-3.2%
1.0	XOM	-4.0%	LUMN	-3.2%
1.0	TEVA	-3.6%	NEM	-3.2%
1.0	HSBC	-3.6%	BIIB	-3.2%
1.0	CAH	-3.6%	AMD	-3.2%
1.0	OXY	-3.6%	DHI	-2.8%
1.0	POST	-3.6%	T	-2.8%
1.0	AMD	-3.6%	KALU	-2.8%
1.0	BMJ	-3.2%	AMAT	-2.8%
1.0	LVS	-3.2%	CCL	-2.8%
1.0	MS	-3.2%	OXY	-2.4%
1.0	AZN	-3.2%	GS	-2.4%
1.0	X	-3.12%	ORLY	-2.4%
1.0	ACGL	-2.8%	HSBC	-2.4%
1.0	LUMN	-2.8%	MU	-2.0%
1.0	EMB	-2.8%	PEP	-2.0%
1.0	HYG	-2.8%	MRK	-2.0%
1.0	CSCO	-2.8%	AZN	-2.0%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
10.0	BHP	-13.69%	X	-34.78%
10.0	AMAT	-12.45%	AMD	-9.13%
10.0	AMD	-7.47%	ORCL	-7.05%
10.0	PHM	-7.05%	B	-7.05%
10.0	CSCO	-6.64%	SLV	-6.67%
10.0	RIO	-5.81%	TEVA	-5.81%
10.0	MRK	-5.81%	AMAT	-4.98%
10.0	LVS	-5.39%	GOOGL	-4.56%
10.0	BA	-4.98%	LVS	-4.56%
10.0	PEP	-4.15%	T	-4.15%
10.0	OXY	-4.15%	CCL	-3.73%
10.0	GS	-3.73%	PEP	-3.73%
10.0	COST	-3.73%	MSI	-3.73%
10.0	EMB	-3.32%	LUMN	-3.73%
10.0	AZO	-3.32%	MU	-3.73%
10.0	B	-3.32%	BHP	-3.32%
10.0	DHI	-3.32%	CYH	-3.32%
10.0	CCL	-3.32%	RIO	-3.32%
10.0	LUMN	-2.9%	CSCO	-2.9%
10.0	BHC	-2.9%	CSTM	-2.9%
10.0	BMY	-2.49%	INTU	-2.9%
10.0	FSUGY	-2.49%	GNRC	-2.49%
10.0	TFC	-2.49%	BHC	-2.49%
10.0	MUB	-2.49%	QQQ	-2.49%
10.0	MOS	-2.49%	COST	-2.49%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
21.0	BHP	-17.39%	AMD	-13.91%
21.0	AMAT	-11.74%	B	-12.17%
21.0	AMD	-11.74%	ORCL	-9.57%
21.0	CSTM	-10.87%	TEVA	-9.57%
21.0	CCL	-10.43%	X	-8.33%
21.0	LVS	-10.0%	RIO	-6.52%
21.0	OXY	-9.57%	AMAT	-6.09%
21.0	BA	-9.57%	T	-5.22%
21.0	B	-9.57%	MSI	-5.22%
21.0	X	-8.33%	PEP	-5.22%
21.0	CSCO	-7.39%	OXY	-4.78%
21.0	PEP	-6.52%	LUMN	-4.78%
21.0	GS	-6.52%	GSK	-4.78%
21.0	RIO	-6.52%	MU	-4.35%
21.0	IRM	-6.09%	CSTM	-4.35%
21.0	TEVA	-6.09%	LVS	-4.35%
21.0	DHI	-4.78%	TRGP	-4.35%
21.0	LNC	-4.78%	LLY	-3.91%
21.0	INTU	-4.78%	BHP	-3.91%
21.0	LLY	-4.35%	SLV	-3.49%
21.0	LEN	-4.35%	WYNN	-3.48%
21.0	COST	-4.35%	XOM	-3.48%
21.0	AZN	-4.35%	CAH	-3.48%
21.0	PHM	-3.91%	HSBC	-3.04%
21.0	BHC	-3.48%	PCG	-3.04%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
63.0	AMAT	-34.04%	B	-39.89%
63.0	CAH	-32.98%	CAH	-31.91%
63.0	TRGP	-29.79%	TEVA	-23.4%
63.0	CSTM	-27.66%	GOOGL	-21.28%
63.0	AMD	-23.94%	CSTM	-18.09%
63.0	RIO	-22.34%	RIO	-18.09%
63.0	BHP	-20.74%	XOM	-13.3%
63.0	LLY	-19.68%	WDC	-11.7%
63.0	GOOGL	-17.02%	AMAT	-11.7%
63.0	BMJ	-13.83%	GNRC	-11.17%
63.0	NEM	-13.83%	OXY	-9.57%
63.0	DHI	-13.3%	BALL	-9.57%
63.0	MNST	-12.23%	BHP	-9.04%
63.0	OXY	-12.23%	NEM	-8.51%
63.0	LVS	-12.23%	DHI	-7.45%
63.0	LUMN	-11.7%	MU	-7.45%
63.0	PHM	-10.64%	GLD	-7.45%
63.0	BIIB	-10.11%	LUMN	-7.45%
63.0	B	-10.11%	MSI	-6.38%
63.0	GNRC	-9.57%	INTC	-5.85%
63.0	GWV	-9.57%	TRGP	-5.32%
63.0	TEVA	-9.57%	LLY	-5.32%
63.0	MRK	-9.04%	AMD	-5.32%
63.0	GS	-9.04%	SLV	-4.81%
63.0	IRM	-8.51%	MRK	-4.79%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95OaRBreak_VmS	Ticker	99OaRBreak_VmS
126.0	CAH	-78.4%	CAH	-54.4%
126.0	AMAT	-71.2%	B	-50.4%
126.0	RIO	-48.0%	AMAT	-47.2%
126.0	AZN	-44.8%	TEVA	-46.4%
126.0	MRK	-40.0%	NEM	-44.8%
126.0	BHP	-40.0%	RIO	-43.2%
126.0	TRGP	-38.4%	AA	-40.0%
126.0	TEVA	-38.4%	SLV	-34.68%
126.0	BIIB	-35.2%	WDC	-29.6%
126.0	LVS	-32.8%	INTC	-26.4%
126.0	MNST	-28.0%	CSTM	-20.8%
126.0	PWR	-23.2%	AMD	-13.6%
126.0	AMD	-17.6%	HSBC	-12.0%
126.0	XOM	-16.0%	GOOGL	-11.2%
126.0	LLY	-12.8%	JAZZ	-11.2%
126.0	LUMN	-11.2%	GLD	-10.4%
126.0	HSBC	-11.2%	MU	-9.6%
126.0	NEM	-10.4%	MRK	-8.0%
126.0	CSCO	-9.6%	XOM	-8.0%
126.0	GOOGL	-8.8%	TRGP	-8.0%
126.0	AMGN	-7.2%	BHP	-7.2%
126.0	GSK	-6.4%	LVS	-6.4%
126.0	FSUGY	-6.4%	MNST	-5.6%
126.0	INTC	-6.4%	ORCL	-1.6%
126.0	CSTM	-5.6%	TXN	-0.8%



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 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	X	0.21%	NVDA	0.31%
1.0	AVGO	0.2%	X	0.29%
1.0	CCL	0.19%	GBTC	0.24%
1.0	TSLA	0.17%	PWR	0.22%
1.0	NVDA	0.16%	AVGO	0.22%
1.0	GE	0.16%	GE	0.21%
1.0	AMD	0.14%	LLY	0.19%
1.0	B	0.14%	CCL	0.16%
1.0	GBTC	0.13%	AMD	0.15%
1.0	VST	0.11%	CAH	0.15%
1.0	TDG	0.1%	MU	0.14%
1.0	LLY	0.1%	JAZZ	0.13%
1.0	MU	0.1%	TSLA	0.13%
1.0	JAZZ	0.09%	B	0.12%
1.0	AMAT	0.09%	TDG	0.12%
1.0	DHI	0.09%	TRGP	0.12%
1.0	LVS	0.08%	ON	0.12%
1.0	MSFT	0.07%	LVS	0.12%
1.0	AZO	0.07%	CDNS	0.11%
1.0	SBNY	0.07%	VST	0.11%
1.0	PWR	0.07%	AMAT	0.11%
1.0	PHM	0.07%	ORLY	0.11%
1.0	BHC	0.07%	HLT	0.11%
1.0	CYH	0.07%	SLV	0.11%
1.0	ON	0.07%	WYNN	0.1%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	NVDA	2.6%	NVDA	3.28%
10.0	TSLA	1.9%	LLY	1.87%
10.0	SBNY	1.86%	CCL	1.78%
10.0	AVGO	1.69%	TSLA	1.74%
10.0	CCL	1.66%	AMAT	1.68%
10.0	LLY	1.39%	AVGO	1.68%
10.0	AMD	1.02%	GBTC	1.52%
10.0	AMAT	1.01%	PWR	1.42%
10.0	FRCB	0.93%	CSTM	1.12%
10.0	GBTC	0.84%	MU	1.12%
10.0	MSFT	0.83%	AMD	1.12%
10.0	PWR	0.8%	AZO	1.03%
10.0	BHC	0.8%	LUMN	1.01%
10.0	AZO	0.78%	TEVA	1.0%
10.0	QQQ	0.68%	GE	0.97%
10.0	LVS	0.67%	PHM	0.89%
10.0	GE	0.6%	ACGL	0.84%
10.0	PHM	0.6%	COST	0.81%
10.0	T	0.53%	T	0.8%
10.0	HLT	0.51%	DHI	0.8%
10.0	MU	0.5%	GS	0.78%
10.0	JPM	0.49%	PCG	0.74%
10.0	GT	0.48%	SLV	0.71%
10.0	DHI	0.48%	WYNN	0.7%
10.0	CDNS	0.47%	CAH	0.69%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	SBNY	5.03%	NVDA	5.87%
21.0	NVDA	4.96%	TSLA	4.57%
21.0	TSLA	4.86%	AMD	4.28%
21.0	CCL	3.51%	GBTC	4.08%
21.0	AMAT	3.02%	CCL	4.05%
21.0	AMD	2.41%	ETRN	4.03%
21.0	GBTC	2.34%	AMAT	3.43%
21.0	FRCB	2.24%	LUMN	3.09%
21.0	LLY	2.18%	SBNY	2.85%
21.0	AZO	1.86%	LLY	2.4%
21.0	PCG	1.85%	AA	2.31%
21.0	PWR	1.71%	VST	2.29%
21.0	PHM	1.56%	PCG	2.2%
21.0	ELAN	1.56%	GE	2.15%
21.0	DHI	1.48%	PWR	2.13%
21.0	QQQ	1.42%	AZO	2.08%
21.0	AMC	1.36%	CDNS	1.99%
21.0	AVGO	1.27%	AVGO	1.92%
21.0	MSFT	1.25%	DHI	1.91%
21.0	CDNS	1.23%	ELAN	1.84%
21.0	CAH	1.17%	CSTM	1.84%
21.0	GE	1.14%	PHM	1.76%
21.0	LVS	1.14%	TEVA	1.76%
21.0	CSTM	1.08%	CAH	1.71%
21.0	JPM	1.02%	LVS	1.66%



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 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	NVDA	14.59%	GBTC	20.14%
63.0	SBNY	13.02%	NVDA	18.51%
63.0	CCL	12.55%	CCL	11.92%
63.0	AMAT	10.18%	AMD	11.63%
63.0	AMC	7.87%	LUMN	11.62%
63.0	GBTC	7.81%	PWR	11.25%
63.0	MSTR	7.47%	LLY	11.01%
63.0	LLY	6.72%	AMAT	9.57%
63.0	PWR	6.27%	GE	9.25%
63.0	AMD	6.18%	PHM	9.18%
63.0	TSLA	6.09%	B	8.85%
63.0	FRCB	5.84%	ETRN	8.48%
63.0	ELAN	5.24%	MSTR	7.04%
63.0	PHM	5.22%	VST	6.67%
63.0	PCG	5.15%	CAH	6.46%
63.0	DHI	4.66%	TEVA	6.27%
63.0	QQQ	4.55%	MS	6.22%
63.0	CAH	4.51%	ELAN	5.96%
63.0	VNO	4.42%	PCG	5.71%
63.0	MU	4.35%	JPM	5.65%
63.0	AZO	3.93%	TSLA	5.39%
63.0	MSFT	3.77%	CSTM	5.07%
63.0	LVS	3.72%	X	5.07%
63.0	AMZN	3.65%	T	5.05%
63.0	LUMN	3.13%	MU	4.85%



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 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	NVDA	38.71%	GBTC	50.14%
126.0	AMAT	25.43%	NVDA	44.45%
126.0	GBTC	22.99%	AMD	26.99%
126.0	MU	20.02%	CCL	25.19%
126.0	AMD	19.15%	LLY	24.71%
126.0	CCL	19.11%	PHM	24.13%
126.0	SBNY	19.0%	GE	23.81%
126.0	PHM	17.29%	LUMN	23.62%
126.0	PWR	14.16%	PWR	23.28%
126.0	AMZN	13.72%	AMAT	22.64%
126.0	VNO	13.69%	MU	21.3%
126.0	DHI	13.68%	WDC	20.33%
126.0	QQQ	13.36%	B	19.2%
126.0	GE	12.45%	THC	19.14%
126.0	TSLA	11.73%	JPM	16.97%
126.0	AMC	11.66%	MS	16.91%
126.0	MS	11.43%	ORCL	16.02%
126.0	THC	11.37%	TSLA	14.86%
126.0	PCG	10.84%	CAH	14.85%
126.0	LLY	10.43%	X	13.25%
126.0	ORCL	10.35%	VST	13.12%
126.0	NFLX	10.08%	AMZN	12.98%
126.0	ELAN	9.88%	TEVA	12.91%
126.0	MSFT	9.54%	DHI	12.9%
126.0	B	8.92%	NEM	12.24%



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 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
252.0	NVDA	115.4%	GBTC	121.2%
252.0	GBTC	94.97%	NVDA	83.44%
252.0	MU	65.61%	GE	81.37%
252.0	NFLX	53.8%	CCL	71.32%
252.0	PHM	50.74%	MU	67.25%
252.0	GE	49.87%	PHM	66.77%
252.0	CCL	49.14%	THC	57.06%
252.0	AMD	48.27%	AMAT	49.83%
252.0	AMAT	46.66%	TRGP	42.88%
252.0	PWR	44.56%	MS	42.71%
252.0	LLY	43.53%	X	41.64%
252.0	ELAN	40.93%	NFLX	39.55%
252.0	QQQ	40.39%	AMD	38.87%
252.0	AMZN	40.37%	ELAN	38.55%
252.0	MS	38.09%	QQQ	36.45%
252.0	VNO	37.8%	PWR	33.05%
252.0	CDNS	35.02%	T	30.76%
252.0	THC	34.2%	ORCL	29.3%
252.0	MSFT	33.12%	HSBC	28.82%
252.0	DHI	32.86%	GS	28.28%
252.0	JPM	32.46%	JPM	27.53%
252.0	COST	30.45%	META	27.53%
252.0	ACGL	28.09%	GOOGL	27.44%
252.0	GOOGL	27.68%	CAH	26.98%
252.0	ISRG	26.5%	VNO	26.97%



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 2026-04-29 through 2026-04-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	AVGO	2.77%	MU	3.59%
1.0	MU	1.6%	AVGO	3.17%
1.0	PWR	1.57%	LUMN	2.11%
1.0	AMD	1.37%	AMD	2.07%
1.0	NVDA	1.13%	NVDA	1.95%
1.0	LUMN	0.94%	PWR	1.91%
1.0	QQQ	0.93%	ON	1.84%
1.0	NAVI	0.92%	CSCO	1.64%
1.0	SPY	0.87%	QQQ	1.27%
1.0	PRGO	0.86%	CDNS	1.23%
1.0	WDC	0.84%	WDC	1.23%
1.0	MSFT	0.83%	NWL	1.12%
1.0	PHM	0.7%	DHI	1.01%
1.0	CYH	0.6%	INTC	0.95%
1.0	ORLY	0.58%	SPY	0.93%
1.0	SBUX	0.53%	LW	0.92%
1.0	VNO	0.51%	BHP	0.86%
1.0	BHC	0.51%	MSFT	0.84%
1.0	VST	0.48%	NAVI	0.84%
1.0	DHI	0.45%	GOOGL	0.82%
1.0	CSCO	0.44%	TEVA	0.81%
1.0	GT	0.43%	PRGO	0.79%
1.0	CMCSA	0.41%	ORLY	0.71%
1.0	BHP	0.41%	SBUX	0.7%
1.0	GOOGL	0.39%	GT	0.67%



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 2026-04-29 through 2026-04-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	AVGO	31.03%	AMD	57.97%
10.0	MU	23.02%	AVGO	32.38%
10.0	AMD	15.91%	MU	32.08%
10.0	NVDA	14.91%	NVDA	18.67%
10.0	QQQ	13.69%	GOOGL	13.72%
10.0	MSFT	9.12%	QQQ	13.22%
10.0	PWR	7.37%	NWL	12.99%
10.0	SPY	6.73%	PWR	11.73%
10.0	PHM	5.28%	LUMN	11.16%
10.0	NAVI	5.24%	NAVI	10.54%
10.0	GOOGL	5.13%	MSFT	9.07%
10.0	LUMN	4.5%	SPY	8.75%
10.0	CSCO	3.76%	CSCO	8.31%
10.0	PRGO	3.65%	VNO	8.1%
10.0	GT	3.47%	CDNS	7.21%
10.0	DHI	3.2%	AMAT	7.16%
10.0	BA	3.15%	PHM	6.41%
10.0	JPM	2.54%	PRGO	6.4%
10.0	HON	2.41%	AMC	6.34%
10.0	CYH	2.3%	GT	5.79%
10.0	CZR	2.12%	MS	5.66%
10.0	CDNS	2.06%	DHI	4.63%
10.0	BHC	2.06%	HLT	4.36%
10.0	EMB	1.99%	BHC	3.15%
10.0	GE	1.94%	AZO	2.99%



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 2026-04-29 through 2026-02-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	AVGO	0.86%	AVGO	0.91%
1.0	OXY	0.78%	OXY	0.9%
1.0	MU	0.67%	PWR	0.68%
1.0	VST	0.52%	AMD	0.63%
1.0	PWR	0.5%	AA	0.62%
1.0	CYH	0.34%	MU	0.6%
1.0	AMD	0.28%	CSTM	0.58%
1.0	AMAT	0.27%	NVDA	0.5%
1.0	COST	0.24%	BHP	0.48%
1.0	INTU	0.23%	AMAT	0.46%
1.0	BHP	0.22%	ON	0.41%
1.0	NVDA	0.2%	VST	0.37%
1.0	SLV	0.18%	INTC	0.35%
1.0	ORLY	0.16%	IRM	0.34%
1.0	AMZN	0.16%	CYH	0.34%
1.0	CLF	0.15%	GBTC	0.28%
1.0	QQQ	0.15%	BHC	0.26%
1.0	SPY	0.14%	CDNS	0.24%
1.0	BMJ	0.14%	VZ	0.24%
1.0	GE	0.14%	TRGP	0.23%
1.0	T	0.13%	HLT	0.22%
1.0	QCOM	0.12%	LUMN	0.22%
1.0	ACGL	0.11%	FCX	0.22%
1.0	CMCSA	0.11%	SBUX	0.21%
1.0	POST	0.11%	BIIB	0.21%



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 2026-04-29 through 2026-02-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	AVGO	10.01%	AMD	15.03%
10.0	AMD	4.34%	AVGO	10.33%
10.0	MU	3.77%	MU	8.42%
10.0	NVDA	3.47%	AMAT	5.66%
10.0	QQQ	3.38%	OXY	5.35%
10.0	PRGO	3.1%	NVDA	4.9%
10.0	CLF	2.83%	SLV	4.33%
10.0	OXY	2.59%	PWR	4.31%
10.0	INTU	2.29%	GOOGL	3.63%
10.0	MSFT	2.04%	QQQ	3.17%
10.0	CYH	1.97%	FCX	2.96%
10.0	CNC	1.79%	PRGO	2.86%
10.0	PWR	1.77%	GNRC	2.71%
10.0	SPY	1.76%	HLT	2.56%
10.0	BHP	1.73%	BHP	2.51%
10.0	SLV	1.67%	CSCO	1.99%
10.0	GE	1.38%	CYH	1.89%
10.0	GOOGL	0.99%	SPY	1.77%
10.0	NEM	0.93%	CDNS	1.57%
10.0	CSCO	0.92%	CSTM	1.52%
10.0	AMAT	0.85%	MSFT	1.48%
10.0	LEN	0.85%	WDC	1.45%
10.0	IRM	0.84%	MSI	1.35%
10.0	POST	0.84%	CNC	1.29%
10.0	HON	0.83%	AA	1.13%



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 2026-04-29 through 2026-02-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	AVGO	18.1%	AMD	27.69%
21.0	AMD	11.92%	AVGO	18.13%
21.0	PRGO	6.51%	OXY	7.49%
21.0	CLF	6.51%	MU	7.34%
21.0	CNC	5.38%	PRGO	6.92%
21.0	NVDA	4.97%	NFLX	6.37%
21.0	OXY	4.88%	WDC	6.08%
21.0	QQQ	4.08%	GOOGL	5.82%
21.0	THC	3.7%	FCX	5.55%
21.0	CYH	3.34%	CZR	5.49%
21.0	CSCO	3.28%	ON	5.39%
21.0	MU	2.96%	NVDA	4.65%
21.0	MSFT	2.67%	CSCO	4.64%
21.0	GNRC	2.6%	AMAT	4.6%
21.0	SLV	2.52%	SLV	3.92%
21.0	BHP	2.5%	QQQ	3.43%
21.0	SPY	2.47%	HLT	3.35%
21.0	LUMN	2.47%	GNRC	3.2%
21.0	CSTM	2.3%	CNC	3.11%
21.0	JPM	2.1%	ZION	2.88%
21.0	HLT	2.01%	MSFT	2.73%
21.0	TMUS	1.8%	GS	2.62%
21.0	GOOGL	1.64%	CSTM	2.46%
21.0	NEM	1.6%	AA	2.38%
21.0	POST	1.56%	SPY	2.38%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	LUMN	0.86%	LUMN	0.89%
1.0	AMD	0.45%	X	0.76%
1.0	AMAT	0.38%	AMD	0.64%
1.0	AVGO	0.38%	AMAT	0.57%
1.0	LVS	0.3%	NVDA	0.51%
1.0	X	0.28%	SLV	0.48%
1.0	PWR	0.23%	CSTM	0.48%
1.0	OXY	0.22%	MU	0.42%
1.0	CLF	0.22%	BHP	0.41%
1.0	BHP	0.22%	LVS	0.39%
1.0	BIIB	0.21%	AVGO	0.38%
1.0	FSUGY	0.21%	INTC	0.37%
1.0	B	0.21%	PWR	0.34%
1.0	NVDA	0.19%	CLF	0.34%
1.0	NWL	0.19%	RIO	0.3%
1.0	MU	0.18%	BIIB	0.29%
1.0	TEVA	0.17%	AA	0.28%
1.0	HSBC	0.15%	CYH	0.27%
1.0	PHM	0.15%	B	0.25%
1.0	SLV	0.15%	HSBC	0.25%
1.0	ACGL	0.14%	BHC	0.25%
1.0	GE	0.13%	OXY	0.25%
1.0	CSTM	0.13%	CCL	0.23%
1.0	RIO	0.13%	KEY	0.23%
1.0	VST	0.12%	TEVA	0.22%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	LUMN	6.1%	X	12.38%
10.0	AMAT	3.73%	LUMN	7.48%
10.0	NVDA	3.11%	AMAT	5.48%
10.0	AMD	2.79%	AMD	4.93%
10.0	AVGO	2.78%	NVDA	4.07%
10.0	SLV	2.01%	SLV	3.72%
10.0	X	1.96%	CSTM	3.27%
10.0	CYH	1.88%	BHP	3.23%
10.0	NWL	1.72%	MU	3.2%
10.0	BHP	1.71%	BIIB	2.89%
10.0	BIIB	1.26%	AVGO	2.81%
10.0	PHM	1.17%	PWR	2.11%
10.0	LVS	0.99%	TEVA	2.08%
10.0	INTU	0.89%	GNRC	2.03%
10.0	MRK	0.84%	CLF	1.94%
10.0	MU	0.83%	LNC	1.7%
10.0	CLF	0.82%	GS	1.63%
10.0	TEVA	0.78%	GOOGL	1.61%
10.0	QQQ	0.78%	KEY	1.51%
10.0	FSUGY	0.76%	LW	1.46%
10.0	CAH	0.76%	LVS	1.43%
10.0	RIO	0.75%	CAH	1.29%
10.0	GS	0.74%	RIO	1.26%
10.0	PWR	0.73%	CSCO	1.13%
10.0	BMJ	0.69%	NEM	1.1%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	AMAT	10.01%	LUMN	16.17%
21.0	AMD	7.81%	AMD	12.33%
21.0	LUMN	7.63%	X	10.61%
21.0	BHP	4.51%	AMAT	8.21%
21.0	BIIB	4.26%	TEVA	6.2%
21.0	NVDA	4.06%	BHP	6.01%
21.0	PHM	3.18%	CSTM	5.93%
21.0	CSTM	3.17%	LVS	5.79%
21.0	CAH	3.15%	BIIB	5.01%
21.0	NWL	2.99%	SLV	4.53%
21.0	SLV	2.88%	CLF	4.43%
21.0	LVS	2.78%	NVDA	4.11%
21.0	TEVA	2.35%	CAH	3.89%
21.0	LNC	2.14%	GE	3.85%
21.0	MU	2.13%	ON	3.67%
21.0	AVGO	2.07%	LNC	3.62%
21.0	TFC	1.98%	GOOGL	3.34%
21.0	CYH	1.88%	B	3.27%
21.0	RIO	1.69%	GNRC	3.0%
21.0	CLF	1.63%	PEP	2.94%
21.0	B	1.55%	BHC	2.88%
21.0	GNRC	1.54%	CCL	2.82%
21.0	PEP	1.51%	ZION	2.8%
21.0	CSCO	1.48%	FSUGY	2.78%
21.0	OXY	1.46%	MU	2.63%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	AMAT	32.56%	LUMN	55.15%
63.0	LUMN	31.21%	AMD	34.62%
63.0	BHP	19.22%	B	32.32%
63.0	CAH	16.69%	AMAT	27.19%
63.0	BIIB	15.68%	BHP	25.92%
63.0	AMC	14.05%	TEVA	24.94%
63.0	AMD	13.21%	CSTM	19.38%
63.0	CSTM	12.39%	LLY	19.3%
63.0	B	12.11%	WDC	16.7%
63.0	TRGP	10.71%	CAH	16.2%
63.0	LLY	9.97%	OXY	16.12%
63.0	TEVA	9.9%	RIO	15.53%
63.0	RIO	8.65%	FSUGY	15.45%
63.0	PHM	8.5%	INTC	15.35%
63.0	MU	8.42%	NEM	13.91%
63.0	SLV	7.6%	BIIB	11.94%
63.0	FSUGY	7.44%	MU	11.67%
63.0	LNC	6.43%	LNC	11.18%
63.0	CHTR	5.66%	LVS	9.84%
63.0	GNRC	5.44%	SLV	8.95%
63.0	OXY	5.02%	TRGP	7.95%
63.0	GOOGL	4.58%	PHM	7.54%
63.0	NVDA	4.08%	ELAN	7.34%
63.0	LVS	4.0%	GOOGL	7.32%
63.0	NEM	4.0%	ZION	7.12%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	AMAT	90.8%	WDC	165.54%
126.0	LUMN	48.24%	B	109.18%
126.0	MU	48.23%	LUMN	99.08%
126.0	BHP	45.4%	AMAT	83.75%
126.0	B	44.27%	AMD	71.67%
126.0	BIIB	37.01%	TEVA	70.0%
126.0	LLY	36.37%	INTC	65.21%
126.0	AMD	35.66%	NEM	59.41%
126.0	CAH	32.57%	BHP	53.09%
126.0	TEVA	32.22%	LLY	51.45%
126.0	SLV	31.29%	CAH	49.78%
126.0	TRGP	27.0%	MU	47.61%
126.0	FSUGY	23.41%	FSUGY	37.58%
126.0	AMC	23.35%	SLV	37.23%
126.0	RIO	21.94%	PWR	32.07%
126.0	INTC	17.41%	CSTM	30.63%
126.0	LVS	16.2%	BIIB	29.67%
126.0	AZN	14.73%	TRGP	25.99%
126.0	MRK	12.62%	AA	24.16%
126.0	CHTR	11.0%	LVS	21.46%
126.0	GOOGL	10.52%	LNC	19.43%
126.0	NEM	9.31%	RIO	19.25%
126.0	MNST	9.3%	GOOGL	18.8%
126.0	CSTM	9.07%	UAA	17.15%
126.0	ON	9.01%	ELAN	16.04%



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 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	IEP	-0.26%	IEP	-0.28%
1.0	MSTR	-0.24%	NWL	-0.27%
1.0	UAA	-0.17%	SIVBQ	-0.14%
1.0	CZR	-0.16%	UAA	-0.12%
1.0	NWL	-0.13%	CZR	-0.11%
1.0	GT	-0.11%	INTU	-0.11%
1.0	GNRC	-0.09%	GT	-0.11%
1.0	LNC	-0.09%	FIS	-0.09%
1.0	NFLX	-0.07%	GNRC	-0.08%
1.0	BXP	-0.07%	BXP	-0.07%
1.0	META	-0.07%	CHTR	-0.07%
1.0	BIIB	-0.07%	META	-0.07%
1.0	ORCL	-0.06%	MSTR	-0.06%
1.0	AAPL	-0.04%	CTLT	-0.06%
1.0	BALL	-0.04%	ZTS	-0.05%
1.0	BA	-0.04%	BIIB	-0.05%
1.0	CHTR	-0.04%	BALL	-0.04%
1.0	TLT	-0.04%	NAVI	-0.04%
1.0	UNH	-0.04%	KHC	-0.04%
1.0	GME	-0.04%	UNH	-0.04%
1.0	TEVA	-0.03%	PRGO	-0.03%
1.0	ZTS	-0.03%	ADBE	-0.03%
1.0	HD	-0.03%	TLT	-0.03%
1.0	SIVBQ	-0.03%	AAPL	-0.02%
1.0	SBUX	-0.02%	HD	-0.02%



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 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	CZR	-1.42%	IEP	-1.86%
10.0	IEP	-1.36%	NWL	-1.58%
10.0	MSTR	-1.32%	SIVBQ	-1.44%
10.0	ORCL	-0.74%	CZR	-1.23%
10.0	META	-0.69%	GME	-0.87%
10.0	NFLX	-0.57%	CYH	-0.76%
10.0	GNRC	-0.56%	GT	-0.7%
10.0	SIVBQ	-0.56%	ORCL	-0.67%
10.0	WDC	-0.49%	INTU	-0.63%
10.0	NWL	-0.48%	META	-0.61%
10.0	GOOGL	-0.43%	ETRN	-0.55%
10.0	INTU	-0.4%	VNO	-0.55%
10.0	AA	-0.38%	CNC	-0.5%
10.0	MS	-0.37%	CLF	-0.5%
10.0	BALL	-0.35%	VZ	-0.5%
10.0	UAA	-0.32%	AMC	-0.49%
10.0	GME	-0.31%	NFLX	-0.46%
10.0	AAPL	-0.3%	BXP	-0.44%
10.0	KALU	-0.29%	HD	-0.4%
10.0	HCA	-0.27%	ON	-0.38%
10.0	BXP	-0.24%	BAC	-0.33%
10.0	CMA	-0.23%	UAA	-0.31%
10.0	BIIB	-0.22%	KALU	-0.3%
10.0	ADBE	-0.2%	OXY	-0.28%
10.0	ISRG	-0.2%	GNRC	-0.26%



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 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	CZR	-3.55%	IEP	-3.21%
21.0	IEP	-3.24%	GME	-2.58%
21.0	MSTR	-2.13%	NWL	-2.57%
21.0	GME	-1.68%	CZR	-2.16%
21.0	INTU	-1.25%	SIVBQ	-2.05%
21.0	GNRC	-1.22%	ADBE	-1.43%
21.0	META	-1.19%	INTU	-1.41%
21.0	WDC	-1.16%	GNRC	-1.39%
21.0	LUMN	-1.08%	GT	-1.21%
21.0	ORCL	-0.99%	CLF	-0.93%
21.0	CLF	-0.89%	BBY	-0.92%
21.0	KALU	-0.82%	BALL	-0.9%
21.0	ADBE	-0.82%	META	-0.79%
21.0	NWL	-0.77%	NFLX	-0.77%
21.0	VZ	-0.71%	VFC	-0.72%
21.0	BALL	-0.61%	VZ	-0.7%
21.0	SIVBQ	-0.6%	BXP	-0.67%
21.0	BAC	-0.58%	HD	-0.66%
21.0	AAPL	-0.54%	ISRG	-0.64%
21.0	FSUGY	-0.53%	KALU	-0.63%
21.0	KHC	-0.48%	KEY	-0.58%
21.0	ISRG	-0.48%	FITB	-0.58%
21.0	CMA	-0.47%	AAP	-0.53%
21.0	NFLX	-0.47%	BAC	-0.5%
21.0	OXY	-0.41%	UAA	-0.48%



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 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	IEP	-10.23%	SIVBQ	-17.54%
63.0	GNRC	-6.53%	IEP	-11.77%
63.0	NWL	-5.24%	NWL	-8.42%
63.0	META	-4.56%	GNRC	-7.78%
63.0	VFC	-3.35%	CLF	-6.93%
63.0	GME	-3.03%	BHC	-5.17%
63.0	CZR	-2.99%	CYH	-4.5%
63.0	SIVBQ	-2.85%	GME	-4.31%
63.0	WDC	-2.51%	VFC	-4.14%
63.0	BALL	-2.3%	UAA	-4.0%
63.0	ADBE	-2.08%	PRGO	-3.63%
63.0	UAA	-1.89%	CVS	-2.79%
63.0	VZ	-1.68%	GT	-2.59%
63.0	CYH	-1.66%	BBY	-2.38%
63.0	AA	-1.6%	BALL	-2.37%
63.0	ON	-1.36%	AA	-2.26%
63.0	INTU	-1.3%	CZR	-2.2%
63.0	BBY	-1.2%	FIS	-1.99%
63.0	CLF	-1.2%	KEY	-1.97%
63.0	KALU	-1.15%	AAP	-1.91%
63.0	PRGO	-1.08%	KHC	-1.71%
63.0	INTC	-1.03%	VZ	-1.61%
63.0	ORCL	-1.0%	ADBE	-1.53%
63.0	ETRN	-0.97%	FRA	-1.39%
63.0	EXPE	-0.94%	CTLT	-1.06%



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 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	IEP	-21.46%	FRCB	-74.45%
126.0	NWL	-20.05%	NWL	-25.5%
126.0	SIVBQ	-14.35%	SIVBQ	-23.49%
126.0	VFC	-11.98%	IEP	-22.36%
126.0	GNRC	-11.67%	VFC	-14.44%
126.0	FRCB	-7.86%	AMC	-11.25%
126.0	WDC	-4.63%	GNRC	-11.11%
126.0	CLF	-4.13%	PRGO	-10.24%
126.0	PRGO	-4.06%	CLF	-9.25%
126.0	BALL	-4.03%	BHC	-7.76%
126.0	CVS	-3.59%	UAA	-7.46%
126.0	GME	-3.41%	GME	-7.09%
126.0	VZ	-3.37%	CTLT	-6.01%
126.0	GT	-3.31%	BALL	-5.41%
126.0	ADBE	-3.24%	SBNY	-5.31%
126.0	CYH	-3.04%	CNC	-5.07%
126.0	FIS	-3.01%	GT	-4.98%
126.0	BBY	-2.91%	FIS	-4.54%
126.0	IRM	-2.59%	CZR	-4.39%
126.0	ON	-2.42%	MOS	-4.24%
126.0	CMA	-2.38%	AAP	-3.47%
126.0	CZR	-1.98%	CHTR	-3.42%
126.0	AA	-1.89%	UNH	-3.36%
126.0	KHC	-1.89%	BBY	-3.09%
126.0	UAA	-1.88%	CMA	-2.91%



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 2026-04-29

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
252.0	FRCB	-115.88%	FRCB	-115.45%
252.0	SIVBQ	-81.22%	SBNY	-56.56%
252.0	NWL	-45.61%	SIVBQ	-55.92%
252.0	IEP	-44.45%	IEP	-50.85%
252.0	GNRC	-18.38%	NWL	-48.36%
252.0	CLF	-16.13%	CLF	-23.11%
252.0	UNH	-13.46%	VFC	-18.87%
252.0	SBNY	-13.3%	CZR	-18.2%
252.0	CZR	-13.0%	AAP	-17.58%
252.0	GT	-12.14%	PRGO	-17.0%
252.0	CVS	-11.72%	GT	-16.6%
252.0	FIS	-11.61%	AMC	-14.96%
252.0	VFC	-10.88%	MOS	-14.59%
252.0	UAA	-9.92%	UAA	-14.56%
252.0	AAP	-9.88%	GNRC	-14.34%
252.0	AA	-9.28%	BHC	-14.28%
252.0	BHC	-8.33%	CTLT	-13.37%
252.0	MOS	-7.36%	UNH	-11.0%
252.0	BALL	-7.25%	CNC	-9.09%
252.0	KEY	-6.86%	KHC	-8.53%
252.0	PRGO	-6.36%	OXY	-7.59%
252.0	CYH	-5.91%	FIS	-7.53%
252.0	IRM	-5.69%	KEY	-7.37%
252.0	GME	-5.38%	LNC	-5.73%
252.0	CMA	-4.27%	TLT	-5.1%



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 2026-04-29 through 2026-04-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	CAH	-0.92%	INTU	-1.36%
1.0	UNH	-0.9%	CAH	-0.92%
1.0	INTC	-0.85%	MOS	-0.89%
1.0	CHTR	-0.78%	NFLX	-0.88%
1.0	MOS	-0.72%	THC	-0.85%
1.0	TXN	-0.5%	UNH	-0.82%
1.0	BUD	-0.36%	CHTR	-0.76%
1.0	ORCL	-0.3%	MRK	-0.67%
1.0	FIS	-0.28%	PCG	-0.44%
1.0	META	-0.26%	AZN	-0.44%
1.0	UAA	-0.26%	T	-0.42%
1.0	CLF	-0.24%	B	-0.41%
1.0	BXP	-0.24%	SLV	-0.39%
1.0	SLV	-0.23%	BUD	-0.3%
1.0	AZN	-0.22%	TSLA	-0.29%
1.0	THC	-0.22%	AMC	-0.24%
1.0	JAZZ	-0.2%	VFC	-0.24%
1.0	VFC	-0.19%	GILD	-0.22%
1.0	MSTR	-0.19%	UAA	-0.18%
1.0	ZTS	-0.18%	ZTS	-0.17%
1.0	LEN	-0.17%	FIS	-0.17%
1.0	MRK	-0.17%	GLD	-0.17%
1.0	TSLA	-0.16%	ORCL	-0.16%
1.0	GME	-0.15%	BBY	-0.16%
1.0	B	-0.14%	JAZZ	-0.12%



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 2026-04-29 through 2026-04-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	INTC	-11.72%	PCG	-9.83%
10.0	AMC	-9.69%	TXN	-7.83%
10.0	UNH	-9.11%	CAH	-6.77%
10.0	TXN	-8.38%	UNH	-6.34%
10.0	MSTR	-7.18%	THC	-5.47%
10.0	KALU	-6.79%	MOS	-5.14%
10.0	PCG	-6.35%	HCA	-4.94%
10.0	CAH	-6.25%	EXPE	-4.0%
10.0	TSLA	-4.73%	LLY	-3.34%
10.0	MOS	-4.62%	TSLA	-3.32%
10.0	EXPE	-4.3%	CHTR	-2.6%
10.0	ORCL	-4.05%	GME	-2.57%
10.0	AMZN	-3.6%	MRK	-2.32%
10.0	BXP	-3.14%	KHC	-2.23%
10.0	VFC	-2.82%	INTC	-2.16%
10.0	THC	-2.73%	NFLX	-2.13%
10.0	META	-2.51%	META	-1.97%
10.0	LLY	-1.98%	VFC	-1.89%
10.0	GME	-1.83%	QCOM	-1.67%
10.0	QCOM	-1.72%	MSTR	-1.54%
10.0	CLF	-1.61%	BXP	-1.5%
10.0	LNC	-1.42%	T	-1.49%
10.0	CSTM	-1.32%	CSTM	-1.29%
10.0	IEP	-1.27%	UAA	-1.23%
10.0	UAA	-1.08%	CNC	-1.08%



P90D: 1d

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

Period examined: All model dates from 2026-04-29 through 2026-02-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	UAA	-0.81%	UAA	-0.79%
1.0	GT	-0.65%	GT	-0.77%
1.0	ORCL	-0.4%	AMC	-0.71%
1.0	INTC	-0.35%	INTU	-0.5%
1.0	VNO	-0.3%	NFLX	-0.45%
1.0	MSTR	-0.29%	NWL	-0.43%
1.0	CHTR	-0.28%	THC	-0.4%
1.0	NWL	-0.27%	B	-0.39%
1.0	CAH	-0.26%	ORCL	-0.38%
1.0	LNC	-0.25%	TSLA	-0.35%
1.0	UNH	-0.25%	LNC	-0.32%
1.0	CCL	-0.25%	CPRT	-0.32%
1.0	ELAN	-0.24%	CAH	-0.31%
1.0	GBTC	-0.24%	WFC	-0.28%
1.0	ZTS	-0.22%	VNO	-0.26%
1.0	GSK	-0.21%	META	-0.26%
1.0	GS	-0.17%	TDG	-0.24%
1.0	ADBE	-0.17%	NAVI	-0.24%
1.0	JPM	-0.17%	FIS	-0.23%
1.0	TDG	-0.17%	PRGO	-0.23%
1.0	LLY	-0.16%	MRK	-0.21%
1.0	CPRT	-0.16%	EXPE	-0.21%
1.0	BUD	-0.15%	UNH	-0.21%
1.0	TSLA	-0.14%	GSK	-0.19%
1.0	LUMN	-0.13%	CHTR	-0.19%



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 2026-04-29 through 2026-02-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	AMC	-9.22%	GT	-8.69%
10.0	GT	-5.79%	LLY	-5.06%
10.0	MOS	-2.93%	NWL	-4.75%
10.0	PCG	-2.92%	B	-4.09%
10.0	META	-2.72%	BUD	-3.72%
10.0	UNH	-2.66%	PHM	-3.65%
10.0	NFLX	-2.66%	AMC	-2.87%
10.0	MSTR	-2.27%	MOS	-2.8%
10.0	EXPE	-2.06%	PCG	-2.51%
10.0	PHM	-1.84%	EXPE	-2.48%
10.0	WDC	-1.73%	CCL	-2.44%
10.0	CPRT	-1.68%	CPRT	-2.37%
10.0	BAC	-1.66%	META	-2.25%
10.0	INTC	-1.62%	LEN	-1.89%
10.0	TSLA	-1.54%	ADBE	-1.81%
10.0	FITB	-1.48%	UAA	-1.79%
10.0	CAH	-1.34%	UNH	-1.71%
10.0	TXN	-1.33%	BHC	-1.5%
10.0	TRGP	-1.32%	CAH	-1.47%
10.0	LLY	-1.31%	TXN	-1.38%
10.0	ORCL	-1.3%	NVS	-1.36%
10.0	BUD	-1.3%	LUMN	-1.35%
10.0	UAA	-1.21%	VNO	-1.34%
10.0	JAZZ	-1.09%	TSLA	-1.25%
10.0	AZO	-1.09%	AZO	-1.13%



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 2026-04-29 through 2026-02-02

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	AMC	-18.16%	GT	-15.38%
21.0	CPRT	-7.06%	PHM	-10.87%
21.0	GT	-6.58%	AMC	-10.73%
21.0	B	-5.91%	BUD	-10.1%
21.0	MOS	-5.84%	NWL	-9.42%
21.0	UNH	-5.05%	LLY	-8.68%
21.0	PHM	-3.81%	B	-7.25%
21.0	PCG	-3.61%	CPRT	-6.89%
21.0	FITB	-3.34%	USB	-6.03%
21.0	USB	-3.22%	MOS	-5.86%
21.0	AZO	-3.17%	ADBE	-5.66%
21.0	BHC	-3.13%	UAA	-4.38%
21.0	EXPE	-2.82%	NVS	-4.13%
21.0	LLY	-2.68%	UNH	-4.0%
21.0	ADBE	-2.49%	LEN	-3.87%
21.0	BUD	-2.44%	CHTR	-3.39%
21.0	TXN	-2.26%	MNST	-3.33%
21.0	CCL	-2.0%	INTC	-2.82%
21.0	META	-1.94%	ISRG	-2.51%
21.0	VICI	-1.94%	BIIB	-2.38%
21.0	NFLX	-1.9%	CCL	-2.36%
21.0	BAC	-1.83%	NEM	-2.1%
21.0	KHC	-1.79%	CAH	-1.92%
21.0	WDC	-1.66%	EXPE	-1.86%
21.0	INTC	-1.62%	FSUGY	-1.75%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
1.0	MSTR	-0.35%	CPRT	-0.25%
1.0	UNH	-0.26%	GT	-0.25%
1.0	UAA	-0.26%	UNH	-0.24%
1.0	GT	-0.23%	MSTR	-0.23%
1.0	CNC	-0.18%	PRGO	-0.23%
1.0	CZR	-0.16%	CHTR	-0.22%
1.0	IEP	-0.15%	IEP	-0.21%
1.0	PCG	-0.14%	UAA	-0.2%
1.0	CPRT	-0.13%	FIS	-0.2%
1.0	CHTR	-0.12%	CNC	-0.18%
1.0	FIS	-0.1%	PCG	-0.18%
1.0	WDC	-0.1%	AMC	-0.18%
1.0	ORCL	-0.1%	NFLX	-0.17%
1.0	VNO	-0.1%	INTU	-0.17%
1.0	JPM	-0.1%	TSLA	-0.16%
1.0	ON	-0.09%	VNO	-0.15%
1.0	GBTC	-0.08%	CZR	-0.14%
1.0	GILD	-0.08%	CMG	-0.1%
1.0	TXN	-0.08%	CMCSA	-0.1%
1.0	VFC	-0.08%	NAVI	-0.1%
1.0	GME	-0.07%	MSFT	-0.09%
1.0	MSI	-0.07%	VICI	-0.06%
1.0	LNC	-0.07%	GILD	-0.06%
1.0	BUD	-0.07%	MSI	-0.06%
1.0	ADBE	-0.06%	FRA	-0.05%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
10.0	WDC	-2.87%	GT	-2.54%
10.0	ORCL	-1.58%	CNC	-2.11%
10.0	AMC	-1.34%	AMC	-1.77%
10.0	MSTR	-1.26%	MSTR	-1.74%
10.0	EXPE	-1.26%	VNO	-1.65%
10.0	ON	-1.01%	NFLX	-1.56%
10.0	GT	-0.95%	EXPE	-1.24%
10.0	VFC	-0.93%	IEP	-1.21%
10.0	TSLA	-0.89%	GBTC	-1.14%
10.0	UNH	-0.88%	CPRT	-1.06%
10.0	VNO	-0.87%	UAA	-1.04%
10.0	KALU	-0.86%	ORCL	-1.01%
10.0	CZR	-0.85%	VST	-1.01%
10.0	IEP	-0.84%	CVS	-0.97%
10.0	UAA	-0.78%	WDC	-0.93%
10.0	CPRT	-0.76%	CZR	-0.85%
10.0	FCX	-0.74%	BUD	-0.8%
10.0	CMA	-0.7%	PCG	-0.76%
10.0	NFLX	-0.62%	TSLA	-0.75%
10.0	AMZN	-0.62%	CMG	-0.75%
10.0	GILD	-0.55%	KALU	-0.7%
10.0	TXN	-0.55%	KHC	-0.69%
10.0	HCA	-0.51%	PRGO	-0.61%
10.0	BUD	-0.5%	ADBE	-0.59%
10.0	VICI	-0.5%	ISRG	-0.57%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
21.0	WDC	-4.71%	MSTR	-7.77%
21.0	MSTR	-3.64%	GT	-3.98%
21.0	CPRT	-2.81%	ADBE	-3.01%
21.0	EXPE	-2.67%	VNO	-2.65%
21.0	ORCL	-2.53%	CPRT	-2.55%
21.0	VNO	-2.03%	UAA	-2.55%
21.0	KALU	-1.93%	ORCL	-2.27%
21.0	CMA	-1.9%	NFLX	-2.02%
21.0	VFC	-1.83%	EXPE	-2.01%
21.0	UAA	-1.81%	GBTC	-1.94%
21.0	CZR	-1.75%	IEP	-1.93%
21.0	IEP	-1.54%	CNC	-1.58%
21.0	NFLX	-1.29%	ISRG	-1.56%
21.0	UNH	-1.21%	CMG	-1.53%
21.0	TXN	-1.2%	BUD	-1.37%
21.0	GBTC	-1.2%	KALU	-1.34%
21.0	ISRG	-1.19%	CVS	-1.22%
21.0	FCX	-1.17%	GME	-1.16%
21.0	BUD	-1.13%	T	-1.13%
21.0	ADBE	-1.12%	AMC	-1.13%
21.0	TSLA	-0.87%	VFC	-0.87%
21.0	GT	-0.82%	TMUS	-0.84%
21.0	VICI	-0.81%	CDNS	-0.82%
21.0	VST	-0.8%	FIS	-0.8%
21.0	GILD	-0.68%	GILD	-0.79%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
63.0	MSTR	-26.47%	MSTR	-33.47%
63.0	ORCL	-12.93%	NFLX	-16.06%
63.0	NFLX	-10.76%	ORCL	-10.67%
63.0	WDC	-8.46%	PRGO	-10.56%
63.0	CPRT	-7.23%	GT	-10.49%
63.0	GT	-7.17%	VNO	-10.04%
63.0	VFC	-6.25%	NWL	-8.88%
63.0	AVGO	-5.44%	ADBE	-7.37%
63.0	KALU	-5.32%	FIS	-7.23%
63.0	EXPE	-5.28%	MOS	-7.1%
63.0	MOS	-5.07%	CPRT	-6.24%
63.0	VNO	-4.73%	VFC	-5.66%
63.0	MSFT	-4.51%	CDNS	-5.14%
63.0	CMA	-3.88%	CLF	-5.11%
63.0	GBTC	-3.75%	EXPE	-4.77%
63.0	NVS	-3.41%	AVGO	-4.75%
63.0	ADBE	-3.39%	MSFT	-4.45%
63.0	BUD	-3.22%	WYNN	-3.82%
63.0	INTC	-2.97%	GBTC	-3.66%
63.0	PRGO	-2.94%	KHC	-3.22%
63.0	ISRG	-2.78%	VICI	-2.65%
63.0	GILD	-2.68%	TSLA	-2.57%
63.0	CMG	-2.54%	CZR	-2.3%
63.0	TSLA	-2.28%	IEP	-2.14%
63.0	UNH	-2.19%	GILD	-1.96%



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 2026-04-29 through 2025-05-01

Hzn	Ticker	95ROLOBC_VmS	Ticker	99ROLOBC_VmS
126.0	MSTR	-47.57%	AMC	-81.67%
126.0	MOS	-22.06%	NWL	-46.32%
126.0	NFLX	-20.21%	PRGO	-41.82%
126.0	INTU	-17.71%	MOS	-37.8%
126.0	CPRT	-15.98%	INTU	-37.26%
126.0	CMG	-14.43%	NFLX	-27.51%
126.0	GT	-13.7%	GT	-21.72%
126.0	VFC	-12.75%	MSTR	-21.69%
126.0	PRGO	-12.17%	FIS	-19.8%
126.0	AVGO	-11.75%	VNO	-17.55%
126.0	LEN	-10.31%	CMG	-15.93%
126.0	VNO	-10.06%	CPRT	-12.64%
126.0	FIS	-9.93%	MSFT	-12.61%
126.0	NWL	-9.65%	AZO	-12.01%
126.0	EXPE	-7.32%	AVGO	-10.92%
126.0	CMA	-7.24%	ZTS	-10.68%
126.0	NVS	-6.27%	VICI	-7.65%
126.0	VICI	-5.76%	CZR	-7.55%
126.0	ADBE	-5.72%	GBTC	-6.63%
126.0	GILD	-5.26%	TMUS	-6.51%
126.0	CZR	-4.65%	LEN	-6.28%
126.0	ORCL	-4.18%	ADBE	-6.23%
126.0	MSFT	-4.02%	ORLY	-6.11%
126.0	ORLY	-3.99%	GME	-5.49%
126.0	BUD	-3.95%	T	-5.47%



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 2026-04-29. Note that for horizon periods greater than 1d we exclude enough model dates to assure no overlap between observation periods.

Model	Pctile	Horizon	OaR_kStat	OaR_pValK	OaR_chrStat	OaR_pValChr
Sigma	95	1	242.16	0	9.17	0
Sigma	95	10	0.03	0.86	2.48	0.12
Sigma	95	21	33.45	0	0.18	0.67
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	334.94	0	20.7	0
Sigma	99	10	74.51	0	0.84	0.36
Sigma	99	21	75.49	0	1.58	0.21
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

