

VecViz Value At Risk (VaR) Performance Report

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Introduction

Value at Risk, or VaR, as discussed in this report, is an estimate of the maximum amount an investor could lose by being long a ticker at the end of a specified forward time horizon, at a specified level of probability. An accurate VaR measure forecasts losses that are exceeded by actual losses 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 VaR 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 VaR Estimates

The metrics used in this report to evaluate VaR performance via comparison to Sigma include the mean absolute error (MAE) of breakage rates to the specified probability, Return on VaR Based Capital (ROVBC), and the alpha of Vector Model ROVBC 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 VaR "Report Card" section of this report.

We supplement this comparative analysis with two additional tests of Vector Model VaR that are well established in the quantitative finance literature: the Kupiec Test of breakage consistency with the specified probability and the Christoferson test of breakage independence. Results of these tests are also summarized in the Report Card section.

VaR Breakage Ratios

VaR Breakage refers to forward returns being below the VaR 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 VaR would generate 50 breaks. Therefore, we compare Vector Model VaR 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 VaR breakage proximity to target.



However, an ideal VaR estimate wouldn't have all those breaks concentrated in just a couple days or just a few tickers. The breaks generated by an ideal VaR estimate would also be independent with respect to model dates and tickers. Therefore, we also compare the Vector Model's VaR 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 VaR 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.

ROVBC and its drivers

The metric "ROVBC" requires some explanation. Return on VaR Based Capital, or ROVBC, attempts to capture the impact on investor returns of using the Vector Model VaR instead of Sigma VaR to size positions, assuming the investor has a fixed risk budget per ticker.

ROVBC 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 Sigma VaR / Vector VaR, subject to a cap and floor (we use 300% and 33.33%). So, for example, if Sigma said VaR for ticker XYZ was -2.00% and the Vector Model said VaR for XYZ was -4.00%, the Vector Model ROVBC for XYZ would be half of Sigma's. Likewise, if the Vector Model said VaR for XYZ was -1.00% the Vector Model's ROVBC for XYZ would be double Sigma's. No cost of borrowing or crediting for uninvested funds is incorporated in ROVBC.

For the Vector Model ROVBC to be higher than Sigma's it signifies that either (1) Vector Model VaR was more deeply negative than Sigma's VaR and the ticker traded lower, or (2) Sigma VaR was more deeply negative than the Vector Model's VaR and the ticker traded higher.

Addressing The Tradeoff Between VaR Breakage and ROVBC

All else equal, assuming a positive drift higher in average asset prices over time, the model with more deeply negative average VaR levels will have lower breakage rates but also lower ROVBC, and vice versa. Thus, relative ROVBC 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 ROVBC to Sigma ROVBC "Adj. for Avg. VM-Sigma VaR Diff." (adjusted for average Vector Model - Sigma VaR differentials). Specifically, we multiply average aggregate Sigma ROVBC by the ratio of average aggregate Sigma VaR to average aggregate Vector Model VaR. This multiplication almost entirely eliminates the influence of systematic VaR differentials on the relationship between Vector Model and Sigma ROVBC.



The bias that remains reflects only the aforementioned capping and flooring when calculating Vector Model ROVBC.

We also provide a more elegant, though less transparent metric that addresses this concern - the alpha of Vector Model ROVBC to Sigma ROVBC (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 ROVBC on the underlying ticker forward returns for corresponding TMD’s. It represents the expected Vector Model ROVBC when Sigma ROVBC, i.e., the underlying ticker return, is 0.00%.

Determining the drivers of ROVBC alpha

A ROVBC Alpha greater than 0.00 across TMD’s indicates that Vector Model VaR moved favorably from a market timing and / or ticker selection perspective. We present that statistic alongside an average ROVBC 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.

ROVBC Beta

ROVBC Beta represents the expected sensitivity of Vector Model ROVBC to Sigma ROVBC, i.e., the underlying ticker return. It is the slope of the aforementioned ordinary least squares regression of Vector Model ROVBC on Sigma ROVBC. Like outright ROVBC, 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 ROVBC beta to Sigma ROVBC in the context of how well each model’s VaR breakage rates compare to targeted levels. For example, if the Sigma model VaR breakage is well below target and the Vector Model’s VaR breakage is close to target, then Vector Model VaR levels are likely less deeply negative than Sigma’s and the beta of Vector Model ROVBC to Sigma ROVBC should be expected to be > 1.00 .

A ROVBC Beta greater than 1.00 across TMD’s indicates that Vector Model VaR was less negative than Sigma VaR 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 VaR was less deeply negative than Sigma VaR on more volatile days. If this second beta is less than the overall beta then it indicates that Vector Model VaR tended to be less deeply negative than Sigma VaR 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 VaR analytics are daily closing prices obtained from QuoteMedia.

The Vector Model was trained upon ~ 60,000 ticker model dates (TMD's) representing ~550 tickers (including equities, currencies, and commodities) and ~ 120 model dates spanning from March 9, 2002 to February 3, 2021. The Out of Sample period starts on 1/31/2022, nearly a full one year from the last model date included in the training data. All VaR 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 VaR 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% VaR is assumed to be -1.645 sigma's lower than the current price and 99% VaR 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 VaR.

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-vecvizzes-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 VaR outperforms Sigma VaR, you should not necessarily conclude that Vector Model VaR 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 ROVBC 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 VaR of -15% may have declined 99% the day after the VaR 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 ROVBC 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 VaR breakage and ROVBC returns are calculated similarly.
- 6) We are not considering transaction costs. The turnover and therefore transaction costs experienced by Vector Model ROVBC based investors resulting in the change in the ratio between Vector Model and Sigma VaR is completely ignored.
- 7) We are not incorporating any financing charges or margin-related costs for implied “levered” ROVBC positions.
- 8) Note that VaR 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.

9) All analytics presented in this report assumes that prices are floored at \$0.01/share.

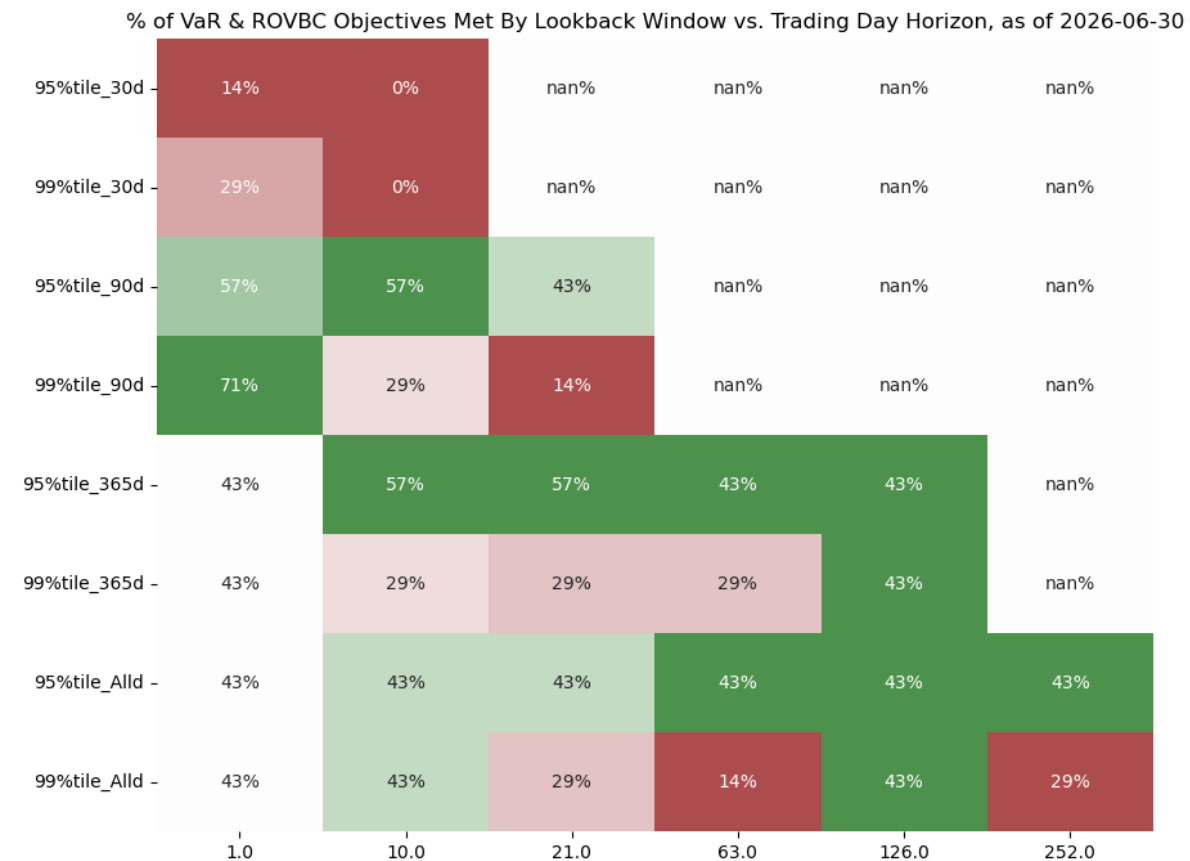
Thus, in summary, with the exception of the Kupiec and Christoferson tests, all metrics presented in this report are presented and are to be considered on a comparative basis. Are Vector Model VaR breakage rates closer to target than Sigma's? Does Vector Model ROVBC outperform Sigma ROVBC? Is the relative 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 questions this report is structured to answer.



Value at Risk (VaR) Report Cards

Period examined: AllD = 2022-01-31 through 2026-06-29 while 365D /90D/ 30D include the 365/90/30 days ended 2026-06-29, respectively.

Sigma Comparison Report Card:



Vector Model Statistical Testing Report Card:

The Kupiec Proportion of Failures test statistic (listed as VaR_kStat in the table below), and its probability (VaR_pValK) are used to test the null hypothesis that the Vector Model's VaR breakage rate is consistent with expectations. The test statistic is calculated by comparing the number of VaR 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 VaR breakage rate is consistent with expectations.

The Christoferson VaR Violation Independence test statistic (listed as VaR_chrStat in the table below) and its probability (VaR_pValChr) are used to test the null hypothesis that the VaR 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 the Vector Model's VaR breakage is independent.

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

Period examined: 2022-01-31 through 2026-06-29. Note that for horizon periods greater than 1d we exclude enough model dates to assure no overlap between observation periods.

Model	Pctile	Horizon	VaR_kStat	VaR_pValK	VaR_chrStat	VaR_pValChr
Vector	95	1	0.24	0.63	13.03	0
Vector	95	10	18.26	0	0.03	0.87
Vector	95	21	6.4	0.01	0.01	0.92
Vector	95	63	1.3	0.25	0.8	0.37
Vector	95	126	0.32	0.57	0.17	0.68
Vector	95	252	0.16	0.69	-0	1
Vector	99	1	109.32	0	31.95	0
Vector	99	10	24.68	0	0.47	0.49
Vector	99	21	10.58	0	1.56	0.21
Vector	99	63	1.51	0.22	0.01	0.91
Vector	99	126	0.9	0.34	0.54	0.46
Vector	99	252	5.07	0.02	-0	1



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 2026-06-29.

VaR and ROVBC Criteria	Average Score(%)
1. Closer to Target VaR Breakage Than Sigma (i.e., smaller MAE)	56.25
2. Less Volatile VaR Breakage Across Model Dates Than Sigma	46.88
3. Less Volatile VaR Breakage Across Tickers Than Sigma	0
4. Higher ROVBC Than Sigma	50
5. Higher ROVBC Than Sigma, Adj. for Avg. VM-Sigma VaR Diff.	87.5
6. Alpha of ROVBC vs Sigma >0 , Across Tickers and Model Dates	9.38
7. Alpha of ROVBC vs Sigma >0 , By Ticker, Across Model Dates	9.38
Overall Comparison to Sigma Average	37.05
Kupiec Test of VaR Proximity to Target	50
Christoferson Test of VaR Date Independence	83.3333

VaR and ROVBC Criteria by Fwd Hzn	1D	10D	21D	63D	126D	252D
1. Closer to Target VaR Breakage Than Sigma	75	25	33.33	75	100	50
2. Less Volatile VaR Breakage Across Model Dates Than Sigma	100	50	50	0	0	0
3. Less Volatile VaR Breakage Across Tickers Than Sigma	0	0	0	0	0	0
4. Higher ROVBC Than Sigma	12.5	50	50	50	100	100
5. Higher ROVBC Than Sigma, Adj. for Avg. VM-Sigma VaR Diff.	75	75	100	100	100	100
6. Alpha of ROVBC vs Sigma >0 , Across Tickers and Model Dates	25	12.5	0	0	0	0
7. Alpha of ROVBC vs Sigma >0 , By Ticker, Across Model Dates	12.5	12.5	16.67	0	0	0
TotalScore	42.86	32.14	35.71	32.14	42.86	35.71



VaR and ROVBC Criteria Across Lookback Window	30D	90D	365D	AllD
1. Closer to Target VaR Breakage Than Sigma	25	16.67	80	66.67
2. Less Volatile VaR Breakage Across Model Dates Than Sigma	50	33.33	60	41.67
3. Less Volatile VaR Breakage Across Tickers Than Sigma	0	0	0	0
4. Higher ROVBC Than Sigma	0	66.67	50	58.33
5. Higher ROVBC Than Sigma, Adj. for Avg. VM-Sigma VaR Diff.	0	100	100	100
6. Alpha of ROVBC vs Sigma >0, Across Tickers and Model Dates	0	50	0	0
7. Alpha of ROVBC vs Sigma >0, By Ticker, Across Model Dates	0	50	0	0
TotalScore	10.71	45.24	41.43	38.1



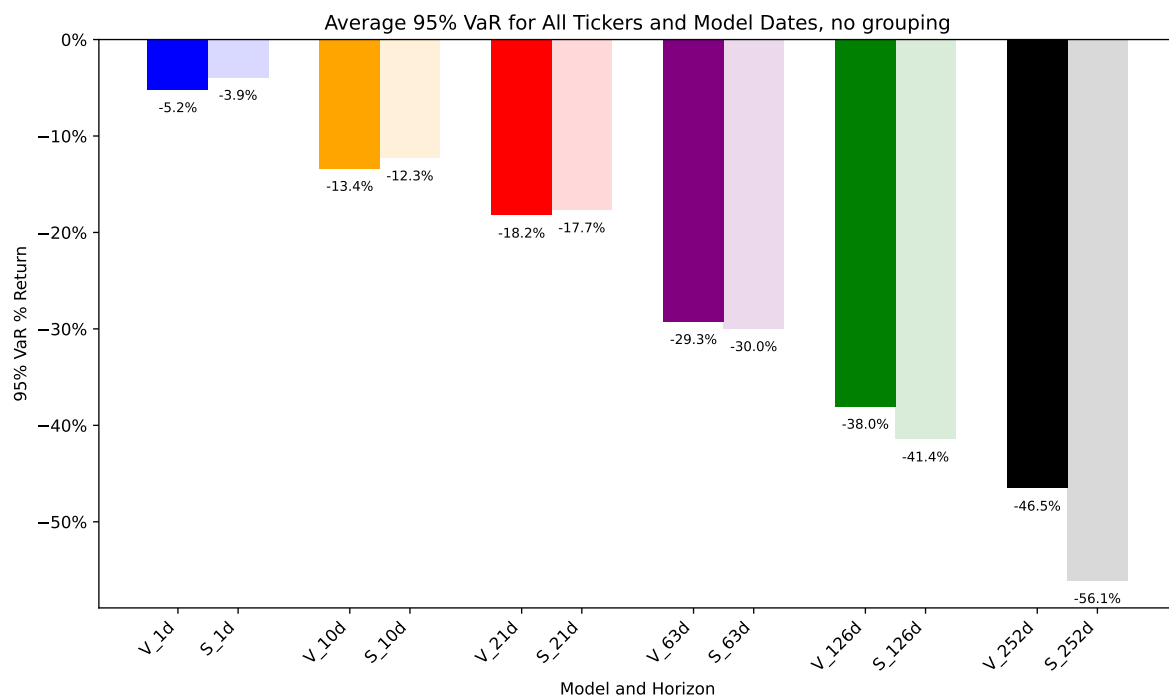
95% Value at Risk (VaR)

Historic Average Levels

Here we compare Vector Model (“V”, dark shading) and Sigma (“S”, light shading) 95% VaR 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.

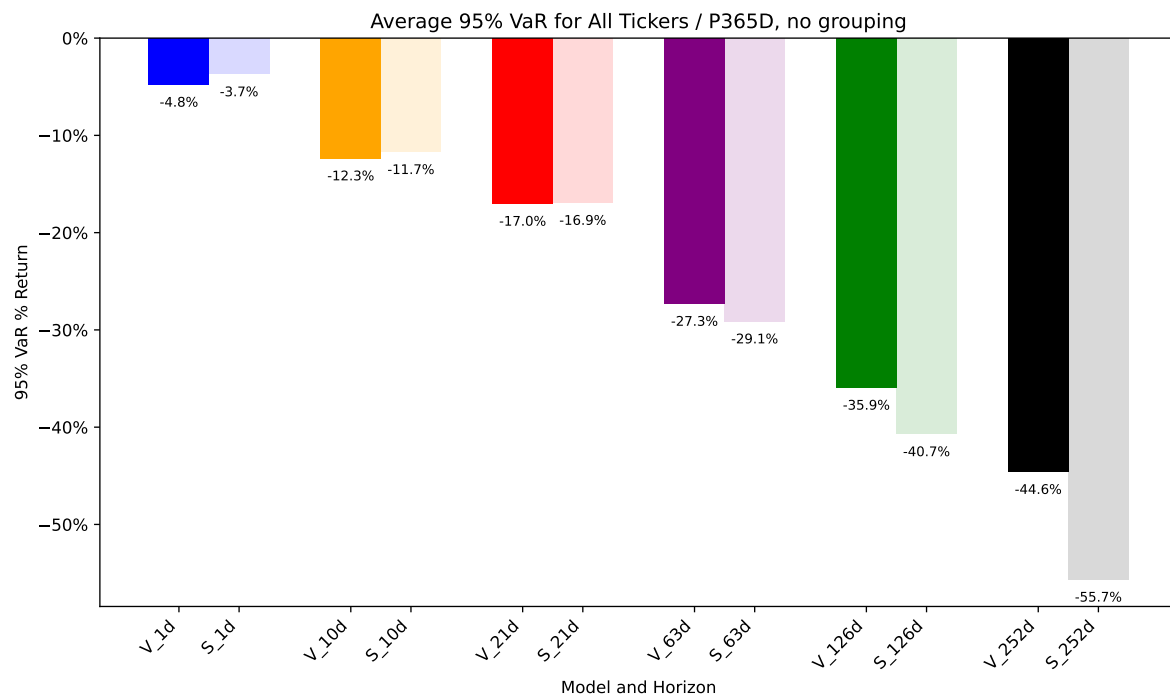
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-06-29



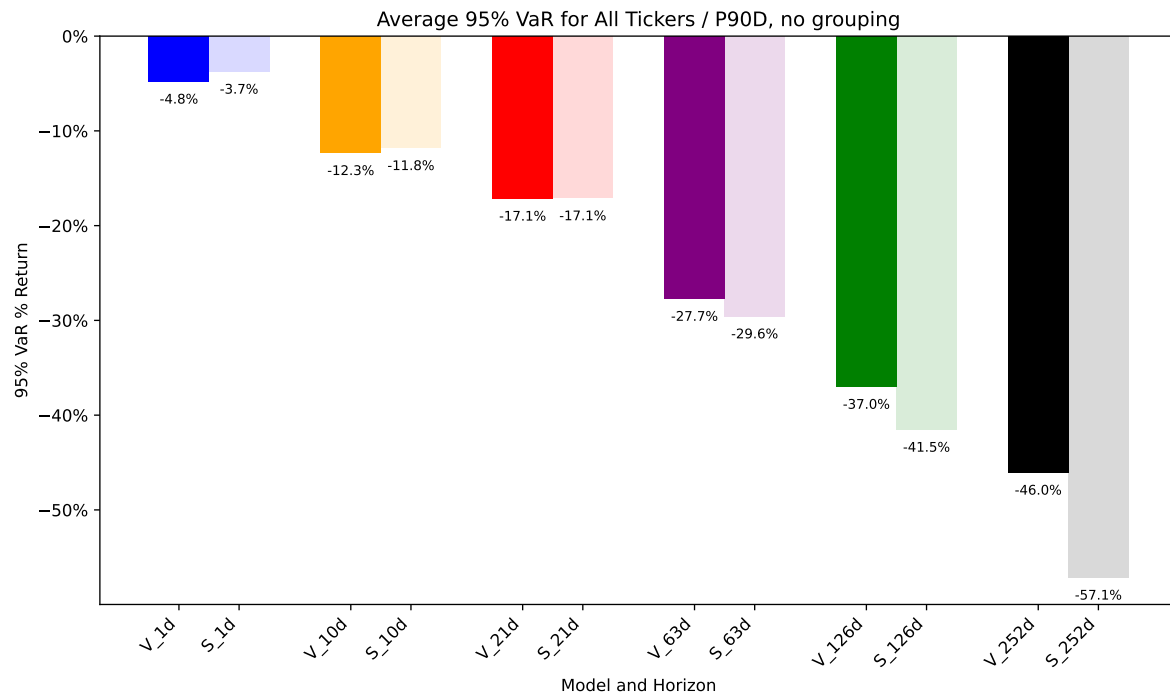
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-06-29 through 2025-07-01



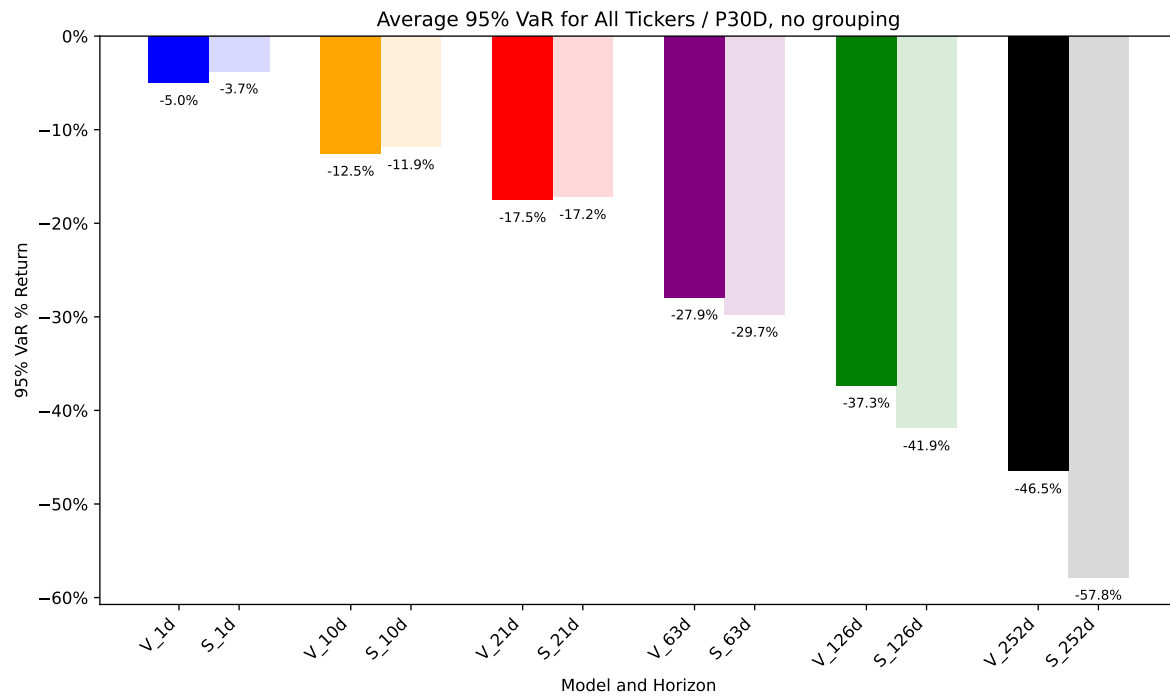
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-06-29 through 2026-04-02



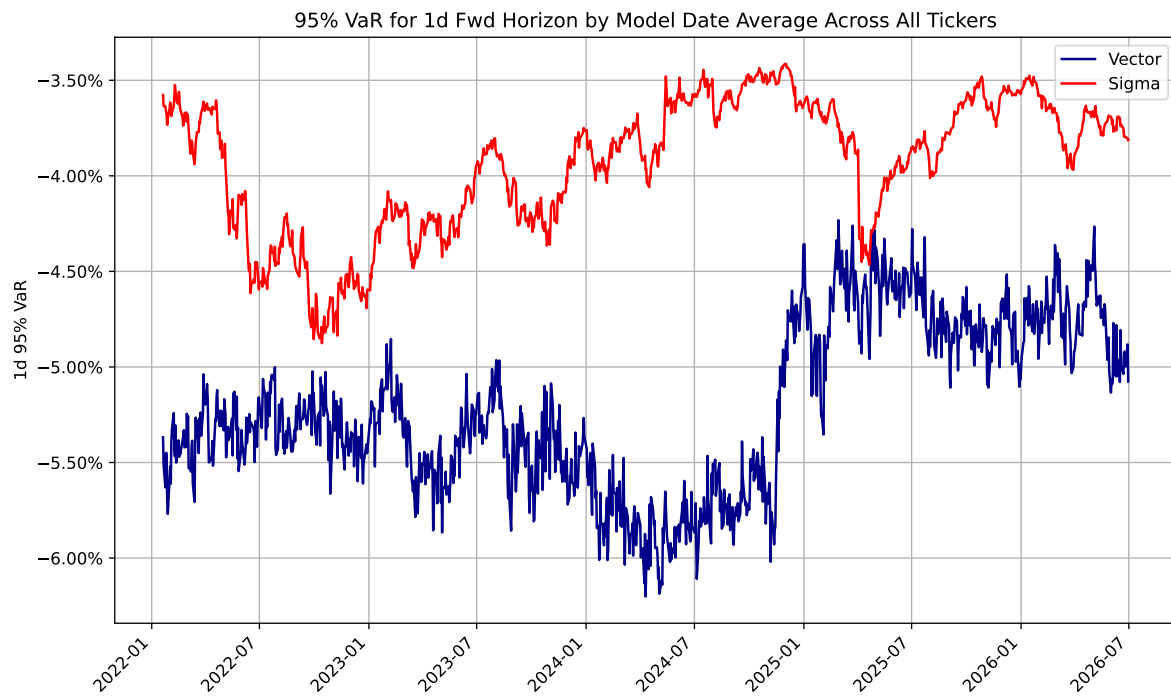
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-06-29 through 2026-06-01

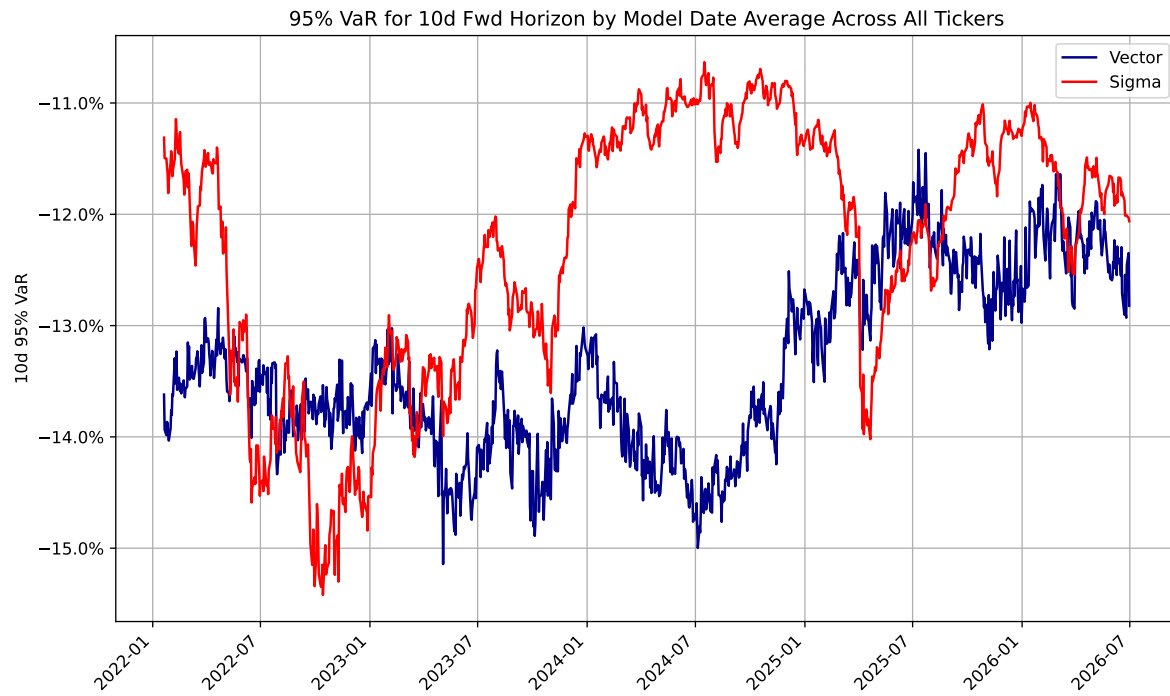


Daily Levels

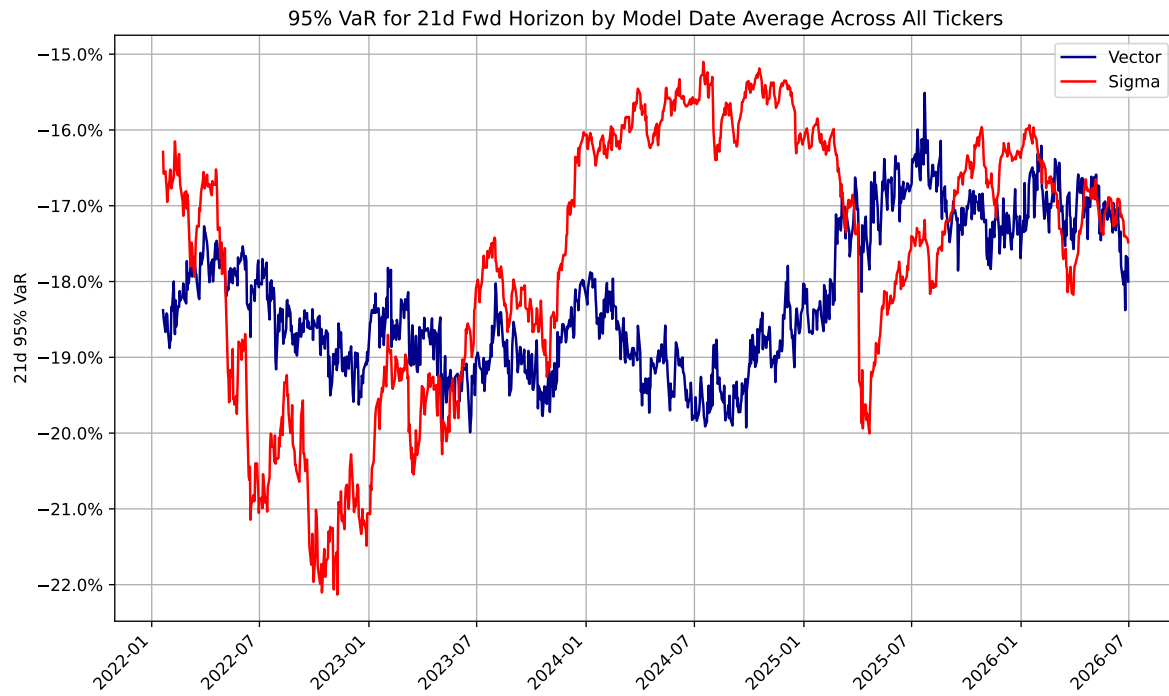
1d Horizon



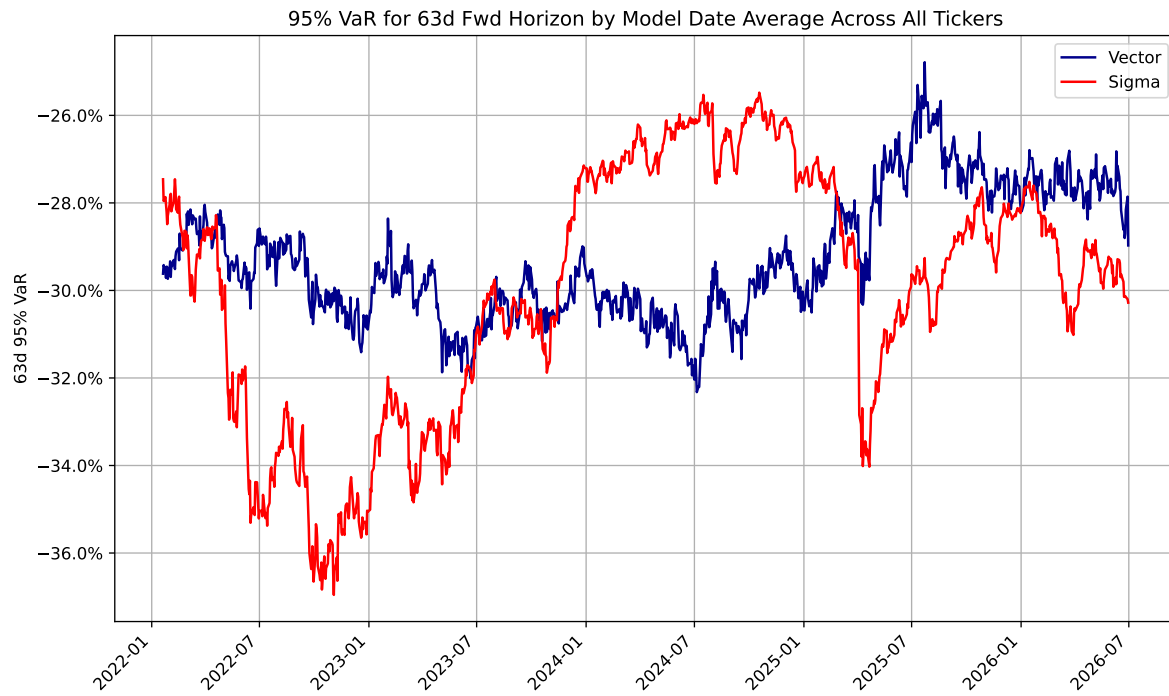
10d Horizon



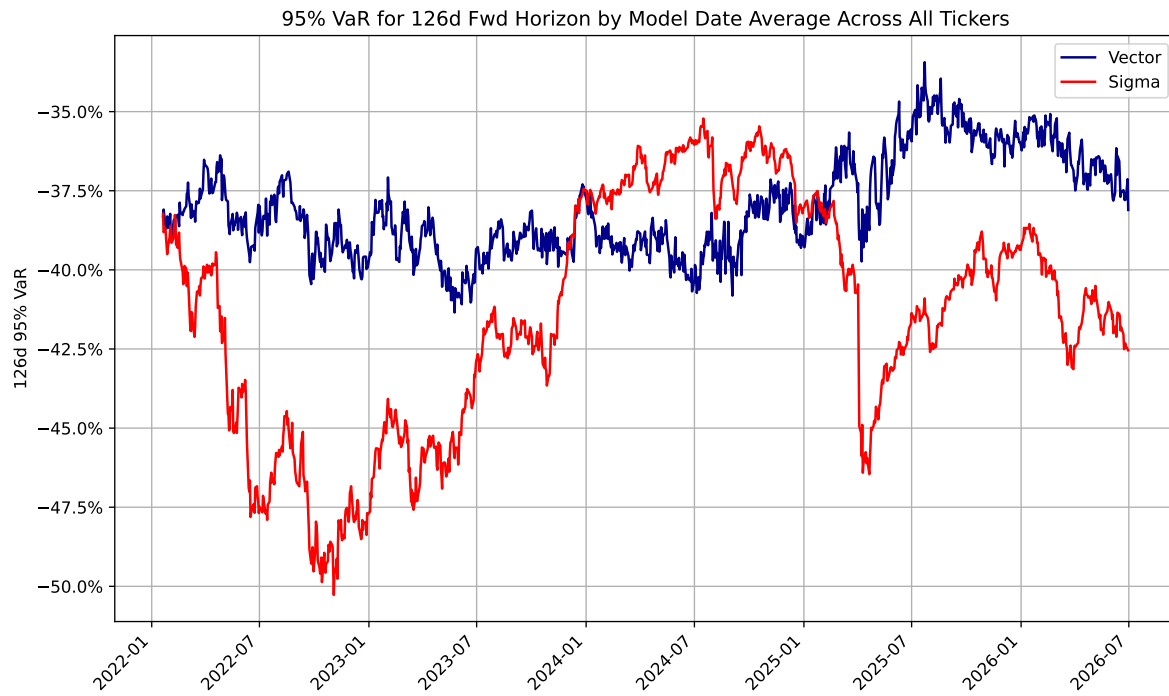
21d Horizon



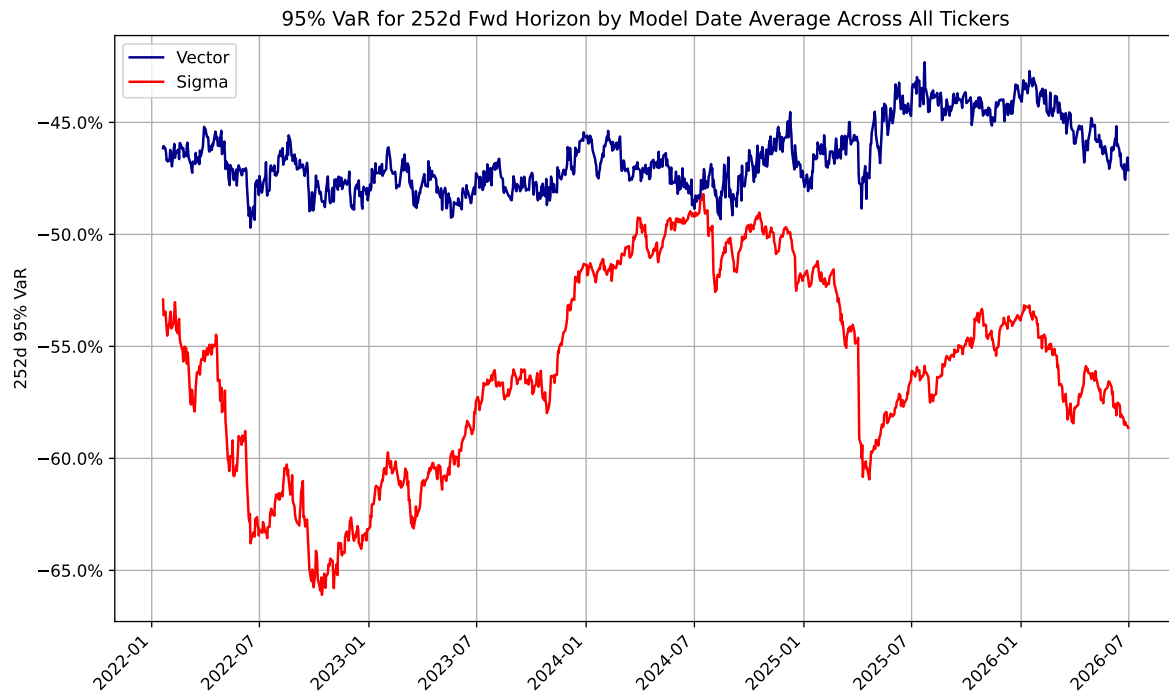
63d Horizon



126d Horizon



252d Horizon



Performance Summary

Here we compare the performance of 95% VaR 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 VaR breakage rates and Return on VaR based Capital (ROVBC), presenting the average results across tickers and model dates for model dates in the period indicated.

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

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

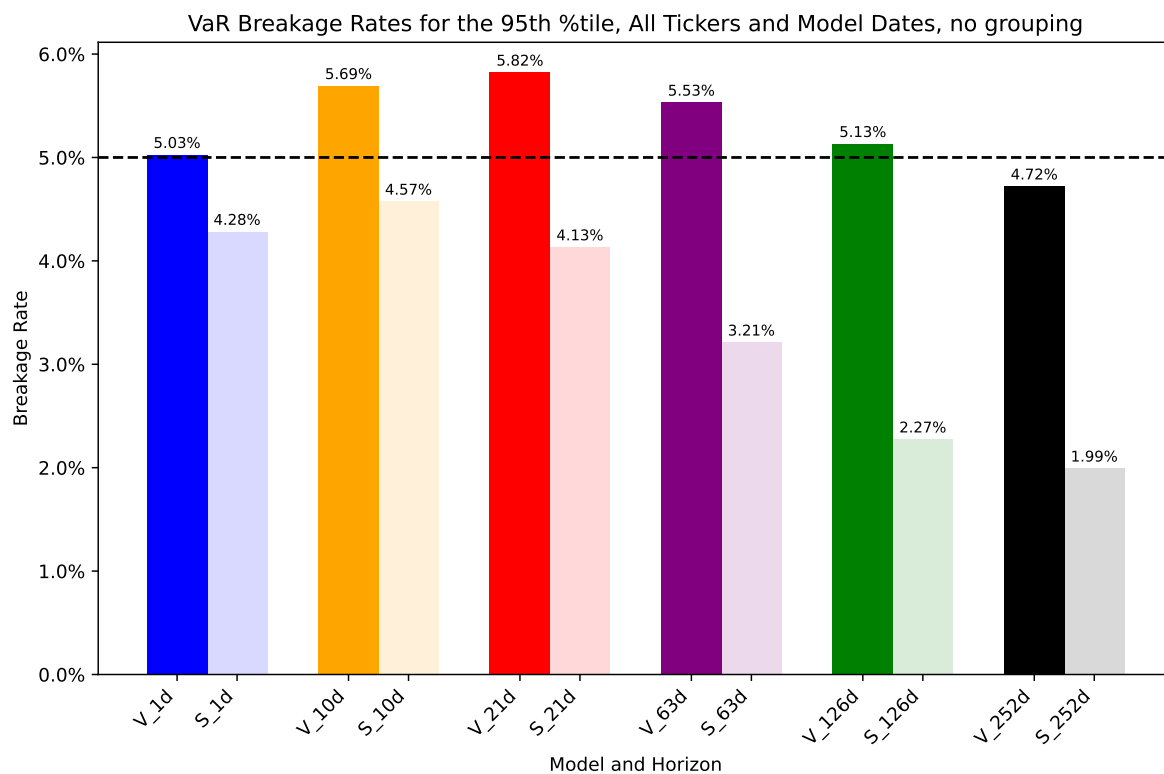
Alpha allows us to isolate ROVBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROVBC multiplier for the Vector Model and 1.00x. Alpha across TMD’s could be driven by VaR differentials between tickers and / or between dates. Thus we also present 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 variation in Vector Model VaR relative to Sigma across time as opposed to variation in Vector Model VaR relative to Sigma between tickers.

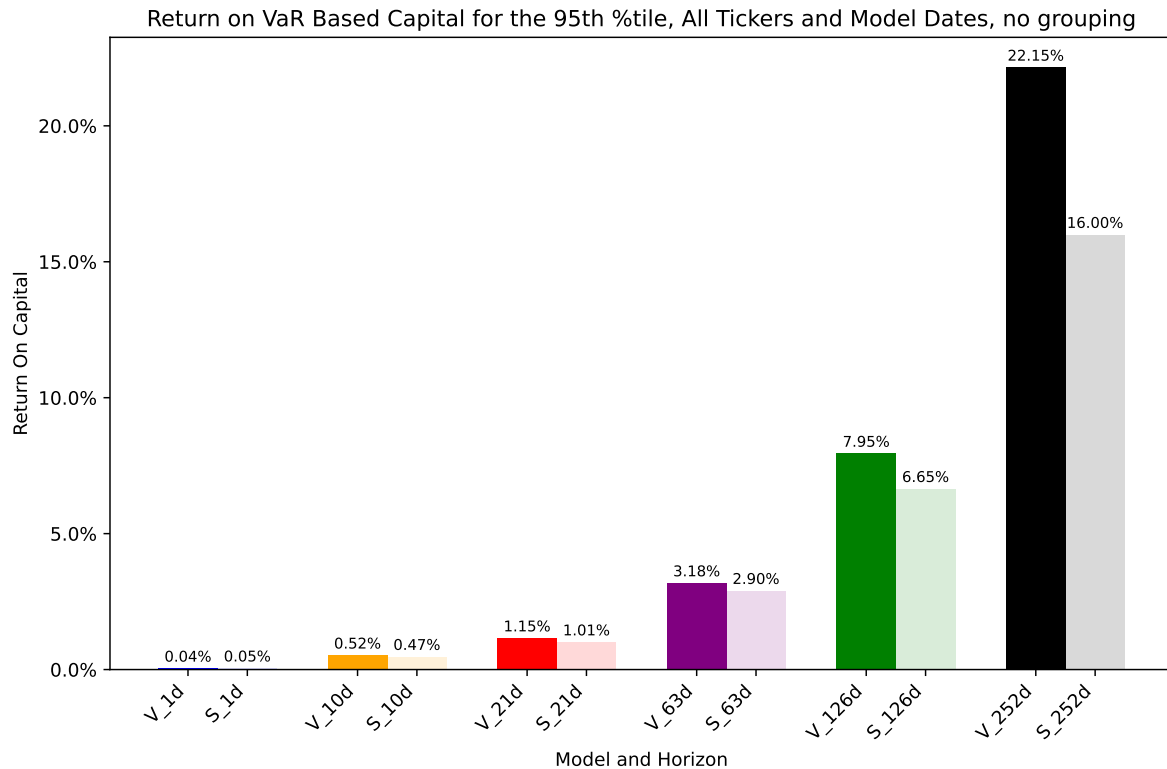
Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons > 1d overlap.



All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-06-29





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

	1d	10d	21d	63d	126d	252d
intercept	-0.01%	-0.08%	-0.17%	-0.65%	-1.41%	-4.42%
intercept_p_value	0.34%	0.00%	0.00%	0.00%	0.00%	0.00%
slope	116.67%	128.08%	131.81%	132.11%	140.76%	166.10%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

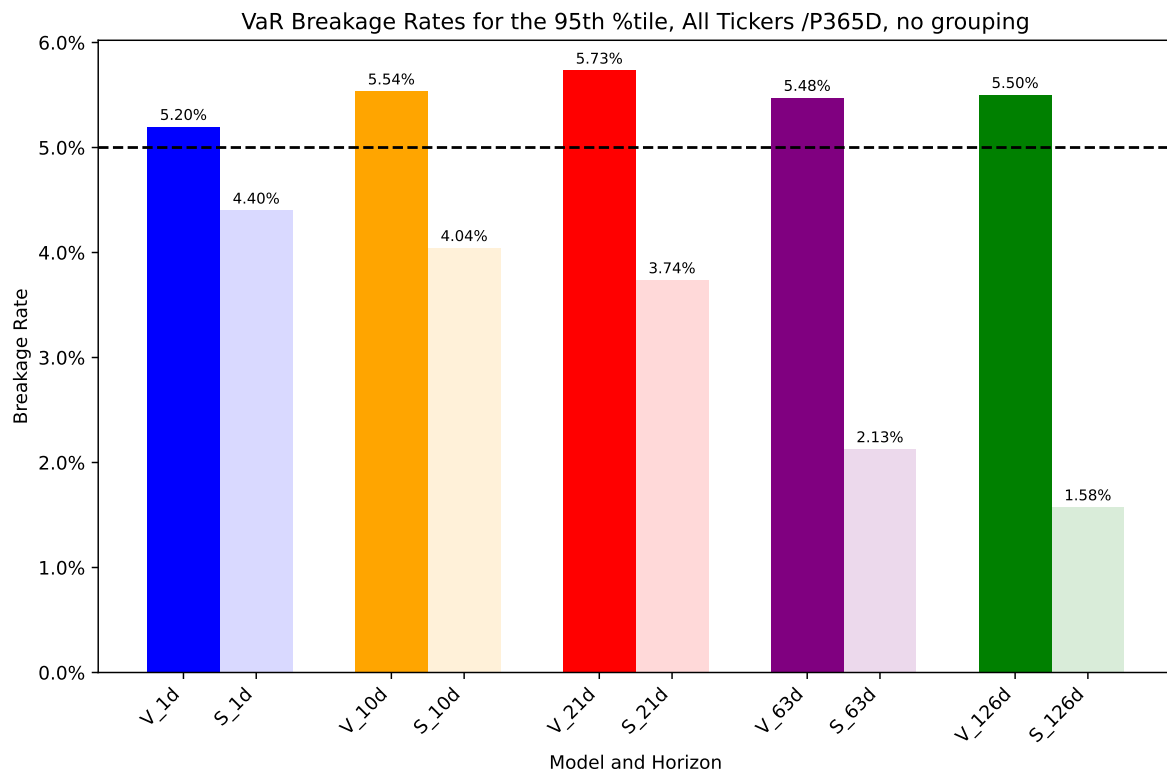
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across Model Dates:

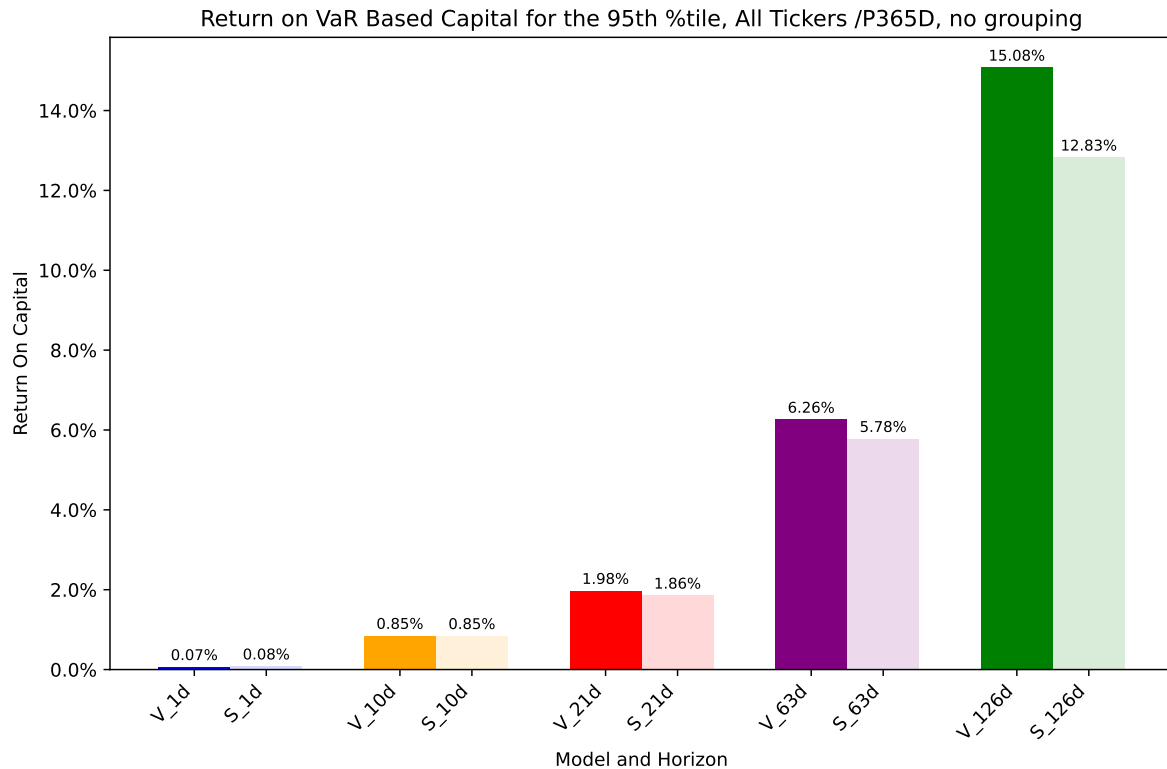
	1d	10d	21d	63d	126d	252d
intercept	-0.04%	-0.20%	-0.56%	-2.28%	-4.43%	-5.59%
intercept_p_value	0.00%	0.15%	0.01%	0.00%	0.00%	0.06%
slope	163.50%	145.72%	163.56%	179.21%	177.60%	168.33%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-06-29 through 2025-07-01





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

	1d	10d	21d	63d	126d
intercept	-0.02%	-0.15%	-0.32%	-0.84%	-2.13%
intercept_p_value	2.14%	0.00%	0.00%	0.00%	0.00%
slope	104.66%	118.54%	123.55%	122.79%	134.17%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

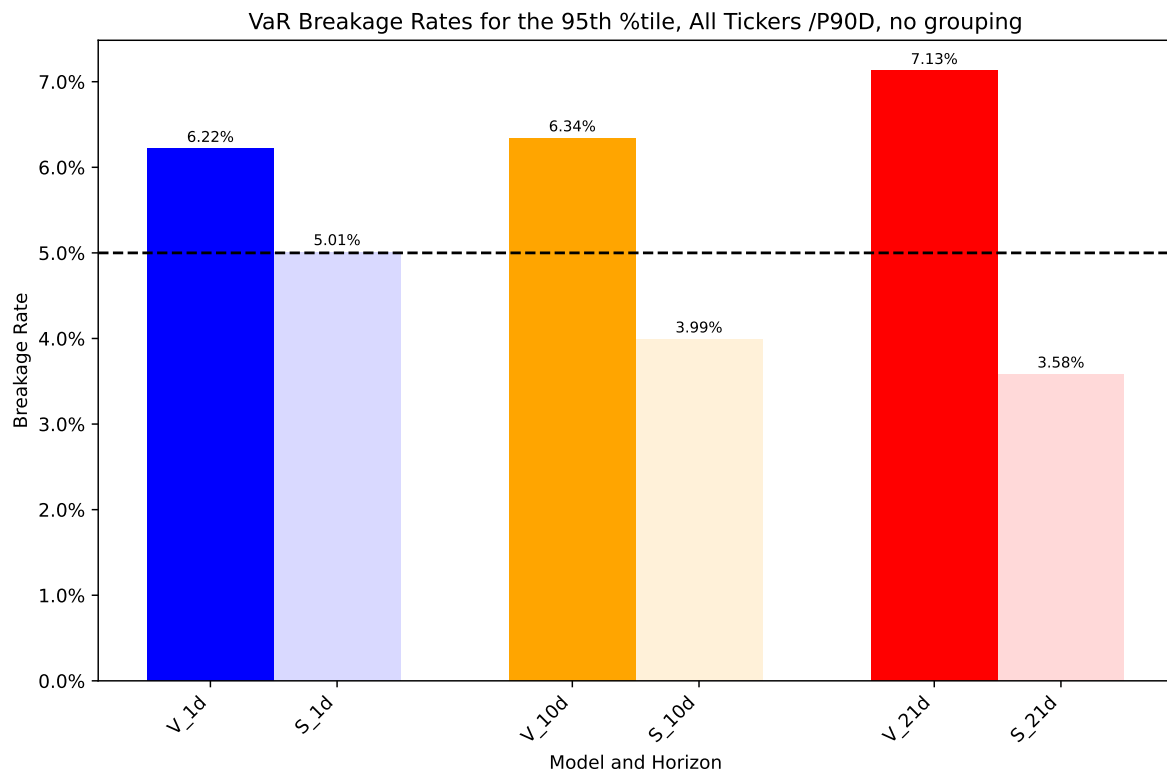
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P365D:

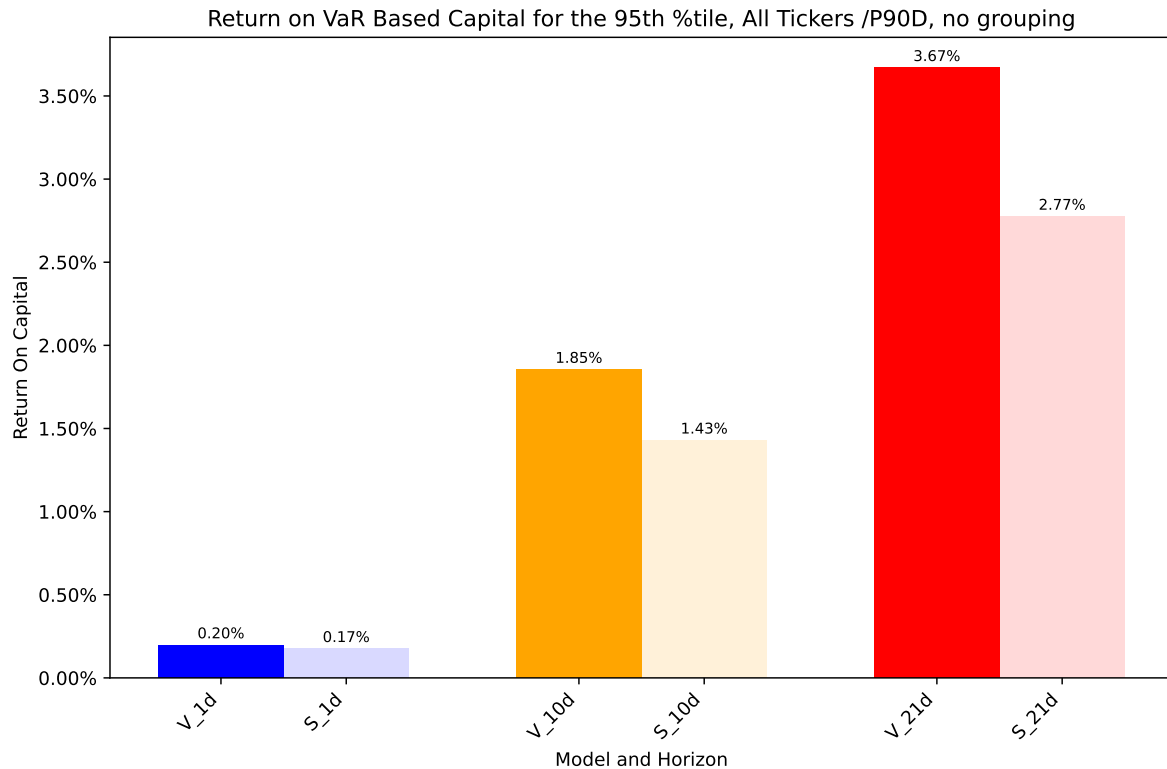
	1d	10d	21d	63d	126d
intercept	-0.02%	-0.07%	-0.19%	-0.70%	-1.92%
intercept_p_value	6.16%	38.58%	25.04%	16.77%	9.31%
slope	102.19%	109.09%	116.67%	120.29%	133.30%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-06-29 through 2026-04-02





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

	1d	10d	21d
intercept	0.01%	0.03%	-0.07%
intercept_p_value	50.53%	62.97%	56.77%
slope	105.16%	127.37%	134.89%
slope_p_value	0.00%	0.00%	0.00%

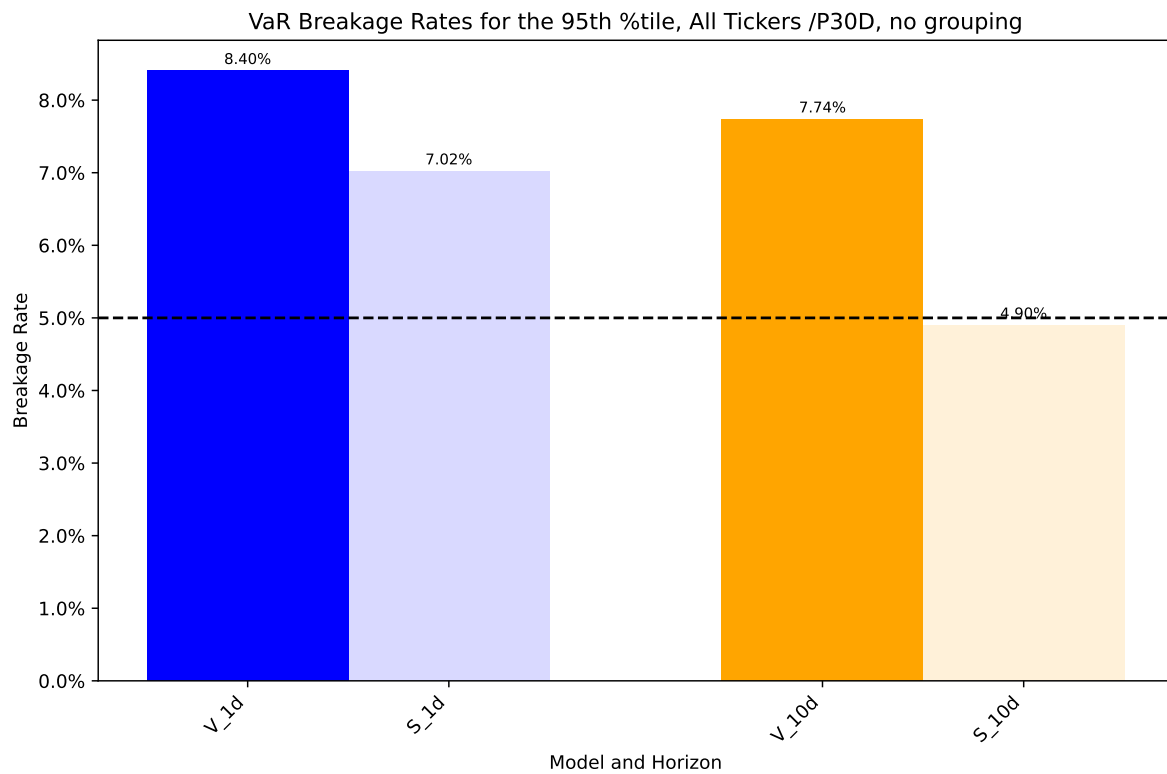
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P90D:

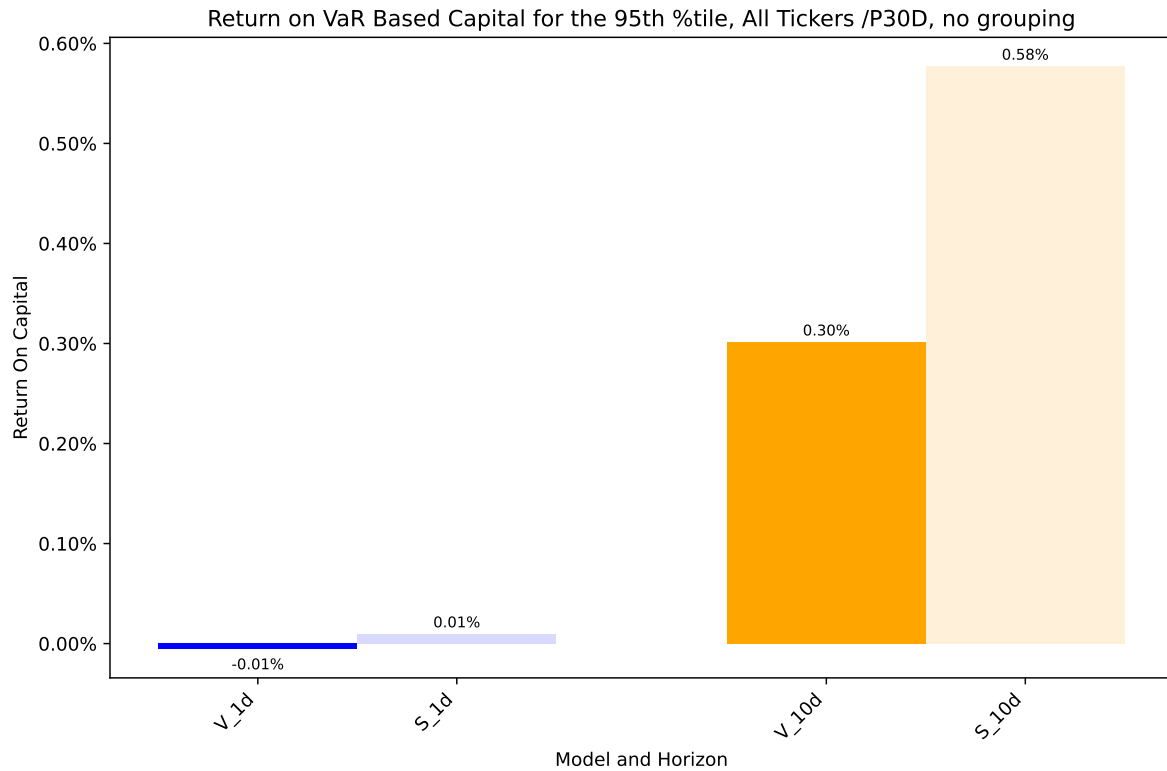
	1d	10d	21d
intercept	-0.00%	0.12%	0.06%
intercept_p_value	83.68%	57.32%	88.92%
slope	115.39%	121.69%	130.11%
slope_p_value	0.00%	0.00%	0.00%



Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-06-29 through 2026-06-01





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

	1d	10d
intercept	-0.01%	-0.43%
intercept_p_value	69.25%	0.37%
slope	97.34%	126.23%
slope_p_value	0.00%	0.00%

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

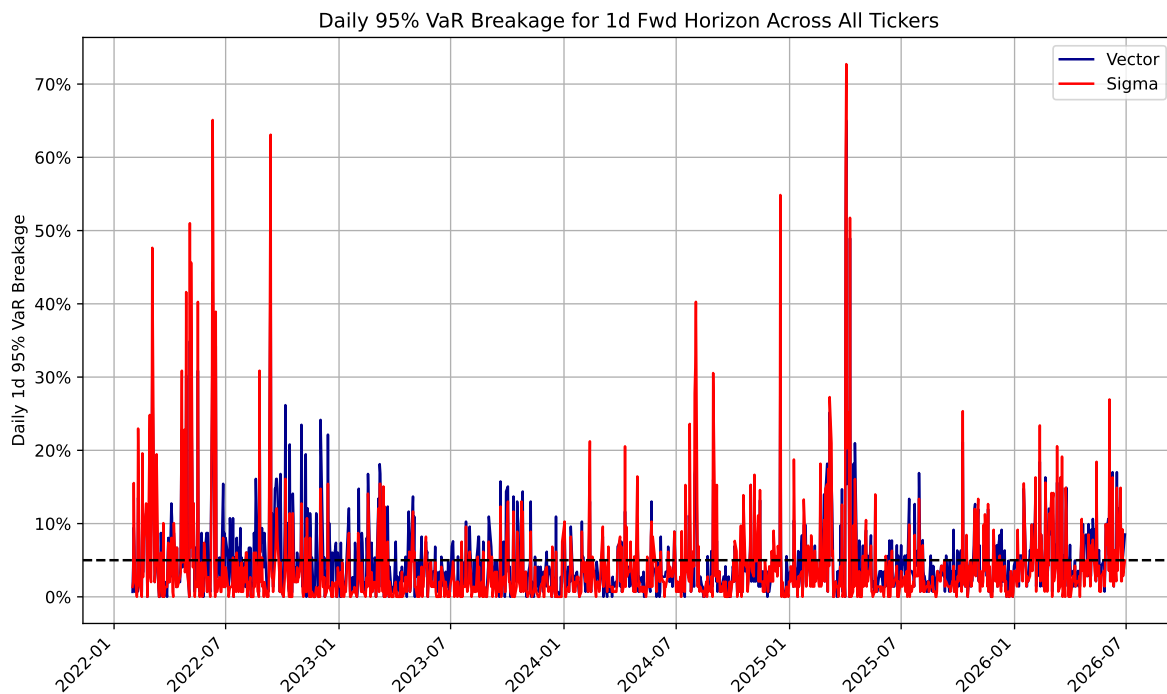
	1d	10d
intercept	-0.02%	-0.41%
intercept_p_value	67.33%	22.71%
slope	109.92%	124.09%
slope_p_value	0.00%	0.00%

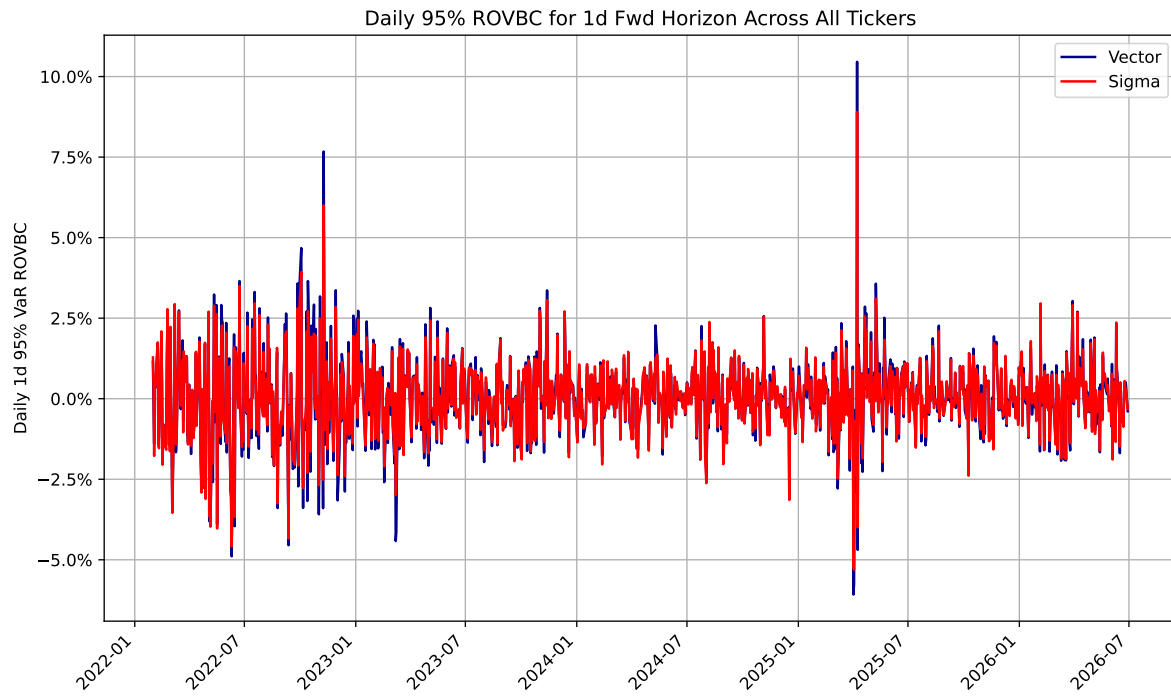


Daily Performance

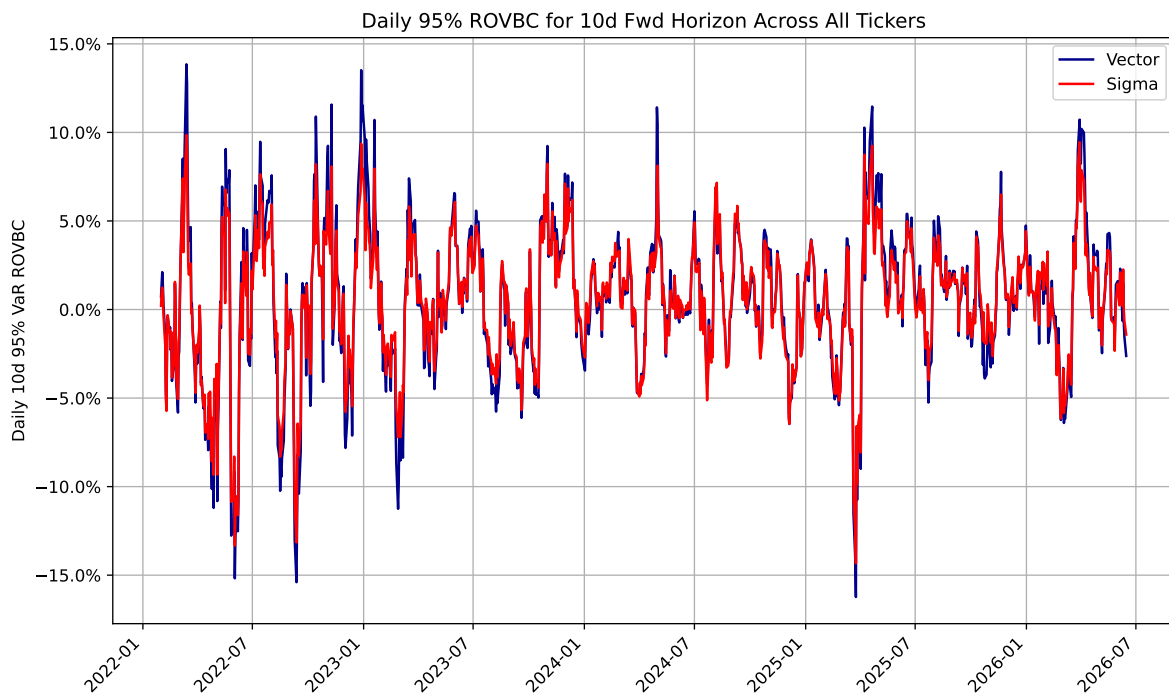
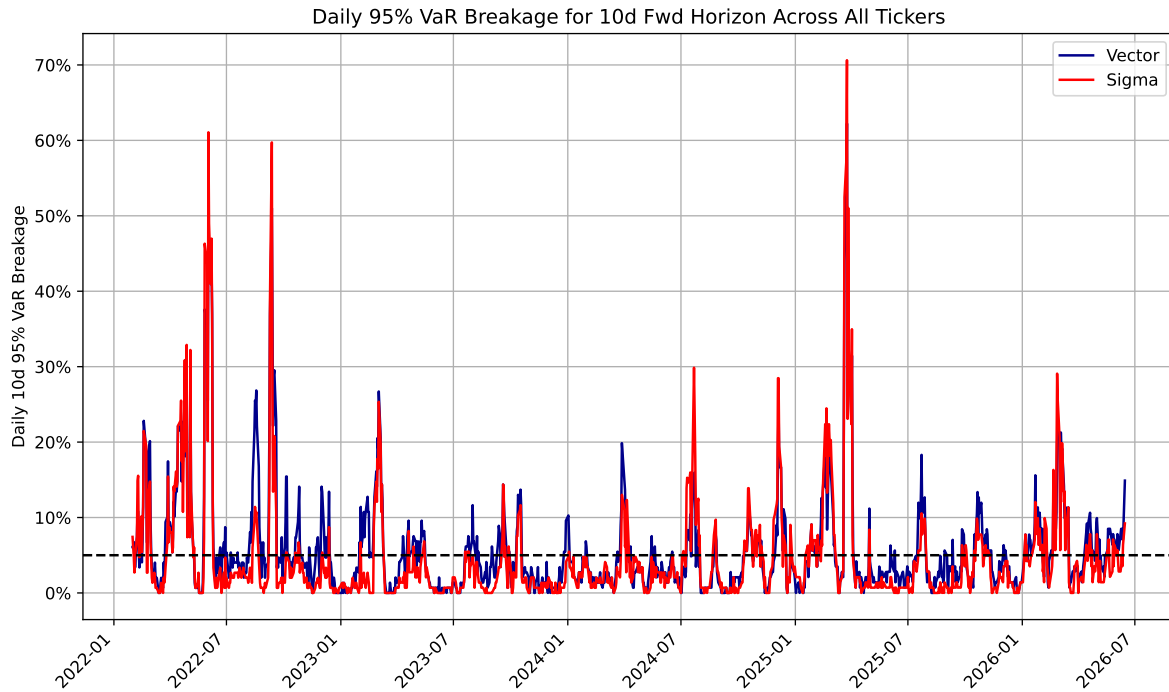
Here we look at the daily breakage and ROVBC statistics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROVBC outliers.

1d Horizon

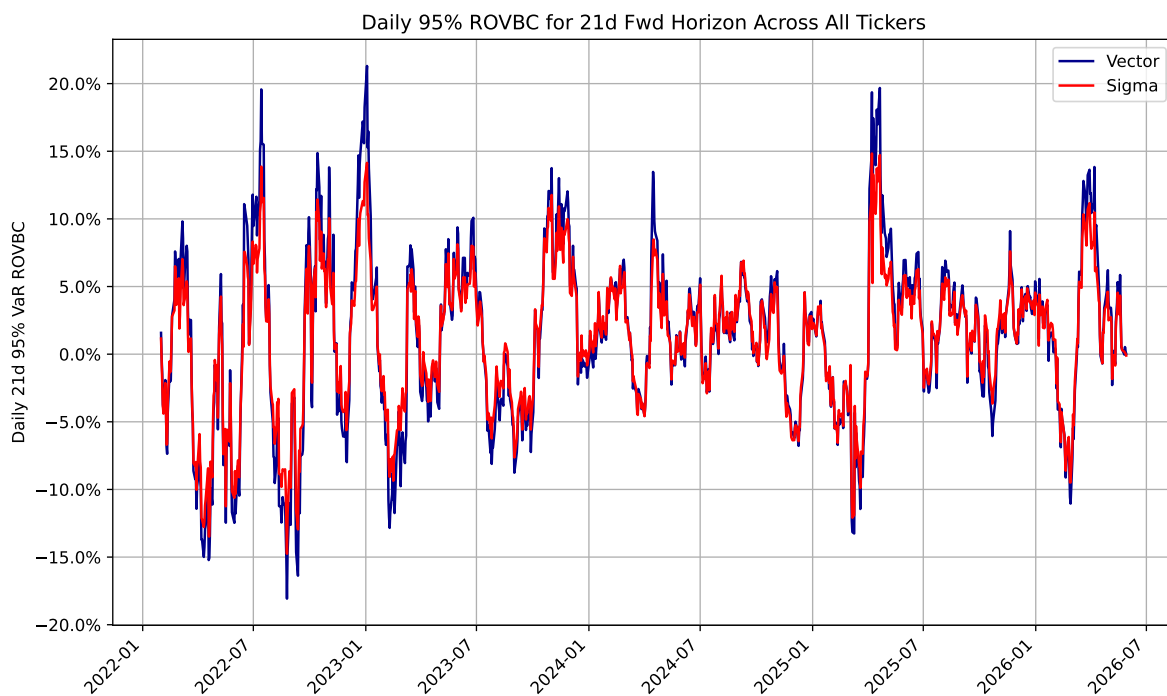
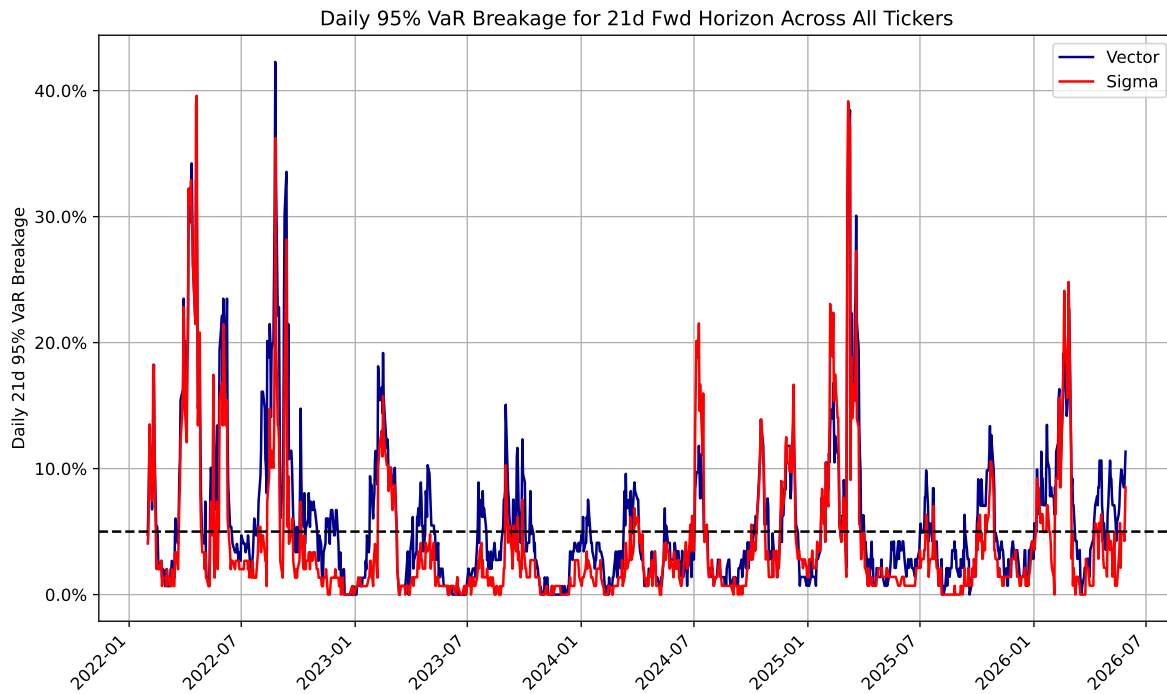




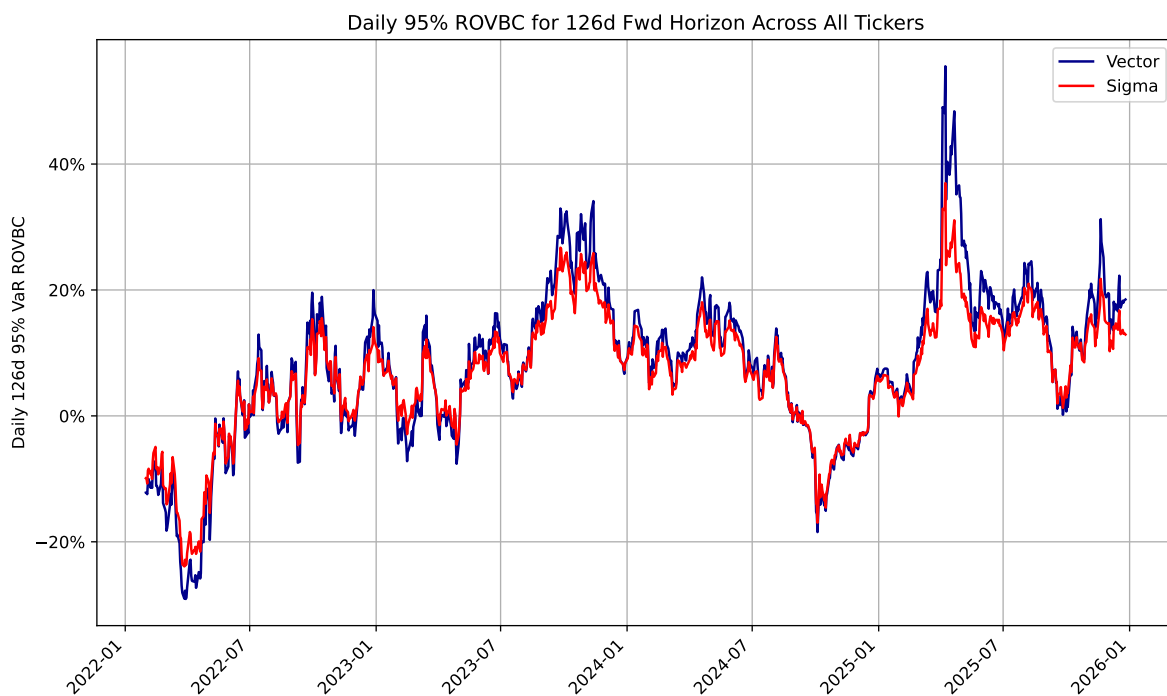
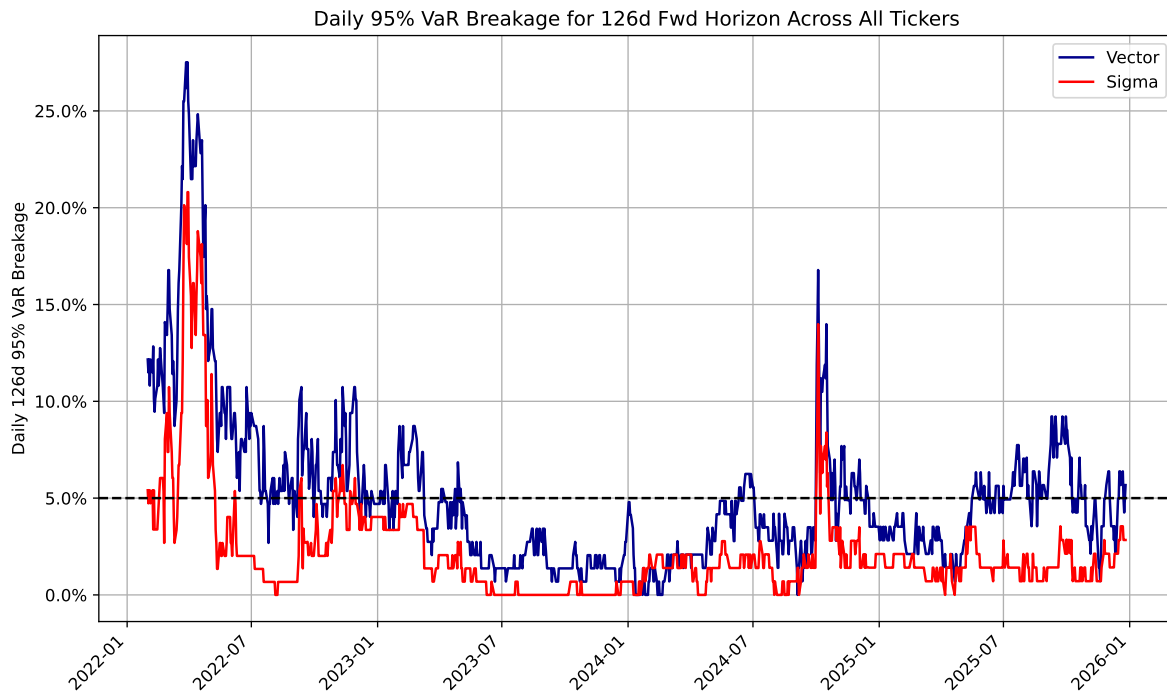
10d Horizon



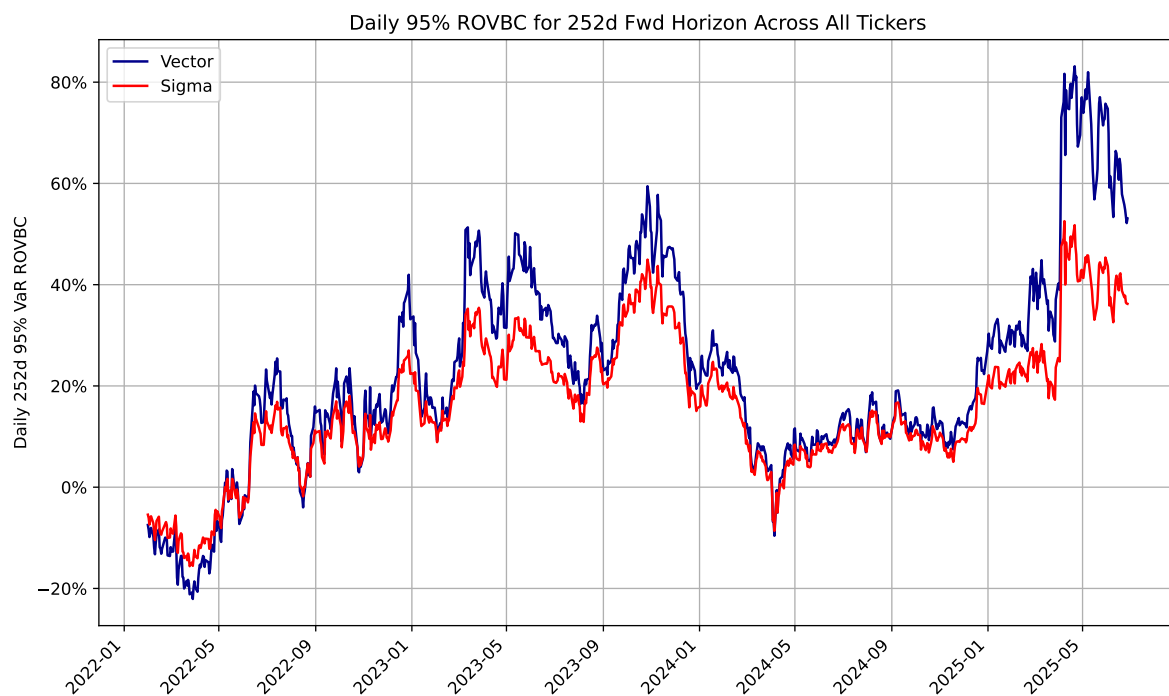
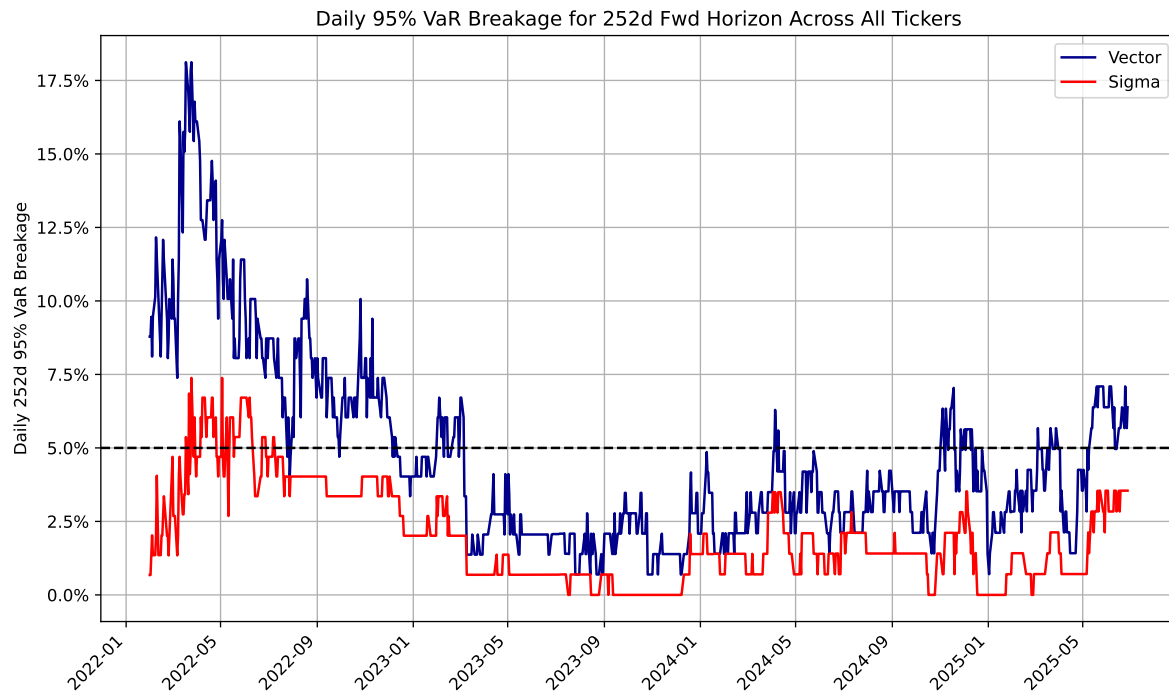
21d Horizon



63d Horizon



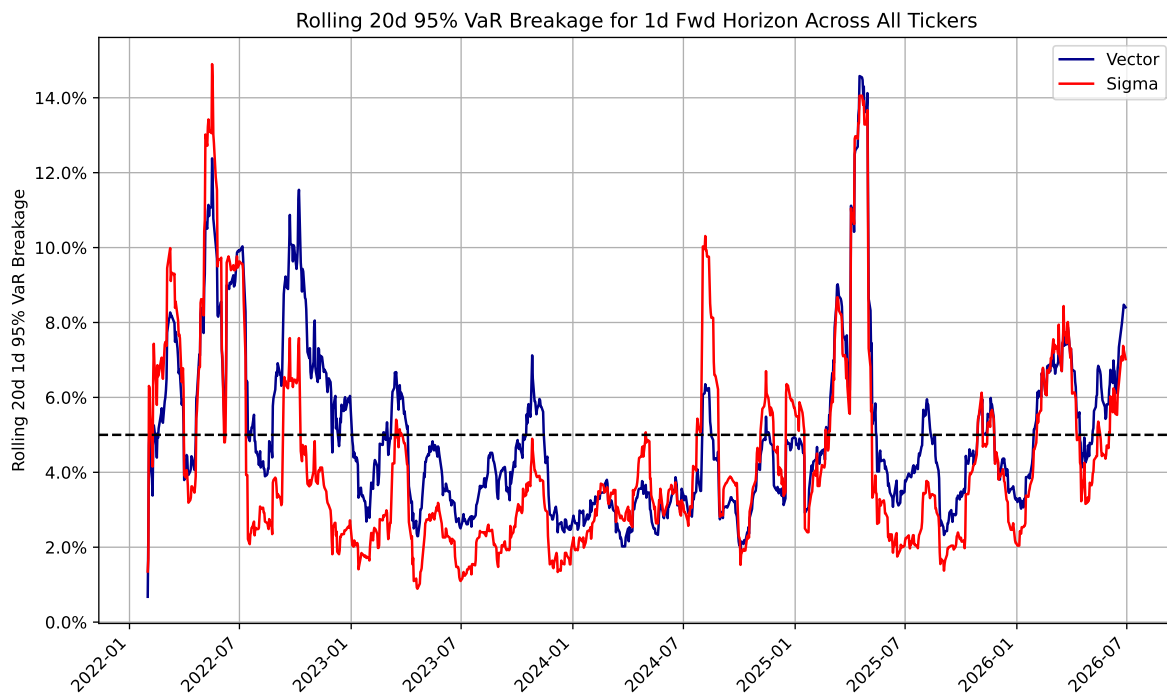
252d Horizon

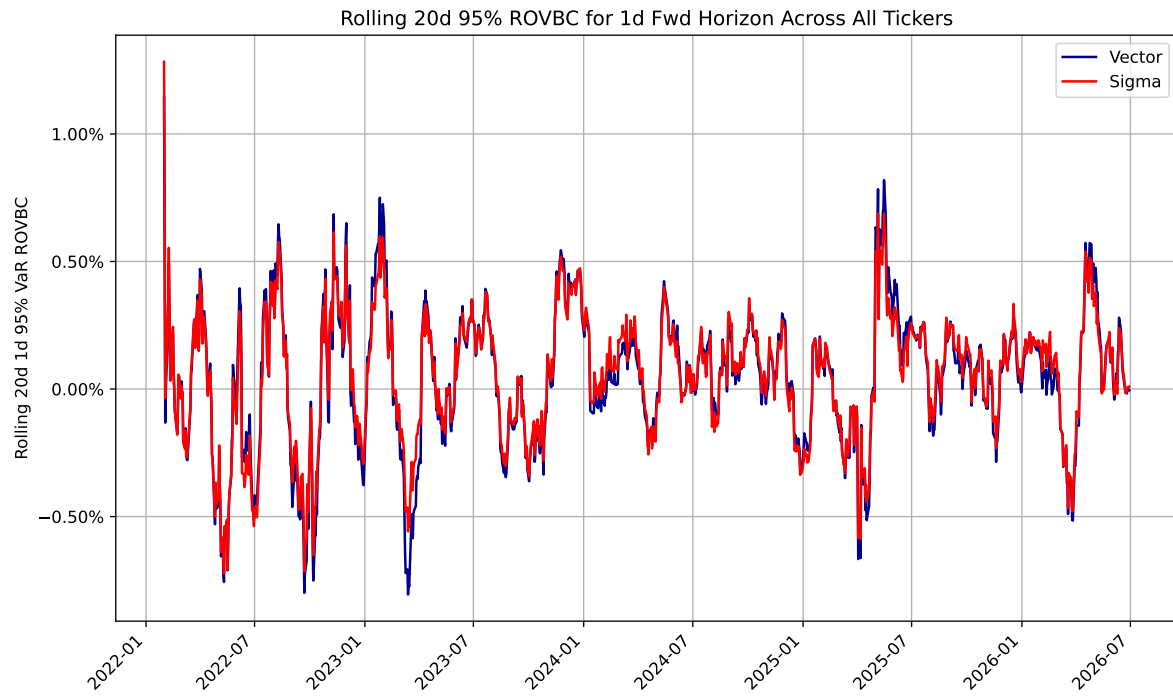


Rolling 20d Performance

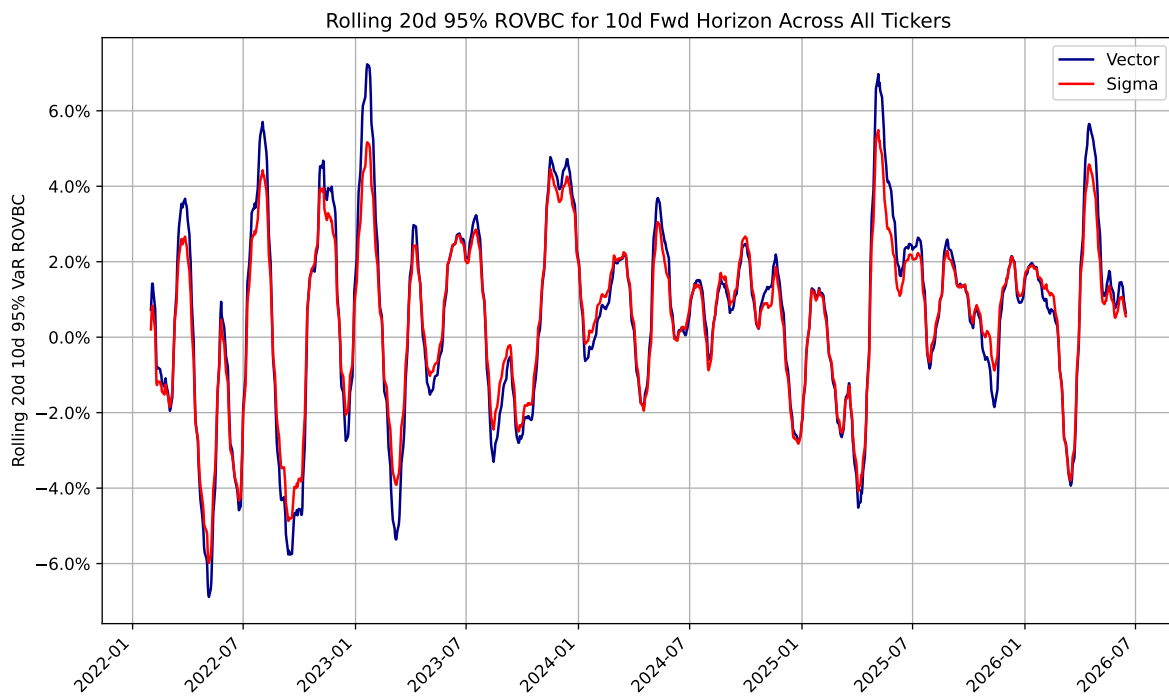
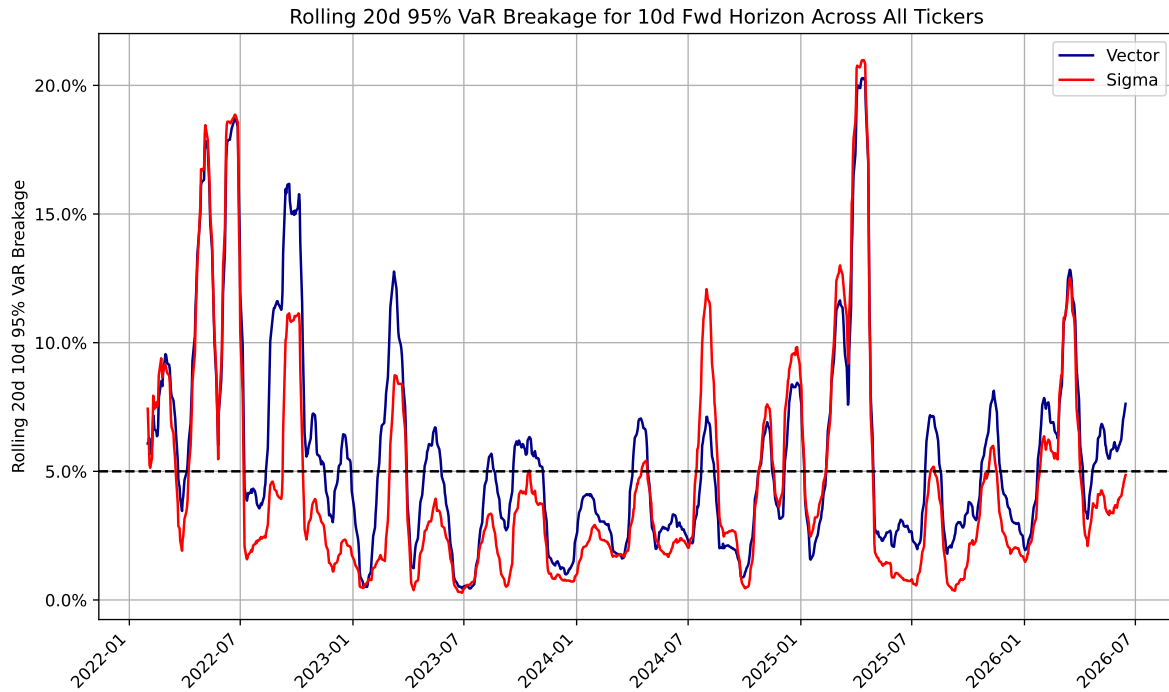
Here we look at 20 day rolling moving averages of the breakage and ROVBC statistics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

1d Horizon

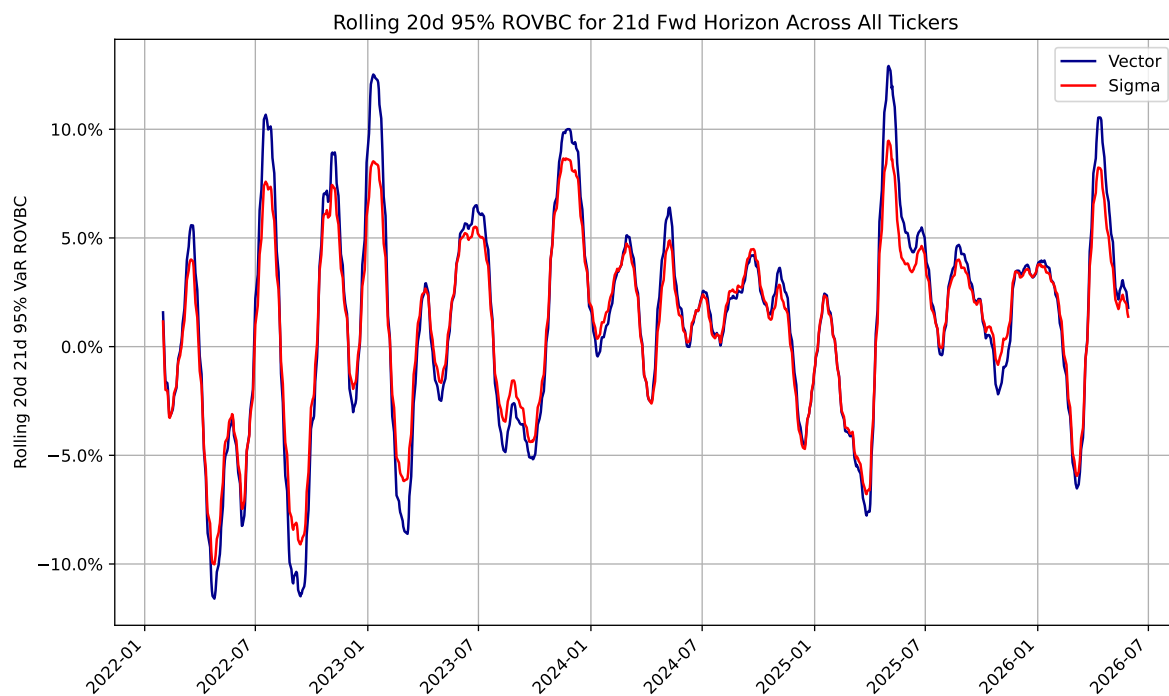
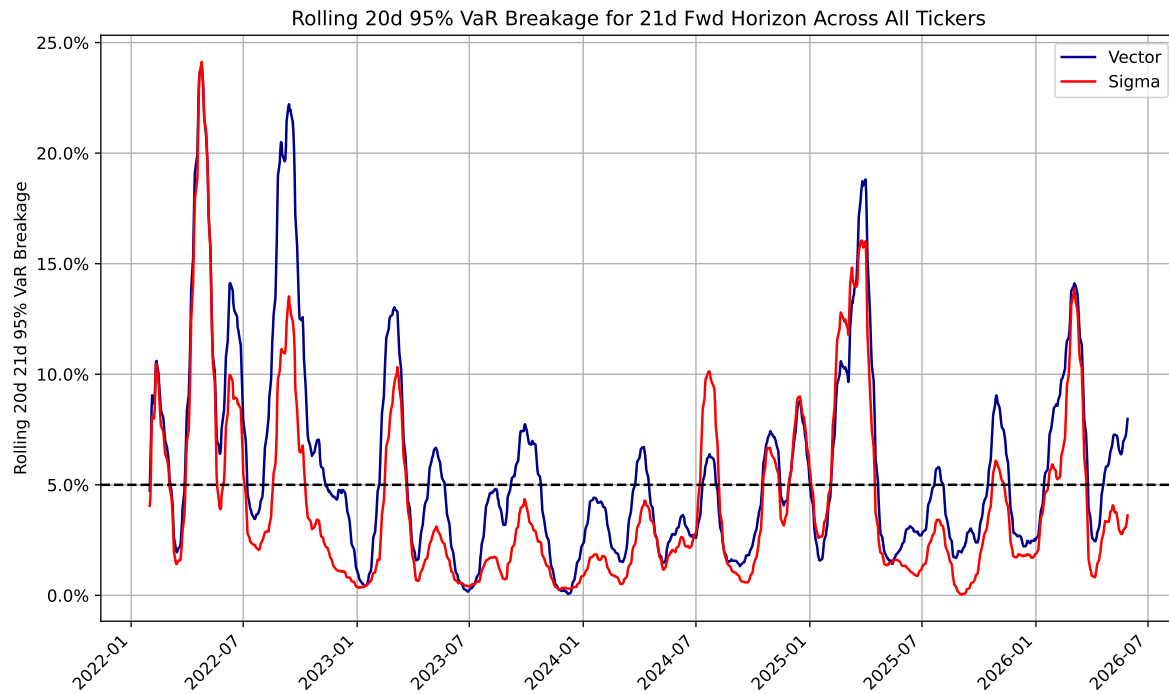




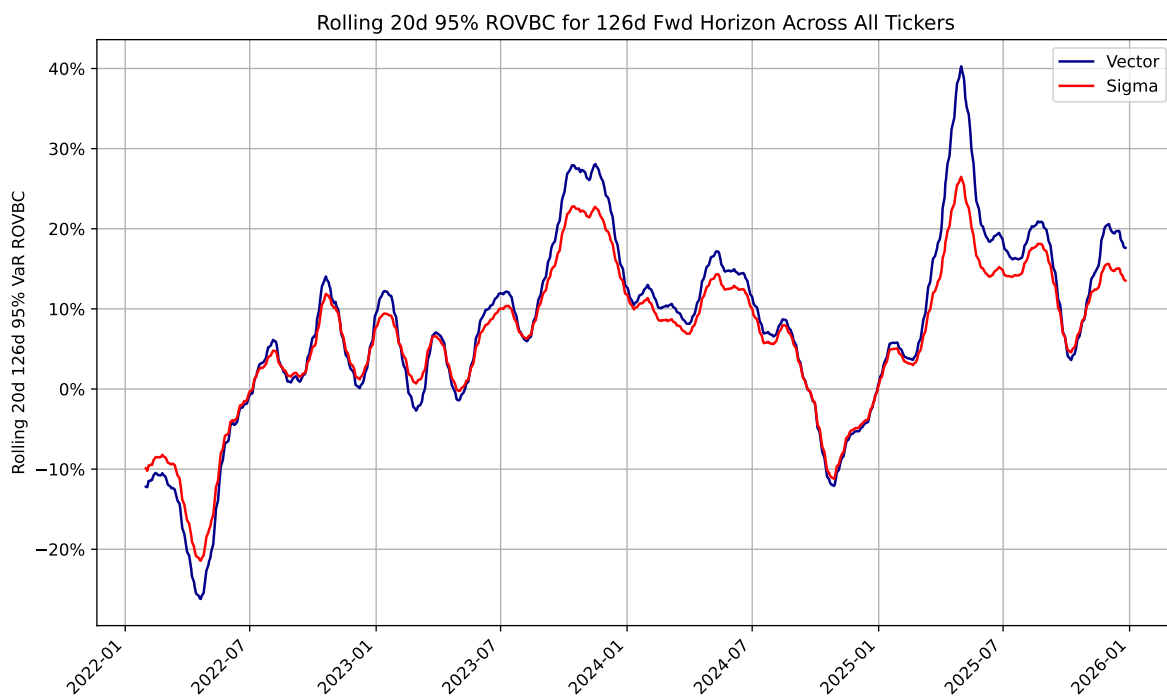
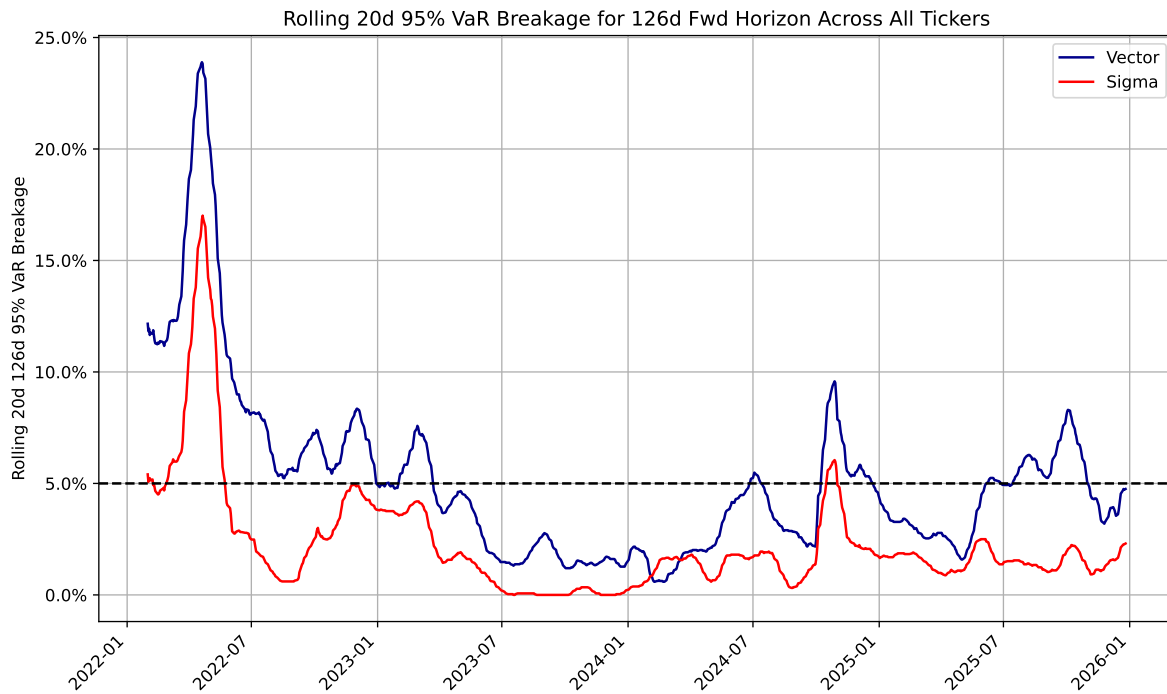
10d Horizon



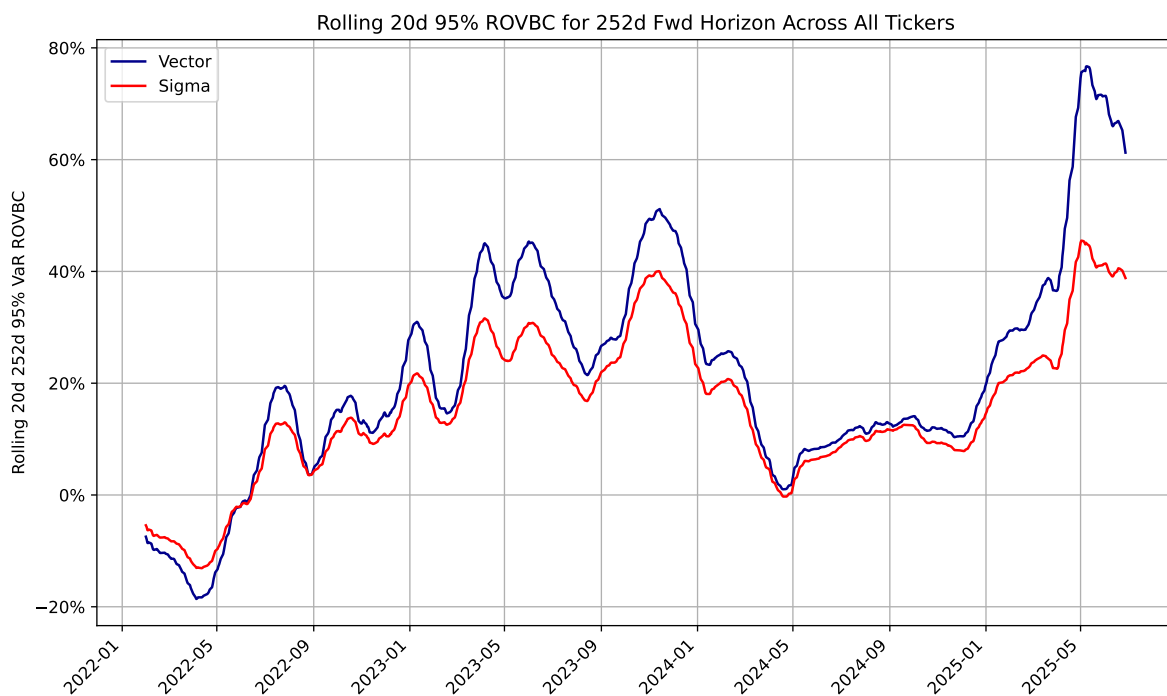
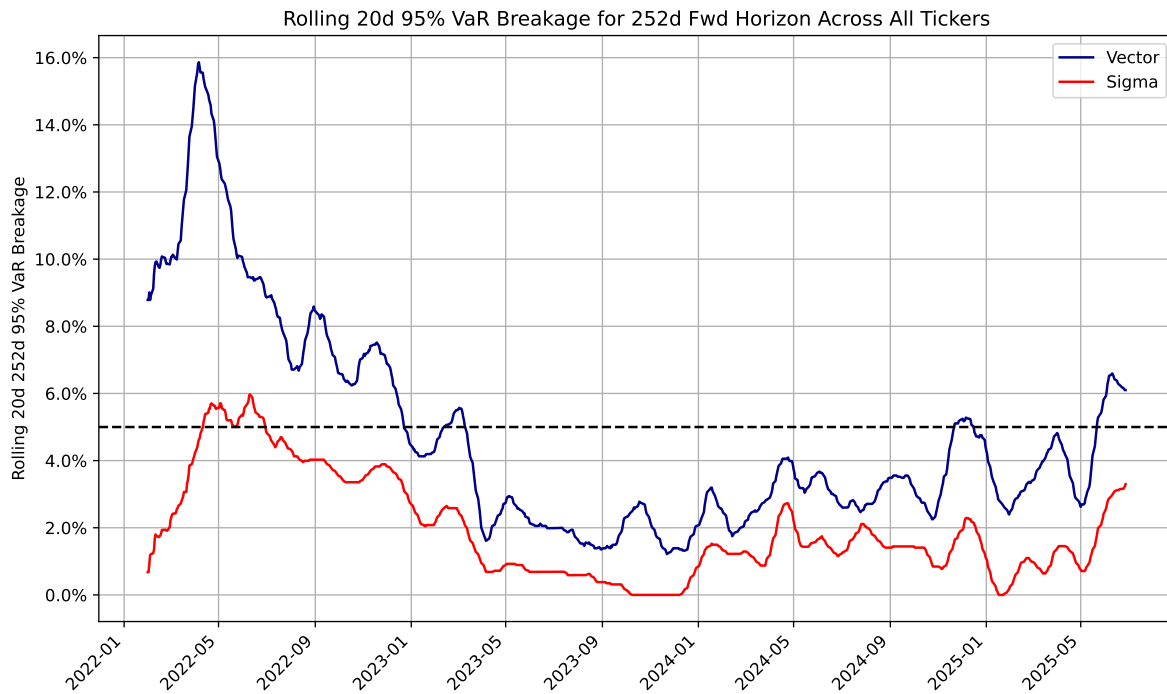
21d Horizon



63d Horizon



252d Horizon



Top 30 Tickers By VaR Breakage

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	SBNY	30.22%	SBNY	7.91%
1.0	SIVBQ	19.06%	FRCB	6.47%
1.0	TSLA	16.27%	GLD	6.15%
1.0	CHTR	14.56%	NEM	5.79%
1.0	LQD	13.92%	SIVBQ	5.76%
1.0	FRCB	13.67%	MSFT	5.7%
1.0	MSTR	11.93%	VST	5.7%
1.0	AMZN	11.66%	XOM	5.61%
1.0	B	10.94%	ACGL	5.52%
1.0	ZTS	10.76%	VCSH	5.52%
1.0	ISRG	10.4%	B	5.52%
1.0	META	10.22%	AAPL	5.52%
1.0	AAP	10.04%	PHM	5.52%
1.0	SBUX	9.76%	NVDA	5.52%
1.0	CDNS	9.76%	MOS	5.42%
1.0	UAA	9.76%	MU	5.42%
1.0	GME	9.31%	NVS	5.42%
1.0	HD	9.22%	ON	5.42%
1.0	GNRC	9.13%	PEP	5.42%
1.0	PRGO	8.5%	HSBC	5.33%
1.0	SLV	8.24%	IRM	5.33%
1.0	BALL	8.23%	AMD	5.33%
1.0	NFLX	8.14%	MUB	5.25%
1.0	AMC	8.05%	AA	5.24%
1.0	VFC	8.05%	AZN	5.24%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	SBNY	40.44%	MUB	11.22%
10.0	SIVBQ	22.43%	SIVBQ	10.66%
10.0	CHTR	18.96%	SBNY	9.93%
10.0	AAP	18.41%	FRCB	8.46%
10.0	AMC	16.86%	AAP	7.47%
10.0	ZTS	16.04%	FRA	7.29%
10.0	TSLA	16.04%	BAC	7.11%
10.0	B	14.22%	CHTR	7.11%
10.0	FRCB	13.97%	CTLT	6.94%
10.0	META	13.95%	WFC	6.93%
10.0	BUD	12.67%	ADBE	6.93%
10.0	MSTR	12.4%	CLF	6.84%
10.0	PRGO	12.03%	UNH	6.84%
10.0	LQD	12.03%	GSK	6.75%
10.0	GME	11.58%	FIS	6.56%
10.0	GNRC	11.39%	LW	6.47%
10.0	GSK	11.39%	INTU	6.38%
10.0	CVS	11.39%	ZTS	6.38%
10.0	AMZN	11.21%	CVS	6.29%
10.0	KALU	10.94%	AA	6.2%
10.0	NEM	10.39%	AZN	6.2%
10.0	SNY	10.39%	BALL	6.11%
10.0	SLV	9.95%	NEM	6.11%
10.0	CTLT	9.93%	NWL	6.11%
10.0	VFC	9.85%	X	6.09%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	SBNY	56.67%	SIVBQ	12.96%
21.0	CHTR	24.59%	MUB	11.98%
21.0	SIVBQ	23.33%	FRCB	11.48%
21.0	AAP	18.6%	CHTR	9.76%
21.0	ZTS	18.32%	LW	9.3%
21.0	AMC	16.02%	SBNY	8.89%
21.0	PRGO	16.02%	GSK	8.29%
21.0	TSLA	15.47%	AAP	8.29%
21.0	BUD	14.46%	FIS	7.83%
21.0	FRCB	14.44%	CTLT	7.73%
21.0	GSK	14.36%	EMB	7.37%
21.0	B	14.36%	INTU	7.0%
21.0	CVS	13.9%	PRGO	6.72%
21.0	LQD	13.72%	CMG	6.63%
21.0	GNRC	13.26%	CVS	6.45%
21.0	MSTR	12.89%	FRA	6.26%
21.0	CTLT	12.57%	UNH	6.26%
21.0	BXP	12.43%	VCSH	6.17%
21.0	KALU	12.34%	ZTS	6.08%
21.0	META	12.06%	ABBV	5.99%
21.0	NEM	11.69%	BMY	5.99%
21.0	VFC	11.51%	BUD	5.99%
21.0	TLT	11.23%	LQD	5.89%
21.0	FIS	11.05%	AZN	5.8%
21.0	VCSH	11.05%	IRM	5.8%



All TMD: 63d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
63.0	SBNY	85.56%	SBNY	30.37%
63.0	SIVBQ	41.85%	SIVBQ	30.0%
63.0	CHTR	33.72%	FRCB	24.81%
63.0	FRCB	29.26%	CHTR	14.94%
63.0	AAP	28.93%	CTLT	10.7%
63.0	AMC	18.87%	MUB	9.97%
63.0	PRGO	17.62%	GSK	9.29%
63.0	VFC	16.86%	NEM	8.91%
63.0	GNRC	15.13%	INTU	8.33%
63.0	BXP	14.85%	HCA	8.24%
63.0	CTLT	14.66%	CNC	8.05%
63.0	FIS	14.27%	UNH	7.76%
63.0	MSTR	14.18%	NFLX	7.47%
63.0	BIIB	13.79%	BXP	7.18%
63.0	ZTS	13.79%	BMJ	7.09%
63.0	BHC	13.6%	LW	7.09%
63.0	B	13.41%	VFC	6.61%
63.0	TSLA	13.31%	FIS	6.51%
63.0	KALU	13.12%	CVS	6.42%
63.0	BUD	13.12%	LQD	6.42%
63.0	NFLX	12.93%	ZION	6.31%
63.0	GSK	12.64%	AAP	6.23%
63.0	AMZN	12.36%	BHC	6.23%
63.0	TLT	12.26%	KEY	6.23%
63.0	META	12.16%	IEP	6.23%
63.0	NEM	11.97%	CMA	5.94%
63.0	LQD	11.49%	BALL	5.75%
63.0	CNC	10.82%	NWL	5.65%
63.0	CMCSA	10.34%	LEN	5.65%
63.0	NWL	10.34%	VCSH	5.56%



All TMD: 126d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
126.0	SBNY	100.0%	SIVBQ	47.78%
126.0	SIVBQ	63.7%	SBNY	44.81%
126.0	FRCB	44.07%	FRCB	43.7%
126.0	CHTR	37.51%	GSK	13.15%
126.0	AMC	29.56%	IEP	12.95%
126.0	AAP	29.26%	AAP	12.54%
126.0	VFC	28.24%	CTLT	10.5%
126.0	PRGO	17.53%	UNH	10.4%
126.0	BXP	17.23%	CNC	9.68%
126.0	ZTS	15.8%	PRGO	9.28%
126.0	GSK	15.7%	CHTR	9.07%
126.0	BMJ	15.39%	INTU	8.87%
126.0	BIIB	15.29%	VZ	8.26%
126.0	CNC	15.19%	CSTM	7.44%
126.0	GNRC	14.98%	INTC	7.34%
126.0	MSTR	14.68%	MRK	7.24%
126.0	TSLA	13.56%	MUB	7.14%
126.0	TLT	13.35%	BHC	6.93%
126.0	IEP	13.05%	BALL	6.83%
126.0	UNH	12.84%	LEN	6.63%
126.0	CTLT	12.76%	NEM	5.61%
126.0	ZION	11.69%	EMB	5.41%
126.0	CVS	11.52%	LW	5.4%
126.0	BHC	10.91%	VCSH	5.2%
126.0	INTU	10.7%	KEY	5.1%
126.0	NEM	10.5%	BIIB	4.89%
126.0	OXY	10.09%	LQD	4.49%
126.0	FIS	9.79%	ELAN	4.34%
126.0	CMCSA	9.58%	BXP	4.28%
126.0	BUD	9.28%	LUMN	4.28%



All TMD: 252d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
252.0	SBNY	100.0%	SIVBQ	90.74%
252.0	SIVBQ	90.74%	FRCB	90.0%
252.0	FRCB	90.37%	SBNY	79.63%
252.0	AAP	49.94%	IEP	28.42%
252.0	CHTR	44.33%	UNH	17.66%
252.0	AMC	42.69%	AAP	16.14%
252.0	BIIB	31.81%	MRK	12.4%
252.0	IEP	26.9%	BMY	11.7%
252.0	VFC	22.69%	GSK	11.35%
252.0	PRGO	21.75%	LUMN	10.64%
252.0	CMA	20.32%	LW	10.18%
252.0	UNH	19.06%	CNC	9.01%
252.0	FIS	18.95%	CPRT	8.77%
252.0	ZION	17.72%	BXP	7.25%
252.0	OXY	15.56%	VZ	6.08%
252.0	NWL	14.85%	CTLT	5.27%
252.0	CTLT	13.79%	PRGO	4.8%
252.0	GSK	12.28%	FIS	4.56%
252.0	CVS	12.05%	VNO	4.44%
252.0	CNC	11.58%	ZTS	4.21%
252.0	MRK	11.46%	CHTR	3.86%
252.0	BXP	11.35%	INTC	3.74%
252.0	BMY	10.29%	INTU	2.92%
252.0	MSTR	10.06%	CMCSA	2.81%
252.0	ZTS	9.71%	CSTM	2.57%
252.0	TLT	9.47%	CMG	2.11%
252.0	VNO	9.24%	CLF	2.11%
252.0	UAA	9.01%	LNC	1.87%
252.0	CMCSA	8.3%	ELAN	1.78%
252.0	ELAN	8.08%	CVS	1.64%



P30D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	GBTC	50.0%	T	25.0%
1.0	NFLX	45.0%	MSFT	25.0%
1.0	VICI	40.0%	ON	25.0%
1.0	GLD	35.0%	QCOM	25.0%
1.0	COST	35.0%	GNRC	20.0%
1.0	TMUS	35.0%	MU	20.0%
1.0	MSFT	35.0%	CSTM	20.0%
1.0	AZO	30.0%	RIO	20.0%
1.0	CDNS	30.0%	AA	20.0%
1.0	MSTR	30.0%	VZ	20.0%
1.0	BHP	25.0%	ADBE	20.0%
1.0	QCOM	25.0%	AMD	15.0%
1.0	ON	25.0%	PWR	15.0%
1.0	T	25.0%	CSCO	15.0%
1.0	ORCL	25.0%	MS	15.0%
1.0	AMZN	25.0%	GLD	15.0%
1.0	META	25.0%	WDC	15.0%
1.0	VZ	25.0%	INTC	15.0%
1.0	KHC	25.0%	ORCL	15.0%
1.0	AVGO	25.0%	HON	15.0%
1.0	CLF	20.0%	AMAT	15.0%
1.0	NVDA	20.0%	AMZN	15.0%
1.0	ISRG	20.0%	QQQ	15.0%
1.0	PEP	20.0%	VICI	15.0%
1.0	TDG	20.0%	TMUS	15.0%
1.0	EXPE	15.0%	B	15.0%
1.0	XOM	15.0%	TXN	15.0%
1.0	INTC	15.0%	AVGO	15.0%
1.0	WDC	15.0%	CPRT	15.0%
1.0	POST	15.0%	GS	10.0%



P30D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	AA	90.91%	AA	100.0%
10.0	ORCL	90.91%	ORCL	81.82%
10.0	NFLX	90.91%	MSFT	72.73%
10.0	OXY	81.82%	ADBE	72.73%
10.0	CDNS	72.73%	ON	36.36%
10.0	META	72.73%	XOM	27.27%
10.0	MSFT	72.73%	AVGO	27.27%
10.0	ADBE	72.73%	OXY	27.27%
10.0	CLF	54.55%	RIO	27.27%
10.0	MSTR	54.55%	CLF	27.27%
10.0	ON	36.36%	BHP	18.18%
10.0	AVGO	27.27%	LUMN	18.18%
10.0	VICI	27.27%	MSTR	18.18%
10.0	SNY	27.27%	NFLX	18.18%
10.0	BHP	27.27%	FSUGY	18.18%
10.0	GBTC	27.27%	QCOM	18.18%
10.0	NVDA	18.18%	VZ	18.18%
10.0	VZ	18.18%	VICI	18.18%
10.0	QCOM	18.18%	CSTM	9.09%
10.0	GLD	18.18%	PEP	9.09%
10.0	TMUS	18.18%	TMUS	9.09%
10.0	PEP	9.09%	INTU	9.09%
10.0	PRGO	9.09%	T	9.09%
10.0	T	9.09%	UNH	0.0%
10.0	ZTS	9.09%	MUB	0.0%
10.0	AMC	9.09%	MU	0.0%
10.0	AAPL	9.09%	WDC	0.0%
10.0	AMZN	9.09%	NAVI	0.0%
10.0	B	9.09%	NEM	0.0%
10.0	CAH	0.0%	MSI	0.0%



P90D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	VICI	26.67%	QCOM	16.67%
1.0	TMUS	26.67%	T	15.0%
1.0	CDNS	25.0%	AA	13.33%
1.0	AZO	25.0%	ON	13.33%
1.0	AVGO	23.33%	MSFT	11.67%
1.0	NFLX	23.33%	XOM	11.67%
1.0	GLD	21.67%	ELAN	11.67%
1.0	ISRG	18.33%	CSTM	11.67%
1.0	COST	18.33%	COST	11.67%
1.0	MSTR	18.33%	NEM	10.0%
1.0	QCOM	18.33%	MU	10.0%
1.0	NVDA	18.33%	INTC	10.0%
1.0	HD	16.67%	OXY	10.0%
1.0	KHC	16.67%	ADBE	10.0%
1.0	GBTC	16.67%	CHTR	8.33%
1.0	AMZN	15.0%	INTU	8.33%
1.0	XOM	15.0%	CSCO	8.33%
1.0	BBY	15.0%	HON	8.33%
1.0	PEP	15.0%	GNRC	8.33%
1.0	MRK	15.0%	FCX	8.33%
1.0	MSFT	15.0%	GE	8.33%
1.0	TDG	13.33%	PEP	8.33%
1.0	EXPE	13.33%	AMD	8.33%
1.0	ORCL	13.33%	PWR	8.33%
1.0	FIS	11.67%	RIO	8.33%
1.0	INTU	11.67%	B	8.33%
1.0	META	11.67%	AZO	8.33%
1.0	CMCSA	11.67%	VZ	8.33%
1.0	NAVI	11.67%	TMUS	8.33%
1.0	VZ	10.0%	AMAT	8.33%



P90D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	NFLX	56.86%	HCA	31.37%
10.0	META	37.25%	AA	21.57%
10.0	HCA	35.29%	AZO	21.57%
10.0	CMCSA	27.45%	ORCL	19.61%
10.0	MSTR	25.49%	MSFT	19.61%
10.0	HD	25.49%	INTU	19.61%
10.0	AZO	25.49%	GSK	19.61%
10.0	SNY	25.49%	CHTR	19.61%
10.0	MSFT	23.53%	ZTS	19.61%
10.0	CHTR	23.53%	ADBE	17.65%
10.0	GSK	23.53%	MSI	17.65%
10.0	ORCL	21.57%	T	15.69%
10.0	OXY	21.57%	HON	15.69%
10.0	AVGO	21.57%	FCX	13.73%
10.0	GBTC	21.57%	COST	11.76%
10.0	ZTS	21.57%	NFLX	11.76%
10.0	MSI	19.61%	OXY	11.76%
10.0	HON	19.61%	QCOM	11.76%
10.0	AA	19.61%	XOM	11.76%
10.0	AMZN	19.61%	FSUGY	11.76%
10.0	TMUS	17.65%	CAH	9.8%
10.0	ADBE	17.65%	LUMN	9.8%
10.0	NWL	17.65%	GBTC	9.8%
10.0	T	17.65%	POST	7.84%
10.0	PEP	15.69%	THC	7.84%
10.0	GLD	15.69%	AZN	7.84%
10.0	CDNS	15.69%	ON	7.84%
10.0	GE	13.73%	AVGO	7.84%
10.0	FCX	13.73%	ACGL	5.88%
10.0	INTU	13.73%	TDG	5.88%



P90D: 21d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	NFLX	60.0%	ZTS	52.5%
21.0	AZO	55.0%	INTU	42.5%
21.0	ZTS	52.5%	HCA	40.0%
21.0	CMCSA	52.5%	CHTR	37.5%
21.0	HCA	52.5%	AZO	22.5%
21.0	MSI	50.0%	NFLX	20.0%
21.0	AMZN	47.5%	GSK	20.0%
21.0	MSTR	47.5%	T	17.5%
21.0	INTU	45.0%	ADBE	17.5%
21.0	CHTR	42.5%	POST	15.0%
21.0	AVGO	37.5%	CMCSA	15.0%
21.0	SNY	37.5%	BALL	15.0%
21.0	T	35.0%	MSFT	12.5%
21.0	GSK	32.5%	FSUGY	12.5%
21.0	GLD	32.5%	MSI	12.5%
21.0	HD	30.0%	MSTR	12.5%
21.0	TMUS	30.0%	CAH	12.5%
21.0	GBTC	27.5%	AA	12.5%
21.0	PEP	25.0%	XOM	10.0%
21.0	MSFT	20.0%	HD	10.0%
21.0	ADBE	17.5%	VFC	7.5%
21.0	META	17.5%	ON	7.5%
21.0	NVDA	15.0%	PCG	7.5%
21.0	BALL	15.0%	PEP	7.5%
21.0	PCG	12.5%	QCOM	7.5%
21.0	AMC	12.5%	COST	7.5%
21.0	EXPE	12.5%	CLF	5.0%
21.0	VFC	10.0%	ORCL	5.0%
21.0	QCOM	7.5%	GBTC	5.0%
21.0	CLF	7.5%	ORLY	5.0%



P365D: 1d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	AMZN	16.8%	NEM	9.2%
1.0	LLY	16.0%	AA	8.4%
1.0	CDNS	16.0%	B	8.4%
1.0	ISRG	15.6%	WDC	8.4%
1.0	CMCSA	14.4%	GLD	7.6%
1.0	TMUS	14.4%	MOS	7.6%
1.0	TDG	14.0%	FCX	7.6%
1.0	GLD	13.6%	MSFT	7.6%
1.0	AZO	13.6%	SLV	7.23%
1.0	MSTR	13.6%	GE	7.2%
1.0	NFLX	13.2%	MU	7.2%
1.0	PRGO	12.8%	RIO	7.2%
1.0	TXN	12.4%	T	7.2%
1.0	VICI	12.4%	INTU	7.2%
1.0	META	12.0%	AZO	7.2%
1.0	KHC	11.6%	BHP	6.8%
1.0	INTU	11.6%	CSTM	6.8%
1.0	HD	11.6%	INTC	6.8%
1.0	SBUX	10.8%	QCOM	6.8%
1.0	MSFT	10.4%	GNRC	6.8%
1.0	GWV	10.4%	ELAN	6.8%
1.0	NAVI	10.0%	HSBC	6.8%
1.0	PEP	9.6%	HCA	6.4%
1.0	QCOM	9.6%	XOM	6.4%
1.0	ZTS	9.6%	POST	6.4%
1.0	TSLA	9.2%	AMAT	6.4%
1.0	CLF	9.2%	OXY	6.0%
1.0	ORCL	8.4%	COST	6.0%
1.0	AMD	8.0%	CSCO	6.0%
1.0	AMC	8.0%	MNST	6.0%



P365D: 10d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	META	26.97%	INTU	18.26%
10.0	AMC	23.65%	AZO	14.11%
10.0	NFLX	22.82%	FIS	12.03%
10.0	CMCSA	21.16%	PRGO	11.2%
10.0	PRGO	20.33%	HCA	10.79%
10.0	INTU	19.09%	ADBE	10.37%
10.0	TDG	18.26%	T	9.96%
10.0	AMZN	17.84%	GBTC	9.96%
10.0	MSTR	17.01%	MSI	9.54%
10.0	ZTS	16.18%	CMG	9.13%
10.0	CLF	16.18%	ORLY	9.13%
10.0	HD	15.77%	MOS	9.13%
10.0	CHTR	15.35%	ZTS	9.13%
10.0	GNRC	14.94%	CHTR	9.13%
10.0	TXN	14.94%	TDG	9.13%
10.0	TMUS	13.28%	MSFT	8.71%
10.0	UNH	13.28%	POST	8.3%
10.0	BUD	12.86%	FCX	7.88%
10.0	GWV	12.45%	SLV	7.5%
10.0	MSFT	12.03%	LEN	7.47%
10.0	AZO	12.03%	BUD	7.47%
10.0	QCOM	11.62%	CLF	7.47%
10.0	SNY	11.62%	LUMN	7.05%
10.0	NAVI	11.62%	HD	6.64%
10.0	GSK	11.2%	GSK	6.64%
10.0	LLY	10.79%	GNRC	6.64%
10.0	GLD	10.79%	THC	6.64%
10.0	GE	10.79%	B	6.64%
10.0	HCA	10.37%	AMZN	6.22%
10.0	AAP	9.96%	NFLX	6.22%



P365D: 21d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	CMCSA	30.43%	INTU	24.35%
21.0	ZTS	28.26%	CHTR	17.39%
21.0	PRGO	27.83%	ZTS	16.96%
21.0	CHTR	27.39%	PRGO	16.96%
21.0	INTU	27.39%	AZO	15.22%
21.0	TDG	25.22%	CMG	14.78%
21.0	AMZN	23.04%	FIS	13.04%
21.0	MSTR	21.74%	T	12.17%
21.0	AMC	19.13%	MSFT	12.17%
21.0	CLF	19.13%	GBTC	11.74%
21.0	MSI	18.26%	MSI	11.74%
21.0	META	18.26%	NAVI	11.3%
21.0	AZO	17.39%	HD	11.3%
21.0	NAVI	16.09%	ADBE	9.57%
21.0	T	16.09%	LEN	9.13%
21.0	NFLX	15.65%	LW	8.7%
21.0	HD	15.65%	BUD	8.7%
21.0	TMUS	14.78%	IRM	8.7%
21.0	UNH	14.78%	MOS	8.26%
21.0	BUD	14.35%	GT	8.26%
21.0	TXN	14.35%	HCA	7.83%
21.0	GNRC	13.04%	EXPE	7.83%
21.0	FIS	12.61%	NFLX	7.83%
21.0	GLD	12.17%	ORLY	6.96%
21.0	MSFT	12.17%	FITB	6.52%
21.0	BXP	12.17%	CCL	6.52%
21.0	CMG	11.3%	BALL	6.09%
21.0	NWL	11.3%	CLF	5.65%
21.0	GBTC	10.87%	ORCL	5.65%
21.0	LW	10.43%	GSK	5.65%



P365D: 63d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
63.0	PRGO	70.21%	INTU	41.49%
63.0	ZTS	47.87%	CHTR	25.53%
63.0	INTU	47.34%	ZTS	22.34%
63.0	CMCSA	45.74%	PRGO	21.28%
63.0	MSTR	42.02%	MSFT	20.74%
63.0	NFLX	41.49%	FIS	19.15%
63.0	CHTR	32.45%	NAVI	15.43%
63.0	MSI	29.79%	HCA	13.3%
63.0	BXP	27.13%	MSI	12.77%
63.0	AMC	26.06%	NFLX	12.77%
63.0	TDG	23.94%	T	11.7%
63.0	NAVI	22.34%	MOS	10.64%
63.0	META	22.34%	ADBE	10.64%
63.0	FIS	22.34%	AZO	7.98%
63.0	ISRG	18.62%	BXP	5.32%
63.0	HD	18.09%	FRA	4.79%
63.0	TMUS	16.49%	HD	4.26%
63.0	T	15.43%	LNC	4.26%
63.0	HCA	14.89%	CMCSA	3.72%
63.0	CLF	14.36%	ORCL	3.72%
63.0	NWL	12.77%	VICI	3.72%
63.0	QCOM	12.77%	CMG	3.72%
63.0	LW	11.7%	SLV	2.67%
63.0	GNRC	10.11%	THC	2.66%
63.0	BUD	9.04%	XOM	2.13%
63.0	BALL	9.04%	LEN	2.13%
63.0	IRM	9.04%	B	1.6%
63.0	AZO	8.51%	QCOM	1.6%
63.0	VNO	7.98%	GBTC	1.6%
63.0	GLD	7.98%	GLD	1.06%



P365D: 126d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
126.0	INTU	84.0%	INTU	69.6%
126.0	PRGO	83.2%	PRGO	44.0%
126.0	MSTR	67.2%	FIS	27.2%
126.0	ZTS	64.0%	FRA	18.4%
126.0	AMC	57.6%	ZTS	13.6%
126.0	NFLX	52.8%	CHTR	13.6%
126.0	BXP	45.6%	MSFT	13.6%
126.0	LEN	36.8%	ADBE	9.6%
126.0	ORCL	33.6%	ORCL	3.2%
126.0	CPRT	31.2%	MOS	2.4%
126.0	CHTR	30.4%	GBTC	2.4%
126.0	NAVI	28.0%	NFLX	2.4%
126.0	FIS	22.4%	AZO	0.8%
126.0	ISRG	20.0%	CMG	0.8%
126.0	TDG	18.4%	HCA	0.8%
126.0	CMCSA	17.6%	NEM	0.0%
126.0	META	14.4%	NWL	0.0%
126.0	UNH	14.4%	ORLY	0.0%
126.0	AAP	13.6%	OXY	0.0%
126.0	VNO	13.6%	PCG	0.0%
126.0	AZO	5.6%	NVS	0.0%
126.0	MSFT	5.6%	NVDA	0.0%
126.0	CLF	3.2%	ON	0.0%
126.0	HCA	2.4%	MU	0.0%
126.0	BBY	2.4%	NAVI	0.0%
126.0	AMZN	2.4%	MUB	0.0%
126.0	TMUS	1.6%	PHM	0.0%
126.0	KHC	1.6%	MSTR	0.0%
126.0	ADBE	0.8%	MSI	0.0%
126.0	CNC	0.8%	MS	0.0%



Top 30 Tickers By ROVBC

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	MSTR	0.37%	MU	0.3%
1.0	GME	0.36%	WDC	0.28%
1.0	WDC	0.36%	MSTR	0.25%
1.0	MU	0.29%	NVDA	0.24%
1.0	AMD	0.22%	VST	0.23%
1.0	META	0.2%	AMD	0.21%
1.0	LLY	0.18%	AVGO	0.21%
1.0	CDNS	0.18%	PWR	0.2%
1.0	PWR	0.16%	AMAT	0.19%
1.0	NFLX	0.16%	GE	0.17%
1.0	NVDA	0.16%	X	0.17%
1.0	INTC	0.16%	LLY	0.17%
1.0	AAPL	0.15%	TEVA	0.16%
1.0	GW	0.15%	TRGP	0.16%
1.0	AVGO	0.15%	INTC	0.16%
1.0	GOOGL	0.15%	GME	0.15%
1.0	ORCL	0.13%	CAH	0.15%
1.0	ON	0.13%	THC	0.13%
1.0	GE	0.12%	GBTC	0.12%
1.0	X	0.12%	ETRN	0.12%
1.0	XOM	0.11%	SLV	0.12%
1.0	AMAT	0.11%	PHM	0.11%
1.0	B	0.11%	GS	0.11%
1.0	AA	0.11%	IRM	0.11%
1.0	CAH	0.1%	GOOGL	0.11%
1.0	UNH	0.1%	CDNS	0.11%
1.0	MRK	0.1%	ON	0.11%
1.0	TEVA	0.1%	KALU	0.1%
1.0	AMZN	0.1%	GW	0.1%
1.0	TRGP	0.09%	HSBC	0.1%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	4.96%	MU	3.03%
10.0	GME	4.92%	WDC	2.95%
10.0	WDC	3.74%	MSTR	2.64%
10.0	MU	3.7%	NVDA	2.41%
10.0	INTC	2.31%	VST	2.27%
10.0	AMD	2.21%	AVGO	2.07%
10.0	META	2.04%	PWR	1.99%
10.0	TEVA	2.01%	AMD	1.98%
10.0	ORCL	1.88%	AMAT	1.75%
10.0	AVGO	1.87%	TEVA	1.67%
10.0	VST	1.85%	LLY	1.64%
10.0	NVDA	1.82%	GE	1.63%
10.0	LLY	1.75%	INTC	1.59%
10.0	PWR	1.65%	X	1.58%
10.0	NFLX	1.63%	TRGP	1.54%
10.0	GE	1.61%	CAH	1.49%
10.0	KALU	1.54%	ETRN	1.41%
10.0	GWG	1.48%	GME	1.27%
10.0	CAH	1.45%	GBTC	1.18%
10.0	GOOGL	1.44%	THC	1.17%
10.0	CDNS	1.42%	SLV	1.16%
10.0	SLV	1.35%	IRM	1.16%
10.0	AMAT	1.32%	GS	1.15%
10.0	ETRN	1.23%	META	1.11%
10.0	X	1.21%	CDNS	1.08%
10.0	AAPL	1.2%	PHM	1.07%
10.0	GS	1.15%	GWG	1.06%
10.0	ON	1.14%	GOOGL	1.03%
10.0	OXY	1.14%	ON	1.02%
10.0	CTLT	1.08%	KALU	1.02%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	MSTR	13.77%	MU	6.41%
21.0	WDC	8.46%	MSTR	6.34%
21.0	MU	8.2%	WDC	6.19%
21.0	GME	7.67%	NVDA	5.28%
21.0	INTC	5.83%	VST	4.79%
21.0	META	5.81%	AMD	4.46%
21.0	AMD	5.29%	AVGO	4.41%
21.0	TEVA	4.96%	PWR	4.24%
21.0	ORCL	4.44%	TEVA	3.64%
21.0	AVGO	4.28%	AMAT	3.53%
21.0	NFLX	4.25%	ETRN	3.5%
21.0	NVDA	4.0%	GE	3.44%
21.0	PWR	3.87%	LLY	3.42%
21.0	LLY	3.79%	INTC	3.35%
21.0	VST	3.69%	TRGP	3.22%
21.0	ETRN	3.51%	X	3.17%
21.0	KALU	3.41%	CAH	3.08%
21.0	GE	3.34%	GBTC	2.67%
21.0	GOOGL	3.23%	META	2.51%
21.0	GBTC	3.13%	SLV	2.5%
21.0	GS	3.11%	GS	2.47%
21.0	AMAT	3.11%	ORCL	2.45%
21.0	TSLA	3.02%	IRM	2.43%
21.0	CAH	2.93%	THC	2.34%
21.0	SLV	2.78%	TSLA	2.34%
21.0	GS	2.69%	CDNS	2.3%
21.0	CTLT	2.65%	ON	2.29%
21.0	ON	2.54%	GOOGL	2.28%
21.0	AA	2.52%	GS	2.25%
21.0	GILD	2.46%	NFLX	2.24%



All TMD: 63d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	WDC	32.46%	WDC	20.44%
63.0	MSTR	30.94%	MSTR	19.38%
63.0	MU	22.51%	MU	19.17%
63.0	META	19.72%	NVDA	17.64%
63.0	NFLX	15.78%	VST	15.68%
63.0	AVGO	14.86%	AVGO	13.85%
63.0	NVDA	14.84%	AMD	12.99%
63.0	AMD	14.37%	PWR	12.22%
63.0	VST	14.2%	TEVA	10.47%
63.0	ORCL	13.92%	GE	10.37%
63.0	INTC	12.64%	ETRN	10.28%
63.0	TEVA	12.27%	AMAT	9.99%
63.0	GE	11.25%	GBTC	9.87%
63.0	ETRN	11.21%	INTC	9.63%
63.0	CTLT	11.11%	LLY	9.44%
63.0	AMAT	11.07%	TRGP	9.22%
63.0	KALU	11.03%	META	9.19%
63.0	PWR	10.23%	CAH	8.92%
63.0	SLV	9.8%	NFLX	8.5%
63.0	GNRC	9.65%	SLV	8.34%
63.0	GOOGL	9.21%	THC	7.54%
63.0	CAH	8.86%	GOOGL	7.45%
63.0	GBTC	8.61%	ORCL	7.42%
63.0	LLY	8.55%	PHM	7.37%
63.0	GS	8.26%	GS	7.31%
63.0	GWV	8.08%	HSBC	6.69%
63.0	NEM	7.97%	IRM	6.49%
63.0	GILD	7.94%	CCL	6.31%
63.0	TSLA	7.88%	GWV	6.2%
63.0	THC	7.83%	KALU	6.09%



All TMD: 126d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	MSTR	87.68%	WDC	48.93%
126.0	WDC	87.4%	MSTR	47.86%
126.0	MU	59.0%	MU	45.81%
126.0	META	52.24%	NVDA	43.47%
126.0	NVDA	44.31%	VST	34.86%
126.0	NFLX	40.51%	AVGO	29.62%
126.0	AVGO	39.07%	GBTC	27.8%
126.0	VST	34.79%	GE	25.13%
126.0	AMD	29.14%	PWR	23.89%
126.0	AMAT	28.61%	AMD	23.15%
126.0	GBTC	28.1%	TEVA	23.04%
126.0	TEVA	27.16%	META	22.47%
126.0	SLV	27.16%	AMAT	22.21%
126.0	GE	26.6%	NFLX	21.24%
126.0	INTC	25.29%	SLV	20.58%
126.0	ORCL	25.04%	TRGP	19.55%
126.0	LLY	23.59%	CAH	19.52%
126.0	PWR	23.29%	THC	19.51%
126.0	B	22.92%	LLY	19.42%
126.0	GOOGL	21.36%	ETRN	18.49%
126.0	CAH	21.28%	INTC	17.11%
126.0	NEM	20.18%	PHM	16.86%
126.0	KALU	19.4%	GOOGL	16.65%
126.0	THC	18.9%	GS	15.69%
126.0	GILD	18.54%	ORCL	15.49%
126.0	CSTM	17.29%	B	14.84%
126.0	TSLA	17.04%	HSBC	14.35%
126.0	GS	17.03%	CCL	13.81%
126.0	ETRN	16.95%	CSTM	13.68%
126.0	GWG	16.01%	GLD	13.12%



All TMD: 252d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
252.0	MSTR	305.43%	MSTR	163.63%
252.0	WDC	264.31%	WDC	120.96%
252.0	MU	146.41%	NVDA	118.09%
252.0	META	138.11%	VST	103.8%
252.0	VST	124.32%	MU	102.34%
252.0	NVDA	120.89%	GBTC	89.68%
252.0	AVGO	109.25%	AVGO	76.56%
252.0	NFLX	109.16%	META	61.88%
252.0	GBTC	95.98%	GE	60.65%
252.0	GE	69.98%	NFLX	55.36%
252.0	AMD	68.12%	AMD	51.59%
252.0	INTC	65.29%	PWR	50.29%
252.0	SLV	64.76%	THC	47.06%
252.0	AMAT	63.31%	TEVA	44.02%
252.0	TEVA	59.67%	AMAT	43.35%
252.0	ORCL	59.55%	LLY	42.51%
252.0	LLY	59.43%	PHM	42.12%
252.0	THC	59.22%	TRGP	41.19%
252.0	PWR	57.71%	SLV	40.63%
252.0	B	56.85%	CAH	39.21%
252.0	NEM	55.91%	CCL	37.04%
252.0	GOOGL	55.49%	GOOGL	36.85%
252.0	AMZN	53.45%	ORCL	36.36%
252.0	CAH	47.98%	ETRN	35.78%
252.0	TSLA	46.61%	GS	34.45%
252.0	ISRG	46.19%	INTC	34.0%
252.0	EXPE	43.18%	B	31.66%
252.0	ELAN	43.17%	HSBC	31.58%
252.0	GS	41.48%	JPM	30.72%
252.0	KALU	41.14%	GLD	29.23%



P30D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	NWL	4.82%	NWL	3.2%
1.0	WDC	2.04%	AMAT	2.49%
1.0	CYH	1.64%	INTC	1.4%
1.0	GE	1.56%	WDC	1.04%
1.0	GT	1.43%	CYH	1.0%
1.0	MRK	1.39%	CAH	1.0%
1.0	INTC	1.33%	ABBV	0.86%
1.0	AMAT	1.31%	MU	0.85%
1.0	PHM	1.26%	VNO	0.84%
1.0	AMC	1.16%	PHM	0.8%
1.0	UNH	1.05%	AMD	0.79%
1.0	CAH	1.01%	FITB	0.76%
1.0	BALL	0.94%	BALL	0.76%
1.0	TSLA	0.79%	UAA	0.75%
1.0	AMD	0.77%	GE	0.73%
1.0	ABBV	0.74%	CVS	0.68%
1.0	BXP	0.74%	HD	0.65%
1.0	EXPE	0.69%	ZION	0.63%
1.0	FITB	0.68%	USB	0.62%
1.0	LLY	0.64%	EXPE	0.62%
1.0	CVS	0.61%	BIIB	0.61%
1.0	UAA	0.59%	BXP	0.59%
1.0	AMGN	0.59%	CMG	0.57%
1.0	TDG	0.52%	MRK	0.57%
1.0	ACGL	0.52%	GT	0.56%
1.0	VNO	0.52%	DHI	0.55%
1.0	AZO	0.49%	LLY	0.54%
1.0	BAC	0.47%	GNRC	0.52%
1.0	KEY	0.46%	BAC	0.51%
1.0	CNC	0.43%	JPM	0.51%



P30D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	NWL	54.07%	NWL	31.95%
10.0	AMC	30.42%	AMAT	23.39%
10.0	GE	26.56%	WDC	22.46%
10.0	WDC	20.17%	INTC	16.87%
10.0	CYH	18.62%	MU	13.37%
10.0	AMAT	17.27%	AMC	13.28%
10.0	INTC	16.03%	GE	10.59%
10.0	EXPE	14.04%	CAH	10.43%
10.0	PHM	13.56%	BALL	10.07%
10.0	CAH	13.51%	EXPE	9.74%
10.0	BALL	11.46%	CYH	9.54%
10.0	HD	9.24%	THC	8.76%
10.0	GT	8.22%	PHM	8.65%
10.0	CVS	8.22%	VST	8.15%
10.0	TDG	8.18%	DHI	7.55%
10.0	VST	8.12%	CMG	7.24%
10.0	MU	7.32%	GT	6.71%
10.0	UAA	7.0%	USB	6.61%
10.0	UNH	6.45%	HD	6.58%
10.0	CMG	6.13%	JPM	6.53%
10.0	THC	6.05%	AMD	6.49%
10.0	VNO	6.04%	CCL	6.43%
10.0	CCL	6.01%	ZION	6.08%
10.0	BAC	5.74%	TDG	6.06%
10.0	DHI	5.29%	CVS	6.0%
10.0	USB	4.89%	BAC	6.0%
10.0	AMD	4.85%	UAA	5.68%
10.0	ABBV	4.67%	ABBV	5.65%
10.0	LNC	4.66%	GNRC	5.59%
10.0	GNRC	4.43%	FITB	5.33%



P90D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	WDC	2.46%	MU	2.13%
1.0	AMD	2.29%	INTC	1.89%
1.0	AMC	2.11%	AMD	1.78%
1.0	INTC	1.94%	WDC	1.42%
1.0	UNH	1.71%	AMAT	1.32%
1.0	MU	1.63%	AMC	1.16%
1.0	CNC	1.48%	NWL	1.08%
1.0	CDNS	1.31%	CNC	1.05%
1.0	NWL	1.3%	ON	0.87%
1.0	ON	1.23%	TXN	0.78%
1.0	AMAT	1.02%	QCOM	0.77%
1.0	QCOM	0.95%	GNRC	0.76%
1.0	LLY	0.93%	VNO	0.75%
1.0	CVS	0.82%	KALU	0.7%
1.0	TXN	0.82%	CSCO	0.7%
1.0	CYH	0.81%	UNH	0.7%
1.0	AAP	0.81%	CVS	0.59%
1.0	LUMN	0.79%	CDNS	0.54%
1.0	TSLA	0.78%	GE	0.5%
1.0	BXP	0.76%	MNST	0.5%
1.0	GE	0.7%	PWR	0.47%
1.0	KALU	0.64%	JAZZ	0.44%
1.0	BBY	0.62%	LLY	0.44%
1.0	VNO	0.58%	BXP	0.43%
1.0	JAZZ	0.55%	MS	0.4%
1.0	MRK	0.55%	QQQ	0.4%
1.0	CLF	0.46%	AAP	0.37%
1.0	BAC	0.41%	AVGO	0.37%
1.0	GNRC	0.39%	IRM	0.36%
1.0	SBUX	0.38%	BIIB	0.35%



P90D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	INTC	24.94%	MU	22.38%
10.0	AMC	24.43%	INTC	18.51%
10.0	AMD	24.15%	AMD	17.64%
10.0	WDC	21.64%	WDC	15.06%
10.0	MU	17.96%	AMC	12.37%
10.0	QCOM	17.33%	CNC	11.8%
10.0	UNH	16.64%	ON	10.93%
10.0	NWL	14.37%	QCOM	10.91%
10.0	CNC	14.34%	AMAT	10.76%
10.0	ORCL	12.63%	NWL	8.61%
10.0	ON	11.23%	TXN	8.03%
10.0	CVS	10.73%	CSCO	7.91%
10.0	LLY	9.96%	GNRC	7.18%
10.0	AMAT	9.22%	VNO	7.09%
10.0	CDNS	8.53%	UNH	6.28%
10.0	VNO	8.5%	KALU	6.04%
10.0	TXN	8.23%	CDNS	5.98%
10.0	BXP	7.26%	CVS	5.88%
10.0	GE	7.17%	CLF	5.14%
10.0	KALU	7.11%	MNST	4.78%
10.0	TSLA	7.02%	PWR	4.69%
10.0	CLF	5.8%	MS	4.34%
10.0	GNRC	5.8%	LLY	4.25%
10.0	JAZZ	5.76%	BBY	4.19%
10.0	BBY	5.61%	BXP	4.11%
10.0	CSCO	4.54%	GE	3.87%
10.0	BUD	4.14%	GS	3.68%
10.0	CAH	4.14%	IRM	3.54%
10.0	AAP	3.8%	JAZZ	3.48%
10.0	PHM	3.68%	QQQ	3.45%



P90D: 21d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	INTC	72.8%	MU	56.57%
21.0	AMD	61.22%	AMD	40.92%
21.0	MU	56.84%	INTC	39.62%
21.0	WDC	47.73%	WDC	30.76%
21.0	AMC	45.44%	QCOM	29.15%
21.0	QCOM	39.73%	CNC	27.55%
21.0	CNC	34.08%	AMC	24.08%
21.0	UNH	32.83%	ON	23.2%
21.0	ORCL	28.24%	AMAT	22.25%
21.0	ON	27.04%	CSCO	20.77%
21.0	CVS	25.45%	CLF	15.86%
21.0	LLY	25.07%	VNO	15.49%
21.0	AMAT	22.77%	TXN	15.18%
21.0	CDNS	18.07%	GNRC	14.28%
21.0	CLF	17.98%	CDNS	13.51%
21.0	JAZZ	17.38%	CVS	13.27%
21.0	VNO	17.38%	UNH	11.83%
21.0	TXN	16.64%	LLY	11.82%
21.0	NWL	15.69%	BBY	11.47%
21.0	BXP	15.33%	NWL	11.35%
21.0	BBY	14.6%	KALU	10.88%
21.0	KALU	13.77%	MNST	10.86%
21.0	CSCO	12.54%	ORCL	9.9%
21.0	GNRC	11.4%	PWR	9.14%
21.0	GE	10.39%	MS	8.96%
21.0	TSLA	9.55%	JAZZ	8.8%
21.0	BUD	9.06%	GE	8.73%
21.0	PWR	7.63%	GS	8.33%
21.0	ABBV	7.43%	BXP	7.83%
21.0	TDG	7.17%	GWV	7.5%



P365D: 1d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	WDC	1.17%	WDC	1.02%
1.0	MU	0.87%	MU	1.01%
1.0	INTC	0.74%	INTC	0.84%
1.0	AMD	0.73%	AMD	0.67%
1.0	LLY	0.5%	AMAT	0.61%
1.0	ON	0.45%	KALU	0.39%
1.0	AAP	0.42%	CSTM	0.38%
1.0	GOOGL	0.42%	JAZZ	0.34%
1.0	UNH	0.41%	LUMN	0.34%
1.0	MRK	0.39%	GNRC	0.34%
1.0	CMA	0.36%	TEVA	0.31%
1.0	AMAT	0.35%	ON	0.31%
1.0	CYH	0.34%	GOOGL	0.3%
1.0	CVS	0.33%	PWR	0.29%
1.0	TSLA	0.32%	SLV	0.28%
1.0	JAZZ	0.32%	AA	0.28%
1.0	KALU	0.31%	CMA	0.27%
1.0	CDNS	0.3%	B	0.27%
1.0	CSTM	0.24%	ELAN	0.25%
1.0	LUMN	0.23%	BHP	0.24%
1.0	NVDA	0.23%	CSCO	0.23%
1.0	PCG	0.22%	NEM	0.23%
1.0	QCOM	0.22%	BIIB	0.23%
1.0	GE	0.2%	RIO	0.21%
1.0	EXPE	0.2%	LLY	0.2%
1.0	AA	0.19%	EXPE	0.2%
1.0	FCX	0.19%	HSBC	0.2%
1.0	CLF	0.19%	MRK	0.2%
1.0	AAPL	0.18%	TRGP	0.19%
1.0	GWV	0.17%	FCX	0.19%



P365D: 10d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	WDC	12.94%	WDC	10.74%
10.0	MU	10.69%	MU	10.62%
10.0	INTC	9.9%	INTC	8.76%
10.0	AMD	6.95%	AMD	6.55%
10.0	KALU	4.8%	AMAT	5.46%
10.0	UNH	4.72%	CSTM	3.84%
10.0	TSLA	4.68%	LUMN	3.68%
10.0	LLY	4.31%	KALU	3.6%
10.0	JAZZ	4.23%	ON	3.42%
10.0	ON	4.14%	GNRC	3.38%
10.0	CNC	4.0%	JAZZ	3.34%
10.0	CVS	3.92%	CNC	3.32%
10.0	AMAT	3.61%	TEVA	3.19%
10.0	GOOGL	3.33%	AA	3.16%
10.0	CMA	3.23%	GOOGL	3.11%
10.0	AA	3.21%	CMA	2.99%
10.0	QCOM	2.79%	B	2.9%
10.0	EXPE	2.68%	PWR	2.84%
10.0	GNRC	2.61%	SLV	2.78%
10.0	VFC	2.57%	CSCO	2.49%
10.0	MRK	2.43%	NEM	2.48%
10.0	TXN	2.36%	BHP	2.34%
10.0	FCX	2.32%	ELAN	2.34%
10.0	CSTM	2.31%	RIO	2.22%
10.0	CDNS	2.27%	CVS	1.98%
10.0	B	2.26%	TRGP	1.96%
10.0	TEVA	2.26%	HSBC	1.94%
10.0	GE	2.15%	BIIB	1.94%
10.0	BIIB	2.13%	FCX	1.94%
10.0	PWR	2.06%	MNST	1.93%



P365D: 21d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	WDC	29.6%	MU	24.43%
21.0	INTC	27.04%	WDC	23.24%
21.0	MU	26.26%	INTC	19.64%
21.0	AMD	17.59%	AMD	14.56%
21.0	UNH	11.45%	AMAT	11.22%
21.0	CNC	10.83%	CSTM	8.8%
21.0	KALU	10.66%	CNC	8.54%
21.0	ON	10.12%	LUMN	8.37%
21.0	JAZZ	10.05%	ON	8.13%
21.0	AA	9.76%	KALU	8.07%
21.0	CVS	9.37%	AA	8.03%
21.0	LLY	9.07%	TEVA	7.33%
21.0	TSLA	8.95%	JAZZ	7.06%
21.0	AMAT	8.76%	GNRC	6.9%
21.0	GOOGL	7.81%	GOOGL	6.8%
21.0	TXN	7.77%	B	6.71%
21.0	GNRC	6.84%	SLV	6.62%
21.0	CSTM	6.55%	CMA	6.15%
21.0	CMA	6.25%	PWR	5.94%
21.0	B	6.23%	CSCO	5.82%
21.0	QCOM	6.18%	NEM	5.44%
21.0	TEVA	5.48%	BHP	5.09%
21.0	NEM	5.47%	RIO	5.05%
21.0	LUMN	5.23%	ELAN	4.99%
21.0	FCX	5.0%	TRGP	4.53%
21.0	VFC	4.98%	TXN	4.48%
21.0	MRK	4.74%	CVS	4.42%
21.0	BIIB	4.6%	FCX	4.4%
21.0	EXPE	4.46%	QCOM	4.22%
21.0	PWR	4.38%	BIIB	4.18%



P365D: 63d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	WDC	108.69%	WDC	82.28%
63.0	MU	91.45%	MU	81.13%
63.0	INTC	76.07%	INTC	67.28%
63.0	ON	45.62%	AMD	43.21%
63.0	AMD	43.3%	AMAT	37.13%
63.0	KALU	42.82%	CSTM	32.03%
63.0	AA	38.91%	AA	31.26%
63.0	AMAT	36.91%	KALU	30.51%
63.0	JAZZ	32.63%	LUMN	29.51%
63.0	CNC	32.05%	ON	28.03%
63.0	GNRC	31.86%	SLV	27.71%
63.0	CSTM	30.56%	TEVA	26.37%
63.0	TXN	27.56%	CNC	23.16%
63.0	LUMN	24.62%	JAZZ	22.69%
63.0	CVS	24.51%	B	21.71%
63.0	TEVA	23.17%	PWR	21.24%
63.0	B	22.18%	GOOGL	21.15%
63.0	NEM	21.62%	CMA	19.37%
63.0	TSLA	21.51%	RIO	18.36%
63.0	SLV	20.27%	NEM	18.31%
63.0	UNH	19.89%	TRGP	16.5%
63.0	CMA	19.65%	BHP	16.49%
63.0	GOOGL	19.54%	FCX	16.06%
63.0	OXY	19.53%	CSCO	15.96%
63.0	BHP	18.71%	GNRC	15.47%
63.0	PWR	18.2%	TXN	14.49%
63.0	VFC	17.07%	MRK	13.14%
63.0	BIIB	16.51%	ELAN	13.07%
63.0	FCX	16.11%	LLY	12.91%
63.0	MRK	14.9%	BIIB	12.71%



P365D: 126d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	WDC	330.81%	WDC	222.39%
126.0	MU	260.53%	MU	218.01%
126.0	INTC	147.43%	INTC	130.62%
126.0	AA	117.1%	AMAT	89.43%
126.0	KALU	116.81%	AA	83.83%
126.0	AMAT	116.56%	CSTM	81.12%
126.0	ON	114.5%	SLV	76.01%
126.0	CSTM	88.54%	KALU	70.89%
126.0	SLV	78.61%	TEVA	63.15%
126.0	JAZZ	73.49%	ON	59.94%
126.0	GNRC	71.47%	AMD	58.47%
126.0	CMA	70.9%	B	51.14%
126.0	B	67.73%	JAZZ	45.45%
126.0	AMD	57.81%	NEM	45.29%
126.0	TXN	57.27%	FCX	44.79%
126.0	NEM	56.85%	RIO	44.7%
126.0	VFC	54.88%	PWR	43.68%
126.0	CNC	54.62%	CMA	41.75%
126.0	TEVA	52.65%	TRGP	41.6%
126.0	PWR	49.69%	CNC	41.09%
126.0	FCX	49.69%	GOOGL	40.45%
126.0	BUD	48.73%	BHP	39.44%
126.0	GOOGL	42.78%	LUMN	36.01%
126.0	BHP	42.25%	MRK	33.14%
126.0	MRK	40.73%	TXN	33.06%
126.0	BIIB	39.51%	GNRC	32.43%
126.0	OXY	39.42%	XOM	30.05%
126.0	LUMN	37.76%	HSBC	29.51%
126.0	GSK	35.64%	VFC	27.83%
126.0	XOM	35.24%	CSCO	27.66%



Bottom 30 Tickers By ROVBC

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	SIVBQ	-1.87%	SIVBQ	-0.78%
1.0	SBNY	-1.06%	SBNY	-0.45%
1.0	FRCB	-0.39%	FRCB	-0.23%
1.0	FIS	-0.18%	IEP	-0.14%
1.0	CHTR	-0.18%	AMC	-0.13%
1.0	IEP	-0.15%	CHTR	-0.09%
1.0	AMC	-0.14%	PRGO	-0.09%
1.0	PRGO	-0.13%	FIS	-0.08%
1.0	BHC	-0.09%	ZTS	-0.07%
1.0	LUMN	-0.08%	BHC	-0.06%
1.0	NAVI	-0.07%	VFC	-0.06%
1.0	T	-0.06%	ADBE	-0.06%
1.0	CMCSA	-0.06%	AAP	-0.06%
1.0	ZTS	-0.05%	NWL	-0.06%
1.0	CYH	-0.05%	GT	-0.05%
1.0	TLT	-0.05%	CMCSA	-0.05%
1.0	UAA	-0.05%	TLT	-0.04%
1.0	ELAN	-0.04%	UAA	-0.04%
1.0	VFC	-0.04%	NAVI	-0.04%
1.0	PEP	-0.04%	INTU	-0.04%
1.0	BXP	-0.04%	CZR	-0.03%
1.0	GT	-0.04%	KHC	-0.03%
1.0	GSK	-0.04%	BXP	-0.03%
1.0	VZ	-0.03%	LNC	-0.02%
1.0	EMB	-0.03%	MOS	-0.02%
1.0	LNC	-0.03%	BALL	-0.02%
1.0	CTLT	-0.03%	FRA	-0.02%
1.0	ADBE	-0.03%	PEP	-0.02%
1.0	USB	-0.02%	CTLT	-0.01%
1.0	LQD	-0.02%	LQD	-0.01%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	SBNY	-10.1%	SBNY	-4.05%
10.0	SIVBQ	-7.85%	SIVBQ	-3.9%
10.0	AMC	-3.16%	FRCB	-2.19%
10.0	FRCB	-3.12%	IEP	-1.38%
10.0	PRGO	-1.92%	AMC	-1.17%
10.0	CHTR	-1.73%	CHTR	-0.99%
10.0	IEP	-1.56%	PRGO	-0.89%
10.0	FIS	-1.27%	FIS	-0.78%
10.0	AAP	-0.9%	ZTS	-0.69%
10.0	ZTS	-0.77%	NWL	-0.66%
10.0	VFC	-0.7%	VFC	-0.66%
10.0	GT	-0.68%	AAP	-0.62%
10.0	BHC	-0.66%	ADBE	-0.57%
10.0	TLT	-0.63%	GT	-0.57%
10.0	BXP	-0.56%	CMCSA	-0.57%
10.0	NAVI	-0.51%	UAA	-0.56%
10.0	CMCSA	-0.51%	BHC	-0.53%
10.0	GSK	-0.49%	NAVI	-0.5%
10.0	ADBE	-0.47%	CZR	-0.45%
10.0	VZ	-0.37%	INTU	-0.4%
10.0	LUMN	-0.3%	TLT	-0.39%
10.0	LNC	-0.3%	MOS	-0.32%
10.0	CYH	-0.3%	BXP	-0.31%
10.0	NWL	-0.27%	KHC	-0.29%
10.0	LQD	-0.24%	LNC	-0.24%
10.0	MOS	-0.23%	BALL	-0.22%
10.0	T	-0.22%	FRA	-0.18%
10.0	BMV	-0.19%	CYH	-0.13%
10.0	PEP	-0.19%	LQD	-0.12%
10.0	BALL	-0.18%	PEP	-0.12%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	SBNY	-29.82%	SBNY	-11.16%
21.0	SIVBQ	-18.52%	SIVBQ	-9.37%
21.0	FRCB	-10.1%	FRCB	-6.02%
21.0	AMC	-6.36%	IEP	-2.96%
21.0	PRGO	-3.74%	AMC	-2.93%
21.0	CHTR	-3.49%	CHTR	-2.05%
21.0	IEP	-2.76%	NWL	-1.82%
21.0	AAP	-2.62%	PRGO	-1.78%
21.0	FIS	-2.24%	FIS	-1.46%
21.0	NWL	-2.23%	ZTS	-1.41%
21.0	ZTS	-1.88%	VFC	-1.4%
21.0	VFC	-1.8%	BHC	-1.32%
21.0	BHC	-1.69%	AAP	-1.25%
21.0	CMCSA	-1.49%	GT	-1.15%
21.0	NAVI	-1.36%	CMCSA	-1.12%
21.0	TLT	-1.24%	NAVI	-1.12%
21.0	GT	-1.11%	UAA	-1.08%
21.0	BXP	-0.92%	CZR	-1.02%
21.0	CYH	-0.83%	ADBE	-0.93%
21.0	GSK	-0.81%	TLT	-0.83%
21.0	LNC	-0.81%	MOS	-0.72%
21.0	ADBE	-0.75%	BXP	-0.71%
21.0	MOS	-0.57%	KHC	-0.69%
21.0	BMY	-0.47%	INTU	-0.64%
21.0	LW	-0.43%	LNC	-0.61%
21.0	LQD	-0.41%	BALL	-0.55%
21.0	KHC	-0.41%	FRA	-0.35%
21.0	BALL	-0.37%	CYH	-0.3%
21.0	T	-0.33%	LQD	-0.23%
21.0	VZ	-0.26%	PEP	-0.2%



All TMD: 63d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	SBNY	-109.2%	SBNY	-37.59%
63.0	SIVBQ	-74.52%	SIVBQ	-33.73%
63.0	FRCB	-50.1%	FRCB	-24.04%
63.0	AMC	-29.81%	AMC	-13.25%
63.0	PRGO	-11.26%	IEP	-9.66%
63.0	IEP	-9.65%	NWL	-7.11%
63.0	CHTR	-9.37%	PRGO	-5.97%
63.0	AAP	-9.09%	CHTR	-5.25%
63.0	NWL	-8.65%	AAP	-4.3%
63.0	VFC	-7.12%	MOS	-4.08%
63.0	FIS	-5.69%	CZR	-4.07%
63.0	ZTS	-5.13%	VFC	-3.95%
63.0	BHC	-4.56%	BHC	-3.94%
63.0	CMCSA	-4.39%	FIS	-3.82%
63.0	MOS	-4.34%	ZTS	-3.51%
63.0	NAVI	-3.66%	NAVI	-3.4%
63.0	TLT	-3.54%	UAA	-3.05%
63.0	KHC	-3.35%	GT	-2.94%
63.0	GT	-2.64%	CMCSA	-2.87%
63.0	LNC	-2.55%	BXP	-2.83%
63.0	BXP	-2.32%	KHC	-2.75%
63.0	ADBE	-2.1%	ADBE	-2.46%
63.0	CLF	-1.98%	TLT	-2.31%
63.0	CZR	-1.89%	LNC	-1.91%
63.0	VNO	-1.47%	CLF	-1.76%
63.0	BALL	-1.24%	BALL	-1.4%
63.0	LQD	-0.86%	BBY	-1.28%
63.0	LW	-0.83%	FRA	-0.88%
63.0	CYH	-0.83%	CYH	-0.68%
63.0	FRA	-0.69%	LW	-0.57%



All TMD: 126d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	SBNY	-181.89%	SIVBQ	-65.15%
126.0	SIVBQ	-152.22%	SBNY	-64.8%
126.0	FRCB	-117.46%	FRCB	-51.17%
126.0	AMC	-58.05%	AMC	-28.95%
126.0	PRGO	-22.49%	IEP	-18.89%
126.0	IEP	-22.15%	NWL	-16.23%
126.0	NWL	-19.9%	PRGO	-11.88%
126.0	AAP	-18.44%	AAP	-10.26%
126.0	CHTR	-16.78%	CHTR	-9.02%
126.0	VFC	-14.05%	MOS	-8.07%
126.0	BHC	-10.33%	CZR	-7.87%
126.0	MOS	-9.09%	VFC	-6.65%
126.0	CMCSA	-8.02%	FIS	-6.48%
126.0	ZTS	-7.42%	NAVI	-5.98%
126.0	CZR	-7.36%	KHC	-5.9%
126.0	FIS	-6.91%	BHC	-5.78%
126.0	KHC	-6.87%	CTLT	-5.69%
126.0	BXP	-6.66%	ZTS	-5.45%
126.0	NAVI	-6.44%	GT	-5.43%
126.0	CNC	-6.32%	BXP	-5.34%
126.0	TLT	-6.16%	UAA	-5.24%
126.0	LNC	-4.04%	CMCSA	-4.71%
126.0	UNH	-3.85%	TLT	-4.11%
126.0	CLF	-3.74%	CNC	-3.97%
126.0	GT	-3.72%	CLF	-3.31%
126.0	UAA	-2.89%	ADBE	-3.19%
126.0	BBY	-1.81%	UNH	-3.18%
126.0	BMY	-1.69%	LNC	-2.41%
126.0	LW	-1.68%	LW	-2.34%
126.0	FRA	-1.18%	BBY	-1.97%



All TMD: 252d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
252.0	SBNY	-265.02%	SBNY	-95.75%
252.0	SIVBQ	-218.68%	SIVBQ	-95.29%
252.0	FRCB	-185.83%	FRCB	-91.61%
252.0	AMC	-97.32%	AMC	-54.07%
252.0	IEP	-48.53%	IEP	-39.1%
252.0	AAP	-44.86%	NWL	-30.4%
252.0	NWL	-43.48%	AAP	-22.06%
252.0	PRGO	-33.53%	PRGO	-20.35%
252.0	VFC	-32.92%	VFC	-17.45%
252.0	CHTR	-30.57%	CNC	-17.13%
252.0	UAA	-26.61%	CZR	-16.6%
252.0	CZR	-23.61%	MOS	-15.12%
252.0	CNC	-21.11%	UAA	-14.81%
252.0	MOS	-21.07%	CHTR	-13.82%
252.0	BHC	-15.32%	KHC	-11.7%
252.0	KHC	-15.11%	GT	-9.8%
252.0	BIIB	-14.51%	UNH	-9.31%
252.0	CLF	-13.67%	NAVI	-9.17%
252.0	OXY	-13.44%	CLF	-8.62%
252.0	TLT	-11.72%	BHC	-8.33%
252.0	ZTS	-10.58%	BMY	-7.84%
252.0	NAVI	-10.31%	TLT	-7.08%
252.0	UNH	-10.01%	ZTS	-6.74%
252.0	CMCSA	-9.85%	CMCSA	-6.41%
252.0	BXP	-9.52%	CTLT	-6.24%
252.0	GT	-8.95%	CYH	-5.99%
252.0	BMY	-8.2%	FIS	-5.69%
252.0	CYH	-7.17%	LW	-5.6%
252.0	LW	-4.1%	BXP	-5.52%
252.0	PEP	-2.97%	OXY	-4.95%



P30D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	ORCL	-4.0%	ORCL	-2.54%
1.0	MSTR	-2.87%	MSTR	-2.51%
1.0	NFLX	-2.57%	AA	-1.89%
1.0	AVGO	-2.0%	CLF	-1.72%
1.0	GBTC	-1.86%	LUMN	-1.55%
1.0	QCOM	-1.48%	INTU	-1.46%
1.0	NVDA	-1.47%	ADBE	-1.4%
1.0	CLF	-1.38%	SLV	-1.11%
1.0	AA	-1.33%	MSFT	-1.02%
1.0	MSFT	-1.28%	FSUGY	-0.97%
1.0	BHC	-1.17%	OXY	-0.95%
1.0	TMUS	-1.13%	GBTC	-0.94%
1.0	CDNS	-1.12%	QCOM	-0.94%
1.0	GLD	-1.11%	NFLX	-0.89%
1.0	VZ	-1.1%	ON	-0.89%
1.0	FIS	-1.09%	AVGO	-0.88%
1.0	VICI	-1.06%	T	-0.82%
1.0	INTU	-1.0%	LVS	-0.7%
1.0	ADBE	-0.95%	NEM	-0.68%
1.0	OXY	-0.74%	RIO	-0.66%
1.0	T	-0.64%	B	-0.65%
1.0	SLV	-0.63%	CPRT	-0.65%
1.0	LVS	-0.61%	VZ	-0.57%
1.0	FSUGY	-0.58%	FIS	-0.55%
1.0	NEM	-0.55%	NVDA	-0.54%
1.0	LUMN	-0.53%	GLD	-0.53%
1.0	XOM	-0.53%	TMUS	-0.51%
1.0	NAVI	-0.51%	CDNS	-0.46%
1.0	B	-0.48%	WYNN	-0.45%
1.0	WYNN	-0.48%	AMZN	-0.43%



P30D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	-41.73%	AA	-22.11%
10.0	ORCL	-28.04%	ORCL	-21.68%
10.0	CLF	-27.54%	MSTR	-18.78%
10.0	NFLX	-26.79%	CLF	-16.34%
10.0	MSFT	-17.19%	ADBE	-16.06%
10.0	AA	-17.07%	LUMN	-11.19%
10.0	ADBE	-12.08%	INTU	-11.13%
10.0	OXY	-11.84%	OXY	-10.1%
10.0	INTU	-11.65%	SLV	-10.0%
10.0	CDNS	-11.22%	MSFT	-9.55%
10.0	META	-11.1%	NFLX	-9.05%
10.0	AVGO	-10.16%	ON	-7.51%
10.0	SLV	-9.62%	PRGO	-7.38%
10.0	GBTC	-9.42%	XOM	-7.04%
10.0	QCOM	-8.09%	FSUGY	-6.98%
10.0	PRGO	-7.32%	AVGO	-6.47%
10.0	GLD	-6.77%	QCOM	-6.4%
10.0	LUMN	-6.38%	LVS	-6.38%
10.0	NVDA	-6.19%	RIO	-6.03%
10.0	CMCSA	-6.1%	BHC	-4.85%
10.0	ON	-6.0%	FIS	-4.55%
10.0	FIS	-5.96%	GLD	-4.4%
10.0	LVS	-5.69%	CSTM	-4.33%
10.0	AMZN	-5.02%	NVDA	-4.23%
10.0	B	-4.78%	T	-4.12%
10.0	SNY	-4.78%	META	-4.1%
10.0	BHP	-4.75%	CPRT	-4.03%
10.0	ZTS	-4.53%	B	-3.98%
10.0	XOM	-4.45%	AMZN	-3.94%
10.0	AAPL	-4.28%	CDNS	-3.75%



P90D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	NFLX	-1.1%	ZTS	-0.76%
1.0	ZTS	-0.83%	INTU	-0.71%
1.0	INTU	-0.77%	CHTR	-0.6%
1.0	TMUS	-0.71%	NFLX	-0.51%
1.0	CHTR	-0.7%	T	-0.51%
1.0	MSTR	-0.65%	AA	-0.46%
1.0	FIS	-0.64%	OXY	-0.4%
1.0	GLD	-0.53%	MSTR	-0.4%
1.0	AZO	-0.47%	MOS	-0.31%
1.0	T	-0.42%	HCA	-0.3%
1.0	GBTC	-0.39%	SLV	-0.29%
1.0	CMCSA	-0.38%	TMUS	-0.29%
1.0	PEP	-0.36%	NEM	-0.28%
1.0	AA	-0.34%	CPRT	-0.27%
1.0	VICI	-0.31%	FIS	-0.26%
1.0	HCA	-0.28%	XOM	-0.25%
1.0	BHC	-0.27%	LVS	-0.25%
1.0	VZ	-0.25%	GLD	-0.24%
1.0	B	-0.25%	VZ	-0.24%
1.0	SNY	-0.25%	ADBE	-0.24%
1.0	XOM	-0.22%	PEP	-0.24%
1.0	NEM	-0.21%	POST	-0.2%
1.0	OXY	-0.21%	GBTC	-0.2%
1.0	MOS	-0.2%	ISRG	-0.19%
1.0	LVS	-0.2%	CMCSA	-0.18%
1.0	POST	-0.2%	SNY	-0.18%
1.0	COST	-0.18%	B	-0.16%
1.0	ADBE	-0.16%	GILD	-0.16%
1.0	SLV	-0.16%	COST	-0.13%
1.0	MSI	-0.15%	GSK	-0.12%



P90D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	NFLX	-15.5%	CHTR	-8.65%
10.0	CHTR	-8.93%	ZTS	-7.34%
10.0	CMCSA	-6.75%	INTU	-6.7%
10.0	INTU	-6.29%	NFLX	-6.1%
10.0	ZTS	-5.32%	HCA	-4.4%
10.0	HCA	-5.2%	AA	-3.75%
10.0	MSI	-4.78%	CMCSA	-3.66%
10.0	GLD	-4.36%	FIS	-3.55%
10.0	AZO	-3.99%	T	-3.54%
10.0	SNY	-3.72%	SLV	-3.48%
10.0	FIS	-3.71%	MSTR	-3.29%
10.0	T	-3.53%	ADBE	-3.0%
10.0	NEM	-3.5%	NEM	-2.95%
10.0	GBTC	-3.25%	GLD	-2.71%
10.0	SLV	-3.19%	LVS	-2.69%
10.0	TMUS	-3.19%	GBTC	-2.65%
10.0	AA	-2.8%	MOS	-2.6%
10.0	PEP	-2.78%	OXY	-2.52%
10.0	BHC	-2.66%	ISRG	-2.34%
10.0	OXY	-2.63%	BHC	-2.34%
10.0	GSK	-2.46%	POST	-2.21%
10.0	LVS	-2.39%	XOM	-2.16%
10.0	ADBE	-2.19%	AZO	-2.14%
10.0	POST	-2.15%	CPRT	-2.09%
10.0	ISRG	-2.06%	SNY	-2.05%
10.0	META	-2.05%	GILD	-2.03%
10.0	MOS	-1.94%	AZN	-1.97%
10.0	GME	-1.71%	PEP	-1.95%
10.0	PCG	-1.71%	GSK	-1.92%
10.0	CPRT	-1.67%	MSI	-1.76%



P90D: 21d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	NFLX	-26.04%	CHTR	-19.5%
21.0	CHTR	-24.84%	ZTS	-18.0%
21.0	CMCSA	-18.93%	INTU	-14.87%
21.0	ZTS	-16.56%	NFLX	-10.81%
21.0	INTU	-15.34%	HCA	-10.61%
21.0	AZO	-14.13%	CMCSA	-8.99%
21.0	HCA	-11.81%	MSTR	-8.73%
21.0	MSI	-10.28%	FIS	-8.34%
21.0	META	-9.45%	GBTC	-7.53%
21.0	GLD	-9.4%	T	-7.41%
21.0	FIS	-8.52%	AZO	-6.61%
21.0	TMUS	-8.06%	SLV	-6.41%
21.0	T	-8.0%	POST	-6.16%
21.0	BHC	-7.65%	NEM	-6.16%
21.0	GBTC	-7.57%	ISRG	-6.13%
21.0	AMZN	-7.51%	GT	-5.84%
21.0	PEP	-7.48%	BHC	-5.63%
21.0	SNY	-7.18%	GME	-5.63%
21.0	NEM	-7.01%	GLD	-5.52%
21.0	SLV	-6.57%	VFC	-5.46%
21.0	VFC	-6.47%	LVS	-5.45%
21.0	NAVI	-5.83%	META	-5.23%
21.0	GME	-5.48%	MOS	-5.2%
21.0	POST	-5.46%	PEP	-4.8%
21.0	IEP	-5.46%	CMG	-4.77%
21.0	ISRG	-5.38%	CPRT	-4.61%
21.0	GSK	-5.16%	ADBE	-4.5%
21.0	LVS	-5.0%	SNY	-4.36%
21.0	GT	-4.98%	GSK	-4.16%
21.0	HD	-4.96%	AZN	-4.14%



P365D: 1d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	MSTR	-0.82%	MSTR	-0.47%
1.0	PRGO	-0.51%	INTU	-0.39%
1.0	CHTR	-0.51%	CHTR	-0.38%
1.0	INTU	-0.49%	PRGO	-0.34%
1.0	ZTS	-0.46%	ZTS	-0.29%
1.0	FIS	-0.43%	FIS	-0.28%
1.0	NFLX	-0.32%	ADBE	-0.23%
1.0	CMG	-0.29%	NFLX	-0.21%
1.0	UAA	-0.29%	CPRT	-0.21%
1.0	NAVI	-0.27%	GBTC	-0.2%
1.0	CMCSA	-0.26%	CMG	-0.18%
1.0	ADBE	-0.24%	NAVI	-0.18%
1.0	TMUS	-0.22%	MOS	-0.18%
1.0	TDG	-0.21%	GT	-0.15%
1.0	BHC	-0.21%	CMCSA	-0.14%
1.0	ISRG	-0.16%	TMUS	-0.13%
1.0	AZO	-0.15%	T	-0.12%
1.0	POST	-0.14%	ISRG	-0.1%
1.0	VICI	-0.13%	MSFT	-0.1%
1.0	CPRT	-0.12%	ORCL	-0.08%
1.0	FRA	-0.11%	VICI	-0.08%
1.0	MOS	-0.09%	POST	-0.08%
1.0	AMC	-0.08%	BHC	-0.08%
1.0	ORCL	-0.08%	META	-0.07%
1.0	VST	-0.08%	FRA	-0.07%
1.0	MSFT	-0.07%	LEN	-0.07%
1.0	LNC	-0.07%	AMC	-0.05%
1.0	META	-0.07%	AZO	-0.05%
1.0	LEN	-0.06%	IEP	-0.04%
1.0	T	-0.06%	SNY	-0.04%



P365D: 10d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	-8.08%	MSTR	-4.86%
10.0	PRGO	-6.72%	INTU	-3.9%
10.0	CHTR	-4.99%	CHTR	-3.85%
10.0	INTU	-4.47%	PRGO	-3.41%
10.0	ZTS	-3.82%	FIS	-2.86%
10.0	NAVI	-3.62%	ZTS	-2.58%
10.0	FIS	-3.09%	ADBE	-2.34%
10.0	AMC	-2.95%	NAVI	-2.22%
10.0	CMG	-2.5%	GBTC	-2.15%
10.0	CMCSA	-2.39%	NFLX	-1.95%
10.0	NFLX	-2.16%	CPRT	-1.89%
10.0	ADBE	-2.13%	GT	-1.89%
10.0	TDG	-1.72%	CMG	-1.88%
10.0	GT	-1.32%	MOS	-1.88%
10.0	MSFT	-1.31%	CMCSA	-1.65%
10.0	CPRT	-1.3%	MSFT	-1.06%
10.0	META	-1.28%	TMUS	-0.96%
10.0	MOS	-1.26%	ISRG	-0.92%
10.0	BHC	-1.21%	VICI	-0.84%
10.0	TMUS	-1.06%	BHC	-0.81%
10.0	POST	-1.01%	FRA	-0.8%
10.0	GBTC	-0.98%	T	-0.8%
10.0	AZO	-0.89%	META	-0.74%
10.0	T	-0.89%	IEP	-0.7%
10.0	VICI	-0.88%	POST	-0.67%
10.0	FRA	-0.74%	AZO	-0.65%
10.0	IEP	-0.69%	ORCL	-0.63%
10.0	SNY	-0.45%	LEN	-0.63%
10.0	LEN	-0.37%	KHC	-0.52%
10.0	KHC	-0.37%	SNY	-0.49%



P365D: 21d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	PRGO	-14.1%	MSTR	-9.3%
21.0	MSTR	-14.0%	INTU	-7.88%
21.0	CHTR	-11.43%	CHTR	-7.59%
21.0	INTU	-9.18%	PRGO	-7.07%
21.0	ZTS	-8.19%	FIS	-6.02%
21.0	NAVI	-7.04%	ZTS	-5.32%
21.0	FIS	-6.2%	GBTC	-4.76%
21.0	CMG	-5.99%	NAVI	-4.69%
21.0	CMCSA	-5.89%	ADBE	-4.34%
21.0	AMC	-5.56%	GT	-4.13%
21.0	TDG	-4.55%	MOS	-4.02%
21.0	ADBE	-4.33%	CMG	-3.92%
21.0	NFLX	-3.52%	CPRT	-3.77%
21.0	GT	-3.1%	NFLX	-3.64%
21.0	MOS	-3.07%	CMCSA	-3.25%
21.0	CPRT	-2.97%	TMUS	-2.06%
21.0	BHC	-2.86%	MSFT	-1.98%
21.0	GBTC	-2.5%	BHC	-1.79%
21.0	META	-2.43%	IEP	-1.76%
21.0	TMUS	-2.37%	FRA	-1.69%
21.0	AZO	-2.17%	ISRG	-1.65%
21.0	T	-1.99%	VST	-1.65%
21.0	IEP	-1.87%	VICI	-1.64%
21.0	VICI	-1.71%	TDG	-1.61%
21.0	POST	-1.65%	META	-1.55%
21.0	MSFT	-1.48%	LEN	-1.47%
21.0	KHC	-1.34%	T	-1.46%
21.0	LEN	-1.3%	AZO	-1.45%
21.0	FRA	-1.29%	KHC	-1.41%
21.0	AMZN	-0.97%	POST	-1.38%



P365D: 63d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	MSTR	-50.13%	MSTR	-23.84%
63.0	PRGO	-48.6%	PRGO	-22.0%
63.0	AMC	-31.66%	INTU	-20.52%
63.0	INTU	-26.61%	CHTR	-16.04%
63.0	ZTS	-25.44%	FIS	-15.53%
63.0	CHTR	-24.23%	ZTS	-14.04%
63.0	NAVI	-17.36%	GBTC	-14.03%
63.0	FIS	-16.29%	NAVI	-13.89%
63.0	CMCSA	-15.04%	ADBE	-12.56%
63.0	META	-14.77%	CPRT	-11.77%
63.0	NFLX	-14.31%	MOS	-11.28%
63.0	CPRT	-12.65%	LEN	-9.65%
63.0	NWL	-12.41%	NFLX	-9.44%
63.0	ADBE	-11.84%	CMG	-9.09%
63.0	LEN	-11.66%	GT	-9.06%
63.0	GBTC	-11.09%	AMC	-8.72%
63.0	TDG	-11.03%	CMCSA	-7.65%
63.0	TMUS	-9.17%	VST	-7.47%
63.0	MOS	-8.97%	TMUS	-7.43%
63.0	CMG	-8.7%	ORCL	-7.43%
63.0	GT	-8.52%	MSFT	-7.06%
63.0	HD	-8.17%	BHC	-6.94%
63.0	KHC	-8.02%	NWL	-6.32%
63.0	BXP	-7.64%	META	-6.07%
63.0	VST	-6.9%	LW	-5.9%
63.0	BHC	-6.83%	FRA	-5.8%
63.0	AZO	-6.62%	AZO	-5.73%
63.0	VNO	-6.51%	HD	-5.7%
63.0	LW	-5.93%	KHC	-5.24%
63.0	T	-4.98%	VICI	-5.16%



P365D: 126d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	MSTR	-128.93%	MSTR	-48.55%
126.0	AMC	-99.95%	AMC	-41.14%
126.0	PRGO	-93.56%	INTU	-40.21%
126.0	INTU	-49.55%	PRGO	-39.49%
126.0	CHTR	-43.33%	GBTC	-31.2%
126.0	NFLX	-39.43%	FIS	-30.07%
126.0	ORCL	-38.52%	NAVI	-29.5%
126.0	ZTS	-37.62%	ORCL	-28.32%
126.0	NAVI	-35.13%	CHTR	-26.33%
126.0	BXP	-34.37%	ADBE	-26.1%
126.0	LW	-32.2%	ZTS	-23.41%
126.0	LEN	-28.59%	NFLX	-23.37%
126.0	FIS	-28.42%	LW	-22.46%
126.0	CPRT	-26.25%	CPRT	-21.22%
126.0	META	-25.13%	LEN	-19.18%
126.0	GBTC	-23.4%	MSFT	-18.37%
126.0	ADBE	-23.3%	MOS	-17.27%
126.0	VNO	-23.01%	VNO	-17.23%
126.0	VST	-21.37%	VST	-16.48%
126.0	CMCSA	-19.01%	BXP	-14.74%
126.0	BBY	-16.22%	BHC	-14.46%
126.0	BHC	-16.22%	GT	-13.3%
126.0	TMUS	-15.45%	TMUS	-13.06%
126.0	KHC	-15.44%	CMG	-13.03%
126.0	MSFT	-14.38%	FRA	-11.52%
126.0	AZO	-13.68%	AZO	-11.44%
126.0	TDG	-13.55%	META	-11.02%
126.0	NWL	-13.27%	BBY	-10.42%
126.0	WYNN	-11.68%	KHC	-10.37%
126.0	MOS	-11.46%	WYNN	-10.22%



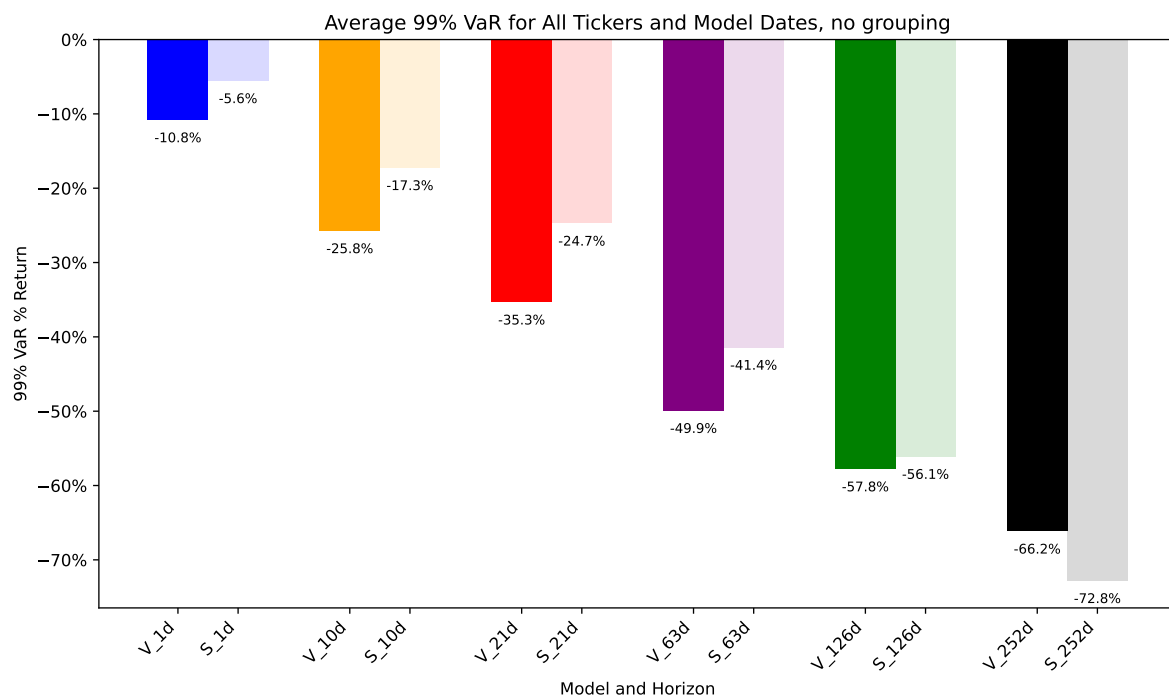
99% Value at Risk (VaR)

Historic Average Levels

Here we compare Vector Model (“V”, dark shading) and Sigma (“S”, light shading) 99% VaR 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.

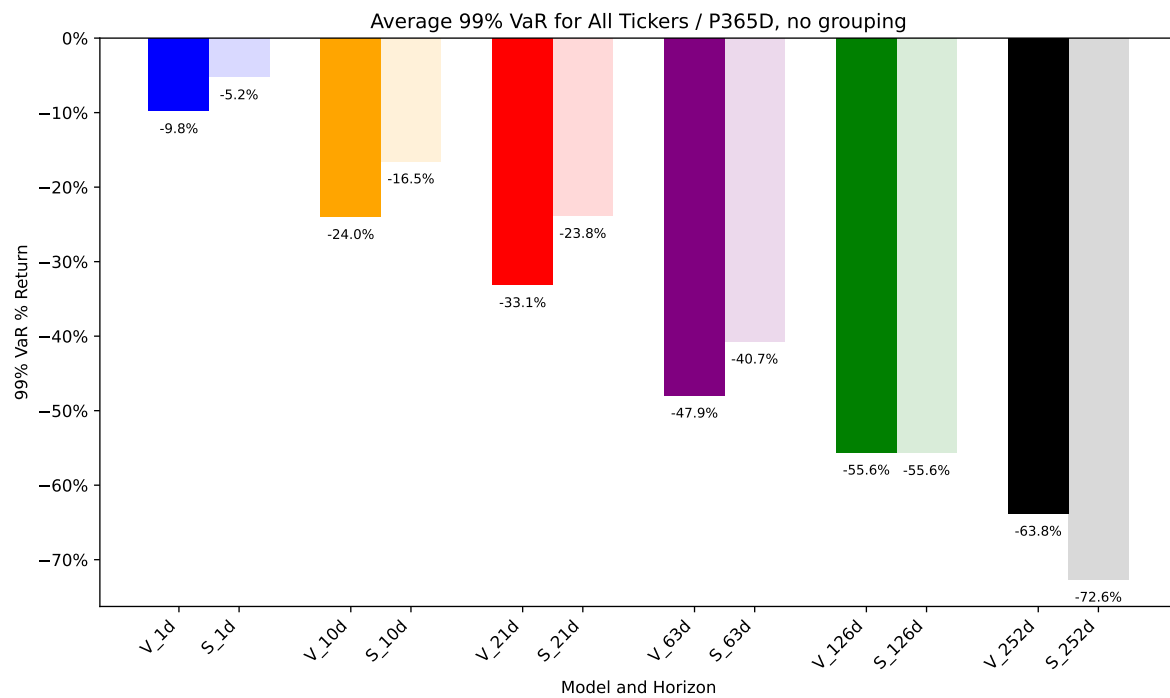
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-06-29



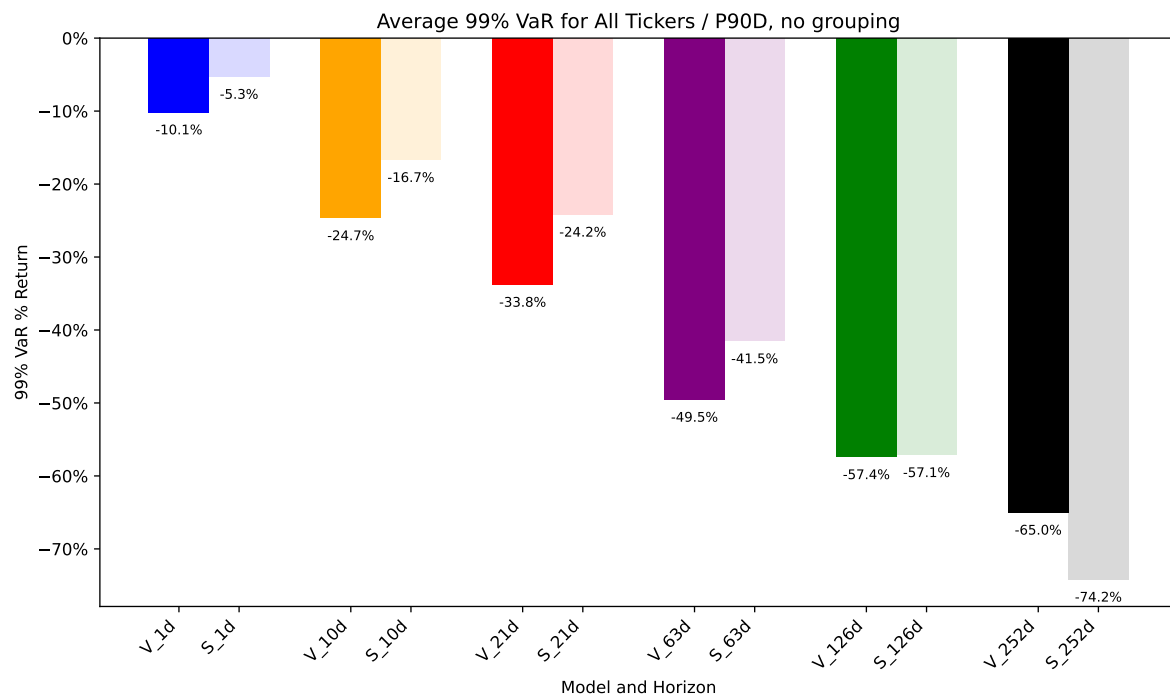
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-06-29 through 2025-07-01



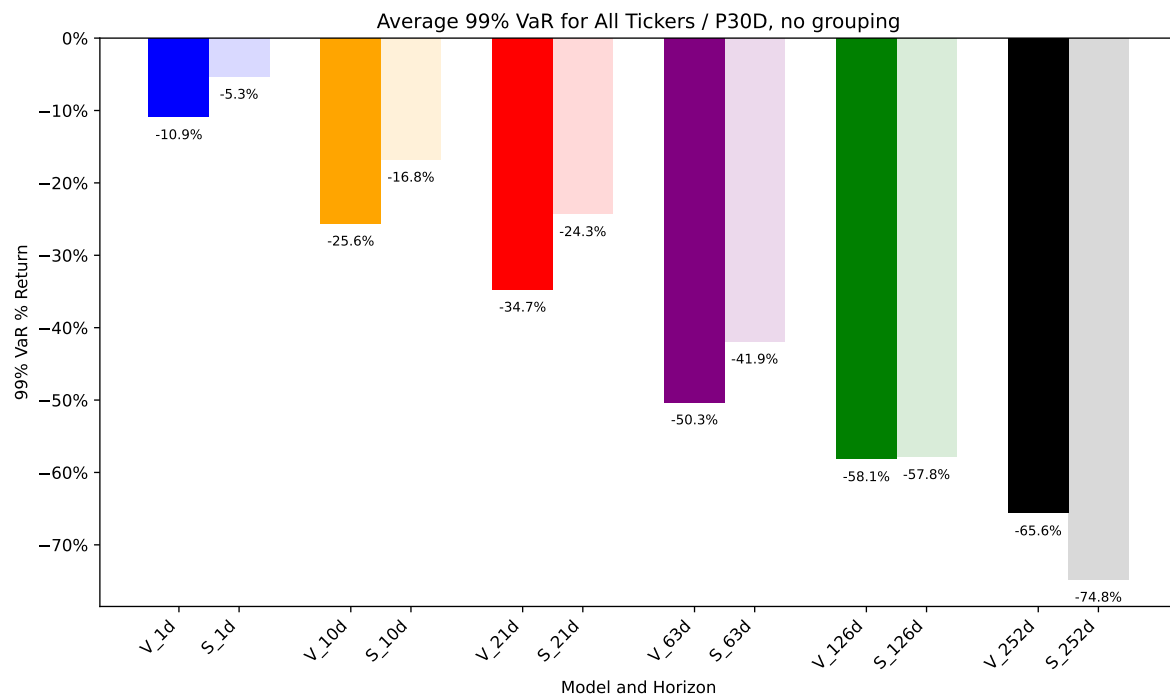
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-06-29 through 2026-04-02



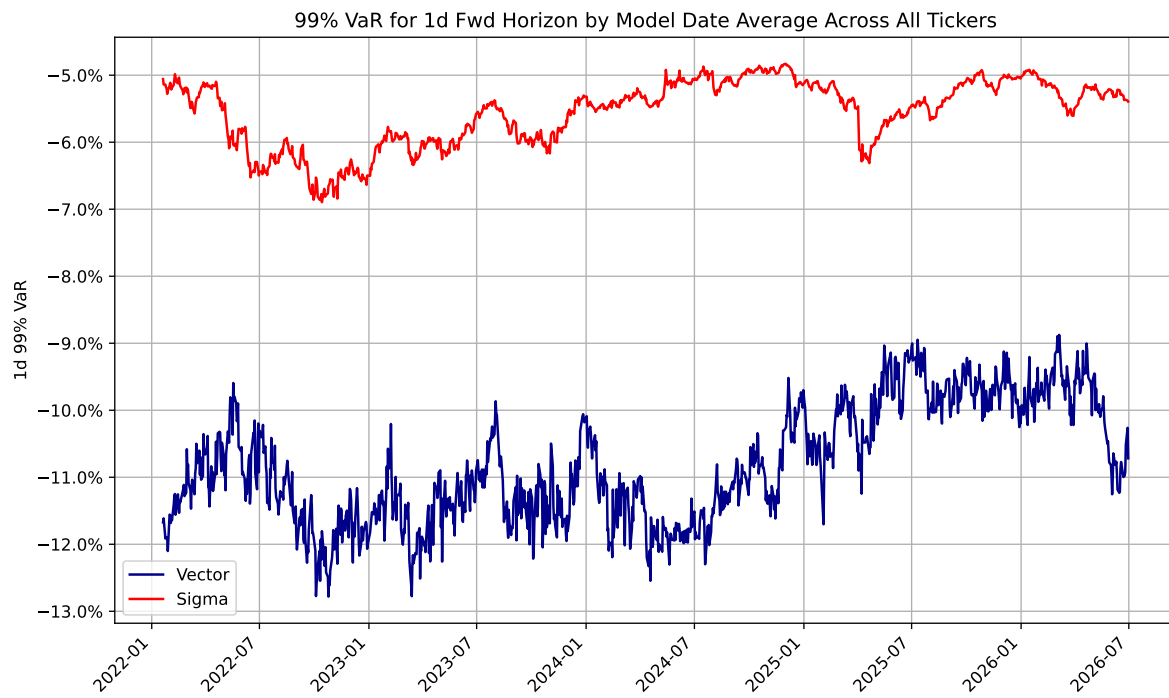
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-06-29 through 2026-06-01

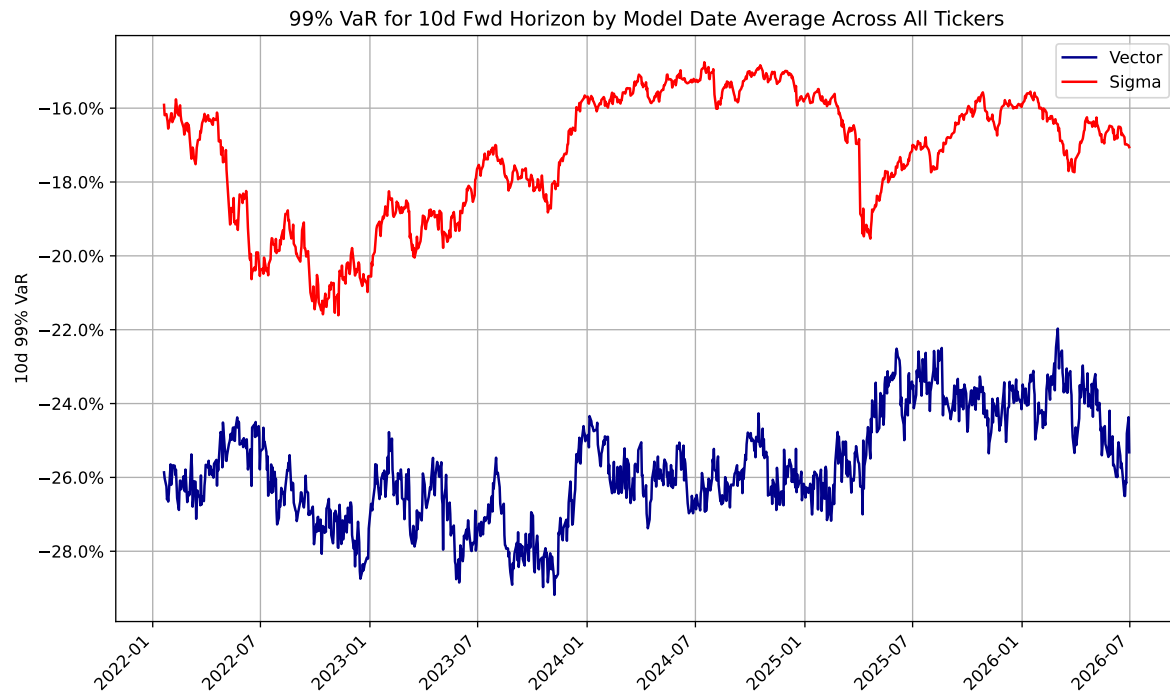


Daily Levels

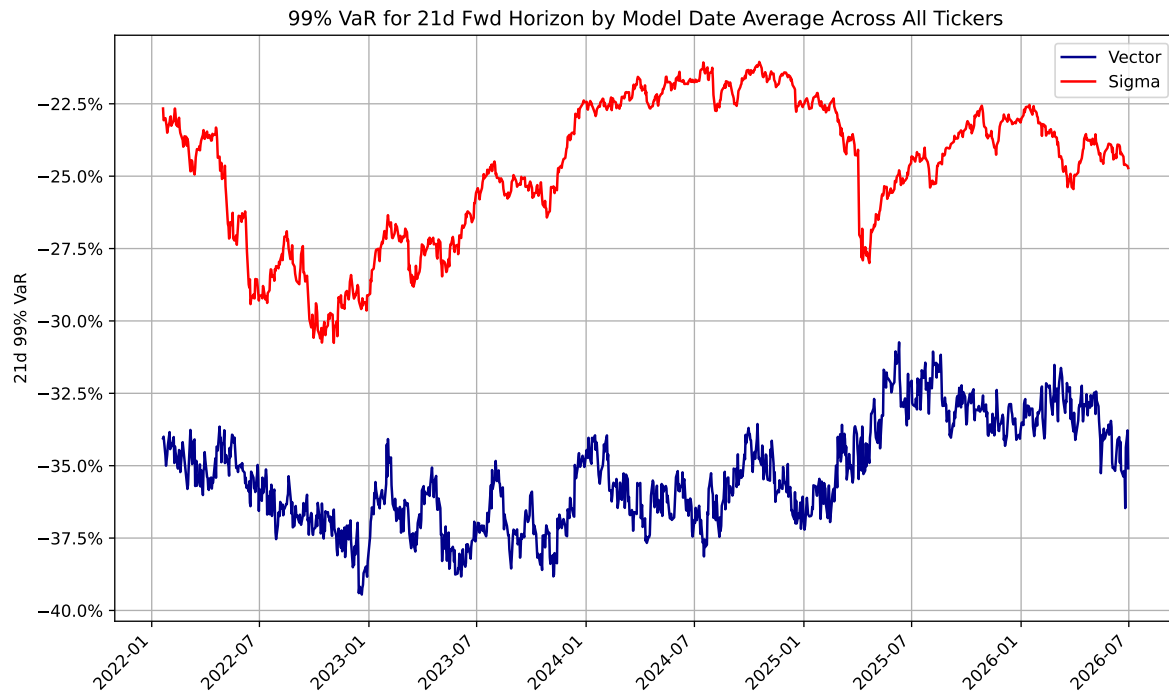
1d Horizon



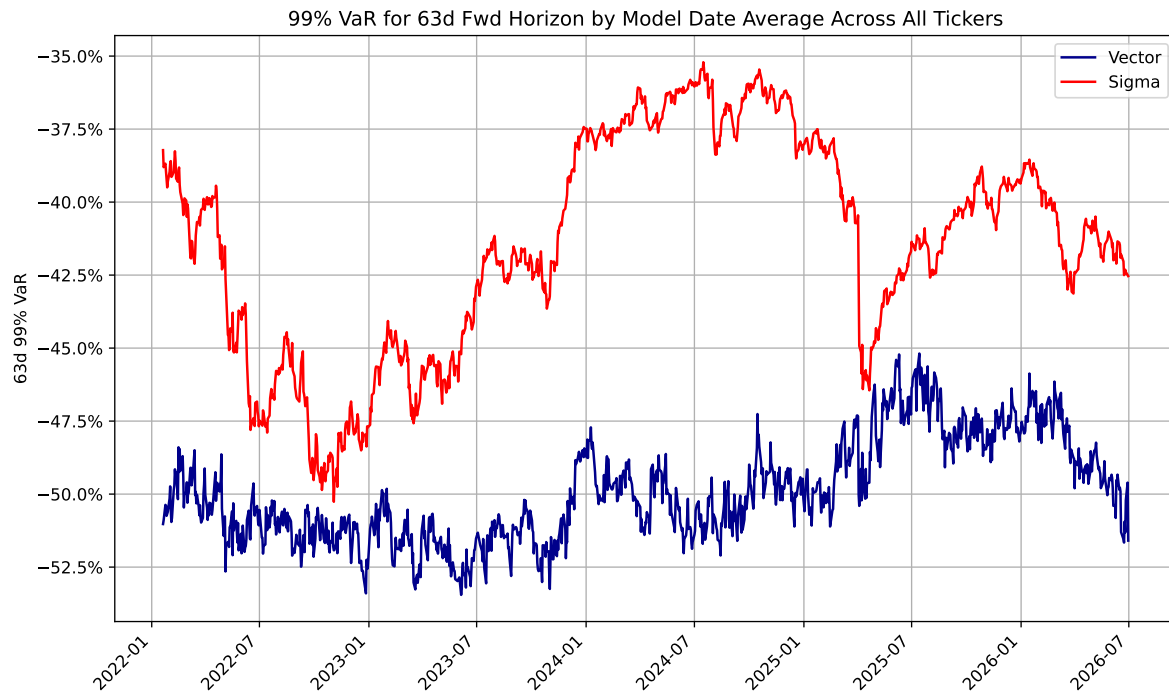
10d Horizon



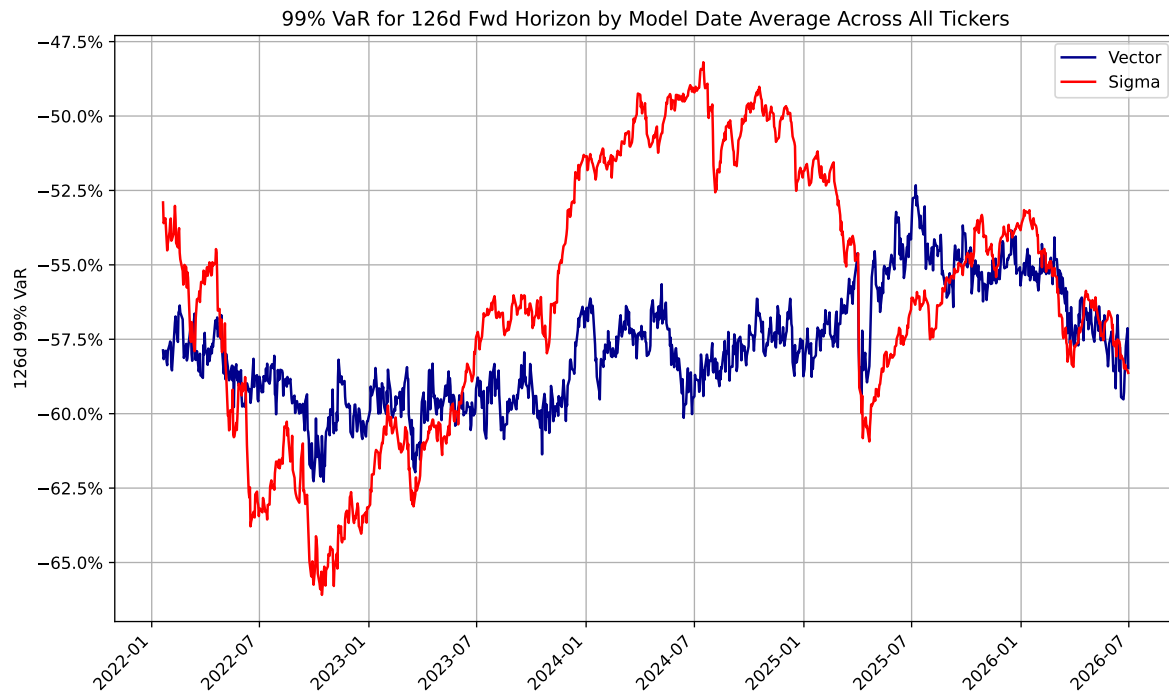
21d Horizon



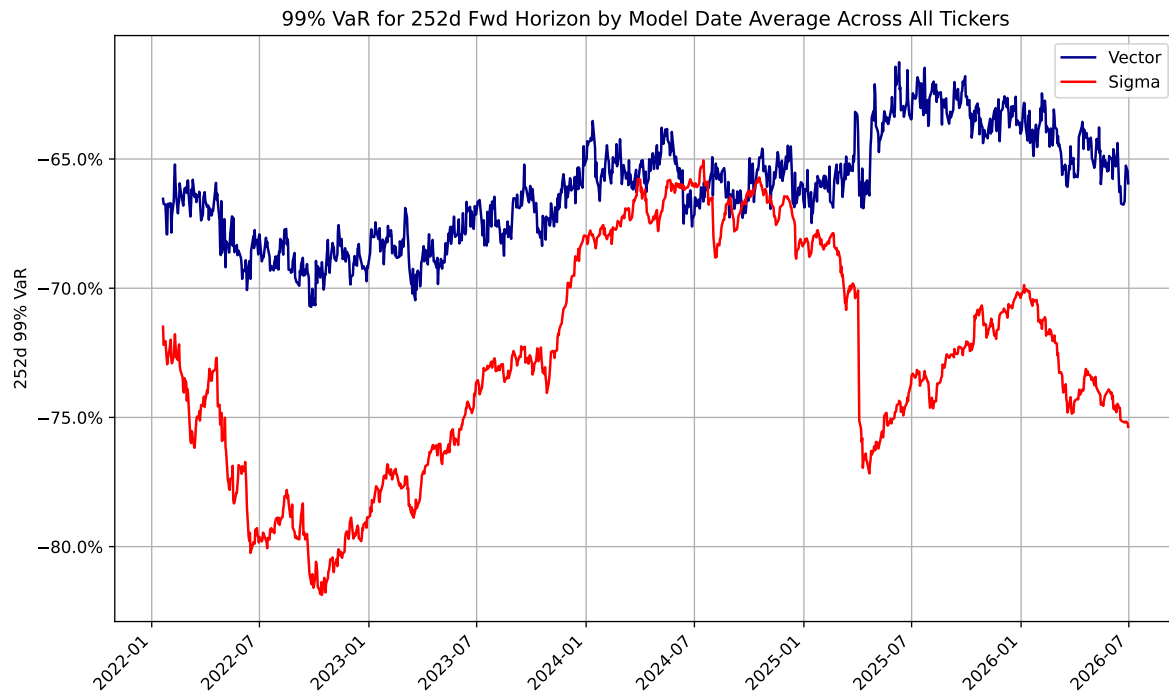
63d Horizon



126d Horizon



252d Horizon



Performance Summary

Here we compare the performance of 99% VaR 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 VaR breakage rates and Return on VaR based Capital (ROVBC), presenting the average results across tickers and model dates for model dates in the period indicated.

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

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

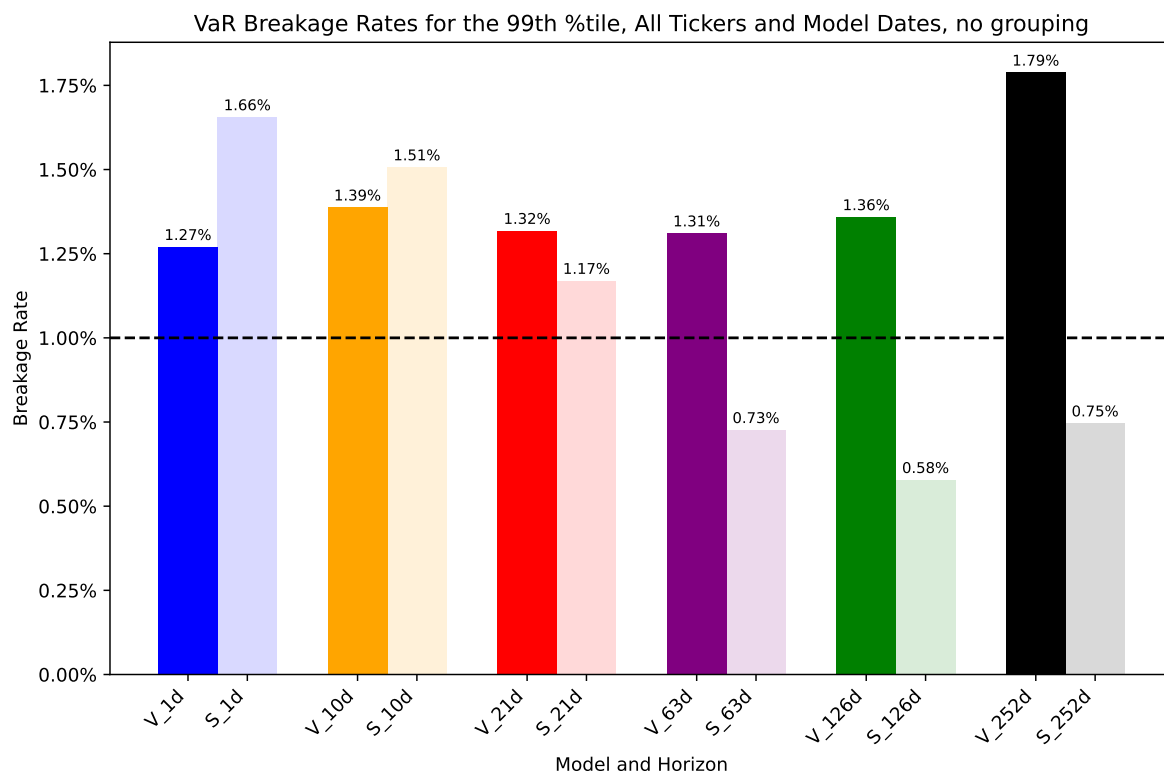
Alpha allows us to isolate ROVBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROVBC multiplier for the Vector Model and 1.00x. Alpha across TMD’s could be driven by VaR differentials between tickers and / or between dates. Thus we also present 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 variation in Vector Model VaR relative to Sigma across time as opposed to variation in Vector Model VaR relative to Sigma between tickers.

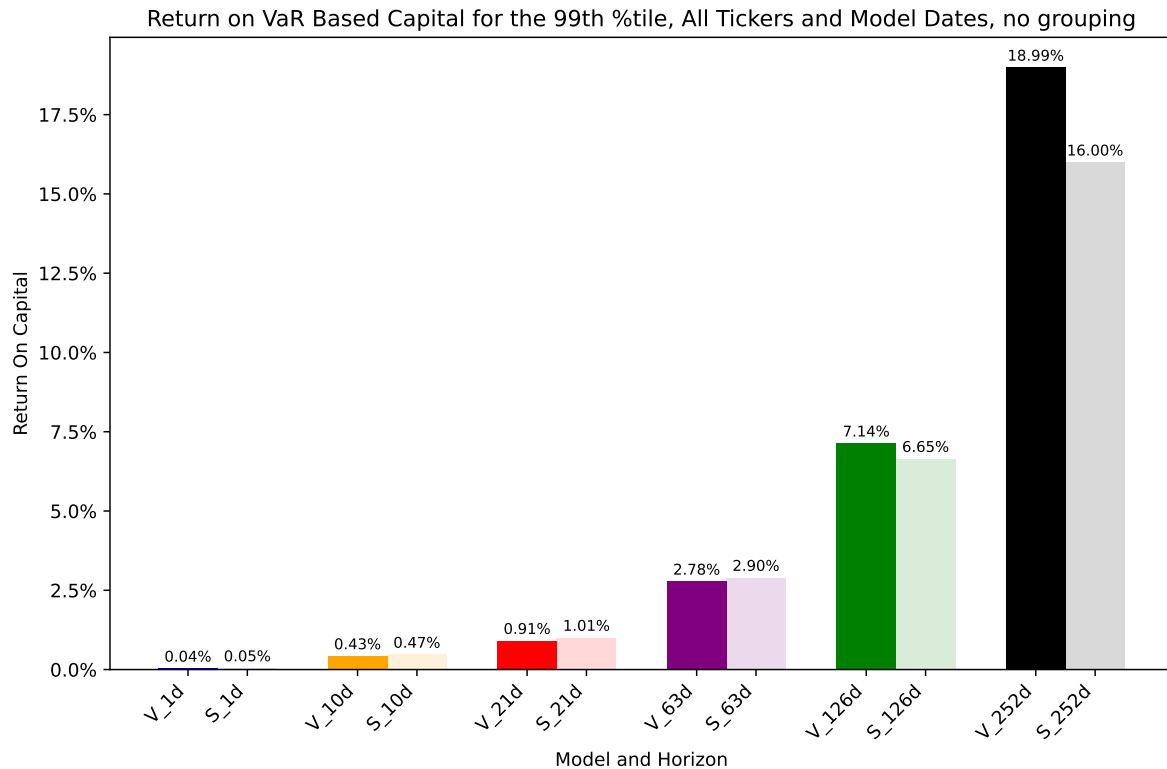
Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons > 1d overlap.



All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2026-06-29





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

	1d	10d	21d	63d	126d	252d
intercept	-0.01%	-0.06%	-0.15%	-0.36%	-0.86%	-1.91%
intercept_p_value	14.48%	0.00%	0.00%	0.00%	0.00%	0.00%
slope	87.91%	102.81%	105.00%	108.26%	120.27%	130.63%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

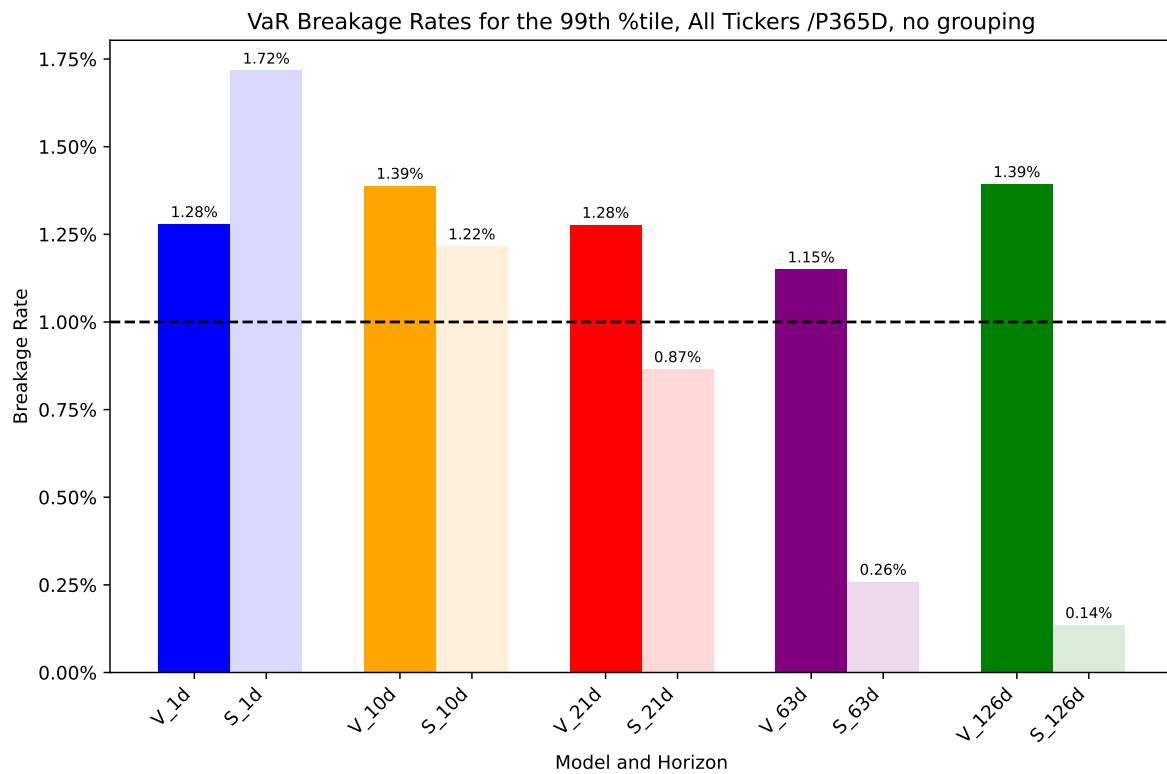
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across Model Dates:

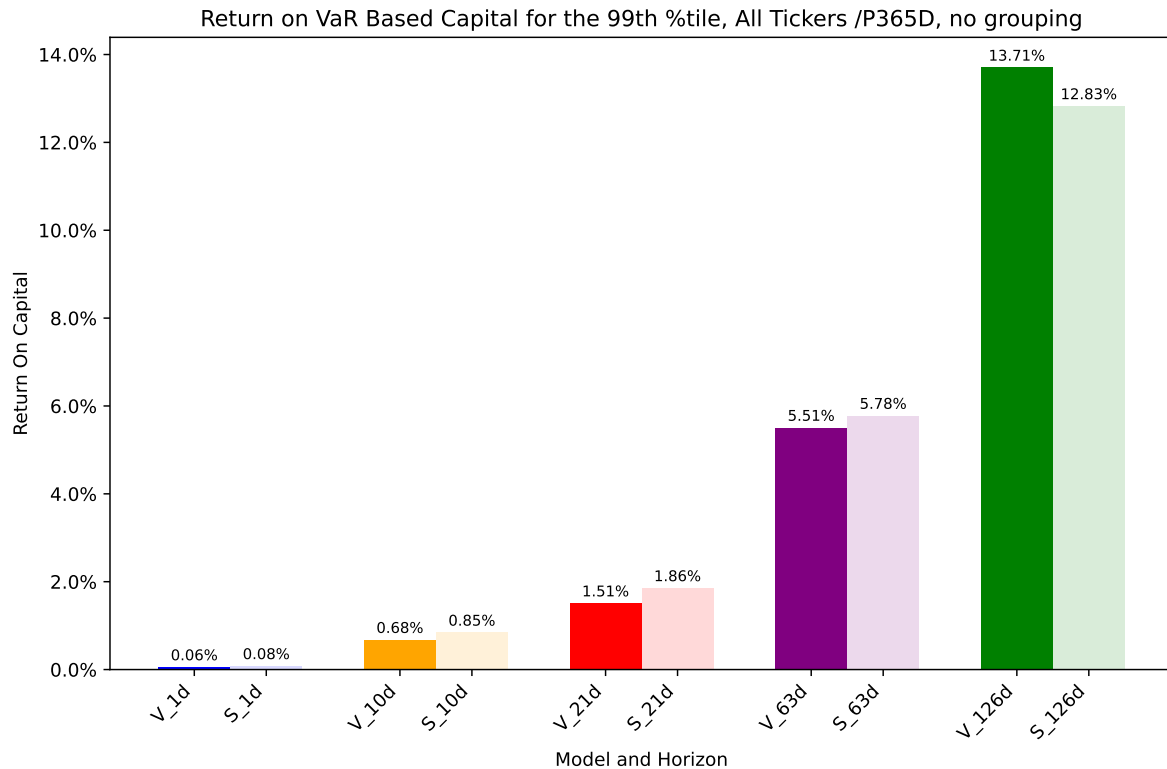
	1d	10d	21d	63d	126d	252d
intercept	-0.04%	-0.20%	-0.56%	-2.28%	-4.43%	-5.59%
intercept_p_value	0.00%	0.15%	0.01%	0.00%	0.00%	0.06%
slope	163.50%	145.72%	163.56%	179.21%	177.60%	168.33%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2026-06-29 through 2025-07-01





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

	1d	10d	21d	63d	126d
intercept	-0.01%	-0.11%	-0.20%	-0.42%	-1.66%
intercept_p_value	25.31%	0.00%	0.00%	0.00%	0.00%
slope	77.88%	92.94%	92.17%	102.59%	119.77%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

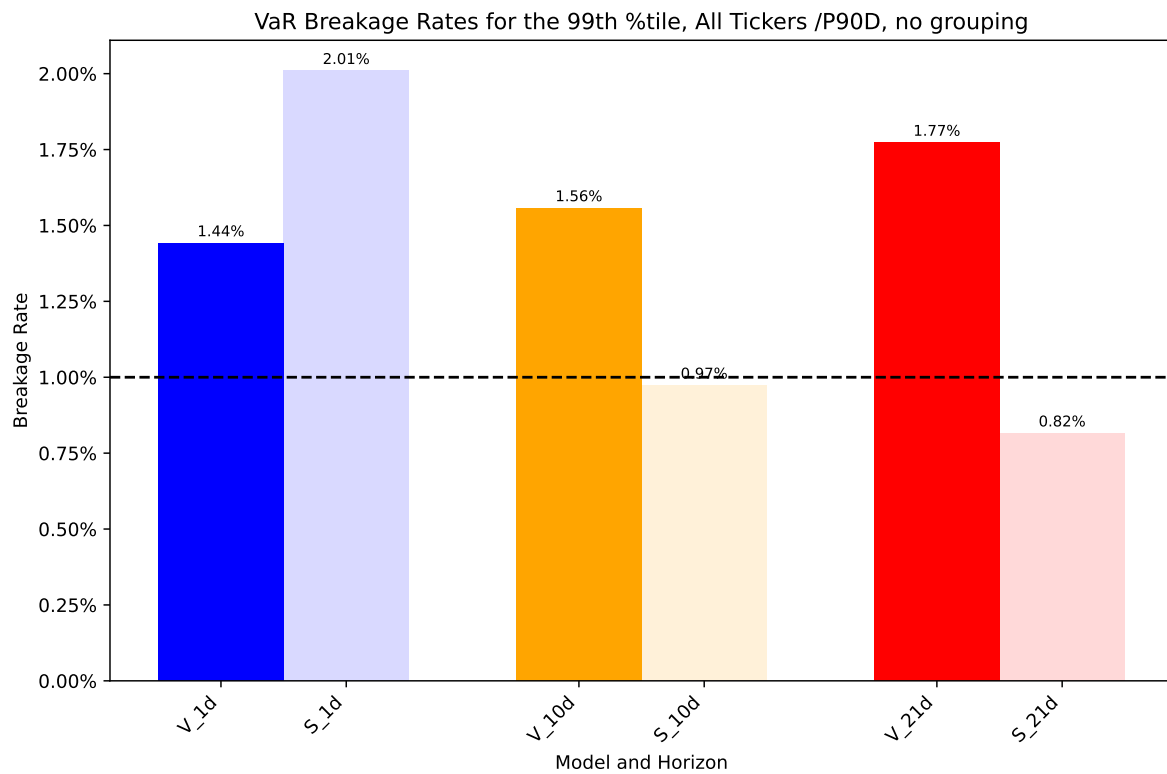
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P365D:

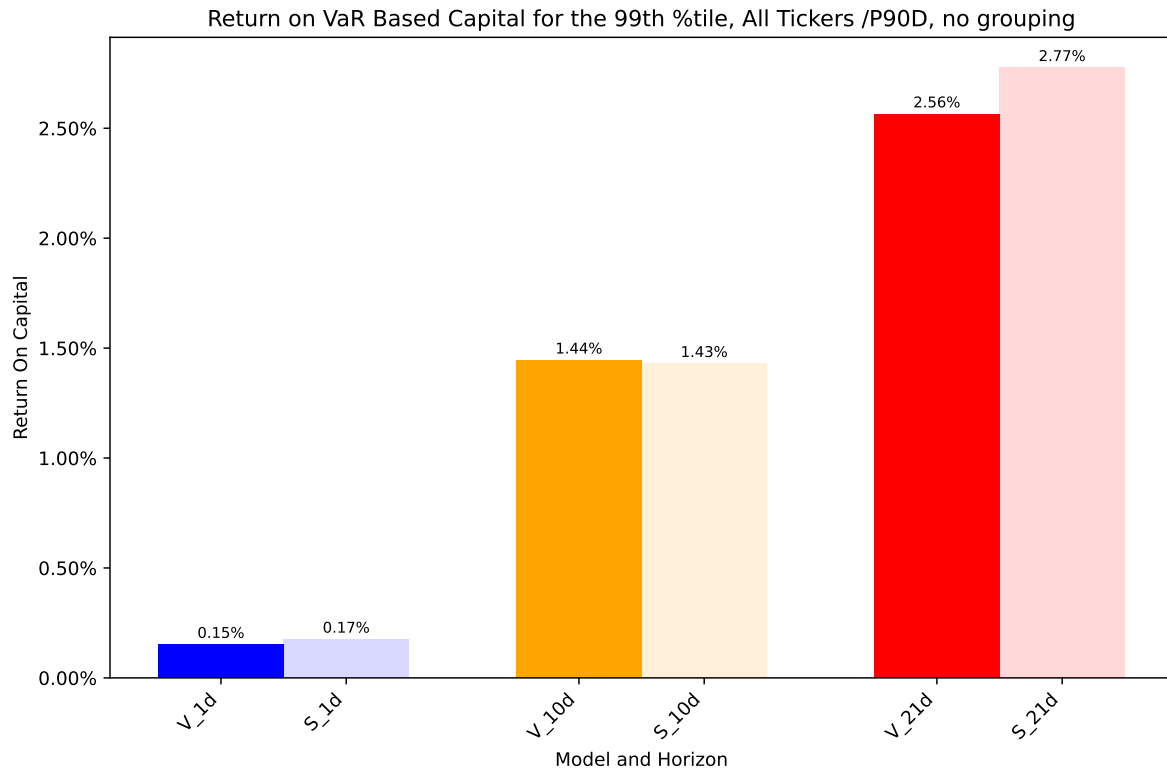
	1d	10d	21d	63d	126d
intercept	-0.02%	-0.07%	-0.19%	-0.70%	-1.92%
intercept_p_value	6.16%	38.58%	25.04%	16.77%	9.31%
slope	102.19%	109.09%	116.67%	120.29%	133.30%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%



Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2026-06-29 through 2026-04-02





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

	1d	10d	21d
intercept	0.02%	-0.01%	-0.25%
intercept_p_value	27.32%	82.90%	2.58%
slope	76.71%	102.00%	101.49%
slope_p_value	0.00%	0.00%	0.00%

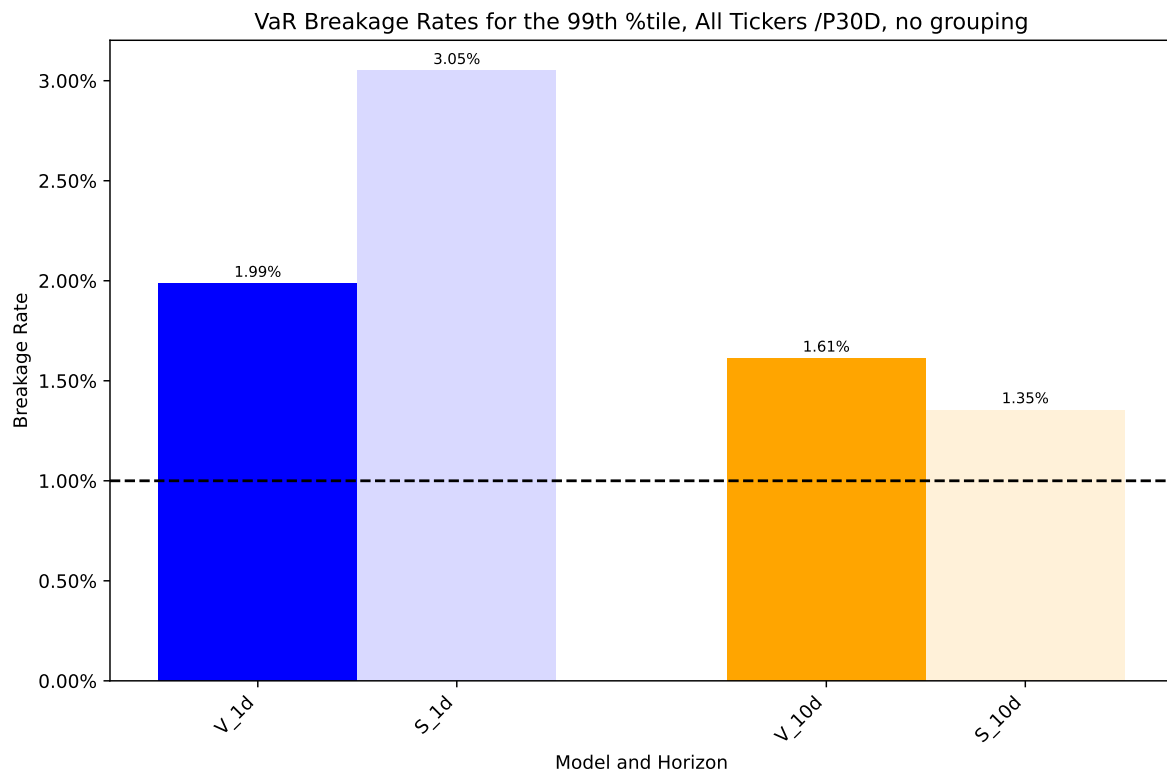
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P90D:

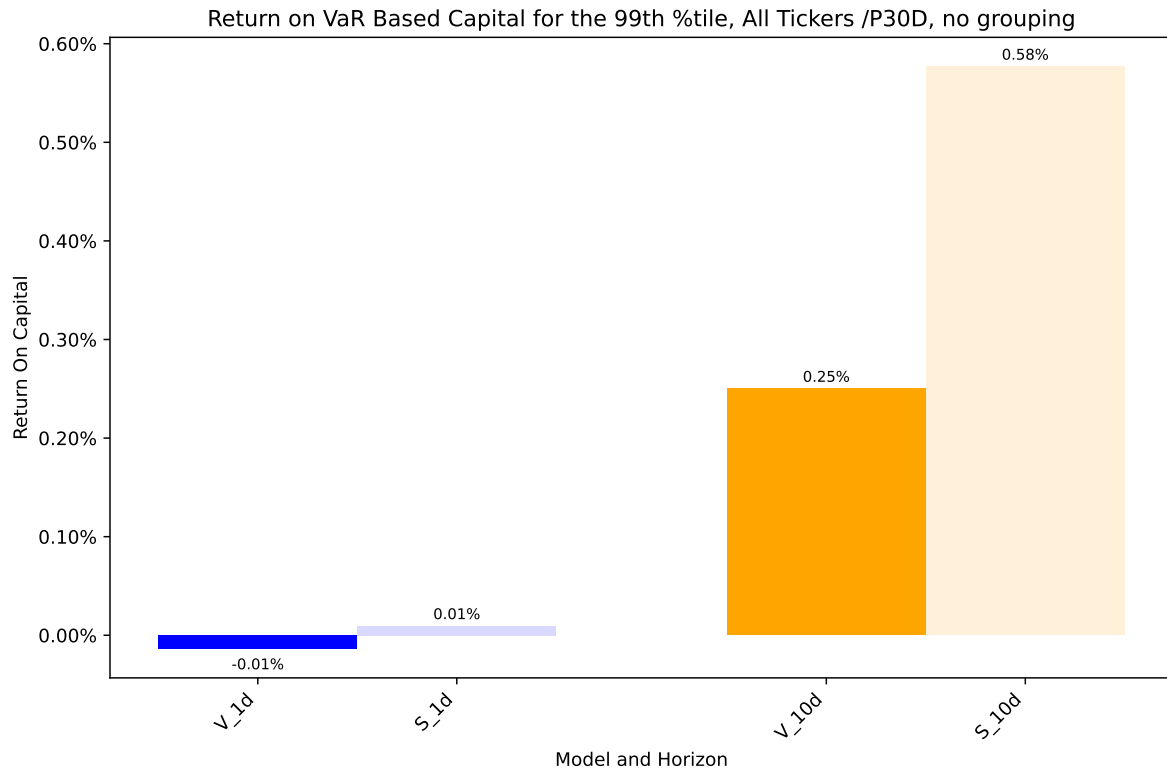
	1d	10d	21d
intercept	-0.00%	0.12%	0.06%
intercept_p_value	83.68%	57.32%	88.92%
slope	115.39%	121.69%	130.11%
slope_p_value	0.00%	0.00%	0.00%



Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2026-06-29 through 2026-06-01





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

	1d	10d
intercept	-0.02%	-0.33%
intercept_p_value	46.74%	0.23%
slope	72.85%	100.52%
slope_p_value	0.00%	0.00%

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

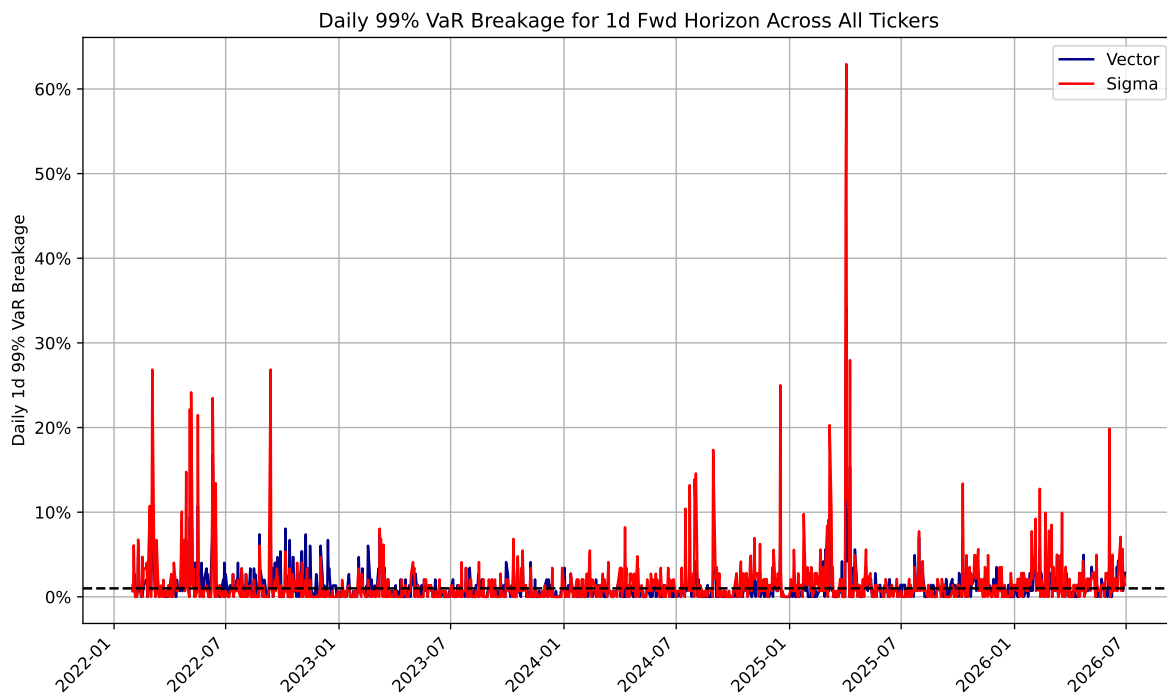
	1d	10d
intercept	-0.02%	-0.41%
intercept_p_value	67.33%	22.71%
slope	109.92%	124.09%
slope_p_value	0.00%	0.00%

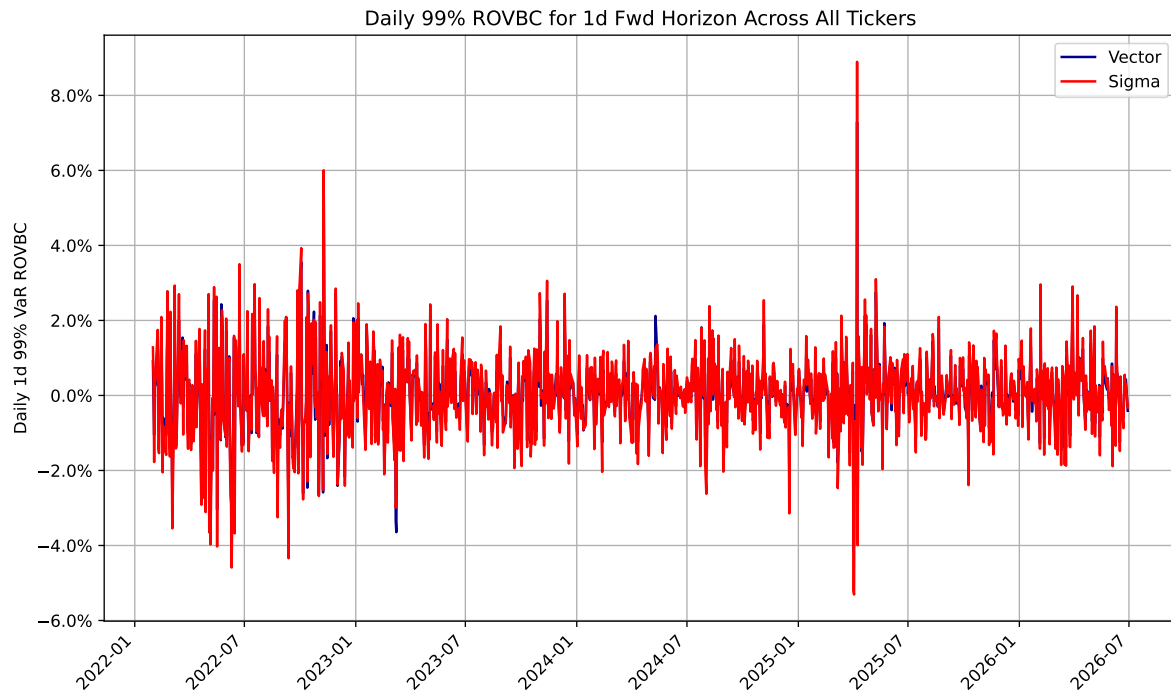


Daily Performance

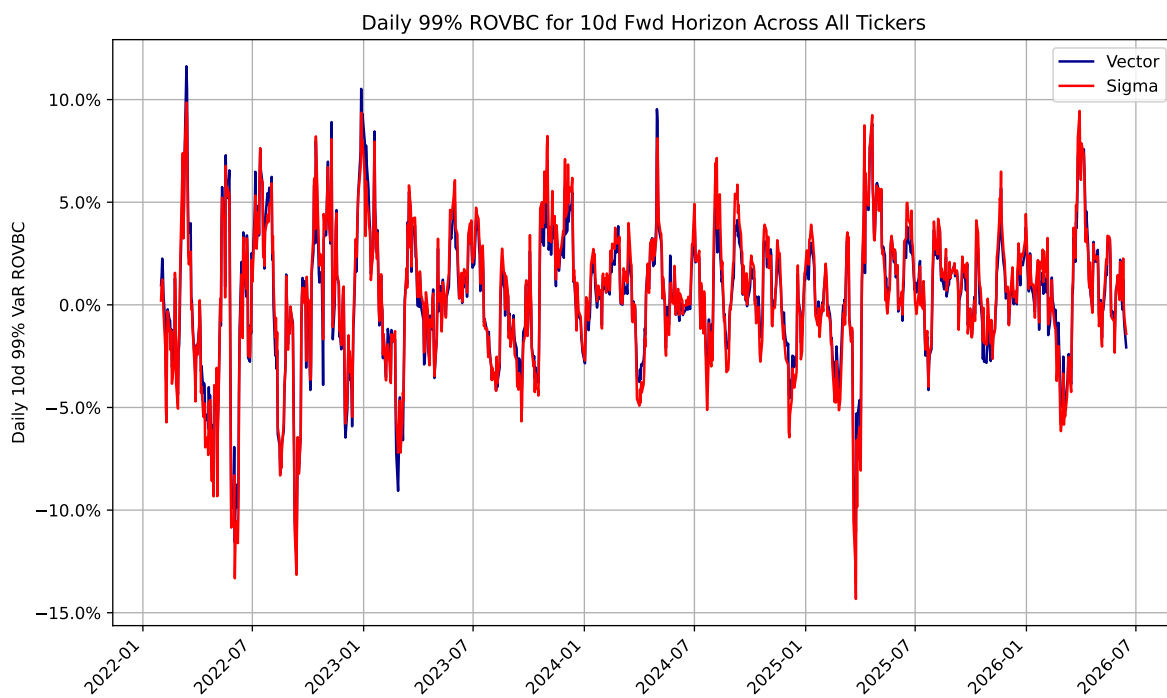
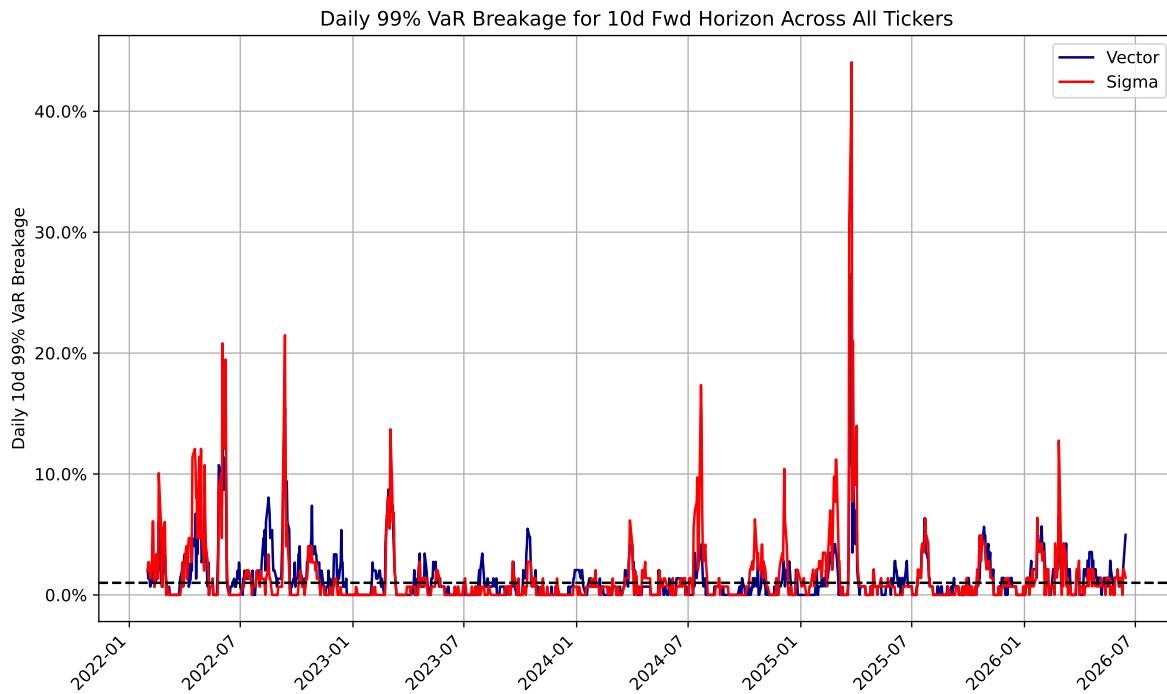
Here we look at the daily breakage and ROVBC statistics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROVBC outliers.

1d Horizon

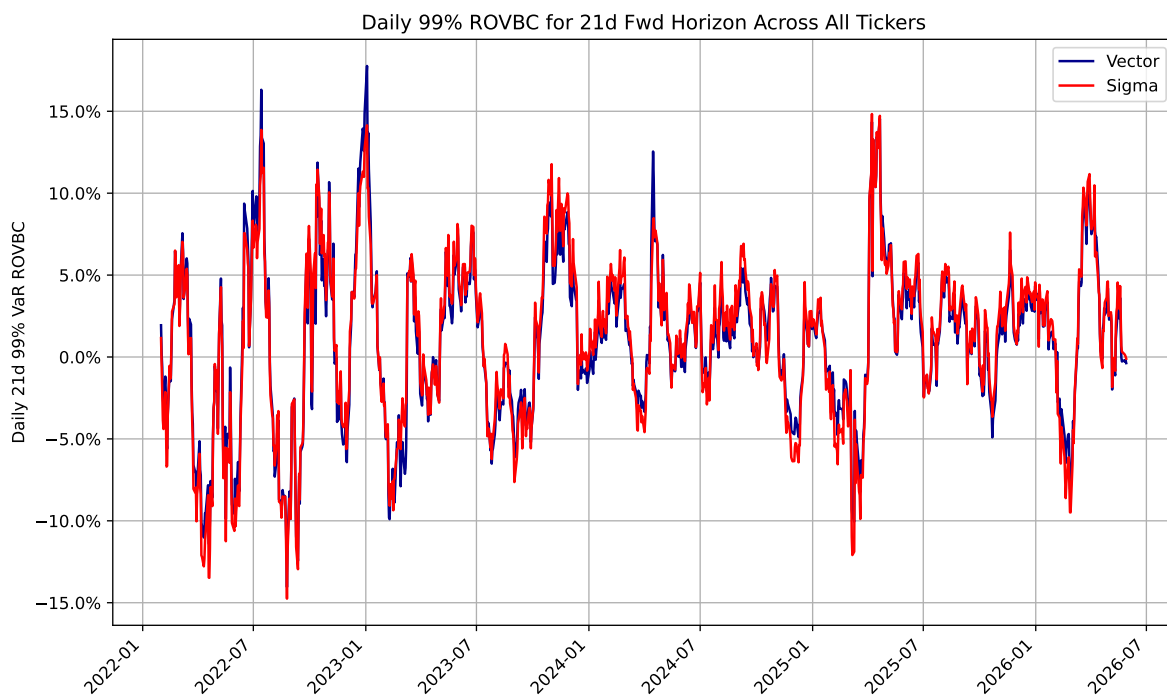
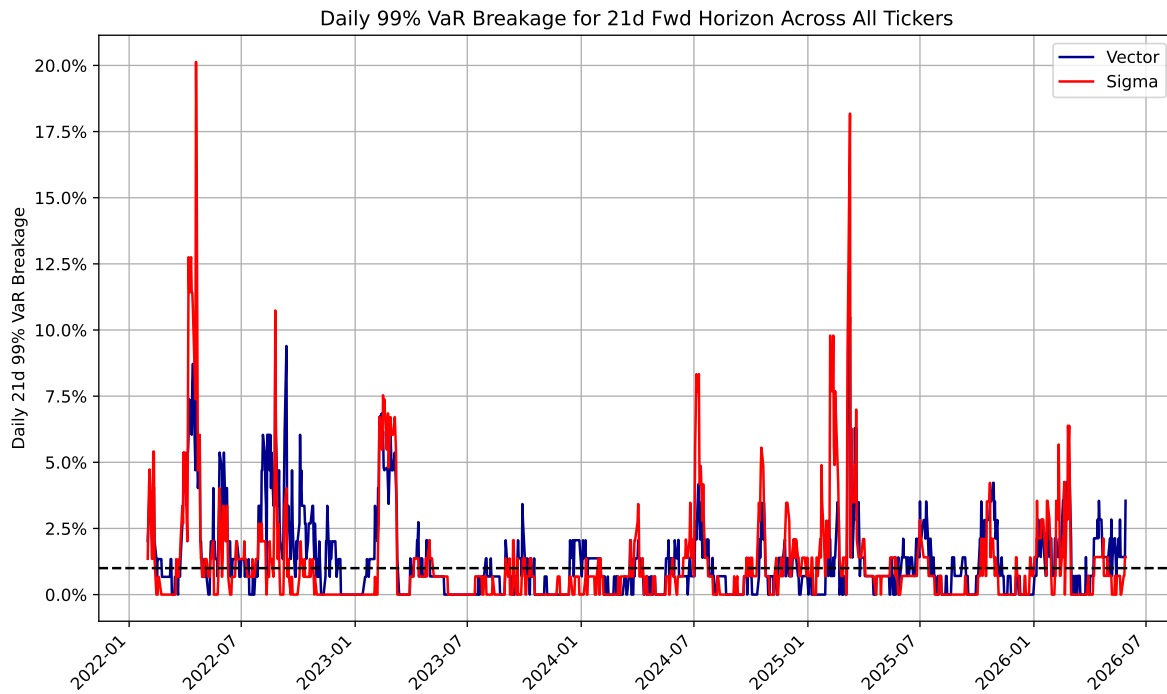




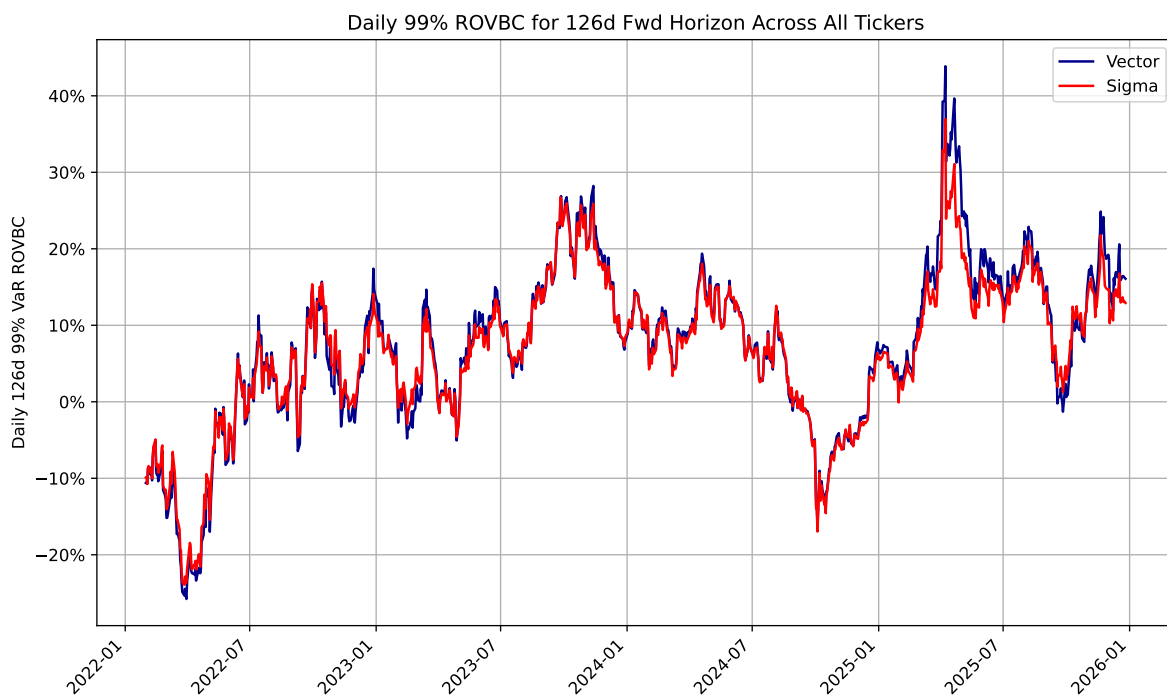
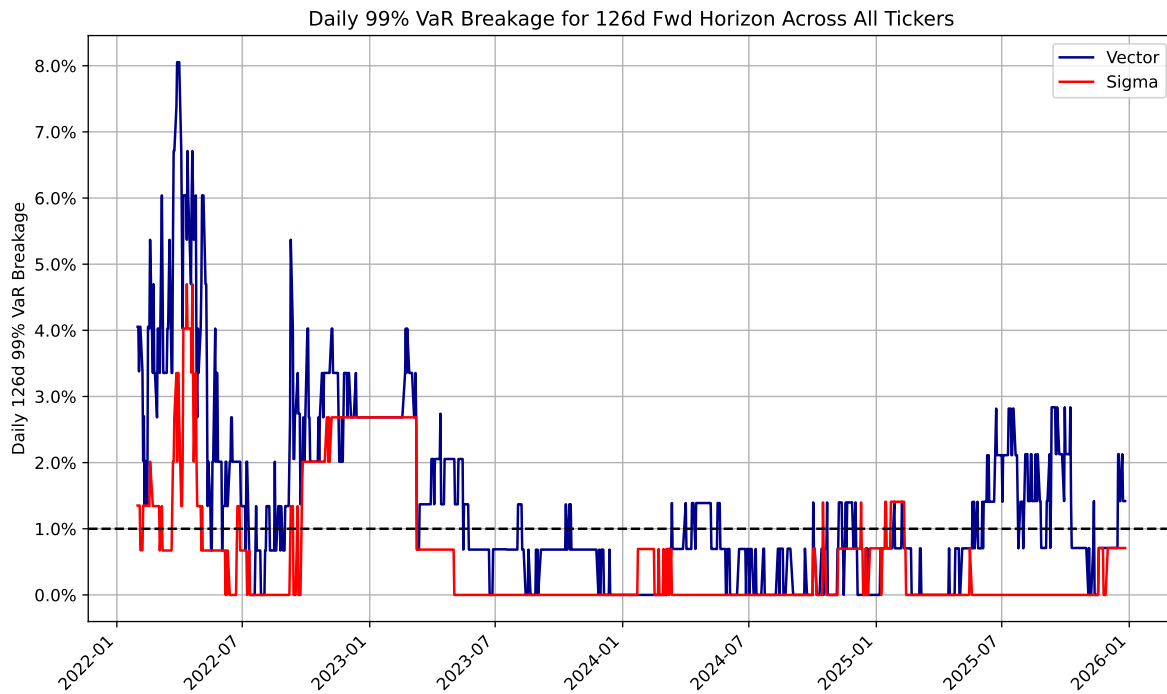
10d Horizon



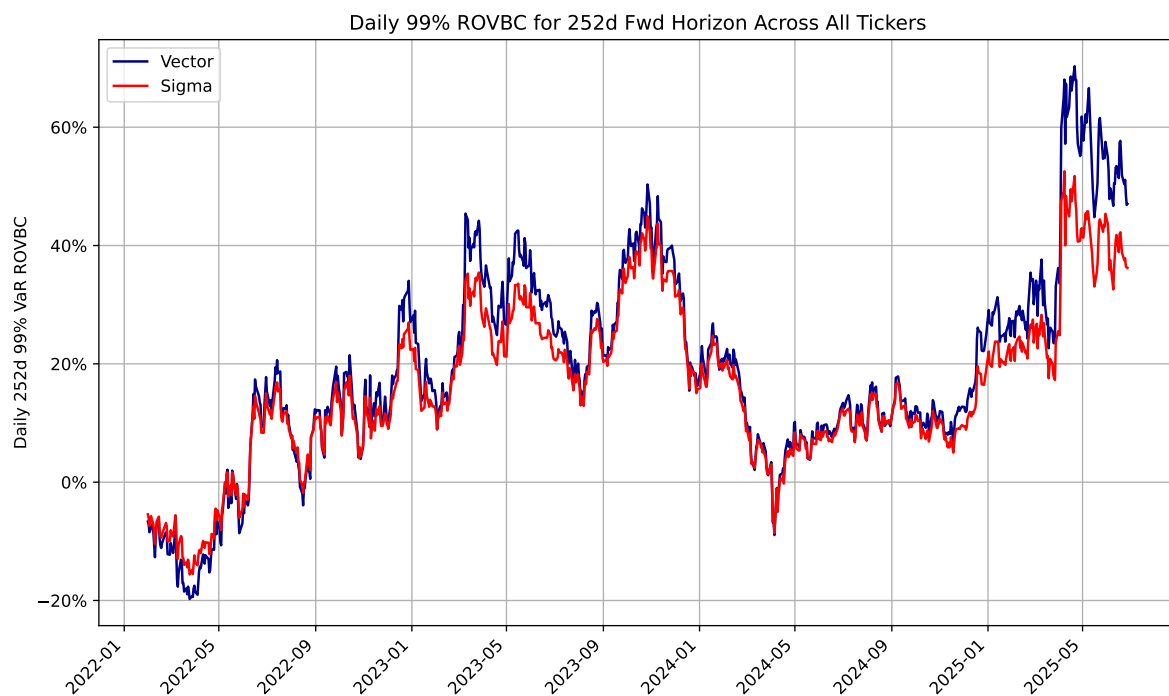
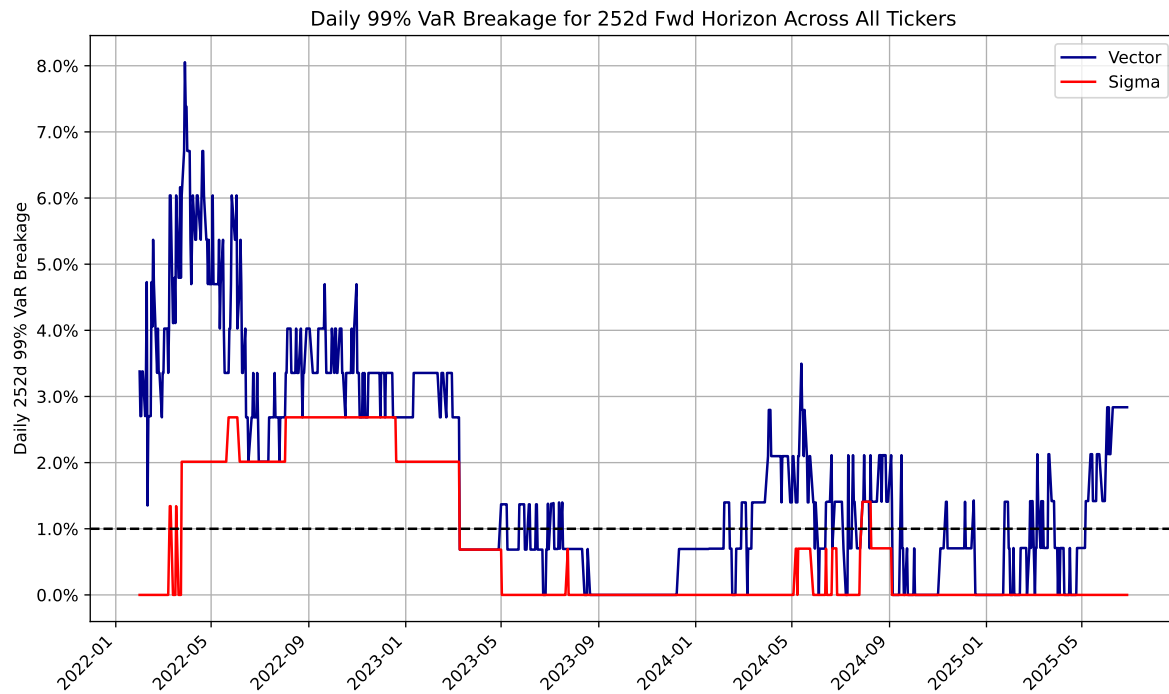
21d Horizon



63d Horizon



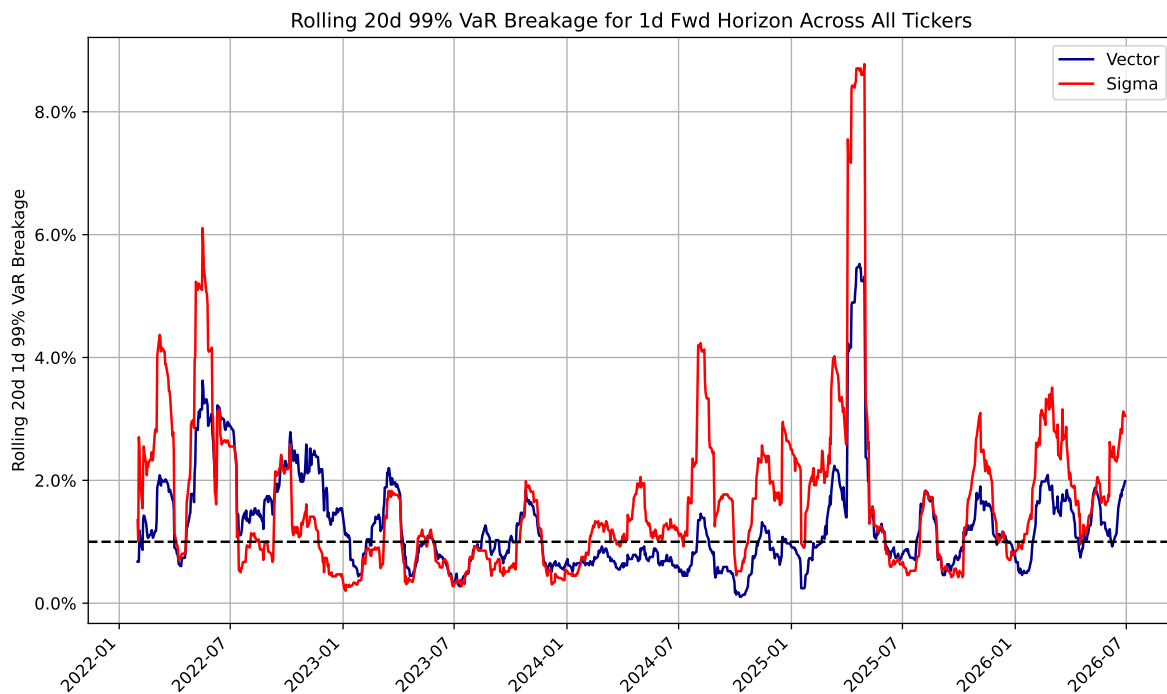
252d Horizon

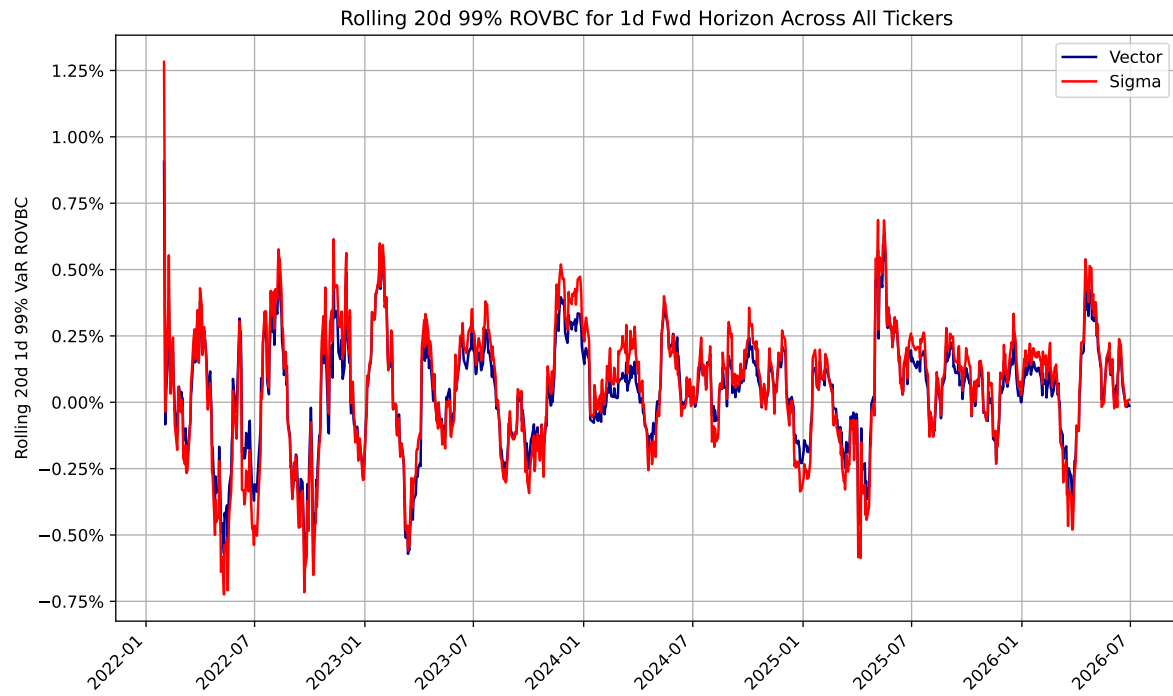


Rolling 20d Performance

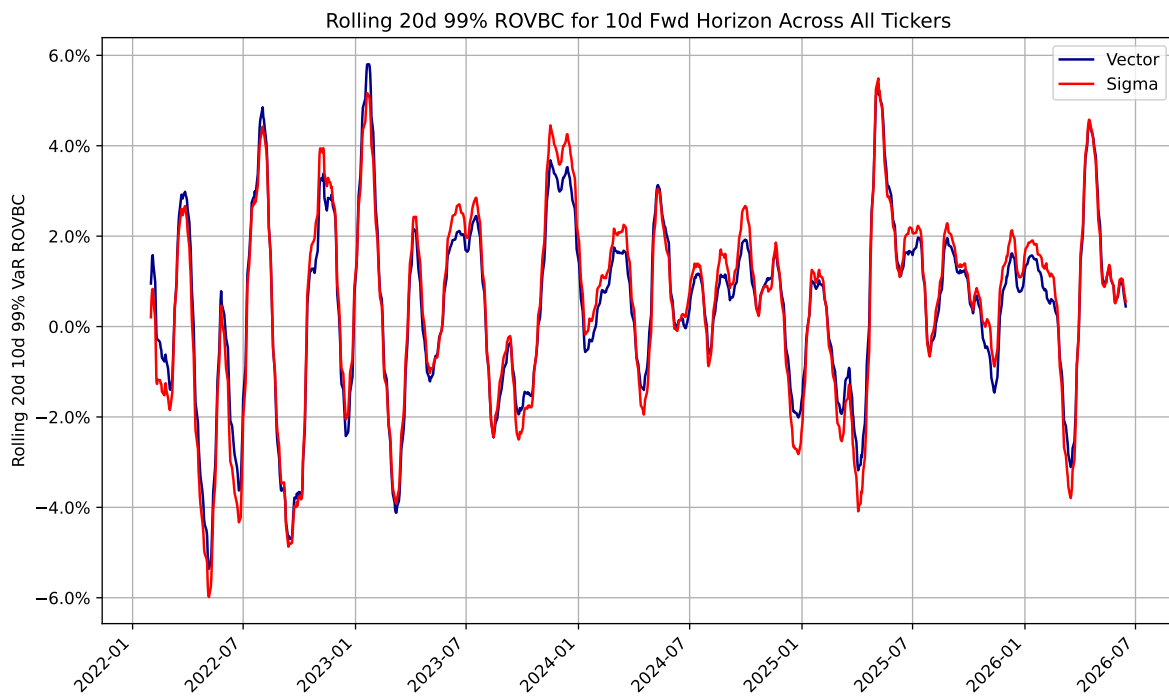
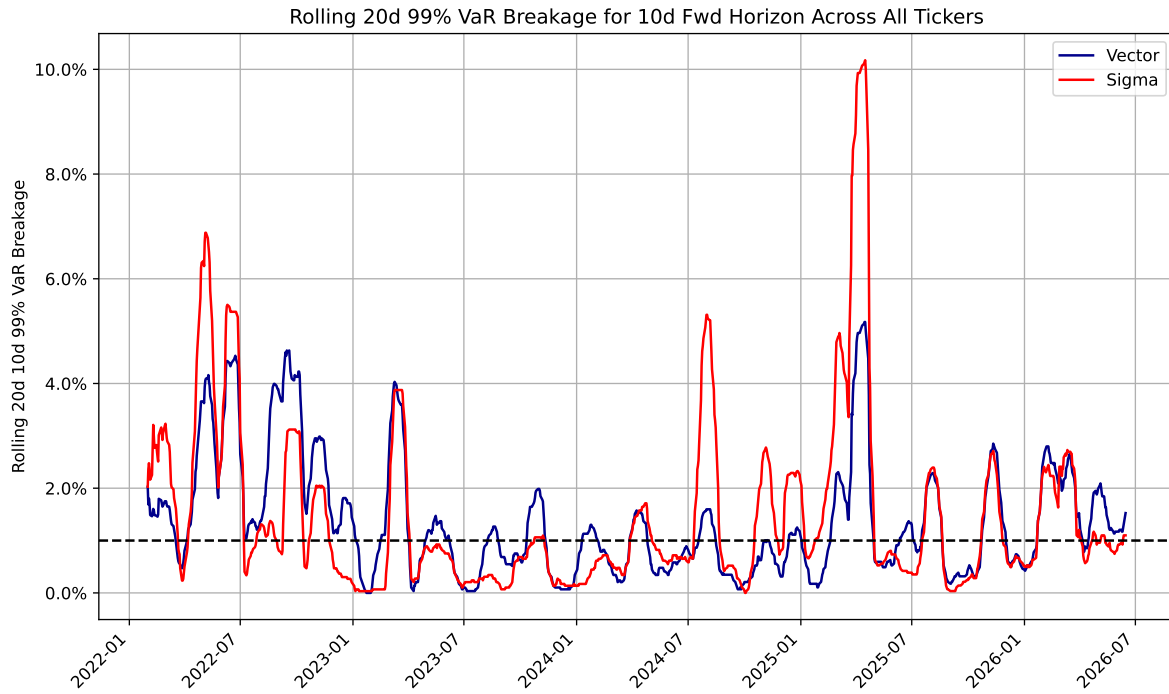
Here we look at 20 day rolling moving averages of the breakage and ROVBC statistics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

1d Horizon

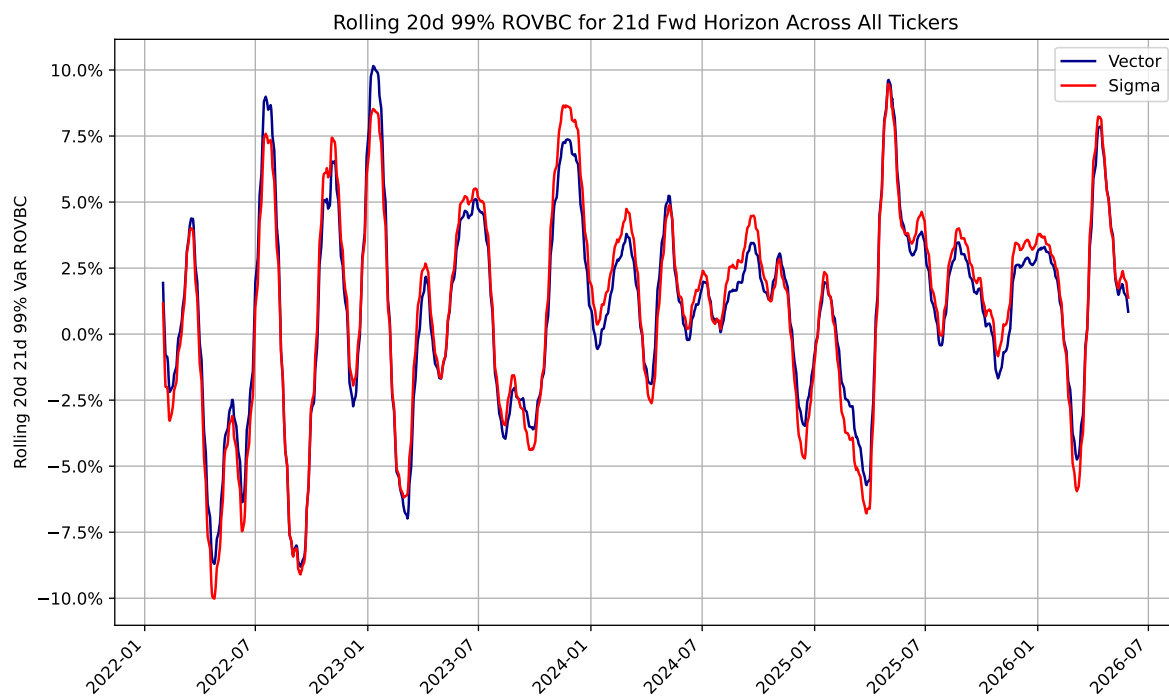
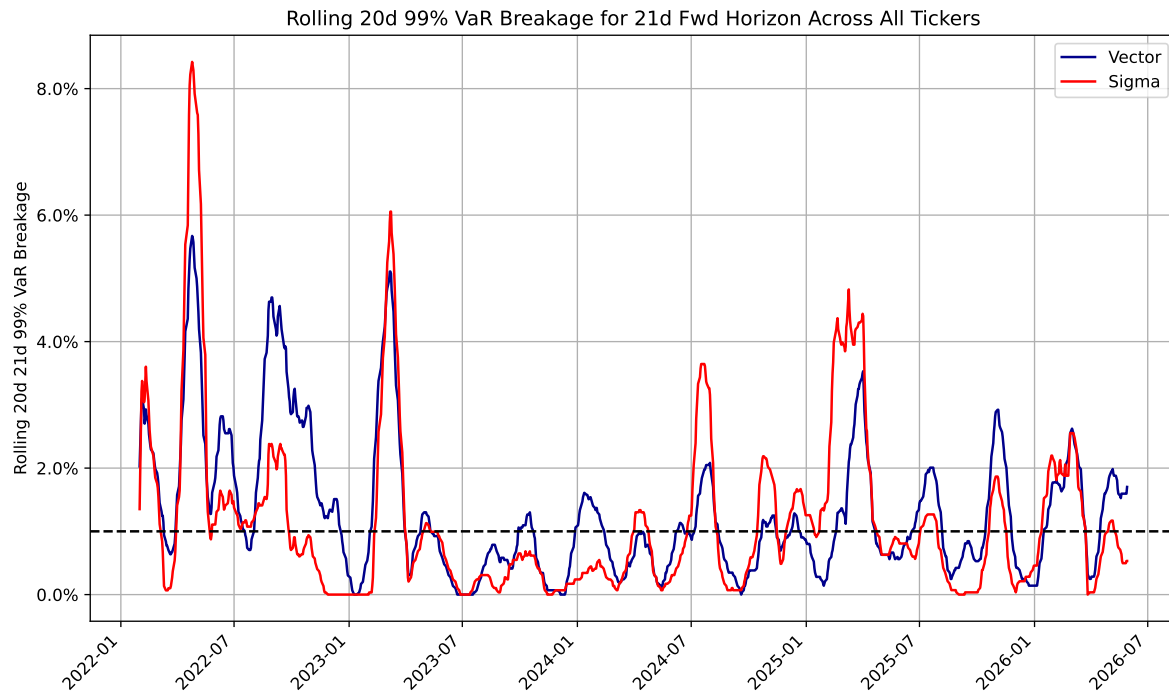




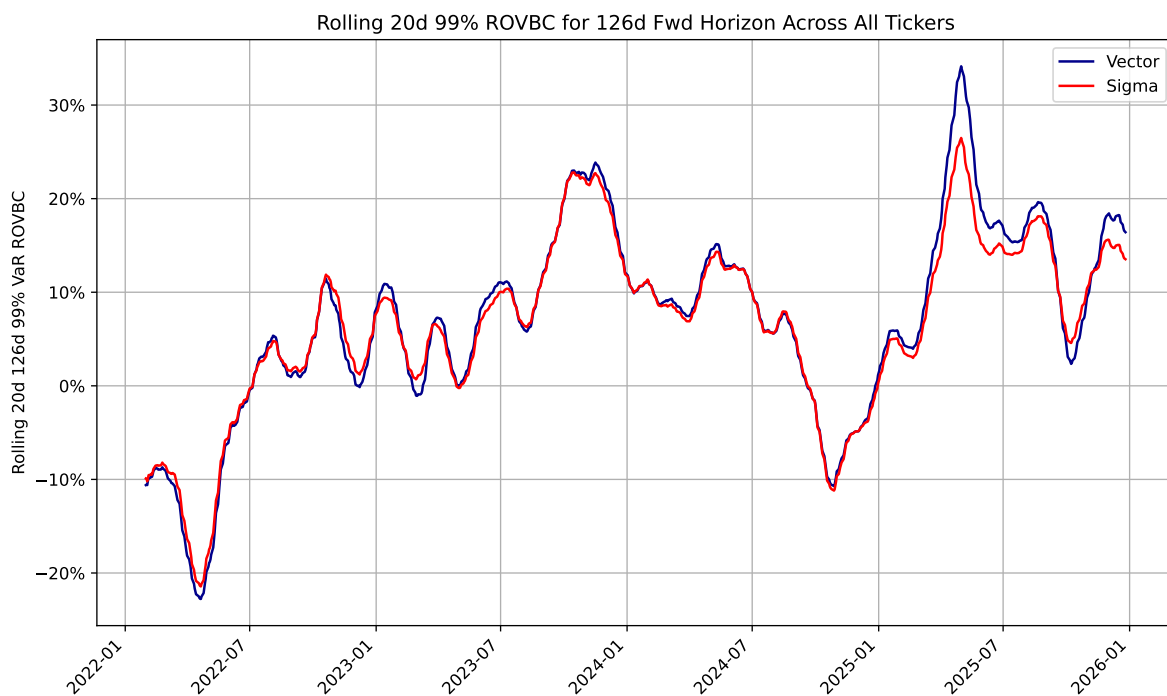
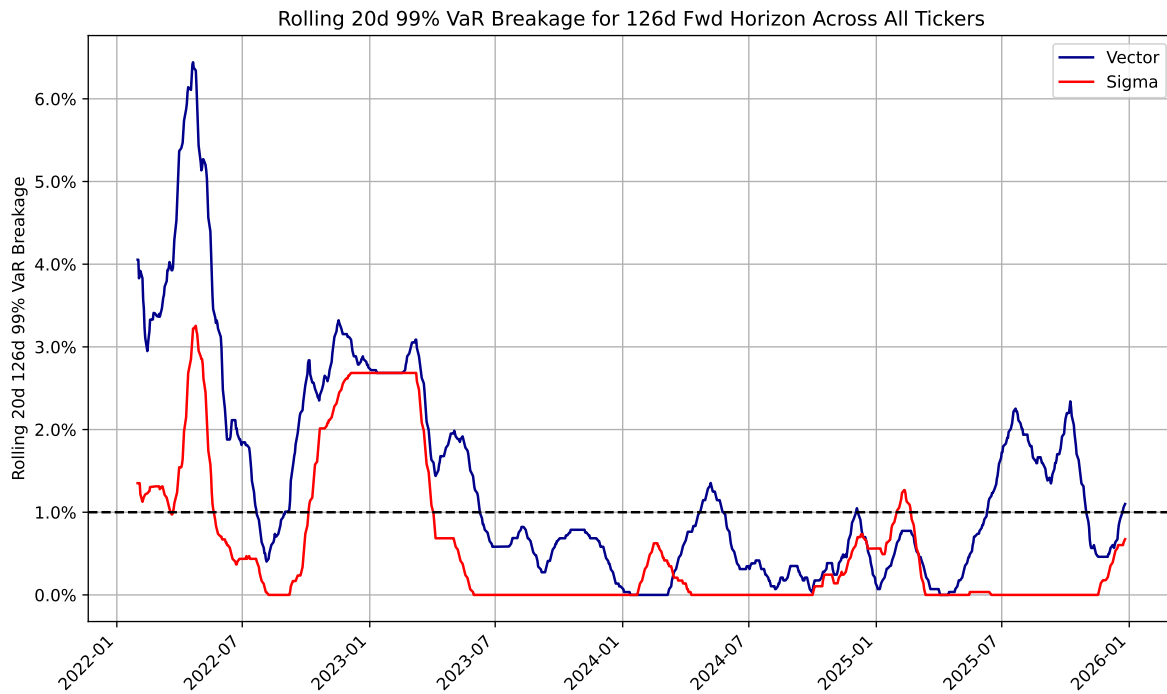
10d Horizon



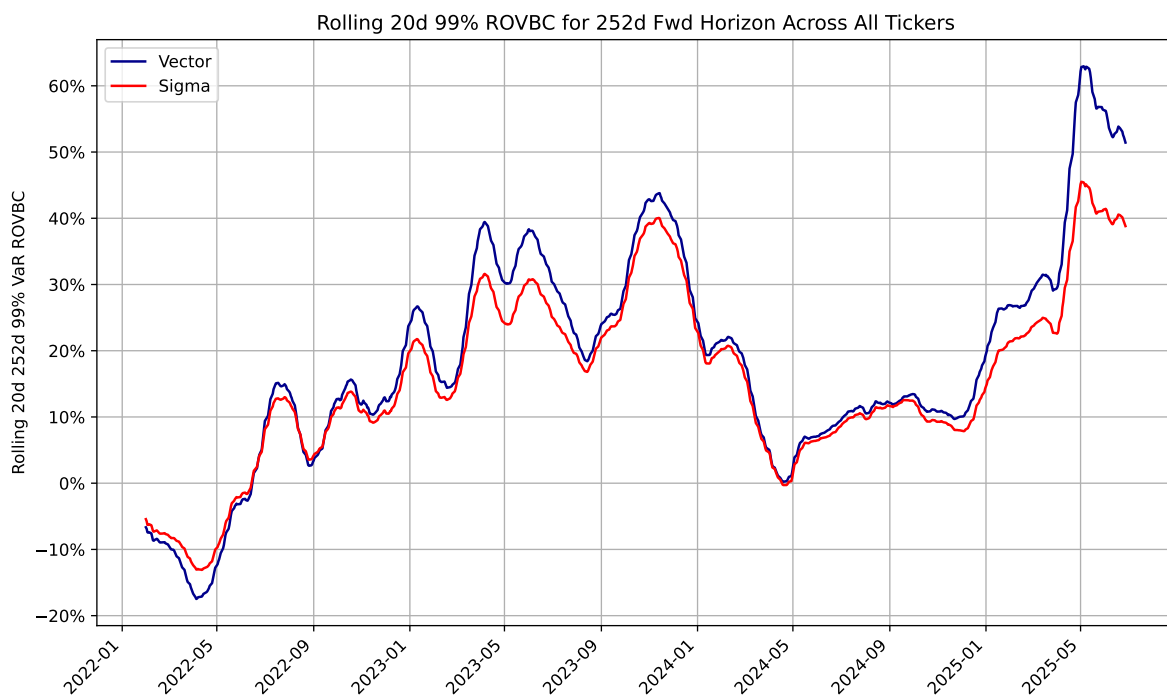
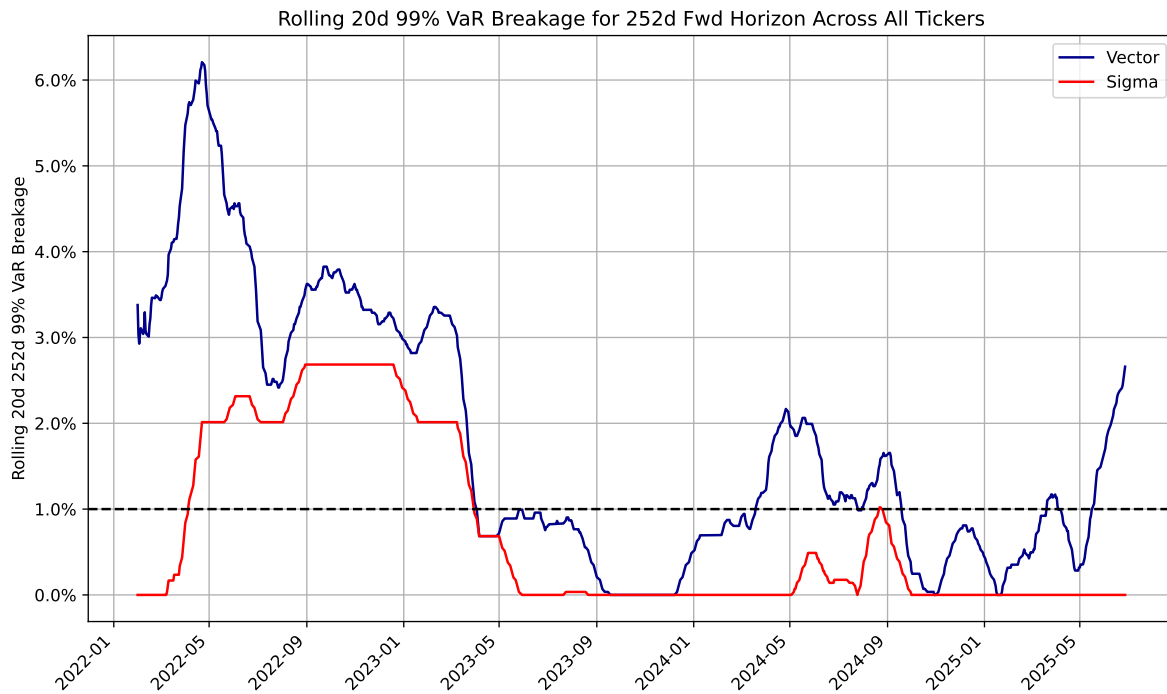
21d Horizon



63d Horizon



252d Horizon



Top 30 Tickers By VaR Breakage

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	SBNY	15.47%	SBNY	3.6%
1.0	SIVBQ	10.43%	QCOM	3.07%
1.0	TSLA	6.87%	SIVBQ	2.88%
1.0	ZTS	5.79%	VCSH	2.71%
1.0	FRCB	5.76%	INTU	2.71%
1.0	LQD	5.52%	HSBC	2.53%
1.0	B	4.7%	WDC	2.44%
1.0	CDNS	3.8%	IRM	2.44%
1.0	GME	3.8%	WFC	2.35%
1.0	AMC	3.62%	NVS	2.35%
1.0	MSTR	3.53%	NEM	2.35%
1.0	AAP	3.16%	PWR	2.35%
1.0	GNRC	3.16%	TRGP	2.35%
1.0	CHTR	3.07%	VZ	2.26%
1.0	JAZZ	2.98%	PEP	2.26%
1.0	CMCSA	2.8%	SPY	2.17%
1.0	ISRG	2.8%	PCG	2.17%
1.0	BUD	2.71%	MU	2.17%
1.0	FRA	2.53%	QQQ	2.17%
1.0	QCOM	2.53%	GLD	2.17%
1.0	VZ	2.44%	AMAT	2.17%
1.0	EXPE	2.44%	ABBV	2.17%
1.0	META	2.35%	ACGL	2.17%
1.0	SLV	2.17%	FRCB	2.16%
1.0	TDG	2.17%	GOOGL	2.08%
1.0	KALU	2.17%	GS	2.08%
1.0	LLY	2.17%	TXN	2.08%
1.0	KHC	2.08%	B	2.08%
1.0	PRGO	1.99%	UNH	2.08%
1.0	INTU	1.99%	VST	2.08%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	SBNY	17.65%	SIVBQ	5.51%
10.0	SIVBQ	12.87%	CHTR	4.19%
10.0	AMC	9.12%	CTLT	4.08%
10.0	CHTR	8.66%	MUB	4.01%
10.0	TSLA	7.57%	LW	3.65%
10.0	AAP	6.84%	FIS	3.65%
10.0	ZTS	6.38%	INTU	3.37%
10.0	LQD	5.2%	SBNY	3.31%
10.0	B	5.1%	FRCB	3.31%
10.0	MSTR	4.74%	PRGO	3.19%
10.0	CVS	4.19%	UNH	3.1%
10.0	GNRC	4.1%	PCG	3.01%
10.0	KALU	3.92%	AAP	3.01%
10.0	CTLT	3.67%	CMG	2.73%
10.0	PRGO	3.56%	BAC	2.64%
10.0	GSK	3.37%	GSK	2.64%
10.0	UNH	3.37%	BHC	2.55%
10.0	FRCB	3.31%	ABBV	2.55%
10.0	NFLX	3.1%	WDC	2.46%
10.0	BHC	3.1%	COST	2.37%
10.0	SNY	3.01%	FITB	2.28%
10.0	LW	3.01%	IEP	2.28%
10.0	ISRG	2.92%	FRA	2.28%
10.0	VCSH	2.83%	CVS	2.28%
10.0	BUD	2.73%	EMB	2.19%
10.0	GME	2.73%	TRGP	2.19%
10.0	AMZN	2.73%	AMZN	2.19%
10.0	CLF	2.55%	KALU	2.19%
10.0	BXP	2.46%	IRM	2.19%
10.0	EXPE	2.46%	WRK	2.17%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	SBNY	21.48%	SIVBQ	7.04%
21.0	SIVBQ	14.07%	FRCB	5.56%
21.0	CHTR	12.98%	SBNY	5.56%
21.0	AMC	8.66%	CHTR	5.06%
21.0	ZTS	7.37%	LW	4.51%
21.0	FRCB	6.67%	MUB	4.33%
21.0	VCSH	6.63%	GSK	4.14%
21.0	TSLA	6.54%	CTLT	3.59%
21.0	BUD	4.79%	INTU	3.22%
21.0	GNRC	4.51%	WDC	2.67%
21.0	AAP	4.51%	PCG	2.58%
21.0	LQD	4.51%	CNC	2.58%
21.0	UNH	4.33%	CMG	2.58%
21.0	PRGO	4.24%	ZTS	2.58%
21.0	B	3.96%	TFC	2.58%
21.0	GSK	3.68%	EMB	2.49%
21.0	CTLT	3.59%	AAP	2.49%
21.0	MSTR	3.5%	FITB	2.49%
21.0	BHC	3.41%	SNY	2.49%
21.0	BIIB	3.41%	UNH	2.39%
21.0	KALU	3.22%	PRGO	2.39%
21.0	CMA	3.15%	NEM	2.39%
21.0	NFLX	3.13%	IEP	2.39%
21.0	BXP	3.04%	BUD	2.3%
21.0	NEM	3.04%	FIS	2.3%
21.0	CNC	2.76%	INTC	2.21%
21.0	META	2.67%	BHC	2.12%
21.0	AMZN	2.58%	FRA	2.12%
21.0	KEY	2.58%	VFC	2.12%
21.0	CVS	2.49%	COST	2.12%



All TMD: 63d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
63.0	SBNY	48.89%	SIVBQ	20.37%
63.0	SIVBQ	25.19%	FRCB	20.0%
63.0	CHTR	20.79%	SBNY	20.0%
63.0	FRCB	20.74%	IEP	6.03%
63.0	AMC	9.87%	GSK	5.94%
63.0	MSTR	8.05%	BHC	5.84%
63.0	AAP	7.76%	CNC	5.08%
63.0	VCSH	6.99%	UNH	4.41%
63.0	NFLX	5.56%	CTLT	4.25%
63.0	ZION	5.44%	MUB	3.74%
63.0	LQD	5.36%	INTU	3.07%
63.0	CNC	5.17%	PCG	2.97%
63.0	BUD	4.98%	EMB	2.59%
63.0	GNRC	4.89%	HCA	2.49%
63.0	PRGO	4.6%	NEM	2.49%
63.0	UNH	4.41%	KEY	2.49%
63.0	GSK	4.21%	CMA	2.34%
63.0	B	4.12%	USB	2.3%
63.0	CMA	3.72%	X	2.17%
63.0	BHC	3.54%	VCSH	2.11%
63.0	META	3.45%	VZ	2.11%
63.0	BMY	3.16%	BUD	2.11%
63.0	ZTS	3.07%	ZION	2.04%
63.0	BXP	3.07%	ZTS	1.82%
63.0	TLT	2.97%	VFC	1.72%
63.0	KEY	2.87%	TFC	1.44%
63.0	CTLT	2.64%	AZN	1.44%
63.0	ON	2.59%	SNY	1.34%
63.0	EMB	2.21%	LQD	1.34%
63.0	INTU	2.2%	WDC	1.25%



All TMD: 126d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
126.0	SBNY	68.52%	SIVBQ	43.7%
126.0	SIVBQ	45.19%	FRCB	43.33%
126.0	FRCB	43.33%	SBNY	42.22%
126.0	CHTR	21.71%	IEP	12.64%
126.0	AAP	19.27%	GSK	9.58%
126.0	AMC	17.74%	UNH	4.38%
126.0	MSTR	9.28%	BHC	2.75%
126.0	BXP	8.15%	INTU	2.45%
126.0	GSK	7.54%	BALL	2.45%
126.0	CTLT	6.14%	LW	2.14%
126.0	VCSH	5.91%	CNC	1.94%
126.0	VFC	5.71%	EMB	1.84%
126.0	UNH	4.79%	NEM	1.83%
126.0	GNRC	4.08%	PCG	1.43%
126.0	PRGO	3.87%	VZ	1.22%
126.0	CMA	3.87%	VCSH	1.02%
126.0	TLT	3.57%	MUB	0.61%
126.0	BHC	3.57%	IRM	0.61%
126.0	OXY	2.96%	CHTR	0.51%
126.0	INTU	2.96%	CTLT	0.48%
126.0	ZION	2.59%	INTC	0.31%
126.0	B	2.24%	CPRT	0.1%
126.0	VNO	1.83%	HYG	0.1%
126.0	NFLX	1.73%	LEN	0.1%
126.0	NEM	1.63%	ON	0.0%
126.0	LQD	1.63%	ORCL	0.0%
126.0	ON	1.43%	NVS	0.0%
126.0	SNY	1.43%	ORLY	0.0%
126.0	ZTS	1.33%	NWL	0.0%
126.0	META	1.33%	OXY	0.0%



All TMD: 252d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
252.0	SBNY	94.81%	SIVBQ	90.37%
252.0	SIVBQ	90.37%	FRCB	90.0%
252.0	FRCB	89.63%	SBNY	68.89%
252.0	AMC	27.37%	IEP	22.92%
252.0	AAP	24.91%	CNC	3.16%
252.0	CHTR	20.23%	MRK	2.22%
252.0	BIIB	12.75%	UNH	1.05%
252.0	BXP	9.82%	LW	0.12%
252.0	VFC	9.12%	NWL	0.0%
252.0	UNH	8.77%	NEM	0.0%
252.0	CMA	6.91%	NFLX	0.0%
252.0	OXY	6.2%	NVDA	0.0%
252.0	MRK	5.96%	NVS	0.0%
252.0	VNO	4.8%	AA	0.0%
252.0	ZION	4.4%	ON	0.0%
252.0	ZTS	4.33%	MUB	0.0%
252.0	CTLT	3.85%	ORCL	0.0%
252.0	CNC	3.04%	ORLY	0.0%
252.0	INTU	2.69%	OXY	0.0%
252.0	BHC	2.57%	PCG	0.0%
252.0	KEY	2.22%	PEP	0.0%
252.0	GNRC	2.11%	NAVI	0.0%
252.0	VCSH	1.75%	MSTR	0.0%
252.0	BMY	1.75%	MU	0.0%
252.0	MSTR	1.64%	LUMN	0.0%
252.0	UAA	1.52%	KEY	0.0%
252.0	EMB	1.05%	KHC	0.0%
252.0	FIS	1.05%	LEN	0.0%
252.0	GSK	0.82%	LLY	0.0%
252.0	PRGO	0.82%	LNC	0.0%



P30D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	TMUS	20.0%	QCOM	20.0%
1.0	META	20.0%	AA	15.0%
1.0	NFLX	20.0%	WDC	15.0%
1.0	GBTC	20.0%	TXN	15.0%
1.0	VICI	15.0%	ON	15.0%
1.0	CDNS	15.0%	VZ	15.0%
1.0	COST	15.0%	T	15.0%
1.0	ON	15.0%	ORCL	10.0%
1.0	TDG	10.0%	CSCO	10.0%
1.0	FCX	10.0%	HON	10.0%
1.0	ORCL	10.0%	MU	10.0%
1.0	QCOM	10.0%	META	10.0%
1.0	NVDA	10.0%	INTC	10.0%
1.0	HD	10.0%	AAPL	10.0%
1.0	AVGO	10.0%	QQQ	10.0%
1.0	TFC	5.0%	VICI	10.0%
1.0	GLD	5.0%	GNRC	10.0%
1.0	GE	5.0%	ADBE	10.0%
1.0	EXPE	5.0%	CSTM	10.0%
1.0	MSTR	5.0%	AMAT	10.0%
1.0	CMCSA	5.0%	AVGO	10.0%
1.0	MSFT	5.0%	FCX	10.0%
1.0	AAP	5.0%	GOOGL	5.0%
1.0	LNC	5.0%	PWR	5.0%
1.0	ADBE	5.0%	RIO	5.0%
1.0	BHP	5.0%	SPY	5.0%
1.0	VZ	5.0%	GLD	5.0%
1.0	WDC	5.0%	FSUGY	5.0%
1.0	XOM	5.0%	LUMN	5.0%
1.0	THC	0.0%	GS	5.0%



P30D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	NFLX	90.91%	AA	63.64%
10.0	ORCL	36.36%	ADBE	54.55%
10.0	CLF	27.27%	ON	27.27%
10.0	AVGO	27.27%	CLF	27.27%
10.0	TMUS	18.18%	AVGO	9.09%
10.0	VZ	9.09%	MSFT	9.09%
10.0	GBTC	9.09%	LLY	0.0%
10.0	MSTR	9.09%	MUB	0.0%
10.0	NWL	0.0%	PEP	0.0%
10.0	NVS	0.0%	PCG	0.0%
10.0	ON	0.0%	OXY	0.0%
10.0	ORLY	0.0%	ORLY	0.0%
10.0	NVDA	0.0%	ORCL	0.0%
10.0	OXY	0.0%	KEY	0.0%
10.0	PCG	0.0%	KHC	0.0%
10.0	NEM	0.0%	NWL	0.0%
10.0	NAVI	0.0%	NVS	0.0%
10.0	MUB	0.0%	NVDA	0.0%
10.0	MU	0.0%	NFLX	0.0%
10.0	AA	0.0%	NEM	0.0%
10.0	MSI	0.0%	NAVI	0.0%
10.0	PHM	0.0%	MU	0.0%
10.0	LUMN	0.0%	LNC	0.0%
10.0	KEY	0.0%	MSTR	0.0%
10.0	KHC	0.0%	MSI	0.0%
10.0	LEN	0.0%	POST	0.0%
10.0	LLY	0.0%	MS	0.0%
10.0	LNC	0.0%	MRK	0.0%
10.0	LQD	0.0%	MOS	0.0%
10.0	LVS	0.0%	MNST	0.0%



P90D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	TMUS	11.67%	QCOM	13.33%
1.0	AVGO	11.67%	AA	8.33%
1.0	CDNS	10.0%	XOM	8.33%
1.0	NFLX	10.0%	VZ	6.67%
1.0	HD	8.33%	INTU	6.67%
1.0	META	8.33%	OXY	6.67%
1.0	GBTC	6.67%	ELAN	6.67%
1.0	XOM	6.67%	B	5.0%
1.0	TDG	6.67%	FCX	5.0%
1.0	CMCSA	6.67%	INTC	5.0%
1.0	NVDA	5.0%	META	5.0%
1.0	ON	5.0%	MSFT	5.0%
1.0	ORCL	5.0%	ON	5.0%
1.0	CAH	5.0%	CSTM	5.0%
1.0	QCOM	5.0%	ADBE	5.0%
1.0	COST	5.0%	T	5.0%
1.0	ZTS	5.0%	VCSH	5.0%
1.0	EXPE	5.0%	WDC	5.0%
1.0	VICI	5.0%	TXN	5.0%
1.0	GLD	3.33%	LUMN	3.33%
1.0	LNC	3.33%	FSUGY	3.33%
1.0	INTU	3.33%	GE	3.33%
1.0	PEP	3.33%	GNRC	3.33%
1.0	GE	3.33%	HCA	3.33%
1.0	FCX	3.33%	HON	3.33%
1.0	MRK	3.33%	WFC	3.33%
1.0	UNH	3.33%	PWR	3.33%
1.0	AMC	1.67%	PEP	3.33%
1.0	AMZN	1.67%	RIO	3.33%
1.0	BHC	1.67%	MU	3.33%



P90D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	NFLX	41.18%	ZTS	19.61%
10.0	AVGO	21.57%	CHTR	17.65%
10.0	ZTS	19.61%	ADBE	13.73%
10.0	AZO	19.61%	INTU	13.73%
10.0	CHTR	17.65%	AA	13.73%
10.0	CMCSA	15.69%	COST	7.84%
10.0	GSK	11.76%	FCX	5.88%
10.0	TMUS	9.8%	ON	5.88%
10.0	GE	7.84%	CLF	5.88%
10.0	ORCL	7.84%	GSK	5.88%
10.0	SNY	5.88%	MSFT	3.92%
10.0	AMC	5.88%	OXY	3.92%
10.0	CLF	5.88%	HCA	3.92%
10.0	PCG	5.88%	AZO	1.96%
10.0	HD	5.88%	HON	1.96%
10.0	MSTR	3.92%	POST	1.96%
10.0	GBTC	3.92%	T	1.96%
10.0	HCA	3.92%	CMCSA	1.96%
10.0	VZ	1.96%	AVGO	1.96%
10.0	NVDA	1.96%	ELAN	1.96%
10.0	AMZN	1.96%	MSI	1.96%
10.0	LQD	0.0%	MU	0.0%
10.0	OXY	0.0%	LW	0.0%
10.0	ORLY	0.0%	PRGO	0.0%
10.0	LUMN	0.0%	MRK	0.0%
10.0	LVS	0.0%	PHM	0.0%
10.0	LW	0.0%	PEP	0.0%
10.0	ON	0.0%	PCG	0.0%
10.0	META	0.0%	LUMN	0.0%
10.0	NWL	0.0%	ORLY	0.0%



P90D: 21d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	ZTS	52.5%	ZTS	52.5%
21.0	NFLX	45.0%	CHTR	30.0%
21.0	CHTR	37.5%	INTU	12.5%
21.0	AVGO	32.5%	AA	7.5%
21.0	AZO	32.5%	ON	5.0%
21.0	CMCSA	12.5%	AZO	2.5%
21.0	INTU	10.0%	T	2.5%
21.0	HD	10.0%	CMCSA	2.5%
21.0	GLD	7.5%	NEM	0.0%
21.0	MSTR	5.0%	NFLX	0.0%
21.0	GBTC	2.5%	NVDA	0.0%
21.0	TMUS	2.5%	NVS	0.0%
21.0	MNST	0.0%	NWL	0.0%
21.0	LUMN	0.0%	ACGL	0.0%
21.0	PCG	0.0%	MUB	0.0%
21.0	OXY	0.0%	ORCL	0.0%
21.0	ORLY	0.0%	ORLY	0.0%
21.0	ORCL	0.0%	OXY	0.0%
21.0	ON	0.0%	PCG	0.0%
21.0	NWL	0.0%	PEP	0.0%
21.0	NVS	0.0%	PHM	0.0%
21.0	LLY	0.0%	NAVI	0.0%
21.0	LNC	0.0%	MU	0.0%
21.0	NVDA	0.0%	PRGO	0.0%
21.0	LQD	0.0%	LW	0.0%
21.0	NEM	0.0%	LEN	0.0%
21.0	META	0.0%	LLY	0.0%
21.0	NAVI	0.0%	LNC	0.0%
21.0	MUB	0.0%	LQD	0.0%
21.0	MU	0.0%	LUMN	0.0%



P365D: 1d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	ZTS	7.6%	NEM	5.6%
1.0	LLY	6.4%	WDC	5.2%
1.0	CMCSA	6.4%	B	5.2%
1.0	CDNS	6.4%	INTU	4.8%
1.0	AMC	6.0%	QCOM	4.4%
1.0	NFLX	5.6%	VCSH	4.0%
1.0	GLD	5.2%	SLV	3.61%
1.0	GWV	5.2%	GLD	3.6%
1.0	TMUS	5.2%	AA	3.6%
1.0	TDG	5.2%	XOM	3.2%
1.0	KHC	4.0%	MU	3.2%
1.0	GNRC	3.6%	HSBC	3.2%
1.0	INTU	3.6%	ADBE	3.2%
1.0	UNH	3.6%	RIO	3.2%
1.0	META	3.6%	OXY	3.2%
1.0	QCOM	3.2%	ELAN	3.2%
1.0	HD	3.2%	PWR	2.8%
1.0	MSTR	2.8%	CSTM	2.8%
1.0	AVGO	2.8%	CLF	2.8%
1.0	TXN	2.4%	FCX	2.8%
1.0	CVS	2.4%	TFC	2.8%
1.0	PRGO	2.4%	BHP	2.8%
1.0	SNY	2.4%	GNRC	2.8%
1.0	ON	2.4%	AMAT	2.8%
1.0	TSLA	2.0%	NVS	2.8%
1.0	AMD	2.0%	LUMN	2.8%
1.0	VZ	2.0%	T	2.4%
1.0	SBUX	2.0%	POST	2.4%
1.0	GBTC	2.0%	FSUGY	2.4%
1.0	CAH	2.0%	ORLY	2.4%



P365D: 10d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	ZTS	12.03%	INTU	11.2%
10.0	NFLX	10.37%	ZTS	8.3%
10.0	PRGO	9.54%	CMG	8.3%
10.0	AMC	9.13%	PRGO	7.88%
10.0	CHTR	9.13%	CHTR	7.88%
10.0	TDG	8.71%	FIS	4.98%
10.0	MSTR	6.64%	LW	4.15%
10.0	UNH	6.64%	BUD	4.15%
10.0	BUD	6.22%	AZO	4.15%
10.0	INTU	6.22%	LUMN	4.15%
10.0	CMCSA	6.22%	SLV	3.75%
10.0	CLF	6.22%	MSI	3.73%
10.0	GE	6.22%	TDG	3.73%
10.0	AMZN	5.39%	NAVI	2.9%
10.0	AVGO	4.56%	MSFT	2.9%
10.0	GNRC	4.15%	IRM	2.9%
10.0	LW	4.15%	GLD	2.9%
10.0	MSI	4.15%	FCX	2.9%
10.0	AZO	4.15%	CLF	2.9%
10.0	BXP	3.73%	AA	2.9%
10.0	CZR	3.32%	ADBE	2.9%
10.0	TXN	3.32%	MNST	2.49%
10.0	GLD	2.9%	B	2.49%
10.0	LLY	2.9%	T	2.49%
10.0	GSK	2.9%	MOS	2.49%
10.0	QCOM	2.9%	META	2.07%
10.0	ORCL	2.49%	CYH	2.07%
10.0	CVS	2.49%	LNC	2.07%
10.0	GBTC	2.49%	AMZN	2.07%
10.0	TMUS	2.49%	GBTC	2.07%



P365D: 21d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	ZTS	21.74%	CHTR	13.04%
21.0	PRGO	16.09%	INTU	12.61%
21.0	CHTR	14.35%	ZTS	10.87%
21.0	CMCSA	10.0%	PRGO	9.13%
21.0	INTU	10.0%	CMG	6.09%
21.0	NFLX	9.57%	MSI	5.65%
21.0	BXP	9.13%	FIS	5.65%
21.0	BUD	9.13%	BUD	3.91%
21.0	MSI	8.7%	MSFT	3.91%
21.0	MSTR	7.83%	FITB	3.91%
21.0	AVGO	5.65%	TFC	3.48%
21.0	AZO	5.65%	NAVI	2.61%
21.0	UNH	5.22%	B	2.61%
21.0	IRM	5.22%	EXPE	2.61%
21.0	NAVI	3.48%	SLV	2.18%
21.0	GLD	3.48%	EMB	2.17%
21.0	CLF	3.04%	MNST	2.17%
21.0	LW	3.04%	MUB	2.17%
21.0	AMC	3.04%	GBTC	1.74%
21.0	QCOM	2.61%	AZO	1.74%
21.0	HD	2.17%	HD	1.74%
21.0	LQD	2.17%	IRM	1.74%
21.0	AMZN	2.17%	LW	1.74%
21.0	TMUS	1.74%	MOS	1.74%
21.0	GSK	1.74%	CCL	1.74%
21.0	CZR	1.74%	HSBC	1.3%
21.0	GBTC	1.74%	WFC	1.3%
21.0	TDG	1.74%	AA	1.3%
21.0	SLV	1.31%	GT	0.87%
21.0	META	1.3%	USB	0.87%



P365D: 63d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
63.0	PRGO	25.0%	INTU	16.49%
63.0	MSTR	24.47%	ZTS	10.11%
63.0	NFLX	22.34%	HCA	4.26%
63.0	CHTR	19.68%	SLV	1.6%
63.0	ZTS	15.43%	MSFT	1.6%
63.0	INTU	12.23%	FIS	1.06%
63.0	TDG	9.57%	T	1.06%
63.0	CMCSA	7.98%	PRGO	0.53%
63.0	BXP	5.32%	LEN	0.0%
63.0	META	4.79%	LLY	0.0%
63.0	TMUS	3.72%	ORLY	0.0%
63.0	MSI	2.66%	ORCL	0.0%
63.0	HD	2.66%	ON	0.0%
63.0	NWL	1.6%	NWL	0.0%
63.0	ISRG	1.6%	NVS	0.0%
63.0	AMC	1.6%	NVDA	0.0%
63.0	AZO	1.06%	KEY	0.0%
63.0	FIS	0.53%	NFLX	0.0%
63.0	CNC	0.53%	NEM	0.0%
63.0	BA	0.0%	NAVI	0.0%
63.0	ORLY	0.0%	MUB	0.0%
63.0	NVS	0.0%	MU	0.0%
63.0	ADBE	0.0%	MSTR	0.0%
63.0	ON	0.0%	MSI	0.0%
63.0	ORCL	0.0%	PCG	0.0%
63.0	OXY	0.0%	MS	0.0%
63.0	PCG	0.0%	MRK	0.0%
63.0	PEP	0.0%	MOS	0.0%
63.0	PHM	0.0%	MNST	0.0%
63.0	POST	0.0%	META	0.0%



P365D: 126d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
126.0	MSTR	56.8%	INTU	19.2%
126.0	PRGO	30.4%	AA	0.0%
126.0	INTU	23.2%	NVDA	0.0%
126.0	BXP	16.8%	MSTR	0.0%
126.0	AMC	16.8%	MU	0.0%
126.0	CHTR	16.0%	MUB	0.0%
126.0	NFLX	13.6%	NAVI	0.0%
126.0	AAP	10.4%	NEM	0.0%
126.0	ZTS	6.4%	NFLX	0.0%
126.0	ORCL	2.4%	NVS	0.0%
126.0	LEN	2.4%	MSFT	0.0%
126.0	CLF	0.8%	NWL	0.0%
126.0	TDG	0.8%	ON	0.0%
126.0	LQD	0.0%	ORCL	0.0%
126.0	NEM	0.0%	ORLY	0.0%
126.0	KHC	0.0%	OXY	0.0%
126.0	PCG	0.0%	PCG	0.0%
126.0	OXY	0.0%	MSI	0.0%
126.0	ORLY	0.0%	MS	0.0%
126.0	ON	0.0%	PHM	0.0%
126.0	NWL	0.0%	MRK	0.0%
126.0	NVS	0.0%	MOS	0.0%
126.0	NVDA	0.0%	MNST	0.0%
126.0	LLY	0.0%	META	0.0%
126.0	LNC	0.0%	LW	0.0%
126.0	LUMN	0.0%	LVS	0.0%
126.0	NAVI	0.0%	LUMN	0.0%
126.0	MUB	0.0%	LQD	0.0%
126.0	MU	0.0%	LNC	0.0%
126.0	PHM	0.0%	LLY	0.0%



Top 30 Tickers By ROVBC

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	GME	0.4%	MU	0.3%
1.0	MSTR	0.28%	WDC	0.28%
1.0	MU	0.26%	MSTR	0.25%
1.0	WDC	0.25%	NVDA	0.24%
1.0	LLY	0.17%	VST	0.23%
1.0	AMD	0.16%	AMD	0.21%
1.0	ORCL	0.15%	AVGO	0.21%
1.0	ON	0.15%	PWR	0.2%
1.0	AVGO	0.13%	AMAT	0.19%
1.0	NVDA	0.13%	GE	0.17%
1.0	AAPL	0.13%	X	0.17%
1.0	QCOM	0.13%	LLY	0.17%
1.0	META	0.13%	TEVA	0.16%
1.0	GW	0.12%	TRGP	0.16%
1.0	PWR	0.12%	INTC	0.16%
1.0	GOOGL	0.12%	GME	0.15%
1.0	VST	0.11%	CAH	0.15%
1.0	X	0.1%	THC	0.13%
1.0	GNRC	0.1%	GBTC	0.12%
1.0	UNH	0.1%	ETRN	0.12%
1.0	AMAT	0.1%	SLV	0.12%
1.0	GE	0.09%	PHM	0.11%
1.0	TEVA	0.09%	GS	0.11%
1.0	CDNS	0.09%	IRM	0.11%
1.0	NFLX	0.08%	GOOGL	0.11%
1.0	NWL	0.08%	CDNS	0.11%
1.0	INTC	0.08%	ON	0.11%
1.0	THC	0.08%	KALU	0.1%
1.0	CAH	0.08%	GW	0.1%
1.0	UAA	0.08%	HSBC	0.1%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	4.89%	MU	3.03%
10.0	GME	3.88%	WDC	2.95%
10.0	MU	3.68%	MSTR	2.64%
10.0	WDC	3.24%	NVDA	2.41%
10.0	INTC	1.94%	VST	2.27%
10.0	NVDA	1.76%	AVGO	2.07%
10.0	AMD	1.74%	PWR	1.99%
10.0	TEVA	1.51%	AMD	1.98%
10.0	VST	1.49%	AMAT	1.75%
10.0	PWR	1.48%	TEVA	1.67%
10.0	META	1.47%	LLY	1.64%
10.0	LLY	1.46%	GE	1.63%
10.0	ORCL	1.41%	INTC	1.59%
10.0	KALU	1.35%	X	1.58%
10.0	AMAT	1.35%	TRGP	1.54%
10.0	AVGO	1.33%	CAH	1.49%
10.0	GE	1.3%	ETRN	1.41%
10.0	ETRN	1.26%	GME	1.27%
10.0	CAH	1.11%	GBTC	1.18%
10.0	AAPL	1.09%	THC	1.17%
10.0	NFLX	1.08%	SLV	1.16%
10.0	CTLT	1.06%	IRM	1.16%
10.0	FCX	1.06%	GS	1.15%
10.0	GNRC	1.03%	META	1.11%
10.0	SLV	1.02%	CDNS	1.08%
10.0	GOOGL	1.02%	PHM	1.07%
10.0	X	0.9%	GWV	1.06%
10.0	XOM	0.9%	GOOGL	1.03%
10.0	GWV	0.88%	ON	1.02%
10.0	HLT	0.87%	KALU	1.02%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	MSTR	11.9%	MU	6.41%
21.0	WDC	7.08%	MSTR	6.34%
21.0	GME	6.87%	WDC	6.19%
21.0	MU	6.1%	NVDA	5.28%
21.0	INTC	4.67%	VST	4.79%
21.0	META	3.92%	AMD	4.46%
21.0	AMD	3.7%	AVGO	4.41%
21.0	NVDA	3.68%	PWR	4.24%
21.0	VST	3.57%	TEVA	3.64%
21.0	TEVA	3.53%	AMAT	3.53%
21.0	NFLX	3.18%	ETRN	3.5%
21.0	ORCL	3.13%	GE	3.44%
21.0	AVGO	3.09%	LLY	3.42%
21.0	PWR	3.01%	INTC	3.35%
21.0	KALU	2.93%	TRGP	3.22%
21.0	AMAT	2.9%	X	3.17%
21.0	GE	2.71%	CAH	3.08%
21.0	CTLT	2.71%	GBTC	2.67%
21.0	AA	2.59%	META	2.51%
21.0	ETRN	2.53%	SLV	2.5%
21.0	LLY	2.46%	GS	2.47%
21.0	GBTC	2.43%	ORCL	2.45%
21.0	CAH	2.23%	IRM	2.43%
21.0	TSLA	2.21%	THC	2.34%
21.0	GNRC	2.16%	TSLA	2.34%
21.0	XOM	2.14%	CDNS	2.3%
21.0	X	1.96%	ON	2.29%
21.0	GOOGL	1.94%	GOOGL	2.28%
21.0	SLV	1.93%	GWV	2.25%
21.0	THC	1.92%	NFLX	2.24%



All TMD: 63d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	WDC	25.27%	WDC	20.44%
63.0	MSTR	20.07%	MSTR	19.38%
63.0	MU	19.14%	MU	19.17%
63.0	META	16.93%	NVDA	17.64%
63.0	NVDA	16.26%	VST	15.68%
63.0	AVGO	14.81%	AVGO	13.85%
63.0	VST	13.81%	AMD	12.99%
63.0	INTC	12.67%	PWR	12.22%
63.0	AMD	10.69%	TEVA	10.47%
63.0	TEVA	10.45%	GE	10.37%
63.0	CTLT	10.43%	ETRN	10.28%
63.0	KALU	10.41%	AMAT	9.99%
63.0	PWR	10.26%	GBTC	9.87%
63.0	ETRN	10.07%	INTC	9.63%
63.0	ORCL	9.75%	LLY	9.44%
63.0	AMAT	9.48%	TRGP	9.22%
63.0	NFLX	9.26%	META	9.19%
63.0	LLY	8.95%	CAH	8.92%
63.0	GBTC	8.53%	NFLX	8.5%
63.0	GE	8.08%	SLV	8.34%
63.0	CAH	7.99%	THC	7.54%
63.0	SLV	7.97%	GOOGL	7.45%
63.0	GNRC	7.53%	ORCL	7.42%
63.0	GOOGL	7.03%	PHM	7.37%
63.0	GILD	6.87%	GS	7.31%
63.0	AMZN	6.8%	HSBC	6.69%
63.0	NEM	6.69%	IRM	6.49%
63.0	TSLA	6.68%	CCL	6.31%
63.0	GS	6.53%	GWV	6.2%
63.0	THC	6.42%	KALU	6.09%



All TMD: 126d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	WDC	72.86%	WDC	48.93%
126.0	MSTR	54.48%	MSTR	47.86%
126.0	MU	53.88%	MU	45.81%
126.0	META	45.86%	NVDA	43.47%
126.0	NVDA	45.62%	VST	34.86%
126.0	AVGO	40.9%	AVGO	29.62%
126.0	VST	33.32%	GBTC	27.8%
126.0	GBTC	28.91%	GE	25.13%
126.0	TEVA	27.1%	PWR	23.89%
126.0	AMAT	26.39%	AMD	23.15%
126.0	NFLX	25.95%	TEVA	23.04%
126.0	PWR	25.52%	META	22.47%
126.0	LLY	25.34%	AMAT	22.21%
126.0	AMD	25.22%	NFLX	21.24%
126.0	SLV	25.13%	SLV	20.58%
126.0	INTC	23.6%	TRGP	19.55%
126.0	KALU	21.65%	CAH	19.52%
126.0	GE	20.9%	THC	19.51%
126.0	GOOGL	20.41%	LLY	19.42%
126.0	CAH	19.97%	ETRN	18.49%
126.0	THC	18.65%	INTC	17.11%
126.0	NEM	18.42%	PHM	16.86%
126.0	ETRN	18.14%	GOOGL	16.65%
126.0	GILD	17.87%	GS	15.69%
126.0	B	17.42%	ORCL	15.49%
126.0	ORCL	17.39%	B	14.84%
126.0	AMZN	16.63%	HSBC	14.35%
126.0	TSLA	16.09%	CCL	13.81%
126.0	GS	14.38%	CSTM	13.68%
126.0	ISRG	14.27%	GLD	13.12%



All TMD: 252d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
252.0	WDC	192.62%	MSTR	163.63%
252.0	MSTR	191.06%	WDC	120.96%
252.0	VST	126.27%	NVDA	118.09%
252.0	MU	125.87%	VST	103.8%
252.0	NVDA	117.15%	MU	102.34%
252.0	META	102.57%	GBTC	89.68%
252.0	AVGO	100.36%	AVGO	76.56%
252.0	GBTC	89.97%	META	61.88%
252.0	NFLX	76.54%	GE	60.65%
252.0	GE	66.46%	NFLX	55.36%
252.0	SLV	58.72%	AMD	51.59%
252.0	THC	58.68%	PWR	50.29%
252.0	AMD	56.16%	THC	47.06%
252.0	B	54.16%	TEVA	44.02%
252.0	GOOGL	53.32%	AMAT	43.35%
252.0	AMZN	53.15%	LLY	42.51%
252.0	TEVA	52.92%	PHM	42.12%
252.0	NEM	52.55%	TRGP	41.19%
252.0	AMAT	51.75%	SLV	40.63%
252.0	ORCL	51.69%	CAH	39.21%
252.0	INTC	51.31%	CCL	37.04%
252.0	PWR	46.04%	GOOGL	36.85%
252.0	ISRG	45.63%	ORCL	36.36%
252.0	CAH	45.4%	ETRN	35.78%
252.0	KALU	42.49%	GS	34.45%
252.0	LLY	40.92%	INTC	34.0%
252.0	PHM	39.53%	B	31.66%
252.0	TDG	38.18%	HSBC	31.58%
252.0	GILD	36.77%	JPM	30.72%
252.0	TRGP	36.52%	GLD	29.23%



P30D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	NWL	3.99%	NWL	3.2%
1.0	WDC	1.84%	AMAT	2.49%
1.0	AMAT	1.01%	INTC	1.4%
1.0	MRK	1.0%	WDC	1.04%
1.0	AMC	0.9%	CYH	1.0%
1.0	CAH	0.87%	CAH	1.0%
1.0	INTC	0.81%	ABBV	0.86%
1.0	PHM	0.78%	MU	0.85%
1.0	BALL	0.73%	VNO	0.84%
1.0	ABBV	0.72%	PHM	0.8%
1.0	GE	0.71%	AMD	0.79%
1.0	CYH	0.67%	FITB	0.76%
1.0	UNH	0.67%	BALL	0.76%
1.0	LLY	0.64%	UAA	0.75%
1.0	VNO	0.57%	GE	0.73%
1.0	FITB	0.55%	CVS	0.68%
1.0	BXP	0.54%	HD	0.65%
1.0	UAA	0.49%	ZION	0.63%
1.0	AMGN	0.47%	USB	0.62%
1.0	TDG	0.47%	EXPE	0.62%
1.0	KHC	0.45%	BIIB	0.61%
1.0	ACGL	0.43%	BXP	0.59%
1.0	CVS	0.43%	CMG	0.57%
1.0	MU	0.42%	MRK	0.57%
1.0	AMD	0.41%	GT	0.56%
1.0	KALU	0.39%	DHI	0.55%
1.0	KEY	0.35%	LLY	0.54%
1.0	ORLY	0.35%	GNRC	0.52%
1.0	BBY	0.34%	BAC	0.51%
1.0	GSK	0.34%	JPM	0.51%



P30D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	NWL	36.79%	NWL	31.95%
10.0	AMC	25.1%	AMAT	23.39%
10.0	WDC	25.08%	WDC	22.46%
10.0	AMAT	22.38%	INTC	16.87%
10.0	GE	19.9%	MU	13.37%
10.0	INTC	13.11%	AMC	13.28%
10.0	EXPE	11.03%	GE	10.59%
10.0	PHM	10.14%	CAH	10.43%
10.0	BALL	10.01%	BALL	10.07%
10.0	CYH	9.89%	EXPE	9.74%
10.0	CAH	9.46%	CYH	9.54%
10.0	MU	8.99%	THC	8.76%
10.0	THC	6.48%	PHM	8.65%
10.0	UNH	5.87%	VST	8.15%
10.0	CVS	5.68%	DHI	7.55%
10.0	CCL	5.67%	CMG	7.24%
10.0	USB	4.88%	GT	6.71%
10.0	AMD	4.79%	USB	6.61%
10.0	BXP	4.5%	HD	6.58%
10.0	LNC	4.27%	JPM	6.53%
10.0	NAVI	4.0%	AMD	6.49%
10.0	HD	3.93%	CCL	6.43%
10.0	KEY	3.88%	ZION	6.08%
10.0	LW	3.82%	TDG	6.06%
10.0	GNRC	3.74%	CVS	6.0%
10.0	UAA	3.61%	BAC	6.0%
10.0	BIIB	3.57%	UAA	5.68%
10.0	ABBV	3.55%	ABBV	5.65%
10.0	VST	3.45%	GNRC	5.59%
10.0	ZION	3.24%	FITB	5.33%



P90D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	WDC	2.16%	MU	2.13%
1.0	AMC	1.85%	INTC	1.89%
1.0	AMD	1.69%	AMD	1.78%
1.0	INTC	1.5%	WDC	1.42%
1.0	UNH	1.46%	AMAT	1.32%
1.0	MU	1.18%	AMC	1.16%
1.0	CNC	1.07%	NWL	1.08%
1.0	QCOM	1.0%	CNC	1.05%
1.0	LLY	0.97%	ON	0.87%
1.0	NWL	0.96%	TXN	0.78%
1.0	ON	0.77%	QCOM	0.77%
1.0	AAP	0.67%	GNRC	0.76%
1.0	KALU	0.67%	VNO	0.75%
1.0	AMAT	0.66%	KALU	0.7%
1.0	CDNS	0.58%	CSCO	0.7%
1.0	CVS	0.52%	UNH	0.7%
1.0	TXN	0.51%	CVS	0.59%
1.0	JAZZ	0.51%	CDNS	0.54%
1.0	LUMN	0.49%	GE	0.5%
1.0	BXP	0.48%	MNST	0.5%
1.0	VNO	0.42%	PWR	0.47%
1.0	BBY	0.39%	JAZZ	0.44%
1.0	CYH	0.36%	LLY	0.44%
1.0	MRK	0.33%	BXP	0.43%
1.0	GNRC	0.32%	MS	0.4%
1.0	GE	0.32%	QQQ	0.4%
1.0	ORCL	0.3%	AAP	0.37%
1.0	TSLA	0.27%	AVGO	0.37%
1.0	BUD	0.27%	IRM	0.36%
1.0	CSCO	0.26%	BIIB	0.35%



P90D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	INTC	24.89%	MU	22.38%
10.0	MU	22.48%	INTC	18.51%
10.0	AMC	19.43%	AMD	17.64%
10.0	AMD	16.45%	WDC	15.06%
10.0	WDC	16.39%	AMC	12.37%
10.0	UNH	15.24%	CNC	11.8%
10.0	QCOM	12.96%	ON	10.93%
10.0	ORCL	11.59%	QCOM	10.91%
10.0	AMAT	11.21%	AMAT	10.76%
10.0	NWL	10.01%	NWL	8.61%
10.0	CVS	9.39%	TXN	8.03%
10.0	CNC	9.32%	CSCO	7.91%
10.0	ON	8.22%	GNRC	7.18%
10.0	BXP	6.49%	VNO	7.09%
10.0	LLY	6.37%	UNH	6.28%
10.0	KALU	5.92%	KALU	6.04%
10.0	JAZZ	5.5%	CDNS	5.98%
10.0	TXN	5.3%	CVS	5.88%
10.0	GE	5.08%	CLF	5.14%
10.0	BBY	5.05%	MNST	4.78%
10.0	GNRC	4.82%	PWR	4.69%
10.0	PWR	4.05%	MS	4.34%
10.0	CSCO	3.48%	LLY	4.25%
10.0	LUMN	3.45%	BBY	4.19%
10.0	BUD	3.28%	BXP	4.11%
10.0	BIIB	3.0%	GE	3.87%
10.0	PHM	2.84%	GS	3.68%
10.0	CZR	2.8%	IRM	3.54%
10.0	MNST	2.78%	JAZZ	3.48%
10.0	VNO	2.65%	QQQ	3.45%



P90D: 21d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	INTC	68.88%	MU	56.57%
21.0	MU	47.25%	AMD	40.92%
21.0	WDC	43.71%	INTC	39.62%
21.0	QCOM	35.4%	WDC	30.76%
21.0	AMD	28.08%	QCOM	29.15%
21.0	CNC	27.78%	CNC	27.55%
21.0	ORCL	27.38%	AMC	24.08%
21.0	UNH	24.68%	ON	23.2%
21.0	AMC	23.04%	AMAT	22.25%
21.0	CVS	20.11%	CSCO	20.77%
21.0	AMAT	19.24%	CLF	15.86%
21.0	BXP	16.55%	VNO	15.49%
21.0	ON	15.14%	TXN	15.18%
21.0	CLF	14.52%	GNRC	14.28%
21.0	KALU	11.76%	CDNS	13.51%
21.0	JAZZ	11.72%	CVS	13.27%
21.0	NWL	11.61%	UNH	11.83%
21.0	TXN	11.6%	LLY	11.82%
21.0	GE	9.82%	BBY	11.47%
21.0	CDNS	8.44%	NWL	11.35%
21.0	LLY	8.15%	KALU	10.88%
21.0	GNRC	7.94%	MNST	10.86%
21.0	TSLA	7.17%	ORCL	9.9%
21.0	CSCO	7.13%	PWR	9.14%
21.0	BIIB	7.01%	MS	8.96%
21.0	BBY	6.19%	JAZZ	8.8%
21.0	LUMN	6.06%	GE	8.73%
21.0	VNO	5.91%	GS	8.33%
21.0	GWV	5.81%	BXP	7.83%
21.0	PWR	5.79%	GWV	7.5%



P365D: 1d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	WDC	0.99%	WDC	1.02%
1.0	MU	0.72%	MU	1.01%
1.0	AMD	0.5%	INTC	0.84%
1.0	INTC	0.49%	AMD	0.67%
1.0	LLY	0.45%	AMAT	0.61%
1.0	ON	0.39%	KALU	0.39%
1.0	UNH	0.35%	CSTM	0.38%
1.0	GOOGL	0.34%	JAZZ	0.34%
1.0	KALU	0.33%	LUMN	0.34%
1.0	MRK	0.3%	GNRC	0.34%
1.0	TSLA	0.28%	TEVA	0.31%
1.0	AMAT	0.28%	ON	0.31%
1.0	QCOM	0.27%	GOOGL	0.3%
1.0	JAZZ	0.25%	PWR	0.29%
1.0	CMA	0.25%	SLV	0.28%
1.0	AAP	0.25%	AA	0.28%
1.0	CVS	0.23%	CMA	0.27%
1.0	PCG	0.2%	B	0.27%
1.0	CSTM	0.18%	ELAN	0.25%
1.0	FCX	0.18%	BHP	0.24%
1.0	GWV	0.17%	CSCO	0.23%
1.0	B	0.17%	NEM	0.23%
1.0	CDNS	0.17%	BIIB	0.23%
1.0	AA	0.17%	RIO	0.21%
1.0	CYH	0.17%	LLY	0.2%
1.0	NVDA	0.16%	EXPE	0.2%
1.0	PWR	0.16%	HSBC	0.2%
1.0	NEM	0.15%	MRK	0.2%
1.0	BIIB	0.14%	TRGP	0.19%
1.0	TEVA	0.14%	FCX	0.19%



P365D: 10d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MU	11.21%	WDC	10.74%
10.0	WDC	10.04%	MU	10.62%
10.0	INTC	8.85%	INTC	8.76%
10.0	AMD	5.56%	AMD	6.55%
10.0	KALU	4.17%	AMAT	5.46%
10.0	AMAT	3.9%	CSTM	3.84%
10.0	JAZZ	3.8%	LUMN	3.68%
10.0	TSLA	3.78%	KALU	3.6%
10.0	UNH	3.54%	ON	3.42%
10.0	CVS	3.46%	GNRC	3.38%
10.0	LLY	2.91%	JAZZ	3.34%
10.0	AA	2.87%	CNC	3.32%
10.0	CMA	2.79%	TEVA	3.19%
10.0	CNC	2.73%	AA	3.16%
10.0	FCX	2.49%	GOOGL	3.11%
10.0	GOOGL	2.43%	CMA	2.99%
10.0	B	2.3%	B	2.9%
10.0	PWR	2.28%	PWR	2.84%
10.0	ON	2.28%	SLV	2.78%
10.0	VFC	2.28%	CSCO	2.49%
10.0	NWL	2.14%	NEM	2.48%
10.0	QCOM	2.06%	BHP	2.34%
10.0	GNRC	2.02%	ELAN	2.34%
10.0	TEVA	1.98%	RIO	2.22%
10.0	EXPE	1.94%	CVS	1.98%
10.0	LUMN	1.93%	TRGP	1.96%
10.0	GE	1.82%	HSBC	1.94%
10.0	BHP	1.78%	BIIB	1.94%
10.0	BIIB	1.73%	FCX	1.94%
10.0	CSTM	1.65%	MNST	1.93%



P365D: 21d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	WDC	24.6%	MU	24.43%
21.0	INTC	22.09%	WDC	23.24%
21.0	MU	19.87%	INTC	19.64%
21.0	AMD	10.03%	AMD	14.56%
21.0	AA	9.01%	AMAT	11.22%
21.0	AMAT	8.5%	CSTM	8.8%
21.0	KALU	8.07%	CNC	8.54%
21.0	JAZZ	8.01%	LUMN	8.37%
21.0	CVS	8.0%	ON	8.13%
21.0	CNC	7.74%	KALU	8.07%
21.0	ON	7.34%	AA	8.03%
21.0	UNH	6.6%	TEVA	7.33%
21.0	GNRC	5.91%	JAZZ	7.06%
21.0	CMA	5.53%	GNRC	6.9%
21.0	TSLA	5.44%	GOOGL	6.8%
21.0	B	5.28%	B	6.71%
21.0	LUMN	5.24%	SLV	6.62%
21.0	QCOM	5.18%	CMA	6.15%
21.0	TEVA	4.93%	PWR	5.94%
21.0	VFC	4.79%	CSCO	5.82%
21.0	TXN	4.4%	NEM	5.44%
21.0	NEM	4.34%	BHP	5.09%
21.0	CSTM	4.33%	RIO	5.05%
21.0	BHP	3.9%	ELAN	4.99%
21.0	FCX	3.88%	TRGP	4.53%
21.0	PWR	3.87%	TXN	4.48%
21.0	BIIB	3.85%	CVS	4.42%
21.0	GOOGL	3.83%	FCX	4.4%
21.0	LLY	3.31%	QCOM	4.22%
21.0	EXPE	3.24%	BIIB	4.18%



P365D: 63d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	WDC	87.99%	WDC	82.28%
63.0	MU	78.58%	MU	81.13%
63.0	INTC	71.5%	INTC	67.28%
63.0	KALU	38.38%	AMD	43.21%
63.0	AA	36.11%	AMAT	37.13%
63.0	AMAT	34.22%	CSTM	32.03%
63.0	AMD	30.97%	AA	31.26%
63.0	JAZZ	29.68%	KALU	30.51%
63.0	CNC	28.99%	LUMN	29.51%
63.0	LUMN	28.59%	ON	28.03%
63.0	GNRC	27.86%	SLV	27.71%
63.0	ON	27.8%	TEVA	26.37%
63.0	CSTM	23.29%	CNC	23.16%
63.0	TEVA	22.67%	JAZZ	22.69%
63.0	CVS	20.46%	B	21.71%
63.0	PWR	20.27%	PWR	21.24%
63.0	SLV	19.07%	GOOGL	21.15%
63.0	OXY	18.75%	CMA	19.37%
63.0	B	17.38%	RIO	18.36%
63.0	CMA	17.18%	NEM	18.31%
63.0	NEM	15.8%	TRGP	16.5%
63.0	GOOGL	15.44%	BHP	16.49%
63.0	BHP	15.21%	FCX	16.06%
63.0	TXN	15.04%	CSCO	15.96%
63.0	FCX	14.73%	GNRC	15.47%
63.0	BUD	14.52%	TXN	14.49%
63.0	VFC	14.29%	MRK	13.14%
63.0	LLY	14.16%	ELAN	13.07%
63.0	QCOM	14.08%	LLY	12.91%
63.0	TSLA	13.88%	BIIB	12.71%



P365D: 126d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	WDC	282.53%	WDC	222.39%
126.0	MU	244.53%	MU	218.01%
126.0	INTC	138.59%	INTC	130.62%
126.0	KALU	116.6%	AMAT	89.43%
126.0	AMAT	111.0%	AA	83.83%
126.0	AA	108.06%	CSTM	81.12%
126.0	ON	85.73%	SLV	76.01%
126.0	SLV	80.86%	KALU	70.89%
126.0	CMA	67.65%	TEVA	63.15%
126.0	JAZZ	64.35%	ON	59.94%
126.0	CSTM	63.9%	AMD	58.47%
126.0	GNRC	62.86%	B	51.14%
126.0	TEVA	62.66%	JAZZ	45.45%
126.0	PWR	56.68%	NEM	45.29%
126.0	BUD	52.34%	FCX	44.79%
126.0	NEM	50.84%	RIO	44.7%
126.0	AMD	50.83%	PWR	43.68%
126.0	B	50.71%	CMA	41.75%
126.0	FCX	42.41%	TRGP	41.6%
126.0	TXN	42.04%	CNC	41.09%
126.0	CNC	41.02%	GOOGL	40.45%
126.0	GOOGL	39.76%	BHP	39.44%
126.0	BHP	37.4%	LUMN	36.01%
126.0	LUMN	36.57%	MRK	33.14%
126.0	GSK	36.15%	TXN	33.06%
126.0	VFC	35.8%	GNRC	32.43%
126.0	MRK	33.83%	XOM	30.05%
126.0	LLY	33.27%	HSBC	29.51%
126.0	OXY	32.1%	VFC	27.83%
126.0	BMY	30.89%	CSCO	27.66%



Bottom 30 Tickers By ROVBC

All TMD: 1d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	SIVBQ	-1.97%	SIVBQ	-0.78%
1.0	SBNY	-0.75%	SBNY	-0.45%
1.0	FRCB	-0.29%	FRCB	-0.23%
1.0	FIS	-0.11%	IEP	-0.14%
1.0	PRGO	-0.1%	AMC	-0.13%
1.0	BHC	-0.1%	CHTR	-0.09%
1.0	CHTR	-0.1%	PRGO	-0.09%
1.0	IEP	-0.1%	FIS	-0.08%
1.0	AMC	-0.09%	ZTS	-0.07%
1.0	AAP	-0.08%	BHC	-0.06%
1.0	LUMN	-0.07%	VFC	-0.06%
1.0	VFC	-0.05%	ADBE	-0.06%
1.0	BXP	-0.05%	AAP	-0.06%
1.0	TLT	-0.05%	NWL	-0.06%
1.0	NAVI	-0.05%	GT	-0.05%
1.0	ZTS	-0.05%	CMCSA	-0.05%
1.0	CMCSA	-0.04%	TLT	-0.04%
1.0	CNC	-0.03%	UAA	-0.04%
1.0	VZ	-0.03%	NAVI	-0.04%
1.0	ADBE	-0.03%	INTU	-0.04%
1.0	T	-0.03%	CZR	-0.03%
1.0	GT	-0.02%	KHC	-0.03%
1.0	LQD	-0.02%	BXP	-0.03%
1.0	PEP	-0.02%	LNC	-0.02%
1.0	BMY	-0.02%	MOS	-0.02%
1.0	GSK	-0.02%	BALL	-0.02%
1.0	ELAN	-0.02%	FRA	-0.02%
1.0	MOS	-0.01%	PEP	-0.02%
1.0	VICI	-0.01%	CTLT	-0.01%
1.0	CMG	-0.01%	LQD	-0.01%



All TMD: 10d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	SIVBQ	-7.57%	SBNY	-4.05%
10.0	SBNY	-6.83%	SIVBQ	-3.9%
10.0	AMC	-2.23%	FRCB	-2.19%
10.0	FRCB	-2.21%	IEP	-1.38%
10.0	PRGO	-1.2%	AMC	-1.17%
10.0	CHTR	-1.06%	CHTR	-0.99%
10.0	AAP	-1.01%	PRGO	-0.89%
10.0	BHC	-0.95%	FIS	-0.78%
10.0	IEP	-0.94%	ZTS	-0.69%
10.0	FIS	-0.73%	NWL	-0.66%
10.0	ZTS	-0.68%	VFC	-0.66%
10.0	CMCSA	-0.63%	AAP	-0.62%
10.0	ADBE	-0.57%	ADBE	-0.57%
10.0	GT	-0.47%	GT	-0.57%
10.0	TLT	-0.39%	CMCSA	-0.57%
10.0	VFC	-0.38%	UAA	-0.56%
10.0	BXP	-0.38%	BHC	-0.53%
10.0	TFC	-0.38%	NAVI	-0.5%
10.0	GSK	-0.34%	CZR	-0.45%
10.0	MOS	-0.31%	INTU	-0.4%
10.0	LQD	-0.29%	TLT	-0.39%
10.0	NAVI	-0.27%	MOS	-0.32%
10.0	NWL	-0.25%	BXP	-0.31%
10.0	CYH	-0.21%	KHC	-0.29%
10.0	BMV	-0.19%	LNC	-0.24%
10.0	CNC	-0.18%	BALL	-0.22%
10.0	KHC	-0.14%	FRA	-0.18%
10.0	VZ	-0.14%	CYH	-0.13%
10.0	EMB	-0.13%	LQD	-0.12%
10.0	T	-0.13%	PEP	-0.12%



All TMD: 21d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	SBNY	-21.4%	SBNY	-11.16%
21.0	SIVBQ	-15.08%	SIVBQ	-9.37%
21.0	AMC	-7.13%	FRCB	-6.02%
21.0	FRCB	-6.98%	IEP	-2.96%
21.0	PRGO	-2.89%	AMC	-2.93%
21.0	CHTR	-2.2%	CHTR	-2.05%
21.0	BHC	-2.1%	NWL	-1.82%
21.0	IEP	-1.89%	PRGO	-1.78%
21.0	CMCSA	-1.34%	FIS	-1.46%
21.0	FIS	-1.32%	ZTS	-1.41%
21.0	ZTS	-1.25%	VFC	-1.4%
21.0	NWL	-1.23%	BHC	-1.32%
21.0	VFC	-1.07%	AAP	-1.25%
21.0	GT	-1.05%	GT	-1.15%
21.0	ADBE	-0.89%	CMCSA	-1.12%
21.0	TLT	-0.87%	NAVI	-1.12%
21.0	AAP	-0.86%	UAA	-1.08%
21.0	NAVI	-0.65%	CZR	-1.02%
21.0	ELAN	-0.56%	ADBE	-0.93%
21.0	BXP	-0.51%	TLT	-0.83%
21.0	LQD	-0.51%	MOS	-0.72%
21.0	ZION	-0.47%	BXP	-0.71%
21.0	BALL	-0.47%	KHC	-0.69%
21.0	KHC	-0.45%	INTU	-0.64%
21.0	TFC	-0.35%	LNC	-0.61%
21.0	T	-0.34%	BALL	-0.55%
21.0	BMY	-0.32%	FRA	-0.35%
21.0	MOS	-0.3%	CYH	-0.3%
21.0	CZR	-0.3%	LQD	-0.23%
21.0	LW	-0.27%	PEP	-0.2%



All TMD: 63d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	SBNY	-80.29%	SBNY	-37.59%
63.0	SIVBQ	-67.12%	SIVBQ	-33.73%
63.0	FRCB	-40.48%	FRCB	-24.04%
63.0	AMC	-23.8%	AMC	-13.25%
63.0	PRGO	-8.49%	IEP	-9.66%
63.0	CHTR	-8.13%	NWL	-7.11%
63.0	IEP	-7.41%	PRGO	-5.97%
63.0	NWL	-6.83%	CHTR	-5.25%
63.0	MOS	-4.06%	AAP	-4.3%
63.0	VFC	-3.95%	MOS	-4.08%
63.0	CMCSA	-3.64%	CZR	-4.07%
63.0	AAP	-3.55%	VFC	-3.95%
63.0	BHC	-3.43%	BHC	-3.94%
63.0	FIS	-2.91%	FIS	-3.82%
63.0	KHC	-2.81%	ZTS	-3.51%
63.0	TLT	-2.49%	NAVI	-3.4%
63.0	ADBE	-2.48%	UAA	-3.05%
63.0	ZTS	-2.42%	GT	-2.94%
63.0	NAVI	-2.25%	CMCSA	-2.87%
63.0	CZR	-2.14%	BXP	-2.83%
63.0	GT	-2.12%	KHC	-2.75%
63.0	LNC	-1.84%	ADBE	-2.46%
63.0	BXP	-1.39%	TLT	-2.31%
63.0	CLF	-1.35%	LNC	-1.91%
63.0	UAA	-0.97%	CLF	-1.76%
63.0	BALL	-0.96%	BALL	-1.4%
63.0	FRA	-0.85%	BBY	-1.28%
63.0	CPRT	-0.72%	FRA	-0.88%
63.0	LQD	-0.52%	CYH	-0.68%
63.0	UNH	-0.45%	LW	-0.57%



All TMD: 126d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	SBNY	-152.34%	SIVBQ	-65.15%
126.0	SIVBQ	-133.25%	SBNY	-64.8%
126.0	FRCB	-104.15%	FRCB	-51.17%
126.0	AMC	-43.59%	AMC	-28.95%
126.0	CHTR	-18.64%	IEP	-18.89%
126.0	AAP	-17.63%	NWL	-16.23%
126.0	NWL	-17.36%	PRGO	-11.88%
126.0	PRGO	-15.73%	AAP	-10.26%
126.0	IEP	-14.58%	CHTR	-9.02%
126.0	MOS	-8.98%	MOS	-8.07%
126.0	VFC	-8.46%	CZR	-7.87%
126.0	CZR	-8.02%	VFC	-6.65%
126.0	FIS	-7.12%	FIS	-6.48%
126.0	ZTS	-6.93%	NAVI	-5.98%
126.0	BHC	-6.62%	KHC	-5.9%
126.0	CMCSA	-6.35%	BHC	-5.78%
126.0	KHC	-5.69%	CTLT	-5.69%
126.0	TLT	-5.08%	ZTS	-5.45%
126.0	UAA	-4.73%	GT	-5.43%
126.0	NAVI	-4.68%	BXP	-5.34%
126.0	BXP	-4.68%	UAA	-5.24%
126.0	GT	-4.64%	CMCSA	-4.71%
126.0	CLF	-3.75%	TLT	-4.11%
126.0	UNH	-3.71%	CNC	-3.97%
126.0	CNC	-3.12%	CLF	-3.31%
126.0	ADBE	-2.66%	ADBE	-3.19%
126.0	CTLT	-2.25%	UNH	-3.18%
126.0	BALL	-1.48%	LNC	-2.41%
126.0	LNC	-1.37%	LW	-2.34%
126.0	LW	-1.35%	BBY	-1.97%



All TMD: 252d

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

Period examined: All model dates from 2022-01-31 through 2026-06-29

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
252.0	SBNY	-189.18%	SBNY	-95.75%
252.0	SIVBQ	-167.74%	SIVBQ	-95.29%
252.0	FRCB	-141.18%	FRCB	-91.61%
252.0	AMC	-70.02%	AMC	-54.07%
252.0	AAP	-44.27%	IEP	-39.1%
252.0	NWL	-34.02%	NWL	-30.4%
252.0	CHTR	-31.68%	AAP	-22.06%
252.0	IEP	-30.39%	PRGO	-20.35%
252.0	VFC	-26.61%	VFC	-17.45%
252.0	PRGO	-26.48%	CNC	-17.13%
252.0	CZR	-20.55%	CZR	-16.6%
252.0	CNC	-18.43%	MOS	-15.12%
252.0	UAA	-17.99%	UAA	-14.81%
252.0	MOS	-15.29%	CHTR	-13.82%
252.0	BIIB	-13.18%	KHC	-11.7%
252.0	ZTS	-12.43%	GT	-9.8%
252.0	KHC	-12.38%	UNH	-9.31%
252.0	OXY	-11.44%	NAVI	-9.17%
252.0	CLF	-11.35%	CLF	-8.62%
252.0	UNH	-11.18%	BHC	-8.33%
252.0	FIS	-10.09%	BMY	-7.84%
252.0	GT	-10.03%	TLT	-7.08%
252.0	BHC	-9.98%	ZTS	-6.74%
252.0	CMCSA	-9.39%	CMCSA	-6.41%
252.0	TLT	-9.2%	CTLT	-6.24%
252.0	BMY	-8.92%	CYH	-5.99%
252.0	BXP	-7.32%	FIS	-5.69%
252.0	CTLT	-6.82%	LW	-5.6%
252.0	NAVI	-6.16%	BXP	-5.52%
252.0	CYH	-6.11%	OXY	-4.95%



P30D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	ORCL	-2.83%	ORCL	-2.54%
1.0	MSTR	-2.53%	MSTR	-2.51%
1.0	NFLX	-1.83%	AA	-1.89%
1.0	GBTC	-1.67%	CLF	-1.72%
1.0	CLF	-1.41%	LUMN	-1.55%
1.0	CDNS	-1.25%	INTU	-1.46%
1.0	AVGO	-1.24%	ADBE	-1.4%
1.0	AA	-1.11%	SLV	-1.11%
1.0	INTU	-1.02%	MSFT	-1.02%
1.0	NVDA	-1.01%	FSUGY	-0.97%
1.0	ADBE	-0.93%	OXY	-0.95%
1.0	MSFT	-0.92%	GBTC	-0.94%
1.0	QCOM	-0.87%	QCOM	-0.94%
1.0	GLD	-0.7%	NFLX	-0.89%
1.0	LUMN	-0.65%	ON	-0.89%
1.0	ON	-0.64%	AVGO	-0.88%
1.0	VICI	-0.6%	T	-0.82%
1.0	SLV	-0.59%	LVS	-0.7%
1.0	FSUGY	-0.55%	NEM	-0.68%
1.0	OXY	-0.51%	RIO	-0.66%
1.0	TMUS	-0.5%	B	-0.65%
1.0	VZ	-0.49%	CPRT	-0.65%
1.0	NEM	-0.48%	VZ	-0.57%
1.0	BHP	-0.45%	FIS	-0.55%
1.0	ZTS	-0.42%	NVDA	-0.54%
1.0	XOM	-0.4%	GLD	-0.53%
1.0	WYNN	-0.37%	TMUS	-0.51%
1.0	T	-0.34%	CDNS	-0.46%
1.0	B	-0.34%	WYNN	-0.45%
1.0	FIS	-0.31%	AMZN	-0.43%



P30D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-06-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	NFLX	-27.02%	AA	-22.11%
10.0	MSTR	-26.26%	ORCL	-21.68%
10.0	ORCL	-23.53%	MSTR	-18.78%
10.0	CLF	-21.88%	CLF	-16.34%
10.0	AA	-15.53%	ADBE	-16.06%
10.0	INTU	-13.64%	LUMN	-11.19%
10.0	AVGO	-12.13%	INTU	-11.13%
10.0	SLV	-10.3%	OXY	-10.1%
10.0	ADBE	-9.67%	SLV	-10.0%
10.0	OXY	-9.21%	MSFT	-9.55%
10.0	META	-7.58%	NFLX	-9.05%
10.0	NVDA	-6.58%	ON	-7.51%
10.0	GBTC	-6.52%	PRGO	-7.38%
10.0	LUMN	-6.03%	XOM	-7.04%
10.0	GLD	-5.89%	FSUGY	-6.98%
10.0	MSFT	-5.61%	AVGO	-6.47%
10.0	PRGO	-5.39%	QCOM	-6.4%
10.0	CDNS	-5.13%	LVS	-6.38%
10.0	QCOM	-5.02%	RIO	-6.03%
10.0	CMCSA	-4.41%	BHC	-4.85%
10.0	ZTS	-4.27%	FIS	-4.55%
10.0	RIO	-4.23%	GLD	-4.4%
10.0	CPRT	-3.65%	CSTM	-4.33%
10.0	LVS	-3.59%	NVDA	-4.23%
10.0	T	-3.55%	T	-4.12%
10.0	B	-3.29%	META	-4.1%
10.0	SNY	-3.23%	CPRT	-4.03%
10.0	ON	-3.06%	B	-3.98%
10.0	FSUGY	-3.01%	AMZN	-3.94%
10.0	WYNN	-2.85%	CDNS	-3.75%



P90D: 1d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	NFLX	-0.74%	ZTS	-0.76%
1.0	INTU	-0.6%	INTU	-0.71%
1.0	ZTS	-0.54%	CHTR	-0.6%
1.0	GBTC	-0.43%	NFLX	-0.51%
1.0	TMUS	-0.42%	T	-0.51%
1.0	MSTR	-0.31%	AA	-0.46%
1.0	PEP	-0.31%	OXY	-0.4%
1.0	CHTR	-0.3%	MSTR	-0.4%
1.0	AA	-0.3%	MOS	-0.31%
1.0	CMCSA	-0.29%	HCA	-0.3%
1.0	T	-0.26%	SLV	-0.29%
1.0	GLD	-0.26%	TMUS	-0.29%
1.0	HCA	-0.22%	NEM	-0.28%
1.0	VZ	-0.21%	CPRT	-0.27%
1.0	FIS	-0.21%	FIS	-0.26%
1.0	XOM	-0.21%	XOM	-0.25%
1.0	OXY	-0.19%	LVS	-0.25%
1.0	VICI	-0.19%	GLD	-0.24%
1.0	ADBE	-0.19%	VZ	-0.24%
1.0	MOS	-0.19%	ADBE	-0.24%
1.0	SNY	-0.18%	PEP	-0.24%
1.0	POST	-0.16%	POST	-0.2%
1.0	SLV	-0.15%	GBTC	-0.2%
1.0	COST	-0.14%	ISRG	-0.19%
1.0	AZO	-0.14%	CMCSA	-0.18%
1.0	NEM	-0.14%	SNY	-0.18%
1.0	ISRG	-0.12%	B	-0.16%
1.0	CPRT	-0.11%	GILD	-0.16%
1.0	BMY	-0.1%	COST	-0.13%
1.0	LVS	-0.08%	GSK	-0.12%



P90D: 10d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	NFLX	-14.86%	CHTR	-8.65%
10.0	CHTR	-7.57%	ZTS	-7.34%
10.0	INTU	-6.34%	INTU	-6.7%
10.0	CMCSA	-5.32%	NFLX	-6.1%
10.0	ZTS	-4.65%	HCA	-4.4%
10.0	HCA	-4.23%	AA	-3.75%
10.0	AZO	-3.63%	CMCSA	-3.66%
10.0	GLD	-3.59%	FIS	-3.55%
10.0	SLV	-3.55%	T	-3.54%
10.0	GBTC	-2.97%	SLV	-3.48%
10.0	SNY	-2.8%	MSTR	-3.29%
10.0	NEM	-2.75%	ADBE	-3.0%
10.0	TMUS	-2.7%	NEM	-2.95%
10.0	T	-2.65%	GLD	-2.71%
10.0	BHC	-2.62%	LVS	-2.69%
10.0	GSK	-2.45%	GBTC	-2.65%
10.0	AA	-2.27%	MOS	-2.6%
10.0	MOS	-2.24%	OXY	-2.52%
10.0	OXY	-2.23%	ISRG	-2.34%
10.0	FIS	-2.04%	BHC	-2.34%
10.0	ISRG	-2.0%	POST	-2.21%
10.0	PEP	-1.99%	XOM	-2.16%
10.0	ADBE	-1.98%	AZO	-2.14%
10.0	CPRT	-1.73%	CPRT	-2.09%
10.0	GILD	-1.72%	SNY	-2.05%
10.0	POST	-1.65%	GILD	-2.03%
10.0	LVS	-1.55%	AZN	-1.97%
10.0	GT	-1.48%	PEP	-1.95%
10.0	GME	-1.44%	GSK	-1.92%
10.0	META	-1.38%	MSI	-1.76%



P90D: 21d

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

Period examined: All model dates from 2026-06-29 through 2026-04-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	NFLX	-27.66%	CHTR	-19.5%
21.0	CHTR	-17.8%	ZTS	-18.0%
21.0	ZTS	-15.0%	INTU	-14.87%
21.0	INTU	-14.44%	NFLX	-10.81%
21.0	CMCSA	-12.11%	HCA	-10.61%
21.0	AZO	-10.5%	CMCSA	-8.99%
21.0	HCA	-9.59%	MSTR	-8.73%
21.0	GBTC	-9.47%	FIS	-8.34%
21.0	GLD	-7.5%	GBTC	-7.53%
21.0	BHC	-7.49%	T	-7.41%
21.0	MSTR	-7.01%	AZO	-6.61%
21.0	META	-6.69%	SLV	-6.41%
21.0	SLV	-6.64%	POST	-6.16%
21.0	TMUS	-6.33%	NEM	-6.16%
21.0	NEM	-6.26%	ISRG	-6.13%
21.0	T	-5.98%	GT	-5.84%
21.0	FIS	-5.87%	BHC	-5.63%
21.0	GT	-5.35%	GME	-5.63%
21.0	SNY	-5.2%	GLD	-5.52%
21.0	GME	-5.07%	VFC	-5.46%
21.0	PEP	-5.01%	LVS	-5.45%
21.0	PRGO	-4.81%	META	-5.23%
21.0	IEP	-4.5%	MOS	-5.2%
21.0	MOS	-4.45%	PEP	-4.8%
21.0	AVGO	-3.91%	CMG	-4.77%
21.0	THC	-3.76%	CPRT	-4.61%
21.0	GSK	-3.75%	ADBE	-4.5%
21.0	ISRG	-3.63%	SNY	-4.36%
21.0	GILD	-3.56%	GSK	-4.16%
21.0	CPRT	-3.54%	AZN	-4.14%



P365D: 1d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	MSTR	-0.58%	MSTR	-0.47%
1.0	INTU	-0.4%	INTU	-0.39%
1.0	ZTS	-0.37%	CHTR	-0.38%
1.0	PRGO	-0.32%	PRGO	-0.34%
1.0	CHTR	-0.29%	ZTS	-0.29%
1.0	FIS	-0.25%	FIS	-0.28%
1.0	NFLX	-0.22%	ADBE	-0.23%
1.0	NAVI	-0.21%	NFLX	-0.21%
1.0	CMCSA	-0.19%	CPRT	-0.21%
1.0	ADBE	-0.17%	GBTC	-0.2%
1.0	CMG	-0.16%	CMG	-0.18%
1.0	TDG	-0.15%	NAVI	-0.18%
1.0	BHC	-0.13%	MOS	-0.18%
1.0	TMUS	-0.12%	GT	-0.15%
1.0	ISRG	-0.11%	CMCSA	-0.14%
1.0	GBTC	-0.1%	TMUS	-0.13%
1.0	CPRT	-0.1%	T	-0.12%
1.0	MOS	-0.1%	ISRG	-0.1%
1.0	AMC	-0.09%	MSFT	-0.1%
1.0	POST	-0.09%	ORCL	-0.08%
1.0	VICI	-0.08%	VICI	-0.08%
1.0	LEN	-0.07%	POST	-0.08%
1.0	HD	-0.07%	BHC	-0.08%
1.0	MSFT	-0.07%	META	-0.07%
1.0	PEP	-0.06%	FRA	-0.07%
1.0	UAA	-0.05%	LEN	-0.07%
1.0	FRA	-0.05%	AMC	-0.05%
1.0	AZO	-0.05%	AZO	-0.05%
1.0	GT	-0.05%	IEP	-0.04%
1.0	CNC	-0.05%	SNY	-0.04%



P365D: 10d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	-6.91%	MSTR	-4.86%
10.0	CHTR	-4.14%	INTU	-3.9%
10.0	PRGO	-4.07%	CHTR	-3.85%
10.0	ZTS	-3.72%	PRGO	-3.41%
10.0	INTU	-3.55%	FIS	-2.86%
10.0	CMCSA	-2.41%	ZTS	-2.58%
10.0	BHC	-2.27%	ADBE	-2.34%
10.0	FIS	-2.11%	NAVI	-2.22%
10.0	AMC	-2.03%	GBTC	-2.15%
10.0	ADBE	-1.94%	NFLX	-1.95%
10.0	NFLX	-1.88%	CPRT	-1.89%
10.0	NAVI	-1.73%	GT	-1.89%
10.0	CMG	-1.45%	CMG	-1.88%
10.0	TDG	-1.43%	MOS	-1.88%
10.0	CPRT	-1.28%	CMCSA	-1.65%
10.0	GT	-1.21%	MSFT	-1.06%
10.0	GBTC	-1.16%	TMUS	-0.96%
10.0	MOS	-0.98%	ISRG	-0.92%
10.0	TMUS	-0.83%	VICI	-0.84%
10.0	POST	-0.78%	BHC	-0.81%
10.0	AZO	-0.72%	FRA	-0.8%
10.0	FRA	-0.59%	T	-0.8%
10.0	LEN	-0.58%	META	-0.74%
10.0	VICI	-0.52%	IEP	-0.7%
10.0	KHC	-0.49%	POST	-0.67%
10.0	T	-0.46%	AZO	-0.65%
10.0	META	-0.4%	ORCL	-0.63%
10.0	VNO	-0.38%	LEN	-0.63%
10.0	IEP	-0.35%	KHC	-0.52%
10.0	SNY	-0.24%	SNY	-0.49%



P365D: 21d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	MSTR	-14.16%	MSTR	-9.3%
21.0	PRGO	-10.26%	INTU	-7.88%
21.0	CHTR	-9.02%	CHTR	-7.59%
21.0	ZTS	-7.31%	PRGO	-7.07%
21.0	INTU	-6.03%	FIS	-6.02%
21.0	CMCSA	-5.88%	ZTS	-5.32%
21.0	AMC	-5.0%	GBTC	-4.76%
21.0	NFLX	-4.27%	NAVI	-4.69%
21.0	FIS	-4.2%	ADBE	-4.34%
21.0	NAVI	-3.86%	GT	-4.13%
21.0	BHC	-3.54%	MOS	-4.02%
21.0	ADBE	-3.28%	CMG	-3.92%
21.0	GT	-3.13%	CPRT	-3.77%
21.0	CPRT	-2.96%	NFLX	-3.64%
21.0	GBTC	-2.86%	CMCSA	-3.25%
21.0	CMG	-2.32%	TMUS	-2.06%
21.0	TDG	-2.19%	MSFT	-1.98%
21.0	TMUS	-2.16%	BHC	-1.79%
21.0	T	-1.87%	IEP	-1.76%
21.0	META	-1.83%	FRA	-1.69%
21.0	MOS	-1.73%	ISRG	-1.65%
21.0	AZO	-1.68%	VST	-1.65%
21.0	KHC	-1.64%	VICI	-1.64%
21.0	IEP	-1.53%	TDG	-1.61%
21.0	FRA	-0.97%	META	-1.55%
21.0	POST	-0.88%	LEN	-1.47%
21.0	MSFT	-0.83%	T	-1.46%
21.0	SNY	-0.77%	AZO	-1.45%
21.0	LEN	-0.74%	KHC	-1.41%
21.0	VICI	-0.73%	POST	-1.38%



P365D: 63d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	MSTR	-55.22%	MSTR	-23.84%
63.0	PRGO	-40.6%	PRGO	-22.0%
63.0	CHTR	-19.66%	INTU	-20.52%
63.0	INTU	-19.08%	CHTR	-16.04%
63.0	ZTS	-14.99%	FIS	-15.53%
63.0	AMC	-14.72%	ZTS	-14.04%
63.0	CMCSA	-13.51%	GBTC	-14.03%
63.0	NFLX	-13.49%	NAVI	-13.89%
63.0	CPRT	-11.61%	ADBE	-12.56%
63.0	META	-11.02%	CPRT	-11.77%
63.0	NAVI	-10.88%	MOS	-11.28%
63.0	FIS	-10.32%	LEN	-9.65%
63.0	ADBE	-10.18%	NFLX	-9.44%
63.0	LEN	-9.45%	CMG	-9.09%
63.0	TMUS	-8.54%	GT	-9.06%
63.0	GT	-8.51%	AMC	-8.72%
63.0	NWL	-8.27%	CMCSA	-7.65%
63.0	GBTC	-8.1%	VST	-7.47%
63.0	KHC	-7.48%	TMUS	-7.43%
63.0	HD	-6.71%	ORCL	-7.43%
63.0	MOS	-6.63%	MSFT	-7.06%
63.0	AZO	-6.49%	BHC	-6.94%
63.0	TDG	-5.9%	NWL	-6.32%
63.0	BXP	-5.05%	META	-6.07%
63.0	IEP	-4.92%	LW	-5.9%
63.0	VST	-4.88%	FRA	-5.8%
63.0	CMG	-4.83%	AZO	-5.73%
63.0	BHC	-4.43%	HD	-5.7%
63.0	MSFT	-4.29%	KHC	-5.24%
63.0	LW	-4.13%	VICI	-5.16%



P365D: 126d

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

Period examined: All model dates from 2026-06-29 through 2025-07-01

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	MSTR	-118.45%	MSTR	-48.55%
126.0	PRGO	-71.27%	AMC	-41.14%
126.0	AMC	-58.28%	INTU	-40.21%
126.0	INTU	-43.47%	PRGO	-39.49%
126.0	ORCL	-39.25%	GBTC	-31.2%
126.0	CHTR	-38.69%	FIS	-30.07%
126.0	NFLX	-36.07%	NAVI	-29.5%
126.0	LW	-29.9%	ORCL	-28.32%
126.0	ZTS	-28.84%	CHTR	-26.33%
126.0	NAVI	-28.77%	ADBE	-26.1%
126.0	BXP	-27.04%	ZTS	-23.41%
126.0	ADBE	-24.15%	NFLX	-23.37%
126.0	LEN	-22.44%	LW	-22.46%
126.0	GBTC	-21.74%	CPRT	-21.22%
126.0	META	-20.77%	LEN	-19.18%
126.0	FIS	-19.7%	MSFT	-18.37%
126.0	CPRT	-19.54%	MOS	-17.27%
126.0	TMUS	-16.29%	VNO	-17.23%
126.0	VNO	-16.2%	VST	-16.48%
126.0	VST	-15.69%	BXP	-14.74%
126.0	BBY	-15.16%	BHC	-14.46%
126.0	AZO	-14.93%	GT	-13.3%
126.0	MSFT	-14.61%	TMUS	-13.06%
126.0	CMCSA	-13.79%	CMG	-13.03%
126.0	BHC	-13.27%	FRA	-11.52%
126.0	KHC	-12.47%	AZO	-11.44%
126.0	GT	-12.31%	META	-11.02%
126.0	TDG	-10.73%	BBY	-10.42%
126.0	MOS	-10.13%	KHC	-10.37%
126.0	HD	-10.07%	WYNN	-10.22%



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

All TMD: 1d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	SBNY	22.3%	SBNY	11.87%
1.0	SIVBQ	13.31%	SIVBQ	7.55%
1.0	TSLA	12.21%	TSLA	5.52%
1.0	CHTR	10.13%	LQD	4.16%
1.0	LQD	9.04%	ZTS	3.8%
1.0	MSTR	8.32%	FRCB	3.6%
1.0	GME	8.23%	AMC	3.25%
1.0	AMC	7.23%	GME	2.98%
1.0	FRCB	7.19%	B	2.62%
1.0	UAA	7.05%	MSTR	2.35%
1.0	META	6.78%	CDNS	1.99%
1.0	SBUX	6.6%	AAP	1.72%
1.0	AMZN	6.6%	GNRC	1.72%
1.0	PRGO	6.42%	BUD	1.54%
1.0	ZTS	6.06%	JAZZ	1.54%
1.0	AAP	5.79%	ISRG	1.45%
1.0	ISRG	5.61%	CHTR	1.36%
1.0	B	5.42%	KALU	1.18%
1.0	NFLX	5.24%	PRGO	1.18%
1.0	HD	5.06%	EXPE	1.08%
1.0	BALL	4.79%	CMCSA	0.99%
1.0	CDNS	4.79%	NFLX	0.9%
1.0	KEY	4.52%	FRA	0.81%
1.0	GNRC	4.52%	META	0.72%
1.0	VFC	4.34%	TLT	0.72%



All TMD: 10d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	SBNY	30.51%	SBNY	14.34%
10.0	AMC	15.95%	AMC	8.93%
10.0	TSLA	12.31%	TSLA	7.38%
10.0	CHTR	11.85%	SIVBQ	7.35%
10.0	SIVBQ	11.76%	CHTR	4.47%
10.0	GME	11.3%	ZTS	4.38%
10.0	AAP	10.94%	LQD	4.38%
10.0	ZTS	9.66%	B	4.28%
10.0	META	9.39%	MSTR	4.1%
10.0	MSTR	9.21%	AAP	3.83%
10.0	B	9.12%	GNRC	3.19%
10.0	BUD	8.39%	GME	2.46%
10.0	PRGO	7.2%	NFLX	2.1%
10.0	TLT	7.11%	CVS	1.91%
10.0	LQD	7.02%	KALU	1.73%
10.0	KALU	6.38%	ISRG	1.73%
10.0	JAZZ	6.11%	BIIB	1.46%
10.0	AMZN	5.93%	SNY	1.37%
10.0	GNRC	5.83%	VCSH	1.28%
10.0	FRCB	5.51%	ORCL	1.19%
10.0	VFC	5.38%	CZR	1.19%
10.0	SNY	5.29%	BXP	1.0%
10.0	NFLX	5.2%	META	0.91%
10.0	CVS	5.1%	TLT	0.91%
10.0	VZ	5.01%	GE	0.91%



All TMD: 21d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	SBNY	47.78%	SBNY	15.93%
21.0	CHTR	14.83%	AMC	8.56%
21.0	AMC	14.55%	CHTR	7.92%
21.0	ZTS	12.25%	SIVBQ	7.04%
21.0	TSLA	11.97%	TSLA	6.45%
21.0	MSTR	10.59%	ZTS	4.79%
21.0	SIVBQ	10.37%	VCSH	4.6%
21.0	AAP	10.31%	GNRC	4.33%
21.0	B	9.39%	LQD	3.59%
21.0	PRGO	9.3%	MSTR	3.22%
21.0	META	8.84%	B	3.13%
21.0	TLT	8.56%	BIIB	3.04%
21.0	GNRC	8.56%	BUD	2.49%
21.0	BUD	8.47%	META	2.3%
21.0	TDG	8.1%	KALU	2.12%
21.0	GME	8.1%	AAP	2.03%
21.0	LQD	7.83%	CMCSA	2.03%
21.0	CVS	7.46%	UNH	1.93%
21.0	KALU	7.46%	PRGO	1.84%
21.0	BXP	6.91%	BXP	1.84%
21.0	JAZZ	6.63%	ORCL	1.57%
21.0	VFC	6.26%	GME	1.47%
21.0	BIIB	6.08%	BHC	1.29%
21.0	NEM	6.08%	AVGO	1.29%
21.0	GSK	6.08%	NFLX	1.2%



All TMD: 63d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	SBNY	55.19%	SBNY	28.89%
63.0	AAP	22.7%	CHTR	20.69%
63.0	AMC	18.87%	AMC	9.87%
63.0	CHTR	18.77%	MSTR	8.05%
63.0	MSTR	14.18%	AAP	6.99%
63.0	PRGO	12.93%	GNRC	4.89%
63.0	BIIB	12.55%	VCSH	4.89%
63.0	KALU	12.16%	SIVBQ	4.81%
63.0	META	11.88%	NFLX	4.5%
63.0	SIVBQ	11.85%	PRGO	4.5%
63.0	TSLA	11.4%	LQD	4.02%
63.0	GNRC	10.44%	META	3.45%
63.0	VFC	10.25%	ZION	3.4%
63.0	B	9.87%	B	3.16%
63.0	ZTS	8.81%	BMY	3.16%
63.0	TDG	8.33%	BXP	3.07%
63.0	BUD	8.33%	BUD	2.87%
63.0	AMZN	8.24%	TLT	2.78%
63.0	FIS	7.76%	ON	2.59%
63.0	BXP	7.66%	BIIB	2.11%
63.0	BHC	7.38%	VNO	2.01%
63.0	CMCSA	6.8%	NWL	1.92%
63.0	TLT	6.7%	TDG	1.92%
63.0	NFLX	5.46%	CMCSA	1.53%
63.0	LQD	5.08%	CMA	1.38%



All TMD: 126d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	SBNY	55.19%	SBNY	26.3%
126.0	AMC	29.56%	CHTR	21.2%
126.0	CHTR	28.44%	AAP	19.27%
126.0	VFC	24.46%	AMC	17.74%
126.0	AAP	16.72%	MSTR	9.28%
126.0	SIVBQ	15.93%	BXP	8.15%
126.0	MSTR	14.68%	VFC	5.71%
126.0	GNRC	14.48%	CTLT	5.65%
126.0	ZTS	14.07%	VCSH	4.89%
126.0	TSLA	13.56%	GNRC	4.08%
126.0	BMJ	13.05%	PRGO	3.87%
126.0	BXP	12.95%	CMA	3.87%
126.0	TLT	10.7%	TLT	3.57%
126.0	BIIB	10.4%	OXY	2.96%
126.0	OXY	9.68%	ZION	2.59%
126.0	BUD	9.07%	B	2.24%
126.0	CVS	8.97%	VNO	1.83%
126.0	AMZN	8.66%	NFLX	1.73%
126.0	ZION	8.38%	LQD	1.63%
126.0	PRGO	8.26%	SIVBQ	1.48%
126.0	NFLX	8.15%	SNY	1.43%
126.0	META	7.44%	ON	1.43%
126.0	CMCSA	7.34%	ZTS	1.33%
126.0	NWL	6.52%	META	1.33%
126.0	ORCL	6.42%	BIIB	1.22%



All TMD: 252d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
252.0	AMC	42.69%	AMC	27.37%
252.0	CHTR	40.47%	SBNY	25.93%
252.0	AAP	33.8%	AAP	24.91%
252.0	BIIB	31.7%	CHTR	20.23%
252.0	VFC	22.69%	BIIB	12.75%
252.0	SBNY	20.37%	BXP	9.82%
252.0	CMA	20.05%	VFC	9.12%
252.0	ZION	17.0%	UNH	7.72%
252.0	PRGO	16.96%	CMA	6.91%
252.0	OXY	14.97%	OXY	6.2%
252.0	FIS	14.39%	VNO	4.8%
252.0	NWL	14.04%	ZION	4.4%
252.0	CVS	10.41%	ZTS	4.33%
252.0	MSTR	10.06%	CTLT	3.85%
252.0	UAA	9.01%	MRK	3.74%
252.0	TLT	8.89%	INTU	2.69%
252.0	CTLT	8.52%	BHC	2.57%
252.0	BHC	7.49%	KEY	2.22%
252.0	KHC	6.78%	GNRC	2.11%
252.0	ELAN	6.29%	VCSH	1.75%
252.0	EXPE	5.85%	BMY	1.75%
252.0	GNRC	5.61%	MSTR	1.64%
252.0	CMCSA	5.5%	UAA	1.52%
252.0	CLF	5.5%	EMB	1.05%
252.0	ZTS	5.5%	FIS	1.05%



P30D: 1d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2026-06-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	GBTC	45.0%	GBTC	20.0%
1.0	NFLX	40.0%	COST	15.0%
1.0	COST	30.0%	TMUS	15.0%
1.0	AZO	25.0%	NFLX	15.0%
1.0	VICI	25.0%	CDNS	10.0%
1.0	CDNS	25.0%	META	10.0%
1.0	MSTR	25.0%	TDG	10.0%
1.0	GLD	20.0%	HD	10.0%
1.0	TMUS	20.0%	MSTR	5.0%
1.0	KHC	20.0%	VICI	5.0%
1.0	META	15.0%	NVDA	5.0%
1.0	BHP	15.0%	EXPE	5.0%
1.0	FIS	15.0%	GE	5.0%
1.0	TDG	15.0%	MUB	0.0%
1.0	POST	10.0%	MSFT	0.0%
1.0	MSFT	10.0%	MRK	0.0%
1.0	CNC	10.0%	NVS	0.0%
1.0	GT	10.0%	MOS	0.0%
1.0	CLF	10.0%	MNST	0.0%
1.0	SNY	10.0%	MSI	0.0%
1.0	PEP	10.0%	ISRG	0.0%
1.0	PRGO	10.0%	LW	0.0%
1.0	ISRG	10.0%	NWL	0.0%
1.0	AMZN	10.0%	LQD	0.0%
1.0	NAVI	10.0%	LNC	0.0%



P30D: 10d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2026-06-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	NFLX	72.73%	NFLX	90.91%
10.0	META	72.73%	ORCL	36.36%
10.0	CDNS	72.73%	TMUS	18.18%
10.0	OXY	54.55%	AVGO	18.18%
10.0	MSTR	36.36%	MSTR	9.09%
10.0	GBTC	27.27%	GBTC	9.09%
10.0	SNY	27.27%	VZ	9.09%
10.0	CLF	27.27%	MU	0.0%
10.0	NVDA	18.18%	MUB	0.0%
10.0	GLD	18.18%	NAVI	0.0%
10.0	BHP	9.09%	NEM	0.0%
10.0	PRGO	9.09%	ISRG	0.0%
10.0	ORCL	9.09%	MSI	0.0%
10.0	TMUS	9.09%	NVS	0.0%
10.0	ZTS	9.09%	NWL	0.0%
10.0	AMZN	9.09%	ORLY	0.0%
10.0	AAPL	9.09%	OXY	0.0%
10.0	B	9.09%	PCG	0.0%
10.0	VICI	9.09%	NVDA	0.0%
10.0	AMC	9.09%	MS	0.0%
10.0	LVS	0.0%	PHM	0.0%
10.0	LEN	0.0%	MRK	0.0%
10.0	ORLY	0.0%	MOS	0.0%
10.0	LLY	0.0%	MNST	0.0%
10.0	ON	0.0%	META	0.0%



P90D: 1d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	VICI	20.0%	TMUS	10.0%
1.0	NFLX	20.0%	AVGO	8.33%
1.0	CDNS	20.0%	HD	8.33%
1.0	TMUS	18.33%	CDNS	8.33%
1.0	AVGO	18.33%	GBTC	6.67%
1.0	AZO	16.67%	NFLX	6.67%
1.0	MSTR	16.67%	TDG	5.0%
1.0	GLD	15.0%	EXPE	3.33%
1.0	GBTC	15.0%	CMCSA	3.33%
1.0	HD	13.33%	UNH	3.33%
1.0	BBY	13.33%	CAH	3.33%
1.0	KHC	13.33%	NVDA	3.33%
1.0	NVDA	11.67%	META	3.33%
1.0	ISRG	11.67%	ZTS	1.67%
1.0	MRK	10.0%	MSTR	1.67%
1.0	NAVI	10.0%	COST	1.67%
1.0	LLY	8.33%	MRK	1.67%
1.0	AMZN	8.33%	KHC	1.67%
1.0	EXPE	8.33%	ORCL	1.67%
1.0	TDG	8.33%	BBY	1.67%
1.0	SNY	6.67%	LLY	1.67%
1.0	FIS	6.67%	LNC	1.67%
1.0	FRA	6.67%	LQD	1.67%
1.0	NWL	6.67%	VICI	1.67%
1.0	ORCL	6.67%	GLD	1.67%



P90D: 10d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	NFLX	45.1%	NFLX	41.18%
10.0	META	37.25%	AVGO	19.61%
10.0	CMCSA	23.53%	AZO	17.65%
10.0	SNY	21.57%	CMCSA	13.73%
10.0	MSTR	21.57%	TMUS	9.8%
10.0	HD	19.61%	ORCL	7.84%
10.0	NWL	17.65%	GE	7.84%
10.0	CDNS	15.69%	GSK	5.88%
10.0	TMUS	15.69%	SNY	5.88%
10.0	GLD	15.69%	HD	5.88%
10.0	AMZN	13.73%	PCG	5.88%
10.0	AVGO	13.73%	AMC	5.88%
10.0	GE	13.73%	MSTR	3.92%
10.0	PEP	13.73%	GBTC	3.92%
10.0	GBTC	11.76%	AMZN	1.96%
10.0	VZ	9.8%	VZ	1.96%
10.0	OXY	9.8%	NVDA	1.96%
10.0	EXPE	9.8%	NAVI	0.0%
10.0	NVDA	7.84%	ORLY	0.0%
10.0	LNC	7.84%	KEY	0.0%
10.0	AMC	7.84%	NWL	0.0%
10.0	BMY	5.88%	NVS	0.0%
10.0	CLF	5.88%	KHC	0.0%
10.0	B	3.92%	NEM	0.0%
10.0	WYNN	3.92%	LEN	0.0%



P90D: 21d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	AMZN	42.5%	NFLX	45.0%
21.0	NFLX	40.0%	AVGO	32.5%
21.0	MSI	37.5%	AZO	30.0%
21.0	CMCSA	37.5%	CMCSA	10.0%
21.0	SNY	37.5%	HD	10.0%
21.0	AVGO	37.5%	GLD	7.5%
21.0	MSTR	35.0%	CHTR	7.5%
21.0	AZO	32.5%	MSTR	5.0%
21.0	GLD	30.0%	GBTC	2.5%
21.0	TMUS	30.0%	TMUS	2.5%
21.0	GBTC	22.5%	NVDA	0.0%
21.0	HD	20.0%	MU	0.0%
21.0	PEP	17.5%	NVS	0.0%
21.0	META	17.5%	NWL	0.0%
21.0	T	17.5%	ORCL	0.0%
21.0	NVDA	15.0%	ORLY	0.0%
21.0	HCA	12.5%	NEM	0.0%
21.0	EXPE	12.5%	NAVI	0.0%
21.0	GSK	12.5%	OXY	0.0%
21.0	AMC	12.5%	MUB	0.0%
21.0	MSFT	7.5%	PCG	0.0%
21.0	BMJ	7.5%	ISRG	0.0%
21.0	CHTR	5.0%	MSI	0.0%
21.0	PCG	5.0%	PHM	0.0%
21.0	NWL	5.0%	MSFT	0.0%



P365D: 1d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	LLY	14.0%	ZTS	6.4%
1.0	CDNS	12.0%	AMC	5.6%
1.0	AMZN	11.6%	LLY	4.8%
1.0	ISRG	11.2%	CMCSA	4.4%
1.0	MSTR	11.2%	GWG	4.4%
1.0	PRGO	11.2%	CDNS	4.4%
1.0	CMCSA	11.2%	TMUS	4.0%
1.0	TDG	10.8%	NFLX	3.6%
1.0	TMUS	9.2%	UNH	3.2%
1.0	SBUX	8.8%	TDG	3.2%
1.0	META	8.4%	HD	2.4%
1.0	NFLX	8.0%	KHC	2.4%
1.0	TXN	8.0%	MSTR	2.4%
1.0	VICI	8.0%	TSLA	2.0%
1.0	HD	8.0%	PRGO	1.6%
1.0	GWG	8.0%	META	1.6%
1.0	TSLA	7.6%	GLD	1.6%
1.0	AMC	7.2%	AVGO	1.6%
1.0	NAVI	6.8%	GBTC	1.2%
1.0	ZTS	6.4%	CVS	1.2%
1.0	AZO	6.4%	SBUX	1.2%
1.0	KHC	6.0%	BBY	0.8%
1.0	GLD	6.0%	BHC	0.8%
1.0	UNH	6.0%	NVDA	0.8%
1.0	PEP	5.2%	GNRC	0.8%



P365D: 10d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	AMC	23.65%	NFLX	9.96%
10.0	META	21.99%	AMC	9.13%
10.0	CMCSA	18.67%	MSTR	6.64%
10.0	NFLX	16.6%	GE	6.22%
10.0	MSTR	14.52%	CMCSA	5.81%
10.0	AMZN	11.62%	TDG	4.98%
10.0	UNH	10.37%	UNH	4.98%
10.0	TXN	9.96%	AVGO	4.15%
10.0	TMUS	9.96%	ZTS	3.73%
10.0	TDG	9.13%	BXP	3.73%
10.0	SNY	9.13%	CZR	3.32%
10.0	HD	9.13%	AMZN	3.32%
10.0	PRGO	9.13%	CLF	3.32%
10.0	CLF	8.71%	QCOM	2.9%
10.0	LLY	8.71%	TMUS	2.49%
10.0	GNRC	8.3%	CVS	2.49%
10.0	CVS	7.88%	ORCL	2.49%
10.0	AAP	7.47%	GNRC	2.49%
10.0	GWW	7.47%	TXN	2.07%
10.0	ZTS	7.05%	BUD	2.07%
10.0	QCOM	6.64%	LLY	1.66%
10.0	AMD	6.22%	KHC	1.66%
10.0	GE	6.22%	GSK	1.66%
10.0	CHTR	6.22%	PRGO	1.66%
10.0	GLD	5.81%	AMGN	1.24%



P365D: 21d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	CMCSA	26.96%	ZTS	10.87%
21.0	TDG	20.43%	NFLX	9.57%
21.0	AMC	19.13%	CMCSA	9.57%
21.0	AMZN	19.13%	BXP	8.7%
21.0	MSTR	17.39%	MSTR	7.83%
21.0	META	14.35%	PRGO	6.96%
21.0	TXN	13.91%	AVGO	5.65%
21.0	TMUS	13.91%	BUD	5.22%
21.0	CLF	13.48%	UNH	5.22%
21.0	UNH	12.17%	AZO	3.91%
21.0	ZTS	11.3%	IRM	3.48%
21.0	PRGO	10.87%	GLD	3.48%
21.0	NWL	10.43%	CLF	3.04%
21.0	CHTR	10.0%	MSI	3.04%
21.0	AMD	10.0%	AMC	3.04%
21.0	SNY	9.57%	QCOM	2.17%
21.0	GLD	8.7%	LQD	2.17%
21.0	GNRC	8.7%	AMZN	2.17%
21.0	BXP	8.26%	TMUS	1.74%
21.0	NFLX	7.83%	CZR	1.74%
21.0	MSI	6.52%	CHTR	1.3%
21.0	AVGO	6.52%	GSK	1.3%
21.0	BUD	5.65%	META	1.3%
21.0	LLY	5.22%	LW	1.3%
21.0	NAVI	4.78%	BALL	0.87%



P365D: 63d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	PRGO	48.94%	PRGO	24.47%
63.0	MSTR	42.02%	MSTR	24.47%
63.0	CMCSA	42.02%	NFLX	22.34%
63.0	NFLX	28.72%	CHTR	19.68%
63.0	AMC	26.06%	TDG	9.57%
63.0	ZTS	25.53%	CMCSA	7.98%
63.0	TDG	22.87%	ZTS	5.32%
63.0	META	22.34%	BXP	5.32%
63.0	BXP	21.81%	META	4.79%
63.0	ISRG	18.62%	TMUS	3.72%
63.0	MSI	17.02%	MSI	2.66%
63.0	TMUS	15.96%	HD	2.66%
63.0	CLF	14.36%	NWL	1.6%
63.0	HD	13.83%	ISRG	1.6%
63.0	NWL	12.77%	AMC	1.6%
63.0	LW	11.7%	AZO	1.06%
63.0	QCOM	11.17%	CNC	0.53%
63.0	GNRC	10.11%	B	0.0%
63.0	BUD	9.04%	ON	0.0%
63.0	IRM	9.04%	NVDA	0.0%
63.0	BALL	8.51%	NVS	0.0%
63.0	VNO	7.98%	ADBE	0.0%
63.0	AMZN	7.45%	ORCL	0.0%
63.0	NAVI	6.91%	NEM	0.0%
63.0	CHTR	6.91%	ORLY	0.0%



P365D: 126d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	MSTR	67.2%	MSTR	56.8%
126.0	AMC	57.6%	PRGO	30.4%
126.0	ZTS	50.4%	AMC	16.8%
126.0	NFLX	50.4%	BXP	16.8%
126.0	BXP	45.6%	CHTR	16.0%
126.0	PRGO	39.2%	NFLX	13.6%
126.0	LEN	36.8%	AAP	10.4%
126.0	CPRT	31.2%	ZTS	6.4%
126.0	ORCL	30.4%	INTU	4.0%
126.0	NAVI	28.0%	ORCL	2.4%
126.0	ISRG	20.0%	LEN	2.4%
126.0	TDG	18.4%	CLF	0.8%
126.0	CMCSA	17.6%	TDG	0.8%
126.0	CHTR	16.8%	LNC	0.0%
126.0	META	14.4%	LQD	0.0%
126.0	UNH	14.4%	KHC	0.0%
126.0	INTU	14.4%	PCG	0.0%
126.0	AAP	13.6%	OXY	0.0%
126.0	VNO	13.6%	ORLY	0.0%
126.0	AZO	4.8%	ON	0.0%
126.0	CLF	3.2%	NWL	0.0%
126.0	BBY	2.4%	NVS	0.0%
126.0	AMZN	2.4%	NVDA	0.0%
126.0	HCA	1.6%	NEM	0.0%
126.0	TMUS	1.6%	LLY	0.0%



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

All TMD: 1d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	PHM	-4.7%	QQQ	-2.17%
1.0	MOS	-4.52%	TRGP	-2.08%
1.0	MS	-4.52%	HSBC	-2.08%
1.0	TRGP	-4.16%	IRM	-1.99%
1.0	THC	-3.8%	GS	-1.9%
1.0	HYG	-3.62%	AMAT	-1.9%
1.0	CSCO	-3.44%	PWR	-1.9%
1.0	QQQ	-3.44%	THC	-1.81%
1.0	NVDA	-3.44%	MS	-1.81%
1.0	VNO	-3.44%	ORLY	-1.72%
1.0	MNST	-3.35%	PCG	-1.72%
1.0	FSUGY	-3.35%	MNST	-1.72%
1.0	PCG	-3.35%	CMG	-1.72%
1.0	CCL	-3.25%	VST	-1.72%
1.0	IRM	-3.16%	WDC	-1.63%
1.0	CAH	-3.16%	SPY	-1.63%
1.0	VST	-3.07%	NVS	-1.63%
1.0	AMAT	-2.98%	NVDA	-1.63%
1.0	CPRT	-2.98%	RIO	-1.63%
1.0	X	-2.95%	EMB	-1.54%
1.0	HSBC	-2.89%	PHM	-1.54%
1.0	GS	-2.8%	PEP	-1.54%
1.0	WRK	-2.79%	ACGL	-1.54%
1.0	HLT	-2.62%	JPM	-1.45%
1.0	PWR	-2.53%	HYG	-1.45%



All TMD: 10d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	MS	-5.01%	MUB	-3.74%
10.0	MUB	-4.74%	BAC	-2.55%
10.0	X	-3.94%	ABBV	-2.46%
10.0	THC	-3.92%	PCG	-2.46%
10.0	CSCO	-3.83%	COST	-2.37%
10.0	NVDA	-3.56%	CMG	-2.37%
10.0	AZN	-3.46%	TRGP	-2.19%
10.0	BAC	-3.46%	WRK	-2.17%
10.0	TRGP	-3.37%	WDC	-2.01%
10.0	MNST	-3.28%	X	-1.91%
10.0	MOS	-3.19%	INTU	-1.82%
10.0	WRK	-3.17%	JPM	-1.73%
10.0	HLT	-3.1%	SBUX	-1.73%
10.0	QQQ	-3.01%	MRK	-1.73%
10.0	CPRT	-3.01%	VST	-1.73%
10.0	PHM	-3.01%	MS	-1.73%
10.0	HSBC	-2.92%	IRM	-1.73%
10.0	ORLY	-2.92%	AZN	-1.64%
10.0	COST	-2.92%	WFC	-1.64%
10.0	IRM	-2.83%	ADBE	-1.64%
10.0	MU	-2.73%	LNC	-1.55%
10.0	JPM	-2.73%	HCA	-1.55%
10.0	ABBV	-2.73%	BBY	-1.55%
10.0	VST	-2.64%	USB	-1.55%
10.0	FSUGY	-2.64%	FIS	-1.55%



All TMD: 21d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	MUB	-7.83%	MUB	-4.06%
21.0	TEVA	-4.14%	LW	-2.85%
21.0	ABBV	-4.05%	CMG	-2.58%
21.0	MS	-3.96%	PCG	-2.3%
21.0	QQQ	-3.78%	COST	-2.03%
21.0	COST	-3.68%	USB	-1.93%
21.0	WRK	-3.57%	TFC	-1.84%
21.0	CPRT	-3.5%	AZN	-1.75%
21.0	TRGP	-3.31%	CPRT	-1.66%
21.0	CMG	-3.31%	HLT	-1.57%
21.0	FSUGY	-3.13%	WDC	-1.57%
21.0	MNST	-3.04%	INTC	-1.47%
21.0	THC	-3.04%	TEVA	-1.47%
21.0	USB	-2.95%	FITB	-1.29%
21.0	IRM	-2.85%	HSBC	-1.29%
21.0	ORLY	-2.85%	FRA	-1.29%
21.0	SPY	-2.76%	X	-1.21%
21.0	CSCO	-2.49%	ADBE	-1.2%
21.0	AZN	-2.49%	ABBV	-1.2%
21.0	GT	-2.39%	LVS	-1.2%
21.0	EMB	-2.3%	TRGP	-1.1%
21.0	HLT	-2.03%	INTU	-1.1%
21.0	LVS	-1.93%	BAC	-1.01%
21.0	PWR	-1.93%	FCX	-1.01%
21.0	PEP	-1.84%	MU	-1.01%



All TMD: 63d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	MUB	-4.99%	IEP	-6.03%
63.0	USB	-3.83%	MUB	-3.74%
63.0	LEN	-3.45%	PCG	-2.97%
63.0	MSFT	-3.45%	HCA	-2.39%
63.0	X	-3.44%	BHC	-2.3%
63.0	CMG	-3.16%	USB	-2.3%
63.0	CSCO	-2.87%	X	-2.17%
63.0	TRGP	-2.68%	VFC	-1.72%
63.0	THC	-2.2%	GSK	-1.72%
63.0	FSUGY	-2.2%	VZ	-1.63%
63.0	AZN	-2.11%	CTLT	-1.61%
63.0	SPY	-2.11%	AZN	-1.44%
63.0	DHI	-2.01%	TFC	-1.34%
63.0	CPRT	-1.92%	AA	-1.25%
63.0	GE	-1.82%	CLF	-1.15%
63.0	ACGL	-1.72%	INTU	-0.86%
63.0	IRM	-1.53%	IRM	-0.77%
63.0	QQQ	-1.53%	HYG	-0.67%
63.0	NVDA	-1.44%	SNY	-0.67%
63.0	MS	-1.44%	LW	-0.48%
63.0	LUMN	-1.34%	MU	-0.48%
63.0	PWR	-1.34%	EMB	-0.38%
63.0	PHM	-1.34%	NEM	-0.38%
63.0	SLV	-1.25%	SLV	-0.29%
63.0	TEVA	-1.05%	LVS	-0.29%



All TMD: 126d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	MUB	-6.02%	IEP	-12.64%
126.0	LW	-3.98%	BALL	-2.45%
126.0	IRM	-3.98%	LW	-2.14%
126.0	PCG	-3.47%	GSK	-2.04%
126.0	VZ	-2.55%	PCG	-1.43%
126.0	BALL	-2.45%	VZ	-1.22%
126.0	LUMN	-2.45%	CNC	-1.12%
126.0	INTC	-1.63%	EMB	-0.82%
126.0	FSUGY	-1.33%	MUB	-0.61%
126.0	PHM	-1.22%	IRM	-0.61%
126.0	CMG	-1.22%	INTC	-0.31%
126.0	CSTM	-1.12%	NEM	-0.2%
126.0	WRK	-1.03%	CPRT	-0.1%
126.0	LEN	-1.02%	NAVI	0.0%
126.0	LVS	-1.02%	MU	0.0%
126.0	X	-0.97%	MSI	0.0%
126.0	BBY	-0.82%	MSFT	0.0%
126.0	MSFT	-0.71%	MS	0.0%
126.0	NVDA	-0.61%	MOS	0.0%
126.0	GOOGL	-0.41%	MNST	0.0%
126.0	CSCO	-0.41%	AA	0.0%
126.0	GBTC	-0.31%	LNC	0.0%
126.0	ACGL	-0.31%	LLY	0.0%
126.0	EMB	-0.2%	KHC	0.0%
126.0	SPY	-0.2%	KALU	0.0%



All TMD: 252d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
252.0	LUMN	-10.41%	IEP	-22.92%
252.0	LW	-9.94%	FRCB	-0.37%
252.0	CPRT	-6.78%	CNC	-0.12%
252.0	VZ	-5.38%	LW	-0.12%
252.0	CMG	-1.75%	IRM	0.0%
252.0	CSTM	-1.64%	ORCL	0.0%
252.0	IEP	-1.52%	NWL	0.0%
252.0	BMJ	-1.4%	NVS	0.0%
252.0	PEP	-1.05%	NVDA	0.0%
252.0	MRK	-0.94%	NFLX	0.0%
252.0	INTC	-0.58%	NAVI	0.0%
252.0	PCG	-0.35%	MUB	0.0%
252.0	GWG	0.0%	MU	0.0%
252.0	GBTC	0.0%	MSI	0.0%
252.0	GE	0.0%	MSFT	0.0%
252.0	HSBC	0.0%	MS	0.0%
252.0	HON	0.0%	MOS	0.0%
252.0	GS	0.0%	INTC	0.0%
252.0	GILD	0.0%	MNST	0.0%
252.0	HLT	0.0%	ORLY	0.0%
252.0	SLV	0.0%	LVS	0.0%
252.0	GOOGL	0.0%	HYG	0.0%
252.0	IRM	0.0%	LUMN	0.0%
252.0	HD	0.0%	LQD	0.0%
252.0	HCA	0.0%	LNC	0.0%



P30D: 1d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2026-06-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	CSTM	-20.0%	AA	-15.0%
1.0	RIO	-20.0%	T	-15.0%
1.0	CSCO	-15.0%	TXN	-15.0%
1.0	MU	-15.0%	INTC	-10.0%
1.0	QQQ	-15.0%	HON	-10.0%
1.0	MS	-15.0%	MU	-10.0%
1.0	ELAN	-10.0%	GNRC	-10.0%
1.0	VCSH	-10.0%	QQQ	-10.0%
1.0	CHTR	-10.0%	CSTM	-10.0%
1.0	FSUGY	-10.0%	CSCO	-10.0%
1.0	CCL	-10.0%	VZ	-10.0%
1.0	GNRC	-10.0%	QCOM	-10.0%
1.0	GS	-10.0%	AAPL	-10.0%
1.0	HON	-10.0%	AMAT	-10.0%
1.0	CPRT	-10.0%	WDC	-10.0%
1.0	AA	-10.0%	ADBE	-5.0%
1.0	SPY	-10.0%	AMC	-5.0%
1.0	ADBE	-10.0%	CPRT	-5.0%
1.0	AMAT	-10.0%	RIO	-5.0%
1.0	MOS	-10.0%	MS	-5.0%
1.0	KALU	-5.0%	NEM	-5.0%
1.0	PCG	-5.0%	SPY	-5.0%
1.0	NVS	-5.0%	AMD	-5.0%
1.0	EMB	-5.0%	TEVA	-5.0%
1.0	FITB	-5.0%	PWR	-5.0%



P30D: 10d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2026-06-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	RIO	-27.27%	AA	-63.64%
10.0	XOM	-27.27%	ADBE	-54.55%
10.0	LUMN	-18.18%	ON	-27.27%
10.0	FSUGY	-18.18%	MSFT	-9.09%
10.0	INTU	-9.09%	MS	0.0%
10.0	CSTM	-9.09%	MSI	0.0%
10.0	AA	-9.09%	MU	0.0%
10.0	NVS	0.0%	MUB	0.0%
10.0	NEM	0.0%	NAVI	0.0%
10.0	NAVI	0.0%	NEM	0.0%
10.0	MUB	0.0%	NVDA	0.0%
10.0	MNST	0.0%	NVS	0.0%
10.0	MU	0.0%	NWL	0.0%
10.0	MSI	0.0%	ORLY	0.0%
10.0	MSFT	0.0%	OXY	0.0%
10.0	MS	0.0%	MRK	0.0%
10.0	MRK	0.0%	MOS	0.0%
10.0	MOS	0.0%	MNST	0.0%
10.0	LW	0.0%	META	0.0%
10.0	LVS	0.0%	LW	0.0%
10.0	LQD	0.0%	LVS	0.0%
10.0	LNC	0.0%	LUMN	0.0%
10.0	LLY	0.0%	LQD	0.0%
10.0	LEN	0.0%	LNC	0.0%
10.0	KHC	0.0%	LLY	0.0%



P90D: 1d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	CSTM	-11.67%	AA	-8.33%
1.0	ELAN	-11.67%	QCOM	-8.33%
1.0	CSCO	-8.33%	ELAN	-6.67%
1.0	RIO	-8.33%	OXY	-6.67%
1.0	AA	-6.67%	T	-5.0%
1.0	CCL	-6.67%	B	-5.0%
1.0	NEM	-6.67%	TXN	-5.0%
1.0	MU	-6.67%	VZ	-5.0%
1.0	VCSH	-6.67%	VCSH	-5.0%
1.0	ORLY	-6.67%	CSTM	-5.0%
1.0	ADBE	-6.67%	INTC	-5.0%
1.0	HSBC	-6.67%	BMJ	-3.33%
1.0	MNST	-6.67%	GNRC	-3.33%
1.0	PCG	-5.0%	MSFT	-3.33%
1.0	CHTR	-5.0%	MU	-3.33%
1.0	PWR	-5.0%	INTU	-3.33%
1.0	HON	-5.0%	NEM	-3.33%
1.0	QQQ	-5.0%	HON	-3.33%
1.0	HLT	-5.0%	CSCO	-3.33%
1.0	JPM	-5.0%	LUMN	-3.33%
1.0	USB	-5.0%	PCG	-3.33%
1.0	THC	-5.0%	FSUGY	-3.33%
1.0	OXY	-5.0%	QQQ	-3.33%
1.0	GNRC	-5.0%	RIO	-3.33%
1.0	MS	-5.0%	AAPL	-3.33%



P90D: 10d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	XOM	-11.76%	AA	-13.73%
10.0	FSUGY	-11.76%	ADBE	-13.73%
10.0	CAH	-9.8%	INTU	-13.73%
10.0	LUMN	-7.84%	COST	-7.84%
10.0	AZN	-7.84%	ON	-5.88%
10.0	THC	-7.84%	FCX	-5.88%
10.0	GT	-5.88%	MSFT	-3.92%
10.0	WFC	-5.88%	OXY	-3.92%
10.0	RIO	-5.88%	T	-1.96%
10.0	ACGL	-5.88%	POST	-1.96%
10.0	INTU	-5.88%	ELAN	-1.96%
10.0	ELAN	-5.88%	MSI	-1.96%
10.0	ORLY	-3.92%	HON	-1.96%
10.0	HLT	-3.92%	NVS	0.0%
10.0	TFC	-3.92%	ZION	0.0%
10.0	POST	-3.92%	NEM	0.0%
10.0	CSTM	-1.96%	NAVI	0.0%
10.0	CMG	-1.96%	MUB	0.0%
10.0	INTC	-1.96%	JAZZ	0.0%
10.0	GNRC	-1.96%	MU	0.0%
10.0	HSBC	-1.96%	JPM	0.0%
10.0	PHM	-1.96%	MS	0.0%
10.0	COST	-1.96%	KALU	0.0%
10.0	MOS	-1.96%	MOS	0.0%
10.0	AA	-1.96%	NWL	0.0%



P90D: 21d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	CAH	-12.5%	AA	-7.5%
21.0	FSUGY	-12.5%	ON	-5.0%
21.0	AA	-10.0%	T	-2.5%
21.0	XOM	-10.0%	INTU	-2.5%
21.0	POST	-10.0%	WDC	0.0%
21.0	ORLY	-5.0%	ORCL	0.0%
21.0	COST	-5.0%	XOM	0.0%
21.0	GOOGL	-2.5%	NWL	0.0%
21.0	CPRT	-2.5%	NVS	0.0%
21.0	ON	-2.5%	NVDA	0.0%
21.0	WFC	-2.5%	NEM	0.0%
21.0	ELAN	-2.5%	NAVI	0.0%
21.0	JPM	0.0%	MUB	0.0%
21.0	NVS	0.0%	MU	0.0%
21.0	NAVI	0.0%	MSI	0.0%
21.0	MUB	0.0%	MSFT	0.0%
21.0	INTC	0.0%	MS	0.0%
21.0	MU	0.0%	MRK	0.0%
21.0	MS	0.0%	MOS	0.0%
21.0	MRK	0.0%	MNST	0.0%
21.0	MOS	0.0%	META	0.0%
21.0	MNST	0.0%	LW	0.0%
21.0	LW	0.0%	LVS	0.0%
21.0	LVS	0.0%	LUMN	0.0%
21.0	IRM	0.0%	LQD	0.0%



P365D: 1d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	ELAN	-6.8%	NEM	-5.2%
1.0	MOS	-6.4%	B	-4.4%
1.0	SLV	-6.02%	VCSH	-4.0%
1.0	HSBC	-6.0%	AA	-3.6%
1.0	MNST	-6.0%	SLV	-3.21%
1.0	RIO	-6.0%	ELAN	-3.2%
1.0	HLT	-5.6%	HSBC	-3.2%
1.0	AA	-5.6%	RIO	-3.2%
1.0	VCSH	-5.6%	WDC	-3.2%
1.0	CSCO	-5.2%	OXY	-2.8%
1.0	CSTM	-5.2%	PWR	-2.8%
1.0	MS	-4.8%	CSTM	-2.8%
1.0	NEM	-4.8%	FSUGY	-2.4%
1.0	ORLY	-4.8%	BHP	-2.4%
1.0	THC	-4.4%	MNST	-2.4%
1.0	FSUGY	-4.0%	LUMN	-2.4%
1.0	NVS	-4.0%	NVS	-2.4%
1.0	JPM	-3.6%	MU	-2.4%
1.0	PWR	-3.6%	ORLY	-2.4%
1.0	BHP	-3.6%	TFC	-2.4%
1.0	OXY	-3.6%	WFC	-2.4%
1.0	GS	-3.2%	AMAT	-2.4%
1.0	FITB	-3.2%	ADBE	-2.4%
1.0	EMB	-3.2%	KEY	-2.0%
1.0	CPRT	-3.2%	T	-2.0%



P365D: 10d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	ORLY	-9.13%	CMG	-7.05%
10.0	THC	-6.64%	INTU	-4.98%
10.0	MOS	-6.22%	LUMN	-3.73%
10.0	SLV	-5.0%	FIS	-3.32%
10.0	HSBC	-4.98%	AA	-2.9%
10.0	LEN	-4.98%	MSFT	-2.9%
10.0	LUMN	-4.98%	ADBE	-2.9%
10.0	CPRT	-4.56%	SLV	-2.5%
10.0	GT	-4.56%	FCX	-2.49%
10.0	XOM	-4.15%	B	-2.49%
10.0	FIS	-4.15%	MOS	-2.49%
10.0	MNST	-3.73%	MNST	-2.49%
10.0	ELAN	-3.73%	CYH	-2.07%
10.0	RIO	-3.73%	LNC	-2.07%
10.0	WFC	-3.73%	COST	-1.66%
10.0	NVS	-3.32%	T	-1.66%
10.0	FITB	-3.32%	NVS	-1.66%
10.0	MUB	-3.32%	FITB	-1.66%
10.0	CNC	-2.9%	NAVI	-1.66%
10.0	LVS	-2.9%	XOM	-1.24%
10.0	CAH	-2.9%	HSBC	-1.24%
10.0	JPM	-2.9%	TFC	-1.24%
10.0	EMB	-2.9%	NEM	-1.24%
10.0	BA	-2.9%	POST	-1.24%
10.0	FSUGY	-2.49%	TEVA	-1.24%



P365D: 21d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	ORLY	-6.96%	CMG	-6.09%
21.0	MOS	-6.09%	FIS	-5.65%
21.0	GT	-5.22%	MSFT	-3.91%
21.0	BA	-5.22%	FITB	-3.91%
21.0	TEVA	-4.78%	TFC	-3.48%
21.0	EMB	-4.78%	EXPE	-2.61%
21.0	USB	-4.35%	INTU	-2.61%
21.0	RIO	-3.91%	B	-2.61%
21.0	NVS	-3.91%	EMB	-2.17%
21.0	WFC	-3.91%	MUB	-2.17%
21.0	FRA	-3.48%	MNST	-2.17%
21.0	THC	-3.48%	MOS	-1.74%
21.0	CMG	-3.48%	AA	-1.3%
21.0	VCSH	-3.48%	HSBC	-1.3%
21.0	MNST	-3.04%	WFC	-1.3%
21.0	XOM	-3.04%	SLV	-0.87%
21.0	UAA	-3.04%	VCSH	-0.87%
21.0	SLV	-2.62%	CCL	-0.87%
21.0	MUB	-2.61%	KEY	-0.87%
21.0	PHM	-2.61%	ON	-0.87%
21.0	CPRT	-2.61%	GT	-0.87%
21.0	HSBC	-2.61%	USB	-0.87%
21.0	ZION	-2.61%	FRA	-0.43%
21.0	CAH	-2.61%	BHP	-0.43%
21.0	KEY	-2.61%	GE	-0.43%



P365D: 63d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	MSFT	-20.74%	INTU	-4.26%
63.0	MOS	-10.64%	HCA	-4.26%
63.0	FRA	-4.79%	SLV	-1.6%
63.0	CMG	-3.19%	MSFT	-1.6%
63.0	ADBE	-3.19%	T	-1.06%
63.0	VICI	-2.66%	FIS	-0.53%
63.0	THC	-2.66%	AA	0.0%
63.0	XOM	-2.13%	MS	0.0%
63.0	GBTC	-1.6%	MU	0.0%
63.0	B	-1.6%	NAVI	0.0%
63.0	SLV	-1.07%	NEM	0.0%
63.0	LNC	-1.06%	NVDA	0.0%
63.0	LUMN	-0.53%	NVS	0.0%
63.0	VCSH	0.0%	ON	0.0%
63.0	VFC	0.0%	ORCL	0.0%
63.0	LVS	0.0%	MUB	0.0%
63.0	LQD	0.0%	MRK	0.0%
63.0	KEY	0.0%	MNST	0.0%
63.0	KALU	0.0%	ORLY	0.0%
63.0	JPM	0.0%	LW	0.0%
63.0	TLT	0.0%	LVS	0.0%
63.0	ZION	0.0%	LUMN	0.0%
63.0	INTC	0.0%	LQD	0.0%
63.0	IEP	0.0%	LNC	0.0%
63.0	HYG	0.0%	LLY	0.0%



P365D: 126d

The columns labeled “VaRBreak_VmS” represent the average amount by which Vector Model VaR Breakage exceeds Sigma VaR 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	FRA	-18.4%	AA	0.0%
126.0	ADBE	-8.8%	OXY	0.0%
126.0	MSFT	-8.0%	ORLY	0.0%
126.0	FIS	-4.8%	ON	0.0%
126.0	GBTC	-2.4%	NWL	0.0%
126.0	MOS	-2.4%	NVS	0.0%
126.0	CMG	-0.8%	NVDA	0.0%
126.0	MUB	0.0%	NEM	0.0%
126.0	NVDA	0.0%	NAVI	0.0%
126.0	MSI	0.0%	MUB	0.0%
126.0	NVS	0.0%	MU	0.0%
126.0	MS	0.0%	MSI	0.0%
126.0	MRK	0.0%	MSFT	0.0%
126.0	NWL	0.0%	MS	0.0%
126.0	ON	0.0%	MRK	0.0%
126.0	NEM	0.0%	PCG	0.0%
126.0	MU	0.0%	MOS	0.0%
126.0	MNST	0.0%	META	0.0%
126.0	LW	0.0%	LW	0.0%
126.0	LUMN	0.0%	LVS	0.0%
126.0	LQD	0.0%	LUMN	0.0%
126.0	LNC	0.0%	LQD	0.0%
126.0	LLY	0.0%	LNC	0.0%
126.0	KEY	0.0%	LLY	0.0%
126.0	KALU	0.0%	KHC	0.0%



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

All TMD: 1d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	GME	0.21%	GME	0.25%
1.0	MSTR	0.12%	NWL	0.14%
1.0	META	0.11%	UAA	0.12%
1.0	NWL	0.1%	UNH	0.09%
1.0	UNH	0.09%	QCOM	0.09%
1.0	AAPL	0.09%	INTU	0.08%
1.0	NFLX	0.08%	CZR	0.07%
1.0	INTU	0.08%	BALL	0.07%
1.0	AAP	0.07%	ORCL	0.06%
1.0	CDNS	0.07%	AAPL	0.06%
1.0	WDC	0.07%	CTLT	0.06%
1.0	HD	0.07%	IEP	0.05%
1.0	AA	0.05%	ON	0.04%
1.0	QCOM	0.05%	AMC	0.04%
1.0	GWW	0.05%	KHC	0.04%
1.0	MRK	0.05%	GNRC	0.04%
1.0	XOM	0.05%	LW	0.04%
1.0	ORCL	0.04%	CMA	0.03%
1.0	BAC	0.04%	SNY	0.03%
1.0	CZR	0.04%	SBUX	0.03%
1.0	CLF	0.04%	ADBE	0.03%
1.0	LW	0.04%	MSTR	0.03%
1.0	SNY	0.04%	META	0.03%
1.0	BA	0.04%	FRA	0.03%
1.0	PCG	0.04%	LNC	0.03%



All TMD: 10d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	GME	3.66%	GME	2.61%
10.0	MSTR	2.32%	MSTR	2.25%
10.0	CTLT	1.13%	CTLT	1.11%
10.0	CZR	0.95%	MU	0.65%
10.0	META	0.93%	CVS	0.57%
10.0	UNH	0.89%	CMA	0.57%
10.0	ORCL	0.88%	UNH	0.5%
10.0	UAA	0.85%	INTU	0.49%
10.0	WDC	0.79%	CZR	0.48%
10.0	INTC	0.72%	AAPL	0.47%
10.0	NFLX	0.67%	UAA	0.46%
10.0	MU	0.67%	GNRC	0.45%
10.0	OXY	0.66%	IEP	0.44%
10.0	AAPL	0.59%	NWL	0.41%
10.0	KALU	0.53%	ORCL	0.4%
10.0	AA	0.45%	AA	0.36%
10.0	LW	0.45%	META	0.36%
10.0	BA	0.44%	INTC	0.34%
10.0	GWW	0.42%	KALU	0.34%
10.0	HD	0.42%	QCOM	0.32%
10.0	GOOGL	0.41%	LNC	0.32%
10.0	NWL	0.39%	WDC	0.29%
10.0	XOM	0.38%	XOM	0.28%
10.0	SNY	0.37%	VFC	0.28%
10.0	INTU	0.37%	WRK	0.26%



All TMD: 21d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	MSTR	7.43%	MSTR	5.56%
21.0	GME	5.7%	GME	4.89%
21.0	META	3.3%	CTLT	2.74%
21.0	CTLT	2.68%	AA	1.58%
21.0	INTC	2.47%	META	1.41%
21.0	WDC	2.27%	INTC	1.32%
21.0	NFLX	2.01%	CVS	1.31%
21.0	ORCL	1.99%	UAA	1.11%
21.0	UAA	1.86%	IEP	1.08%
21.0	MU	1.8%	INTU	1.07%
21.0	UNH	1.52%	GNRC	1.03%
21.0	AA	1.51%	CMA	0.97%
21.0	TEVA	1.32%	NFLX	0.94%
21.0	KALU	1.3%	WDC	0.89%
21.0	CZR	1.28%	KALU	0.81%
21.0	OXY	1.04%	XOM	0.74%
21.0	GOOGL	0.95%	CZR	0.71%
21.0	AMGN	0.91%	ORCL	0.68%
21.0	TXN	0.87%	NWL	0.59%
21.0	GWV	0.86%	CYH	0.58%
21.0	GILD	0.85%	NAVI	0.47%
21.0	GNRC	0.85%	SBUX	0.45%
21.0	AMD	0.83%	MOS	0.41%
21.0	SBUX	0.81%	ABBV	0.41%
21.0	AAPL	0.81%	LNC	0.4%



All TMD: 63d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
63.0	WDC	12.01%	CTLT	10.61%
63.0	MSTR	11.56%	META	7.75%
63.0	CTLT	11.29%	WDC	4.83%
63.0	META	10.53%	GNRC	4.63%
63.0	NFLX	7.27%	KALU	4.31%
63.0	GNRC	6.75%	CVS	3.77%
63.0	ORCL	6.51%	GME	3.64%
63.0	KALU	4.93%	CMA	3.44%
63.0	CMA	4.48%	INTC	3.04%
63.0	GME	4.34%	AMZN	2.36%
63.0	CVS	3.89%	ORCL	2.33%
63.0	MU	3.33%	IEP	2.25%
63.0	NEM	3.29%	UAA	2.09%
63.0	UAA	3.12%	WRK	2.02%
63.0	INTC	3.01%	NEM	2.01%
63.0	AA	2.77%	CZR	1.93%
63.0	SBUX	2.72%	AA	1.78%
63.0	OXY	2.55%	OXY	1.51%
63.0	WRK	2.52%	BXP	1.44%
63.0	GILD	2.51%	GILD	1.44%
63.0	AAPL	2.32%	CNC	1.38%
63.0	XOM	2.27%	SBUX	1.26%
63.0	CZR	2.17%	CYH	1.22%
63.0	ISRG	2.14%	NAVI	1.16%
63.0	AMGN	2.11%	JAZZ	1.15%



All TMD: 126d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
126.0	MSTR	39.82%	WDC	23.93%
126.0	WDC	38.47%	META	23.39%
126.0	META	29.77%	AVGO	11.28%
126.0	NFLX	19.27%	KALU	11.13%
126.0	MU	13.19%	MU	8.07%
126.0	GNRC	12.29%	GNRC	7.7%
126.0	ORCL	9.54%	AMZN	7.09%
126.0	AVGO	9.45%	MSTR	6.62%
126.0	KALU	8.87%	INTC	6.49%
126.0	INTC	8.18%	NEM	6.26%
126.0	B	8.08%	LLY	5.92%
126.0	NEM	8.02%	GILD	5.88%
126.0	ON	6.7%	WRK	5.32%
126.0	BA	6.59%	CVS	4.92%
126.0	CTLT	6.59%	NFLX	4.71%
126.0	SLV	6.57%	BA	4.7%
126.0	GILD	6.55%	SLV	4.55%
126.0	AMAT	6.39%	IEP	4.3%
126.0	AMD	5.99%	AMAT	4.17%
126.0	GME	5.65%	TSLA	4.14%
126.0	INTU	5.35%	TEVA	4.06%
126.0	XOM	5.31%	GOOGL	3.76%
126.0	TSLA	5.09%	ISRG	3.71%
126.0	WRK	5.06%	INTU	3.57%
126.0	AAPL	5.01%	GME	3.5%



All TMD: 252d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
252.0	WDC	143.35%	WDC	71.66%
252.0	MSTR	141.81%	META	40.69%
252.0	META	76.23%	AMZN	27.85%
252.0	NFLX	53.8%	MSTR	27.44%
252.0	MU	44.07%	KALU	25.55%
252.0	AVGO	32.69%	NEM	23.97%
252.0	INTC	31.3%	AVGO	23.8%
252.0	AMZN	28.15%	MU	23.53%
252.0	NEM	27.33%	B	22.5%
252.0	GNRC	26.42%	VST	22.47%
252.0	B	25.2%	NFLX	21.18%
252.0	KALU	24.2%	INTU	19.42%
252.0	SLV	24.13%	ISRG	18.87%
252.0	TSLA	23.7%	SLV	18.09%
252.0	ORCL	23.19%	INTC	17.31%
252.0	ELAN	23.01%	GOOGL	16.48%
252.0	INTU	22.02%	ORCL	15.33%
252.0	VST	20.52%	GILD	14.33%
252.0	AMAT	19.96%	THC	11.63%
252.0	ISRG	19.43%	GNRC	11.18%
252.0	GOOGL	18.64%	CVS	10.22%
252.0	CTLT	18.05%	EXPE	9.76%
252.0	EXPE	17.56%	TDG	9.68%
252.0	GILD	17.23%	LEN	9.12%
252.0	LLY	16.92%	COST	9.07%



P30D: 1d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2026-06-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	NWL	1.62%	AMC	1.02%
1.0	AMC	1.28%	LUMN	0.89%
1.0	LUMN	1.02%	WDC	0.8%
1.0	WDC	1.0%	NWL	0.79%
1.0	GT	0.87%	AA	0.79%
1.0	GE	0.84%	SLV	0.52%
1.0	MRK	0.82%	T	0.49%
1.0	TSLA	0.67%	ADBE	0.47%
1.0	ON	0.66%	LVS	0.47%
1.0	CYH	0.64%	INTU	0.45%
1.0	UNH	0.58%	OXY	0.44%
1.0	AA	0.56%	MRK	0.43%
1.0	SLV	0.48%	KHC	0.43%
1.0	PHM	0.47%	FSUGY	0.42%
1.0	INTU	0.46%	RIO	0.42%
1.0	ADBE	0.45%	GILD	0.38%
1.0	FSUGY	0.39%	CPRT	0.37%
1.0	RIO	0.36%	B	0.31%
1.0	CLF	0.34%	CLF	0.31%
1.0	CPRT	0.3%	BBY	0.26%
1.0	GOOGL	0.27%	ON	0.25%
1.0	BBY	0.24%	FIS	0.24%
1.0	CNC	0.23%	AMZN	0.23%
1.0	OXY	0.21%	UNH	0.2%
1.0	CSTM	0.2%	CSTM	0.2%



P30D: 10d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2026-06-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	NWL	22.12%	AMC	11.82%
10.0	AMC	17.13%	GE	9.31%
10.0	GE	15.97%	AA	6.58%
10.0	CYH	9.07%	ADBE	6.39%
10.0	AA	5.04%	LUMN	5.15%
10.0	PHM	4.92%	NWL	4.84%
10.0	LUMN	4.81%	XOM	4.63%
10.0	EXPE	4.31%	ON	4.45%
10.0	ADBE	3.99%	FSUGY	3.97%
10.0	UNH	3.24%	MSFT	3.94%
10.0	CAH	3.08%	BHC	2.87%
10.0	FSUGY	3.08%	LVS	2.8%
10.0	HD	2.67%	UNH	2.67%
10.0	XOM	2.59%	WDC	2.61%
10.0	CVS	2.22%	CSTM	2.61%
10.0	TDG	2.13%	FIS	2.53%
10.0	RIO	2.12%	CSCO	2.27%
10.0	CSCO	2.04%	PRGO	1.99%
10.0	CSTM	1.94%	RIO	1.79%
10.0	BXP	1.6%	BXP	1.72%
10.0	MRK	1.52%	PHM	1.5%
10.0	GT	1.51%	AMZN	1.45%
10.0	ON	1.51%	QCOM	1.38%
10.0	BALL	1.39%	EXPE	1.29%
10.0	UAA	1.32%	VICI	1.29%



P90D: 1d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	WDC	1.04%	UNH	0.76%
1.0	UNH	1.01%	WDC	0.74%
1.0	AMC	0.95%	AMC	0.68%
1.0	CDNS	0.77%	LLY	0.53%
1.0	CYH	0.56%	CHTR	0.3%
1.0	LUMN	0.54%	AAP	0.3%
1.0	AMD	0.51%	T	0.24%
1.0	LLY	0.49%	LUMN	0.24%
1.0	TSLA	0.48%	QCOM	0.23%
1.0	AAP	0.44%	ZTS	0.22%
1.0	MRK	0.43%	OXY	0.21%
1.0	CNC	0.43%	MRK	0.21%
1.0	ON	0.36%	ORCL	0.21%
1.0	BXP	0.33%	GILD	0.2%
1.0	BBY	0.31%	META	0.18%
1.0	META	0.3%	LVS	0.17%
1.0	ORCL	0.25%	AA	0.17%
1.0	CVS	0.23%	CPRT	0.15%
1.0	NWL	0.22%	NEM	0.14%
1.0	PRGO	0.22%	SLV	0.14%
1.0	IEP	0.21%	MOS	0.12%
1.0	GE	0.19%	B	0.11%
1.0	OXY	0.19%	PRGO	0.11%
1.0	CLF	0.18%	CYH	0.11%
1.0	QCOM	0.17%	IEP	0.11%



P90D: 10d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	AMC	12.06%	UNH	8.97%
10.0	UNH	10.37%	ORCL	8.57%
10.0	ORCL	9.61%	AMC	7.06%
10.0	WDC	6.59%	INTC	6.39%
10.0	AMD	6.51%	CVS	3.51%
10.0	INTC	6.44%	ZTS	2.69%
10.0	QCOM	6.42%	BXP	2.37%
10.0	NWL	5.76%	VFC	2.29%
10.0	LLY	5.7%	MSTR	2.16%
10.0	TSLA	4.88%	LLY	2.11%
10.0	CVS	4.85%	QCOM	2.04%
10.0	GE	3.3%	JAZZ	2.02%
10.0	BXP	3.15%	FIS	1.51%
10.0	CDNS	2.54%	AA	1.47%
10.0	CNC	2.54%	XOM	1.4%
10.0	CAH	2.37%	NWL	1.39%
10.0	JAZZ	2.29%	FCX	1.38%
10.0	MSTR	2.17%	WDC	1.34%
10.0	ZTS	2.01%	GE	1.21%
10.0	AAP	1.91%	AZN	1.16%
10.0	CYH	1.89%	LVS	1.14%
10.0	BUD	1.89%	B	1.1%
10.0	PHM	1.76%	CHTR	1.08%
10.0	BBY	1.42%	BUD	1.02%
10.0	VNO	1.41%	ADBE	1.02%



P90D: 21d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	INTC	33.18%	INTC	29.26%
21.0	AMC	21.37%	ORCL	17.48%
21.0	UNH	21.0%	WDC	12.95%
21.0	AMD	20.3%	UNH	12.85%
21.0	ORCL	18.34%	BXP	8.72%
21.0	WDC	16.96%	CVS	6.84%
21.0	LLY	13.25%	QCOM	6.25%
21.0	CVS	12.18%	ZTS	3.0%
21.0	QCOM	10.58%	JAZZ	2.92%
21.0	JAZZ	8.57%	POST	2.84%
21.0	MSTR	8.39%	BALL	2.8%
21.0	BXP	7.5%	AZN	2.67%
21.0	CNC	6.53%	ISRG	2.5%
21.0	TSLA	4.83%	FIS	2.48%
21.0	CDNS	4.56%	TSLA	2.44%
21.0	NWL	4.35%	LVS	2.34%
21.0	ON	3.84%	CMG	2.3%
21.0	BUD	3.77%	VFC	2.1%
21.0	TDG	3.77%	CYH	2.08%
21.0	BBY	3.13%	AA	2.08%
21.0	KHC	2.93%	XOM	1.87%
21.0	KALU	2.89%	BIIB	1.81%
21.0	CAH	2.46%	MSTR	1.72%
21.0	CZR	2.31%	CHTR	1.71%
21.0	PHM	2.26%	ACGL	1.69%



P365D: 1d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	LLY	0.3%	LLY	0.25%
1.0	UNH	0.28%	UNH	0.22%
1.0	CYH	0.28%	ORCL	0.2%
1.0	AAP	0.27%	QCOM	0.16%
1.0	GBTC	0.25%	PCG	0.12%
1.0	CDNS	0.2%	CPRT	0.12%
1.0	MRK	0.19%	CYH	0.11%
1.0	CVS	0.15%	KHC	0.11%
1.0	TSLA	0.15%	TSLA	0.11%
1.0	ON	0.14%	GBTC	0.1%
1.0	WDC	0.14%	GT	0.1%
1.0	LW	0.14%	MRK	0.1%
1.0	PCG	0.14%	AAP	0.1%
1.0	GOOGL	0.11%	LW	0.09%
1.0	QCOM	0.11%	CHTR	0.09%
1.0	NVDA	0.1%	T	0.08%
1.0	CPRT	0.1%	MOS	0.08%
1.0	GT	0.09%	ON	0.08%
1.0	BAC	0.09%	ADBE	0.06%
1.0	MOS	0.09%	CDNS	0.06%
1.0	CMA	0.09%	SNY	0.06%
1.0	SNY	0.08%	GWW	0.06%
1.0	KHC	0.06%	HON	0.05%
1.0	T	0.06%	CVS	0.05%
1.0	BXP	0.06%	GOOGL	0.04%



P365D: 10d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	TSLA	3.34%	TSLA	2.44%
10.0	UNH	3.09%	UNH	1.91%
10.0	LLY	2.46%	ORCL	1.86%
10.0	WDC	2.2%	CVS	1.48%
10.0	CVS	1.94%	NWL	1.32%
10.0	LW	1.79%	LLY	1.07%
10.0	ORCL	1.74%	GBTC	0.99%
10.0	CDNS	1.3%	MOS	0.9%
10.0	KALU	1.21%	MSFT	0.86%
10.0	QCOM	1.19%	ISRG	0.81%
10.0	GBTC	1.18%	FIS	0.74%
10.0	INTC	1.13%	GT	0.68%
10.0	AAP	1.11%	LW	0.66%
10.0	NWL	1.06%	CPRT	0.62%
10.0	ISRG	0.99%	MU	0.59%
10.0	VST	0.94%	AAP	0.57%
10.0	JAZZ	0.89%	KALU	0.57%
10.0	EXPE	0.84%	BUD	0.55%
10.0	VFC	0.83%	FCX	0.55%
10.0	ON	0.73%	MSI	0.54%
10.0	MRK	0.68%	VFC	0.53%
10.0	AMGN	0.68%	NAVI	0.49%
10.0	CNC	0.68%	QCOM	0.47%
10.0	GW	0.67%	JAZZ	0.46%
10.0	CYH	0.64%	BBY	0.44%



P365D: 21d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	UNH	7.52%	ORCL	3.86%
21.0	INTC	7.4%	CVS	3.57%
21.0	WDC	6.37%	ISRG	2.84%
21.0	TSLA	6.11%	UNH	2.67%
21.0	LLY	5.1%	TSLA	2.6%
21.0	CVS	4.95%	NWL	2.45%
21.0	ORCL	3.48%	INTC	2.45%
21.0	TXN	3.29%	MOS	2.29%
21.0	AMD	3.03%	GBTC	1.9%
21.0	JAZZ	2.99%	INTU	1.85%
21.0	KALU	2.6%	FIS	1.81%
21.0	CNC	2.28%	CMG	1.59%
21.0	GBTC	2.26%	LW	1.51%
21.0	ISRG	2.21%	WDC	1.37%
21.0	ON	1.99%	MSFT	1.16%
21.0	QCOM	1.96%	AMGN	1.14%
21.0	MU	1.84%	VFC	1.06%
21.0	BUD	1.82%	ADBE	1.05%
21.0	AA	1.73%	VST	1.04%
21.0	AMGN	1.7%	GT	1.0%
21.0	DHI	1.67%	AA	0.98%
21.0	UAA	1.61%	QCOM	0.96%
21.0	VFC	1.25%	JAZZ	0.95%
21.0	CDNS	1.23%	VICI	0.91%
21.0	EXPE	1.15%	HON	0.87%



P365D: 63d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
63.0	WDC	26.41%	GNRC	12.39%
63.0	ON	17.59%	CVS	10.48%
63.0	GNRC	16.38%	ORCL	9.3%
63.0	TSLA	14.85%	OXY	8.88%
63.0	CVS	14.52%	KALU	7.87%
63.0	TXN	13.07%	TSLA	7.22%
63.0	KALU	12.31%	JAZZ	6.99%
63.0	ORCL	11.71%	BUD	6.33%
63.0	UNH	10.74%	GBTC	5.93%
63.0	MU	10.32%	QCOM	5.93%
63.0	JAZZ	9.94%	CNC	5.84%
63.0	OXY	9.66%	WDC	5.7%
63.0	CNC	8.89%	FIS	5.21%
63.0	INTC	8.79%	AA	4.84%
63.0	AA	7.64%	MOS	4.65%
63.0	AMGN	7.37%	AMGN	4.34%
63.0	QCOM	6.21%	CMG	4.27%
63.0	BUD	5.67%	INTC	4.21%
63.0	ISRG	5.45%	MSI	3.37%
63.0	VFC	5.44%	UAA	3.19%
63.0	UAA	4.63%	NVDA	3.03%
63.0	SBUX	4.05%	NAVI	3.0%
63.0	MSFT	3.89%	MSFT	2.77%
63.0	BIIB	3.8%	VFC	2.66%
63.0	GILD	3.43%	VNO	2.6%



P365D: 126d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
126.0	WDC	108.42%	WDC	60.13%
126.0	ON	54.56%	KALU	45.71%
126.0	KALU	45.92%	BUD	31.43%
126.0	MU	42.52%	GNRC	30.43%
126.0	GNRC	39.04%	MU	26.52%
126.0	AA	33.26%	CMA	25.9%
126.0	CMA	29.15%	ON	25.79%
126.0	JAZZ	28.04%	AA	24.22%
126.0	BUD	27.83%	AMAT	21.57%
126.0	AMAT	27.12%	JAZZ	18.9%
126.0	VFC	27.04%	PWR	13.0%
126.0	TXN	24.21%	LLY	10.55%
126.0	INTC	16.81%	FIS	10.36%
126.0	B	16.58%	GSK	9.62%
126.0	OXY	16.45%	GBTC	9.46%
126.0	AMGN	16.24%	OXY	9.13%
126.0	GWV	14.84%	TXN	8.98%
126.0	UAA	13.82%	BMV	8.06%
126.0	CNC	13.52%	VFC	7.97%
126.0	BIIB	12.13%	INTC	7.97%
126.0	CVS	11.84%	AMGN	7.96%
126.0	NEM	11.55%	CVS	7.91%
126.0	SBUX	11.09%	MOS	7.14%
126.0	BMV	11.07%	CZR	5.78%
126.0	TSLA	10.12%	SBUX	5.58%



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

All TMD: 1d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	SIVBQ	-1.1%	SIVBQ	-1.19%
1.0	SBNY	-0.61%	SBNY	-0.3%
1.0	FRCB	-0.16%	VST	-0.12%
1.0	VST	-0.14%	NVDA	-0.11%
1.0	FIS	-0.1%	AMAT	-0.1%
1.0	CSTM	-0.1%	LUMN	-0.09%
1.0	TSLA	-0.1%	GBTC	-0.09%
1.0	ETRN	-0.09%	TRGP	-0.09%
1.0	LUMN	-0.09%	PWR	-0.08%
1.0	CHTR	-0.09%	GE	-0.08%
1.0	ELAN	-0.08%	AVGO	-0.08%
1.0	NVDA	-0.08%	INTC	-0.07%
1.0	AMAT	-0.08%	CAH	-0.07%
1.0	CCL	-0.08%	CCL	-0.07%
1.0	CYH	-0.07%	TEVA	-0.07%
1.0	TEVA	-0.07%	B	-0.07%
1.0	TRGP	-0.07%	X	-0.07%
1.0	GLD	-0.06%	ETRN	-0.07%
1.0	T	-0.06%	GLD	-0.06%
1.0	AVGO	-0.06%	SLV	-0.06%
1.0	X	-0.05%	CSTM	-0.06%
1.0	CMG	-0.05%	FRCB	-0.06%
1.0	GE	-0.05%	TSLA	-0.06%
1.0	MS	-0.05%	ELAN	-0.06%
1.0	SLV	-0.05%	PHM	-0.06%



All TMD: 10d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	SBNY	-6.06%	SIVBQ	-3.67%
10.0	SIVBQ	-3.94%	SBNY	-2.79%
10.0	AMC	-1.99%	AMC	-1.06%
10.0	PRGO	-1.03%	VST	-0.78%
10.0	FRCB	-0.93%	AVGO	-0.74%
10.0	CHTR	-0.74%	TRGP	-0.74%
10.0	LUMN	-0.65%	X	-0.68%
10.0	CCL	-0.61%	NVDA	-0.65%
10.0	NVDA	-0.58%	PWR	-0.51%
10.0	TRGP	-0.58%	GLD	-0.51%
10.0	TDG	-0.58%	TDG	-0.51%
10.0	GSK	-0.56%	CCL	-0.44%
10.0	FIS	-0.48%	CDNS	-0.44%
10.0	GLD	-0.46%	MNST	-0.44%
10.0	AMAT	-0.43%	CSCO	-0.43%
10.0	VST	-0.43%	PHM	-0.43%
10.0	CSTM	-0.39%	BHC	-0.43%
10.0	X	-0.37%	GSK	-0.42%
10.0	CMG	-0.35%	AMAT	-0.4%
10.0	MS	-0.34%	AAP	-0.4%
10.0	MNST	-0.34%	IRM	-0.39%
10.0	PWR	-0.34%	CAH	-0.39%
10.0	VZ	-0.33%	GBTC	-0.38%
10.0	PHM	-0.32%	ACGL	-0.38%
10.0	ACGL	-0.3%	THC	-0.37%



All TMD: 21d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	SBNY	-18.66%	SBNY	-10.24%
21.0	SIVBQ	-9.14%	SIVBQ	-5.7%
21.0	FRCB	-4.08%	AMC	-4.2%
21.0	AMC	-3.43%	NVDA	-1.6%
21.0	PRGO	-1.96%	TRGP	-1.37%
21.0	CHTR	-1.44%	ELAN	-1.36%
21.0	AAP	-1.38%	AVGO	-1.32%
21.0	NVDA	-1.28%	PWR	-1.23%
21.0	TDG	-1.19%	VST	-1.22%
21.0	VST	-1.1%	X	-1.22%
21.0	X	-1.07%	PRGO	-1.11%
21.0	GSK	-1.04%	CSCO	-1.07%
21.0	CCL	-1.02%	CDNS	-1.03%
21.0	LUMN	-1.02%	HSBC	-1.01%
21.0	GLD	-0.98%	ETRN	-0.97%
21.0	TRGP	-0.91%	FRCB	-0.96%
21.0	CMG	-0.83%	LLY	-0.96%
21.0	FIS	-0.78%	GLD	-0.95%
21.0	IRM	-0.71%	PHM	-0.94%
21.0	ELAN	-0.66%	COST	-0.94%
21.0	CSTM	-0.65%	MNST	-0.92%
21.0	HSBC	-0.62%	CAH	-0.85%
21.0	MNST	-0.62%	BHC	-0.78%
21.0	ACGL	-0.61%	TDG	-0.76%
21.0	MS	-0.59%	MS	-0.76%



All TMD: 63d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
63.0	SBNY	-71.61%	SBNY	-42.7%
63.0	SIVBQ	-40.79%	SIVBQ	-33.39%
63.0	FRCB	-26.06%	FRCB	-16.44%
63.0	AMC	-16.56%	AMC	-10.55%
63.0	PRGO	-5.29%	TRGP	-3.56%
63.0	AAP	-4.79%	PHM	-3.01%
63.0	CHTR	-4.12%	CHTR	-2.88%
63.0	VFC	-3.18%	GLD	-2.54%
63.0	NVDA	-2.8%	PRGO	-2.52%
63.0	VNO	-2.54%	CSCO	-2.48%
63.0	GLD	-2.23%	MNST	-2.38%
63.0	MNST	-2.11%	AMD	-2.3%
63.0	PWR	-1.98%	GE	-2.29%
63.0	CSCO	-1.94%	CDNS	-2.16%
63.0	FIS	-1.87%	HSBC	-1.97%
63.0	TRGP	-1.83%	PWR	-1.96%
63.0	PHM	-1.76%	COST	-1.87%
63.0	GSK	-1.63%	VST	-1.87%
63.0	ZTS	-1.62%	CPRT	-1.81%
63.0	NWL	-1.54%	GWV	-1.78%
63.0	CMCSA	-1.52%	IRM	-1.78%
63.0	VST	-1.49%	MS	-1.75%
63.0	CPRT	-1.45%	JPM	-1.61%
63.0	HSBC	-1.42%	DHI	-1.49%
63.0	X	-1.32%	ORLY	-1.49%



All TMD: 126d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
126.0	SBNY	-117.09%	SBNY	-87.54%
126.0	SIVBQ	-87.07%	SIVBQ	-68.1%
126.0	FRCB	-66.29%	FRCB	-52.98%
126.0	AMC	-29.1%	AMC	-14.64%
126.0	PRGO	-10.61%	CHTR	-9.62%
126.0	AAP	-8.17%	AAP	-7.37%
126.0	CHTR	-7.76%	TRGP	-5.59%
126.0	VFC	-7.4%	PHM	-4.45%
126.0	PHM	-4.6%	GE	-4.23%
126.0	BHC	-4.55%	MS	-3.97%
126.0	TRGP	-4.4%	PRGO	-3.84%
126.0	NWL	-3.67%	CSCO	-3.78%
126.0	CSCO	-3.55%	CDNS	-3.56%
126.0	GLD	-3.46%	JPM	-3.46%
126.0	CCL	-3.42%	GLD	-3.25%
126.0	CMCSA	-3.31%	MNST	-3.2%
126.0	CPRT	-3.28%	ACGL	-3.17%
126.0	IEP	-3.26%	CPRT	-3.11%
126.0	MNST	-3.11%	HSBC	-3.04%
126.0	MS	-2.87%	CCL	-2.02%
126.0	JPM	-2.52%	VFC	-1.81%
126.0	CNC	-2.35%	DHI	-1.8%
126.0	TLT	-2.05%	RIO	-1.73%
126.0	ZTS	-1.98%	CMCSA	-1.64%
126.0	X	-1.88%	PCG	-1.63%



All TMD: 252d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
252.0	SBNY	-169.28%	SBNY	-93.43%
252.0	SIVBQ	-123.39%	SIVBQ	-72.45%
252.0	FRCB	-94.22%	FRCB	-49.57%
252.0	AMC	-43.25%	AAP	-22.21%
252.0	AAP	-22.8%	CHTR	-17.86%
252.0	CHTR	-16.75%	AMC	-15.95%
252.0	VFC	-15.47%	BIIB	-9.26%
252.0	PRGO	-13.19%	VFC	-9.16%
252.0	NWL	-13.09%	AA	-6.97%
252.0	UAA	-11.8%	OXY	-6.49%
252.0	BIIB	-10.59%	JPM	-6.48%
252.0	IEP	-9.43%	MS	-6.24%
252.0	OXY	-8.49%	PRGO	-6.13%
252.0	PHM	-7.96%	ZTS	-5.69%
252.0	CZR	-7.02%	CSCO	-5.67%
252.0	BHC	-6.99%	TRGP	-4.67%
252.0	MS	-6.08%	FIS	-4.4%
252.0	MOS	-5.95%	PWR	-4.25%
252.0	JPM	-5.87%	CZR	-3.95%
252.0	CSCO	-5.49%	ACGL	-3.77%
252.0	CCL	-5.27%	NWL	-3.62%
252.0	CLF	-5.05%	CPRT	-3.54%
252.0	TLT	-4.64%	UAA	-3.17%
252.0	BXP	-4.0%	CMCSA	-2.99%
252.0	CNC	-3.98%	GLD	-2.8%



P30D: 1d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2026-06-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	NFLX	-1.68%	AMAT	-1.47%
1.0	ORCL	-1.46%	NFLX	-0.94%
1.0	AMAT	-1.17%	CDNS	-0.79%
1.0	AVGO	-1.12%	GBTC	-0.72%
1.0	NVDA	-0.93%	INTC	-0.6%
1.0	GBTC	-0.92%	HD	-0.55%
1.0	BHC	-0.87%	NVDA	-0.47%
1.0	VICI	-0.85%	CMG	-0.45%
1.0	MU	-0.7%	MU	-0.44%
1.0	CDNS	-0.66%	BIIB	-0.4%
1.0	TMUS	-0.62%	VICI	-0.39%
1.0	GLD	-0.58%	DHI	-0.39%
1.0	NAVI	-0.57%	ZION	-0.38%
1.0	FIS	-0.54%	AMD	-0.38%
1.0	QCOM	-0.54%	EXPE	-0.37%
1.0	VZ	-0.53%	AVGO	-0.36%
1.0	MSTR	-0.36%	GT	-0.35%
1.0	VNO	-0.32%	JPM	-0.34%
1.0	GNRC	-0.31%	GNRC	-0.33%
1.0	JPM	-0.3%	CYH	-0.33%
1.0	ZION	-0.3%	USB	-0.31%
1.0	USB	-0.28%	THC	-0.3%
1.0	THC	-0.28%	ORCL	-0.28%
1.0	MSFT	-0.26%	GWV	-0.28%
1.0	HD	-0.25%	VNO	-0.27%



P30D: 10d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2026-06-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	MSTR	-22.95%	NFLX	-17.97%
10.0	NFLX	-17.74%	MSTR	-7.48%
10.0	CLF	-11.2%	AVGO	-5.66%
10.0	MSFT	-7.64%	CLF	-5.54%
10.0	CDNS	-7.46%	DHI	-4.96%
10.0	META	-7.0%	VST	-4.69%
10.0	ORCL	-6.36%	CMG	-4.62%
10.0	AMAT	-6.12%	MU	-4.38%
10.0	MU	-6.05%	GT	-4.06%
10.0	GBTC	-5.94%	INTC	-3.76%
10.0	AVGO	-3.69%	JPM	-3.75%
10.0	JPM	-3.01%	BAC	-3.57%
10.0	THC	-2.71%	META	-3.48%
10.0	CMCSA	-2.53%	VNO	-3.17%
10.0	GLD	-2.37%	TDG	-3.1%
10.0	ZION	-2.3%	GBTC	-3.04%
10.0	WDC	-2.29%	MNST	-2.97%
10.0	DHI	-2.27%	ZION	-2.84%
10.0	ACGL	-2.17%	HCA	-2.67%
10.0	MS	-2.12%	HD	-2.65%
10.0	SNY	-2.01%	SBUX	-2.65%
10.0	MNST	-2.01%	INTU	-2.51%
10.0	NVDA	-1.96%	FITB	-2.48%
10.0	OXY	-1.74%	ACGL	-2.46%
10.0	FITB	-1.72%	NVDA	-2.35%



P90D: 1d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	NFLX	-0.58%	MU	-0.95%
1.0	MU	-0.5%	AMAT	-0.66%
1.0	TMUS	-0.42%	GNRC	-0.44%
1.0	AZO	-0.39%	CSCO	-0.44%
1.0	FIS	-0.38%	INTC	-0.38%
1.0	GNRC	-0.37%	AVGO	-0.37%
1.0	CSCO	-0.34%	VNO	-0.33%
1.0	AVGO	-0.32%	MNST	-0.29%
1.0	AMAT	-0.3%	TXN	-0.27%
1.0	GLD	-0.28%	MS	-0.27%
1.0	MS	-0.27%	PWR	-0.26%
1.0	UAA	-0.26%	QQQ	-0.25%
1.0	MNST	-0.26%	HD	-0.23%
1.0	VICI	-0.25%	GBTC	-0.23%
1.0	MSTR	-0.25%	NFLX	-0.23%
1.0	CMCSA	-0.2%	BIIB	-0.21%
1.0	GBTC	-0.19%	ZION	-0.2%
1.0	VNO	-0.17%	DHI	-0.2%
1.0	BHC	-0.17%	GE	-0.19%
1.0	PWR	-0.16%	BHP	-0.17%
1.0	GS	-0.16%	CSTM	-0.17%
1.0	BIIB	-0.15%	NVDA	-0.17%
1.0	SPY	-0.14%	EXPE	-0.17%
1.0	BHP	-0.14%	GS	-0.16%
1.0	EXPE	-0.14%	SBUX	-0.15%



P90D: 10d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	NFLX	-9.4%	NFLX	-8.77%
10.0	MU	-4.42%	VNO	-4.45%
10.0	CSCO	-3.37%	CSCO	-4.43%
10.0	CMCSA	-3.09%	CDNS	-3.42%
10.0	MSI	-3.02%	CLF	-2.76%
10.0	MS	-2.67%	TXN	-2.73%
10.0	AMZN	-2.28%	ON	-2.71%
10.0	CSTM	-1.91%	CNC	-2.48%
10.0	GS	-1.87%	MS	-2.38%
10.0	AZO	-1.85%	GNRC	-2.36%
10.0	AVGO	-1.71%	GS	-2.21%
10.0	SNY	-1.67%	MNST	-2.0%
10.0	GLD	-1.64%	QQQ	-1.95%
10.0	PWR	-1.64%	CSTM	-1.85%
10.0	TMUS	-1.56%	DHI	-1.71%
10.0	AMAT	-1.54%	CMCSA	-1.66%
10.0	QQQ	-1.53%	AVGO	-1.64%
10.0	MNST	-1.48%	AZO	-1.49%
10.0	GNRC	-1.38%	TRGP	-1.28%
10.0	BHP	-1.32%	AAPL	-1.27%
10.0	MSFT	-1.3%	AMD	-1.19%
10.0	TEVA	-1.18%	SPY	-1.13%
10.0	SPY	-1.11%	BAC	-1.1%
10.0	TRGP	-1.09%	SBUX	-1.08%
10.0	HON	-0.86%	TEVA	-1.07%



P90D: 21d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2026-04-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	NFLX	-15.23%	NFLX	-16.85%
21.0	CMCSA	-9.94%	CSCO	-13.64%
21.0	CSCO	-8.23%	AMD	-12.84%
21.0	AMZN	-7.64%	VNO	-9.58%
21.0	AZO	-7.52%	MU	-9.33%
21.0	MSI	-6.33%	ON	-8.05%
21.0	AVGO	-5.48%	GNRC	-6.34%
21.0	CHTR	-5.33%	AVGO	-6.29%
21.0	TMUS	-4.62%	MNST	-5.52%
21.0	MS	-4.25%	BBY	-5.28%
21.0	META	-4.22%	CDNS	-5.06%
21.0	CSTM	-4.11%	CSTM	-4.58%
21.0	HD	-4.06%	GS	-3.94%
21.0	GLD	-3.88%	AZO	-3.89%
21.0	MNST	-3.84%	LLY	-3.67%
21.0	QQQ	-3.68%	QQQ	-3.61%
21.0	GS	-3.44%	MS	-3.6%
21.0	NVDA	-3.38%	TXN	-3.59%
21.0	GNRC	-2.87%	PWR	-3.35%
21.0	SNY	-2.83%	CMCSA	-3.12%
21.0	PEP	-2.68%	NVDA	-3.07%
21.0	BHP	-2.48%	AAPL	-3.03%
21.0	TRGP	-2.45%	AMAT	-3.01%
21.0	SPY	-2.23%	TRGP	-2.95%
21.0	NAVI	-2.23%	TMUS	-2.89%



P365D: 1d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	MSTR	-0.34%	INTC	-0.34%
1.0	UAA	-0.3%	AMAT	-0.33%
1.0	AMAT	-0.25%	MU	-0.29%
1.0	GNRC	-0.19%	GNRC	-0.22%
1.0	SLV	-0.18%	LUMN	-0.21%
1.0	TDG	-0.18%	SLV	-0.2%
1.0	PRGO	-0.17%	CNC	-0.19%
1.0	ZTS	-0.17%	CSTM	-0.19%
1.0	AVGO	-0.14%	TEVA	-0.18%
1.0	FIS	-0.14%	AMD	-0.17%
1.0	MU	-0.14%	AVGO	-0.15%
1.0	TEVA	-0.14%	ELAN	-0.15%
1.0	CSTM	-0.14%	CSCO	-0.14%
1.0	CHTR	-0.13%	PWR	-0.14%
1.0	BHC	-0.13%	TRGP	-0.13%
1.0	GLD	-0.13%	BHP	-0.12%
1.0	PWR	-0.12%	TDG	-0.11%
1.0	ELAN	-0.12%	RIO	-0.11%
1.0	HSBC	-0.12%	GLD	-0.11%
1.0	CMCSA	-0.12%	HSBC	-0.11%
1.0	MS	-0.11%	MS	-0.11%
1.0	NFLX	-0.11%	AA	-0.11%
1.0	CSCO	-0.11%	GS	-0.1%
1.0	LUMN	-0.11%	MSTR	-0.1%
1.0	AZO	-0.1%	MNST	-0.1%



P365D: 10d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	PRGO	-3.31%	AMC	-2.22%
10.0	MSTR	-3.22%	CSTM	-2.19%
10.0	AMC	-3.14%	MSTR	-2.05%
10.0	AMAT	-1.86%	SLV	-1.9%
10.0	SLV	-1.86%	LUMN	-1.75%
10.0	LUMN	-1.74%	CLF	-1.73%
10.0	CSTM	-1.53%	AMAT	-1.56%
10.0	NAVI	-1.4%	BHC	-1.46%
10.0	TDG	-1.24%	GNRC	-1.36%
10.0	ZTS	-1.24%	ELAN	-1.3%
10.0	GLD	-1.15%	TRGP	-1.24%
10.0	CHTR	-1.14%	TEVA	-1.21%
10.0	MS	-1.01%	CSCO	-1.19%
10.0	GS	-0.96%	ON	-1.14%
10.0	TEVA	-0.93%	ZTS	-1.14%
10.0	CSCO	-0.91%	NEM	-1.06%
10.0	TRGP	-0.82%	GLD	-1.03%
10.0	PWR	-0.78%	MNST	-1.02%
10.0	MNST	-0.78%	GS	-1.0%
10.0	GNRC	-0.77%	AMD	-1.0%
10.0	AVGO	-0.75%	MS	-0.97%
10.0	CMCSA	-0.74%	TDG	-0.96%
10.0	NEM	-0.66%	RIO	-0.85%
10.0	HSBC	-0.66%	CMCSA	-0.77%
10.0	B	-0.64%	HSBC	-0.7%



P365D: 21d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	PRGO	-7.02%	MSTR	-4.86%
21.0	AMC	-5.08%	MU	-4.56%
21.0	MSTR	-4.7%	AMD	-4.53%
21.0	CHTR	-3.84%	AMC	-4.51%
21.0	SLV	-3.38%	CSTM	-4.46%
21.0	LUMN	-3.15%	SLV	-4.23%
21.0	TDG	-2.94%	CSCO	-3.35%
21.0	ZTS	-2.86%	PRGO	-3.19%
21.0	CMCSA	-2.64%	LUMN	-3.13%
21.0	AMAT	-2.47%	GOOGL	-2.97%
21.0	NAVI	-2.35%	AMAT	-2.73%
21.0	GLD	-2.32%	CMCSA	-2.63%
21.0	CSTM	-2.24%	TEVA	-2.4%
21.0	CLF	-2.12%	MNST	-2.35%
21.0	CMG	-2.07%	TRGP	-2.31%
21.0	AMZN	-2.07%	ELAN	-2.14%
21.0	CSCO	-1.92%	AVGO	-2.07%
21.0	TRGP	-1.86%	PWR	-2.07%
21.0	TEVA	-1.84%	CLF	-2.02%
21.0	ELAN	-1.71%	RIO	-1.99%
21.0	PWR	-1.56%	ZTS	-1.98%
21.0	MS	-1.56%	GLD	-1.9%
21.0	MNST	-1.55%	GS	-1.82%
21.0	GS	-1.51%	BHC	-1.75%
21.0	AVGO	-1.48%	MS	-1.62%



P365D: 63d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
63.0	PRGO	-26.6%	MSTR	-31.39%
63.0	MSTR	-26.3%	PRGO	-18.6%
63.0	AMC	-22.93%	AMD	-12.24%
63.0	ZTS	-11.4%	CSTM	-8.74%
63.0	META	-8.7%	SLV	-8.64%
63.0	CHTR	-8.19%	RIO	-7.28%
63.0	GLD	-7.49%	CSCO	-6.94%
63.0	SLV	-7.44%	TRGP	-6.68%
63.0	CMCSA	-7.39%	GLD	-6.19%
63.0	TDG	-6.52%	AMC	-5.99%
63.0	INTU	-6.09%	MNST	-5.91%
63.0	NWL	-6.09%	CMCSA	-5.86%
63.0	MNST	-6.05%	GOOGL	-5.71%
63.0	CSCO	-5.5%	ELAN	-5.13%
63.0	LUMN	-4.89%	META	-4.95%
63.0	NFLX	-4.87%	MS	-4.95%
63.0	RIO	-4.45%	B	-4.33%
63.0	TRGP	-4.06%	NFLX	-4.05%
63.0	NAVI	-3.47%	TEVA	-3.7%
63.0	ELAN	-3.29%	CHTR	-3.62%
63.0	TEVA	-3.2%	HSBC	-3.33%
63.0	BXP	-3.14%	AMAT	-2.91%
63.0	PWR	-3.04%	MRK	-2.6%
63.0	KHC	-2.78%	MU	-2.55%
63.0	IRM	-2.65%	NEM	-2.52%



P365D: 126d

The columns labeled “ROVBC_VmS” represent the average amount by which Vector Model ROVBC exceeds Sigma ROVBC 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 2026-06-29 through 2025-07-01

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
126.0	MSTR	-80.38%	MSTR	-69.89%
126.0	AMC	-58.82%	PRGO	-31.79%
126.0	PRGO	-54.08%	RIO	-17.48%
126.0	BXP	-19.63%	CSTM	-17.22%
126.0	CHTR	-17.0%	AMC	-17.14%
126.0	NFLX	-16.06%	TRGP	-14.79%
126.0	TRGP	-14.64%	NFLX	-12.7%
126.0	ZTS	-14.21%	CHTR	-12.36%
126.0	META	-14.11%	BXP	-12.31%
126.0	MNST	-12.56%	MNST	-11.0%
126.0	RIO	-11.68%	ORCL	-10.93%
126.0	TEVA	-10.5%	META	-9.75%
126.0	ORCL	-10.19%	CSCO	-9.57%
126.0	LW	-9.73%	GLD	-8.35%
126.0	GLD	-9.44%	AMD	-7.64%
126.0	LEN	-9.41%	AAP	-7.59%
126.0	INTU	-9.35%	LW	-7.44%
126.0	CSCO	-9.17%	MS	-7.34%
126.0	CMCSA	-8.97%	FSUGY	-6.03%
126.0	HSBC	-7.04%	HSBC	-5.78%
126.0	TDG	-6.33%	ZTS	-5.43%
126.0	MS	-6.25%	BBY	-4.74%
126.0	BBY	-5.8%	ELAN	-4.53%
126.0	VNO	-5.78%	FITB	-4.24%
126.0	NAVI	-5.63%	QCOM	-3.89%



Appendix 5: Kupiec and Christoferson Tests for Sigma

The Kupiec Proportion of Failures test statistic (listed as VaR_kStat in the table below), and its probability (VaR_pValK) are used to test the null hypothesis that the VaR model breakage is consistent with expectations. The test statistic is calculated by comparing the number of VaR 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 VaR breakage is consistent with expectations.

The Christoferson VaR Violation Independence test statistic (listed as VaR_chrStat in the table below) and its probability (VaR_pValChr) are used to test the null hypothesis that the VaR 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 VaR 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 2026-06-29. Note that for horizon periods greater than 1d we exclude enough model dates to assure no overlap between observation periods.

Model	Pctile	Horizon	VaR_kStat	VaR_pValK	VaR_chrStat	VaR_pValChr
Sigma	95	1	182.3	0	8.54	0
Sigma	95	10	10.8	0	0.09	0.76
Sigma	95	21	32.33	0	0.47	0.49
Sigma	95	63	28.68	0	nan	0
Sigma	95	126	30.7	0	nan	0
Sigma	95	252	22.33	0	nan	0
Sigma	99	1	582.78	0	28.56	0
Sigma	99	10	33.61	0	0.43	0.51
Sigma	99	21	0.64	0.43	1.69	0.19
Sigma	99	63	1.44	0.23	1.84	0.17
Sigma	99	126	0.65	0.42	nan	0
Sigma	99	252	1.68	0.2	nan	0

