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-vecvizs-analytics/)

3) There are many volatility models that the Vector Model could be compared to beyond Sigma. Thus, even if this report causes you to conclude that the Vector Model's 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.

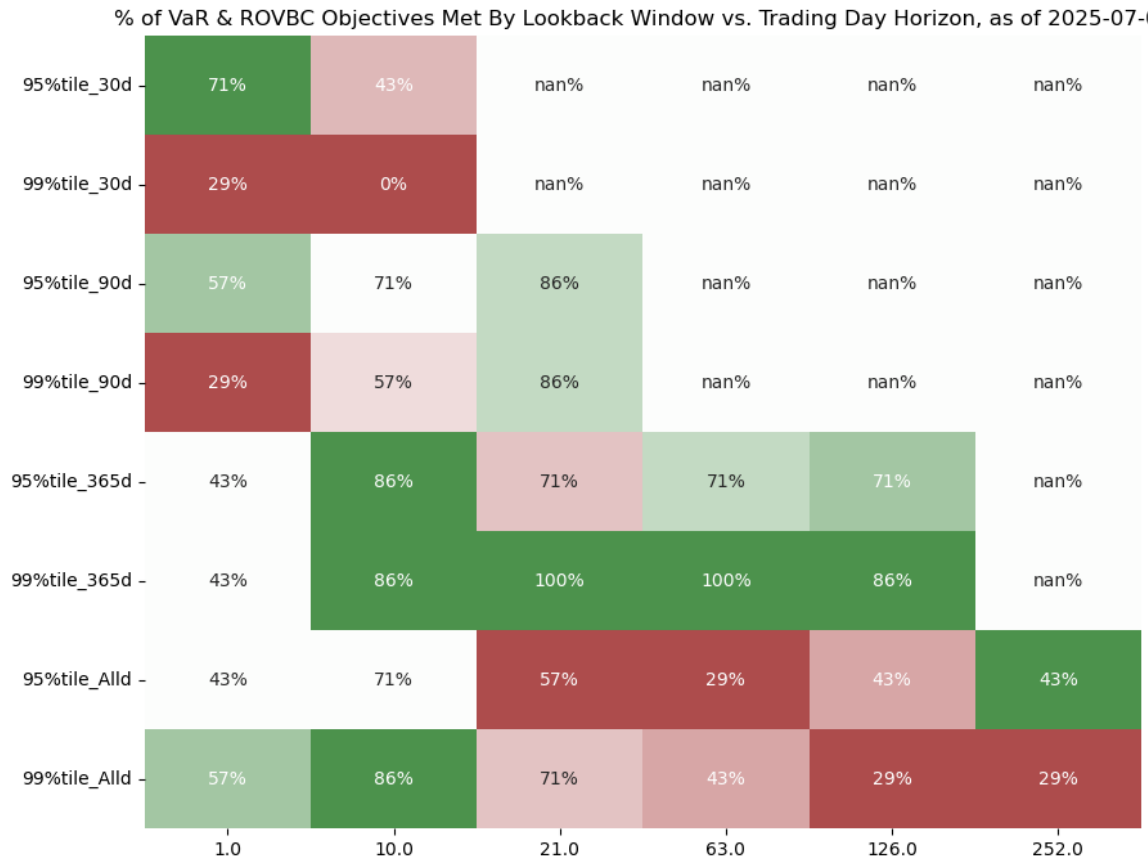
9) All analytics presented in this report assumes that prices are floored at $0.01/share.

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 2025-06-27 while 365D /90D/ 30D include the 365/90/30 days ended 2025-06-27, 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 2025-06-27. 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	102.05	0	6.12	0.01
Vector	95	10	67.87	0	0	0.95
Vector	95	21	16.14	0	0.38	0.54
Vector	95	63	9.04	0	0.12	0.72
Vector	95	126	0.1	0.75	0.68	0.41
Vector	95	252	0.73	0.39	nan	0
Vector	99	1	873.35	0	6.52	0.01
Vector	99	10	117.6	0	1.22	0.27
Vector	99	21	50.02	0	0.05	0.83
Vector	99	63	16.26	0	0.46	0.5
Vector	99	126	6.08	0.01	0.68	0.41
Vector	99	252	13.42	0	-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 2025-06-27.

VaR and ROVBC Criteria	Average Score(%)
1. Closer to Target VaR Breakage Than Sigma (i.e., smaller MAE)	59.38
2. Less Volatile VaR Breakage Across Model Dates Than Sigma	53.12
3. Less Volatile VaR Breakage Across Tickers Than Sigma	12.5
4. Higher ROVBC Than Sigma	87.5
5. Higher ROVBC Than Sigma, Adj. for Avg. VM-Sigma VaR Diff.	75
6. Alpha of ROVBC vs Sigma >0, Across Tickers and Model Dates	68.75
7. Alpha of ROVBC vs Sigma >0, By Ticker, Across Model Dates	56.25
Overall Comparison to Sigma Average	58.93
Kupiec Test of VaR Proximity to Target	16.6667
Christoferson Test of VaR Date Independence	75

VaR and ROVBC Criteria by Fwd Hzn	1D	10D	21D	63D	126D	252D
1. Closer to Target VaR Breakage Than Sigma	75	62.5	50	25	75	50
2. Less Volatile VaR Breakage Across Model Dates Than Sigma	87.5	50	66.67	50	0	0
3. Less Volatile VaR Breakage Across Tickers Than Sigma	0	0	33.33	25	25	0
4. Higher ROVBC Than Sigma	62.5	87.5	100	100	100	100
5. Higher ROVBC Than Sigma, Adj. for Avg. VM-Sigma VaR Diff.	12.5	87.5	100	100	100	100
6. Alpha of ROVBC vs Sigma >0, Across Tickers and Model Dates	62.5	75	100	75	50	0
7. Alpha of ROVBC vs Sigma >0, By Ticker, Across Model Dates	25	75	100	50	50	0
TotalScore	46.43	62.5	78.57	60.71	57.14	35.71

VaR and ROVBC Criteria Across Lookback Window	30D	90D	365D	AllD
1. Closer to Target VaR Breakage Than Sigma	75	66.67	80	33.33
2. Less Volatile VaR Breakage Across Model Dates Than Sigma	25	50	80	41.67
3. Less Volatile VaR Breakage Across Tickers Than Sigma	0	16.67	30	0
4. Higher ROVBC Than Sigma	50	83.33	90	100
5. Higher ROVBC Than Sigma, Adj. for Avg. VM-Sigma VaR Diff.	50	66.67	80	83.33
6. Alpha of ROVBC vs Sigma >0, Across Tickers and Model Dates	25	83.33	90	58.33
7. Alpha of ROVBC vs Sigma >0, By Ticker, Across Model Dates	25	83.33	80	33.33
TotalScore	35.71	64.29	75.71	50

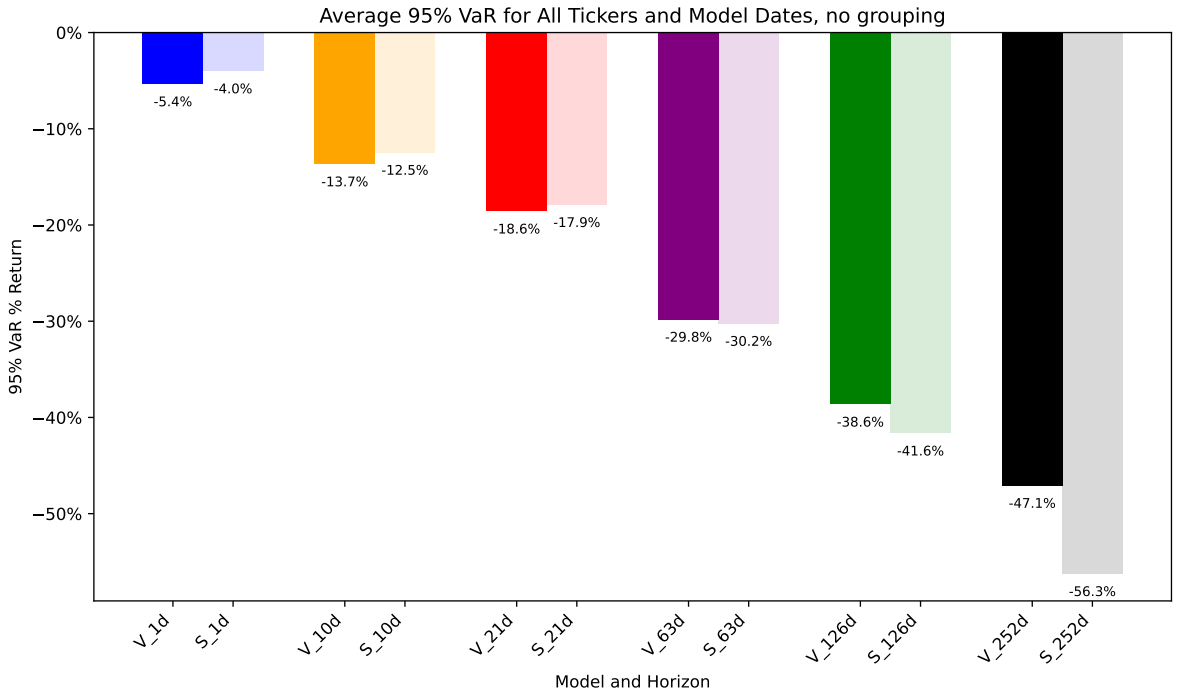
95% Value at Risk (VaR)

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.

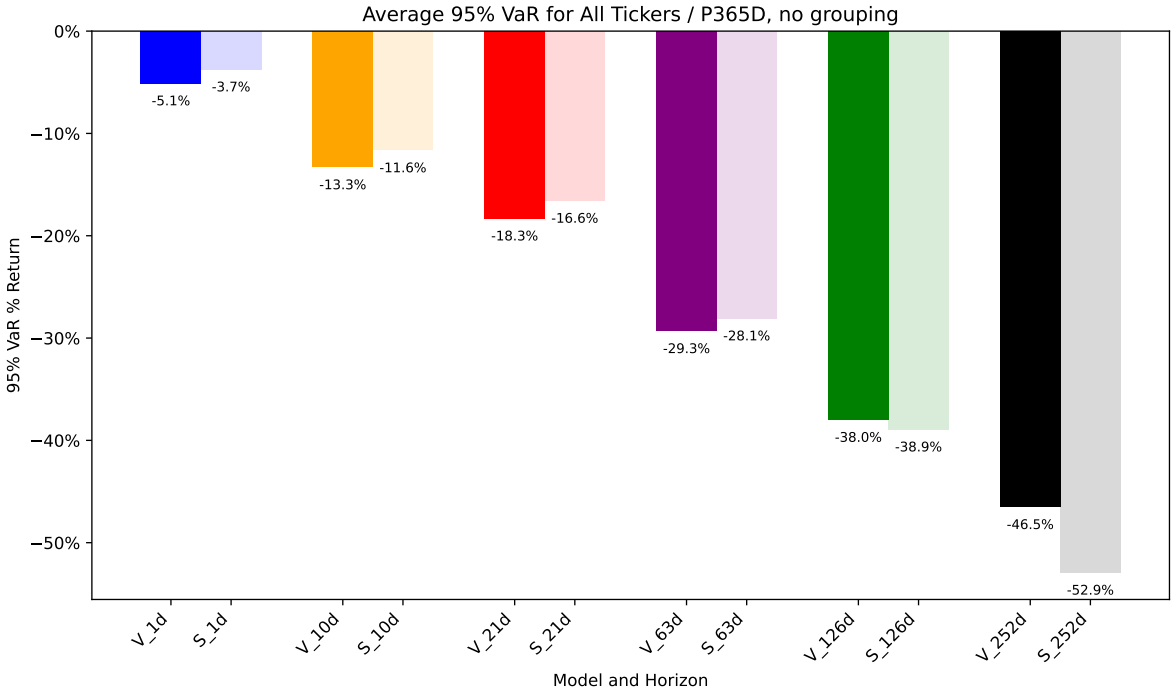
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-06-27



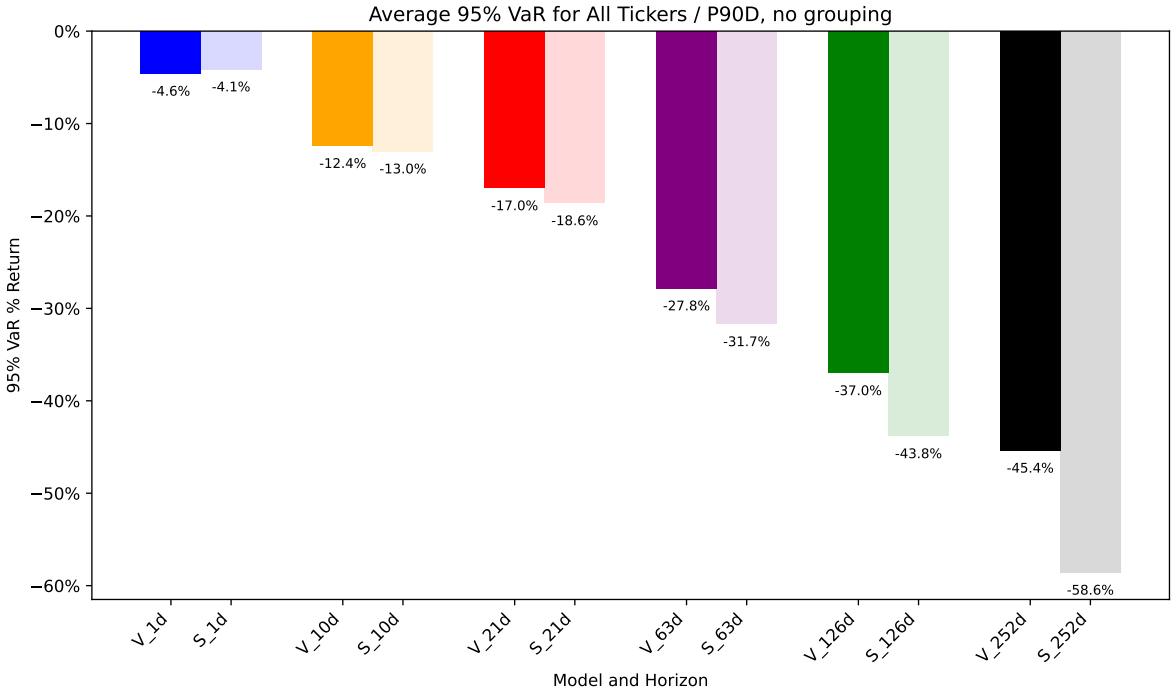
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2025-06-27 through 2024-07-02



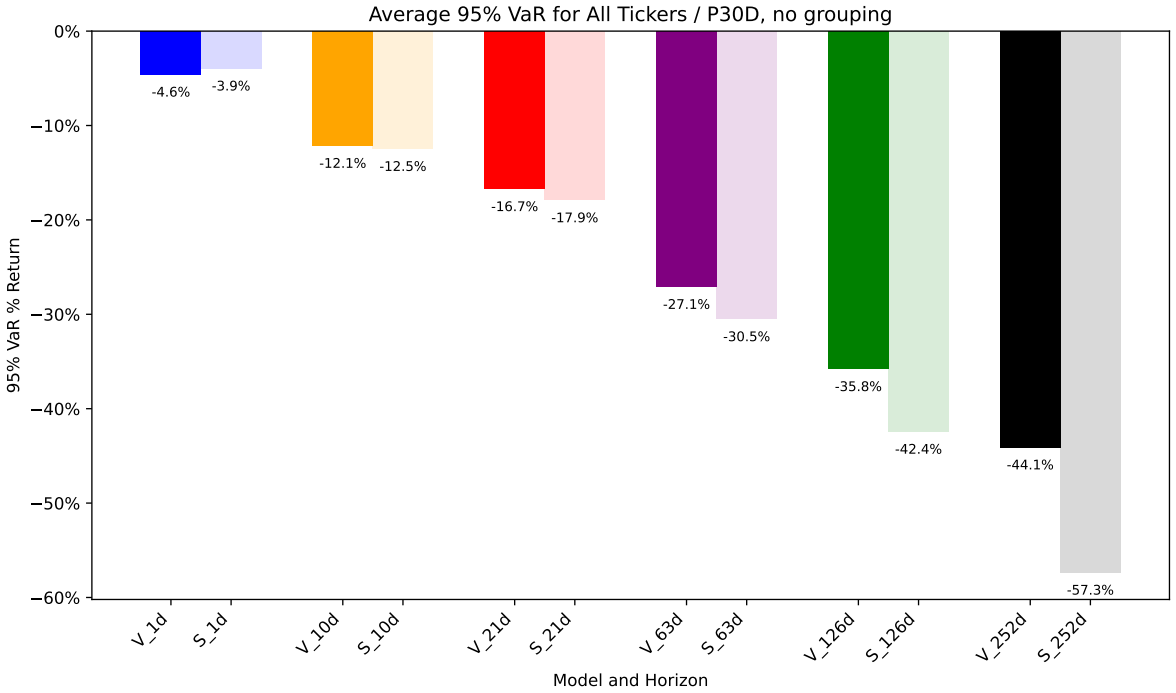
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-06-27 through 2025-04-03



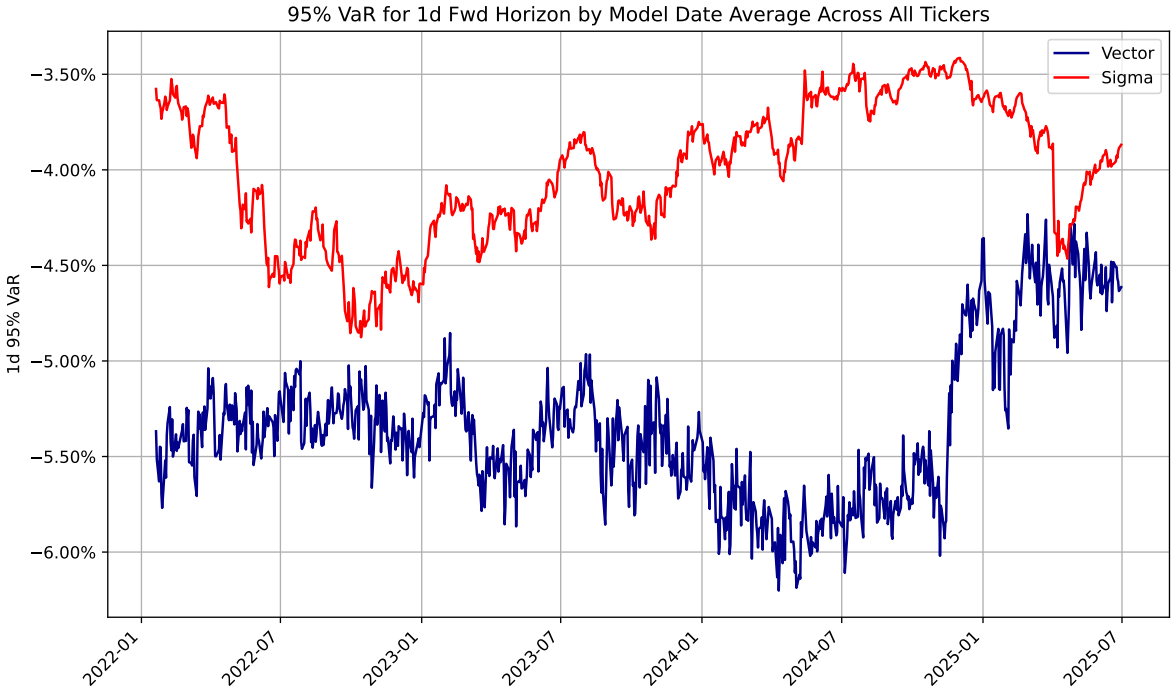
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-06-27 through 2025-06-02

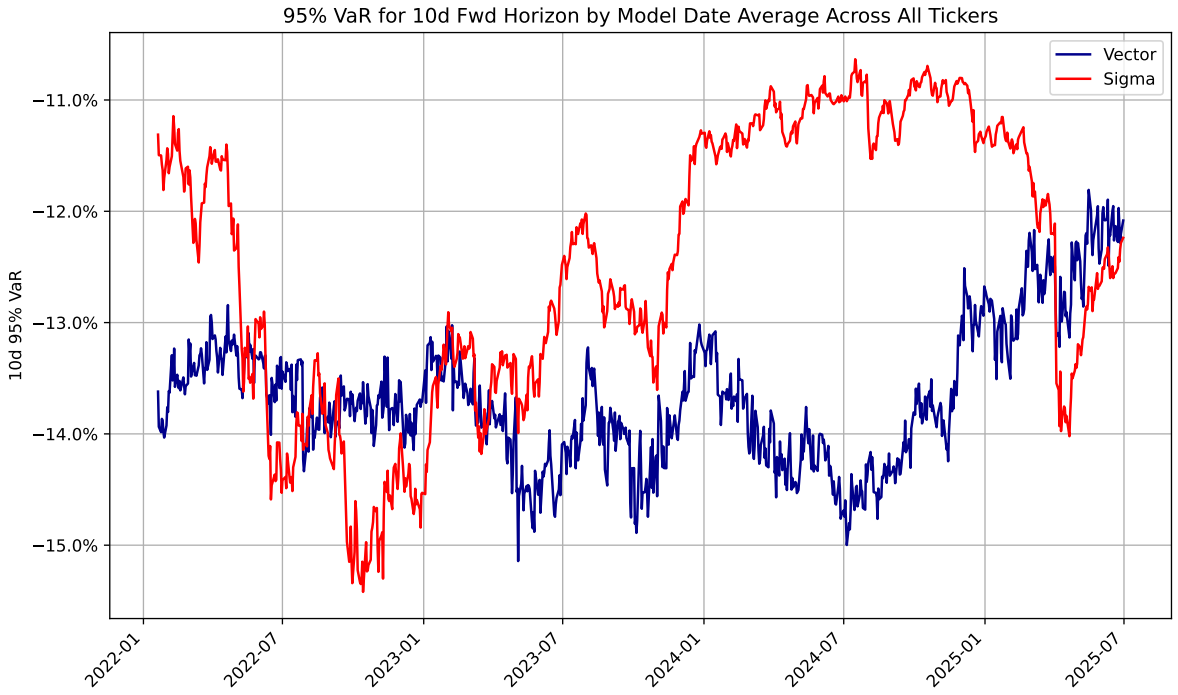


Daily Levels

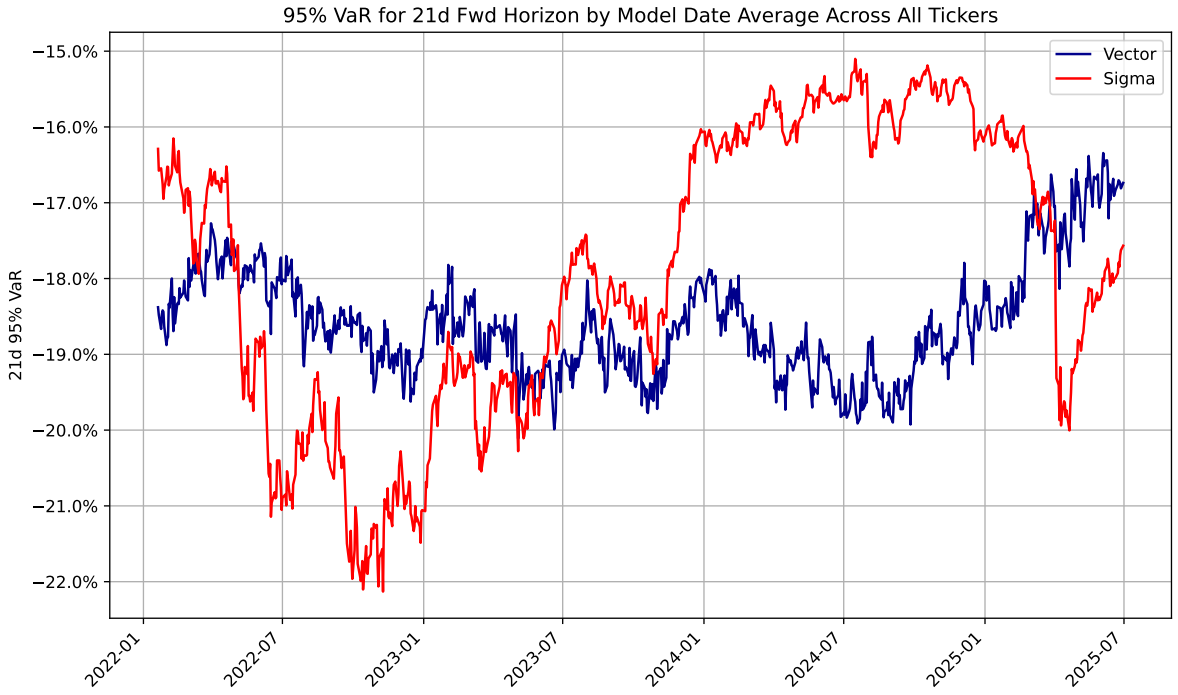
1d Horizon



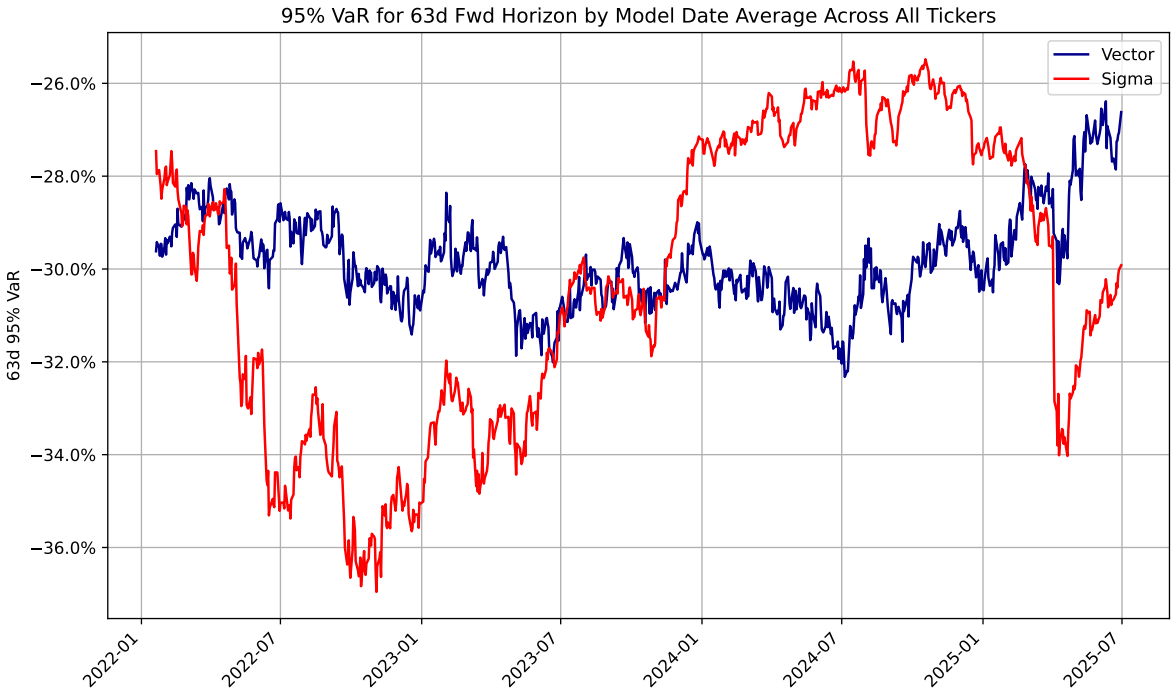
10d Horizon


95% VaR for 10d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
10d 95% VaR
−11.0%
−12.0%
−13.0%
−14.0%
−15.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

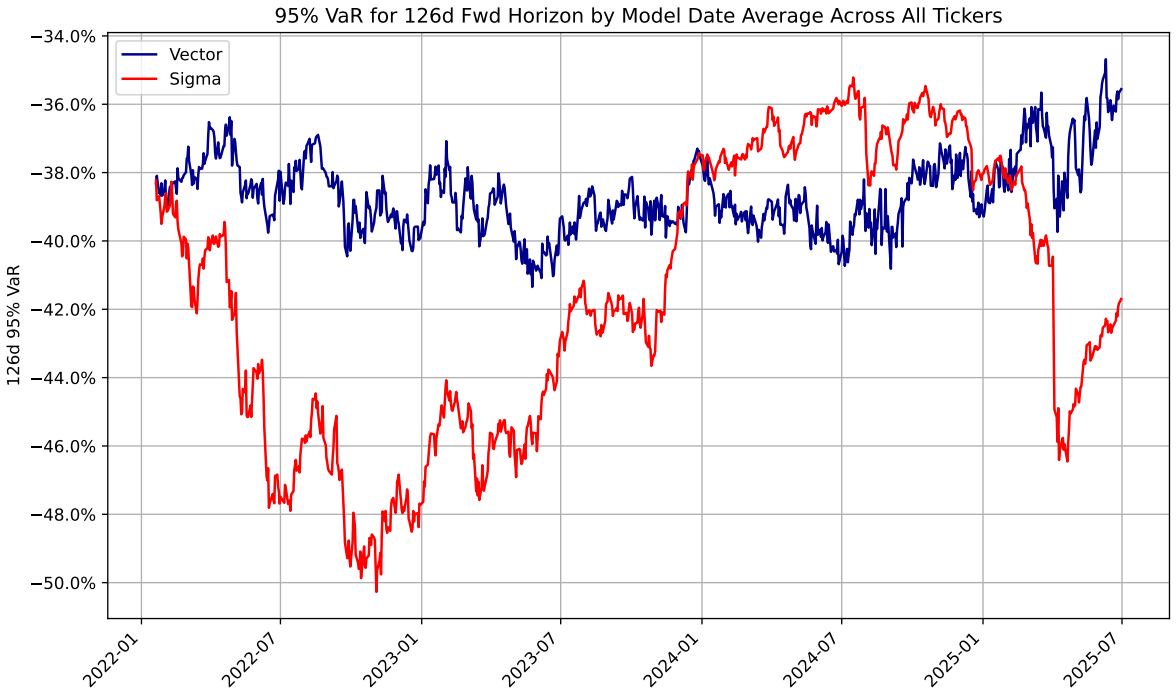
21d Horizon


95% VaR for 21d Fwd Horizon by Model Date Average Across All Tickers
21d 95% VaR
−15.0%
−16.0%
−17.0%
−18.0%
−19.0%
−20.0%
−21.0%
−22.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07
Vector
Sigma

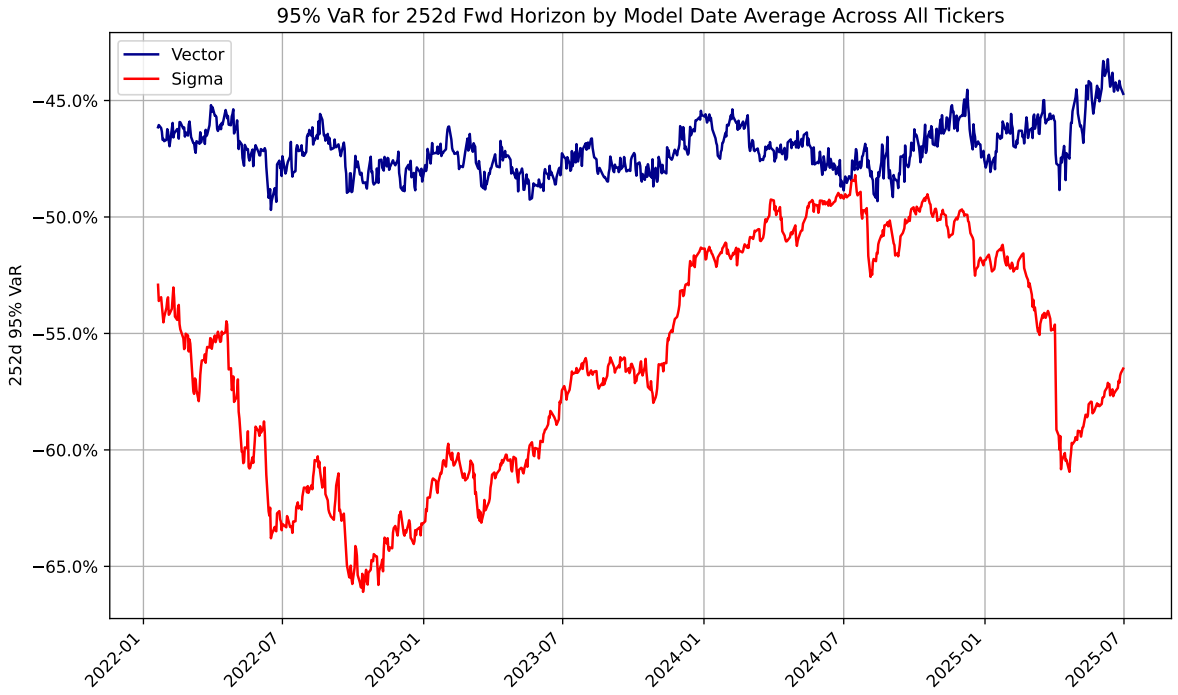
63d Horizon


95% VaR for 63d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
63d 95% VaR
−26.0%
−28.0%
−30.0%
−32.0%
−34.0%
−36.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

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

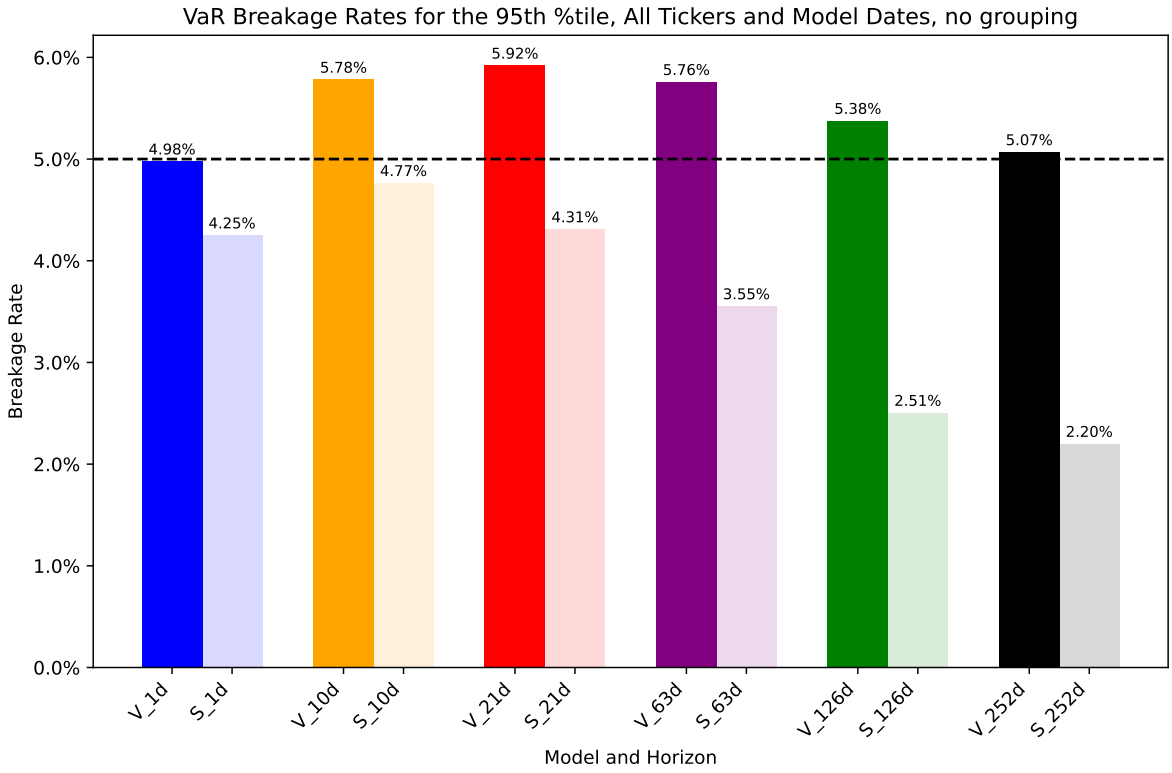
Vector Model ROVBC can be evalauated on the basis of outright levels relative to Sigma and alpha relative to Sigma ROVBC (which, as discussed previously, is assigned the underlying ticker price returns). We advise keeping proximity of VaR breakage rates to targetted levels in mind when comparing outright 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.

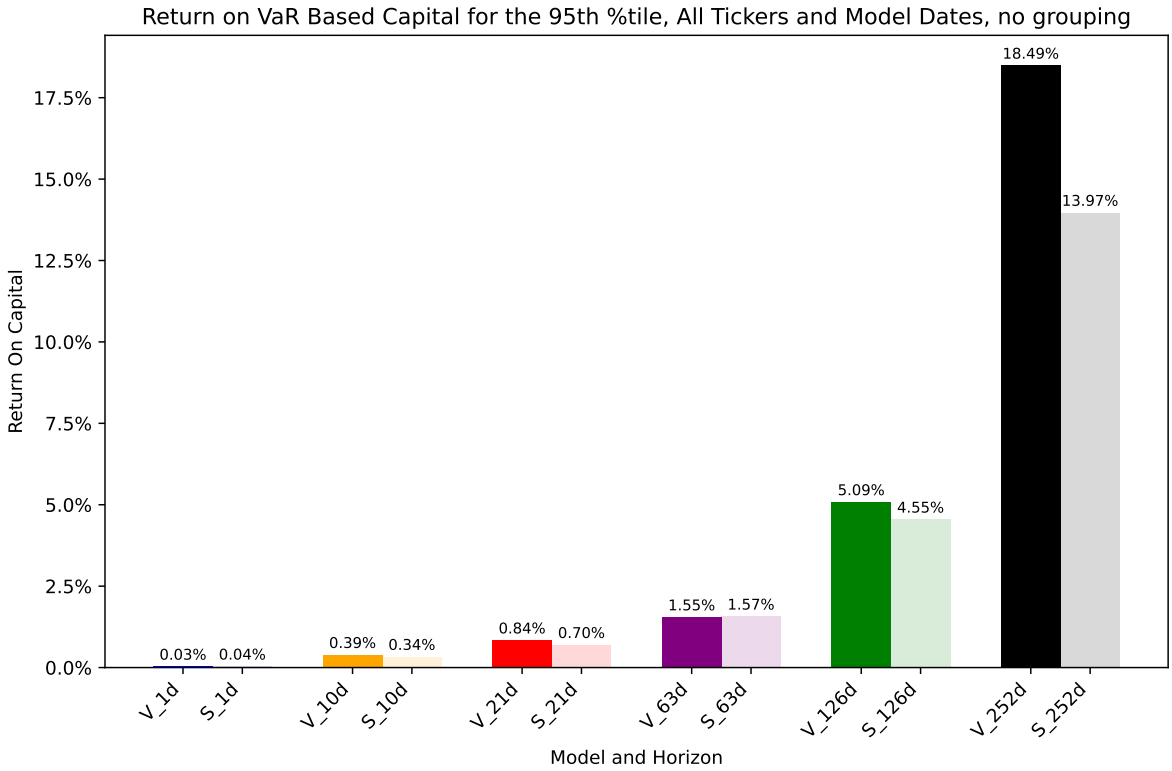
Alpha allows us to isolate ROVBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROVBC multiplier for the Vector Model and 1.00x. Alpha across TMD's could be driven by VaR differentials between tickers and / or between dates. Thus we also present 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 Mdoel 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 2025-06-27





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

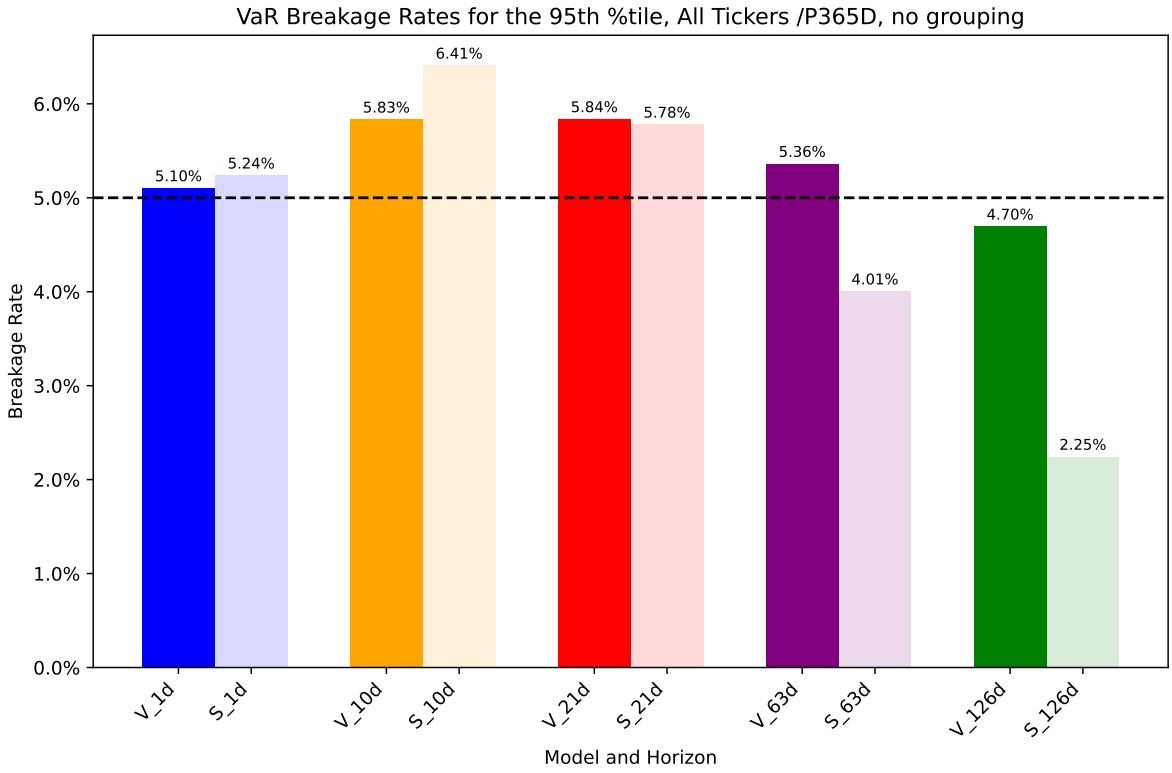
	1d	10d	21d	63d	126d	252d
intercept	-0.01%	-0.05%	-0.10%	-0.57%	-1.27%	-2.57%
intercept_p_value	6.26%	1.16%	0.01%	0.00%	0.00%	0.00%
slope	119.75%	130.73%	134.33%	134.56%	139.63%	150.72%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

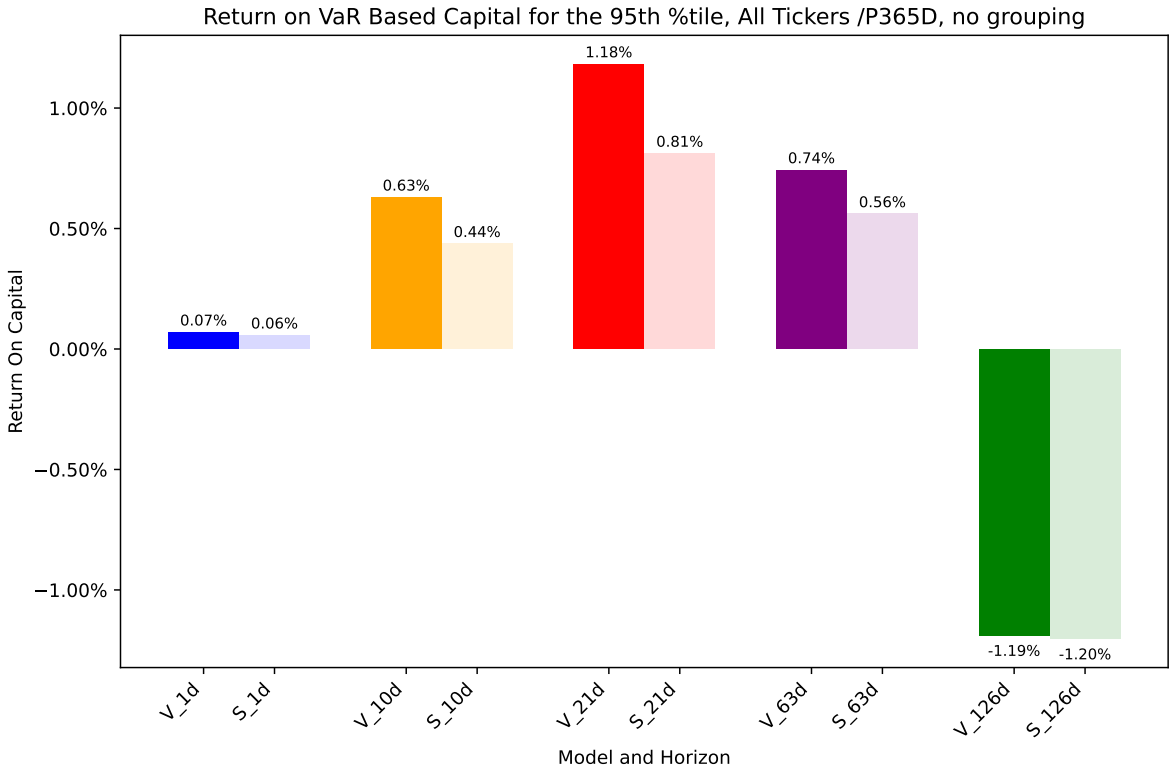
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across Model Dates:

	1d	10d	21d	63d	126d	252d
intercept	-0.03%	-0.12%	-0.36%	-1.47%	-3.39%	-4.98%
intercept_p_value	0.03%	5.98%	1.38%	0.18%	0.02%	0.39%
slope	160.75%	146.04%	162.55%	174.72%	174.26%	162.77%
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 2025-06-27 through 2024-07-02





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

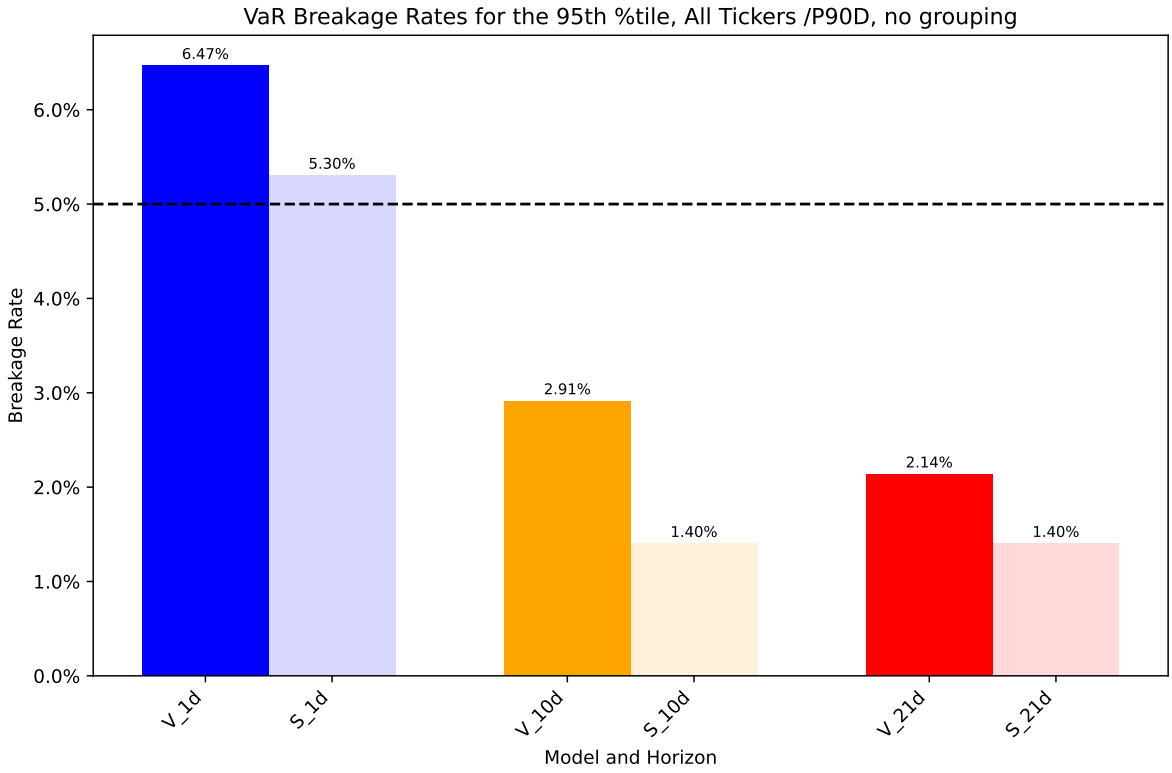
	1d	10d	21d	63d	126d
intercept	0.01%	0.15%	0.24%	0.09%	0.22%
intercept_p_value	51.66%	0.00%	0.00%	11.62%	0.99%
slope	110.29%	109.20%	115.83%	116.40%	116.88%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

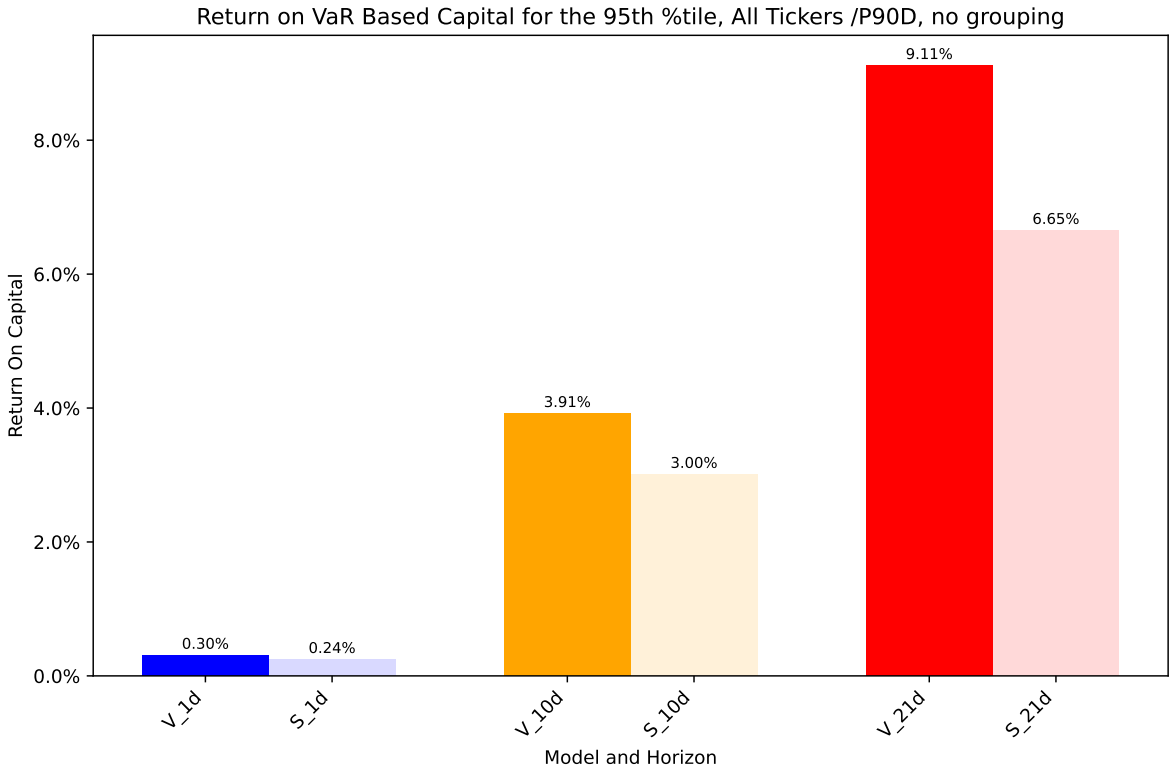
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P365D:

	1d	10d	21d	63d	126d
intercept	0.04%	0.19%	0.30%	0.10%	0.20%
intercept_p_value	0.02%	2.17%	5.78%	75.93%	71.10%
slope	45.78%	100.86%	108.10%	113.27%	114.22%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-06-27 through 2025-04-03





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

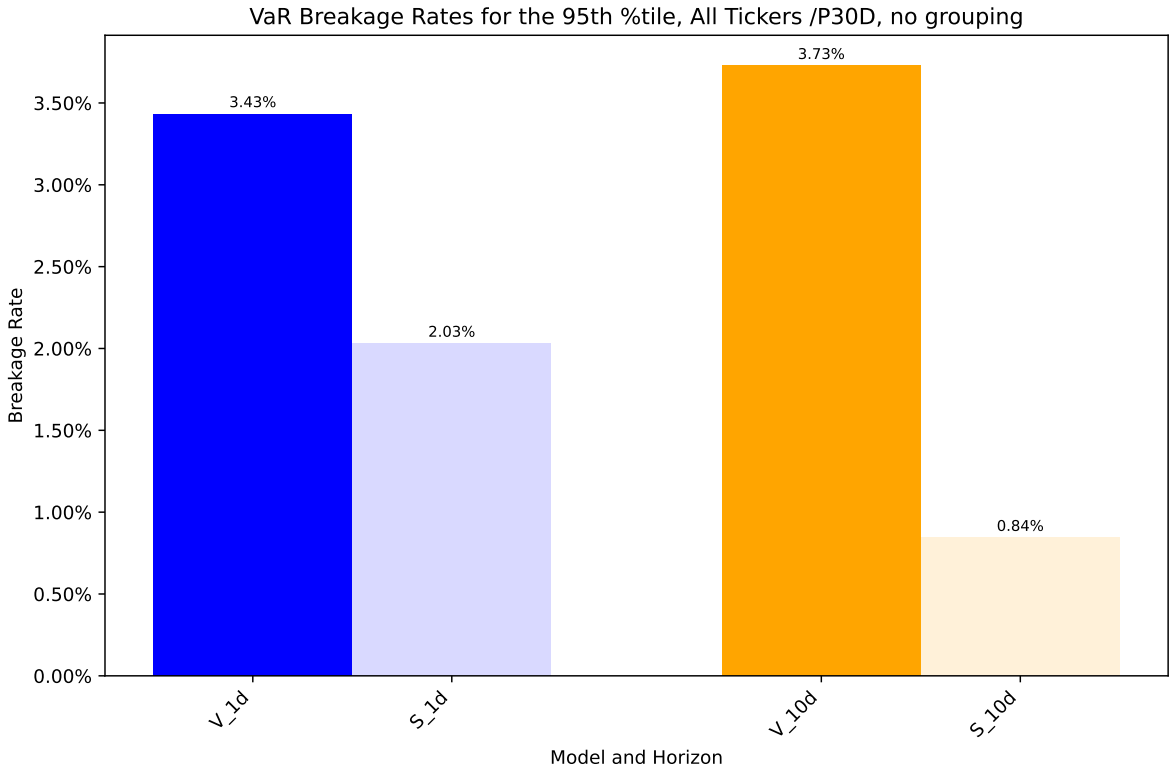
	1d	10d	21d
intercept	-0.00%	-0.06%	-0.03%
intercept_p_value	99.60%	41.57%	81.90%
slope	126.26%	132.10%	137.51%
slope_p_value	0.00%	0.00%	0.00%

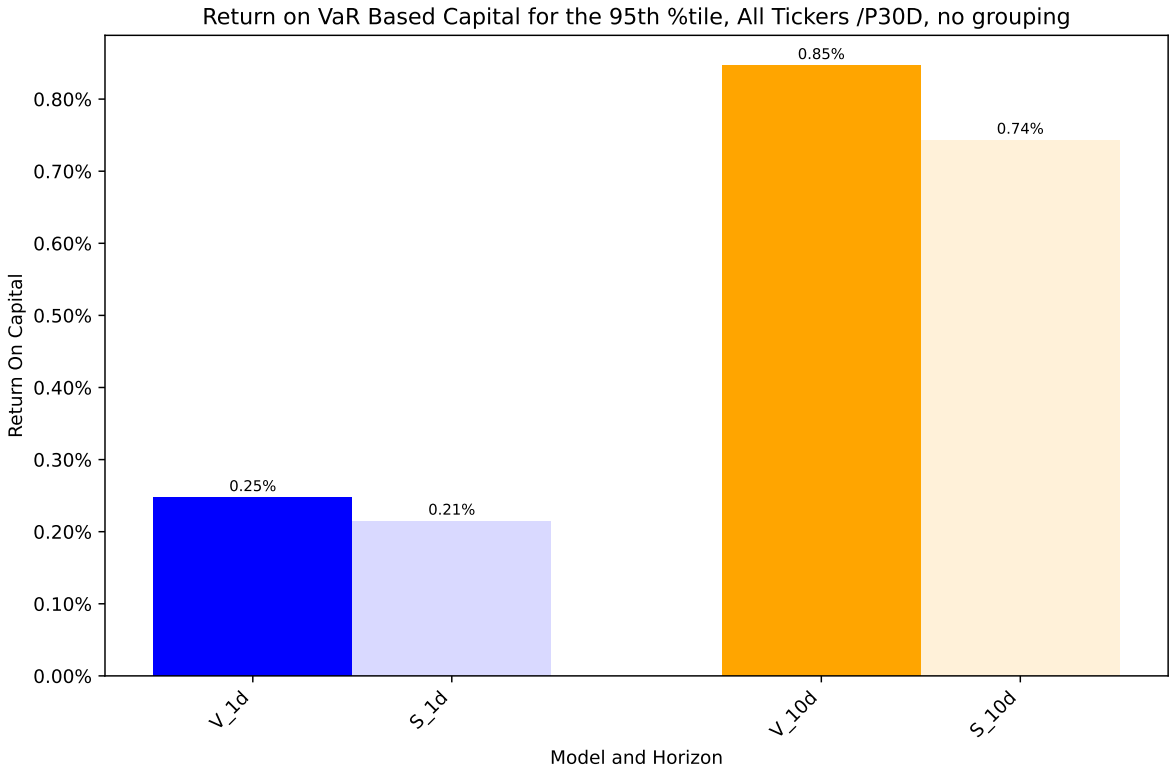
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P90D:

	1d	10d	21d
intercept	0.03%	-0.09%	-0.34%
intercept_p_value	30.60%	73.10%	60.59%
slope	114.18%	133.26%	141.98%
slope_p_value	0.00%	0.00%	0.00%

Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-06-27 through 2025-06-02





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

	1d	10d
intercept	-0.01%	-0.11%
intercept_p_value	75.31%	25.15%
slope	119.42%	128.39%
slope_p_value	0.00%	0.00%

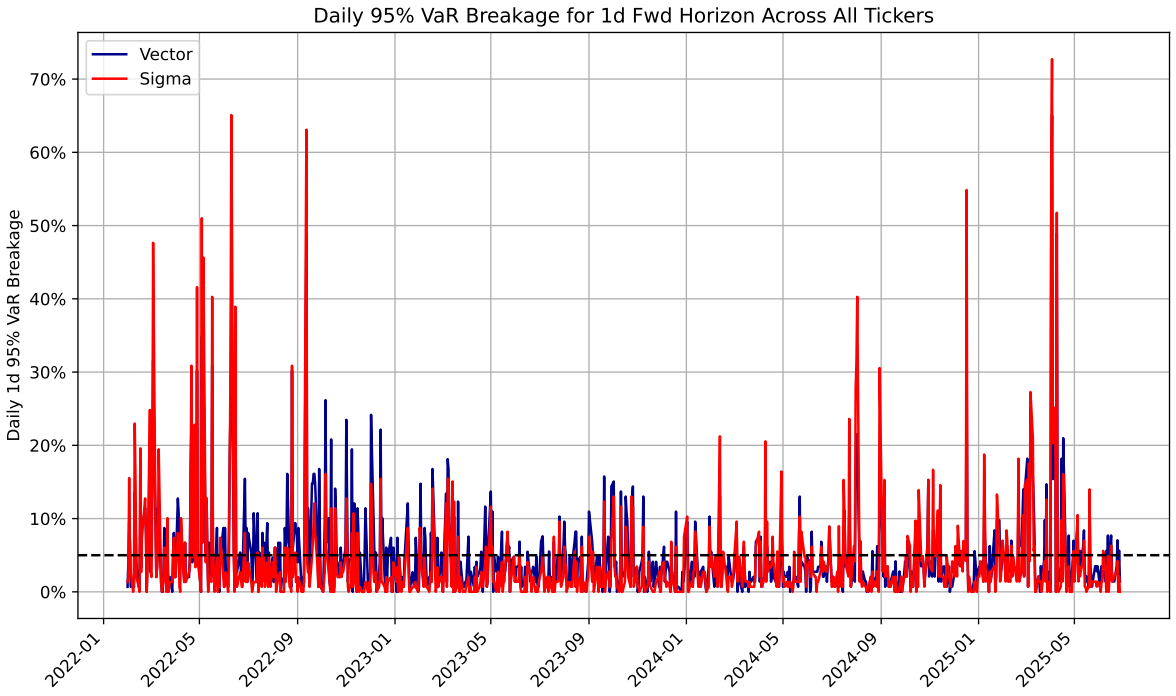
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P30D:

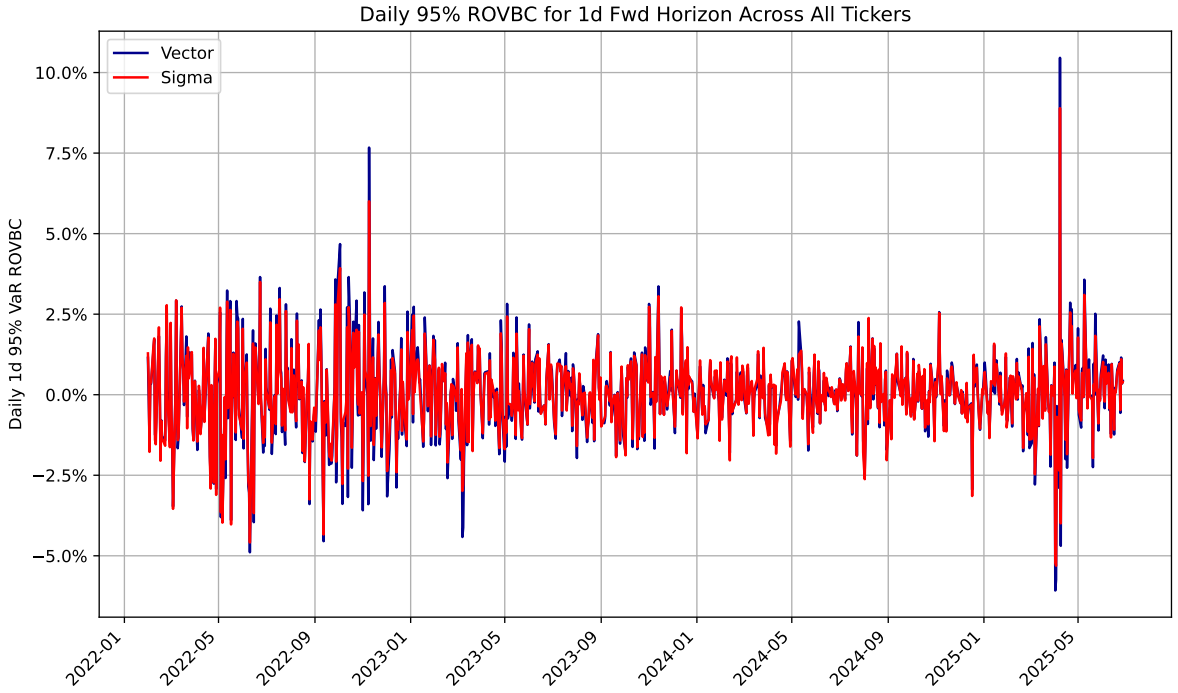
	1d	10d
intercept	-0.04%	-0.12%
intercept_p_value	20.33%	55.51%
slope	131.74%	129.87%
slope_p_value	0.00%	0.00%

Daily Performance

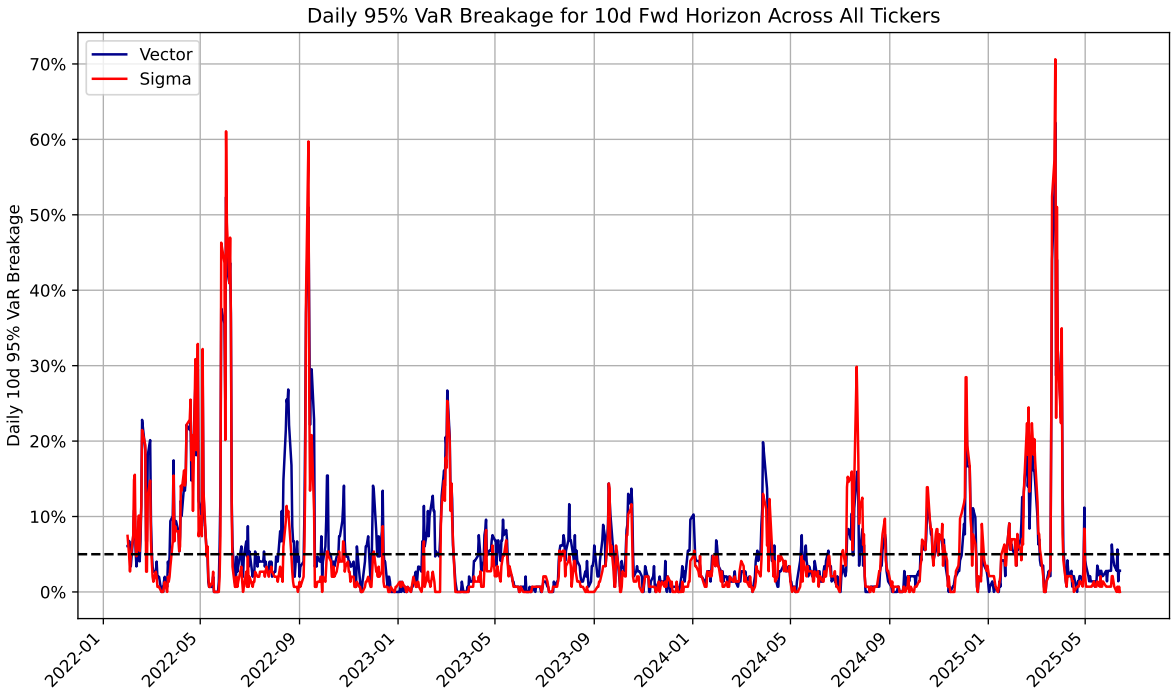
Here we look at the daily breakage and ROVBC statitics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROVBC outliers.

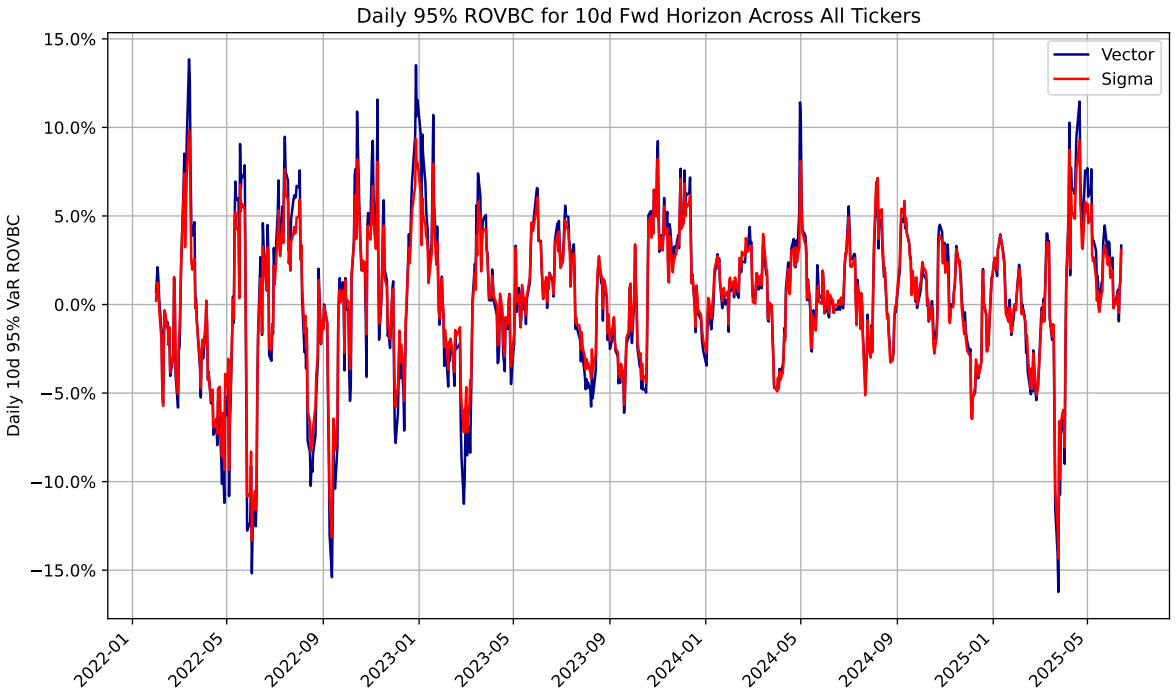
1d Horizon



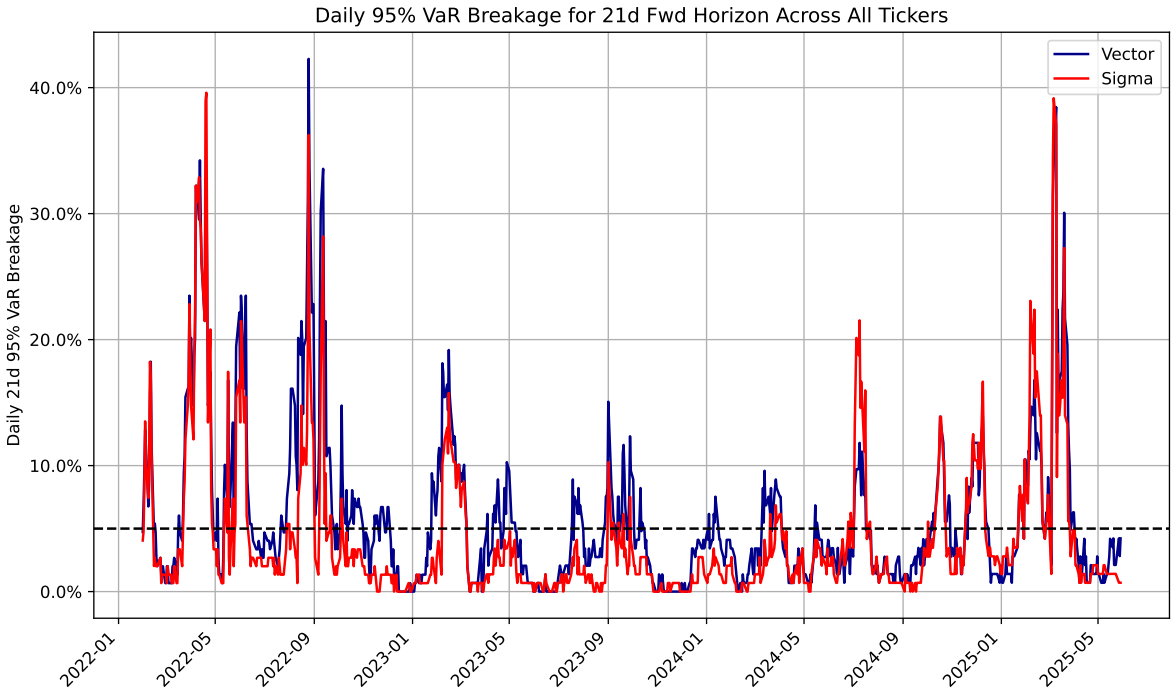

Daily 95% ROVBC for 1d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 1d 95% VaR ROVBC
10.0%
7.5%
5.0%
2.5%
0.0%
−2.5%
−5.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

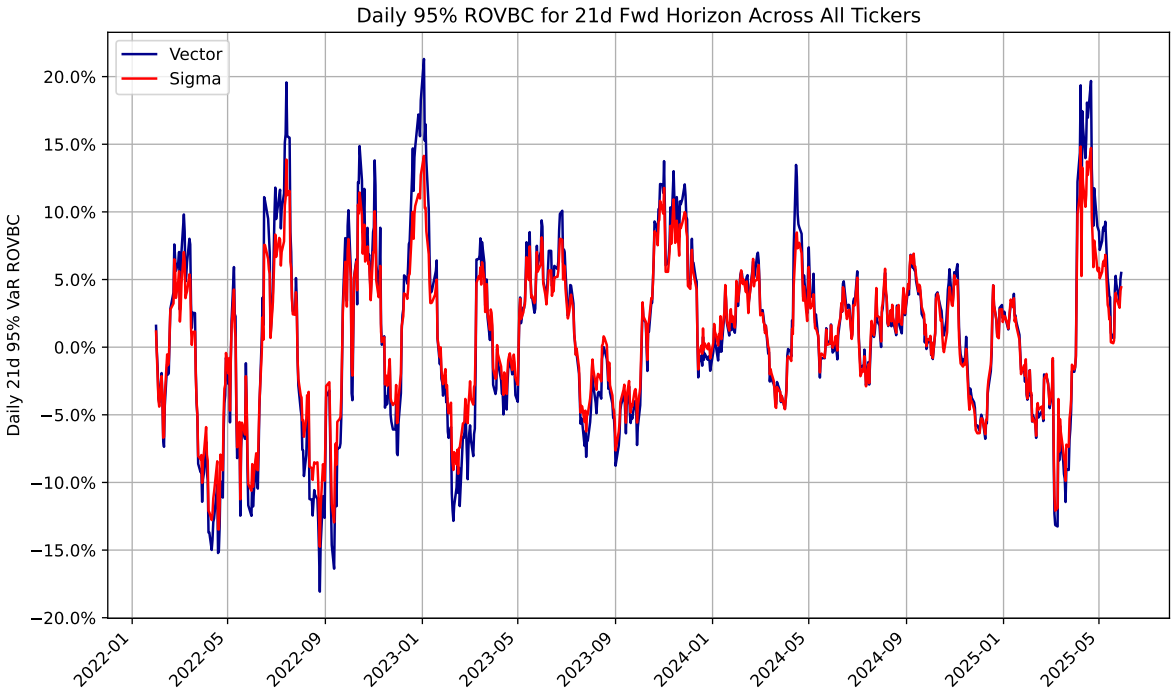
10d Horizon


Daily 95% VaR Breakage for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 10d 95% VaR Breakage
70%
60%
50%
40%
30%
20%
10%
0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

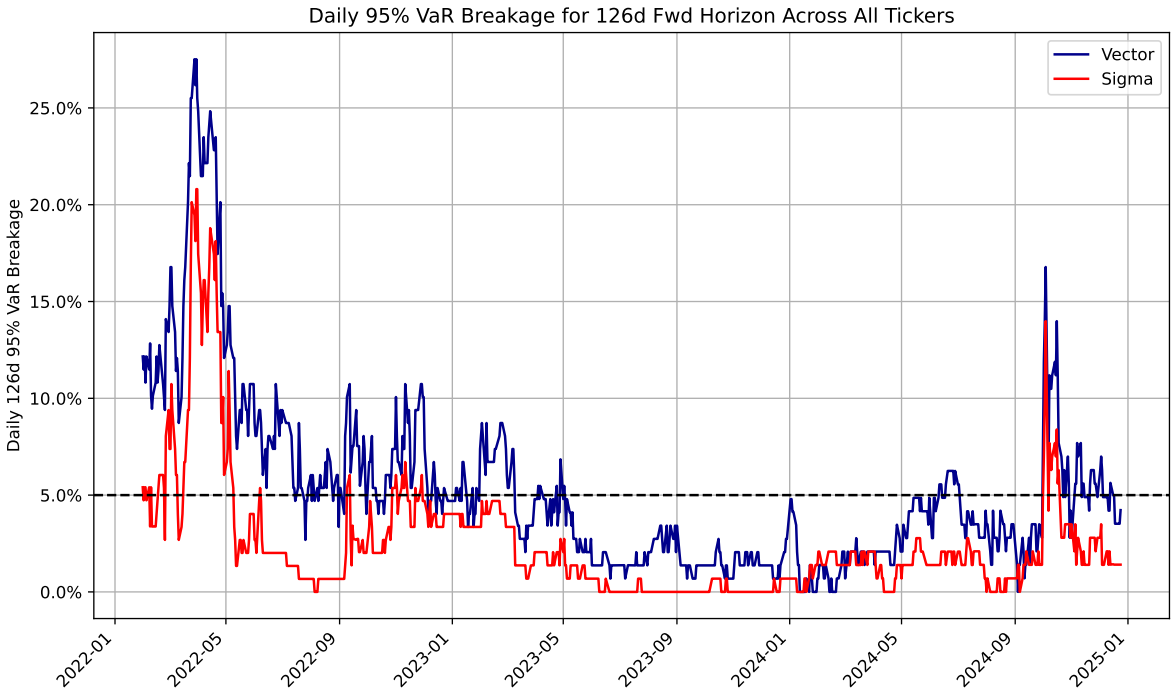

Daily 95% ROVBC for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 10d 95% VaR ROVBC
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

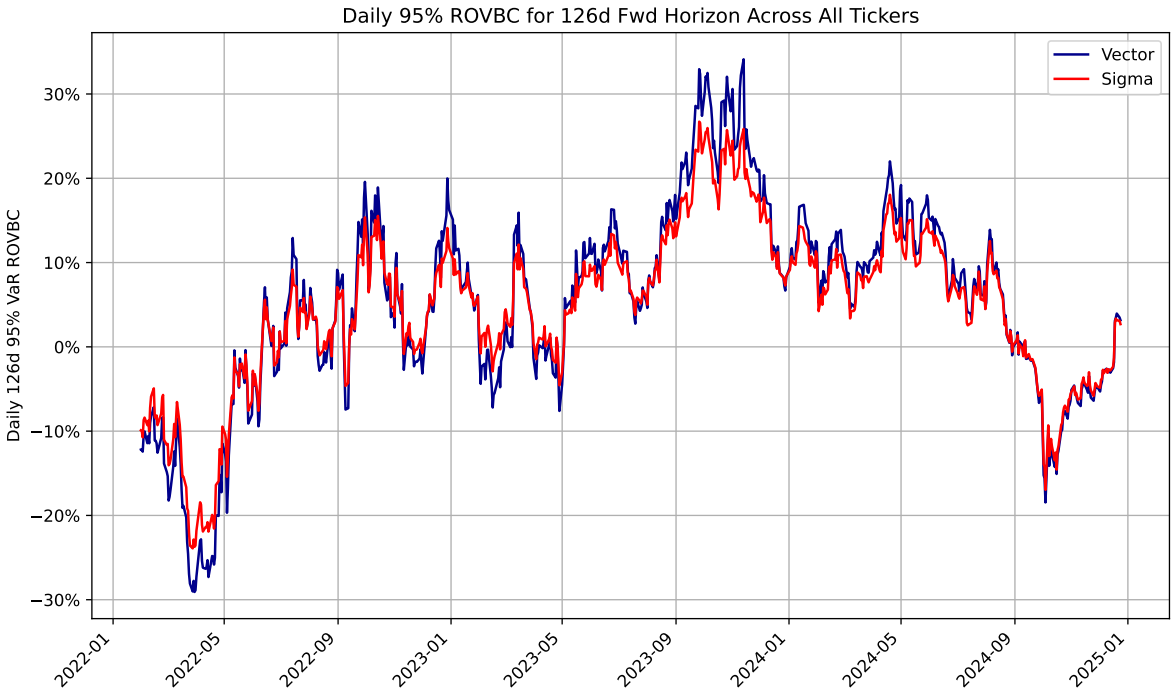
21d Horizon


Daily 95% VaR Breakage for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 21d 95% VaR Breakage
40.0%
30.0%
20.0%
10.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

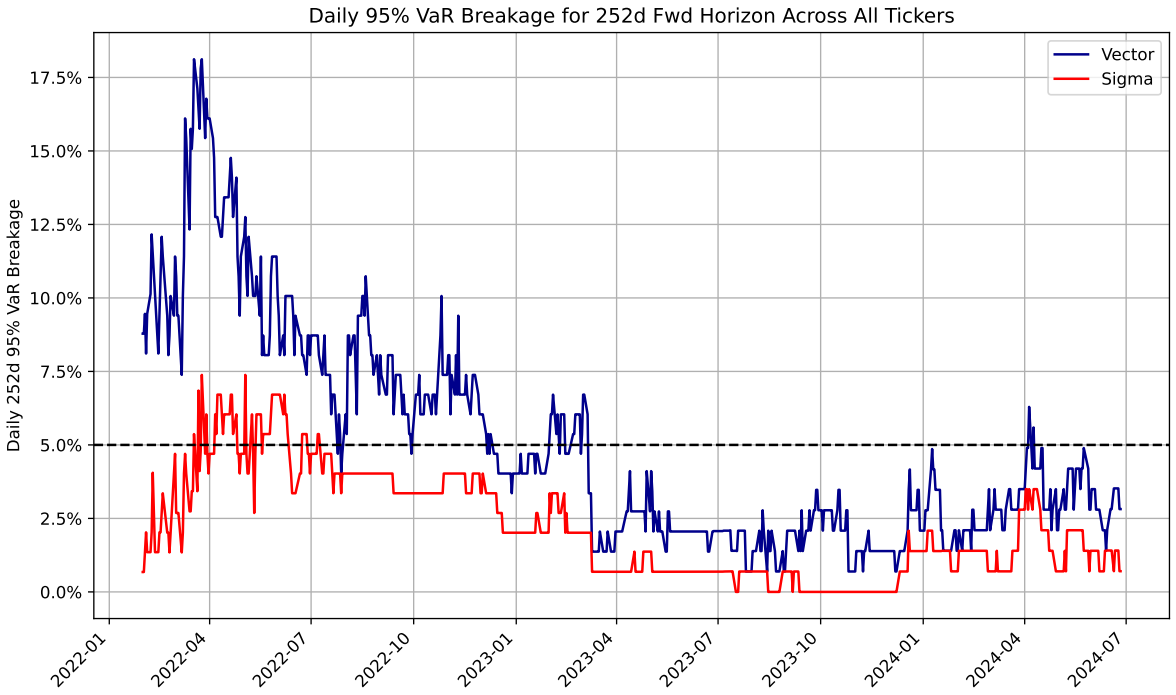

Daily 95% ROVBC for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 21d 95% VaR ROVBC
20.0%
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
−20.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

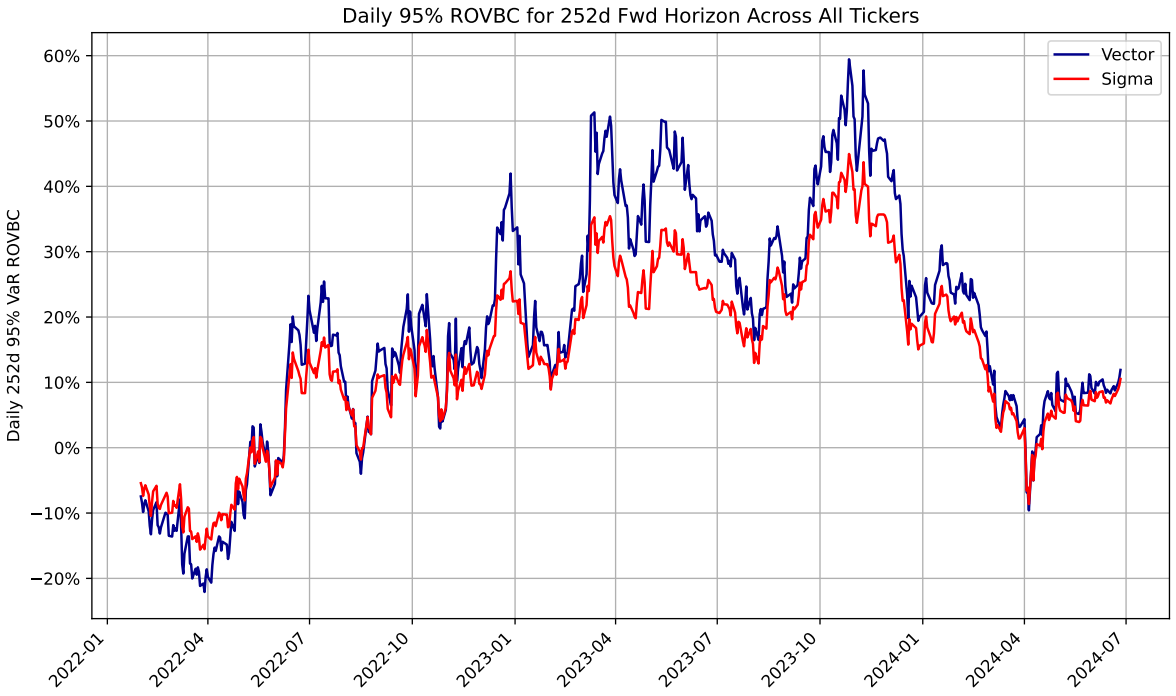
63d Horizon


Daily 95% VaR Breakage for 126d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 126d 95% VaR Breakage
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01


Daily 95% ROVBC for 126d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 126d 95% VaR ROVBC
30%
20%
10%
0%
−10%
−20%
−30%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

252d Horizon

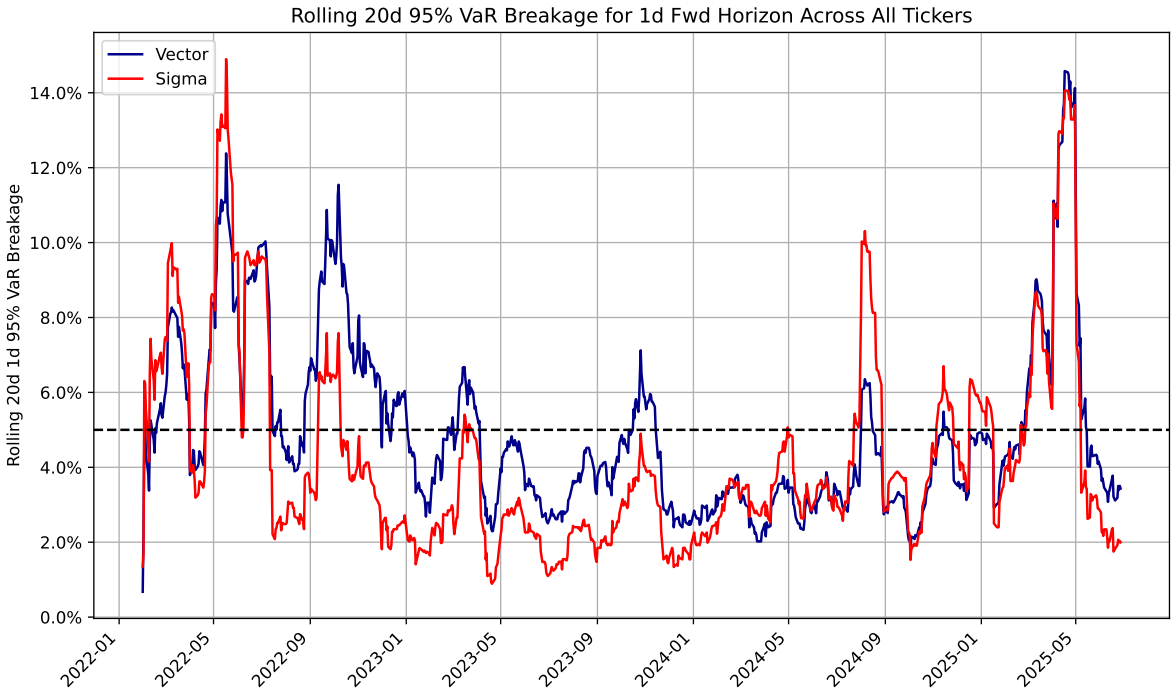


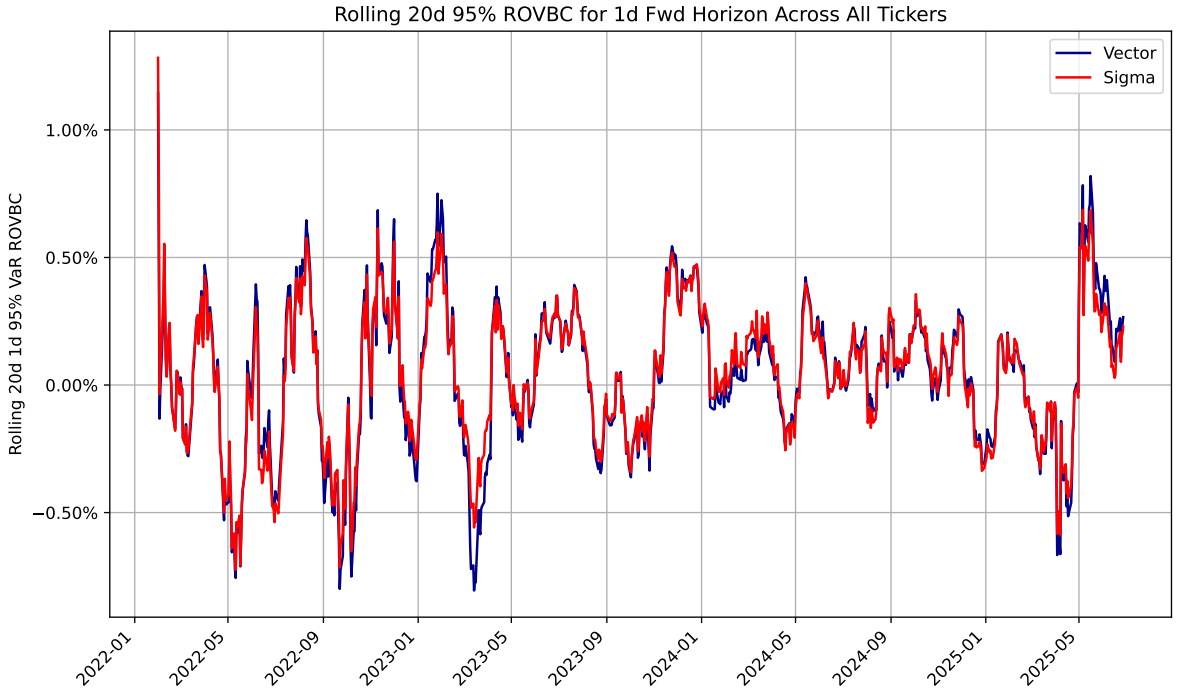


Rolling 20d Performance

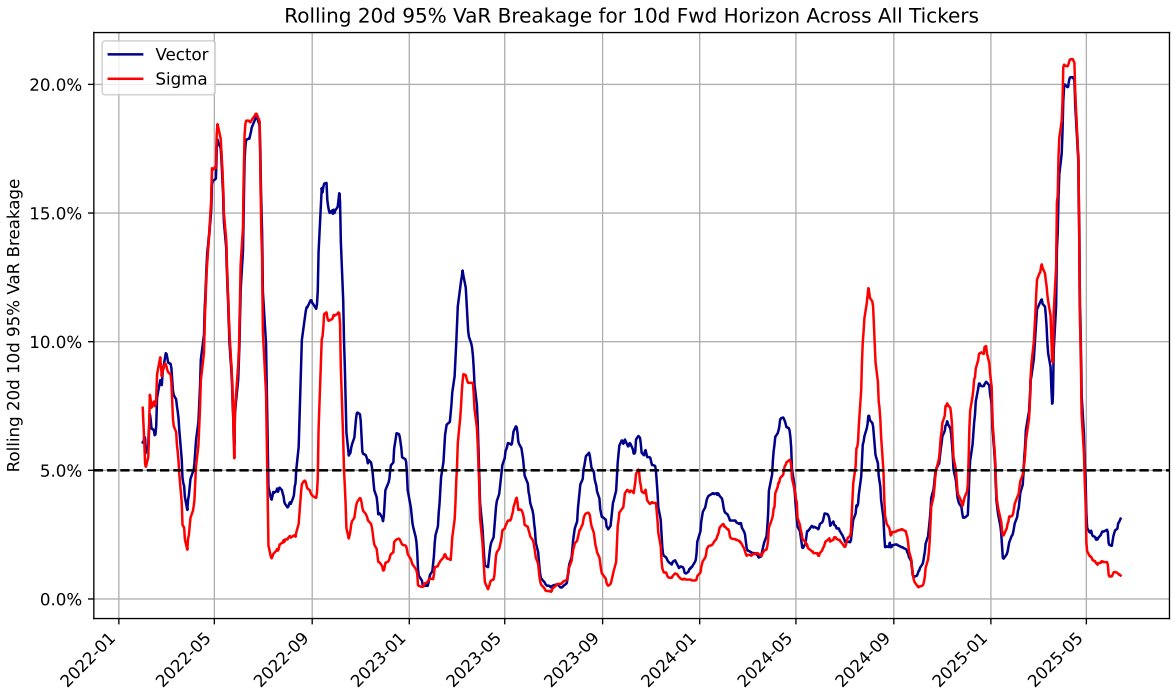
Here we look at 20 day rolling moving averages of the breakage and ROVBC statitics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

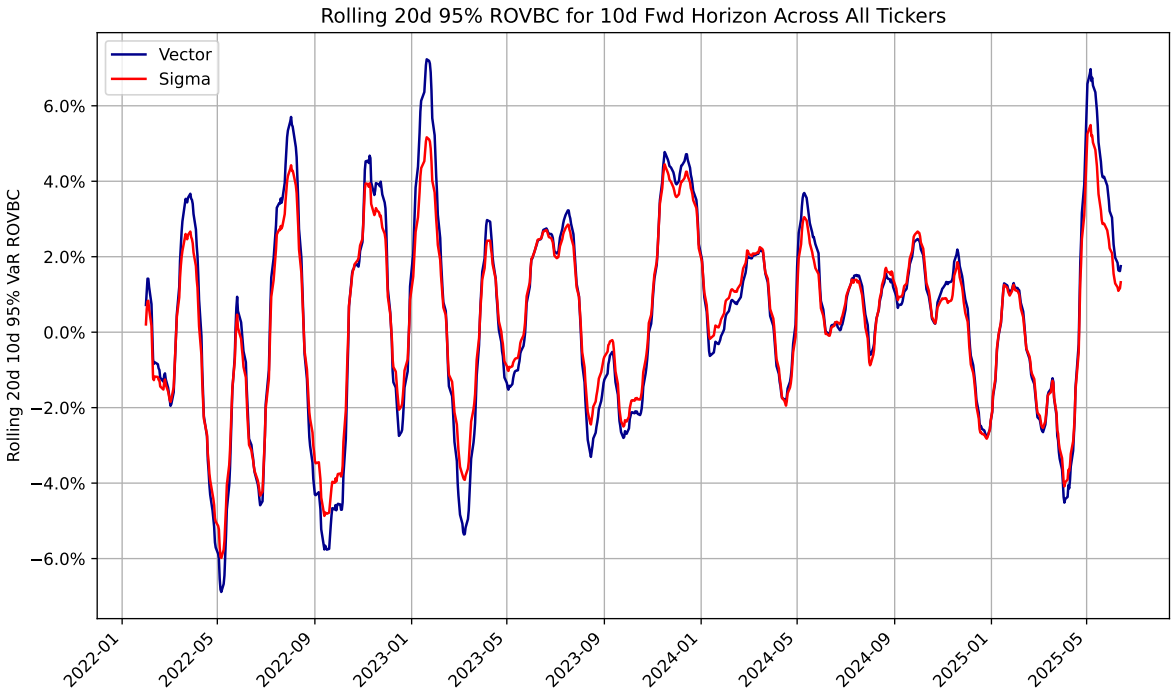
1d Horizon



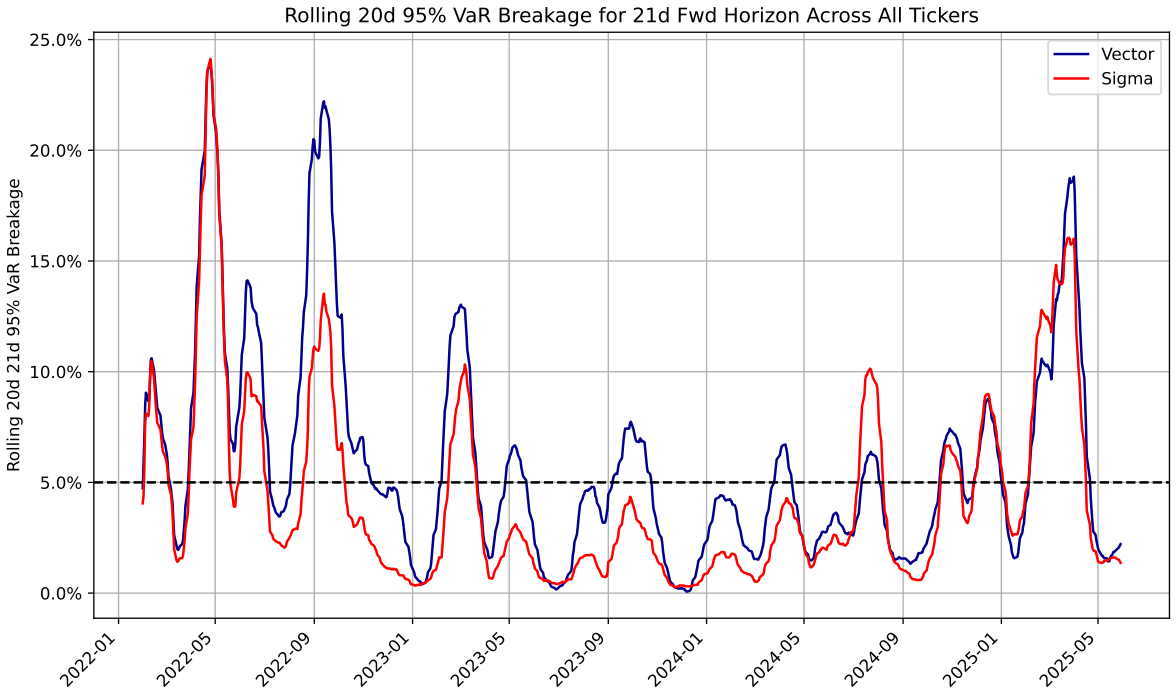

Rolling 20d 95% ROVBC for 1d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 1d 95% VaR ROVBC
1.00%
0.50%
0.00%
−0.50%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

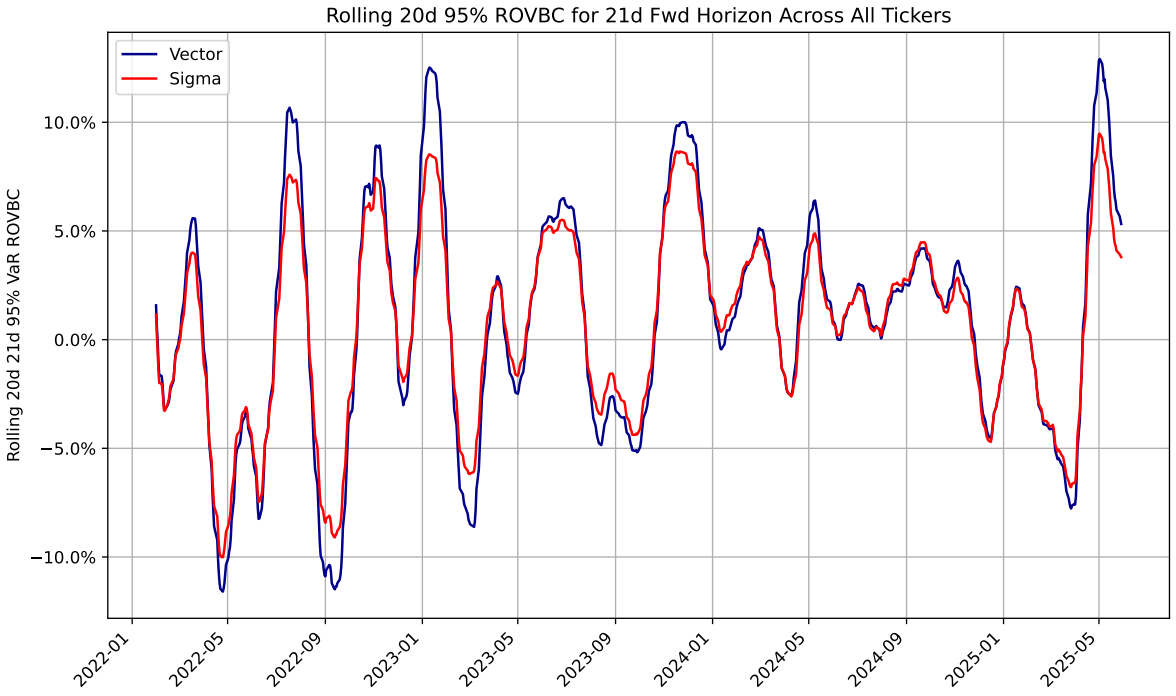
10d Horizon


Rolling 20d 95% VaR Breakage for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 95% VaR Breakage
20.0%
15.0%
10.0%
5.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

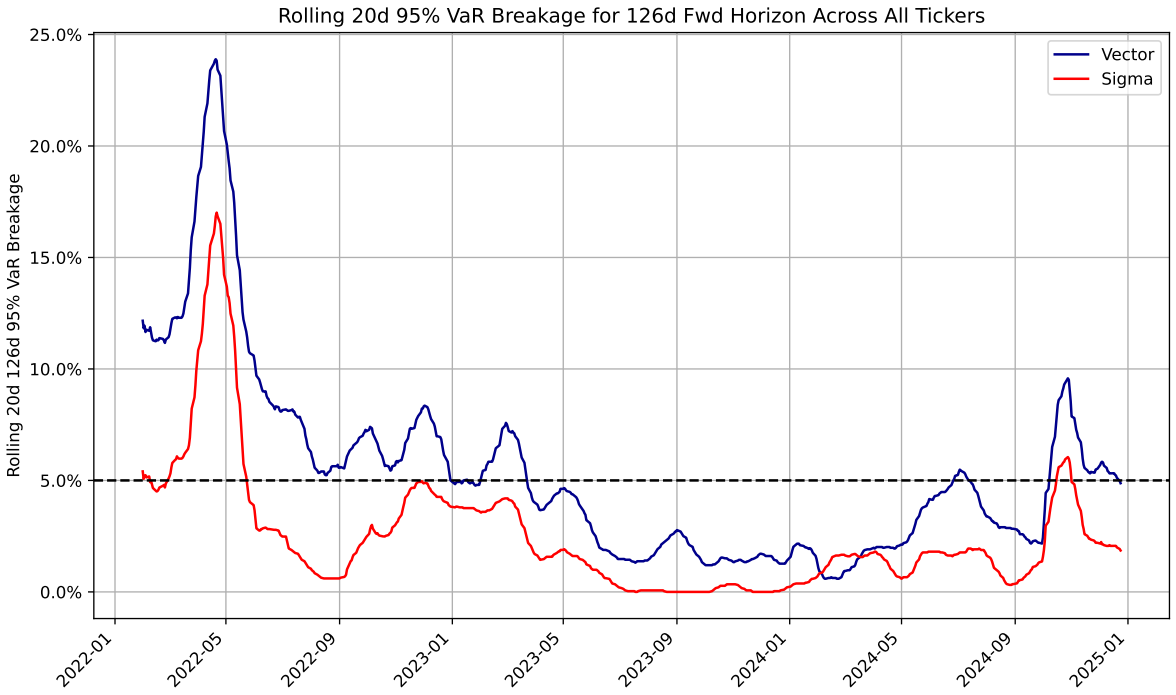

Rolling 20d 95% ROVBC for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 95% VaR ROVBC
6.0%
4.0%
2.0%
0.0%
−2.0%
−4.0%
−6.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

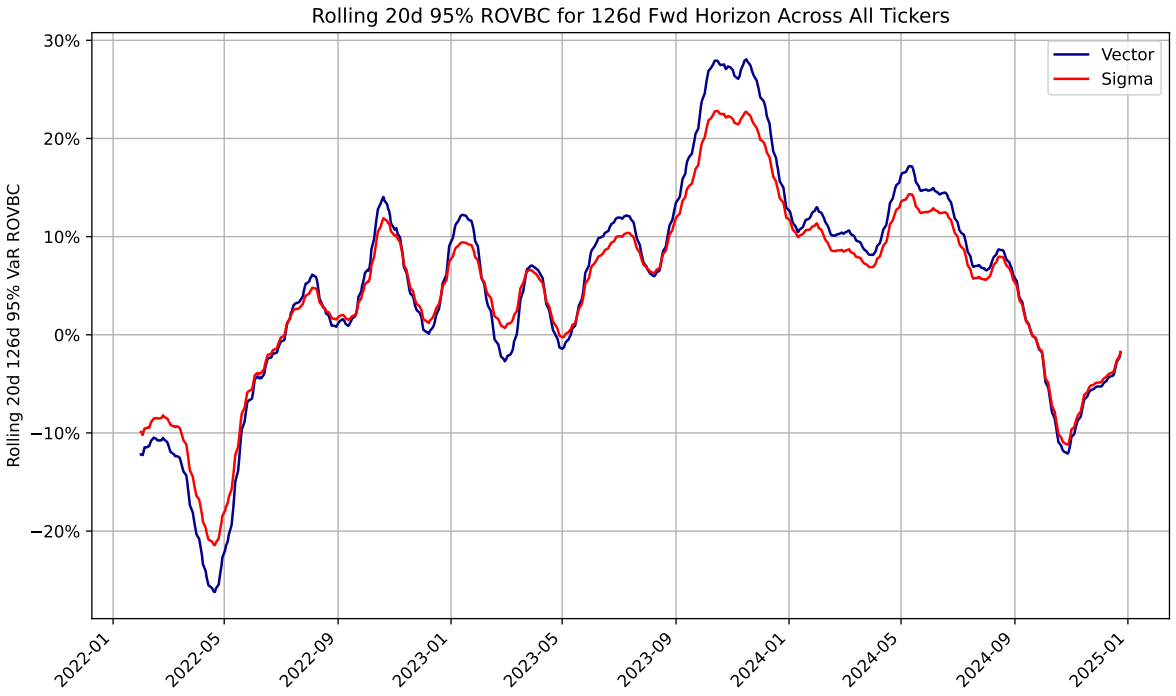
21d Horizon


Rolling 20d 95% VaR Breakage for 21d Fwd Horizon Across All Tickers
Rolling 20d 21d 95% VaR Breakage
Vector
Sigma
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

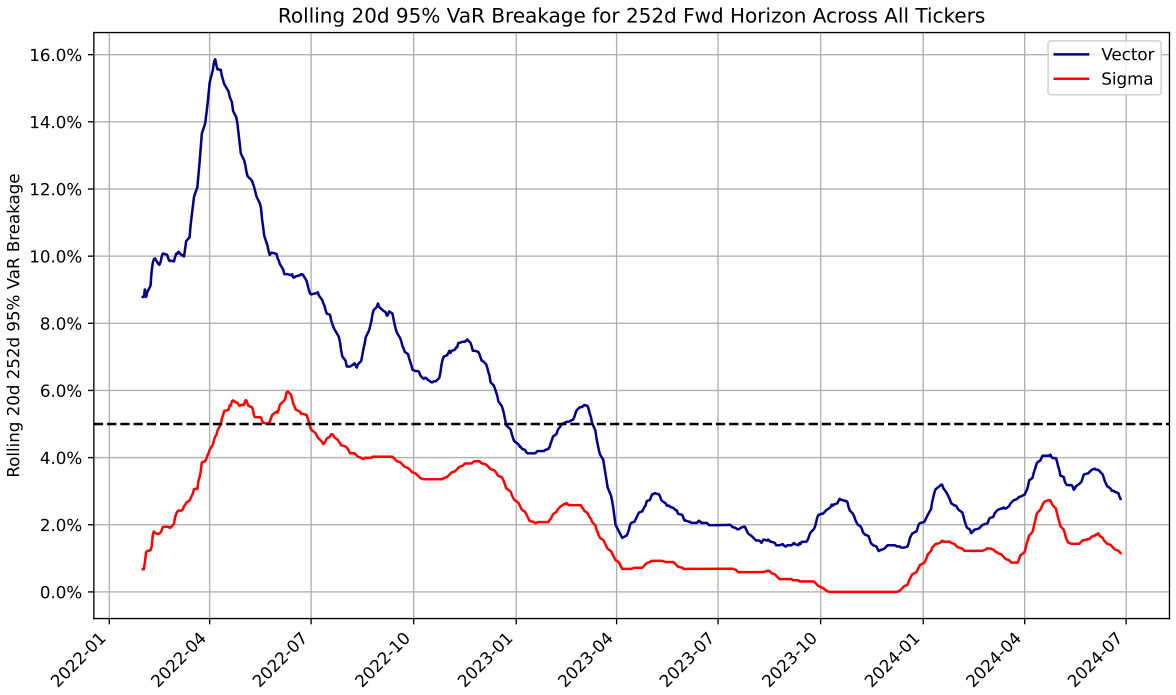

Rolling 20d 95% ROVBC for 21d Fwd Horizon Across All Tickers
Rolling 20d 21d 95% VaR ROVBC
Vector
Sigma
10.0%
5.0%
0.0%
−5.0%
−10.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

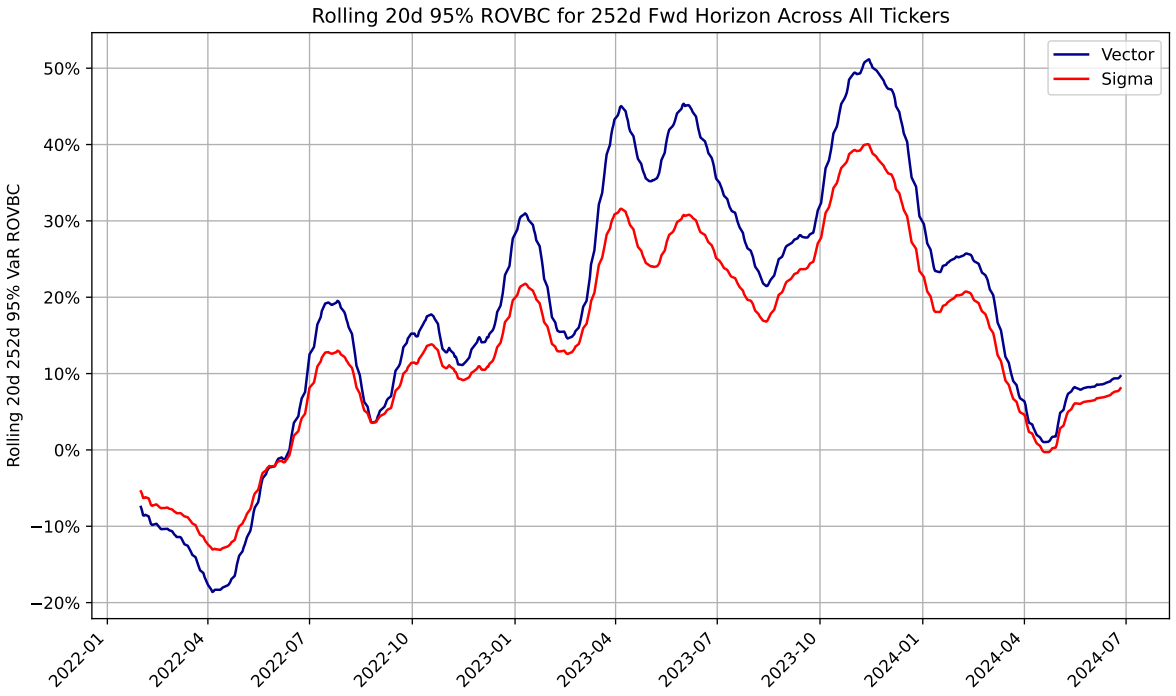
63d Horizon


Rolling 20d 95% VaR Breakage for 126d Fwd Horizon Across All Tickers
Rolling 20d 126d 95% VaR Breakage
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Vector
Sigma
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01


Rolling 20d 95% ROVBC for 126d Fwd Horizon Across All Tickers
Rolling 20d 126d 95% VaR ROVBC
30%
20%
10%
0%
−10%
−20%
Vector
Sigma
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

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 2025-06-27

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	SBNY	30.22%	SBNY	7.91%
1.0	SIVBQ	19.06%	VST	6.55%
1.0	TSLA	18.25%	FRCB	6.47%
1.0	CHTR	17.31%	AAPL	6.32%
1.0	LQD	16.61%	ACGL	6.2%
1.0	FRCB	13.67%	TRGP	6.08%
1.0	B	12.28%	PHM	6.08%
1.0	GME	11.93%	MUB	5.97%
1.0	AAP	11.7%	GOOGL	5.85%
1.0	MSTR	11.46%	NVDA	5.85%
1.0	UAA	11.23%	SIVBQ	5.76%
1.0	ZTS	11.11%	GLD	5.73%
1.0	SLV	10.29%	PEP	5.73%
1.0	AMZN	10.18%	AZN	5.73%
1.0	GNRC	9.71%	IRM	5.61%
1.0	META	9.59%	LQD	5.61%
1.0	SBUX	9.47%	TXN	5.38%
1.0	MUB	9.25%	XOM	5.38%
1.0	BALL	9.24%	QQQ	5.38%
1.0	VFC	9.24%	VCSH	5.38%
1.0	VCSH	9.12%	VZ	5.38%
1.0	BUD	8.89%	ON	5.38%
1.0	TLT	8.89%	NVS	5.26%
1.0	ISRG	8.89%	ABBV	5.26%
1.0	KEY	8.77%	AMD	5.26%

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 2025-06-27

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	SBNY	40.44%	MUB	13.61%
10.0	SIVBQ	22.43%	SIVBQ	10.66%
10.0	AAP	21.04%	SBNY	9.93%
10.0	CHTR	20.21%	AAP	8.98%
10.0	TSLA	19.39%	FRCB	8.46%
10.0	B	17.14%	BAC	8.39%
10.0	ZTS	16.08%	FRA	8.39%
10.0	GME	15.01%	UNH	8.04%
10.0	LQD	15.01%	CVS	7.92%
10.0	AMC	14.78%	BMY	7.57%
10.0	FRCB	13.97%	WFC	7.45%
10.0	KALU	12.77%	AZN	7.33%
10.0	TLT	12.65%	LW	7.21%
10.0	BUD	12.41%	MS	7.21%
10.0	CVS	12.17%	CTLT	6.94%
10.0	SLV	12.17%	NWL	6.86%
10.0	NEM	12.06%	GSK	6.86%
10.0	VFC	11.82%	CLF	6.74%
10.0	JAZZ	11.7%	AA	6.74%
10.0	GSK	11.58%	BALL	6.74%
10.0	MSTR	11.23%	CHTR	6.62%
10.0	GNRC	10.52%	EMB	6.39%
10.0	META	10.28%	BHC	6.38%
10.0	VCSH	10.28%	MU	6.38%
10.0	SNY	10.17%	NEM	6.15%

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 2025-06-27

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	SBNY	56.67%	MUB	14.63%
21.0	CHTR	23.95%	SIVBQ	12.96%
21.0	SIVBQ	23.33%	FRCB	11.48%
21.0	AAP	22.75%	AAP	10.66%
21.0	TSLA	19.16%	LW	9.7%
21.0	B	17.96%	GSK	9.22%
21.0	LQD	16.77%	SBNY	8.89%
21.0	GSK	16.17%	CVS	8.38%
21.0	CVS	15.81%	EMB	8.27%
21.0	BUD	14.73%	ABBV	7.78%
21.0	AMC	14.73%	BMY	7.78%
21.0	ZTS	14.61%	CTLT	7.73%
21.0	TLT	14.61%	CHTR	7.43%
21.0	FRCB	14.44%	AZN	7.43%
21.0	VCSH	14.37%	UNH	7.43%
21.0	KALU	14.25%	VCSH	7.07%
21.0	NEM	13.89%	LQD	7.07%
21.0	GNRC	13.65%	FRA	6.95%
21.0	VFC	13.53%	NWL	6.71%
21.0	PRGO	13.17%	BAC	6.59%
21.0	BXP	12.81%	FIS	6.59%
21.0	CTLT	12.57%	WDC	6.59%
21.0	JAZZ	11.74%	PEP	6.35%
21.0	BIIB	11.38%	VFC	6.35%
21.0	SNY	11.14%	AA	6.35%

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 2025-06-27

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	AAP	36.57%	FRCB	24.81%
63.0	CHTR	31.02%	MUB	13.13%
63.0	FRCB	29.26%	GSK	12.23%
63.0	VFC	22.19%	NEM	11.73%
63.0	BIIB	18.16%	CTLT	10.7%
63.0	BHC	17.91%	LW	9.33%
63.0	B	17.65%	CHTR	9.08%
63.0	GNRC	17.53%	BMY	9.08%
63.0	AMC	17.4%	VFC	8.7%
63.0	TSLA	17.4%	LQD	8.45%
63.0	KALU	17.28%	CVS	8.45%
63.0	TLT	16.14%	ZION	8.34%
63.0	NEM	15.76%	AAP	8.2%
63.0	GSK	15.64%	KEY	8.2%
63.0	LQD	15.13%	BHC	8.2%
63.0	CTLT	14.66%	BXP	8.2%
63.0	AMZN	14.5%	IEP	8.2%
63.0	FIS	13.24%	HCA	7.69%
63.0	BXP	13.11%	NWL	7.44%
63.0	CVS	12.99%	BALL	7.44%
63.0	BMY	12.99%	VCSH	7.31%
63.0	CMA	12.23%	TLT	7.31%
63.0	VCSH	12.11%	UNH	7.06%
63.0	FITB	12.11%	CMA	7.06%
63.0	KEY	11.6%	LEN	6.94%
63.0	BUD	11.35%	CYH	6.94%
63.0	META	10.72%	NFLX	6.81%
63.0	ZION	10.65%	EMB	6.44%

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 2025-06-27

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	AAP	36.44%	GSK	17.67%
126.0	CHTR	35.89%	IEP	17.4%
126.0	VFC	32.6%	AAP	16.85%
126.0	AMC	25.34%	VZ	11.1%
126.0	GSK	21.1%	CTLT	10.5%
126.0	BIIB	20.55%	CSTM	10.0%
126.0	GNRC	20.14%	INTC	9.86%
126.0	TSLA	18.22%	MRK	9.73%
126.0	TLT	17.95%	MUB	9.6%
126.0	IEP	17.53%	BHC	9.32%
126.0	ZION	15.78%	BALL	9.18%
126.0	CVS	15.48%	LEN	8.9%
126.0	BXP	15.34%	NEM	7.53%
126.0	BHC	14.52%	EMB	7.27%
126.0	NEM	14.11%	LW	7.26%
126.0	BMY	13.84%	VCSH	6.99%
126.0	OXY	13.56%	KEY	6.85%
126.0	CTLT	12.76%	BIIB	6.58%
126.0	MRK	12.19%	LQD	6.03%
126.0	B	12.19%	ELAN	5.86%
126.0	VCSH	12.05%	BXP	5.75%
126.0	BUD	11.37%	LUMN	5.75%
126.0	AMZN	11.23%	UNH	5.75%
126.0	CMA	11.1%	CHTR	5.34%
126.0	SNY	10.14%	IRM	5.34%
126.0	CLF	9.59%	CLF	4.93%
126.0	LQD	9.59%	HYG	4.79%

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 2025-06-27

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	70.7%	IEP	40.23%
252.0	AMC	48.68%	AAP	22.85%
252.0	CHTR	39.57%	BMY	16.56%
252.0	IEP	38.08%	GSK	16.06%
252.0	BIIB	36.59%	LUMN	15.07%
252.0	VFC	31.13%	LW	14.4%
252.0	CMA	25.33%	MRK	13.91%
252.0	ZION	25.25%	BXP	10.26%
252.0	FIS	18.71%	VZ	8.61%
252.0	GSK	17.38%	VNO	6.29%
252.0	CVS	17.05%	INTC	5.3%
252.0	BXP	16.06%	CTLT	5.27%
252.0	OXY	15.89%	UNH	4.3%
252.0	BMY	14.07%	CSTM	3.64%
252.0	CTLT	13.79%	CLF	2.98%
252.0	TLT	13.41%	LNC	2.65%
252.0	VNO	12.75%	ELAN	2.54%
252.0	ELAN	11.51%	CVS	2.32%
252.0	BHC	11.26%	EMB	1.99%
252.0	CLF	10.43%	PEP	1.99%
252.0	MRK	10.26%	WDC	1.66%
252.0	NWL	9.6%	BALL	1.32%
252.0	EXPE	8.28%	NWL	1.16%
252.0	LNC	8.28%	ZION	1.02%
252.0	GNRC	7.95%	TLT	0.83%
252.0	AMZN	7.28%	OXY	0.83%
252.0	PRGO	7.28%	VCSH	0.66%

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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	TSLA	42.11%	GSK	15.79%
1.0	ZTS	31.58%	ZTS	10.53%
1.0	TDG	21.05%	TMUS	10.53%
1.0	SBUX	21.05%	ORLY	10.53%
1.0	AMZN	15.79%	AZO	10.53%
1.0	VZ	15.79%	PCG	10.53%
1.0	QQQ	15.79%	NEM	10.53%
1.0	AAP	15.79%	ADBE	10.53%
1.0	ISRG	15.79%	ACGL	10.53%
1.0	AMC	15.79%	XOM	10.53%
1.0	AMGN	10.53%	TSLA	5.26%
1.0	SLV	10.53%	HLT	5.26%
1.0	GWW	10.53%	CZR	5.26%
1.0	HD	10.53%	GE	5.26%
1.0	LLY	10.53%	GILD	5.26%
1.0	NAVI	10.53%	GLD	5.26%
1.0	NEM	10.53%	GME	5.26%
1.0	BUD	10.53%	GOOGL	5.26%
1.0	ADBE	10.53%	GWW	5.26%
1.0	PEP	10.53%	HCA	5.26%
1.0	B	10.53%	LEN	5.26%
1.0	TLT	10.53%	AAP	5.26%
1.0	UNH	10.53%	THC	5.26%
1.0	AZO	10.53%	MOS	5.26%
1.0	ACGL	10.53%	MRK	5.26%
1.0	AMD	5.26%	COST	5.26%
1.0	FITB	5.26%	VNO	5.26%
1.0	FRA	5.26%	OXY	5.26%
1.0	GME	5.26%	PEP	5.26%
1.0	XOM	5.26%	PHM	5.26%

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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	ZTS	90.0%	PCG	50.0%
10.0	AMC	70.0%	TMUS	30.0%
10.0	AAP	60.0%	COST	20.0%
10.0	GME	60.0%	GSK	10.0%
10.0	ADBE	50.0%	VNO	10.0%
10.0	PCG	40.0%	AA	0.0%
10.0	VZ	40.0%	NFLX	0.0%
10.0	TSLA	30.0%	MU	0.0%
10.0	AMGN	30.0%	MUB	0.0%
10.0	BHP	20.0%	NAVI	0.0%
10.0	COST	10.0%	NEM	0.0%
10.0	BUD	10.0%	NVS	0.0%
10.0	BXP	10.0%	NVDA	0.0%
10.0	OXY	10.0%	NWL	0.0%
10.0	MUB	0.0%	ON	0.0%
10.0	NWL	0.0%	ORCL	0.0%
10.0	NVS	0.0%	ORLY	0.0%
10.0	NVDA	0.0%	OXY	0.0%
10.0	ORCL	0.0%	MSTR	0.0%
10.0	NFLX	0.0%	MSFT	0.0%
10.0	NEM	0.0%	MSI	0.0%
10.0	ORLY	0.0%	LUMN	0.0%
10.0	NAVI	0.0%	KEY	0.0%
10.0	PEP	0.0%	KHC	0.0%
10.0	ON	0.0%	LEN	0.0%
10.0	MSTR	0.0%	LLY	0.0%
10.0	MU	0.0%	LNC	0.0%
10.0	POST	0.0%	LQD	0.0%
10.0	MSI	0.0%	LVS	0.0%
10.0	MSFT	0.0%	PHM	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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	SBUX	28.81%	GLD	13.56%
1.0	ZTS	25.42%	GSK	13.56%
1.0	TSLA	25.42%	AMGN	11.86%
1.0	LLY	20.34%	GILD	11.86%
1.0	B	18.64%	ZTS	11.86%
1.0	AMZN	18.64%	ABBV	11.86%
1.0	AMGN	16.95%	XOM	10.17%
1.0	VZ	16.95%	AZN	10.17%
1.0	TDG	15.25%	AAPL	10.17%
1.0	TLT	15.25%	MRK	10.17%
1.0	CDNS	15.25%	BMY	10.17%
1.0	LQD	15.25%	OXY	10.17%
1.0	UNH	15.25%	TMUS	10.17%
1.0	AAP	15.25%	ACGL	10.17%
1.0	PEP	13.56%	ORLY	8.47%
1.0	TXN	11.86%	EMB	8.47%
1.0	NEM	11.86%	UNH	8.47%
1.0	INTC	11.86%	HLT	8.47%
1.0	ISRG	11.86%	CSCO	8.47%
1.0	AMC	11.86%	JAZZ	8.47%
1.0	AAPL	11.86%	CNC	8.47%
1.0	ABBV	11.86%	LLY	8.47%
1.0	MU	10.17%	LQD	8.47%
1.0	NAVI	10.17%	AZO	8.47%
1.0	HON	10.17%	MUB	8.47%
1.0	QQQ	10.17%	PEP	8.47%
1.0	CNC	10.17%	TRGP	8.47%
1.0	ACGL	10.17%	BIIB	8.47%
1.0	META	10.17%	B	8.47%
1.0	JAZZ	10.17%	TLT	8.47%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	UNH	44.0%	UNH	40.0%
10.0	TSLA	22.0%	PCG	22.0%
10.0	LLY	22.0%	CPRT	20.0%
10.0	ZTS	20.0%	TMUS	14.0%
10.0	CVS	20.0%	PEP	14.0%
10.0	AMC	20.0%	LLY	10.0%
10.0	PCG	18.0%	BMY	10.0%
10.0	JAZZ	18.0%	MRK	8.0%
10.0	CDNS	18.0%	GSK	6.0%
10.0	CPRT	16.0%	GILD	6.0%
10.0	GME	16.0%	ABBV	6.0%
10.0	AMGN	14.0%	JAZZ	6.0%
10.0	AAP	12.0%	AMGN	4.0%
10.0	ADBE	12.0%	CNC	4.0%
10.0	PEP	12.0%	AZN	4.0%
10.0	VZ	12.0%	COST	4.0%
10.0	BMY	12.0%	MUB	4.0%
10.0	BHC	10.0%	SNY	2.0%
10.0	TLT	8.0%	LQD	2.0%
10.0	CNC	8.0%	TLT	2.0%
10.0	B	6.0%	FRA	2.0%
10.0	LQD	6.0%	CVS	2.0%
10.0	MUB	4.0%	VCSH	2.0%
10.0	META	4.0%	NVS	2.0%
10.0	BHP	4.0%	B	2.0%
10.0	OXY	4.0%	VNO	2.0%
10.0	SBUX	4.0%	ORCL	0.0%
10.0	AZN	4.0%	ORLY	0.0%
10.0	SNY	4.0%	OXY	0.0%
10.0	GILD	4.0%	ON	0.0%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	UNH	71.79%	UNH	66.67%
21.0	PCG	33.33%	CPRT	53.85%
21.0	ADBE	20.51%	PCG	38.46%
21.0	CPRT	20.51%	PEP	12.82%
21.0	TSLA	20.51%	LLY	12.82%
21.0	LLY	17.95%	BMY	10.26%
21.0	BHC	15.38%	KHC	5.13%
21.0	CVS	15.38%	AA	0.0%
21.0	AMGN	12.82%	NVDA	0.0%
21.0	ZTS	10.26%	NAVI	0.0%
21.0	BMY	10.26%	NEM	0.0%
21.0	AAP	7.69%	NFLX	0.0%
21.0	PEP	7.69%	ON	0.0%
21.0	NEM	5.13%	NVS	0.0%
21.0	SNY	5.13%	NWL	0.0%
21.0	CHTR	5.13%	MU	0.0%
21.0	CYH	5.13%	ORCL	0.0%
21.0	AMC	5.13%	ORLY	0.0%
21.0	CNC	2.56%	OXY	0.0%
21.0	LQD	2.56%	MUB	0.0%
21.0	B	2.56%	MSI	0.0%
21.0	JAZZ	2.56%	MSTR	0.0%
21.0	SBUX	2.56%	POST	0.0%
21.0	TLT	2.56%	MSFT	0.0%
21.0	NVDA	0.0%	MS	0.0%
21.0	NAVI	0.0%	MRK	0.0%
21.0	XOM	0.0%	MOS	0.0%
21.0	NFLX	0.0%	MNST	0.0%
21.0	NVS	0.0%	META	0.0%
21.0	MU	0.0%	LW	0.0%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	TSLA	23.39%	AAPL	10.48%
1.0	MSFT	14.11%	TRGP	9.27%
1.0	ZTS	13.71%	QQQ	8.87%
1.0	SBUX	13.71%	SPY	8.87%
1.0	AMZN	13.71%	IRM	8.47%
1.0	INTC	13.31%	NVDA	8.47%
1.0	B	13.31%	TXN	8.47%
1.0	QCOM	13.31%	LLY	8.47%
1.0	UNH	12.9%	HCA	7.66%
1.0	CLF	12.1%	VST	7.66%
1.0	AAP	12.1%	HLT	7.66%
1.0	MU	11.69%	AZN	7.66%
1.0	ON	11.29%	GSK	7.66%
1.0	AMGN	10.89%	TMUS	7.66%
1.0	TXN	10.48%	OXY	7.66%
1.0	GSK	10.48%	GOOGL	7.66%
1.0	CHTR	10.48%	AMAT	7.26%
1.0	KHC	10.48%	BMY	7.26%
1.0	LQD	10.08%	CDNS	7.26%
1.0	CDNS	10.08%	PEP	7.26%
1.0	CNC	9.68%	ACGL	7.26%
1.0	PEP	9.68%	PCG	7.26%
1.0	KEY	9.27%	CCL	6.85%
1.0	NAVI	9.27%	ORCL	6.85%
1.0	VZ	9.27%	CNC	6.85%
1.0	UAA	8.06%	MS	6.85%
1.0	META	8.06%	PHM	6.85%
1.0	CZR	8.06%	GLD	6.85%
1.0	BHC	8.06%	XOM	6.85%
1.0	VFC	8.06%	AMGN	6.85%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	TSLA	29.71%	UNH	15.9%
10.0	ZTS	17.99%	LLY	14.64%
10.0	AAP	17.99%	MU	13.81%
10.0	WDC	15.06%	MRK	13.81%
10.0	UNH	15.06%	WDC	13.81%
10.0	CVS	14.64%	AZN	13.39%
10.0	INTC	14.64%	BAC	12.97%
10.0	BUD	14.23%	WFC	12.55%
10.0	CLF	13.81%	HON	12.13%
10.0	GSK	13.81%	PCG	12.13%
10.0	VFC	12.97%	FRA	11.72%
10.0	CMA	12.97%	IRM	11.72%
10.0	WFC	12.97%	AAPL	11.72%
10.0	CZR	12.55%	CDNS	11.3%
10.0	CSTM	12.55%	TRGP	11.3%
10.0	CDNS	12.55%	AA	11.3%
10.0	KALU	12.13%	NVDA	10.88%
10.0	B	12.13%	CCL	10.46%
10.0	BHC	12.13%	VST	10.04%
10.0	SBUX	11.72%	VFC	10.04%
10.0	SLV	11.72%	CPRT	10.04%
10.0	AA	11.72%	BHC	10.04%
10.0	VZ	10.88%	CSTM	9.62%
10.0	KEY	10.46%	QQQ	9.62%
10.0	GNRC	10.46%	FITB	9.21%
10.0	NAVI	10.46%	CVS	9.21%
10.0	AMGN	10.04%	CNC	9.21%
10.0	JAZZ	10.04%	LVS	9.21%
10.0	OXY	10.04%	MS	9.21%
10.0	BIIB	9.62%	ABBV	9.21%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	BUD	23.68%	UNH	25.0%
21.0	TSLA	23.68%	MRK	16.67%
21.0	GSK	21.93%	AZN	16.23%
21.0	UNH	21.49%	PCG	16.23%
21.0	ZTS	20.18%	CSTM	15.35%
21.0	CSTM	19.74%	WDC	14.47%
21.0	WDC	19.3%	VFC	14.04%
21.0	INTC	18.42%	CPRT	13.6%
21.0	AAP	18.42%	LVS	13.16%
21.0	BIIB	17.11%	ABBV	12.72%
21.0	VFC	17.11%	BUD	12.28%
21.0	ON	16.67%	FRA	11.84%
21.0	BHC	15.35%	KALU	11.4%
21.0	CZR	15.35%	CCL	11.4%
21.0	AMGN	15.35%	IRM	11.4%
21.0	GNRC	14.91%	HLT	10.96%
21.0	CVS	14.91%	BIIB	10.53%
21.0	SBUX	14.47%	CDNS	10.09%
21.0	AA	14.47%	AMZN	10.09%
21.0	B	14.47%	AAP	9.65%
21.0	OXY	13.6%	BMY	9.65%
21.0	CHTR	13.6%	AA	9.65%
21.0	KALU	13.16%	QQQ	9.65%
21.0	LQD	12.72%	TEVA	9.65%
21.0	META	12.28%	PEP	9.65%
21.0	CMA	12.28%	INTC	9.21%
21.0	AZN	12.28%	LW	9.21%
21.0	NAVI	11.84%	NWL	9.21%
21.0	MRK	11.84%	SPY	9.21%
21.0	LW	11.84%	BBY	9.21%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
63.0	AAP	30.65%	LEN	29.57%
63.0	VFC	30.11%	UNH	29.03%
63.0	GNRC	28.49%	PCG	26.34%
63.0	ON	28.49%	WDC	24.73%
63.0	BIIB	28.49%	VFC	23.12%
63.0	UNH	26.88%	BUD	20.97%
63.0	BUD	25.81%	IRM	20.43%
63.0	WDC	25.27%	AZN	17.2%
63.0	BHC	23.66%	NWL	16.67%
63.0	NWL	22.58%	HCA	16.67%
63.0	BMY	22.58%	NEM	15.05%
63.0	CSTM	22.04%	NVS	15.05%
63.0	PEP	21.51%	GSK	14.52%
63.0	GSK	20.97%	CCL	13.98%
63.0	GOOGL	18.82%	TEVA	13.44%
63.0	NEM	17.74%	DHI	11.83%
63.0	KHC	17.2%	CSTM	11.29%
63.0	PCG	16.67%	PEP	10.75%
63.0	SBUX	15.59%	CYH	9.68%
63.0	CNC	15.05%	ACGL	9.68%
63.0	HCA	13.98%	CNC	9.14%
63.0	OXY	13.98%	MSI	8.06%
63.0	AMGN	13.44%	LVS	8.06%
63.0	B	12.9%	CMCSA	8.06%
63.0	CLF	12.9%	PHM	8.06%
63.0	CMA	12.37%	BMY	7.53%
63.0	FITB	11.83%	MRK	7.53%
63.0	CVS	11.29%	JAZZ	7.53%
63.0	MRK	11.29%	FRA	7.53%
63.0	LW	10.75%	FIS	7.53%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
126.0	BIIB	60.16%	LEN	52.85%
126.0	MRK	44.72%	UNH	34.15%
126.0	GNRC	43.09%	IRM	31.71%
126.0	CLF	39.84%	BIIB	30.89%
126.0	VFC	37.4%	MRK	26.02%
126.0	PEP	37.4%	PEP	21.14%
126.0	BUD	28.46%	PCG	20.33%
126.0	UNH	26.02%	CSTM	19.51%
126.0	UAA	26.02%	WDC	12.2%
126.0	BHC	25.2%	DHI	11.38%
126.0	OXY	24.39%	BBY	9.76%
126.0	ON	23.58%	PHM	9.76%
126.0	WDC	21.95%	LVS	8.94%
126.0	CZR	21.14%	MUB	4.1%
126.0	BMY	21.14%	OXY	3.25%
126.0	CNC	17.89%	BALL	3.25%
126.0	DHI	17.07%	CYH	2.44%
126.0	NWL	17.07%	ACGL	2.44%
126.0	KHC	14.63%	NWL	2.44%
126.0	CSTM	13.01%	FCX	2.44%
126.0	NAVI	10.57%	BHC	1.63%
126.0	AAP	9.76%	BHP	1.63%
126.0	LW	8.94%	WYNN	1.63%
126.0	ELAN	8.94%	FRA	1.63%
126.0	CYH	8.13%	TRGP	1.63%
126.0	LEN	7.32%	BUD	1.63%
126.0	WYNN	7.32%	TXN	0.81%
126.0	AMD	7.32%	AMD	0.81%
126.0	BXP	6.5%	VFC	0.81%
126.0	LUMN	6.5%	LUMN	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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	MSTR	0.72%	MSTR	0.47%
1.0	GME	0.47%	VST	0.31%
1.0	NFLX	0.31%	NVDA	0.28%
1.0	META	0.29%	AVGO	0.22%
1.0	ORCL	0.2%	GBTC	0.22%
1.0	INTU	0.19%	GME	0.2%
1.0	AVGO	0.19%	PWR	0.18%
1.0	PWR	0.16%	NFLX	0.18%
1.0	VST	0.16%	GE	0.17%
1.0	GWW	0.15%	X	0.17%
1.0	AAPL	0.15%	LLY	0.15%
1.0	NVDA	0.14%	CAH	0.15%
1.0	CDNS	0.14%	TRGP	0.15%
1.0	AMZN	0.13%	META	0.15%
1.0	MU	0.13%	THC	0.15%
1.0	XOM	0.13%	ORCL	0.14%
1.0	WDC	0.12%	TDG	0.12%
1.0	TDG	0.12%	TEVA	0.12%
1.0	X	0.12%	ETRN	0.12%
1.0	THC	0.11%	IRM	0.11%
1.0	GBTC	0.1%	CCL	0.11%
1.0	ORLY	0.1%	CDNS	0.11%
1.0	CAH	0.1%	PHM	0.11%
1.0	GE	0.1%	TMUS	0.1%
1.0	HD	0.1%	ISRG	0.1%
1.0	AZO	0.09%	GWW	0.1%
1.0	ISRG	0.09%	GS	0.1%
1.0	B	0.09%	ORLY	0.1%
1.0	LLY	0.09%	MU	0.1%
1.0	MSI	0.09%	CMG	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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	8.58%	MSTR	4.71%
10.0	GME	6.32%	VST	3.03%
10.0	META	2.98%	NVDA	2.72%
10.0	NFLX	2.73%	AVGO	2.12%
10.0	VST	2.13%	GBTC	2.07%
10.0	AVGO	2.1%	NFLX	1.8%
10.0	ORCL	2.04%	PWR	1.73%
10.0	TEVA	1.98%	GME	1.68%
10.0	NVDA	1.87%	META	1.63%
10.0	MU	1.77%	GE	1.6%
10.0	GBTC	1.51%	LLY	1.6%
10.0	PWR	1.48%	X	1.58%
10.0	SLV	1.47%	CAH	1.48%
10.0	GE	1.45%	TRGP	1.42%
10.0	GWW	1.39%	ETRN	1.41%
10.0	CAH	1.38%	ORCL	1.37%
10.0	ETRN	1.23%	THC	1.33%
10.0	INTU	1.23%	TEVA	1.28%
10.0	X	1.21%	IRM	1.15%
10.0	GS	1.15%	TDG	1.13%
10.0	THC	1.14%	CDNS	1.05%
10.0	OXY	1.11%	PHM	1.04%
10.0	CTLT	1.08%	GWW	1.03%
10.0	AMZN	1.06%	TSLA	0.97%
10.0	AAPL	1.05%	ORLY	0.94%
10.0	LLY	1.04%	MU	0.93%
10.0	CDNS	1.03%	ISRG	0.92%
10.0	WDC	1.03%	CCL	0.91%
10.0	XOM	1.01%	COST	0.88%
10.0	HCA	1.0%	CMG	0.88%

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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	MSTR	21.44%	MSTR	10.57%
21.0	GME	10.19%	VST	6.47%
21.0	META	8.13%	NVDA	5.86%
21.0	NFLX	6.5%	GBTC	4.56%
21.0	TEVA	5.03%	AVGO	4.44%
21.0	AVGO	4.73%	NFLX	3.93%
21.0	VST	4.66%	PWR	3.65%
21.0	GBTC	4.65%	META	3.63%
21.0	NVDA	4.35%	GE	3.53%
21.0	ORCL	4.33%	ETRN	3.5%
21.0	ETRN	3.51%	LLY	3.34%
21.0	GE	3.43%	X	3.17%
21.0	PWR	3.29%	CAH	3.06%
21.0	MU	3.26%	TRGP	2.92%
21.0	GWW	3.16%	GME	2.85%
21.0	CAH	2.96%	TEVA	2.81%
21.0	CTLT	2.65%	ORCL	2.8%
21.0	THC	2.6%	THC	2.79%
21.0	SLV	2.57%	IRM	2.42%
21.0	AMZN	2.54%	TDG	2.34%
21.0	INTU	2.53%	TSLA	2.33%
21.0	GILD	2.48%	GWW	2.31%
21.0	GS	2.45%	PHM	2.24%
21.0	LLY	2.43%	CDNS	2.21%
21.0	TRGP	2.25%	ISRG	2.07%
21.0	WDC	2.23%	ORLY	2.01%
21.0	X	2.1%	CCL	2.0%
21.0	HCA	2.05%	COST	1.97%
21.0	XOM	2.0%	ACGL	1.92%
21.0	TMUS	1.99%	TMUS	1.82%

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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	MSTR	52.21%	MSTR	30.78%
63.0	META	25.72%	VST	19.34%
63.0	NFLX	23.42%	NVDA	18.55%
63.0	VST	17.05%	GBTC	14.94%
63.0	NVDA	13.78%	NFLX	12.64%
63.0	AVGO	13.13%	AVGO	12.24%
63.0	GBTC	13.01%	META	11.79%
63.0	ETRN	11.21%	GE	10.4%
63.0	CTLT	11.11%	ETRN	10.28%
63.0	GE	10.89%	LLY	9.69%
63.0	ORCL	10.23%	PWR	9.17%
63.0	GME	10.13%	CAH	8.56%
63.0	TEVA	9.8%	TRGP	8.3%
63.0	CAH	8.85%	PHM	7.9%
63.0	GWW	8.41%	THC	7.82%
63.0	LLY	8.39%	TDG	7.01%
63.0	GILD	7.75%	TEVA	6.81%
63.0	ISRG	7.64%	ORCL	6.75%
63.0	THC	7.45%	GWW	6.63%
63.0	TDG	7.21%	ISRG	6.41%
63.0	MSI	7.1%	ACGL	6.13%
63.0	TRGP	6.82%	ORLY	6.04%
63.0	INTU	6.39%	CDNS	6.03%
63.0	PWR	6.29%	IRM	5.99%
63.0	TMUS	6.12%	X	5.91%
63.0	SLV	5.93%	TMUS	5.74%
63.0	PHM	5.54%	JPM	5.5%
63.0	AZO	5.54%	CMG	5.44%
63.0	XOM	5.31%	CPRT	5.42%
63.0	CDNS	5.27%	CCL	5.41%

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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	MSTR	143.82%	MSTR	73.94%
126.0	META	70.1%	NVDA	49.33%
126.0	NFLX	58.77%	VST	43.95%
126.0	NVDA	46.77%	GBTC	40.42%
126.0	VST	43.56%	NFLX	30.16%
126.0	GBTC	40.18%	META	29.78%
126.0	AVGO	36.82%	AVGO	28.09%
126.0	ORCL	25.92%	GE	25.18%
126.0	GE	24.77%	LLY	21.09%
126.0	LLY	24.43%	TRGP	20.47%
126.0	TEVA	23.18%	PHM	19.21%
126.0	ISRG	21.78%	THC	19.07%
126.0	CAH	20.55%	ETRN	18.49%
126.0	GILD	18.85%	PWR	18.21%
126.0	TDG	18.7%	CAH	17.57%
126.0	ETRN	16.95%	TDG	16.22%
126.0	GWW	16.8%	ISRG	16.07%
126.0	MSI	16.7%	TEVA	15.91%
126.0	INTU	16.31%	ORCL	15.87%
126.0	TRGP	16.26%	GWW	14.82%
126.0	TMUS	15.99%	ACGL	14.14%
126.0	AMZN	15.98%	IRM	13.86%
126.0	LEN	15.75%	CCL	13.67%
126.0	AMD	15.1%	JPM	13.33%
126.0	THC	15.0%	ORLY	13.28%
126.0	ORLY	14.77%	MSI	13.07%
126.0	CDNS	13.49%	CMG	13.0%
126.0	ACGL	13.12%	CPRT	12.76%
126.0	GOOGL	12.98%	COST	12.64%
126.0	HCA	12.86%	TMUS	12.35%

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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
252.0	MSTR	434.75%	MSTR	226.72%
252.0	META	184.21%	NVDA	146.81%
252.0	VST	154.93%	VST	126.5%
252.0	NVDA	146.1%	GBTC	120.3%
252.0	NFLX	138.97%	META	81.19%
252.0	GBTC	127.55%	AVGO	73.18%
252.0	AVGO	110.61%	NFLX	68.62%
252.0	LLY	74.96%	GE	61.22%
252.0	ORCL	69.81%	PHM	56.37%
252.0	ISRG	67.06%	LLY	54.67%
252.0	AMZN	65.84%	THC	52.11%
252.0	GE	65.79%	TRGP	50.35%
252.0	TEVA	63.47%	PWR	42.1%
252.0	THC	62.63%	TDG	40.67%
252.0	TDG	56.02%	ISRG	39.69%
252.0	INTU	53.58%	TEVA	39.08%
252.0	TRGP	49.79%	ORCL	38.06%
252.0	AMD	49.6%	IRM	37.42%
252.0	LEN	48.84%	CCL	36.24%
252.0	MSI	48.0%	ETRN	35.78%
252.0	CAH	43.59%	DHI	35.23%
252.0	GWW	43.53%	ACGL	34.67%
252.0	PHM	43.09%	GWW	34.43%
252.0	GOOGL	42.93%	CMG	32.73%
252.0	DHI	42.06%	CAH	32.53%
252.0	WDC	41.32%	COST	31.56%
252.0	AMAT	41.16%	JPM	31.22%
252.0	ACGL	40.77%	CPRT	31.0%
252.0	COST	39.13%	MSI	30.54%
252.0	ETRN	38.77%	LEN	30.04%

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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	BHC	3.72%	BHC	2.15%
1.0	MU	2.25%	ORCL	1.51%
1.0	VST	2.04%	MU	1.22%
1.0	ON	1.66%	AMD	1.17%
1.0	ORCL	1.64%	ON	1.17%
1.0	TXN	1.33%	WDC	1.09%
1.0	AMD	1.18%	CCL	0.98%
1.0	GNRC	1.04%	GNRC	0.93%
1.0	SBUX	0.99%	GS	0.89%
1.0	WDC	0.99%	AMAT	0.82%
1.0	META	0.9%	VST	0.79%
1.0	INTC	0.86%	NVDA	0.75%
1.0	LLY	0.85%	LUMN	0.74%
1.0	QQQ	0.83%	INTC	0.72%
1.0	CCL	0.81%	CMG	0.65%
1.0	AA	0.77%	TXN	0.64%
1.0	AMZN	0.77%	AA	0.58%
1.0	CDNS	0.75%	AVGO	0.57%
1.0	LUMN	0.75%	ZION	0.55%
1.0	QCOM	0.73%	DHI	0.54%
1.0	AMAT	0.73%	KEY	0.52%
1.0	TDG	0.73%	META	0.52%
1.0	CZR	0.69%	NFLX	0.5%
1.0	WFC	0.68%	MS	0.49%
1.0	PWR	0.68%	TFC	0.49%
1.0	MSFT	0.67%	CZR	0.49%
1.0	KEY	0.66%	JPM	0.48%
1.0	GS	0.65%	PWR	0.48%
1.0	FCX	0.64%	MSTR	0.46%
1.0	MSTR	0.63%	QCOM	0.45%

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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	BHC	29.1%	BHC	25.34%
10.0	ORCL	28.16%	ORCL	18.18%
10.0	MU	20.55%	AMD	14.01%
10.0	WDC	18.47%	MU	13.58%
10.0	VST	13.83%	WDC	10.73%
10.0	AMD	13.55%	VST	8.84%
10.0	NEM	10.99%	GS	7.83%
10.0	PWR	10.24%	NEM	6.87%
10.0	ON	9.42%	INTC	6.47%
10.0	CZR	9.18%	ON	6.46%
10.0	INTC	9.06%	AMAT	6.27%
10.0	GS	8.05%	CAH	6.0%
10.0	TSLA	7.76%	CZR	5.91%
10.0	MSFT	7.68%	CCL	5.65%
10.0	GNRC	7.24%	WYNN	5.46%
10.0	TXN	7.19%	NVDA	5.39%
10.0	XOM	5.83%	GNRC	5.37%
10.0	META	5.61%	JPM	5.21%
10.0	SBUX	5.47%	CMG	5.07%
10.0	QQQ	4.86%	XOM	5.02%
10.0	AMAT	4.77%	CVS	4.6%
10.0	CCL	4.7%	TXN	4.43%
10.0	CVS	4.66%	BALL	4.37%
10.0	WYNN	4.6%	CSCO	3.98%
10.0	JPM	4.59%	MS	3.86%
10.0	WFC	3.73%	MSFT	3.77%
10.0	NVDA	3.7%	PWR	3.76%
10.0	ZION	3.69%	NFLX	3.57%
10.0	AA	3.54%	LUMN	3.4%
10.0	QCOM	3.53%	BAC	3.38%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	MU	2.14%	WDC	1.12%
1.0	AAP	2.03%	VST	1.06%
1.0	WDC	1.73%	AVGO	1.05%
1.0	PWR	1.43%	MU	0.94%
1.0	ORCL	1.35%	CCL	0.9%
1.0	META	1.24%	ORCL	0.85%
1.0	AMC	1.11%	NVDA	0.81%
1.0	AVGO	1.05%	AMD	0.8%
1.0	ON	1.04%	ON	0.77%
1.0	BHC	1.02%	X	0.76%
1.0	BA	1.01%	ELAN	0.75%
1.0	ELAN	1.0%	MSTR	0.72%
1.0	MSTR	0.97%	KALU	0.72%
1.0	VST	0.96%	PWR	0.72%
1.0	AMZN	0.94%	CSTM	0.71%
1.0	TXN	0.92%	AAP	0.67%
1.0	CSTM	0.89%	NFLX	0.67%
1.0	CDNS	0.85%	MOS	0.61%
1.0	CLF	0.81%	CYH	0.61%
1.0	QCOM	0.8%	BA	0.6%
1.0	QQQ	0.74%	META	0.6%
1.0	NFLX	0.71%	GS	0.58%
1.0	KALU	0.7%	GE	0.57%
1.0	MSFT	0.67%	AMAT	0.57%
1.0	UAA	0.6%	THC	0.53%
1.0	GME	0.6%	MSFT	0.51%
1.0	GS	0.59%	FCX	0.5%
1.0	INTU	0.56%	INTU	0.5%
1.0	LUMN	0.53%	GBTC	0.49%
1.0	AMAT	0.51%	MS	0.48%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MU	29.45%	WDC	12.53%
10.0	WDC	26.2%	MU	12.3%
10.0	ELAN	21.24%	VST	11.37%
10.0	ORCL	15.9%	ELAN	10.18%
10.0	AAP	13.7%	ORCL	10.14%
10.0	PWR	13.39%	CSTM	10.12%
10.0	META	13.16%	AAP	9.83%
10.0	TSLA	13.06%	AVGO	9.33%
10.0	ON	12.51%	ON	9.02%
10.0	TXN	11.56%	AMD	8.72%
10.0	MSTR	11.04%	KALU	8.04%
10.0	KALU	10.77%	MOS	7.74%
10.0	AVGO	10.3%	CCL	7.68%
10.0	TEVA	9.77%	CYH	7.68%
10.0	CSTM	9.58%	NVDA	7.56%
10.0	VST	9.19%	PWR	7.46%
10.0	GE	9.17%	THC	6.95%
10.0	AMD	8.93%	X	6.95%
10.0	MSFT	8.72%	NFLX	6.91%
10.0	BHC	8.56%	GE	6.64%
10.0	GS	7.5%	MSTR	6.44%
10.0	AA	7.17%	BHC	6.4%
10.0	QQQ	7.12%	BA	6.37%
10.0	X	6.96%	TSLA	6.3%
10.0	AMC	6.82%	META	6.26%
10.0	AMZN	6.77%	GS	6.12%
10.0	BA	6.48%	INTU	5.89%
10.0	CCL	6.46%	TXN	5.89%
10.0	NAVI	6.34%	LVS	5.72%
10.0	THC	6.32%	FCX	5.72%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	MU	72.68%	AAP	28.29%
21.0	WDC	62.01%	MU	28.28%
21.0	ELAN	61.02%	WDC	27.21%
21.0	META	37.82%	ELAN	27.09%
21.0	ON	34.21%	VST	25.51%
21.0	ORCL	33.34%	CSTM	24.36%
21.0	AAP	32.78%	AVGO	22.29%
21.0	PWR	32.69%	CYH	22.11%
21.0	KALU	29.69%	ORCL	21.73%
21.0	AMC	28.22%	ON	19.86%
21.0	AVGO	26.32%	NVDA	18.97%
21.0	CSTM	26.32%	AMD	18.81%
21.0	TXN	26.23%	CCL	18.12%
21.0	TSLA	24.74%	KALU	18.0%
21.0	TEVA	23.24%	THC	17.66%
21.0	GE	22.08%	MOS	16.92%
21.0	THC	21.43%	PWR	16.76%
21.0	VST	19.56%	GE	16.08%
21.0	BA	18.82%	META	15.65%
21.0	MSFT	18.75%	X	14.98%
21.0	AMD	18.71%	TSLA	14.73%
21.0	GS	18.07%	INTU	14.67%
21.0	NVDA	17.94%	BA	14.35%
21.0	CCL	17.87%	TXN	14.16%
21.0	INTU	16.62%	MSFT	12.92%
21.0	CYH	16.35%	NFLX	12.85%
21.0	MSTR	15.84%	LVS	12.38%
21.0	X	15.36%	GS	11.9%
21.0	GNRC	14.99%	FCX	11.51%
21.0	AA	14.79%	LUMN	11.25%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	MSTR	1.01%	WRK	2.75%
1.0	WRK	0.99%	MSTR	0.63%
1.0	NWL	0.54%	LUMN	0.47%
1.0	PWR	0.39%	VST	0.43%
1.0	VFC	0.39%	NFLX	0.29%
1.0	CHTR	0.36%	AVGO	0.28%
1.0	META	0.34%	CCL	0.24%
1.0	PRGO	0.34%	TSLA	0.23%
1.0	GME	0.33%	CAH	0.23%
1.0	ORCL	0.33%	GBTC	0.23%
1.0	AMZN	0.33%	GE	0.21%
1.0	B	0.28%	X	0.21%
1.0	BHC	0.26%	GILD	0.21%
1.0	MU	0.25%	ORCL	0.21%
1.0	NFLX	0.25%	PWR	0.21%
1.0	NEM	0.23%	GS	0.19%
1.0	GILD	0.21%	VNO	0.19%
1.0	GBTC	0.2%	T	0.18%
1.0	LNC	0.2%	META	0.18%
1.0	LUMN	0.18%	NVDA	0.17%
1.0	AAP	0.18%	CSCO	0.17%
1.0	SLV	0.18%	EXPE	0.17%
1.0	GS	0.18%	NEM	0.16%
1.0	QQQ	0.17%	MS	0.16%
1.0	BA	0.17%	ETRN	0.16%
1.0	WDC	0.17%	CHTR	0.15%
1.0	EXPE	0.16%	JPM	0.15%
1.0	X	0.16%	THC	0.15%
1.0	GE	0.15%	GLD	0.15%
1.0	ELAN	0.14%	HSBC	0.14%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	11.17%	MSTR	5.86%
10.0	MU	4.82%	LUMN	5.74%
10.0	META	3.6%	VST	4.14%
10.0	ORCL	3.22%	NFLX	2.92%
10.0	LUMN	3.1%	GBTC	2.44%
10.0	PWR	3.02%	AVGO	2.4%
10.0	GME	2.67%	CAH	2.4%
10.0	GILD	2.62%	TSLA	2.07%
10.0	VST	2.52%	GILD	2.04%
10.0	EXPE	2.47%	ORCL	2.0%
10.0	B	2.43%	GE	1.99%
10.0	AVGO	2.35%	CCL	1.94%
10.0	NEM	2.24%	X	1.91%
10.0	NWL	2.17%	PWR	1.81%
10.0	UAA	2.1%	T	1.76%
10.0	NFLX	2.08%	VNO	1.73%
10.0	GS	2.06%	CSCO	1.63%
10.0	CHTR	2.05%	META	1.62%
10.0	GE	2.05%	GS	1.59%
10.0	VFC	1.99%	HSBC	1.47%
10.0	AMZN	1.94%	GLD	1.44%
10.0	GBTC	1.91%	EXPE	1.42%
10.0	ABBV	1.83%	MS	1.41%
10.0	CAH	1.79%	JPM	1.4%
10.0	SLV	1.72%	MOS	1.37%
10.0	X	1.71%	THC	1.37%
10.0	WDC	1.67%	NEM	1.36%
10.0	CCL	1.59%	WFC	1.34%
10.0	MSFT	1.53%	TRGP	1.33%
10.0	TEVA	1.43%	CHTR	1.33%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	MSTR	24.76%	MSTR	12.07%
21.0	MU	9.03%	VST	9.63%
21.0	META	8.0%	LUMN	9.28%
21.0	TSLA	6.72%	NFLX	6.54%
21.0	PWR	6.63%	AVGO	5.54%
21.0	GME	6.16%	TSLA	4.97%
21.0	LUMN	6.14%	CAH	4.92%
21.0	AVGO	5.92%	GBTC	4.89%
21.0	GILD	5.5%	GE	4.32%
21.0	ORCL	5.42%	GILD	4.18%
21.0	EXPE	5.2%	CCL	4.06%
21.0	VST	5.07%	META	3.84%
21.0	UAA	5.03%	T	3.84%
21.0	NFLX	4.93%	PWR	3.82%
21.0	GE	4.85%	ORCL	3.78%
21.0	GBTC	4.53%	VNO	3.54%
21.0	WDC	4.41%	X	3.33%
21.0	CHTR	4.25%	CSCO	3.29%
21.0	AMZN	3.98%	HSBC	3.18%
21.0	B	3.96%	GLD	3.16%
21.0	GS	3.88%	EXPE	3.0%
21.0	CAH	3.79%	GS	2.9%
21.0	ELAN	3.76%	MS	2.83%
21.0	CCL	3.74%	TMUS	2.81%
21.0	NEM	3.69%	WFC	2.75%
21.0	SLV	3.27%	JPM	2.72%
21.0	SBUX	3.23%	TRGP	2.6%
21.0	TEVA	3.16%	MOS	2.58%
21.0	VNO	3.05%	THC	2.55%
21.0	THC	2.94%	SBUX	2.46%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	MSTR	77.37%	MSTR	50.84%
63.0	TSLA	34.89%	VST	26.69%
63.0	VST	19.3%	NFLX	19.65%
63.0	NFLX	16.33%	GBTC	19.25%
63.0	GILD	15.93%	TSLA	17.67%
63.0	GME	15.22%	CAH	12.67%
63.0	CVS	15.09%	AVGO	12.4%
63.0	GBTC	14.59%	GILD	12.34%
63.0	EXPE	12.58%	CCL	11.92%
63.0	GE	12.56%	T	11.89%
63.0	CCL	12.29%	GLD	10.04%
63.0	CAH	10.63%	HSBC	9.86%
63.0	META	10.3%	WFC	9.63%
63.0	AVGO	10.18%	GE	9.32%
63.0	B	10.07%	TMUS	9.24%
63.0	BUD	9.97%	EXPE	8.86%
63.0	PWR	9.62%	PWR	8.57%
63.0	WFC	8.62%	CSCO	8.54%
63.0	NEM	8.55%	TRGP	8.1%
63.0	CHTR	8.14%	MS	7.99%
63.0	GS	7.4%	MNST	7.87%
63.0	AZO	7.31%	GME	7.74%
63.0	T	7.28%	ORLY	7.72%
63.0	GLD	7.13%	X	7.29%
63.0	HSBC	6.99%	VNO	7.24%
63.0	UAA	6.82%	JPM	7.01%
63.0	SLV	6.65%	META	7.0%
63.0	BA	6.64%	AZO	6.51%
63.0	ORCL	6.47%	GS	6.5%
63.0	JPM	6.03%	MOS	6.05%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	MSTR	124.37%	MSTR	78.08%
126.0	TSLA	55.65%	VST	44.13%
126.0	NFLX	42.29%	NFLX	40.82%
126.0	VST	41.13%	GBTC	34.65%
126.0	GILD	39.57%	GILD	26.97%
126.0	GBTC	27.73%	AVGO	26.92%
126.0	AVGO	26.1%	CAH	24.89%
126.0	META	25.5%	HSBC	24.71%
126.0	EXPE	23.96%	T	24.58%
126.0	CAH	23.13%	TSLA	23.37%
126.0	AZO	23.08%	WFC	19.91%
126.0	HSBC	22.01%	GE	19.65%
126.0	GE	20.5%	GLD	19.33%
126.0	CVS	20.43%	TMUS	18.15%
126.0	GME	18.7%	TRGP	18.12%
126.0	BA	18.69%	CSCO	17.49%
126.0	GLD	17.51%	CCL	17.29%
126.0	CCL	16.98%	EXPE	16.83%
126.0	T	16.68%	ORLY	15.74%
126.0	GS	16.13%	META	15.68%
126.0	CTLT	14.39%	JPM	15.52%
126.0	WFC	13.8%	AZO	14.48%
126.0	CHTR	13.12%	MS	14.21%
126.0	TMUS	12.93%	GS	13.6%
126.0	ORLY	12.83%	GME	11.84%
126.0	TRGP	10.9%	BA	11.58%
126.0	SLV	10.87%	CTLT	10.62%
126.0	NEM	10.39%	MNST	10.46%
126.0	MNST	9.63%	COST	9.96%
126.0	CSCO	9.04%	ISRG	9.87%

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 2025-06-27

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	IEP	-0.19%	IEP	-0.18%
1.0	CYH	-0.17%	AMC	-0.14%
1.0	LUMN	-0.17%	VFC	-0.13%
1.0	AMC	-0.13%	AAP	-0.13%
1.0	AAP	-0.12%	NWL	-0.11%
1.0	FIS	-0.11%	LUMN	-0.08%
1.0	ELAN	-0.1%	UAA	-0.06%
1.0	VFC	-0.09%	BHC	-0.06%
1.0	CHTR	-0.09%	CZR	-0.06%
1.0	GSK	-0.09%	TLT	-0.05%
1.0	TSLA	-0.08%	BIIB	-0.05%
1.0	CSTM	-0.07%	INTC	-0.05%
1.0	BXP	-0.07%	BALL	-0.04%
1.0	TLT	-0.07%	LNC	-0.04%
1.0	CVS	-0.07%	BXP	-0.04%
1.0	T	-0.07%	GSK	-0.03%
1.0	VZ	-0.05%	CVS	-0.03%
1.0	BHC	-0.05%	CLF	-0.03%
1.0	USB	-0.05%	UNH	-0.03%
1.0	PEP	-0.05%	KHC	-0.03%
1.0	KEY	-0.05%	BMY	-0.03%
1.0	EMB	-0.05%	PEP	-0.03%
1.0	BMY	-0.04%	CMCSA	-0.03%
1.0	GT	-0.03%	ELAN	-0.02%
1.0	CTLT	-0.03%	GT	-0.02%
1.0	LQD	-0.03%	CNC	-0.02%
1.0	BIIB	-0.03%	GNRC	-0.02%

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 2025-06-27

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	-3.24%	FRCB	-2.19%
10.0	FRCB	-3.12%	IEP	-1.67%
10.0	AAP	-2.23%	AMC	-1.56%
10.0	IEP	-1.92%	VFC	-1.42%
10.0	VFC	-1.76%	AAP	-1.21%
10.0	GSK	-1.03%	NWL	-1.18%
10.0	LUMN	-1.01%	CZR	-0.78%
10.0	NWL	-0.94%	UAA	-0.77%
10.0	CHTR	-0.9%	LUMN	-0.69%
10.0	BIIB	-0.86%	BHC	-0.55%
10.0	TLT	-0.84%	CLF	-0.51%
10.0	FIS	-0.76%	TLT	-0.51%
10.0	BXP	-0.73%	BIIB	-0.49%
10.0	CYH	-0.72%	INTC	-0.49%
10.0	BHC	-0.66%	LNC	-0.48%
10.0	PRGO	-0.6%	BALL	-0.42%
10.0	ZION	-0.54%	BXP	-0.37%
10.0	GT	-0.54%	AA	-0.35%
10.0	VZ	-0.51%	GNRC	-0.35%
10.0	BMY	-0.51%	ZION	-0.35%
10.0	CVS	-0.5%	CNC	-0.34%
10.0	ELAN	-0.47%	ELAN	-0.34%
10.0	LNC	-0.45%	CYH	-0.34%
10.0	BALL	-0.39%	CVS	-0.34%
10.0	CNC	-0.31%	UNH	-0.33%
10.0	LQD	-0.31%	TFC	-0.29%
10.0	PEP	-0.3%	GSK	-0.29%
10.0	CLF	-0.24%	CMCSA	-0.29%

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 2025-06-27

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	-6.69%	AMC	-3.67%
21.0	AAP	-4.91%	IEP	-3.6%
21.0	VFC	-3.81%	VFC	-2.92%
21.0	IEP	-3.48%	NWL	-2.58%
21.0	NWL	-2.97%	AAP	-2.35%
21.0	BHC	-2.06%	CZR	-1.81%
21.0	GSK	-1.96%	BHC	-1.77%
21.0	LUMN	-1.7%	UAA	-1.46%
21.0	TLT	-1.65%	LUMN	-1.27%
21.0	LNC	-1.58%	INTC	-1.23%
21.0	BIIB	-1.49%	CLF	-1.23%
21.0	CHTR	-1.23%	LNC	-1.13%
21.0	FIS	-1.2%	AA	-1.09%
21.0	CYH	-1.18%	TLT	-1.07%
21.0	CVS	-1.14%	BALL	-0.93%
21.0	BXP	-1.11%	BIIB	-0.91%
21.0	BMY	-1.11%	GNRC	-0.87%
21.0	PRGO	-1.09%	BXP	-0.8%
21.0	ZION	-0.97%	CNC	-0.74%
21.0	ELAN	-0.86%	CVS	-0.73%
21.0	CNC	-0.68%	UNH	-0.67%
21.0	BALL	-0.63%	KHC	-0.65%
21.0	GT	-0.6%	TFC	-0.63%
21.0	VZ	-0.57%	BMY	-0.6%
21.0	UNH	-0.57%	ZION	-0.58%
21.0	LW	-0.53%	CMCSA	-0.57%
21.0	LQD	-0.52%	PEP	-0.54%

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 2025-06-27

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	-32.03%	AMC	-15.47%
63.0	AAP	-18.36%	IEP	-11.93%
63.0	VFC	-14.63%	AAP	-10.04%
63.0	IEP	-11.83%	VFC	-8.68%
63.0	NWL	-9.06%	NWL	-8.45%
63.0	BHC	-8.76%	CLF	-6.76%
63.0	CLF	-6.47%	BHC	-6.32%
63.0	ELAN	-6.28%	CZR	-6.09%
63.0	ON	-5.18%	AA	-5.47%
63.0	TLT	-4.71%	UAA	-4.84%
63.0	LNC	-4.7%	INTC	-4.54%
63.0	AA	-4.57%	LUMN	-3.95%
63.0	BIIB	-4.54%	ELAN	-3.68%
63.0	GSK	-4.27%	LNC	-3.6%
63.0	MOS	-4.16%	MOS	-3.53%
63.0	CHTR	-3.76%	GNRC	-3.34%
63.0	CZR	-3.67%	BALL	-3.2%
63.0	JAZZ	-3.45%	BXP	-3.14%
63.0	UNH	-3.41%	BIIB	-3.07%
63.0	BALL	-3.4%	TLT	-2.94%
63.0	INTC	-3.31%	CVS	-2.67%
63.0	FIS	-3.13%	CNC	-2.3%
63.0	CNC	-2.96%	BHP	-2.28%
63.0	LUMN	-2.76%	KHC	-2.23%
63.0	BMY	-2.58%	JAZZ	-2.17%
63.0	PRGO	-2.51%	BMY	-2.15%
63.0	KHC	-2.36%	PRGO	-2.14%

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 2025-06-27

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	-55.15%	AMC	-29.49%
126.0	AAP	-32.86%	IEP	-22.85%
126.0	VFC	-28.47%	AAP	-19.78%
126.0	IEP	-26.18%	NWL	-15.88%
126.0	NWL	-18.13%	VFC	-13.17%
126.0	BHC	-14.63%	CLF	-10.97%
126.0	ELAN	-12.13%	MOS	-9.58%
126.0	MOS	-12.01%	CZR	-8.98%
126.0	CLF	-10.88%	AA	-8.06%
126.0	AA	-10.22%	INTC	-7.41%
126.0	CZR	-8.34%	BHC	-7.36%
126.0	TLT	-8.19%	ELAN	-7.07%
126.0	PRGO	-8.11%	CVS	-6.72%
126.0	LNC	-7.97%	UAA	-6.57%
126.0	CVS	-7.56%	PRGO	-5.75%
126.0	GSK	-7.27%	CTLT	-5.69%
126.0	BIIB	-7.1%	LUMN	-5.58%
126.0	JAZZ	-6.98%	GNRC	-5.57%
126.0	CHTR	-6.8%	LNC	-5.42%
126.0	INTC	-5.8%	TLT	-5.32%
126.0	CNC	-5.77%	BXP	-5.32%
126.0	UAA	-5.63%	BIIB	-4.99%
126.0	BALL	-4.97%	BALL	-4.96%
126.0	LUMN	-4.74%	CNC	-4.94%
126.0	KHC	-4.72%	KHC	-4.49%
126.0	BMY	-4.69%	BMY	-4.01%
126.0	BXP	-4.62%	GSK	-3.91%

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 2025-06-27

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	-105.77%	AMC	-56.89%
252.0	AAP	-80.97%	IEP	-44.6%
252.0	IEP	-57.09%	AAP	-42.05%
252.0	VFC	-43.52%	NWL	-28.61%
252.0	NWL	-38.36%	VFC	-23.96%
252.0	MOS	-30.59%	MOS	-22.15%
252.0	AA	-25.34%	CVS	-17.93%
252.0	BIIB	-25.34%	CLF	-16.91%
252.0	CVS	-25.16%	CZR	-13.9%
252.0	CLF	-22.71%	PRGO	-12.91%
252.0	UAA	-21.76%	UAA	-12.11%
252.0	PRGO	-20.64%	AA	-11.72%
252.0	CZR	-18.91%	BMY	-11.5%
252.0	BHC	-18.3%	INTC	-10.36%
252.0	OXY	-17.62%	BIIB	-9.93%
252.0	JAZZ	-15.98%	JAZZ	-9.79%
252.0	TLT	-14.73%	CNC	-9.77%
252.0	CHTR	-14.39%	BHC	-9.3%
252.0	BMY	-11.34%	TLT	-8.46%
252.0	KHC	-10.28%	KHC	-7.93%
252.0	CNC	-10.01%	GT	-7.69%
252.0	LNC	-8.8%	LUMN	-7.09%
252.0	BHP	-8.78%	OXY	-7.0%
252.0	ELAN	-8.18%	CTLT	-6.24%
252.0	GT	-7.51%	BHP	-5.72%
252.0	INTC	-6.72%	LNC	-5.39%
252.0	BXP	-6.27%	CHTR	-5.11%

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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	GME	-2.16%	GME	-1.02%
1.0	TSLA	-1.53%	PCG	-0.9%
1.0	AMC	-1.44%	CYH	-0.57%
1.0	ZTS	-1.44%	AMC	-0.53%
1.0	AAP	-0.76%	ZTS	-0.42%
1.0	PCG	-0.63%	GSK	-0.42%
1.0	BUD	-0.28%	GT	-0.35%
1.0	VZ	-0.28%	COST	-0.34%
1.0	GSK	-0.28%	AAP	-0.31%
1.0	ACGL	-0.26%	TSLA	-0.29%
1.0	BMY	-0.26%	LW	-0.29%
1.0	GT	-0.25%	ACGL	-0.28%
1.0	COST	-0.24%	BMY	-0.27%
1.0	GWW	-0.22%	IEP	-0.24%
1.0	LW	-0.21%	BIIB	-0.22%
1.0	ISRG	-0.2%	ADBE	-0.2%
1.0	PRGO	-0.18%	BUD	-0.19%
1.0	BBY	-0.18%	CPRT	-0.18%
1.0	TEVA	-0.17%	VFC	-0.17%
1.0	BIIB	-0.16%	GWW	-0.16%
1.0	AMGN	-0.15%	KHC	-0.16%
1.0	CPRT	-0.14%	AMGN	-0.16%
1.0	IEP	-0.14%	AZN	-0.15%
1.0	BHP	-0.1%	TEVA	-0.13%
1.0	KHC	-0.09%	BHP	-0.13%
1.0	AZN	-0.08%	GLD	-0.11%
1.0	AZO	-0.07%	RIO	-0.1%
1.0	TMUS	-0.06%	JAZZ	-0.1%
1.0	ABBV	-0.06%	VZ	-0.09%
1.0	JAZZ	-0.05%	MNST	-0.09%

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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	AMC	-25.97%	GME	-15.72%
10.0	GME	-21.53%	AMC	-8.66%
10.0	AAP	-19.25%	PCG	-8.52%
10.0	ZTS	-14.21%	GT	-7.22%
10.0	ADBE	-13.29%	AAP	-6.49%
10.0	VFC	-9.47%	ADBE	-6.41%
10.0	PCG	-7.95%	VFC	-6.26%
10.0	VZ	-6.27%	GSK	-5.98%
10.0	BHP	-5.72%	ZTS	-5.94%
10.0	GSK	-5.01%	CYH	-5.83%
10.0	BBY	-4.89%	BMY	-4.26%
10.0	LW	-4.57%	BBY	-4.22%
10.0	AMGN	-4.48%	BIIB	-4.2%
10.0	GWW	-4.34%	BHP	-4.04%
10.0	BMY	-4.25%	CPRT	-3.91%
10.0	BIIB	-4.14%	GWW	-3.89%
10.0	EXPE	-4.02%	TMUS	-3.85%
10.0	SNY	-3.98%	BA	-3.78%
10.0	JAZZ	-3.81%	AZN	-3.53%
10.0	BXP	-3.56%	LW	-3.51%
10.0	TMUS	-3.42%	EXPE	-3.22%
10.0	CPRT	-3.38%	SNY	-3.18%
10.0	GT	-3.2%	COST	-3.12%
10.0	COST	-3.16%	VZ	-3.08%
10.0	ISRG	-3.05%	FSUGY	-2.98%
10.0	ACGL	-3.04%	TEVA	-2.91%
10.0	FSUGY	-2.75%	KHC	-2.85%
10.0	KHC	-2.52%	ISRG	-2.8%
10.0	TEVA	-2.39%	ACGL	-2.8%
10.0	AZN	-2.33%	AMGN	-2.72%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	UNH	-0.99%	UNH	-0.81%
1.0	BMY	-0.42%	BMY	-0.36%
1.0	KHC	-0.35%	PCG	-0.34%
1.0	PEP	-0.34%	KHC	-0.29%
1.0	CNC	-0.32%	CNC	-0.26%
1.0	CVS	-0.3%	PEP	-0.22%
1.0	ZTS	-0.23%	CPRT	-0.22%
1.0	ACGL	-0.2%	LW	-0.21%
1.0	PCG	-0.2%	SNY	-0.19%
1.0	CPRT	-0.18%	JAZZ	-0.18%
1.0	INTC	-0.17%	TMUS	-0.17%
1.0	POST	-0.13%	AMGN	-0.16%
1.0	SNY	-0.11%	IEP	-0.15%
1.0	TMUS	-0.09%	POST	-0.13%
1.0	AZN	-0.08%	MRK	-0.12%
1.0	TLT	-0.07%	ABBV	-0.12%
1.0	NAVI	-0.07%	ORLY	-0.1%
1.0	JAZZ	-0.06%	VZ	-0.08%
1.0	IEP	-0.04%	AZN	-0.08%
1.0	ORLY	-0.04%	ACGL	-0.07%
1.0	MRK	-0.03%	TLT	-0.06%
1.0	GT	-0.03%	XOM	-0.05%
1.0	AAPL	-0.02%	MSI	-0.04%
1.0	AMGN	-0.02%	BIIB	-0.04%
1.0	OXY	-0.01%	AZO	-0.04%
1.0	AZO	-0.01%	OXY	-0.03%
1.0	GILD	-0.01%	TRGP	-0.02%
1.0	TRGP	-0.0%	MUB	-0.02%
1.0	GSK	0.0%	ZTS	-0.02%
1.0	CYH	0.01%	GSK	-0.01%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	UNH	-12.83%	UNH	-10.71%
10.0	PCG	-2.96%	PCG	-3.38%
10.0	CNC	-2.85%	CPRT	-3.12%
10.0	BMY	-2.7%	CNC	-2.75%
10.0	CPRT	-2.29%	KHC	-2.4%
10.0	PEP	-2.03%	TMUS	-2.2%
10.0	KHC	-1.95%	BMY	-2.12%
10.0	CVS	-1.9%	PEP	-2.08%
10.0	TMUS	-1.65%	SNY	-1.1%
10.0	VZ	-1.22%	POST	-0.89%
10.0	SNY	-1.12%	LW	-0.61%
10.0	POST	-1.1%	ORLY	-0.57%
10.0	ORLY	-0.53%	VZ	-0.57%
10.0	TLT	-0.38%	AMGN	-0.41%
10.0	ACGL	-0.36%	TLT	-0.39%
10.0	MSI	-0.17%	GME	-0.17%
10.0	RIO	0.06%	MSI	-0.14%
10.0	AZO	0.08%	AZO	-0.0%
10.0	MUB	0.16%	MRK	0.0%
10.0	MRK	0.19%	ACGL	0.0%
10.0	VCSH	0.19%	CVS	0.05%
10.0	IEP	0.22%	MUB	0.1%
10.0	LEN	0.22%	VCSH	0.2%
10.0	AMGN	0.29%	IEP	0.28%
10.0	TRGP	0.37%	LQD	0.37%
10.0	LLY	0.42%	HD	0.45%
10.0	GLD	0.46%	LEN	0.53%
10.0	T	0.48%	CMCSA	0.56%
10.0	HD	0.48%	TRGP	0.57%
10.0	EMB	0.49%	JAZZ	0.61%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	UNH	-23.05%	UNH	-20.13%
21.0	PCG	-5.82%	CPRT	-8.51%
21.0	CNC	-5.13%	PCG	-6.99%
21.0	CPRT	-5.12%	KHC	-5.75%
21.0	CVS	-4.28%	CNC	-5.63%
21.0	BMY	-4.27%	TMUS	-4.1%
21.0	KHC	-4.21%	PEP	-3.86%
21.0	PEP	-3.69%	SNY	-3.2%
21.0	SNY	-3.64%	BMY	-2.8%
21.0	TMUS	-3.62%	POST	-1.86%
21.0	LLY	-2.01%	TLT	-1.21%
21.0	POST	-1.63%	ORLY	-1.13%
21.0	TLT	-1.45%	CLF	-1.13%
21.0	ORLY	-1.08%	MSI	-0.95%
21.0	MSI	-0.94%	MRK	-0.87%
21.0	IEP	-0.7%	IEP	-0.63%
21.0	RIO	-0.49%	LLY	-0.61%
21.0	MRK	-0.42%	CVS	-0.58%
21.0	VZ	-0.42%	VZ	-0.38%
21.0	CLF	-0.24%	TRGP	-0.34%
21.0	ACGL	-0.13%	MUB	0.03%
21.0	TRGP	-0.03%	VCSH	0.27%
21.0	MUB	0.12%	AZO	0.37%
21.0	AAPL	0.15%	AMGN	0.42%
21.0	VCSH	0.28%	AAPL	0.44%
21.0	AZO	0.47%	ACGL	0.55%
21.0	LEN	0.53%	JAZZ	0.55%
21.0	JAZZ	0.6%	RIO	0.55%
21.0	HYG	0.72%	LQD	0.57%
21.0	DHI	0.77%	DHI	0.72%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	CSTM	-0.33%	IEP	-0.25%
1.0	AMC	-0.31%	BIIB	-0.23%
1.0	CLF	-0.22%	CLF	-0.19%
1.0	IEP	-0.18%	MRK	-0.18%
1.0	BIIB	-0.17%	AMC	-0.15%
1.0	CYH	-0.16%	UNH	-0.15%
1.0	PEP	-0.15%	OXY	-0.14%
1.0	NAVI	-0.13%	LW	-0.13%
1.0	ON	-0.11%	ADBE	-0.13%
1.0	MRK	-0.11%	FSUGY	-0.12%
1.0	CZR	-0.1%	LEN	-0.08%
1.0	OXY	-0.1%	PEP	-0.08%
1.0	LW	-0.09%	KHC	-0.08%
1.0	BBY	-0.09%	AA	-0.08%
1.0	UNH	-0.08%	CSTM	-0.08%
1.0	KHC	-0.08%	PCG	-0.07%
1.0	CMA	-0.07%	CZR	-0.07%
1.0	AA	-0.06%	ON	-0.06%
1.0	INTC	-0.05%	AMAT	-0.06%
1.0	BHP	-0.04%	BHP	-0.06%
1.0	LEN	-0.04%	CNC	-0.06%
1.0	UAA	-0.04%	QCOM	-0.06%
1.0	FSUGY	-0.04%	INTC	-0.05%
1.0	CPRT	-0.04%	BBY	-0.04%
1.0	BALL	-0.04%	RIO	-0.04%
1.0	DHI	-0.04%	ZTS	-0.03%
1.0	KALU	-0.04%	LLY	-0.03%
1.0	ACGL	-0.03%	AMGN	-0.03%
1.0	CMG	-0.03%	CPRT	-0.03%
1.0	AAPL	-0.02%	AZN	-0.03%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	AMC	-4.12%	CLF	-2.51%
10.0	CLF	-3.4%	IEP	-2.41%
10.0	BIIB	-3.19%	BIIB	-2.29%
10.0	IEP	-1.86%	AMC	-1.89%
10.0	CSTM	-1.52%	MRK	-1.8%
10.0	ON	-1.5%	UNH	-1.57%
10.0	MRK	-1.19%	ADBE	-1.39%
10.0	LW	-1.17%	FSUGY	-1.39%
10.0	CZR	-1.14%	LW	-1.25%
10.0	AAP	-1.01%	OXY	-1.17%
10.0	KHC	-0.96%	LEN	-1.16%
10.0	ADBE	-0.96%	AMAT	-1.01%
10.0	PEP	-0.94%	ON	-0.99%
10.0	RIO	-0.85%	QCOM	-0.94%
10.0	FSUGY	-0.81%	PEP	-0.91%
10.0	OXY	-0.75%	CZR	-0.9%
10.0	BALL	-0.73%	INTC	-0.9%
10.0	CNC	-0.72%	KHC	-0.85%
10.0	LEN	-0.64%	AA	-0.81%
10.0	BHP	-0.63%	CSTM	-0.78%
10.0	UNH	-0.47%	PCG	-0.77%
10.0	KALU	-0.47%	BHP	-0.71%
10.0	LLY	-0.44%	CNC	-0.69%
10.0	CPRT	-0.43%	BBY	-0.62%
10.0	BBY	-0.4%	AMD	-0.61%
10.0	ZTS	-0.38%	RIO	-0.54%
10.0	CMG	-0.37%	AMGN	-0.41%
10.0	GSK	-0.37%	AAPL	-0.4%
10.0	VZ	-0.36%	FCX	-0.39%
10.0	DHI	-0.32%	LLY	-0.38%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	CLF	-7.45%	CLF	-5.84%
21.0	BIIB	-6.45%	IEP	-5.47%
21.0	ON	-4.67%	BIIB	-4.68%
21.0	IEP	-3.96%	UNH	-3.95%
21.0	CZR	-3.68%	MRK	-3.9%
21.0	CSTM	-3.54%	AMC	-3.71%
21.0	UNH	-3.33%	LEN	-3.23%
21.0	MRK	-3.05%	OXY	-2.83%
21.0	AMC	-2.89%	FSUGY	-2.68%
21.0	AAP	-2.84%	INTC	-2.62%
21.0	LW	-2.79%	ON	-2.58%
21.0	OXY	-2.69%	ADBE	-2.52%
21.0	KHC	-2.23%	PEP	-2.16%
21.0	PEP	-2.08%	CZR	-2.03%
21.0	ADBE	-1.99%	AMAT	-1.99%
21.0	FSUGY	-1.76%	KHC	-1.92%
21.0	LEN	-1.63%	DHI	-1.89%
21.0	DHI	-1.58%	LW	-1.78%
21.0	AMD	-1.53%	QCOM	-1.76%
21.0	INTC	-1.47%	CNC	-1.63%
21.0	RIO	-1.37%	BBY	-1.43%
21.0	NAVI	-1.31%	CSTM	-1.39%
21.0	CNC	-1.29%	PCG	-1.38%
21.0	GNRC	-1.24%	AMD	-1.37%
21.0	ZTS	-1.11%	AA	-1.27%
21.0	BHP	-1.09%	BHP	-1.2%
21.0	BBY	-1.05%	PHM	-1.02%
21.0	LLY	-0.97%	AMGN	-0.94%
21.0	PCG	-0.93%	RIO	-0.93%
21.0	TLT	-0.81%	CMCSA	-0.86%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	ON	-30.08%	CLF	-17.47%
63.0	CLF	-24.19%	IEP	-16.49%
63.0	BIIB	-19.43%	BIIB	-15.78%
63.0	UNH	-18.68%	AMC	-15.25%
63.0	AAP	-16.82%	ON	-14.68%
63.0	AMC	-13.56%	LEN	-13.69%
63.0	CSTM	-12.53%	MRK	-12.54%
63.0	IEP	-12.34%	CSTM	-11.53%
63.0	MRK	-12.27%	UNH	-11.52%
63.0	OXY	-11.82%	ADBE	-11.13%
63.0	AMD	-10.26%	DHI	-10.4%
63.0	ADBE	-9.97%	OXY	-9.58%
63.0	CZR	-9.43%	AMD	-9.44%
63.0	BBY	-8.36%	CYH	-9.43%
63.0	CNC	-8.32%	CZR	-9.11%
63.0	PEP	-8.24%	BBY	-8.34%
63.0	KHC	-7.86%	WDC	-8.15%
63.0	CYH	-7.71%	AMAT	-7.75%
63.0	DHI	-7.32%	PEP	-7.73%
63.0	LEN	-7.13%	FSUGY	-7.43%
63.0	LW	-6.98%	CNC	-6.75%
63.0	NAVI	-6.86%	KHC	-6.73%
63.0	ELAN	-6.83%	PHM	-6.7%
63.0	QCOM	-6.56%	BALL	-5.99%
63.0	BALL	-6.39%	NAVI	-5.76%
63.0	GNRC	-6.1%	QCOM	-5.54%
63.0	FSUGY	-5.71%	AAP	-5.33%
63.0	ZTS	-5.68%	ELAN	-4.97%
63.0	BHC	-5.39%	FCX	-4.93%
63.0	TXN	-5.34%	ZTS	-4.79%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	CLF	-48.1%	ON	-33.83%
126.0	ON	-43.29%	AMC	-33.44%
126.0	BIIB	-38.55%	IEP	-32.07%
126.0	AMC	-33.28%	CLF	-31.61%
126.0	GNRC	-32.16%	LEN	-31.38%
126.0	CZR	-31.76%	BIIB	-28.83%
126.0	IEP	-29.67%	CYH	-27.23%
126.0	CYH	-28.22%	AMD	-24.85%
126.0	LW	-27.79%	DHI	-24.73%
126.0	AMD	-27.14%	MRK	-22.29%
126.0	MRK	-25.5%	ADBE	-22.22%
126.0	WDC	-24.62%	CSTM	-22.18%
126.0	UAA	-23.65%	CZR	-21.98%
126.0	ELAN	-22.35%	WDC	-21.71%
126.0	OXY	-22.1%	UNH	-21.39%
126.0	AAP	-21.03%	LW	-20.43%
126.0	DHI	-20.21%	PHM	-18.61%
126.0	BHC	-20.05%	BBY	-16.58%
126.0	LEN	-20.03%	GNRC	-16.29%
126.0	CSTM	-18.93%	BALL	-16.03%
126.0	NWL	-18.24%	FSUGY	-15.97%
126.0	LUMN	-17.79%	PEP	-15.83%
126.0	KHC	-17.35%	OXY	-15.74%
126.0	PEP	-17.28%	PCG	-15.39%
126.0	NAVI	-16.94%	AA	-15.37%
126.0	UNH	-16.41%	UAA	-14.97%
126.0	AA	-15.96%	AMAT	-14.93%
126.0	BALL	-15.75%	FCX	-14.76%
126.0	BBY	-15.63%	KHC	-14.4%
126.0	ADBE	-15.59%	IRM	-14.35%

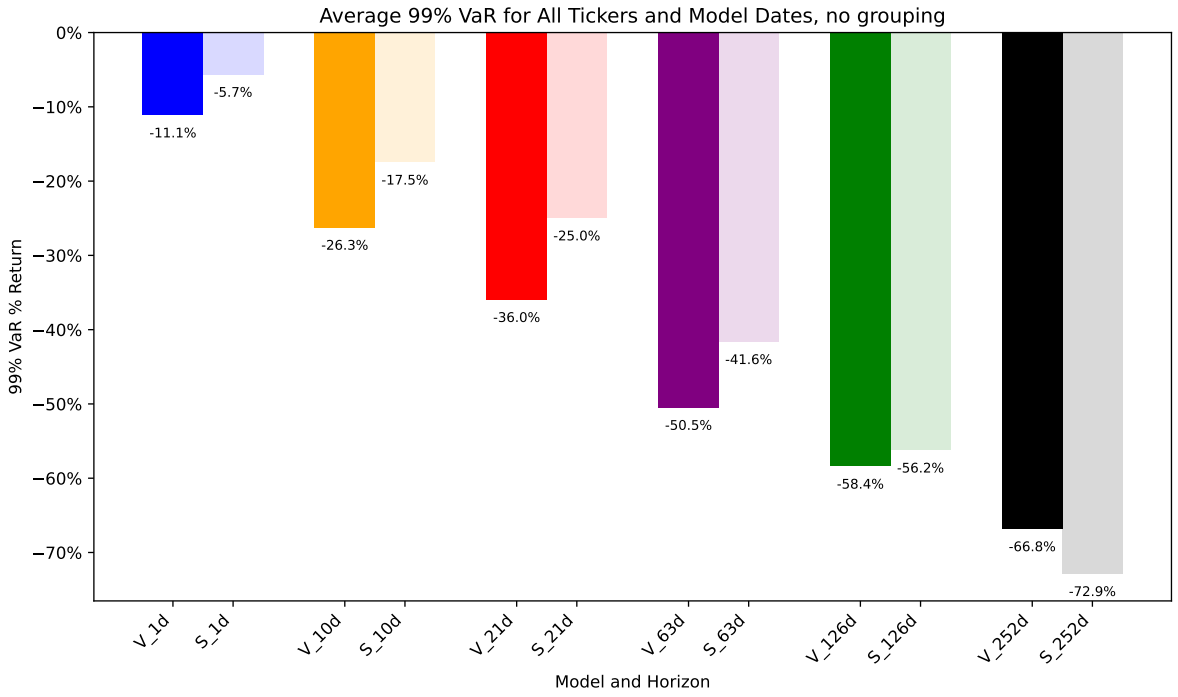
99% Value at Risk (VaR)

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.

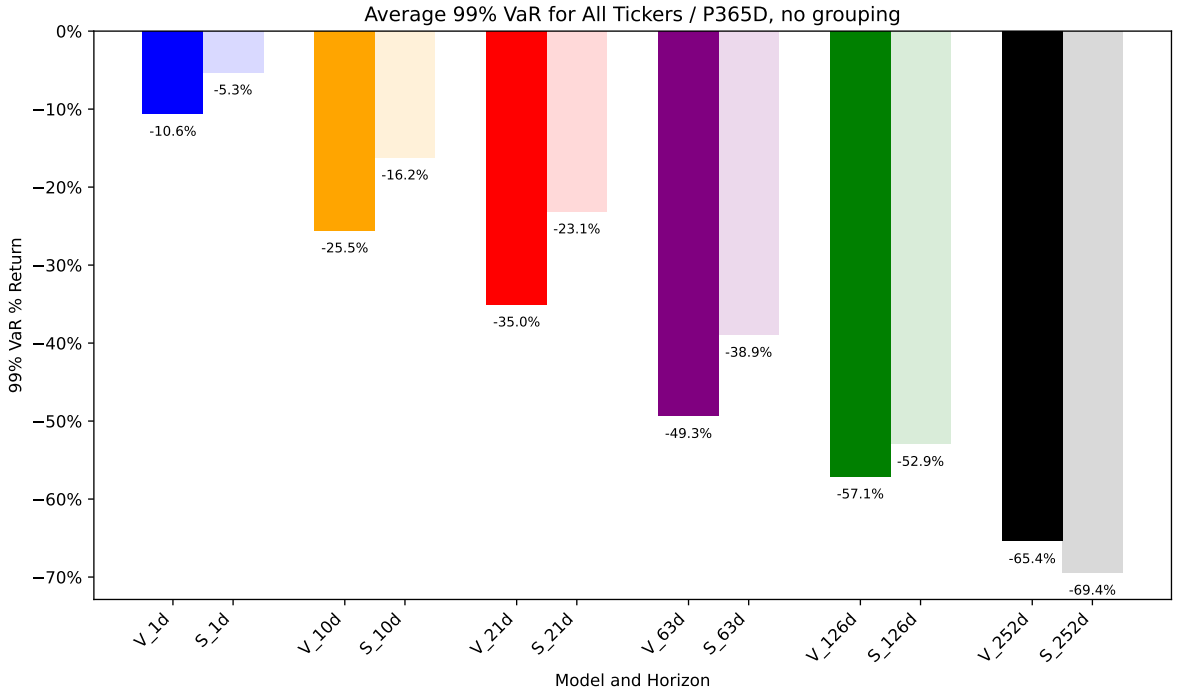
All Out of Sample Model Dates

Period examined: All model dates from 2022-01-31 through 2025-06-27



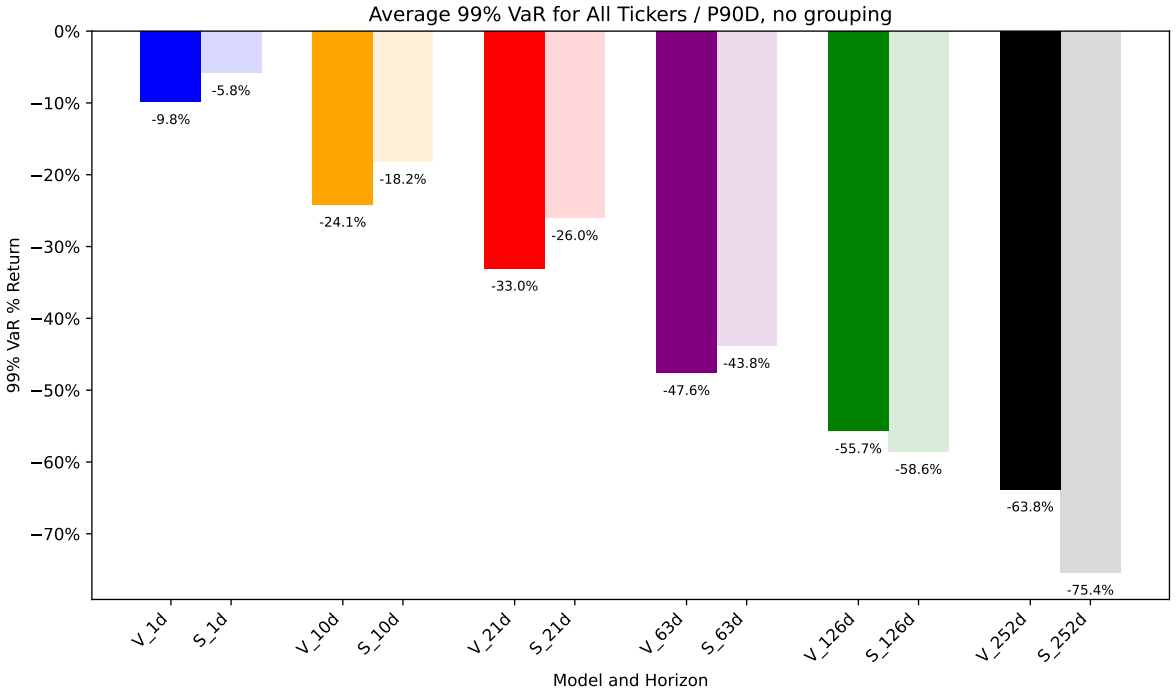
Prior 365 Calendar Days (P365D)

Period examined: All model dates from 2025-06-27 through 2024-07-02



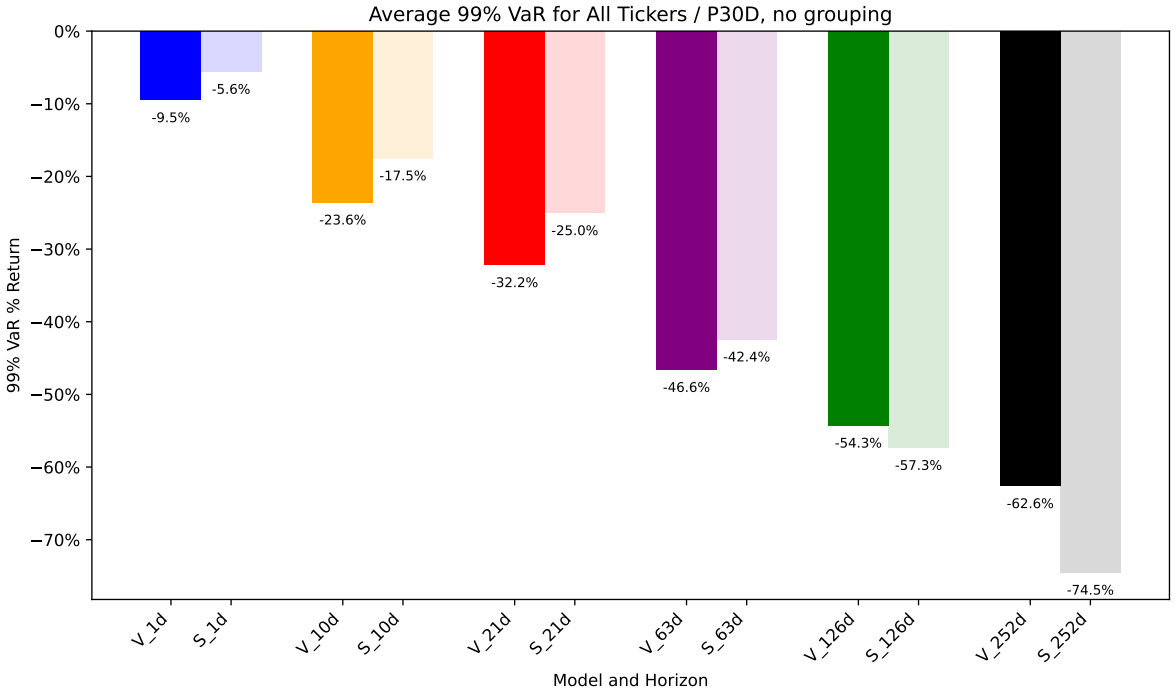
Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-06-27 through 2025-04-03



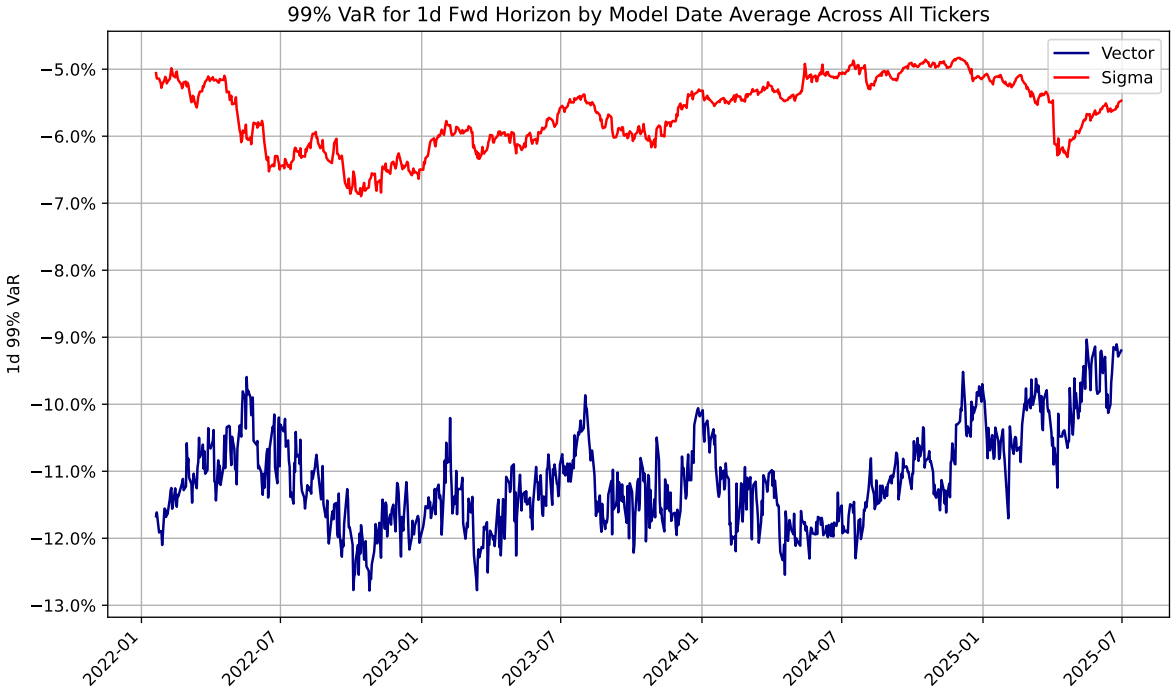
Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-06-27 through 2025-06-02

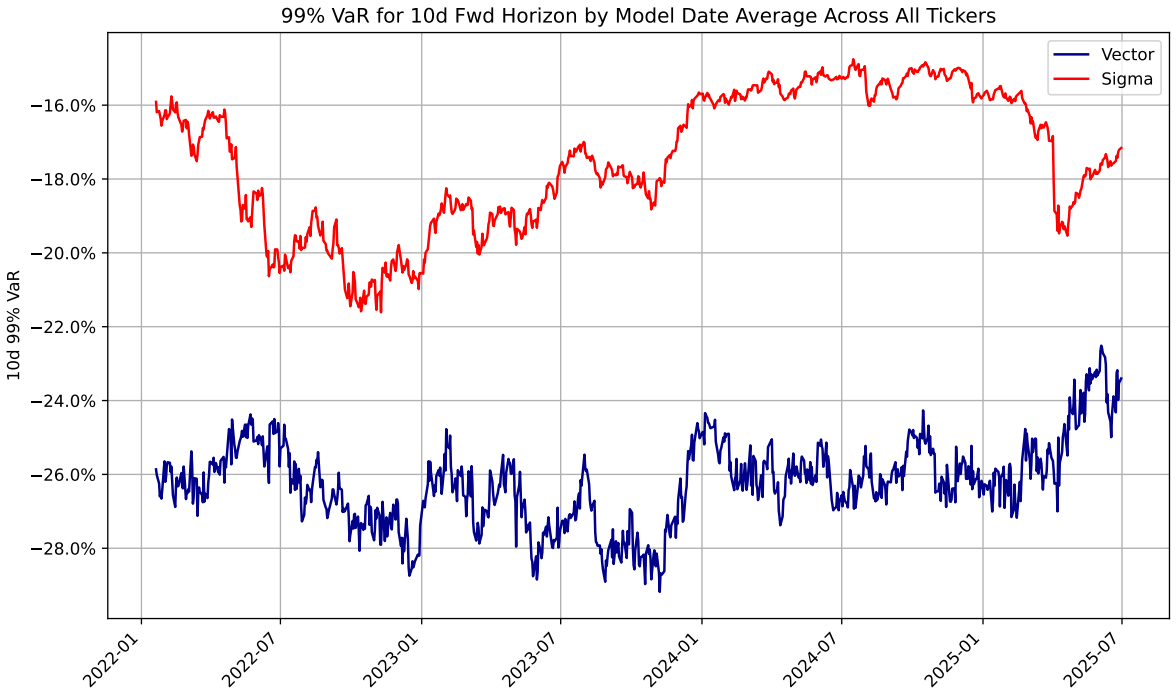


Daily Levels

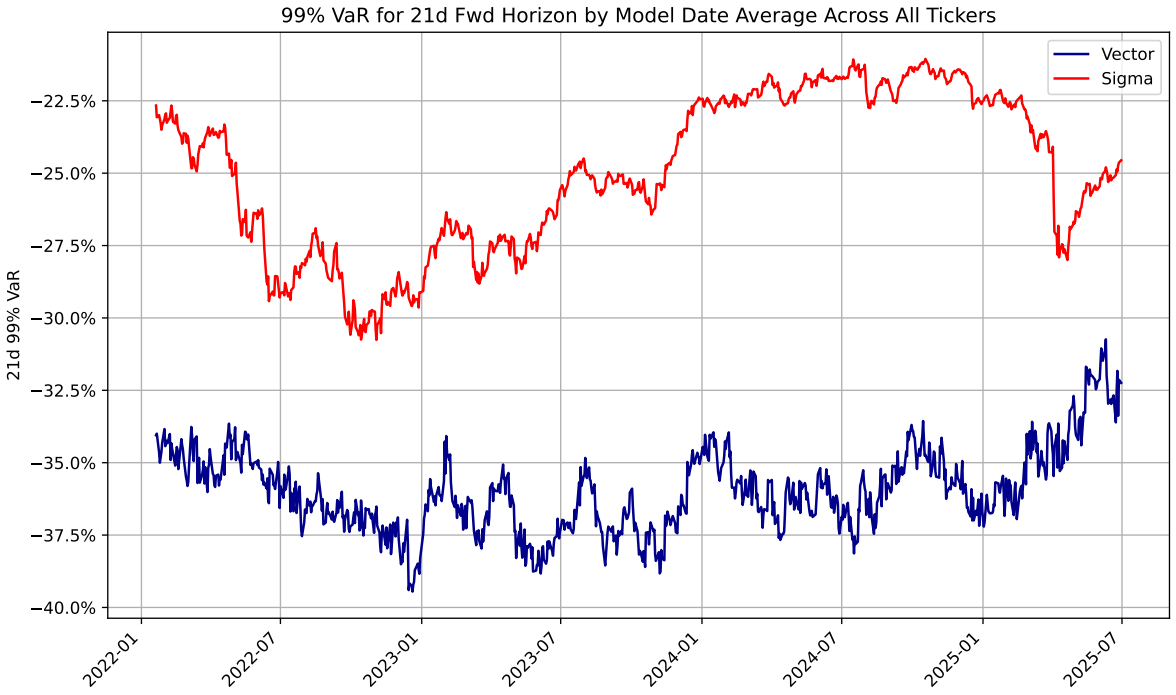
1d Horizon



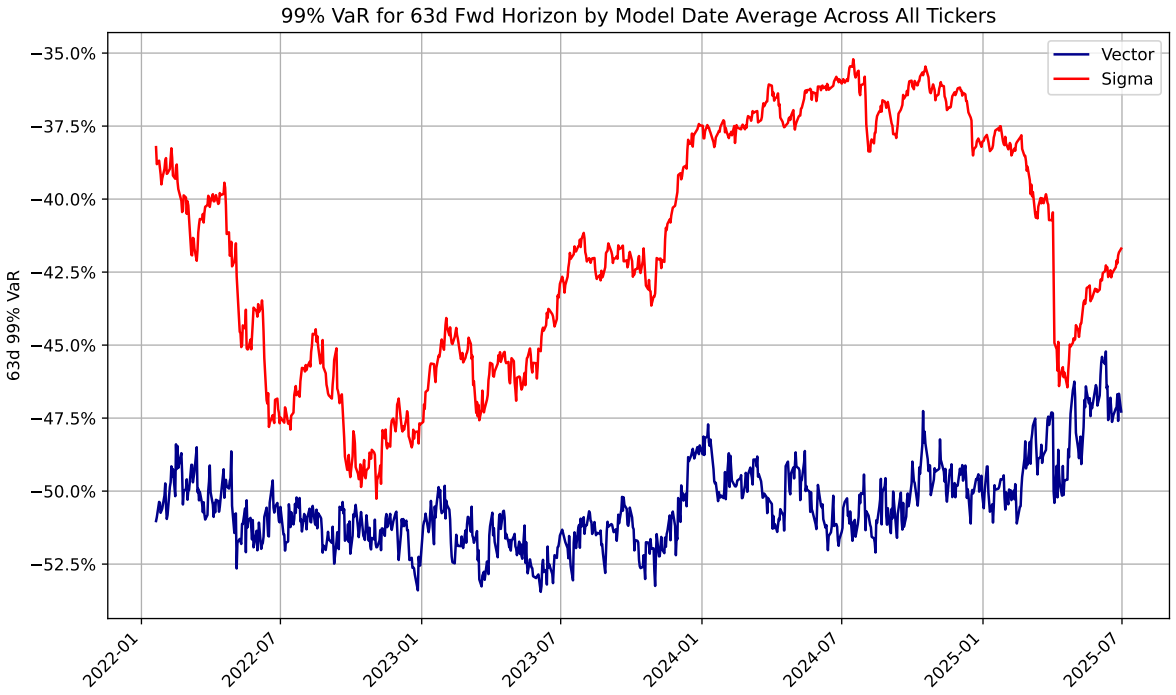
10d Horizon


99% VaR for 10d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
10d 99% VaR
−16.0%
−18.0%
−20.0%
−22.0%
−24.0%
−26.0%
−28.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

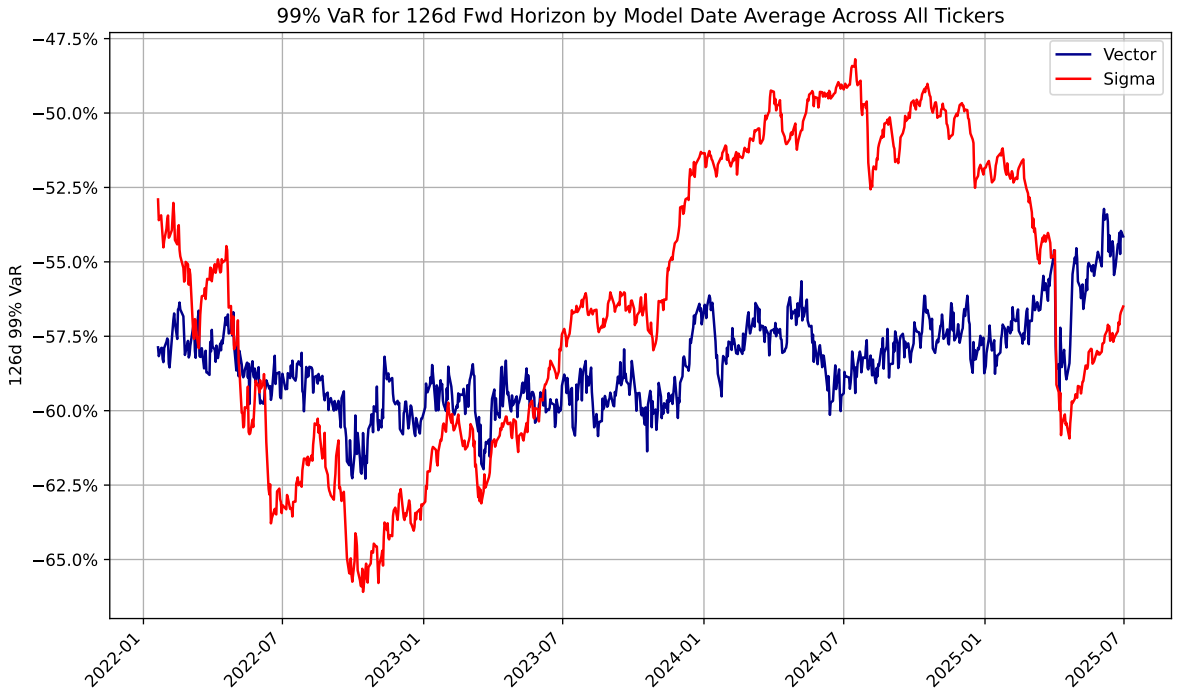
21d Horizon


99% VaR for 21d Fwd Horizon by Model Date Average Across All Tickers
Vector
Sigma
21d 99% VaR
−22.5%
−25.0%
−27.5%
−30.0%
−32.5%
−35.0%
−37.5%
−40.0%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07

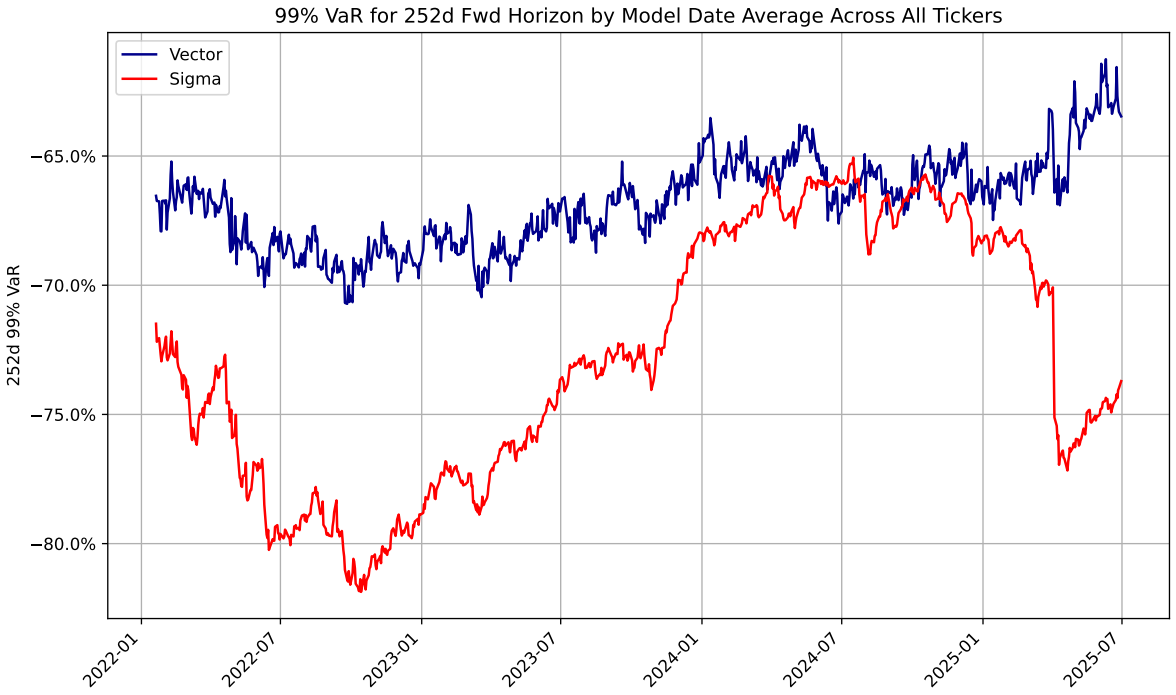
63d Horizon


99% VaR for 63d Fwd Horizon by Model Date Average Across All Tickers
63d 99% VaR
−35.0%
−37.5%
−40.0%
−42.5%
−45.0%
−47.5%
−50.0%
−52.5%
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07
Vector
Sigma

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

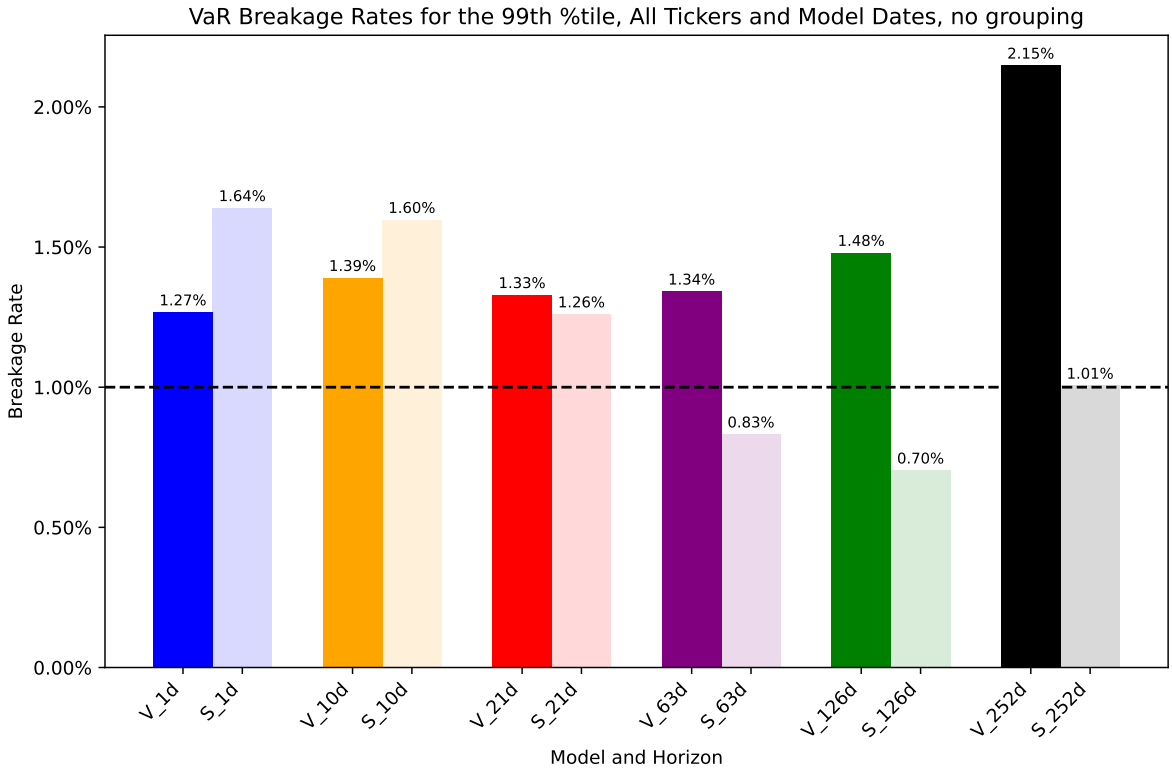
Vector Model ROVBC can be evalauated on the basis of outright levels relative to Sigma and alpha relative to Sigma ROVBC (which, as discussed previously, is assigned the underlying ticker price returns). We advise keeping proximity of VaR breakage rates to targetted levels in mind when comparing outright 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.

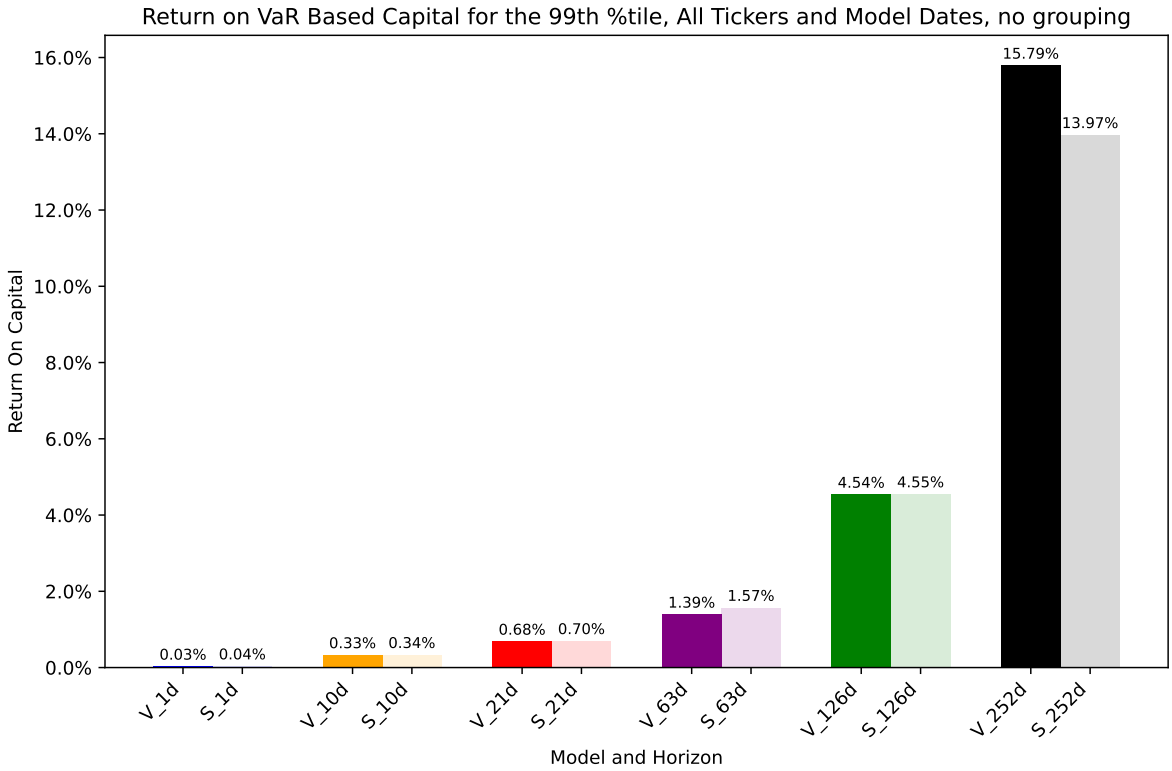
Alpha allows us to isolate ROVBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROVBC multiplier for the Vector Model and 1.00x. Alpha across TMD's could be driven by VaR differentials between tickers and / or between dates. Thus we also present 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 Mdoel 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 2025-06-27





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

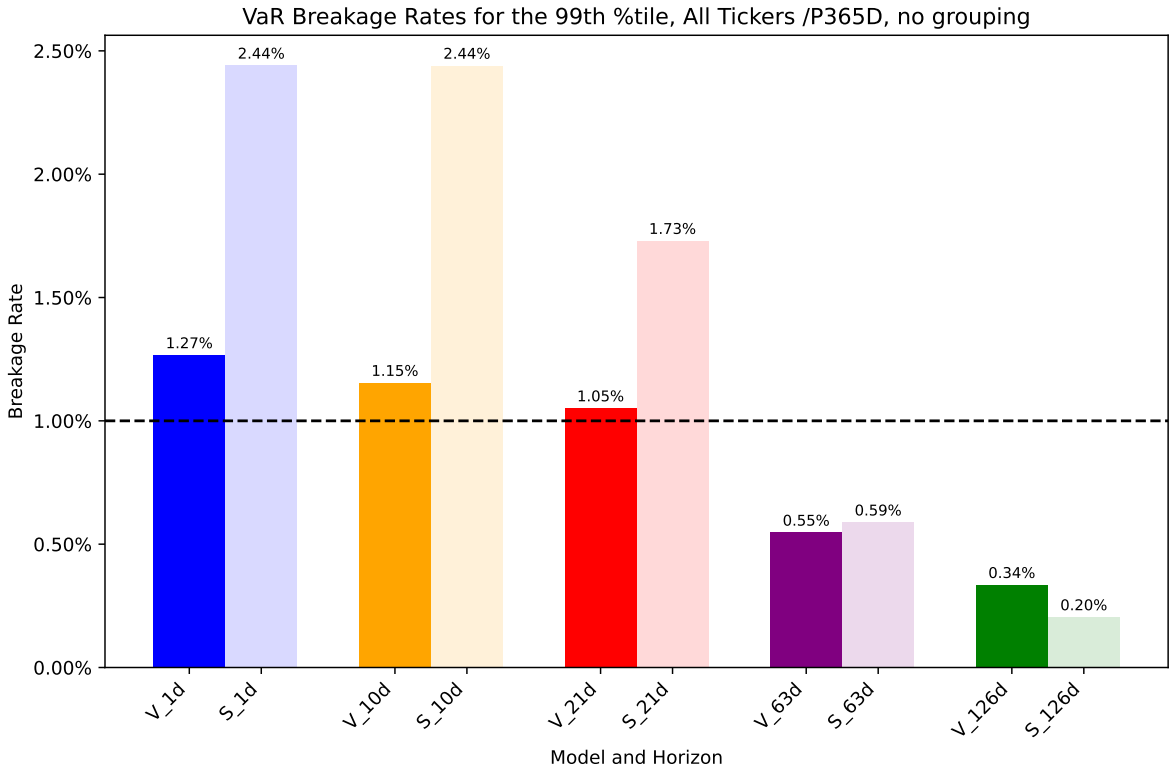
	1d	10d	21d	63d	126d	252d
intercept	-0.00%	-0.02%	-0.08%	-0.33%	-0.82%	-0.91%
intercept_p_value	43.94%	14.97%	0.13%	0.00%	0.00%	0.00%
slope	90.48%	105.55%	108.69%	109.59%	117.87%	119.51%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

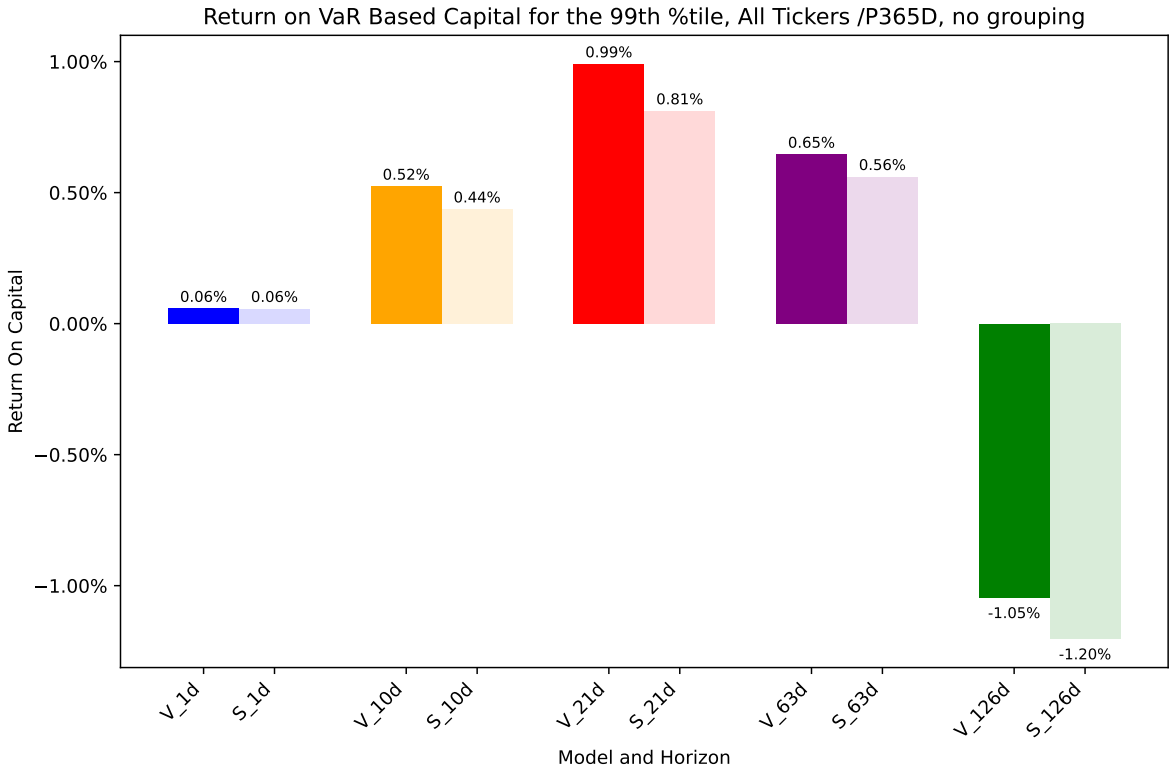
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across Model Dates:

	1d	10d	21d	63d	126d	252d
intercept	-0.03%	-0.12%	-0.36%	-1.47%	-3.39%	-4.98%
intercept_p_value	0.03%	5.98%	1.38%	0.18%	0.02%	0.39%
slope	160.75%	146.04%	162.55%	174.72%	174.26%	162.77%
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 2025-06-27 through 2024-07-02





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

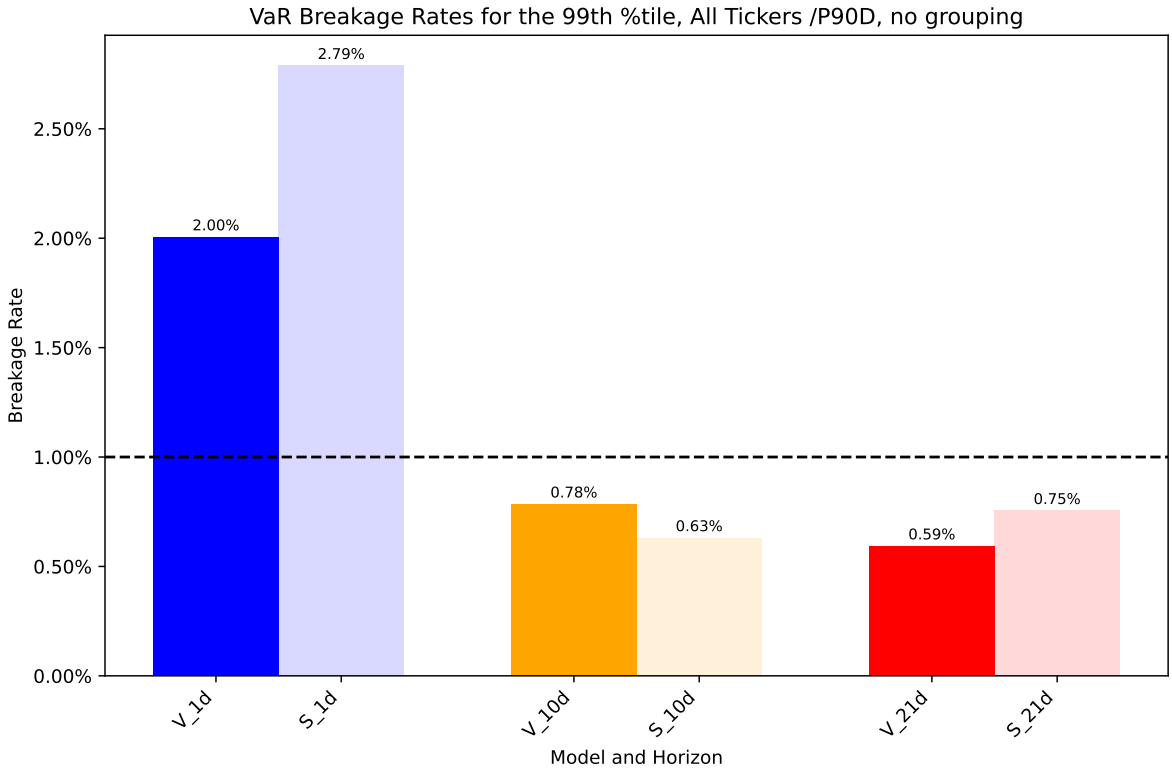
	1d	10d	21d	63d	126d
intercept	0.01%	0.16%	0.25%	0.13%	0.17%
intercept_p_value	6.43%	0.00%	0.00%	0.07%	0.45%
slope	75.82%	82.83%	91.54%	91.28%	101.02%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

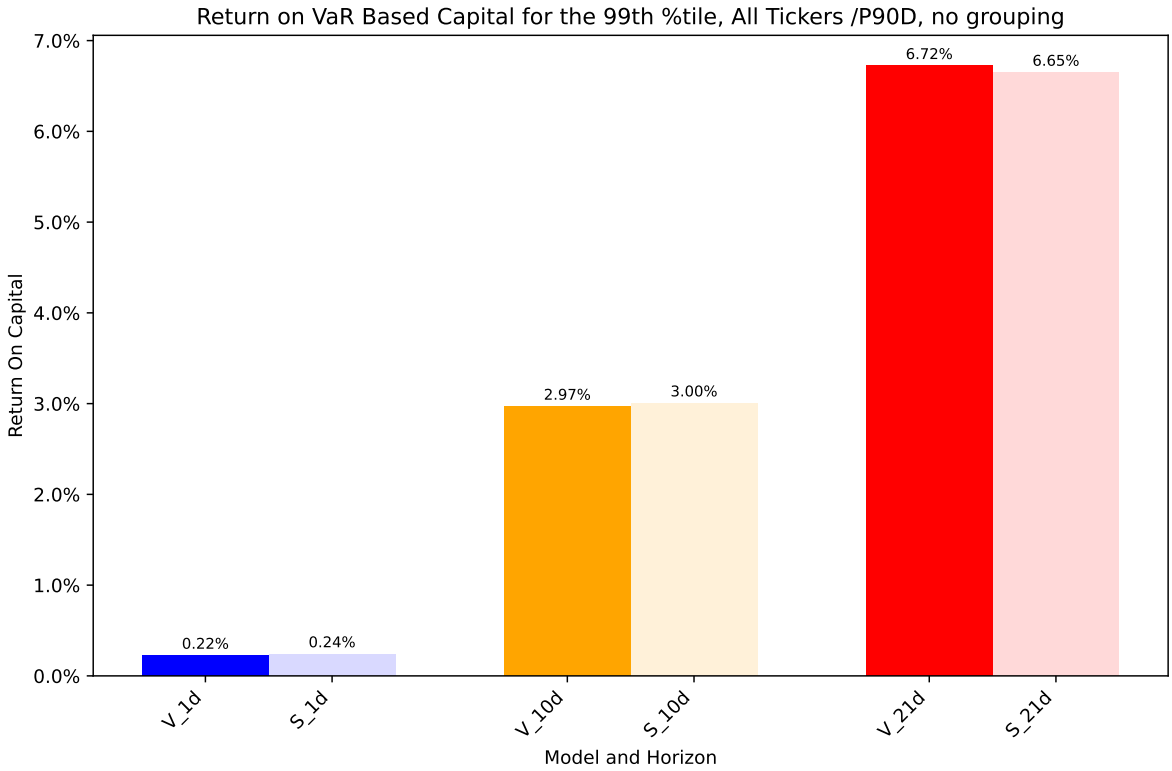
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P365D:

	1d	10d	21d	63d	126d
intercept	0.04%	0.19%	0.30%	0.10%	0.20%
intercept_p_value	0.02%	2.17%	5.78%	75.93%	71.10%
slope	45.78%	100.86%	108.10%	113.27%	114.22%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

Prior 90 Calendar Days (P90D)

Period examined: All model dates from 2025-06-27 through 2025-04-03





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

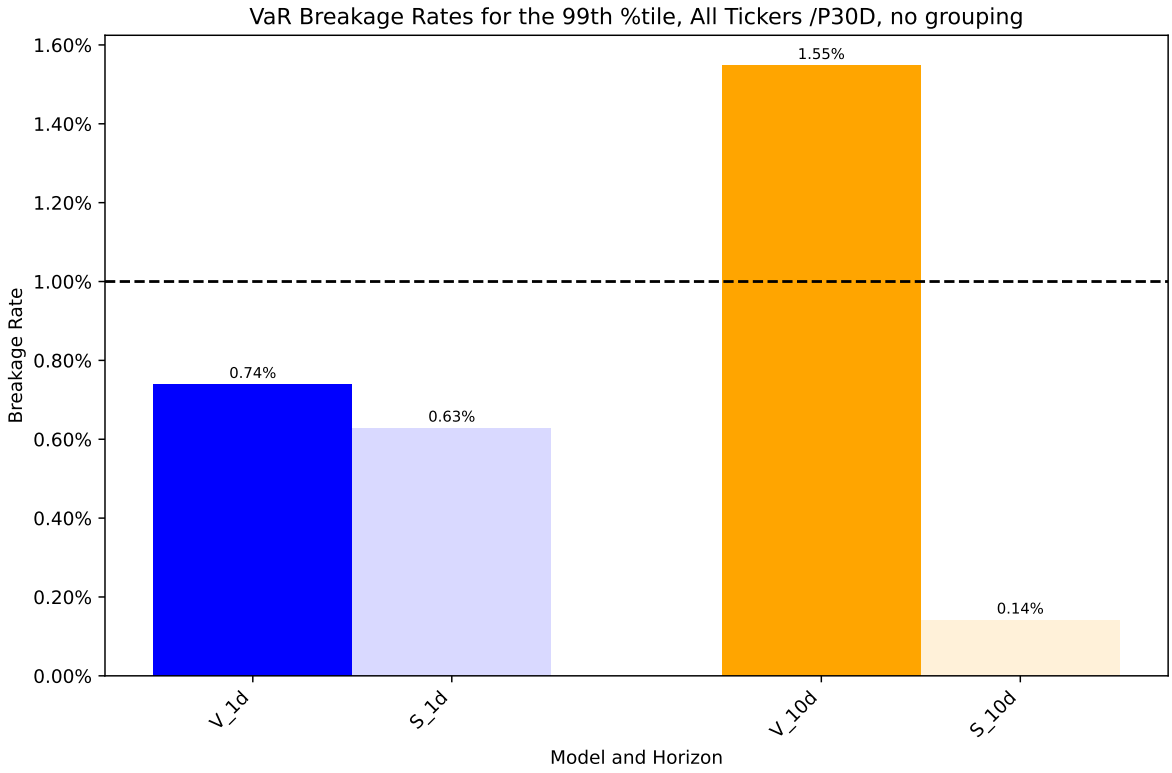
	1d	10d	21d
intercept	0.02%	-0.03%	-0.13%
intercept_p_value	35.90%	60.26%	22.87%
slope	85.41%	99.77%	103.01%
slope_p_value	0.00%	0.00%	0.00%

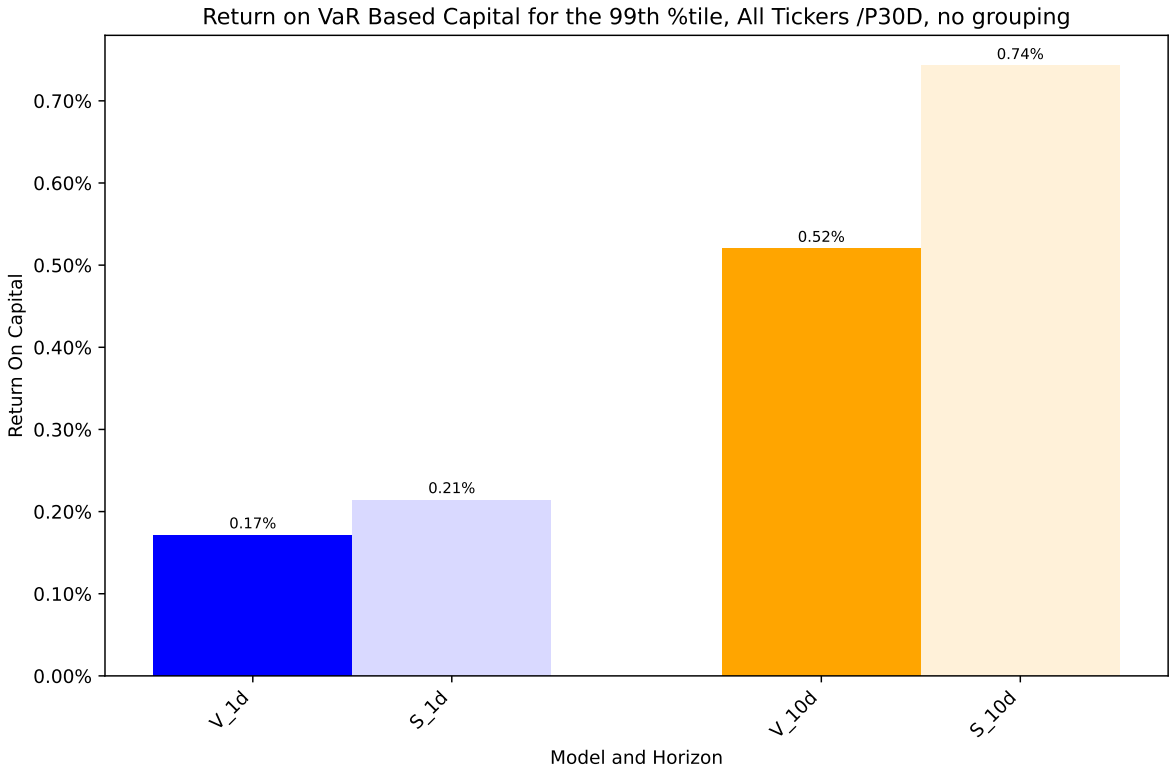
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P90D:

	1d	10d	21d
intercept	0.03%	-0.09%	-0.34%
intercept_p_value	30.60%	73.10%	60.59%
slope	114.18%	133.26%	141.98%
slope_p_value	0.00%	0.00%	0.00%

Prior 30 Calendar Days (P30D)

Period examined: All model dates from 2025-06-27 through 2025-06-02





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

	1d	10d
intercept	-0.02%	-0.22%
intercept_p_value	45.05%	0.99%
slope	88.65%	100.23%
slope_p_value	0.00%	0.00%

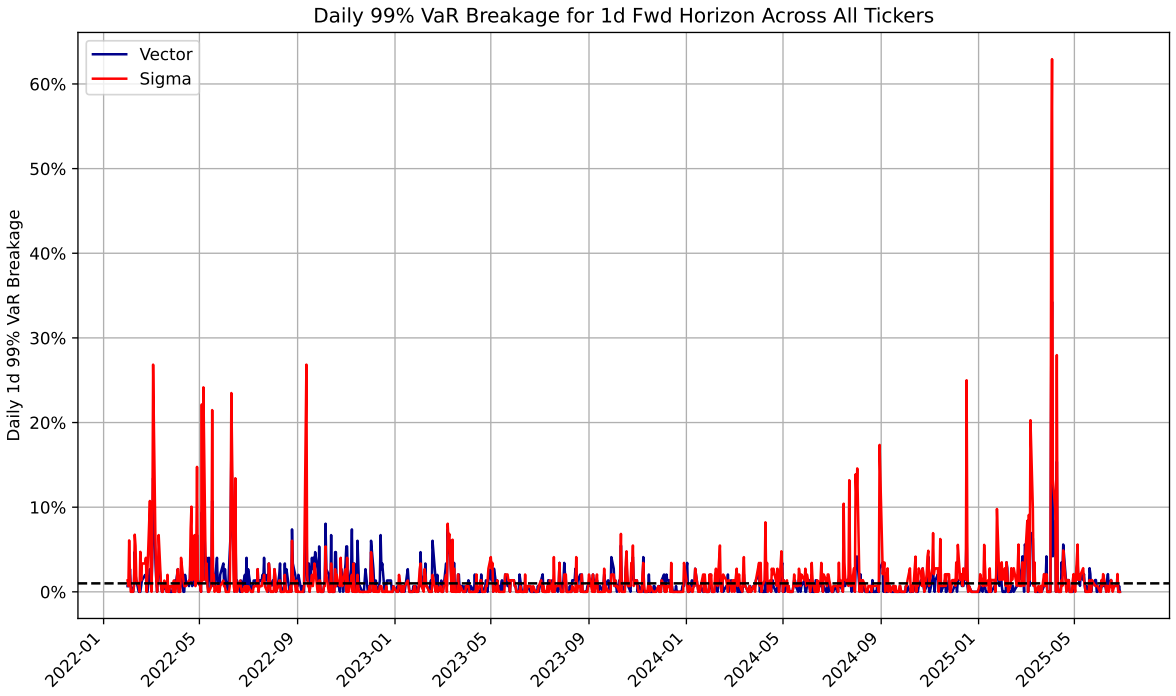
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P30D:

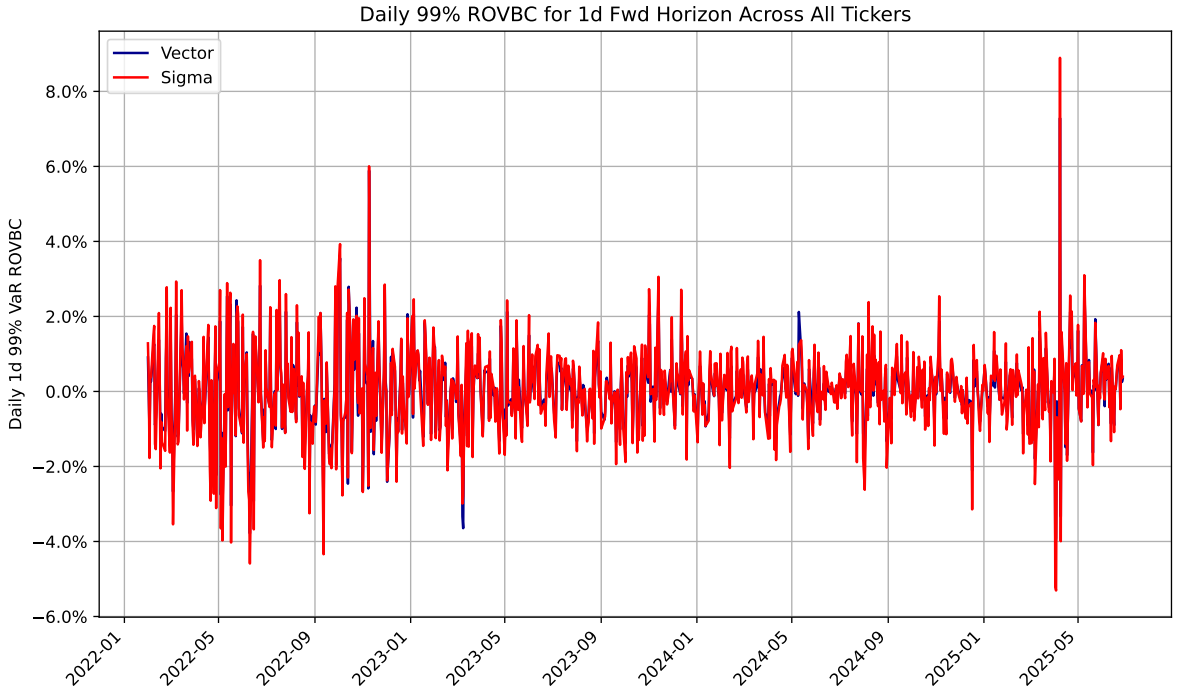
	1d	10d
intercept	-0.04%	-0.12%
intercept_p_value	20.33%	55.51%
slope	131.74%	129.87%
slope_p_value	0.00%	0.00%

Daily Performance

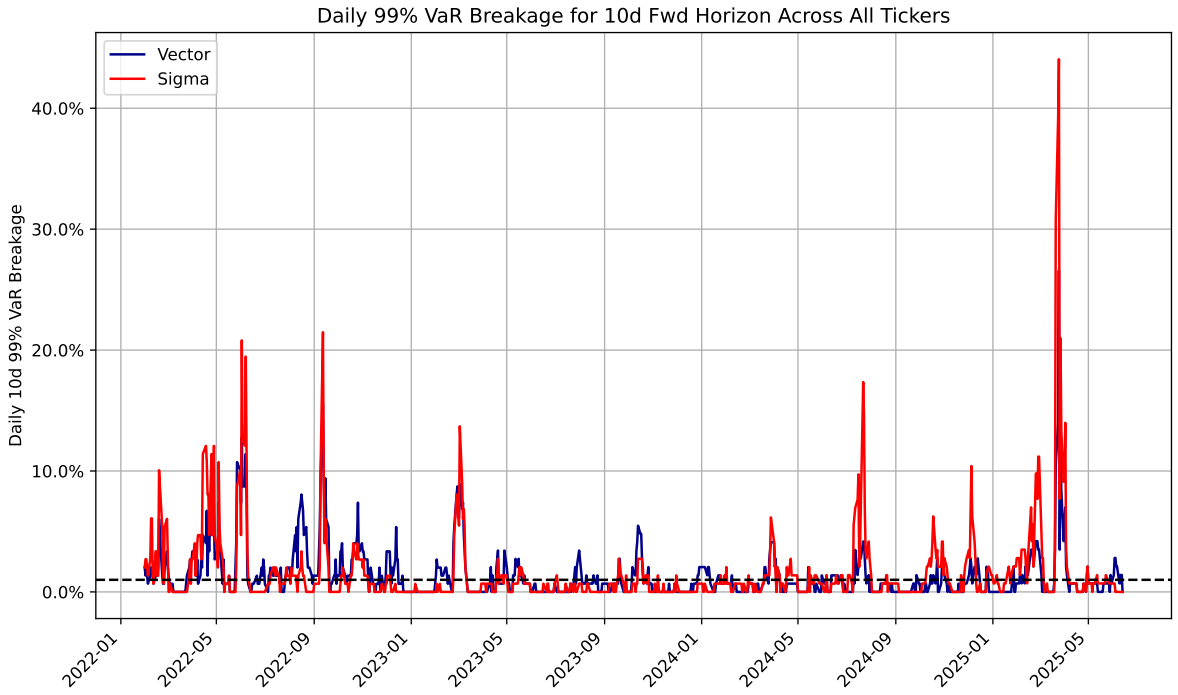
Here we look at the daily breakage and ROVBC statitics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROVBC outliers.

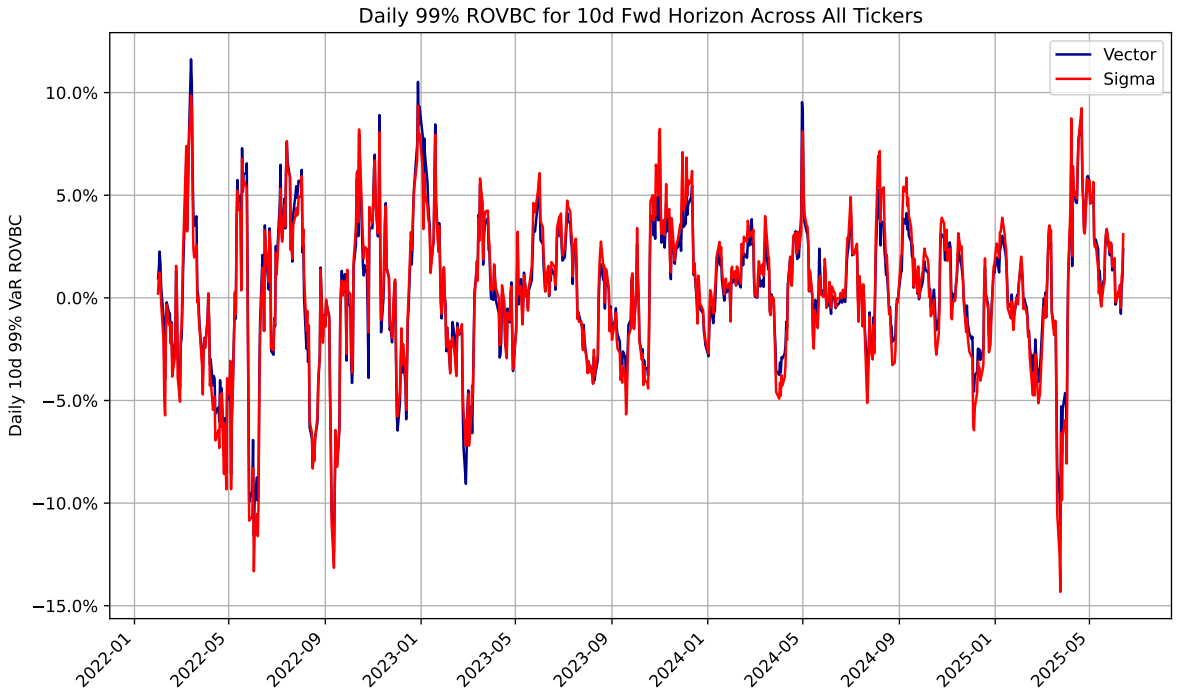
1d Horizon



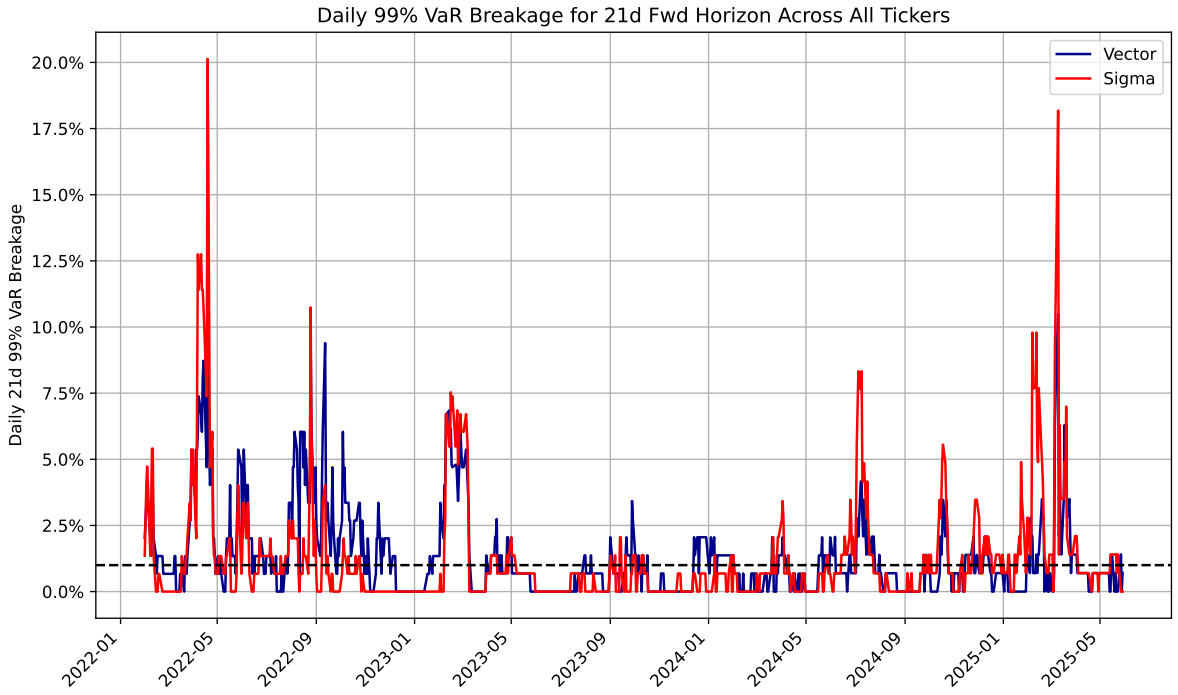

Daily 99% ROVBC for 1d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 1d 99% VaR ROVBC
8.0%
6.0%
4.0%
2.0%
0.0%
−2.0%
−4.0%
−6.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

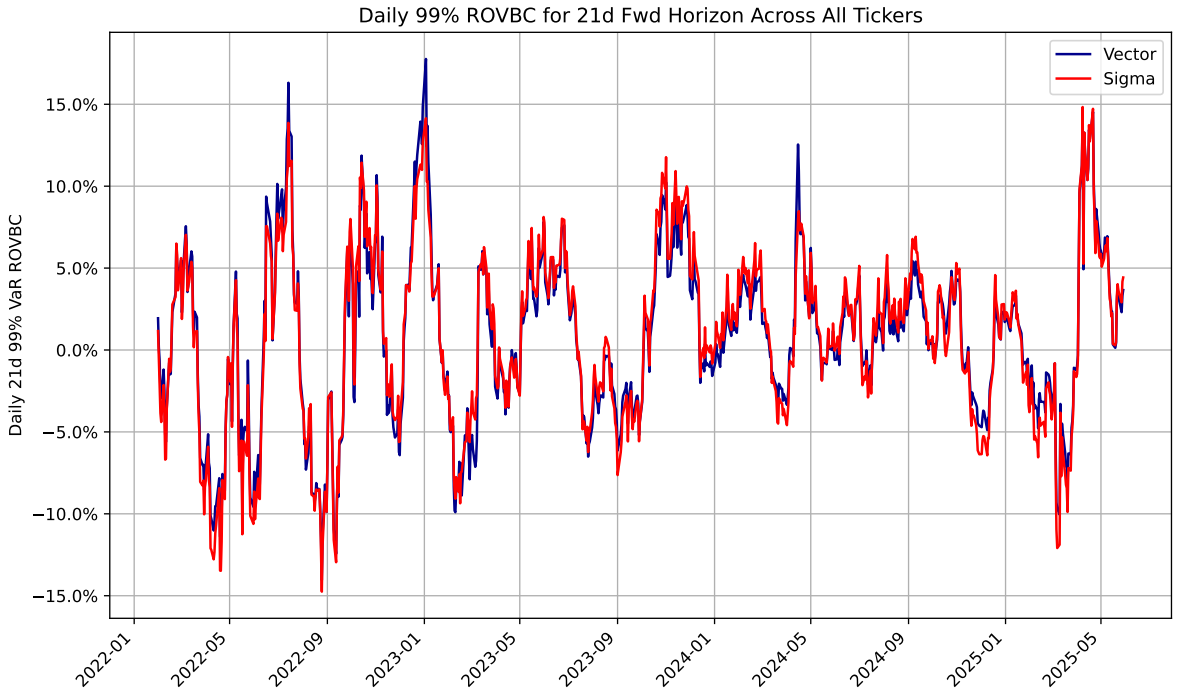
10d Horizon


Daily 99% VaR Breakage for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 10d 99% VaR Breakage
40.0%
30.0%
20.0%
10.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

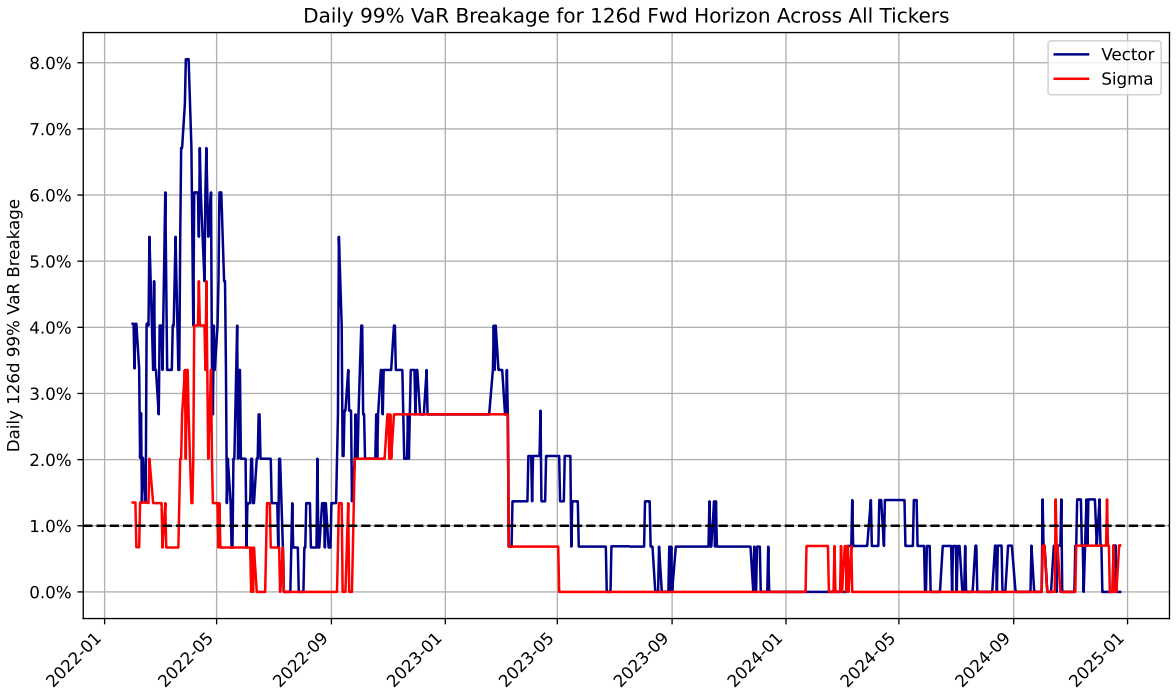

Daily 99% ROVBC for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Daily 10d 99% VaR ROVBC
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

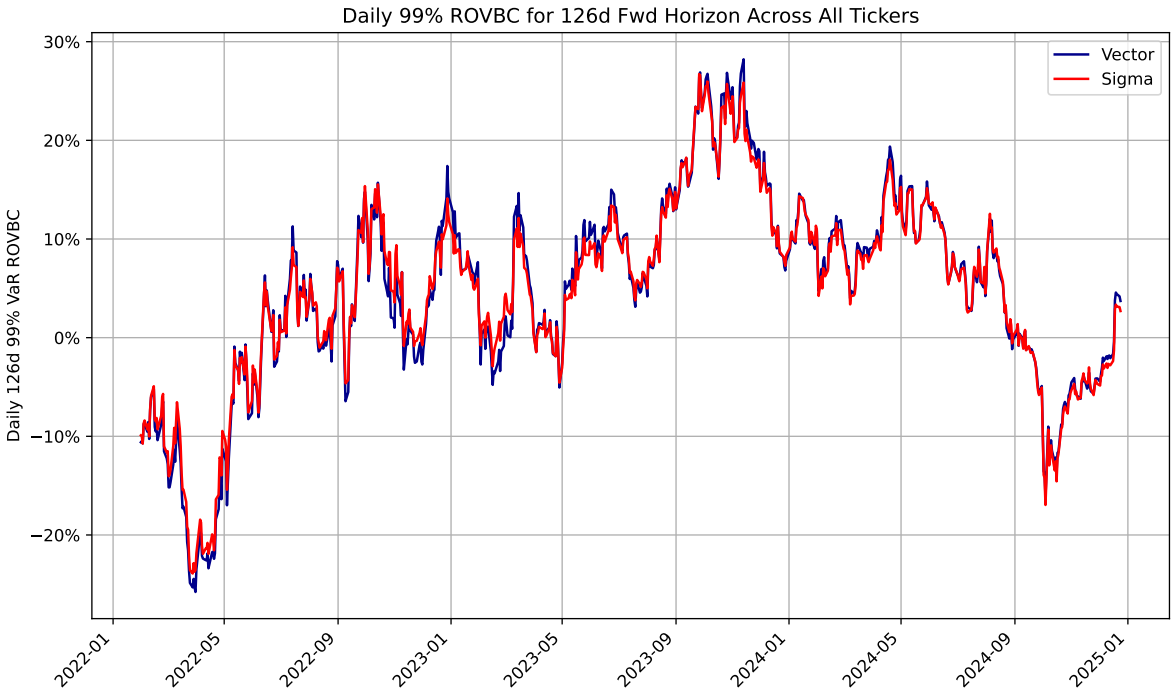
21d Horizon


Daily 99% VaR Breakage for 21d Fwd Horizon Across All Tickers
Daily 21d 99% VaR Breakage
Vector
Sigma
20.0%
17.5%
15.0%
12.5%
10.0%
7.5%
5.0%
2.5%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

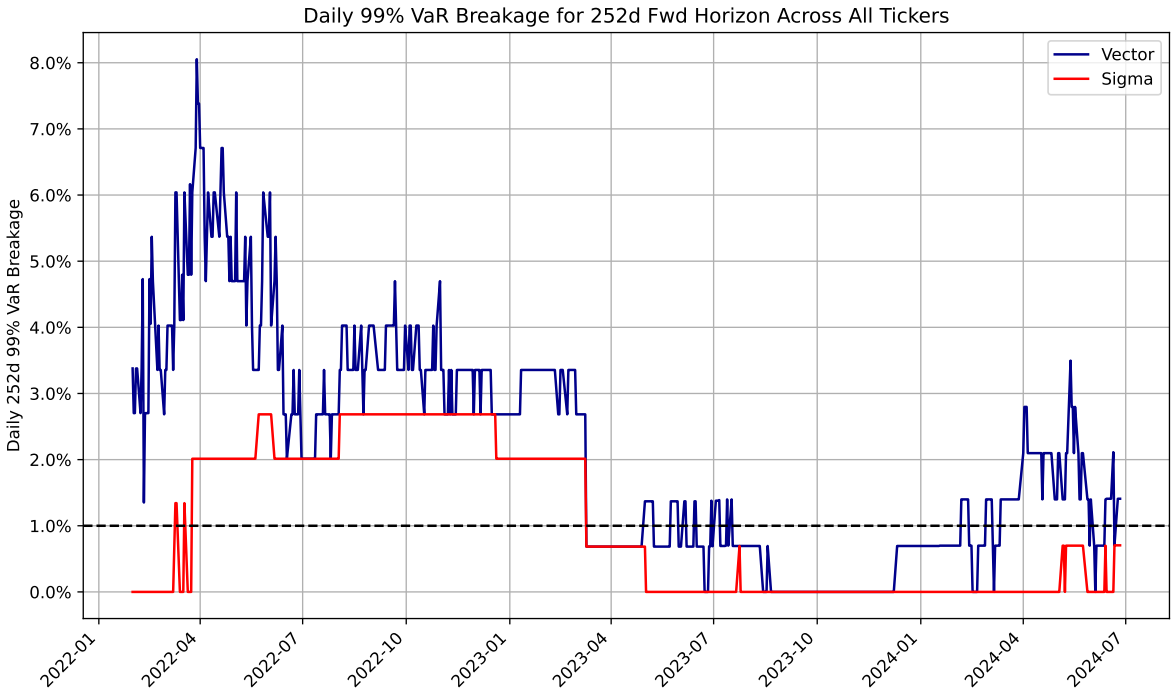

Daily 99% ROVBC for 21d Fwd Horizon Across All Tickers
Daily 21d 99% VaR ROVBC
Vector
Sigma
15.0%
10.0%
5.0%
0.0%
−5.0%
−10.0%
−15.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

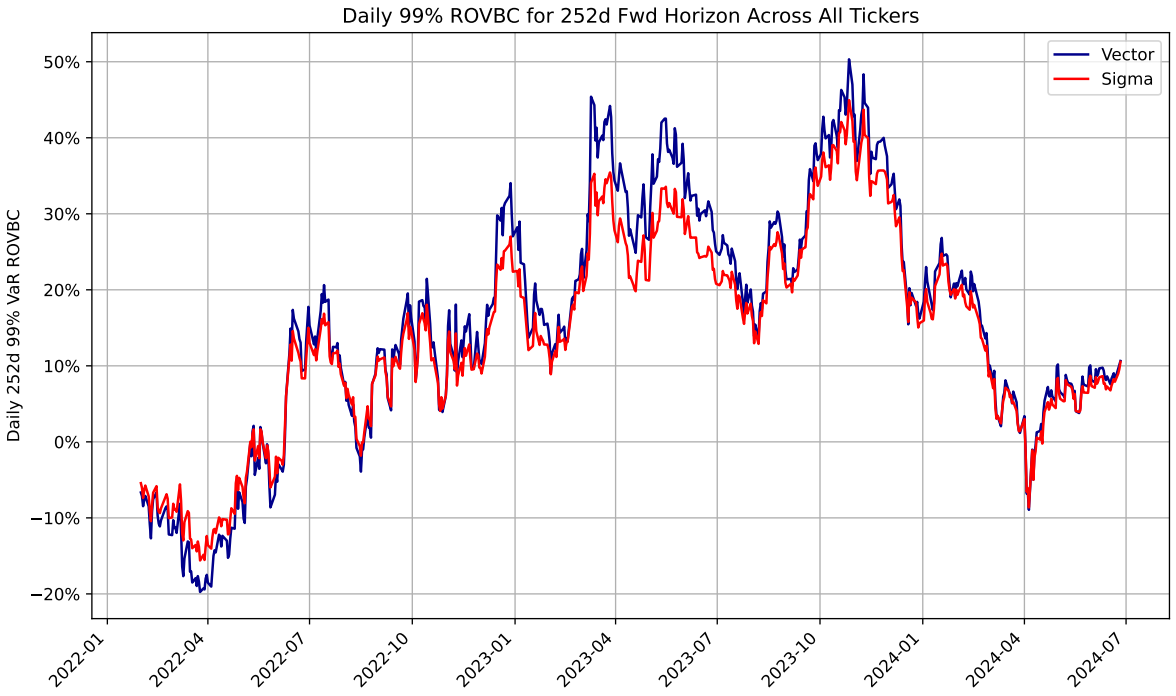
63d Horizon


Daily 99% VaR Breakage for 126d Fwd Horizon Across All Tickers
Daily 126d 99% VaR Breakage
Vector
Sigma
8.0%
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01


Daily 99% ROVBC for 126d Fwd Horizon Across All Tickers
Daily 126d 99% VaR ROVBC
Vector
Sigma
30%
20%
10%
0%
−10%
−20%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

252d Horizon

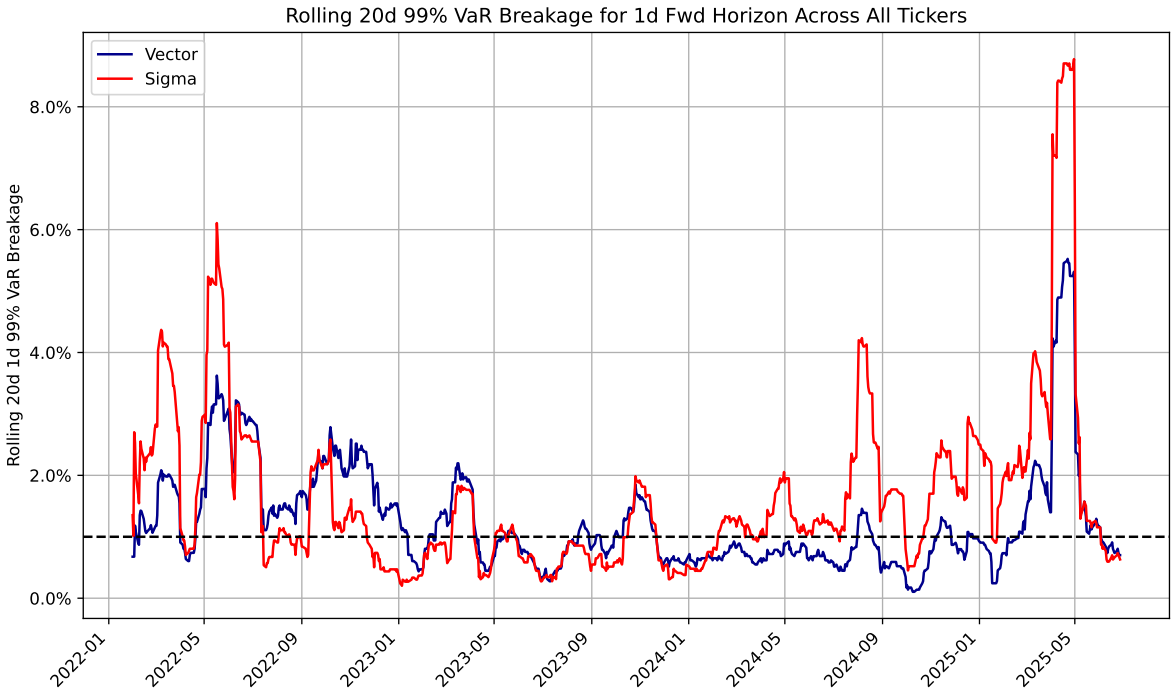


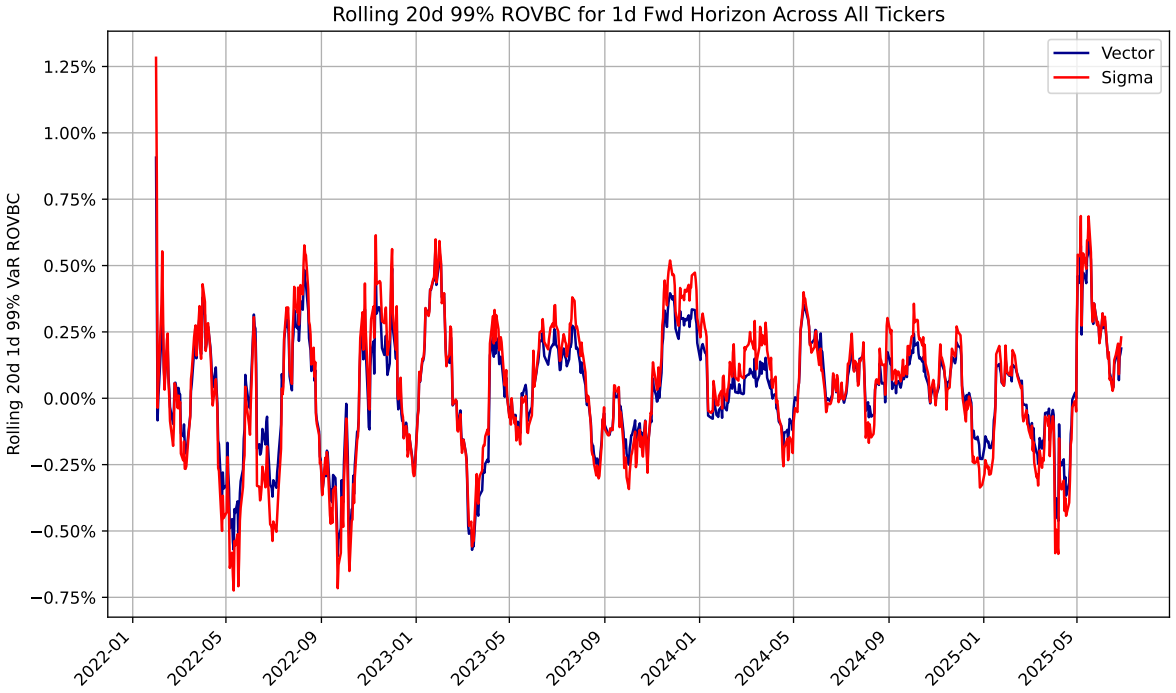


Rolling 20d Performance

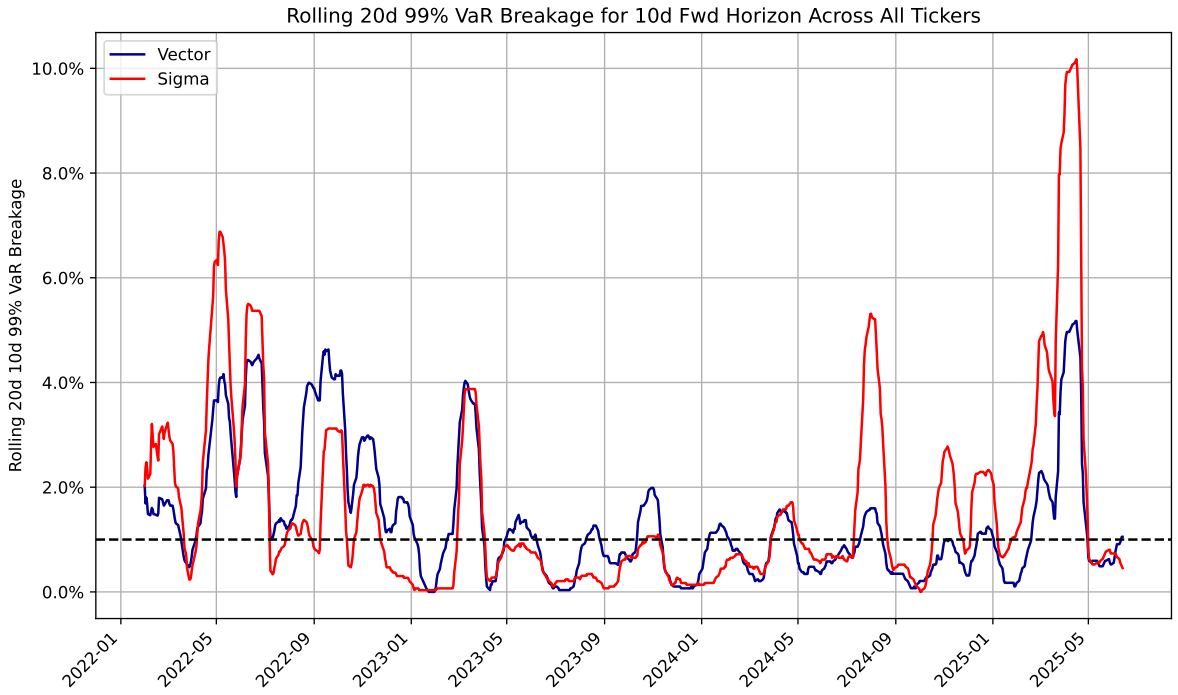
Here we look at 20 day rolling moving averages of the breakage and ROVBC statitics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

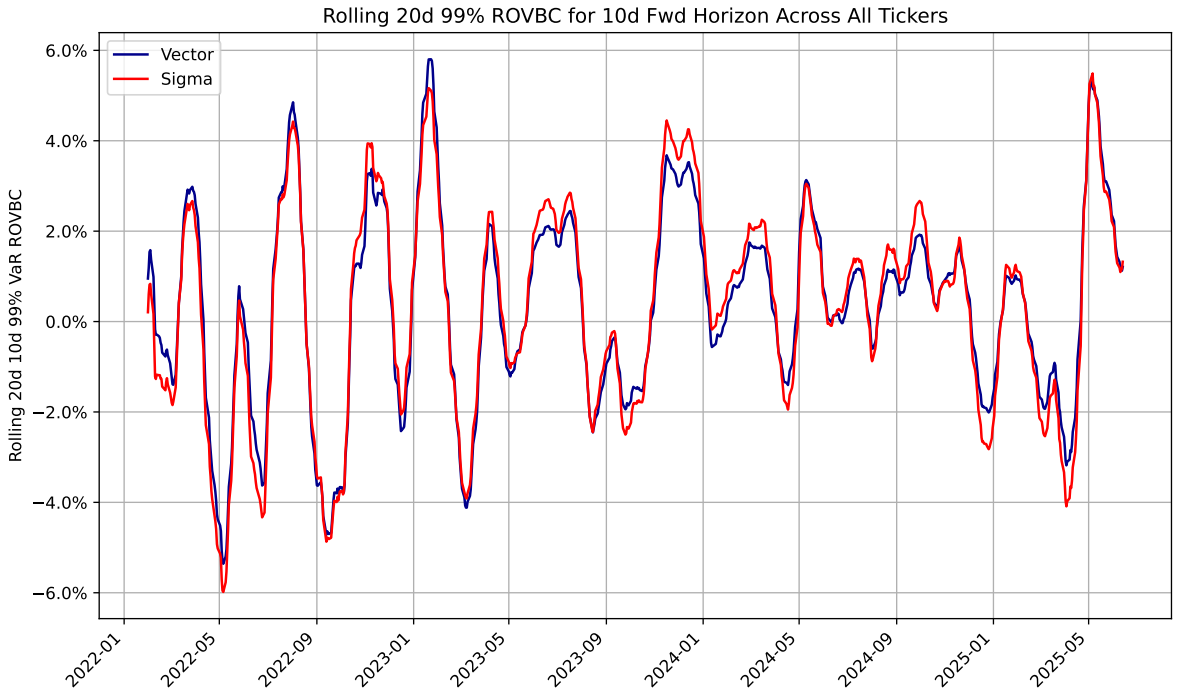
1d Horizon



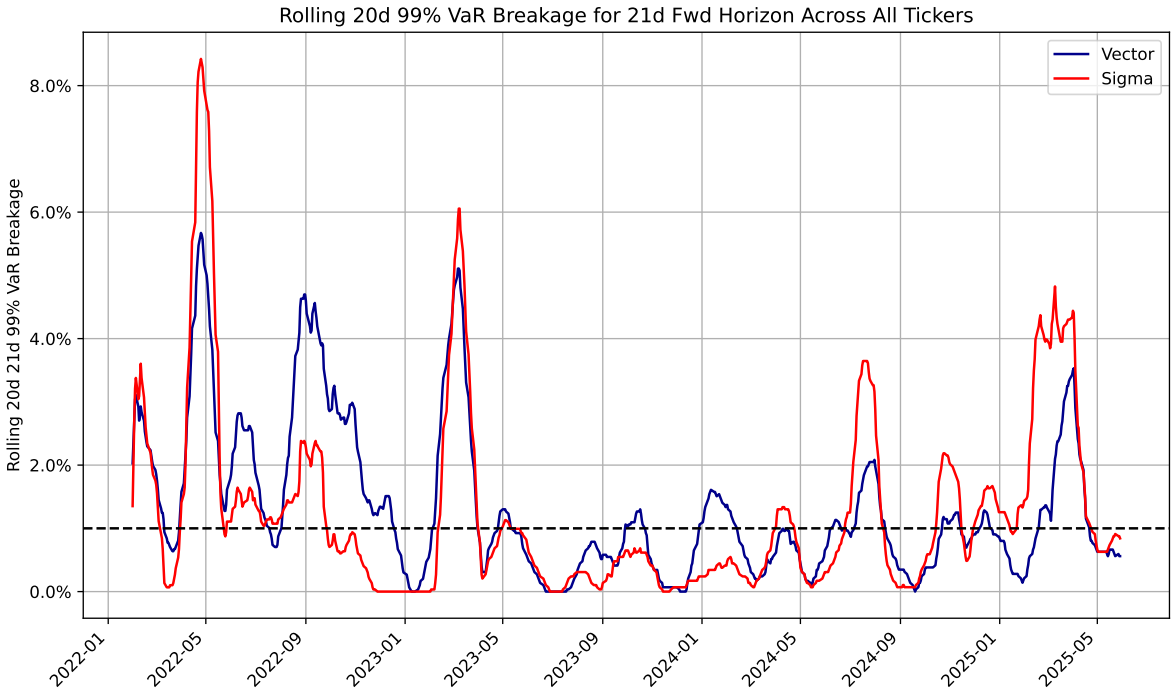

Rolling 20d 99% ROVBC for 1d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 1d 99% VaR ROVBC
1.25%
1.00%
0.75%
0.50%
0.25%
0.00%
−0.25%
−0.50%
−0.75%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

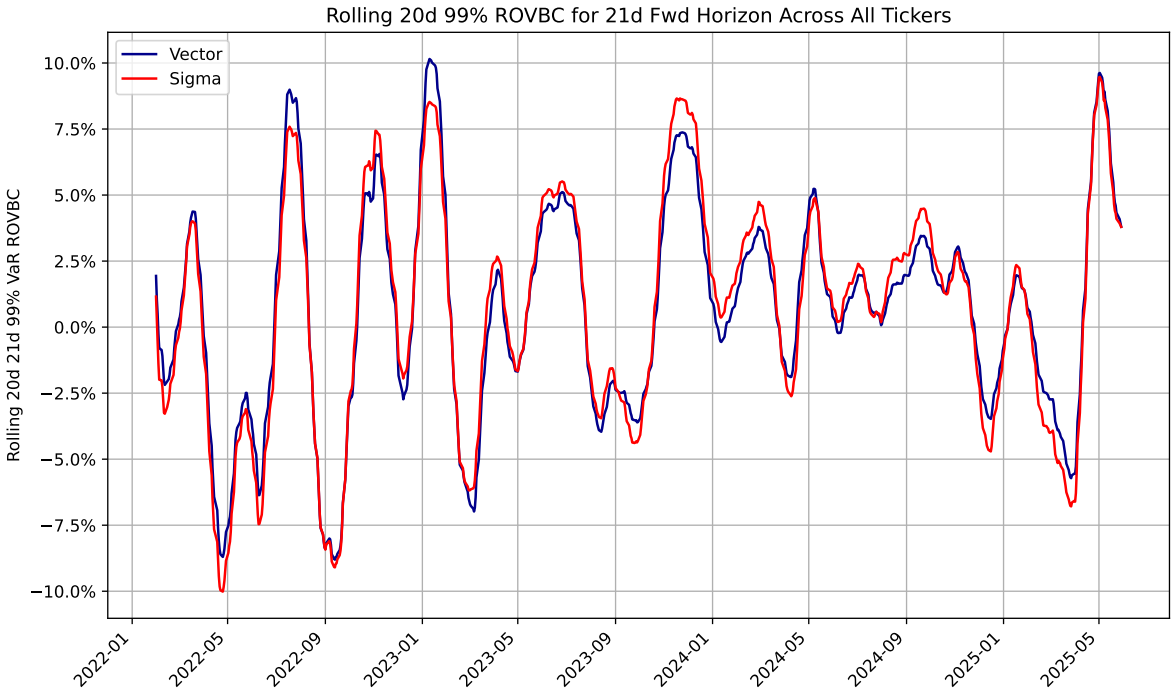
10d Horizon


Rolling 20d 99% VaR Breakage for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 99% VaR Breakage
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

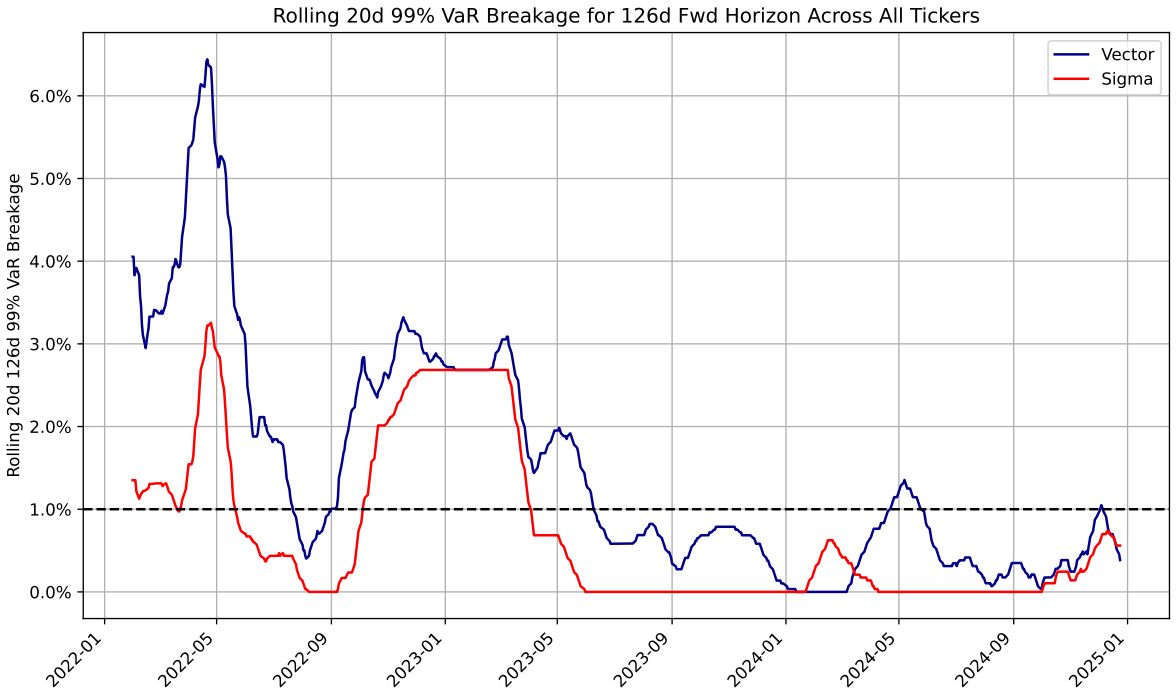

Rolling 20d 99% ROVBC for 10d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 10d 99% VaR ROVBC
6.0%
4.0%
2.0%
0.0%
−2.0%
−4.0%
−6.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

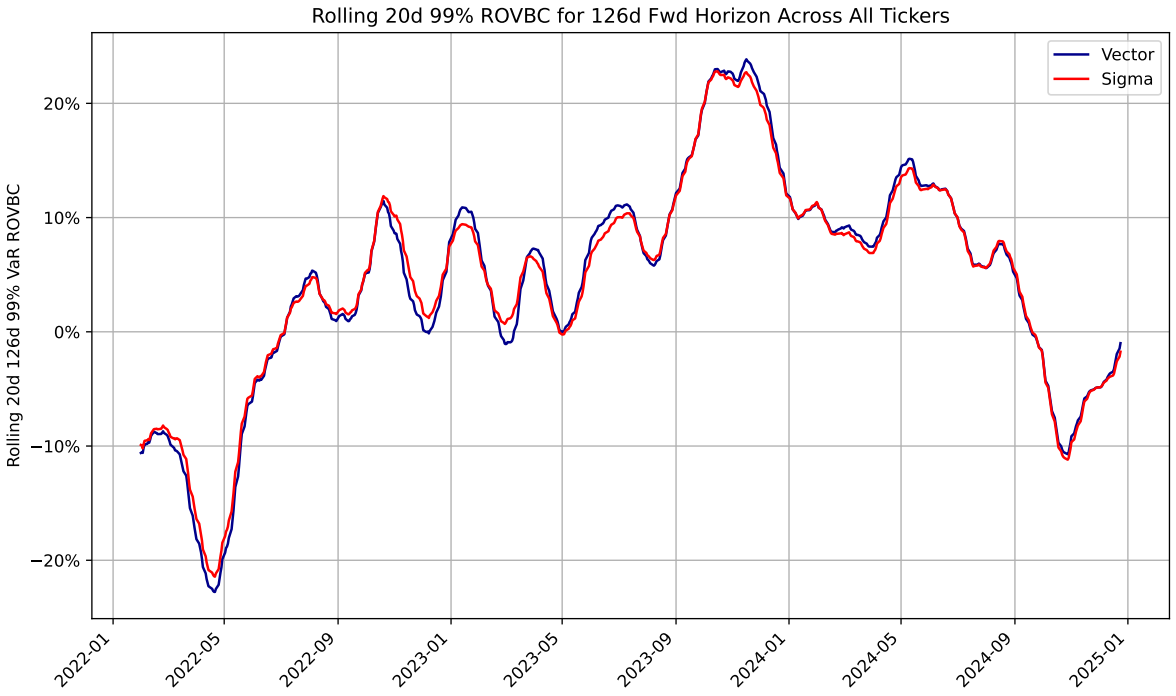
21d Horizon


Rolling 20d 99% VaR Breakage for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 21d 99% VaR Breakage
8.0%
6.0%
4.0%
2.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

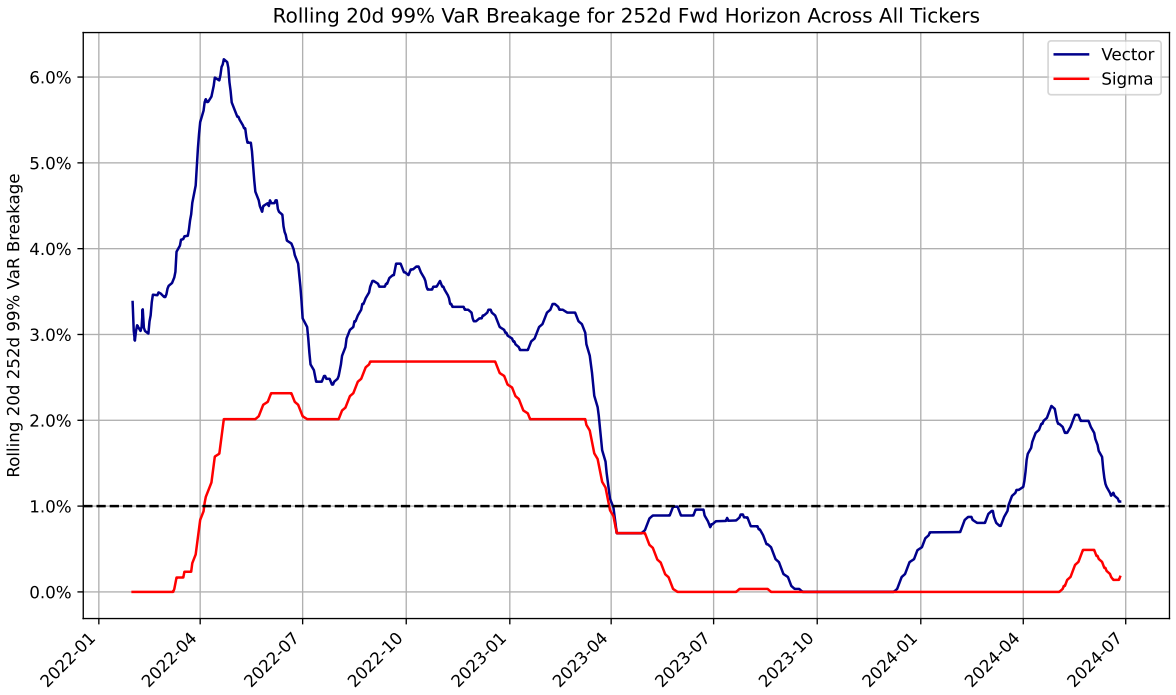

Rolling 20d 99% ROVBC for 21d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 21d 99% VaR ROVBC
10.0%
7.5%
5.0%
2.5%
0.0%
−2.5%
−5.0%
−7.5%
−10.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01
2025-05

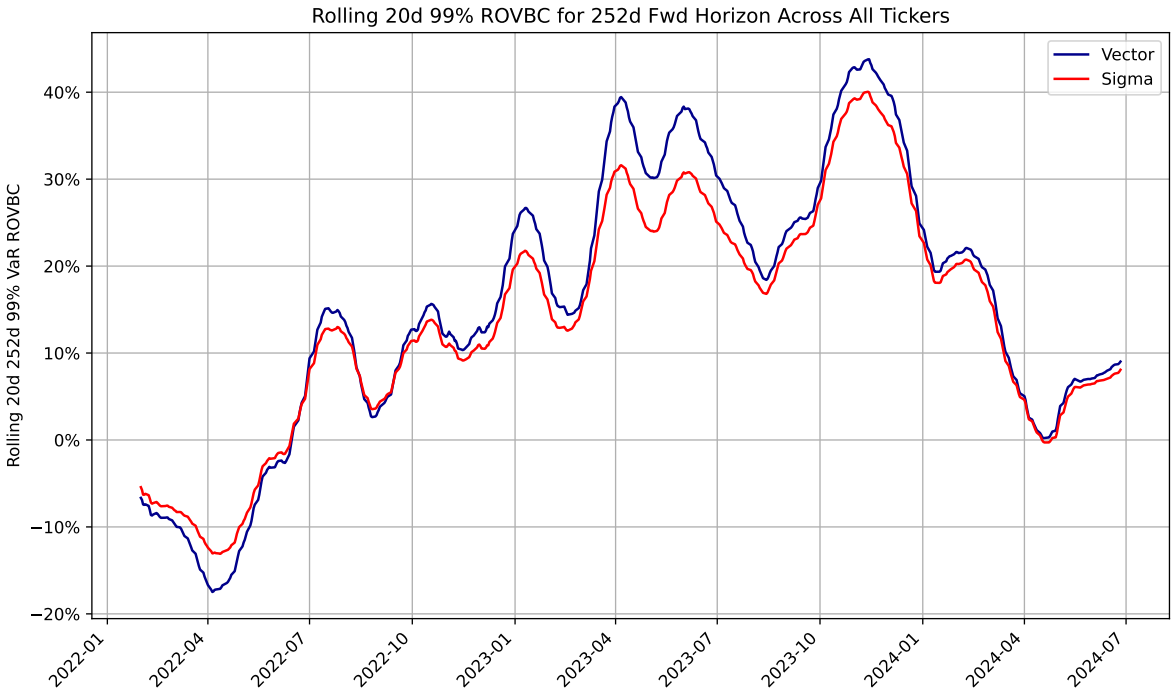
63d Horizon


Rolling 20d 99% VaR Breakage for 126d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 126d 99% VaR Breakage
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01


Rolling 20d 99% ROVBC for 126d Fwd Horizon Across All Tickers
Vector
Sigma
Rolling 20d 126d 99% VaR ROVBC
20%
10%
0%
−10%
−20%
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
2025-01

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 2025-06-27

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	SBNY	15.47%	SBNY	3.6%
1.0	SIVBQ	10.43%	SIVBQ	2.88%
1.0	TSLA	8.19%	TRGP	2.81%
1.0	LQD	6.9%	QCOM	2.69%
1.0	B	5.85%	SPY	2.57%
1.0	FRCB	5.76%	IRM	2.57%
1.0	ZTS	5.26%	UNH	2.57%
1.0	GME	4.91%	GOOGL	2.46%
1.0	JAZZ	3.86%	PEP	2.46%
1.0	MSTR	3.74%	QQQ	2.46%
1.0	AAP	3.74%	ACGL	2.46%
1.0	CHTR	3.51%	VST	2.46%
1.0	ISRG	3.27%	NVDA	2.34%
1.0	FRA	3.16%	HSBC	2.34%
1.0	BUD	3.16%	WFC	2.34%
1.0	CDNS	3.04%	TMUS	2.22%
1.0	GNRC	3.04%	GS	2.22%
1.0	AMC	2.92%	CMG	2.22%
1.0	EXPE	2.69%	VCSH	2.22%
1.0	SLV	2.69%	ZTS	2.22%
1.0	VZ	2.57%	NVS	2.22%
1.0	KALU	2.46%	PCG	2.22%
1.0	QCOM	2.34%	KHC	2.22%
1.0	BXP	2.11%	ABBV	2.22%
1.0	GSK	2.11%	PWR	2.22%
1.0	META	1.99%	VZ	2.22%
1.0	TLT	1.87%	FRCB	2.16%
1.0	PRGO	1.87%	LEN	2.11%
1.0	OXY	1.87%	INTU	2.11%
1.0	ELAN	1.78%	MSFT	2.11%

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 2025-06-27

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	SBNY	17.65%	SIVBQ	5.51%
10.0	SIVBQ	12.87%	MUB	5.09%
10.0	TSLA	9.46%	CTLT	4.08%
10.0	AMC	8.87%	PCG	3.9%
10.0	AAP	8.87%	AAP	3.9%
10.0	CHTR	8.63%	UNH	3.55%
10.0	B	6.62%	LW	3.55%
10.0	LQD	6.5%	FIS	3.31%
10.0	ZTS	4.85%	BAC	3.31%
10.0	CVS	4.73%	SBNY	3.31%
10.0	KALU	4.61%	FRCB	3.31%
10.0	MSTR	4.26%	WDC	3.19%
10.0	GNRC	4.14%	CHTR	3.19%
10.0	ISRG	3.78%	ABBV	3.19%
10.0	CTLT	3.67%	GSK	3.07%
10.0	VCSH	3.66%	FRA	2.96%
10.0	GME	3.55%	CVS	2.96%
10.0	BHC	3.55%	IEP	2.96%
10.0	GSK	3.55%	BHC	2.84%
10.0	SNY	3.55%	TRGP	2.84%
10.0	FRCB	3.31%	EMB	2.6%
10.0	EXPE	3.19%	BALL	2.6%
10.0	NEM	2.96%	AZN	2.6%
10.0	EMB	2.72%	WFC	2.6%
10.0	LW	2.72%	COST	2.6%
10.0	META	2.6%	EXPE	2.48%
10.0	OXY	2.6%	SBUX	2.48%
10.0	CMA	2.48%	FITB	2.48%
10.0	JAZZ	2.48%	JPM	2.36%
10.0	UNH	2.48%	HYG	2.36%

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 2025-06-27

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	12.46%	SBNY	5.56%
21.0	AMC	9.58%	LW	5.39%
21.0	VCSH	8.62%	GSK	5.27%
21.0	TSLA	8.38%	MUB	5.04%
21.0	FRCB	6.67%	CTLT	3.59%
21.0	AAP	5.87%	WDC	3.47%
21.0	GNRC	5.51%	PCG	3.35%
21.0	LQD	5.27%	SNY	3.23%
21.0	B	5.15%	AAP	3.23%
21.0	BHC	4.43%	IEP	3.11%
21.0	BIIB	4.43%	UNH	3.11%
21.0	GSK	4.31%	NEM	3.11%
21.0	KALU	4.19%	INTC	2.87%
21.0	NEM	3.95%	COST	2.75%
21.0	CMA	3.71%	CHTR	2.75%
21.0	BUD	3.71%	BHC	2.75%
21.0	UNH	3.59%	VFC	2.75%
21.0	CTLT	3.59%	EMB	2.64%
21.0	KEY	3.35%	FRA	2.63%
21.0	ZTS	3.35%	AMZN	2.63%
21.0	CVS	3.11%	NFLX	2.51%
21.0	META	3.11%	ZION	2.44%
21.0	ZION	3.05%	VCSH	2.4%
21.0	EMB	2.88%	TFC	2.4%
21.0	FIS	2.75%	AZN	2.4%
21.0	AMZN	2.75%	CMA	2.4%
21.0	BMY	2.63%	KEY	2.28%
21.0	IEP	2.51%	USB	2.28%

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 2025-06-27

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
63.0	SBNY	48.89%	SIVBQ	20.37%
63.0	SIVBQ	25.19%	SBNY	20.0%
63.0	FRCB	20.74%	FRCB	20.0%
63.0	CHTR	18.16%	IEP	7.94%
63.0	AMC	12.36%	GSK	7.82%
63.0	AAP	10.21%	BHC	7.69%
63.0	VCSH	9.21%	MUB	4.92%
63.0	ZION	7.19%	CTLT	4.25%
63.0	LQD	7.06%	UNH	4.16%
63.0	GNRC	6.43%	PCG	3.91%
63.0	GSK	5.55%	EMB	3.41%
63.0	B	5.42%	KEY	3.28%
63.0	BUD	4.79%	NEM	3.28%
63.0	MSTR	4.79%	USB	3.03%
63.0	BHC	4.67%	BUD	2.77%
63.0	CMA	4.41%	VCSH	2.77%
63.0	BMY	4.16%	CMA	2.77%
63.0	TLT	3.91%	VZ	2.77%
63.0	KEY	3.78%	ZION	2.7%
63.0	ON	3.4%	VFC	2.27%
63.0	META	3.4%	HCA	2.27%
63.0	UNH	3.03%	X	2.17%
63.0	EMB	2.9%	TFC	1.89%
63.0	BIIB	2.77%	AZN	1.89%
63.0	BXP	2.77%	LQD	1.77%
63.0	NEM	2.77%	SNY	1.77%
63.0	VNO	2.65%	CLF	1.64%
63.0	CTLT	2.64%	AA	1.64%
63.0	NWL	2.14%	WDC	1.64%
63.0	FRA	2.14%	NFLX	1.39%

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 2025-06-27

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	AAP	23.97%	IEP	16.99%
126.0	CHTR	20.27%	GSK	12.88%
126.0	AMC	19.86%	BHC	3.7%
126.0	GSK	10.14%	BALL	3.29%
126.0	BXP	8.08%	UNH	3.15%
126.0	VCSH	7.95%	LW	2.88%
126.0	VFC	7.67%	EMB	2.47%
126.0	CTLT	6.14%	NEM	2.47%
126.0	GNRC	5.48%	VZ	1.64%
126.0	TLT	4.79%	VCSH	1.37%
126.0	BHC	4.79%	MUB	0.82%
126.0	CMA	4.66%	IRM	0.82%
126.0	OXY	3.97%	PCG	0.82%
126.0	ZION	3.49%	CHTR	0.68%
126.0	B	3.01%	CTLT	0.48%
126.0	VNO	2.47%	INTC	0.41%
126.0	NEM	2.19%	HYG	0.14%
126.0	LQD	2.19%	LEN	0.14%
126.0	UNH	2.19%	ORCL	0.0%
126.0	SNY	1.92%	ORLY	0.0%
126.0	ON	1.92%	ON	0.0%
126.0	META	1.78%	OXY	0.0%
126.0	BIIB	1.64%	NWL	0.0%
126.0	EMB	1.37%	NVS	0.0%
126.0	FIS	1.1%	NVDA	0.0%
126.0	HYG	0.96%	NFLX	0.0%
126.0	CLF	0.82%	AA	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 2025-06-27

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	36.42%	IEP	32.45%
252.0	AAP	35.26%	MRK	3.15%
252.0	BIIB	16.89%	LW	0.17%
252.0	CHTR	14.57%	AA	0.0%
252.0	BXP	13.91%	NWL	0.0%
252.0	VFC	12.91%	NEM	0.0%
252.0	CMA	8.61%	NFLX	0.0%
252.0	OXY	7.45%	NVDA	0.0%
252.0	MRK	7.12%	NVS	0.0%
252.0	VNO	6.79%	ON	0.0%
252.0	ZION	6.27%	MUB	0.0%
252.0	CTLT	3.85%	ORCL	0.0%
252.0	BHC	3.64%	ORLY	0.0%
252.0	KEY	3.15%	OXY	0.0%
252.0	GNRC	2.98%	PCG	0.0%
252.0	VCSH	2.48%	PEP	0.0%
252.0	BMY	2.48%	NAVI	0.0%
252.0	FIS	1.49%	MSTR	0.0%
252.0	EMB	1.49%	MU	0.0%
252.0	GSK	1.16%	LUMN	0.0%
252.0	ELAN	1.02%	KEY	0.0%
252.0	TLT	0.99%	KHC	0.0%
252.0	FITB	0.66%	LEN	0.0%
252.0	NEM	0.33%	LLY	0.0%
252.0	CVS	0.17%	LNC	0.0%
252.0	UNH	0.17%	LQD	0.0%
252.0	PHM	0.0%	LVS	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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	ZTS	21.05%	ISRG	5.26%
1.0	TSLA	21.05%	BXP	5.26%
1.0	AAP	15.79%	VNO	5.26%
1.0	LLY	10.53%	TSLA	5.26%
1.0	AMC	5.26%	TMUS	5.26%
1.0	LQD	5.26%	THC	5.26%
1.0	AMGN	5.26%	POST	5.26%
1.0	VZ	5.26%	PCG	5.26%
1.0	CDNS	5.26%	MOS	5.26%
1.0	TDG	5.26%	GSK	5.26%
1.0	GME	5.26%	GME	5.26%
1.0	KHC	0.0%	CYH	5.26%
1.0	NVDA	0.0%	COST	5.26%
1.0	NAVI	0.0%	ZTS	5.26%
1.0	NEM	0.0%	AZN	5.26%
1.0	NFLX	0.0%	AMGN	5.26%
1.0	ON	0.0%	AZO	5.26%
1.0	NVS	0.0%	B	0.0%
1.0	NWL	0.0%	ORLY	0.0%
1.0	ORCL	0.0%	NWL	0.0%
1.0	ORLY	0.0%	ON	0.0%
1.0	OXY	0.0%	ORCL	0.0%
1.0	PCG	0.0%	OXY	0.0%
1.0	MUB	0.0%	NVDA	0.0%
1.0	MSI	0.0%	AMC	0.0%
1.0	MU	0.0%	PEP	0.0%
1.0	MSTR	0.0%	PHM	0.0%
1.0	PHM	0.0%	AMAT	0.0%
1.0	MSFT	0.0%	PRGO	0.0%
1.0	MS	0.0%	PWR	0.0%

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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	AMC	70.0%	PCG	20.0%
10.0	ZTS	60.0%	AA	0.0%
10.0	ADBE	40.0%	NVS	0.0%
10.0	PCG	20.0%	MU	0.0%
10.0	TSLA	20.0%	MUB	0.0%
10.0	AAP	10.0%	NAVI	0.0%
10.0	PEP	0.0%	NEM	0.0%
10.0	OXY	0.0%	NFLX	0.0%
10.0	ORLY	0.0%	NVDA	0.0%
10.0	ORCL	0.0%	NWL	0.0%
10.0	MSI	0.0%	MSI	0.0%
10.0	NWL	0.0%	ON	0.0%
10.0	NVS	0.0%	ORCL	0.0%
10.0	NVDA	0.0%	ORLY	0.0%
10.0	NFLX	0.0%	OXY	0.0%
10.0	NEM	0.0%	PEP	0.0%
10.0	NAVI	0.0%	MSTR	0.0%
10.0	MUB	0.0%	MSFT	0.0%
10.0	MU	0.0%	POST	0.0%
10.0	MSTR	0.0%	LQD	0.0%
10.0	ON	0.0%	KALU	0.0%
10.0	MSFT	0.0%	KEY	0.0%
10.0	POST	0.0%	KHC	0.0%
10.0	MS	0.0%	LEN	0.0%
10.0	MRK	0.0%	LLY	0.0%
10.0	MOS	0.0%	LNC	0.0%
10.0	MNST	0.0%	LUMN	0.0%
10.0	META	0.0%	MS	0.0%
10.0	LW	0.0%	LVS	0.0%
10.0	LVS	0.0%	LW	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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	ZTS	15.25%	ZTS	6.78%
1.0	LLY	11.86%	TMUS	6.78%
1.0	LQD	10.17%	GLD	6.78%
1.0	VZ	10.17%	BMY	6.78%
1.0	UNH	10.17%	JAZZ	6.78%
1.0	TSLA	10.17%	MRK	6.78%
1.0	AMGN	10.17%	AZN	6.78%
1.0	SBUX	8.47%	AZO	6.78%
1.0	B	8.47%	VCSH	6.78%
1.0	EXPE	6.78%	ABBV	6.78%
1.0	AAP	6.78%	TXN	6.78%
1.0	MU	6.78%	UNH	6.78%
1.0	META	6.78%	THC	5.08%
1.0	QCOM	6.78%	KHC	5.08%
1.0	TXN	6.78%	EXPE	5.08%
1.0	CDNS	5.08%	GILD	5.08%
1.0	TDG	5.08%	GSK	5.08%
1.0	HCA	5.08%	HYG	5.08%
1.0	GNRC	5.08%	LLY	5.08%
1.0	CMCSA	5.08%	SNY	5.08%
1.0	AA	5.08%	LQD	5.08%
1.0	AMC	5.08%	OXY	5.08%
1.0	ABBV	3.39%	COST	5.08%
1.0	FITB	3.39%	TRGP	5.08%
1.0	JAZZ	3.39%	PCG	5.08%
1.0	AMD	3.39%	QCOM	5.08%
1.0	CSTM	3.39%	EMB	5.08%
1.0	PWR	3.39%	ISRG	5.08%
1.0	AZN	3.39%	AMGN	5.08%
1.0	AAPL	3.39%	B	5.08%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	UNH	38.0%	UNH	38.0%
10.0	AMC	18.0%	CPRT	20.0%
10.0	ZTS	14.0%	PCG	14.0%
10.0	TSLA	12.0%	MUB	4.0%
10.0	ADBE	8.0%	LLY	4.0%
10.0	LLY	6.0%	JAZZ	2.0%
10.0	PCG	6.0%	BMY	2.0%
10.0	BMY	2.0%	MRK	2.0%
10.0	AAP	2.0%	TLT	2.0%
10.0	AMGN	2.0%	ABBV	2.0%
10.0	TLT	2.0%	ORCL	0.0%
10.0	CNC	2.0%	ORLY	0.0%
10.0	NVDA	0.0%	NWL	0.0%
10.0	NAVI	0.0%	NVS	0.0%
10.0	NEM	0.0%	NVDA	0.0%
10.0	NFLX	0.0%	NFLX	0.0%
10.0	ON	0.0%	OXY	0.0%
10.0	NVS	0.0%	NEM	0.0%
10.0	NWL	0.0%	NAVI	0.0%
10.0	ORCL	0.0%	PEP	0.0%
10.0	ORLY	0.0%	ON	0.0%
10.0	OXY	0.0%	MSI	0.0%
10.0	PEP	0.0%	MU	0.0%
10.0	MUB	0.0%	LVS	0.0%
10.0	MSI	0.0%	KEY	0.0%
10.0	MU	0.0%	KHC	0.0%
10.0	MSTR	0.0%	LEN	0.0%
10.0	POST	0.0%	LNC	0.0%
10.0	MSFT	0.0%	LQD	0.0%
10.0	MS	0.0%	LUMN	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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	UNH	64.1%	CPRT	46.15%
21.0	PCG	7.69%	UNH	41.03%
21.0	CYH	5.13%	PCG	17.95%
21.0	AMC	5.13%	PEP	2.56%
21.0	AAP	2.56%	AA	0.0%
21.0	NVDA	0.0%	NVDA	0.0%
21.0	MU	0.0%	MU	0.0%
21.0	MUB	0.0%	MUB	0.0%
21.0	NAVI	0.0%	NAVI	0.0%
21.0	NEM	0.0%	NEM	0.0%
21.0	NFLX	0.0%	NFLX	0.0%
21.0	NWL	0.0%	NWL	0.0%
21.0	NVS	0.0%	NVS	0.0%
21.0	MSI	0.0%	MSI	0.0%
21.0	ON	0.0%	ON	0.0%
21.0	ORCL	0.0%	ORCL	0.0%
21.0	ORLY	0.0%	ORLY	0.0%
21.0	OXY	0.0%	OXY	0.0%
21.0	PEP	0.0%	MSTR	0.0%
21.0	MSTR	0.0%	MSFT	0.0%
21.0	AA	0.0%	POST	0.0%
21.0	MSFT	0.0%	LQD	0.0%
21.0	PHM	0.0%	KALU	0.0%
21.0	MRK	0.0%	KEY	0.0%
21.0	MOS	0.0%	KHC	0.0%
21.0	MNST	0.0%	LEN	0.0%
21.0	META	0.0%	LLY	0.0%
21.0	LW	0.0%	LNC	0.0%
21.0	LVS	0.0%	LUMN	0.0%
21.0	LUMN	0.0%	MS	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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	TSLA	7.66%	TXN	5.24%
1.0	QCOM	6.05%	AMAT	5.24%
1.0	AMGN	5.24%	TMUS	5.24%
1.0	B	5.24%	TRGP	5.24%
1.0	ZTS	5.24%	UNH	5.24%
1.0	VZ	5.24%	NVDA	5.24%
1.0	NAVI	4.84%	IRM	4.84%
1.0	TXN	4.84%	GS	4.84%
1.0	UNH	4.44%	QQQ	4.84%
1.0	LQD	4.44%	LLY	4.44%
1.0	HCA	3.63%	HLT	4.44%
1.0	MU	3.63%	QCOM	4.44%
1.0	CDNS	3.63%	WFC	4.03%
1.0	LLY	3.23%	SPY	4.03%
1.0	SBUX	3.23%	MU	4.03%
1.0	EXPE	3.23%	JPM	4.03%
1.0	MSTR	3.23%	KHC	4.03%
1.0	WFC	2.82%	AZN	4.03%
1.0	GSK	2.82%	PCG	4.03%
1.0	MSFT	2.82%	CDNS	3.63%
1.0	GOOGL	2.82%	CCL	3.63%
1.0	AAP	2.82%	ZTS	3.63%
1.0	AMC	2.82%	MS	3.63%
1.0	CMCSA	2.42%	THC	3.63%
1.0	CMA	2.42%	TSLA	3.63%
1.0	CHTR	2.42%	CMG	3.63%
1.0	GNRC	2.42%	VST	3.63%
1.0	AMZN	2.42%	HSBC	3.23%
1.0	CVS	2.02%	MSFT	3.23%
1.0	AZN	2.02%	MSI	3.23%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	TSLA	10.46%	UNH	11.3%
10.0	ZTS	9.21%	PCG	8.79%
10.0	UNH	8.79%	WDC	8.79%
10.0	AMC	7.95%	MRK	7.95%
10.0	KALU	6.69%	AZN	7.53%
10.0	CVS	6.69%	ABBV	7.11%
10.0	AAP	6.69%	BAC	6.69%
10.0	CMA	4.18%	TRGP	6.28%
10.0	BHC	4.18%	VFC	6.28%
10.0	B	4.18%	CCL	5.86%
10.0	CZR	4.18%	MU	5.86%
10.0	CLF	3.77%	FRA	5.86%
10.0	LW	3.77%	CSTM	5.44%
10.0	CHTR	3.35%	BBY	5.44%
10.0	EXPE	3.35%	KALU	5.44%
10.0	NAVI	3.35%	CVS	5.02%
10.0	BIIB	3.35%	WFC	5.02%
10.0	MU	2.93%	MUB	4.62%
10.0	NEM	2.93%	CDNS	4.6%
10.0	BMY	2.93%	MS	4.6%
10.0	GNRC	2.93%	BHC	4.6%
10.0	LLY	2.93%	JAZZ	4.6%
10.0	OXY	2.51%	SPY	4.18%
10.0	BUD	2.51%	AAPL	4.18%
10.0	FITB	2.51%	SBUX	4.18%
10.0	TXN	2.51%	JPM	4.18%
10.0	LQD	2.09%	NWL	4.18%
10.0	GSK	2.09%	QQQ	4.18%
10.0	JAZZ	2.09%	CPRT	4.18%
10.0	ON	2.09%	LW	4.18%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	UNH	13.16%	WDC	12.28%
21.0	BUD	10.09%	PCG	12.28%
21.0	KALU	9.65%	UNH	11.4%
21.0	CVS	7.46%	INTC	8.77%
21.0	AAP	7.02%	VFC	8.33%
21.0	BMY	7.02%	CPRT	7.89%
21.0	TSLA	6.58%	AZN	7.46%
21.0	ON	6.14%	HLT	7.02%
21.0	GNRC	6.14%	JAZZ	6.14%
21.0	CMA	5.7%	BUD	5.7%
21.0	BIIB	5.26%	TEVA	5.7%
21.0	WDC	5.26%	KALU	5.26%
21.0	BHC	4.82%	FRA	5.26%
21.0	GSK	4.39%	LVS	5.26%
21.0	AMC	3.51%	OXY	4.82%
21.0	CZR	3.51%	MRK	4.39%
21.0	ZTS	3.51%	BMY	4.39%
21.0	AMGN	3.07%	IRM	3.95%
21.0	CHTR	3.07%	NEM	3.95%
21.0	NEM	2.63%	JPM	3.95%
21.0	CSTM	2.63%	ABBV	3.95%
21.0	AA	2.63%	MU	3.95%
21.0	HCA	2.19%	CCL	3.95%
21.0	LW	2.19%	CSTM	3.51%
21.0	LQD	2.19%	ISRG	3.51%
21.0	INTC	2.19%	NWL	3.51%
21.0	KHC	1.75%	AMAT	3.07%
21.0	OXY	1.32%	CDNS	3.07%
21.0	PCG	1.32%	HCA	3.07%
21.0	CYH	1.32%	LEN	3.07%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
63.0	BUD	20.43%	UNH	17.74%
63.0	ON	14.52%	PCG	16.67%
63.0	UNH	12.9%	BUD	11.83%
63.0	WDC	6.99%	VFC	9.68%
63.0	GNRC	4.84%	AZN	8.06%
63.0	CVS	2.69%	WDC	6.99%
63.0	GSK	2.69%	IRM	4.3%
63.0	AAP	2.69%	HCA	2.69%
63.0	LQD	2.15%	TEVA	1.61%
63.0	CNC	2.15%	LVS	1.61%
63.0	FITB	1.08%	AAPL	1.08%
63.0	B	1.08%	FRA	1.08%
63.0	BMY	1.08%	CCL	0.54%
63.0	GOOGL	0.54%	SPY	0.54%
63.0	UAA	0.54%	OXY	0.0%
63.0	CMCSA	0.54%	NAVI	0.0%
63.0	HCA	0.54%	NEM	0.0%
63.0	CLF	0.54%	NVDA	0.0%
63.0	OXY	0.54%	NFLX	0.0%
63.0	NWL	0.0%	ORCL	0.0%
63.0	NVS	0.0%	ORLY	0.0%
63.0	NVDA	0.0%	NVS	0.0%
63.0	ORLY	0.0%	NWL	0.0%
63.0	NFLX	0.0%	ON	0.0%
63.0	PCG	0.0%	MUB	0.0%
63.0	ORCL	0.0%	AA	0.0%
63.0	MUB	0.0%	MU	0.0%
63.0	NEM	0.0%	MSTR	0.0%
63.0	NAVI	0.0%	MSI	0.0%
63.0	PHM	0.0%	PEP	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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
126.0	UNH	13.01%	UNH	18.7%
126.0	ON	11.38%	IRM	4.88%
126.0	BIIB	5.69%	PCG	4.88%
126.0	CLF	4.88%	LEN	0.81%
126.0	CNC	4.07%	NFLX	0.0%
126.0	MRK	2.44%	MSTR	0.0%
126.0	GNRC	1.63%	MU	0.0%
126.0	UAA	1.63%	MUB	0.0%
126.0	PEP	1.63%	NAVI	0.0%
126.0	OXY	1.63%	NEM	0.0%
126.0	NVS	0.0%	NVS	0.0%
126.0	NWL	0.0%	NVDA	0.0%
126.0	MSTR	0.0%	MSFT	0.0%
126.0	NFLX	0.0%	NWL	0.0%
126.0	NEM	0.0%	ON	0.0%
126.0	ORCL	0.0%	ORCL	0.0%
126.0	ORLY	0.0%	ORLY	0.0%
126.0	NAVI	0.0%	OXY	0.0%
126.0	MUB	0.0%	MSI	0.0%
126.0	MU	0.0%	MS	0.0%
126.0	PCG	0.0%	PHM	0.0%
126.0	NVDA	0.0%	MRK	0.0%
126.0	AA	0.0%	MOS	0.0%
126.0	PHM	0.0%	MNST	0.0%
126.0	MSFT	0.0%	META	0.0%
126.0	MS	0.0%	LW	0.0%
126.0	MOS	0.0%	LVS	0.0%
126.0	MNST	0.0%	LUMN	0.0%
126.0	META	0.0%	LQD	0.0%
126.0	LW	0.0%	LNC	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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	MSTR	0.53%	MSTR	0.47%
1.0	GME	0.52%	VST	0.31%
1.0	META	0.18%	NVDA	0.28%
1.0	NFLX	0.18%	AVGO	0.22%
1.0	INTU	0.17%	GBTC	0.22%
1.0	ORCL	0.17%	GME	0.2%
1.0	AVGO	0.16%	PWR	0.18%
1.0	VST	0.16%	NFLX	0.18%
1.0	MU	0.13%	GE	0.17%
1.0	AAPL	0.13%	X	0.17%
1.0	NVDA	0.12%	LLY	0.15%
1.0	PWR	0.11%	CAH	0.15%
1.0	TDG	0.11%	TRGP	0.15%
1.0	UAA	0.11%	META	0.15%
1.0	GWW	0.11%	THC	0.15%
1.0	X	0.1%	ORCL	0.14%
1.0	THC	0.09%	TDG	0.12%
1.0	NWL	0.09%	TEVA	0.12%
1.0	GNRC	0.09%	ETRN	0.12%
1.0	XOM	0.09%	IRM	0.11%
1.0	AMZN	0.09%	CCL	0.11%
1.0	LLY	0.08%	CDNS	0.11%
1.0	GE	0.08%	PHM	0.11%
1.0	QCOM	0.08%	TMUS	0.1%
1.0	TMUS	0.08%	ISRG	0.1%
1.0	ISRG	0.08%	GWW	0.1%
1.0	ON	0.08%	GS	0.1%
1.0	TEVA	0.08%	ORLY	0.1%
1.0	GBTC	0.08%	MU	0.1%
1.0	TRGP	0.07%	CMG	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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	8.18%	MSTR	4.71%
10.0	GME	4.97%	VST	3.03%
10.0	META	2.0%	NVDA	2.72%
10.0	VST	1.96%	AVGO	2.12%
10.0	NFLX	1.93%	GBTC	2.07%
10.0	NVDA	1.79%	NFLX	1.8%
10.0	MU	1.59%	PWR	1.73%
10.0	TEVA	1.41%	GME	1.68%
10.0	ORCL	1.39%	META	1.63%
10.0	GBTC	1.34%	GE	1.6%
10.0	AVGO	1.31%	LLY	1.6%
10.0	ETRN	1.26%	X	1.58%
10.0	WDC	1.23%	CAH	1.48%
10.0	PWR	1.19%	TRGP	1.42%
10.0	GE	1.13%	ETRN	1.41%
10.0	INTU	1.13%	ORCL	1.37%
10.0	CAH	1.1%	THC	1.33%
10.0	LLY	1.07%	TEVA	1.28%
10.0	CTLT	1.06%	IRM	1.15%
10.0	SLV	1.04%	TDG	1.13%
10.0	AAPL	1.01%	CDNS	1.05%
10.0	XOM	0.96%	PHM	1.04%
10.0	THC	0.9%	GWW	1.03%
10.0	X	0.9%	TSLA	0.97%
10.0	IRM	0.85%	ORLY	0.94%
10.0	TMUS	0.84%	MU	0.93%
10.0	TRGP	0.83%	ISRG	0.92%
10.0	HLT	0.82%	CCL	0.91%
10.0	GS	0.81%	COST	0.88%
10.0	HCA	0.79%	CMG	0.88%

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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	MSTR	19.0%	MSTR	10.57%
21.0	GME	9.26%	VST	6.47%
21.0	META	5.53%	NVDA	5.86%
21.0	NFLX	5.32%	GBTC	4.56%
21.0	VST	4.7%	AVGO	4.44%
21.0	NVDA	3.9%	NFLX	3.93%
21.0	GBTC	3.85%	PWR	3.65%
21.0	TEVA	3.32%	META	3.63%
21.0	AVGO	3.32%	GE	3.53%
21.0	ORCL	2.81%	ETRN	3.5%
21.0	CTLT	2.71%	LLY	3.34%
21.0	GE	2.62%	X	3.17%
21.0	PWR	2.58%	CAH	3.06%
21.0	ETRN	2.53%	TRGP	2.92%
21.0	MU	2.39%	GME	2.85%
21.0	CAH	2.32%	TEVA	2.81%
21.0	LLY	2.28%	ORCL	2.8%
21.0	XOM	2.22%	THC	2.79%
21.0	INTU	2.2%	IRM	2.42%
21.0	THC	2.17%	TDG	2.34%
21.0	X	1.96%	TSLA	2.33%
21.0	WDC	1.95%	GWW	2.31%
21.0	TMUS	1.87%	PHM	2.24%
21.0	IRM	1.82%	CDNS	2.21%
21.0	TRGP	1.79%	ISRG	2.07%
21.0	SLV	1.74%	ORLY	2.01%
21.0	HCA	1.73%	CCL	2.0%
21.0	AMD	1.66%	COST	1.97%
21.0	CCL	1.61%	ACGL	1.92%
21.0	GWW	1.57%	TMUS	1.82%

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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	MSTR	39.26%	MSTR	30.78%
63.0	META	21.85%	VST	19.34%
63.0	VST	15.89%	NVDA	18.55%
63.0	NVDA	14.96%	GBTC	14.94%
63.0	NFLX	14.71%	NFLX	12.64%
63.0	GBTC	12.38%	AVGO	12.24%
63.0	AVGO	12.25%	META	11.79%
63.0	CTLT	10.43%	GE	10.4%
63.0	ETRN	10.07%	ETRN	10.28%
63.0	GME	9.16%	LLY	9.69%
63.0	LLY	8.75%	PWR	9.17%
63.0	CAH	7.77%	CAH	8.56%
63.0	TEVA	7.75%	TRGP	8.3%
63.0	ORCL	7.45%	PHM	7.9%
63.0	GE	7.43%	THC	7.82%
63.0	GILD	7.15%	TDG	7.01%
63.0	TMUS	6.83%	TEVA	6.81%
63.0	ISRG	6.7%	ORCL	6.75%
63.0	AMZN	6.39%	GWW	6.63%
63.0	THC	6.34%	ISRG	6.41%
63.0	PWR	6.24%	ACGL	6.13%
63.0	TDG	5.71%	ORLY	6.04%
63.0	TRGP	5.17%	CDNS	6.03%
63.0	CCL	4.8%	IRM	5.99%
63.0	GWW	4.79%	X	5.91%
63.0	AZO	4.63%	TMUS	5.74%
63.0	X	4.61%	JPM	5.5%
63.0	ACGL	4.49%	CMG	5.44%
63.0	XOM	4.48%	CPRT	5.42%
63.0	CMG	4.43%	CCL	5.41%

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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	MSTR	97.0%	MSTR	73.94%
126.0	META	60.84%	NVDA	49.33%
126.0	NVDA	45.93%	VST	43.95%
126.0	GBTC	40.72%	GBTC	40.42%
126.0	VST	40.56%	NFLX	30.16%
126.0	NFLX	38.42%	META	29.78%
126.0	AVGO	35.42%	AVGO	28.09%
126.0	LLY	26.68%	GE	25.18%
126.0	TEVA	20.8%	LLY	21.09%
126.0	ISRG	20.71%	TRGP	20.47%
126.0	ORCL	19.91%	PHM	19.21%
126.0	GE	19.63%	THC	19.07%
126.0	AMZN	19.01%	ETRN	18.49%
126.0	CAH	18.81%	PWR	18.21%
126.0	GILD	18.44%	CAH	17.57%
126.0	ETRN	18.14%	TDG	16.22%
126.0	TDG	17.1%	ISRG	16.07%
126.0	TMUS	15.58%	TEVA	15.91%
126.0	THC	15.3%	ORCL	15.87%
126.0	TRGP	14.8%	GWW	14.82%
126.0	GOOGL	14.39%	ACGL	14.14%
126.0	TSLA	14.07%	IRM	13.86%
126.0	PWR	13.85%	CCL	13.67%
126.0	GWW	13.84%	JPM	13.33%
126.0	MSI	13.58%	ORLY	13.28%
126.0	INTU	13.01%	MSI	13.07%
126.0	ORLY	12.34%	CMG	13.0%
126.0	IRM	12.25%	CPRT	12.76%
126.0	PHM	12.1%	COST	12.64%
126.0	AZO	11.87%	TMUS	12.35%

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 2025-06-27

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
252.0	MSTR	267.33%	MSTR	226.72%
252.0	VST	157.36%	NVDA	146.81%
252.0	NVDA	142.76%	VST	126.5%
252.0	META	134.03%	GBTC	120.3%
252.0	GBTC	120.7%	META	81.19%
252.0	AVGO	107.48%	AVGO	73.18%
252.0	NFLX	91.93%	NFLX	68.62%
252.0	ISRG	66.56%	GE	61.22%
252.0	AMZN	65.04%	PHM	56.37%
252.0	GE	61.61%	LLY	54.67%
252.0	THC	61.14%	THC	52.11%
252.0	ORCL	60.47%	TRGP	50.35%
252.0	TDG	55.65%	PWR	42.1%
252.0	TEVA	51.87%	TDG	40.67%
252.0	INTU	50.65%	ISRG	39.69%
252.0	PHM	50.23%	TEVA	39.08%
252.0	LLY	47.72%	ORCL	38.06%
252.0	TRGP	45.33%	IRM	37.42%
252.0	COST	44.66%	CCL	36.24%
252.0	GOOGL	44.28%	ETRN	35.78%
252.0	GWW	42.88%	DHI	35.23%
252.0	MSI	41.92%	ACGL	34.67%
252.0	CAH	41.7%	GWW	34.43%
252.0	LEN	41.54%	CMG	32.73%
252.0	IRM	38.98%	CAH	32.53%
252.0	TMUS	37.21%	COST	31.56%
252.0	PWR	36.8%	JPM	31.22%
252.0	CCL	36.17%	CPRT	31.0%
252.0	DHI	35.93%	MSI	30.54%
252.0	ETRN	35.77%	LEN	30.04%

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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	BHC	2.47%	BHC	2.15%
1.0	TXN	1.25%	ORCL	1.51%
1.0	ON	1.23%	MU	1.22%
1.0	MU	1.09%	AMD	1.17%
1.0	VST	1.09%	ON	1.17%
1.0	GNRC	1.02%	WDC	1.09%
1.0	WDC	1.0%	CCL	0.98%
1.0	INTC	0.86%	GNRC	0.93%
1.0	ORCL	0.86%	GS	0.89%
1.0	QCOM	0.79%	AMAT	0.82%
1.0	LLY	0.79%	VST	0.79%
1.0	AMD	0.77%	NVDA	0.75%
1.0	AMAT	0.76%	LUMN	0.74%
1.0	SBUX	0.72%	INTC	0.72%
1.0	CDNS	0.7%	CMG	0.65%
1.0	CZR	0.61%	TXN	0.64%
1.0	GS	0.6%	AA	0.58%
1.0	META	0.57%	AVGO	0.57%
1.0	PWR	0.55%	ZION	0.55%
1.0	MSTR	0.53%	DHI	0.54%
1.0	TDG	0.52%	KEY	0.52%
1.0	CCL	0.51%	META	0.52%
1.0	ZION	0.5%	NFLX	0.5%
1.0	QQQ	0.48%	MS	0.49%
1.0	CMCSA	0.47%	TFC	0.49%
1.0	AMZN	0.47%	CZR	0.49%
1.0	AA	0.46%	JPM	0.48%
1.0	MSFT	0.42%	PWR	0.48%
1.0	NFLX	0.36%	MSTR	0.46%
1.0	WFC	0.36%	QCOM	0.45%

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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	BHC	30.07%	BHC	25.34%
10.0	MU	15.11%	ORCL	18.18%
10.0	WDC	13.33%	AMD	14.01%
10.0	ORCL	12.16%	MU	13.58%
10.0	NEM	10.19%	WDC	10.73%
10.0	CZR	10.18%	VST	8.84%
10.0	PWR	9.08%	GS	7.83%
10.0	AMD	9.05%	NEM	6.87%
10.0	ON	8.53%	INTC	6.47%
10.0	GNRC	5.93%	ON	6.46%
10.0	INTC	5.48%	AMAT	6.27%
10.0	TXN	5.37%	CAH	6.0%
10.0	GS	5.17%	CZR	5.91%
10.0	TSLA	5.1%	CCL	5.65%
10.0	WYNN	4.75%	WYNN	5.46%
10.0	CCL	4.63%	NVDA	5.39%
10.0	MSFT	4.28%	GNRC	5.37%
10.0	NVDA	4.12%	JPM	5.21%
10.0	JPM	4.12%	CMG	5.07%
10.0	VST	4.11%	XOM	5.02%
10.0	CVS	4.02%	CVS	4.6%
10.0	AMAT	3.55%	TXN	4.43%
10.0	SBUX	3.42%	BALL	4.37%
10.0	QCOM	3.39%	CSCO	3.98%
10.0	WFC	3.27%	MS	3.86%
10.0	BAC	3.18%	MSFT	3.77%
10.0	META	3.16%	PWR	3.76%
10.0	CAH	3.12%	NFLX	3.57%
10.0	B	2.95%	LUMN	3.4%
10.0	BALL	2.95%	BAC	3.38%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	MU	1.95%	WDC	1.12%
1.0	AMC	1.16%	VST	1.06%
1.0	ORCL	1.15%	AVGO	1.05%
1.0	WDC	1.12%	MU	0.94%
1.0	PWR	0.98%	CCL	0.9%
1.0	ON	0.97%	ORCL	0.85%
1.0	ELAN	0.92%	NVDA	0.81%
1.0	AVGO	0.86%	AMD	0.8%
1.0	META	0.86%	ON	0.77%
1.0	MSTR	0.8%	X	0.76%
1.0	CSTM	0.79%	ELAN	0.75%
1.0	BHC	0.66%	MSTR	0.72%
1.0	KALU	0.63%	KALU	0.72%
1.0	VST	0.63%	PWR	0.72%
1.0	AMZN	0.62%	CSTM	0.71%
1.0	QCOM	0.59%	AAP	0.67%
1.0	GS	0.59%	NFLX	0.67%
1.0	AMAT	0.58%	MOS	0.61%
1.0	QQQ	0.58%	CYH	0.61%
1.0	MSFT	0.55%	BA	0.6%
1.0	TXN	0.53%	META	0.6%
1.0	TEVA	0.52%	GS	0.58%
1.0	CDNS	0.5%	GE	0.57%
1.0	NFLX	0.48%	AMAT	0.57%
1.0	CMCSA	0.41%	THC	0.53%
1.0	GE	0.41%	MSFT	0.51%
1.0	BA	0.41%	FCX	0.5%
1.0	AMD	0.4%	INTU	0.5%
1.0	GNRC	0.4%	GBTC	0.49%
1.0	FCX	0.39%	MS	0.48%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MU	25.68%	WDC	12.53%
10.0	WDC	15.88%	MU	12.3%
10.0	ELAN	15.39%	VST	11.37%
10.0	ON	11.73%	ELAN	10.18%
10.0	PWR	10.81%	ORCL	10.14%
10.0	KALU	10.34%	CSTM	10.12%
10.0	CSTM	9.49%	AAP	9.83%
10.0	ORCL	9.32%	AVGO	9.33%
10.0	META	8.67%	ON	9.02%
10.0	GE	8.35%	AMD	8.72%
10.0	TEVA	7.97%	KALU	8.04%
10.0	BHC	7.76%	MOS	7.74%
10.0	AVGO	7.67%	CCL	7.68%
10.0	NVDA	6.85%	CYH	7.68%
10.0	MSTR	6.85%	NVDA	7.56%
10.0	AMC	6.82%	PWR	7.46%
10.0	AMD	6.68%	THC	6.95%
10.0	TSLA	6.65%	X	6.95%
10.0	VST	6.55%	NFLX	6.91%
10.0	THC	6.51%	GE	6.64%
10.0	X	6.4%	MSTR	6.44%
10.0	TXN	6.33%	BHC	6.4%
10.0	NAVI	6.31%	BA	6.37%
10.0	CCL	5.67%	TSLA	6.3%
10.0	FCX	5.65%	META	6.26%
10.0	QCOM	5.62%	GS	6.12%
10.0	CYH	5.56%	INTU	5.89%
10.0	IRM	5.28%	TXN	5.89%
10.0	CZR	5.23%	LVS	5.72%
10.0	AAP	5.21%	FCX	5.72%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	MU	54.47%	AAP	28.29%
21.0	WDC	37.7%	MU	28.28%
21.0	ON	28.37%	WDC	27.21%
21.0	AMC	28.22%	ELAN	27.09%
21.0	CSTM	27.21%	VST	25.51%
21.0	ELAN	26.93%	CSTM	24.36%
21.0	KALU	25.58%	AVGO	22.29%
21.0	META	25.47%	CYH	22.11%
21.0	PWR	24.67%	ORCL	21.73%
21.0	ORCL	22.79%	ON	19.86%
21.0	GE	20.93%	NVDA	18.97%
21.0	AAP	20.8%	AMD	18.81%
21.0	AVGO	20.05%	CCL	18.12%
21.0	THC	19.82%	KALU	18.0%
21.0	VST	19.75%	THC	17.66%
21.0	NVDA	19.39%	MOS	16.92%
21.0	CYH	16.7%	PWR	16.76%
21.0	X	16.5%	GE	16.08%
21.0	CCL	16.05%	META	15.65%
21.0	AMD	15.3%	X	14.98%
21.0	TEVA	14.92%	TSLA	14.73%
21.0	TXN	14.7%	INTU	14.67%
21.0	GS	13.84%	BA	14.35%
21.0	MSTR	13.55%	TXN	14.16%
21.0	IRM	13.31%	MSFT	12.92%
21.0	BA	12.95%	NFLX	12.85%
21.0	TSLA	12.18%	LVS	12.38%
21.0	ZTS	12.01%	GS	11.9%
21.0	FCX	11.97%	FCX	11.51%
21.0	GNRC	11.78%	LUMN	11.25%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	WRK	1.16%	WRK	2.75%
1.0	MSTR	0.86%	MSTR	0.63%
1.0	NWL	0.5%	LUMN	0.47%
1.0	MU	0.36%	VST	0.43%
1.0	ORCL	0.29%	NFLX	0.29%
1.0	META	0.26%	AVGO	0.28%
1.0	PWR	0.25%	CCL	0.24%
1.0	VST	0.24%	TSLA	0.23%
1.0	AMZN	0.23%	CAH	0.23%
1.0	NFLX	0.19%	GBTC	0.23%
1.0	GILD	0.19%	GE	0.21%
1.0	B	0.18%	X	0.21%
1.0	PRGO	0.18%	GILD	0.21%
1.0	NEM	0.18%	ORCL	0.21%
1.0	GS	0.16%	PWR	0.21%
1.0	CHTR	0.16%	GS	0.19%
1.0	MSFT	0.16%	VNO	0.19%
1.0	EXPE	0.16%	T	0.18%
1.0	VFC	0.16%	META	0.18%
1.0	LNC	0.15%	NVDA	0.17%
1.0	AVGO	0.15%	CSCO	0.17%
1.0	LUMN	0.14%	EXPE	0.17%
1.0	TSLA	0.14%	NEM	0.16%
1.0	ELAN	0.13%	MS	0.16%
1.0	QQQ	0.13%	ETRN	0.16%
1.0	ABBV	0.13%	CHTR	0.15%
1.0	UAA	0.13%	JPM	0.15%
1.0	GME	0.13%	THC	0.15%
1.0	QCOM	0.13%	GLD	0.15%
1.0	SLV	0.12%	HSBC	0.14%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	11.87%	MSTR	5.86%
10.0	MU	4.66%	LUMN	5.74%
10.0	LUMN	3.12%	VST	4.14%
10.0	VST	2.63%	NFLX	2.92%
10.0	PWR	2.45%	GBTC	2.44%
10.0	META	2.29%	AVGO	2.4%
10.0	CVS	2.13%	CAH	2.4%
10.0	GE	1.97%	TSLA	2.07%
10.0	WDC	1.9%	GILD	2.04%
10.0	CHTR	1.88%	ORCL	2.0%
10.0	NFLX	1.84%	GE	1.99%
10.0	ORCL	1.83%	CCL	1.94%
10.0	ABBV	1.75%	X	1.91%
10.0	EXPE	1.74%	PWR	1.81%
10.0	TSLA	1.58%	T	1.76%
10.0	NEM	1.56%	VNO	1.73%
10.0	GILD	1.55%	CSCO	1.63%
10.0	X	1.55%	META	1.62%
10.0	SBUX	1.51%	GS	1.59%
10.0	CAH	1.51%	HSBC	1.47%
10.0	GBTC	1.49%	GLD	1.44%
10.0	B	1.46%	EXPE	1.42%
10.0	AVGO	1.45%	MS	1.41%
10.0	GS	1.4%	JPM	1.4%
10.0	UAA	1.38%	MOS	1.37%
10.0	NVDA	1.34%	THC	1.37%
10.0	ELAN	1.31%	NEM	1.36%
10.0	BUD	1.26%	WFC	1.34%
10.0	VNO	1.24%	TRGP	1.33%
10.0	BA	1.22%	CHTR	1.33%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	MSTR	25.32%	MSTR	12.07%
21.0	LUMN	7.99%	VST	9.63%
21.0	MU	7.32%	LUMN	9.28%
21.0	TSLA	7.04%	NFLX	6.54%
21.0	VST	6.99%	AVGO	5.54%
21.0	META	5.94%	TSLA	4.97%
21.0	PWR	5.07%	CAH	4.92%
21.0	GE	4.57%	GBTC	4.89%
21.0	AVGO	4.34%	GE	4.32%
21.0	GME	4.09%	GILD	4.18%
21.0	CVS	3.82%	CCL	4.06%
21.0	GBTC	3.81%	META	3.84%
21.0	GILD	3.74%	T	3.84%
21.0	ORCL	3.62%	PWR	3.82%
21.0	NFLX	3.49%	ORCL	3.78%
21.0	CHTR	3.44%	VNO	3.54%
21.0	UAA	3.36%	X	3.33%
21.0	GS	3.34%	CSCO	3.29%
21.0	BUD	3.28%	HSBC	3.18%
21.0	SBUX	3.09%	GLD	3.16%
21.0	NEM	2.99%	EXPE	3.0%
21.0	CAH	2.98%	GS	2.9%
21.0	WDC	2.91%	MS	2.83%
21.0	ABBV	2.9%	TMUS	2.81%
21.0	B	2.85%	WFC	2.75%
21.0	EXPE	2.84%	JPM	2.72%
21.0	NVDA	2.79%	TRGP	2.6%
21.0	X	2.69%	MOS	2.58%
21.0	BXP	2.65%	THC	2.55%
21.0	CCL	2.52%	SBUX	2.46%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	MSTR	55.62%	MSTR	50.84%
63.0	VST	25.92%	VST	26.69%
63.0	TSLA	17.24%	NFLX	19.65%
63.0	NFLX	16.42%	GBTC	19.25%
63.0	GBTC	15.31%	TSLA	17.67%
63.0	GILD	14.27%	CAH	12.67%
63.0	CVS	12.11%	AVGO	12.4%
63.0	AVGO	10.75%	GILD	12.34%
63.0	GE	10.03%	CCL	11.92%
63.0	CAH	9.53%	T	11.89%
63.0	META	9.21%	GLD	10.04%
63.0	PWR	9.07%	HSBC	9.86%
63.0	GME	8.49%	WFC	9.63%
63.0	B	8.06%	GE	9.32%
63.0	GS	7.92%	TMUS	9.24%
63.0	AZO	7.36%	EXPE	8.86%
63.0	NEM	7.22%	PWR	8.57%
63.0	GLD	7.12%	CSCO	8.54%
63.0	EXPE	6.9%	TRGP	8.1%
63.0	TMUS	6.86%	MS	7.99%
63.0	CCL	6.72%	MNST	7.87%
63.0	T	5.52%	GME	7.74%
63.0	SLV	5.45%	ORLY	7.72%
63.0	HSBC	5.4%	X	7.29%
63.0	CHTR	5.34%	VNO	7.24%
63.0	MS	5.28%	JPM	7.01%
63.0	BUD	5.23%	META	7.0%
63.0	TRGP	5.19%	AZO	6.51%
63.0	BA	5.03%	GS	6.5%
63.0	MNST	4.84%	MOS	6.05%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	MSTR	87.49%	MSTR	78.08%
126.0	NFLX	48.9%	VST	44.13%
126.0	VST	45.63%	NFLX	40.82%
126.0	TSLA	40.27%	GBTC	34.65%
126.0	GILD	35.04%	GILD	26.97%
126.0	GBTC	33.18%	AVGO	26.92%
126.0	META	25.9%	CAH	24.89%
126.0	AVGO	24.91%	HSBC	24.71%
126.0	AZO	20.98%	T	24.58%
126.0	CAH	20.76%	TSLA	23.37%
126.0	HSBC	19.14%	WFC	19.91%
126.0	CVS	19.05%	GE	19.65%
126.0	GE	18.02%	GLD	19.33%
126.0	GLD	17.08%	TMUS	18.15%
126.0	EXPE	16.34%	TRGP	18.12%
126.0	GS	15.75%	CSCO	17.49%
126.0	TMUS	15.56%	CCL	17.29%
126.0	T	14.91%	EXPE	16.83%
126.0	BA	13.94%	ORLY	15.74%
126.0	WFC	13.69%	META	15.68%
126.0	CTLT	12.95%	JPM	15.52%
126.0	CCL	12.63%	AZO	14.48%
126.0	ORLY	12.51%	MS	14.21%
126.0	GME	12.39%	GS	13.6%
126.0	TRGP	10.02%	GME	11.84%
126.0	CHTR	9.75%	BA	11.58%
126.0	SLV	9.5%	CTLT	10.62%
126.0	B	9.27%	MNST	10.46%
126.0	GT	8.58%	COST	9.96%
126.0	MNST	8.49%	ISRG	9.87%

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 2025-06-27

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	AAP	-0.19%	IEP	-0.18%
1.0	LUMN	-0.13%	AMC	-0.14%
1.0	IEP	-0.12%	VFC	-0.13%
1.0	VFC	-0.11%	AAP	-0.13%
1.0	BHC	-0.09%	NWL	-0.11%
1.0	FIS	-0.07%	LUMN	-0.08%
1.0	BXP	-0.07%	UAA	-0.06%
1.0	AMC	-0.07%	BHC	-0.06%
1.0	TLT	-0.06%	CZR	-0.06%
1.0	GSK	-0.06%	TLT	-0.05%
1.0	ELAN	-0.05%	BIIB	-0.05%
1.0	CHTR	-0.04%	INTC	-0.05%
1.0	BIIB	-0.04%	BALL	-0.04%
1.0	INTC	-0.04%	LNC	-0.04%
1.0	PRGO	-0.04%	BXP	-0.04%
1.0	BMY	-0.04%	GSK	-0.03%
1.0	LQD	-0.03%	CVS	-0.03%
1.0	B	-0.03%	CLF	-0.03%
1.0	CNC	-0.03%	UNH	-0.03%
1.0	VZ	-0.03%	KHC	-0.03%
1.0	CVS	-0.03%	BMY	-0.03%
1.0	T	-0.02%	PEP	-0.03%
1.0	TFC	-0.02%	CMCSA	-0.03%
1.0	GT	-0.02%	ELAN	-0.02%
1.0	USB	-0.01%	GT	-0.02%
1.0	TSLA	-0.01%	CNC	-0.02%
1.0	PEP	-0.01%	GNRC	-0.02%

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 2025-06-27

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	-2.28%	FRCB	-2.19%
10.0	FRCB	-2.21%	IEP	-1.67%
10.0	AAP	-2.02%	AMC	-1.56%
10.0	IEP	-1.22%	VFC	-1.42%
10.0	VFC	-1.2%	AAP	-1.21%
10.0	NWL	-0.99%	NWL	-1.18%
10.0	GSK	-0.74%	CZR	-0.78%
10.0	BHC	-0.63%	UAA	-0.77%
10.0	LUMN	-0.58%	LUMN	-0.69%
10.0	TFC	-0.56%	BHC	-0.55%
10.0	TLT	-0.52%	CLF	-0.51%
10.0	BXP	-0.46%	TLT	-0.51%
10.0	CNC	-0.46%	BIIB	-0.49%
10.0	BMY	-0.43%	INTC	-0.49%
10.0	PRGO	-0.41%	LNC	-0.48%
10.0	LQD	-0.37%	BALL	-0.42%
10.0	ZION	-0.36%	BXP	-0.37%
10.0	CYH	-0.34%	AA	-0.35%
10.0	BIIB	-0.34%	GNRC	-0.35%
10.0	FIS	-0.34%	ZION	-0.35%
10.0	GT	-0.29%	CNC	-0.34%
10.0	CLF	-0.29%	ELAN	-0.34%
10.0	CHTR	-0.24%	CYH	-0.34%
10.0	ELAN	-0.23%	CVS	-0.34%
10.0	VZ	-0.23%	UNH	-0.33%
10.0	UNH	-0.22%	TFC	-0.29%
10.0	LW	-0.22%	GSK	-0.29%
10.0	EMB	-0.21%	CMCSA	-0.29%

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 2025-06-27

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	-7.85%	FRCB	-6.02%
21.0	FRCB	-6.98%	AMC	-3.67%
21.0	AAP	-2.8%	IEP	-3.6%
21.0	VFC	-2.78%	VFC	-2.92%
21.0	IEP	-2.49%	NWL	-2.58%
21.0	NWL	-2.46%	AAP	-2.35%
21.0	BHC	-2.4%	CZR	-1.81%
21.0	ELAN	-1.66%	BHC	-1.77%
21.0	TLT	-1.17%	UAA	-1.46%
21.0	ZION	-1.13%	LUMN	-1.27%
21.0	BIIB	-0.99%	INTC	-1.23%
21.0	GSK	-0.98%	CLF	-1.23%
21.0	PRGO	-0.97%	LNC	-1.13%
21.0	CZR	-0.9%	AA	-1.09%
21.0	BALL	-0.84%	TLT	-1.07%
21.0	LNC	-0.83%	BALL	-0.93%
21.0	UNH	-0.79%	BIIB	-0.91%
21.0	BMY	-0.78%	GNRC	-0.87%
21.0	TFC	-0.7%	BXP	-0.8%
21.0	CNC	-0.68%	CNC	-0.74%
21.0	LQD	-0.64%	CVS	-0.73%
21.0	FITB	-0.62%	UNH	-0.67%
21.0	BXP	-0.57%	KHC	-0.65%
21.0	FIS	-0.56%	TFC	-0.63%
21.0	KEY	-0.55%	BMY	-0.6%
21.0	LUMN	-0.53%	ZION	-0.58%
21.0	GT	-0.52%	CMCSA	-0.57%
21.0	LW	-0.44%	PEP	-0.54%

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 2025-06-27

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	-27.59%	AMC	-15.47%
63.0	AAP	-10.66%	IEP	-11.93%
63.0	VFC	-9.67%	AAP	-10.04%
63.0	IEP	-8.78%	VFC	-8.68%
63.0	NWL	-7.69%	NWL	-8.45%
63.0	BHC	-6.77%	CLF	-6.76%
63.0	CLF	-6.13%	BHC	-6.32%
63.0	AA	-5.26%	CZR	-6.09%
63.0	ELAN	-5.15%	AA	-5.47%
63.0	MOS	-4.29%	UAA	-4.84%
63.0	CZR	-3.84%	INTC	-4.54%
63.0	CHTR	-3.82%	LUMN	-3.95%
63.0	LNC	-3.54%	ELAN	-3.68%
63.0	TLT	-3.38%	LNC	-3.6%
63.0	BIIB	-3.27%	MOS	-3.53%
63.0	BALL	-3.06%	GNRC	-3.34%
63.0	UAA	-3.06%	BALL	-3.2%
63.0	LUMN	-2.83%	BXP	-3.14%
63.0	ON	-2.66%	BIIB	-3.07%
63.0	JAZZ	-2.56%	TLT	-2.94%
63.0	BMY	-2.33%	CVS	-2.67%
63.0	INTC	-2.0%	CNC	-2.3%
63.0	KHC	-1.78%	BHP	-2.28%
63.0	ZION	-1.72%	KHC	-2.23%
63.0	CNC	-1.68%	JAZZ	-2.17%
63.0	UNH	-1.4%	BMY	-2.15%
63.0	BHP	-1.39%	PRGO	-2.14%

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 2025-06-27

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	-44.25%	AMC	-29.49%
126.0	AAP	-28.51%	IEP	-22.85%
126.0	VFC	-17.62%	AAP	-19.78%
126.0	NWL	-17.02%	NWL	-15.88%
126.0	IEP	-16.89%	VFC	-13.17%
126.0	AA	-12.29%	CLF	-10.97%
126.0	MOS	-11.75%	MOS	-9.58%
126.0	CLF	-11.2%	CZR	-8.98%
126.0	CHTR	-10.3%	AA	-8.06%
126.0	ELAN	-9.97%	INTC	-7.41%
126.0	BHC	-9.46%	BHC	-7.36%
126.0	CZR	-9.3%	ELAN	-7.07%
126.0	TLT	-6.64%	CVS	-6.72%
126.0	UAA	-6.21%	UAA	-6.57%
126.0	GNRC	-6.02%	PRGO	-5.75%
126.0	JAZZ	-5.97%	CTLT	-5.69%
126.0	PRGO	-5.87%	LUMN	-5.58%
126.0	BALL	-5.16%	GNRC	-5.57%
126.0	CVS	-5.11%	LNC	-5.42%
126.0	FIS	-5.01%	TLT	-5.32%
126.0	LUMN	-4.87%	BXP	-5.32%
126.0	CNC	-4.5%	BIIB	-4.99%
126.0	INTC	-4.47%	BALL	-4.96%
126.0	BIIB	-4.46%	CNC	-4.94%
126.0	LNC	-4.31%	KHC	-4.49%
126.0	KHC	-4.06%	BMY	-4.01%
126.0	BMY	-3.94%	GSK	-3.91%

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 2025-06-27

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	-76.16%	AMC	-56.89%
252.0	AAP	-74.08%	IEP	-44.6%
252.0	VFC	-35.54%	AAP	-42.05%
252.0	NWL	-33.1%	NWL	-28.61%
252.0	IEP	-32.27%	VFC	-23.96%
252.0	BIIB	-23.5%	MOS	-22.15%
252.0	MOS	-23.02%	CVS	-17.93%
252.0	AA	-22.53%	CLF	-16.91%
252.0	CLF	-19.58%	CZR	-13.9%
252.0	CVS	-19.14%	PRGO	-12.91%
252.0	CZR	-17.27%	UAA	-12.11%
252.0	PRGO	-16.96%	AA	-11.72%
252.0	JAZZ	-16.41%	BMY	-11.5%
252.0	OXY	-15.74%	INTC	-10.36%
252.0	CHTR	-15.25%	BIIB	-9.93%
252.0	BMY	-13.51%	JAZZ	-9.79%
252.0	UAA	-13.49%	CNC	-9.77%
252.0	BHC	-11.67%	BHC	-9.3%
252.0	CNC	-11.4%	TLT	-8.46%
252.0	TLT	-11.28%	KHC	-7.93%
252.0	BHP	-9.07%	GT	-7.69%
252.0	ELAN	-8.64%	LUMN	-7.09%
252.0	KHC	-8.2%	OXY	-7.0%
252.0	INTC	-8.04%	CTLT	-6.24%
252.0	GT	-8.02%	BHP	-5.72%
252.0	LUMN	-7.09%	LNC	-5.39%
252.0	CTLT	-6.82%	CHTR	-5.11%

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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	GME	-1.43%	GME	-1.02%
1.0	TSLA	-1.42%	PCG	-0.9%
1.0	AMC	-1.4%	CYH	-0.57%
1.0	ZTS	-1.28%	AMC	-0.53%
1.0	AAP	-0.47%	ZTS	-0.42%
1.0	PCG	-0.4%	GSK	-0.42%
1.0	ACGL	-0.33%	GT	-0.35%
1.0	VZ	-0.24%	COST	-0.34%
1.0	LW	-0.2%	AAP	-0.31%
1.0	COST	-0.19%	TSLA	-0.29%
1.0	BMY	-0.18%	LW	-0.29%
1.0	BBY	-0.17%	ACGL	-0.28%
1.0	AMGN	-0.17%	BMY	-0.27%
1.0	GSK	-0.17%	IEP	-0.24%
1.0	BUD	-0.16%	BIIB	-0.22%
1.0	GWW	-0.15%	ADBE	-0.2%
1.0	GT	-0.12%	BUD	-0.19%
1.0	ADBE	-0.12%	CPRT	-0.18%
1.0	CYH	-0.12%	VFC	-0.17%
1.0	IEP	-0.11%	GWW	-0.16%
1.0	TMUS	-0.09%	KHC	-0.16%
1.0	AZN	-0.08%	AMGN	-0.16%
1.0	BIIB	-0.07%	AZN	-0.15%
1.0	JAZZ	-0.07%	TEVA	-0.13%
1.0	BHP	-0.06%	BHP	-0.13%
1.0	CPRT	-0.06%	GLD	-0.11%
1.0	TEVA	-0.06%	RIO	-0.1%
1.0	KHC	-0.05%	JAZZ	-0.1%
1.0	VFC	-0.04%	VZ	-0.09%
1.0	GLD	-0.04%	MNST	-0.09%

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 2025-06-27 through 2025-06-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	AMC	-25.97%	GME	-15.72%
10.0	GME	-20.27%	AMC	-8.66%
10.0	AAP	-17.7%	PCG	-8.52%
10.0	ADBE	-12.76%	GT	-7.22%
10.0	ZTS	-12.11%	AAP	-6.49%
10.0	PCG	-6.32%	ADBE	-6.41%
10.0	VFC	-5.42%	VFC	-6.26%
10.0	LW	-4.64%	GSK	-5.98%
10.0	BHP	-4.06%	ZTS	-5.94%
10.0	BXP	-3.61%	CYH	-5.83%
10.0	SNY	-3.45%	BMY	-4.26%
10.0	BMY	-3.29%	BBY	-4.22%
10.0	GSK	-3.21%	BIIB	-4.2%
10.0	JAZZ	-3.13%	BHP	-4.04%
10.0	GWW	-3.06%	CPRT	-3.91%
10.0	VZ	-3.0%	GWW	-3.89%
10.0	EXPE	-2.94%	TMUS	-3.85%
10.0	FSUGY	-2.94%	BA	-3.78%
10.0	AMGN	-2.83%	AZN	-3.53%
10.0	BUD	-2.47%	LW	-3.51%
10.0	GT	-2.41%	EXPE	-3.22%
10.0	CYH	-2.23%	SNY	-3.18%
10.0	TEVA	-2.22%	COST	-3.12%
10.0	TMUS	-2.14%	VZ	-3.08%
10.0	BBY	-2.09%	FSUGY	-2.98%
10.0	BA	-2.05%	TEVA	-2.91%
10.0	CPRT	-2.05%	KHC	-2.85%
10.0	CNC	-2.03%	ISRG	-2.8%
10.0	ACGL	-1.86%	ACGL	-2.8%
10.0	COST	-1.79%	AMGN	-2.72%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	UNH	-0.63%	UNH	-0.81%
1.0	ZTS	-0.25%	BMY	-0.36%
1.0	CNC	-0.25%	PCG	-0.34%
1.0	BMY	-0.23%	KHC	-0.29%
1.0	ACGL	-0.22%	CNC	-0.26%
1.0	PCG	-0.14%	PEP	-0.22%
1.0	CVS	-0.11%	CPRT	-0.22%
1.0	CPRT	-0.11%	LW	-0.21%
1.0	POST	-0.11%	SNY	-0.19%
1.0	KHC	-0.1%	JAZZ	-0.18%
1.0	XOM	-0.09%	TMUS	-0.17%
1.0	PEP	-0.08%	AMGN	-0.16%
1.0	LW	-0.08%	IEP	-0.15%
1.0	JAZZ	-0.07%	POST	-0.13%
1.0	IEP	-0.06%	MRK	-0.12%
1.0	MRK	-0.06%	ABBV	-0.12%
1.0	TMUS	-0.05%	ORLY	-0.1%
1.0	SNY	-0.05%	VZ	-0.08%
1.0	TLT	-0.04%	AZN	-0.08%
1.0	OXY	-0.04%	ACGL	-0.07%
1.0	AZN	-0.04%	TLT	-0.06%
1.0	AMGN	-0.03%	XOM	-0.05%
1.0	ORLY	-0.03%	MSI	-0.04%
1.0	T	-0.02%	BIIB	-0.04%
1.0	RIO	-0.02%	AZO	-0.04%
1.0	VFC	-0.02%	OXY	-0.03%
1.0	BIIB	-0.01%	TRGP	-0.02%
1.0	TRGP	-0.01%	MUB	-0.02%
1.0	MUB	0.0%	ZTS	-0.02%
1.0	AZO	0.01%	GSK	-0.01%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	UNH	-10.38%	UNH	-10.71%
10.0	CNC	-2.62%	PCG	-3.38%
10.0	PCG	-2.6%	CPRT	-3.12%
10.0	BMY	-2.17%	CNC	-2.75%
10.0	CPRT	-1.34%	KHC	-2.4%
10.0	KHC	-1.21%	TMUS	-2.2%
10.0	TMUS	-1.06%	BMY	-2.12%
10.0	SNY	-1.02%	PEP	-2.08%
10.0	PEP	-0.77%	SNY	-1.1%
10.0	VZ	-0.66%	POST	-0.89%
10.0	POST	-0.59%	LW	-0.61%
10.0	ORLY	-0.47%	ORLY	-0.57%
10.0	LW	-0.45%	VZ	-0.57%
10.0	JAZZ	-0.31%	AMGN	-0.41%
10.0	ACGL	-0.28%	TLT	-0.39%
10.0	TLT	-0.27%	GME	-0.17%
10.0	MSI	-0.23%	MSI	-0.14%
10.0	IEP	-0.2%	AZO	-0.0%
10.0	CVS	-0.12%	MRK	0.0%
10.0	RIO	0.04%	ACGL	0.0%
10.0	AZO	0.12%	CVS	0.05%
10.0	MUB	0.14%	MUB	0.1%
10.0	XOM	0.15%	VCSH	0.2%
10.0	LEN	0.18%	IEP	0.28%
10.0	VCSH	0.19%	LQD	0.37%
10.0	MRK	0.19%	HD	0.45%
10.0	HYG	0.27%	LEN	0.53%
10.0	TRGP	0.28%	CMCSA	0.56%
10.0	HD	0.29%	TRGP	0.57%
10.0	LQD	0.29%	JAZZ	0.61%

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 2025-06-27 through 2025-04-03

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	UNH	-20.78%	UNH	-20.13%
21.0	PCG	-6.24%	CPRT	-8.51%
21.0	CNC	-4.13%	PCG	-6.99%
21.0	KHC	-4.06%	KHC	-5.75%
21.0	SNY	-3.54%	CNC	-5.63%
21.0	BMY	-3.25%	TMUS	-4.1%
21.0	CPRT	-3.22%	PEP	-3.86%
21.0	GME	-2.59%	SNY	-3.2%
21.0	TMUS	-2.37%	BMY	-2.8%
21.0	PEP	-1.86%	POST	-1.86%
21.0	POST	-1.55%	TLT	-1.21%
21.0	TLT	-1.14%	ORLY	-1.13%
21.0	MSI	-0.81%	CLF	-1.13%
21.0	JAZZ	-0.66%	MSI	-0.95%
21.0	LLY	-0.62%	MRK	-0.87%
21.0	ORLY	-0.5%	IEP	-0.63%
21.0	IEP	-0.4%	LLY	-0.61%
21.0	MRK	-0.35%	CVS	-0.58%
21.0	CLF	-0.21%	VZ	-0.38%
21.0	VZ	-0.13%	TRGP	-0.34%
21.0	RIO	-0.1%	MUB	0.03%
21.0	TRGP	-0.09%	VCSH	0.27%
21.0	CVS	-0.0%	AZO	0.37%
21.0	MUB	0.04%	AMGN	0.42%
21.0	ACGL	0.24%	AAPL	0.44%
21.0	VCSH	0.25%	ACGL	0.55%
21.0	AZO	0.33%	JAZZ	0.55%
21.0	AAPL	0.36%	RIO	0.55%
21.0	VICI	0.45%	LQD	0.57%
21.0	HYG	0.47%	DHI	0.72%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	CLF	-0.19%	IEP	-0.25%
1.0	AMC	-0.17%	BIIB	-0.23%
1.0	AAP	-0.16%	CLF	-0.19%
1.0	IEP	-0.12%	MRK	-0.18%
1.0	INTC	-0.11%	AMC	-0.15%
1.0	CSTM	-0.1%	UNH	-0.15%
1.0	NAVI	-0.1%	OXY	-0.14%
1.0	BIIB	-0.09%	LW	-0.13%
1.0	MRK	-0.09%	ADBE	-0.13%
1.0	OXY	-0.09%	FSUGY	-0.12%
1.0	CYH	-0.06%	LEN	-0.08%
1.0	KALU	-0.05%	PEP	-0.08%
1.0	KHC	-0.05%	KHC	-0.08%
1.0	ACGL	-0.05%	AA	-0.08%
1.0	LEN	-0.05%	CSTM	-0.08%
1.0	BHP	-0.05%	PCG	-0.07%
1.0	ZTS	-0.05%	CZR	-0.07%
1.0	FSUGY	-0.04%	ON	-0.06%
1.0	CZR	-0.04%	AMAT	-0.06%
1.0	PEP	-0.04%	BHP	-0.06%
1.0	CMG	-0.03%	CNC	-0.06%
1.0	CNC	-0.03%	QCOM	-0.06%
1.0	LW	-0.03%	INTC	-0.05%
1.0	UNH	-0.03%	BBY	-0.04%
1.0	BBY	-0.02%	RIO	-0.04%
1.0	CPRT	-0.02%	ZTS	-0.03%
1.0	RIO	-0.02%	LLY	-0.03%
1.0	USB	-0.02%	AMGN	-0.03%
1.0	XOM	-0.02%	CPRT	-0.03%
1.0	DHI	-0.02%	AZN	-0.03%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	CLF	-3.1%	CLF	-2.51%
10.0	AMC	-2.17%	IEP	-2.41%
10.0	AAP	-2.07%	BIIB	-2.29%
10.0	BIIB	-1.9%	AMC	-1.89%
10.0	LW	-1.27%	MRK	-1.8%
10.0	IEP	-1.09%	UNH	-1.57%
10.0	ON	-0.98%	ADBE	-1.39%
10.0	UNH	-0.94%	FSUGY	-1.39%
10.0	CZR	-0.87%	LW	-1.25%
10.0	MRK	-0.82%	OXY	-1.17%
10.0	CNC	-0.81%	LEN	-1.16%
10.0	OXY	-0.74%	AMAT	-1.01%
10.0	ADBE	-0.72%	ON	-0.99%
10.0	RIO	-0.67%	QCOM	-0.94%
10.0	KHC	-0.61%	PEP	-0.91%
10.0	BHP	-0.51%	CZR	-0.9%
10.0	FSUGY	-0.48%	INTC	-0.9%
10.0	LLY	-0.43%	KHC	-0.85%
10.0	LEN	-0.4%	AA	-0.81%
10.0	INTC	-0.37%	CSTM	-0.78%
10.0	PCG	-0.37%	PCG	-0.77%
10.0	ACGL	-0.34%	BHP	-0.71%
10.0	KALU	-0.28%	CNC	-0.69%
10.0	BMY	-0.27%	BBY	-0.62%
10.0	CPRT	-0.27%	AMD	-0.61%
10.0	PEP	-0.26%	RIO	-0.54%
10.0	AA	-0.26%	AMGN	-0.41%
10.0	CMG	-0.21%	AAPL	-0.4%
10.0	CMA	-0.21%	FCX	-0.39%
10.0	TLT	-0.19%	LLY	-0.38%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	CLF	-5.71%	CLF	-5.84%
21.0	BIIB	-3.78%	IEP	-5.47%
21.0	UNH	-3.7%	BIIB	-4.68%
21.0	ON	-3.26%	UNH	-3.95%
21.0	CZR	-2.92%	MRK	-3.9%
21.0	IEP	-2.83%	AMC	-3.71%
21.0	MRK	-2.73%	LEN	-3.23%
21.0	OXY	-2.67%	OXY	-2.83%
21.0	LW	-2.44%	FSUGY	-2.68%
21.0	AMC	-2.35%	INTC	-2.62%
21.0	AAP	-1.9%	ON	-2.58%
21.0	INTC	-1.64%	ADBE	-2.52%
21.0	KHC	-1.58%	PEP	-2.16%
21.0	CNC	-1.38%	CZR	-2.03%
21.0	PEP	-1.29%	AMAT	-1.99%
21.0	LEN	-1.12%	KHC	-1.92%
21.0	BHP	-1.06%	DHI	-1.89%
21.0	RIO	-0.99%	LW	-1.78%
21.0	GNRC	-0.96%	QCOM	-1.76%
21.0	PCG	-0.93%	CNC	-1.63%
21.0	ELAN	-0.88%	BBY	-1.43%
21.0	ADBE	-0.85%	CSTM	-1.39%
21.0	FSUGY	-0.79%	PCG	-1.38%
21.0	DHI	-0.67%	AMD	-1.37%
21.0	TLT	-0.61%	AA	-1.27%
21.0	BALL	-0.48%	BHP	-1.2%
21.0	NAVI	-0.48%	PHM	-1.02%
21.0	BHC	-0.4%	AMGN	-0.94%
21.0	PHM	-0.36%	RIO	-0.93%
21.0	FITB	-0.36%	CMCSA	-0.86%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	ON	-21.0%	CLF	-17.47%
63.0	CLF	-19.78%	IEP	-16.49%
63.0	IEP	-15.64%	BIIB	-15.78%
63.0	AMC	-14.41%	AMC	-15.25%
63.0	BIIB	-13.48%	ON	-14.68%
63.0	OXY	-10.95%	LEN	-13.69%
63.0	GNRC	-10.37%	MRK	-12.54%
63.0	MRK	-10.27%	CSTM	-11.53%
63.0	UNH	-9.33%	UNH	-11.52%
63.0	ADBE	-8.02%	ADBE	-11.13%
63.0	CSTM	-7.9%	DHI	-10.4%
63.0	ELAN	-7.58%	OXY	-9.58%
63.0	AMD	-7.32%	AMD	-9.44%
63.0	DHI	-7.27%	CYH	-9.43%
63.0	LW	-6.57%	CZR	-9.11%
63.0	KHC	-6.48%	BBY	-8.34%
63.0	LEN	-6.18%	WDC	-8.15%
63.0	WDC	-6.18%	AMAT	-7.75%
63.0	PEP	-6.14%	PEP	-7.73%
63.0	QCOM	-6.05%	FSUGY	-7.43%
63.0	BBY	-6.0%	CNC	-6.75%
63.0	BALL	-5.91%	KHC	-6.73%
63.0	CYH	-5.62%	PHM	-6.7%
63.0	ZTS	-5.53%	BALL	-5.99%
63.0	CZR	-5.51%	NAVI	-5.76%
63.0	CNC	-5.37%	QCOM	-5.54%
63.0	FSUGY	-5.11%	AAP	-5.33%
63.0	AAP	-4.98%	ELAN	-4.97%
63.0	NAVI	-4.27%	FCX	-4.93%
63.0	BHP	-4.08%	ZTS	-4.79%

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 2025-06-27 through 2024-07-02

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	CLF	-41.29%	ON	-33.83%
126.0	ON	-40.39%	AMC	-33.44%
126.0	AMC	-33.44%	IEP	-32.07%
126.0	IEP	-32.11%	CLF	-31.61%
126.0	BIIB	-28.54%	LEN	-31.38%
126.0	LW	-26.0%	BIIB	-28.83%
126.0	GNRC	-25.56%	CYH	-27.23%
126.0	CYH	-25.44%	AMD	-24.85%
126.0	CZR	-23.65%	DHI	-24.73%
126.0	MRK	-22.83%	MRK	-22.29%
126.0	AMD	-21.55%	ADBE	-22.22%
126.0	ELAN	-21.54%	CSTM	-22.18%
126.0	AA	-21.35%	CZR	-21.98%
126.0	WDC	-20.43%	WDC	-21.71%
126.0	DHI	-20.08%	UNH	-21.39%
126.0	OXY	-19.01%	LW	-20.43%
126.0	UNH	-18.1%	PHM	-18.61%
126.0	LEN	-16.98%	BBY	-16.58%
126.0	CSTM	-16.43%	GNRC	-16.29%
126.0	LUMN	-16.22%	BALL	-16.03%
126.0	ADBE	-16.18%	FSUGY	-15.97%
126.0	UAA	-15.69%	PEP	-15.83%
126.0	FCX	-15.29%	OXY	-15.74%
126.0	ZTS	-14.83%	PCG	-15.39%
126.0	KHC	-14.6%	AA	-15.37%
126.0	BALL	-14.46%	UAA	-14.97%
126.0	PEP	-14.45%	AMAT	-14.93%
126.0	KALU	-14.45%	FCX	-14.76%
126.0	NWL	-14.08%	KHC	-14.4%
126.0	FSUGY	-13.34%	IRM	-14.35%

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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	SBNY	22.3%	SBNY	11.87%
1.0	TSLA	13.45%	SIVBQ	7.55%
1.0	SIVBQ	13.31%	TSLA	6.43%
1.0	CHTR	12.98%	LQD	5.26%
1.0	LQD	10.99%	B	4.68%
1.0	GME	10.64%	GME	3.98%
1.0	UAA	8.42%	FRCB	3.6%
1.0	B	7.6%	ZTS	3.04%
1.0	MSTR	7.49%	AMC	2.57%
1.0	AAP	7.37%	MSTR	2.34%
1.0	AMC	7.25%	JAZZ	2.22%
1.0	FRCB	7.19%	AAP	2.22%
1.0	META	6.2%	GNRC	1.99%
1.0	BALL	5.96%	BUD	1.99%
1.0	SBUX	5.96%	ISRG	1.75%
1.0	ZTS	5.96%	CHTR	1.64%
1.0	SLV	5.73%	KALU	1.64%
1.0	GNRC	5.73%	EXPE	1.4%
1.0	KEY	5.5%	CDNS	1.29%
1.0	VFC	5.26%	SLV	1.17%
1.0	AMZN	5.15%	ELAN	1.07%
1.0	PRGO	5.03%	PRGO	1.05%
1.0	BUD	5.03%	TLT	1.05%
1.0	NFLX	4.56%	FRA	1.05%
1.0	JAZZ	4.44%	BXP	0.7%

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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	SBNY	30.51%	SBNY	14.34%
10.0	GME	14.66%	TSLA	9.22%
10.0	TSLA	14.54%	AMC	8.63%
10.0	CHTR	13.59%	SIVBQ	7.35%
10.0	AMC	13.59%	B	6.26%
10.0	B	12.41%	LQD	5.56%
10.0	AAP	12.06%	CHTR	5.44%
10.0	SIVBQ	11.76%	AAP	4.96%
10.0	ZTS	10.4%	ZTS	4.61%
10.0	TLT	9.34%	MSTR	3.43%
10.0	LQD	9.34%	GNRC	3.43%
10.0	BUD	8.98%	GME	3.19%
10.0	KALU	7.8%	KALU	2.25%
10.0	MSTR	7.8%	ISRG	2.25%
10.0	SLV	7.57%	VCSH	1.89%
10.0	JAZZ	7.33%	BIIB	1.89%
10.0	PRGO	6.74%	CVS	1.77%
10.0	VFC	6.5%	SNY	1.42%
10.0	NEM	5.91%	META	1.3%
10.0	META	5.79%	TLT	1.18%
10.0	BIIB	5.56%	OXY	1.18%
10.0	FRCB	5.51%	CMA	1.06%
10.0	OXY	5.44%	NEM	0.83%
10.0	VCSH	5.2%	WYNN	0.83%
10.0	GNRC	5.2%	ORCL	0.83%

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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	SBNY	47.78%	SBNY	15.93%
21.0	CHTR	16.53%	CHTR	9.7%
21.0	TSLA	14.61%	AMC	9.46%
21.0	AMC	12.81%	TSLA	8.26%
21.0	B	12.69%	SIVBQ	7.04%
21.0	AAP	12.1%	VCSH	6.23%
21.0	ZTS	11.38%	GNRC	5.51%
21.0	TLT	11.14%	B	4.79%
21.0	GME	10.54%	LQD	4.07%
21.0	SIVBQ	10.37%	BIIB	3.95%
21.0	LQD	9.7%	ZTS	2.99%
21.0	BUD	9.34%	KALU	2.75%
21.0	PRGO	9.1%	META	2.63%
21.0	MSTR	8.98%	AAP	2.63%
21.0	GNRC	8.74%	ORCL	2.04%
21.0	KALU	8.74%	MSTR	2.04%
21.0	JAZZ	8.62%	GME	1.92%
21.0	BIIB	7.9%	BUD	1.8%
21.0	NEM	7.66%	BHC	1.68%
21.0	META	7.54%	FIS	1.32%
21.0	CVS	7.43%	CMA	1.32%
21.0	UAA	7.31%	BHP	1.2%
21.0	VCSH	7.31%	FRCB	1.11%
21.0	VFC	7.19%	KEY	1.08%
21.0	GSK	6.95%	TLT	1.08%

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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	SBNY	55.19%	SBNY	28.89%
63.0	AAP	28.37%	CHTR	18.03%
63.0	CHTR	21.94%	AMC	12.36%
63.0	AMC	17.4%	AAP	9.21%
63.0	BIIB	16.52%	GNRC	6.43%
63.0	KALU	16.02%	VCSH	6.43%
63.0	TSLA	14.88%	LQD	5.3%
63.0	VFC	13.49%	SIVBQ	4.81%
63.0	B	13.37%	MSTR	4.79%
63.0	SIVBQ	11.85%	ZION	4.49%
63.0	GNRC	11.35%	B	4.16%
63.0	META	10.34%	BMY	4.16%
63.0	BHC	9.71%	TLT	3.66%
63.0	FIS	9.33%	META	3.4%
63.0	AMZN	9.08%	ON	3.4%
63.0	TLT	8.83%	BXP	2.77%
63.0	MSTR	8.7%	BIIB	2.77%
63.0	LQD	6.68%	VNO	2.65%
63.0	BUD	6.43%	NWL	2.14%
63.0	JAZZ	5.8%	BUD	2.02%
63.0	FITB	5.8%	CMA	1.64%
63.0	ZTS	5.55%	CVS	1.64%
63.0	LNC	5.55%	BA	1.39%
63.0	OXY	5.42%	FRA	1.26%
63.0	ON	5.3%	FITB	1.26%

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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	SBNY	55.19%	SBNY	26.3%
126.0	CHTR	30.55%	AAP	23.97%
126.0	VFC	29.59%	AMC	19.86%
126.0	AMC	25.34%	CHTR	19.59%
126.0	AAP	19.59%	BXP	8.08%
126.0	GNRC	19.45%	VFC	7.67%
126.0	TSLA	18.22%	VCSH	6.58%
126.0	SIVBQ	15.93%	CTLT	5.65%
126.0	TLT	14.38%	GNRC	5.48%
126.0	BIIB	13.97%	TLT	4.79%
126.0	OXY	13.01%	CMA	4.66%
126.0	CVS	12.05%	OXY	3.97%
126.0	ZION	11.31%	ZION	3.49%
126.0	AMZN	11.23%	B	3.01%
126.0	BUD	11.1%	VNO	2.47%
126.0	BMY	10.68%	LQD	2.19%
126.0	BXP	9.59%	ON	1.92%
126.0	FIS	8.77%	SNY	1.92%
126.0	B	8.36%	META	1.78%
126.0	CCL	7.81%	BIIB	1.64%
126.0	META	7.53%	SIVBQ	1.48%
126.0	EXPE	6.99%	FIS	1.1%
126.0	CMA	6.85%	BHC	1.1%
126.0	NEM	6.58%	CLF	0.82%
126.0	SNY	6.3%	HYG	0.82%

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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
252.0	AMC	48.68%	AMC	36.42%
252.0	AAP	47.85%	AAP	35.26%
252.0	CHTR	39.57%	SBNY	25.93%
252.0	BIIB	36.59%	BIIB	16.89%
252.0	VFC	31.13%	CHTR	14.57%
252.0	CMA	25.0%	BXP	13.91%
252.0	ZION	24.24%	VFC	12.91%
252.0	SBNY	20.37%	CMA	8.61%
252.0	FIS	18.71%	OXY	7.45%
252.0	OXY	15.07%	VNO	6.79%
252.0	CVS	14.74%	ZION	6.27%
252.0	TLT	12.58%	MRK	3.97%
252.0	BHC	10.6%	CTLT	3.85%
252.0	ELAN	8.97%	BHC	3.64%
252.0	CTLT	8.52%	KEY	3.15%
252.0	NWL	8.44%	GNRC	2.98%
252.0	EXPE	8.28%	BMY	2.48%
252.0	GNRC	7.95%	VCSH	2.48%
252.0	CLF	7.45%	EMB	1.49%
252.0	PRGO	7.28%	FIS	1.49%
252.0	AMZN	7.28%	GSK	1.16%
252.0	VNO	6.46%	ELAN	1.02%
252.0	LQD	6.13%	TLT	0.99%
252.0	BXP	5.79%	FITB	0.66%
252.0	LNC	5.63%	NEM	0.33%

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 2025-06-27 through 2025-06-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	TSLA	36.84%	ZTS	15.79%
1.0	ZTS	21.05%	TSLA	15.79%
1.0	TDG	21.05%	AAP	15.79%
1.0	SBUX	21.05%	LLY	10.53%
1.0	VZ	15.79%	LQD	5.26%
1.0	AMC	15.79%	AMC	5.26%
1.0	AMZN	15.79%	CDNS	5.26%
1.0	QQQ	15.79%	VZ	5.26%
1.0	HD	10.53%	TDG	5.26%
1.0	UNH	10.53%	XOM	0.0%
1.0	TLT	10.53%	MSI	0.0%
1.0	SLV	10.53%	MSTR	0.0%
1.0	NAVI	10.53%	MU	0.0%
1.0	LLY	10.53%	MUB	0.0%
1.0	AAP	10.53%	NEM	0.0%
1.0	ISRG	10.53%	NAVI	0.0%
1.0	AA	5.26%	NFLX	0.0%
1.0	T	5.26%	NVDA	0.0%
1.0	JPM	5.26%	NVS	0.0%
1.0	B	5.26%	NWL	0.0%
1.0	INTC	5.26%	ON	0.0%
1.0	MU	5.26%	MSFT	0.0%
1.0	GWW	5.26%	MNST	0.0%
1.0	PEP	5.26%	MS	0.0%
1.0	PWR	5.26%	MRK	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 2025-06-27 through 2025-06-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	ZTS	90.0%	AMC	70.0%
10.0	AMC	70.0%	ZTS	60.0%
10.0	GME	60.0%	ADBE	40.0%
10.0	AAP	60.0%	TSLA	20.0%
10.0	ADBE	50.0%	AAP	10.0%
10.0	VZ	40.0%	PCG	0.0%
10.0	AMGN	30.0%	NVDA	0.0%
10.0	TSLA	30.0%	MSTR	0.0%
10.0	BHP	20.0%	MU	0.0%
10.0	OXY	10.0%	MUB	0.0%
10.0	BXP	10.0%	NAVI	0.0%
10.0	BUD	10.0%	NEM	0.0%
10.0	LNC	0.0%	NFLX	0.0%
10.0	NFLX	0.0%	NVS	0.0%
10.0	KHC	0.0%	PEP	0.0%
10.0	MUB	0.0%	NWL	0.0%
10.0	NAVI	0.0%	MSI	0.0%
10.0	NEM	0.0%	ORCL	0.0%
10.0	NVDA	0.0%	ORLY	0.0%
10.0	MSTR	0.0%	OXY	0.0%
10.0	NVS	0.0%	ON	0.0%
10.0	NWL	0.0%	MSFT	0.0%
10.0	ON	0.0%	POST	0.0%
10.0	ORCL	0.0%	MS	0.0%
10.0	ORLY	0.0%	MRK	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 2025-06-27 through 2025-04-03

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	SBUX	23.73%	ZTS	8.47%
1.0	TSLA	20.34%	VZ	8.47%
1.0	AMZN	15.25%	TSLA	6.78%
1.0	ZTS	13.56%	LLY	6.78%
1.0	VZ	13.56%	AAP	6.78%
1.0	TDG	11.86%	SBUX	5.08%
1.0	AMC	11.86%	AMC	5.08%
1.0	CDNS	11.86%	AMGN	5.08%
1.0	LLY	11.86%	LQD	5.08%
1.0	B	10.17%	CMCSA	3.39%
1.0	SLV	8.47%	UNH	3.39%
1.0	AAP	8.47%	PWR	3.39%
1.0	UNH	6.78%	MU	3.39%
1.0	TLT	6.78%	META	3.39%
1.0	MU	6.78%	GNRC	3.39%
1.0	META	6.78%	CSTM	3.39%
1.0	LQD	6.78%	AA	3.39%
1.0	INTC	6.78%	B	3.39%
1.0	ISRG	6.78%	AMZN	1.69%
1.0	PWR	5.08%	KEY	1.69%
1.0	TXN	5.08%	HCA	1.69%
1.0	CVS	5.08%	QCOM	1.69%
1.0	AMGN	5.08%	CDNS	1.69%
1.0	PEP	5.08%	TEVA	1.69%
1.0	ORCL	5.08%	AMD	1.69%

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 2025-06-27 through 2025-04-03

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	TSLA	22.0%	AMC	18.0%
10.0	ZTS	20.0%	ZTS	14.0%
10.0	AMC	20.0%	TSLA	12.0%
10.0	CDNS	18.0%	ADBE	8.0%
10.0	CVS	18.0%	LLY	2.0%
10.0	GME	16.0%	CNC	2.0%
10.0	ADBE	12.0%	AMGN	2.0%
10.0	VZ	12.0%	AAP	2.0%
10.0	AAP	12.0%	WFC	0.0%
10.0	JAZZ	12.0%	WYNN	0.0%
10.0	LLY	12.0%	PEP	0.0%
10.0	BHC	10.0%	OXY	0.0%
10.0	AMGN	10.0%	ORLY	0.0%
10.0	TLT	6.0%	ORCL	0.0%
10.0	LQD	4.0%	ON	0.0%
10.0	BHP	4.0%	NWL	0.0%
10.0	META	4.0%	NVS	0.0%
10.0	CNC	4.0%	NVDA	0.0%
10.0	OXY	4.0%	NFLX	0.0%
10.0	B	4.0%	NEM	0.0%
10.0	SBUX	4.0%	NAVI	0.0%
10.0	UNH	4.0%	MU	0.0%
10.0	MU	2.0%	MSTR	0.0%
10.0	TXN	2.0%	MSI	0.0%
10.0	POST	2.0%	MSFT	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 2025-06-27 through 2025-04-03

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	ADBE	20.51%	UNH	23.08%
21.0	TSLA	20.51%	CYH	5.13%
21.0	BHC	15.38%	AMC	5.13%
21.0	CVS	15.38%	AAP	2.56%
21.0	AMGN	12.82%	NFLX	0.0%
21.0	ZTS	10.26%	MSTR	0.0%
21.0	AAP	7.69%	MU	0.0%
21.0	NEM	5.13%	MUB	0.0%
21.0	CYH	5.13%	NAVI	0.0%
21.0	SNY	5.13%	NEM	0.0%
21.0	CHTR	5.13%	NVS	0.0%
21.0	UNH	5.13%	NVDA	0.0%
21.0	LLY	5.13%	MSFT	0.0%
21.0	AMC	5.13%	NWL	0.0%
21.0	SBUX	2.56%	ON	0.0%
21.0	B	2.56%	ORCL	0.0%
21.0	JAZZ	2.56%	ORLY	0.0%
21.0	CNC	2.56%	OXY	0.0%
21.0	LQD	2.56%	MSI	0.0%
21.0	TLT	2.56%	MRK	0.0%
21.0	NFLX	0.0%	MS	0.0%
21.0	NAVI	0.0%	LNC	0.0%
21.0	XOM	0.0%	JPM	0.0%
21.0	NVS	0.0%	KALU	0.0%
21.0	NVDA	0.0%	KEY	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 2025-06-27 through 2024-07-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	TSLA	16.94%	TSLA	4.03%
1.0	INTC	9.68%	B	3.63%
1.0	SBUX	9.68%	VZ	2.82%
1.0	MSFT	8.47%	AMC	2.82%
1.0	ZTS	7.66%	LQD	2.82%
1.0	CLF	7.66%	NAVI	2.42%
1.0	B	7.66%	AAP	2.02%
1.0	CHTR	7.66%	AMGN	2.02%
1.0	AAP	7.66%	MSTR	2.02%
1.0	AMZN	7.26%	ZTS	1.61%
1.0	UNH	6.85%	QCOM	1.61%
1.0	QCOM	6.85%	GSK	1.21%
1.0	LQD	6.05%	CHTR	1.21%
1.0	AMC	5.65%	EXPE	1.21%
1.0	MU	5.65%	SBUX	1.21%
1.0	ON	4.84%	GNRC	0.81%
1.0	KHC	4.44%	HCA	0.81%
1.0	KEY	4.44%	INTC	0.81%
1.0	AMGN	4.03%	CMCSA	0.81%
1.0	NAVI	4.03%	CMA	0.81%
1.0	VZ	4.03%	CSTM	0.4%
1.0	NFLX	3.63%	BHC	0.4%
1.0	VFC	3.63%	CZR	0.4%
1.0	UAA	3.63%	BUD	0.4%
1.0	BHC	3.63%	KEY	0.4%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	TSLA	24.69%	TSLA	10.04%
10.0	ZTS	12.97%	ZTS	9.21%
10.0	VZ	10.04%	AMC	7.95%
10.0	AAP	9.62%	AAP	4.18%
10.0	BUD	8.79%	CLF	3.77%
10.0	AMC	8.37%	CMA	3.77%
10.0	B	8.37%	B	3.35%
10.0	INTC	7.95%	CHTR	3.35%
10.0	CZR	7.95%	GNRC	2.09%
10.0	CMA	7.53%	NAVI	2.09%
10.0	SLV	7.11%	LQD	2.09%
10.0	CHTR	7.11%	CZR	2.09%
10.0	KEY	6.69%	ON	1.67%
10.0	MSTR	6.28%	CVS	1.67%
10.0	ON	5.86%	GSK	1.26%
10.0	AMGN	5.86%	MSTR	1.26%
10.0	GSK	5.44%	KALU	1.26%
10.0	LQD	5.44%	BIIB	1.26%
10.0	CVS	5.44%	SLV	0.84%
10.0	GNRC	5.02%	ELAN	0.84%
10.0	CLF	4.6%	SNY	0.84%
10.0	EXPE	4.18%	EXPE	0.42%
10.0	META	4.18%	GE	0.42%
10.0	GME	4.18%	BMY	0.42%
10.0	NAVI	4.18%	VZ	0.0%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	ZTS	19.3%	TSLA	6.14%
21.0	ON	16.67%	ON	6.14%
21.0	TSLA	16.23%	AAP	6.14%
21.0	CHTR	13.6%	GNRC	6.14%
21.0	GSK	13.16%	CMA	5.7%
21.0	CMA	11.84%	CVS	4.82%
21.0	BUD	11.4%	BHC	4.39%
21.0	B	11.4%	BUD	4.39%
21.0	GNRC	10.96%	KALU	4.39%
21.0	LQD	10.09%	BIIB	3.51%
21.0	INTC	9.21%	ZTS	3.51%
21.0	CZR	9.21%	AMC	3.51%
21.0	NAVI	9.21%	CZR	3.07%
21.0	AAP	8.77%	CHTR	3.07%
21.0	AMGN	7.89%	GSK	3.07%
21.0	BHC	7.46%	BMY	2.63%
21.0	CLF	7.02%	AMGN	2.19%
21.0	ELAN	6.58%	LQD	2.19%
21.0	BIIB	6.58%	UNH	1.75%
21.0	CVS	6.14%	ELAN	1.32%
21.0	SBUX	5.7%	AA	0.88%
21.0	KEY	5.7%	GOOGL	0.44%
21.0	AMC	5.26%	NAVI	0.44%
21.0	OXY	5.26%	CLF	0.44%
21.0	META	4.82%	SLV	0.44%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	AAP	30.11%	ON	14.52%
63.0	ON	25.81%	BUD	8.6%
63.0	GNRC	23.66%	GNRC	4.84%
63.0	BHC	22.58%	CVS	2.69%
63.0	BIIB	21.51%	AAP	2.69%
63.0	BMY	15.05%	GSK	2.69%
63.0	GOOGL	13.98%	LQD	2.15%
63.0	CLF	12.9%	CNC	2.15%
63.0	CMA	12.37%	BMY	1.08%
63.0	KHC	11.29%	FITB	1.08%
63.0	PEP	10.75%	B	1.08%
63.0	CSTM	10.75%	GOOGL	0.54%
63.0	LW	10.22%	UAA	0.54%
63.0	AMGN	9.68%	OXY	0.54%
63.0	B	9.68%	CLF	0.54%
63.0	LQD	9.14%	CMCSA	0.54%
63.0	SBUX	9.14%	NFLX	0.0%
63.0	KALU	9.14%	NEM	0.0%
63.0	OXY	8.06%	MU	0.0%
63.0	ELAN	7.53%	NAVI	0.0%
63.0	CVS	6.99%	NVDA	0.0%
63.0	VFC	6.99%	NVS	0.0%
63.0	GSK	6.45%	NWL	0.0%
63.0	KEY	6.45%	ORCL	0.0%
63.0	CNC	5.91%	MUB	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 2025-06-27 through 2024-07-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	GNRC	43.09%	ON	11.38%
126.0	CLF	39.84%	BIIB	5.69%
126.0	VFC	36.59%	CLF	4.88%
126.0	BIIB	29.27%	CNC	4.07%
126.0	BUD	26.83%	MRK	2.44%
126.0	UAA	26.02%	PEP	1.63%
126.0	ON	23.58%	OXY	1.63%
126.0	BHC	23.58%	GNRC	1.63%
126.0	CZR	21.14%	UAA	1.63%
126.0	BMY	21.14%	AA	0.0%
126.0	OXY	21.14%	NEM	0.0%
126.0	MRK	18.7%	MUB	0.0%
126.0	CNC	17.89%	NAVI	0.0%
126.0	PEP	16.26%	NVS	0.0%
126.0	NWL	14.63%	NFLX	0.0%
126.0	KHC	14.63%	NVDA	0.0%
126.0	NAVI	10.57%	NWL	0.0%
126.0	WDC	9.76%	ORCL	0.0%
126.0	AAP	9.76%	ORLY	0.0%
126.0	ELAN	8.94%	MU	0.0%
126.0	LW	8.94%	MSI	0.0%
126.0	LUMN	6.5%	MSTR	0.0%
126.0	AMD	6.5%	LUMN	0.0%
126.0	BXP	6.5%	KALU	0.0%
126.0	DHI	5.69%	KEY	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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	PHM	-5.38%	TRGP	-2.46%
1.0	NVDA	-5.38%	QQQ	-2.46%
1.0	TRGP	-4.8%	NVDA	-2.34%
1.0	VST	-4.68%	CMG	-2.22%
1.0	MS	-4.44%	VST	-2.22%
1.0	PCG	-4.33%	PCG	-2.22%
1.0	IRM	-3.98%	IRM	-2.22%
1.0	MOS	-3.98%	GS	-1.99%
1.0	HYG	-3.86%	PHM	-1.99%
1.0	AMAT	-3.86%	LEN	-1.87%
1.0	QQQ	-3.74%	PEP	-1.87%
1.0	VNO	-3.74%	THC	-1.87%
1.0	THC	-3.63%	SPY	-1.87%
1.0	CCL	-3.63%	EMB	-1.76%
1.0	CAH	-3.51%	HSBC	-1.75%
1.0	FSUGY	-3.16%	MOS	-1.75%
1.0	AMD	-3.16%	CAH	-1.75%
1.0	GLD	-3.04%	HLT	-1.75%
1.0	X	-2.95%	MS	-1.75%
1.0	CSCO	-2.92%	AMAT	-1.75%
1.0	CPRT	-2.92%	ACGL	-1.64%
1.0	DHI	-2.92%	PWR	-1.64%
1.0	WRK	-2.79%	DHI	-1.64%
1.0	GS	-2.69%	HYG	-1.64%
1.0	MRK	-2.69%	JPM	-1.52%

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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	MS	-6.26%	MUB	-4.73%
10.0	MUB	-5.21%	PCG	-3.55%
10.0	NVDA	-5.08%	BAC	-3.19%
10.0	CSCO	-4.49%	ABBV	-3.07%
10.0	BAC	-4.26%	TRGP	-2.84%
10.0	TRGP	-4.26%	WDC	-2.6%
10.0	AZN	-4.02%	COST	-2.6%
10.0	X	-3.94%	MRK	-2.25%
10.0	HON	-3.9%	SBUX	-2.25%
10.0	QQQ	-3.78%	VST	-2.25%
10.0	HLT	-3.66%	JPM	-2.25%
10.0	COST	-3.66%	WRK	-2.17%
10.0	IRM	-3.66%	AZN	-2.13%
10.0	PCG	-3.55%	MS	-2.13%
10.0	VST	-3.43%	IRM	-2.01%
10.0	UNH	-3.31%	WFC	-2.01%
10.0	PHM	-3.31%	BBY	-2.01%
10.0	MU	-3.31%	HCA	-2.01%
10.0	AMAT	-3.19%	X	-1.91%
10.0	THC	-3.19%	HLT	-1.89%
10.0	MNST	-3.19%	USB	-1.89%
10.0	WRK	-3.17%	CSTM	-1.65%
10.0	PWR	-3.07%	CCL	-1.54%
10.0	CMG	-3.07%	FRA	-1.54%
10.0	VNO	-2.96%	QQQ	-1.54%

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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	MUB	-9.47%	MUB	-4.68%
21.0	ABBV	-5.27%	LW	-4.07%
21.0	MS	-4.91%	PCG	-2.99%
21.0	QQQ	-4.91%	COST	-2.63%
21.0	COST	-4.55%	AZN	-2.28%
21.0	TRGP	-4.31%	USB	-2.28%
21.0	TEVA	-4.07%	CPRT	-2.16%
21.0	CPRT	-3.83%	HLT	-2.04%
21.0	IRM	-3.83%	WDC	-2.04%
21.0	WRK	-3.57%	TEVA	-1.92%
21.0	FSUGY	-3.47%	INTC	-1.92%
21.0	SPY	-3.35%	ADBE	-1.56%
21.0	PEP	-3.23%	FRA	-1.56%
21.0	MNST	-3.11%	ABBV	-1.56%
21.0	AZN	-3.11%	CMG	-1.56%
21.0	CSCO	-2.99%	LVS	-1.56%
21.0	THC	-2.99%	TRGP	-1.44%
21.0	NVDA	-2.75%	TFC	-1.44%
21.0	CMG	-2.75%	FCX	-1.44%
21.0	USB	-2.63%	MU	-1.32%
21.0	HLT	-2.63%	IRM	-1.32%
21.0	PWR	-2.51%	HSBC	-1.32%
21.0	LVS	-2.4%	X	-1.21%
21.0	AMAT	-2.28%	BAC	-1.2%
21.0	LUMN	-2.04%	MS	-1.08%

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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	MUB	-6.57%	IEP	-7.94%
63.0	LEN	-5.42%	MUB	-4.92%
63.0	USB	-5.04%	PCG	-3.91%
63.0	IRM	-4.16%	BHC	-3.03%
63.0	CSCO	-3.78%	USB	-3.03%
63.0	TRGP	-3.53%	GSK	-2.27%
63.0	X	-3.44%	VFC	-2.27%
63.0	FSUGY	-2.9%	X	-2.17%
63.0	AZN	-2.77%	HCA	-2.14%
63.0	SPY	-2.77%	VZ	-2.14%
63.0	CMG	-2.77%	AZN	-1.89%
63.0	DHI	-2.65%	TFC	-1.77%
63.0	GE	-2.4%	AA	-1.64%
63.0	THC	-2.27%	CTLT	-1.61%
63.0	ACGL	-2.27%	CLF	-1.51%
63.0	PCG	-2.27%	UNH	-1.13%
63.0	QQQ	-2.02%	IRM	-1.01%
63.0	MS	-1.89%	HYG	-0.88%
63.0	MSI	-1.89%	SNY	-0.88%
63.0	NVDA	-1.89%	LW	-0.63%
63.0	PWR	-1.77%	MU	-0.63%
63.0	PHM	-1.77%	EMB	-0.51%
63.0	LUMN	-1.64%	NEM	-0.5%
63.0	LW	-1.51%	LVS	-0.38%
63.0	SLV	-1.39%	TEVA	-0.25%

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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	MUB	-8.09%	IEP	-16.99%
126.0	LEN	-7.67%	BALL	-3.29%
126.0	LW	-5.34%	LW	-2.88%
126.0	IRM	-5.34%	GSK	-2.74%
126.0	PCG	-3.42%	VZ	-1.64%
126.0	VZ	-3.42%	EMB	-1.1%
126.0	LUMN	-3.29%	UNH	-0.96%
126.0	BALL	-3.29%	MUB	-0.82%
126.0	INTC	-2.19%	PCG	-0.82%
126.0	FSUGY	-1.78%	IRM	-0.82%
126.0	PHM	-1.64%	INTC	-0.41%
126.0	CSTM	-1.51%	NEM	-0.27%
126.0	BBY	-1.51%	LEN	-0.14%
126.0	LVS	-1.51%	MS	0.0%
126.0	UNH	-1.37%	MSFT	0.0%
126.0	WRK	-1.03%	AA	0.0%
126.0	X	-0.97%	MU	0.0%
126.0	NVDA	-0.82%	NAVI	0.0%
126.0	CSCO	-0.55%	NFLX	0.0%
126.0	GOOGL	-0.55%	MSI	0.0%
126.0	ACGL	-0.41%	MOS	0.0%
126.0	EMB	-0.27%	LUMN	0.0%
126.0	SPY	-0.27%	LVS	0.0%
126.0	TRGP	-0.27%	NVDA	0.0%
126.0	ABBV	-0.14%	LNC	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 2025-06-27

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
252.0	LUMN	-14.74%	IEP	-32.45%
252.0	LW	-14.4%	FRCB	-0.37%
252.0	VZ	-7.62%	LW	-0.17%
252.0	MRK	-3.64%	INTU	0.0%
252.0	BMY	-2.48%	ORCL	0.0%
252.0	CSTM	-2.32%	ON	0.0%
252.0	IEP	-2.15%	NWL	0.0%
252.0	PEP	-1.49%	NVS	0.0%
252.0	INTC	-0.83%	NVDA	0.0%
252.0	UNH	-0.33%	NFLX	0.0%
252.0	MU	0.0%	NAVI	0.0%
252.0	MUB	0.0%	MUB	0.0%
252.0	NFLX	0.0%	MU	0.0%
252.0	NVDA	0.0%	MSTR	0.0%
252.0	NVS	0.0%	MSI	0.0%
252.0	ON	0.0%	MSFT	0.0%
252.0	ORCL	0.0%	MS	0.0%
252.0	NAVI	0.0%	MOS	0.0%
252.0	MSI	0.0%	MNST	0.0%
252.0	ISRG	0.0%	ORLY	0.0%
252.0	MS	0.0%	META	0.0%
252.0	ORLY	0.0%	LVS	0.0%
252.0	LVS	0.0%	LUMN	0.0%
252.0	LLY	0.0%	LQD	0.0%
252.0	LEN	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 2025-06-27 through 2025-06-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	GSK	-15.79%	ISRG	-5.26%
1.0	ORLY	-10.53%	GSK	-5.26%
1.0	HLT	-5.26%	MOS	-5.26%
1.0	MRK	-5.26%	CYH	-5.26%
1.0	MOS	-5.26%	PCG	-5.26%
1.0	CMA	-5.26%	COST	-5.26%
1.0	CCL	-5.26%	BXP	-5.26%
1.0	OXY	-5.26%	THC	-5.26%
1.0	PCG	-5.26%	TMUS	-5.26%
1.0	PHM	-5.26%	AZO	-5.26%
1.0	BIIB	-5.26%	AZN	-5.26%
1.0	BHP	-5.26%	POST	-5.26%
1.0	GILD	-5.26%	VNO	-5.26%
1.0	GLD	-5.26%	VCSH	0.0%
1.0	VNO	-5.26%	NWL	0.0%
1.0	GE	-5.26%	NVS	0.0%
1.0	LEN	-5.26%	NVDA	0.0%
1.0	XOM	-5.26%	NFLX	0.0%
1.0	TMUS	-5.26%	NEM	0.0%
1.0	BA	-5.26%	NAVI	0.0%
1.0	THC	-5.26%	MUB	0.0%
1.0	HCA	-5.26%	MU	0.0%
1.0	CYH	-5.26%	MSTR	0.0%
1.0	GOOGL	-5.26%	MSI	0.0%
1.0	AZN	-5.26%	MSFT	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 2025-06-27 through 2025-06-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	TMUS	-30.0%	AA	0.0%
10.0	COST	-10.0%	OXY	0.0%
10.0	GSK	-10.0%	ORLY	0.0%
10.0	VNO	-10.0%	ORCL	0.0%
10.0	PCG	-10.0%	ON	0.0%
10.0	LEN	0.0%	NWL	0.0%
10.0	ORCL	0.0%	NVS	0.0%
10.0	ON	0.0%	NVDA	0.0%
10.0	NWL	0.0%	NFLX	0.0%
10.0	NVS	0.0%	NEM	0.0%
10.0	NVDA	0.0%	NAVI	0.0%
10.0	NFLX	0.0%	MUB	0.0%
10.0	NEM	0.0%	MU	0.0%
10.0	NAVI	0.0%	MSTR	0.0%
10.0	MUB	0.0%	MSI	0.0%
10.0	MU	0.0%	MSFT	0.0%
10.0	MSTR	0.0%	MS	0.0%
10.0	MSI	0.0%	MRK	0.0%
10.0	MSFT	0.0%	JPM	0.0%
10.0	MS	0.0%	KALU	0.0%
10.0	MRK	0.0%	KEY	0.0%
10.0	ORLY	0.0%	KHC	0.0%
10.0	JPM	0.0%	LEN	0.0%
10.0	MNST	0.0%	LLY	0.0%
10.0	META	0.0%	PCG	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 2025-06-27 through 2025-04-03

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	GLD	-13.56%	AZO	-6.78%
1.0	TRGP	-6.78%	GLD	-6.78%
1.0	VCSH	-6.78%	VCSH	-6.78%
1.0	CSCO	-6.78%	MRK	-6.78%
1.0	PHM	-6.78%	CAH	-5.08%
1.0	CAH	-6.78%	KHC	-5.08%
1.0	HYG	-6.78%	HYG	-5.08%
1.0	EMB	-6.78%	EMB	-5.08%
1.0	PCG	-5.08%	SNY	-5.08%
1.0	OXY	-5.08%	TRGP	-5.08%
1.0	HSBC	-5.08%	THC	-5.08%
1.0	BIIB	-5.08%	GILD	-5.08%
1.0	GSK	-5.08%	TMUS	-5.08%
1.0	HLT	-5.08%	COST	-5.08%
1.0	TMUS	-5.08%	PCG	-5.08%
1.0	NVDA	-5.08%	MNST	-3.39%
1.0	SNY	-3.39%	MOS	-3.39%
1.0	LEN	-3.39%	ISRG	-3.39%
1.0	CPRT	-3.39%	USB	-3.39%
1.0	BAC	-3.39%	HSBC	-3.39%
1.0	VICI	-3.39%	FIS	-3.39%
1.0	AZN	-3.39%	HLT	-3.39%
1.0	T	-3.39%	GSK	-3.39%
1.0	XOM	-3.39%	LNC	-3.39%
1.0	VNO	-3.39%	JAZZ	-3.39%

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 2025-06-27 through 2025-04-03

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	TMUS	-14.0%	CPRT	-20.0%
10.0	MRK	-6.0%	PCG	-8.0%
10.0	PCG	-4.0%	MUB	-4.0%
10.0	ABBV	-4.0%	MRK	-2.0%
10.0	GSK	-4.0%	JAZZ	-2.0%
10.0	CPRT	-4.0%	ABBV	-2.0%
10.0	PEP	-2.0%	KHC	0.0%
10.0	COST	-2.0%	PEP	0.0%
10.0	GILD	-2.0%	JPM	0.0%
10.0	VNO	-2.0%	OXY	0.0%
10.0	VCSH	-2.0%	ORLY	0.0%
10.0	FRA	-2.0%	ORCL	0.0%
10.0	ISRG	0.0%	ON	0.0%
10.0	KALU	0.0%	NWL	0.0%
10.0	SPY	0.0%	NVS	0.0%
10.0	JPM	0.0%	NVDA	0.0%
10.0	ZION	0.0%	NFLX	0.0%
10.0	T	0.0%	NEM	0.0%
10.0	INTU	0.0%	NAVI	0.0%
10.0	KEY	0.0%	KALU	0.0%
10.0	IEP	0.0%	MU	0.0%
10.0	HYG	0.0%	MSTR	0.0%
10.0	HSBC	0.0%	MSI	0.0%
10.0	HON	0.0%	PHM	0.0%
10.0	HLT	0.0%	MS	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 2025-06-27 through 2025-04-03

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	CPRT	-33.33%	CPRT	-46.15%
21.0	PCG	-5.13%	PCG	-10.26%
21.0	PEP	-5.13%	PEP	-2.56%
21.0	KHC	-5.13%	ORLY	0.0%
21.0	MSI	0.0%	ORCL	0.0%
21.0	MSTR	0.0%	ON	0.0%
21.0	MU	0.0%	NWL	0.0%
21.0	MUB	0.0%	NVS	0.0%
21.0	NAVI	0.0%	MSI	0.0%
21.0	AA	0.0%	NFLX	0.0%
21.0	MSFT	0.0%	NEM	0.0%
21.0	NVS	0.0%	NAVI	0.0%
21.0	NWL	0.0%	MUB	0.0%
21.0	ON	0.0%	MU	0.0%
21.0	ORCL	0.0%	MSTR	0.0%
21.0	NFLX	0.0%	OXY	0.0%
21.0	NVDA	0.0%	NVDA	0.0%
21.0	MRK	0.0%	MSFT	0.0%
21.0	MOS	0.0%	MRK	0.0%
21.0	MNST	0.0%	JPM	0.0%
21.0	META	0.0%	KALU	0.0%
21.0	LW	0.0%	KEY	0.0%
21.0	LVS	0.0%	KHC	0.0%
21.0	LUMN	0.0%	LEN	0.0%
21.0	LNC	0.0%	LLY	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 2025-06-27 through 2024-07-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	TRGP	-8.47%	NVDA	-5.24%
1.0	NVDA	-8.06%	TRGP	-5.24%
1.0	SPY	-7.26%	QQQ	-4.84%
1.0	GLD	-6.85%	TMUS	-4.84%
1.0	PHM	-6.85%	GS	-4.44%
1.0	QQQ	-6.45%	HLT	-4.44%
1.0	PCG	-6.05%	AMAT	-4.44%
1.0	TMUS	-5.65%	JPM	-4.03%
1.0	HSBC	-5.24%	PCG	-4.03%
1.0	MS	-5.24%	IRM	-4.03%
1.0	IRM	-5.24%	THC	-3.63%
1.0	LEN	-5.24%	SPY	-3.63%
1.0	CCL	-4.84%	CMG	-3.63%
1.0	HLT	-4.84%	VST	-3.23%
1.0	AZN	-4.44%	COST	-2.82%
1.0	THC	-4.44%	MS	-2.82%
1.0	CAH	-4.44%	HSBC	-2.82%
1.0	GS	-4.44%	GLD	-2.82%
1.0	HYG	-4.44%	MSI	-2.82%
1.0	CPRT	-4.03%	VNO	-2.82%
1.0	T	-4.03%	VCSH	-2.82%
1.0	VNO	-4.03%	CCL	-2.82%
1.0	AMAT	-4.03%	CAH	-2.82%
1.0	VST	-4.03%	PEP	-2.82%
1.0	VCSH	-3.63%	X	-2.5%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	TRGP	-11.3%	MRK	-7.95%
10.0	NVDA	-10.88%	WDC	-7.53%
10.0	HON	-9.21%	PCG	-7.53%
10.0	QQQ	-8.79%	ABBV	-6.69%
10.0	LEN	-8.37%	TRGP	-6.28%
10.0	PHM	-7.95%	BAC	-6.28%
10.0	IRM	-7.53%	AZN	-5.86%
10.0	SPY	-7.53%	BBY	-5.44%
10.0	BAC	-7.53%	CCL	-5.02%
10.0	AMAT	-7.11%	CSTM	-4.6%
10.0	MSI	-7.11%	MUB	-4.2%
10.0	PCG	-7.11%	SPY	-4.18%
10.0	MS	-6.69%	CPRT	-4.18%
10.0	LLY	-6.69%	FRA	-4.18%
10.0	CPRT	-6.69%	GT	-4.18%
10.0	GS	-6.28%	QQQ	-4.18%
10.0	CSCO	-6.28%	CDNS	-4.18%
10.0	AAPL	-6.28%	NWL	-4.18%
10.0	HD	-5.86%	VFC	-4.18%
10.0	COST	-5.86%	FIS	-3.77%
10.0	MRK	-5.86%	MS	-3.77%
10.0	TMUS	-5.86%	COST	-3.77%
10.0	GT	-5.44%	JPM	-3.77%
10.0	MU	-5.44%	ISRG	-3.77%
10.0	LVS	-5.02%	HLT	-3.77%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	LVS	-10.53%	PCG	-10.96%
21.0	CPRT	-10.09%	CPRT	-7.89%
21.0	QQQ	-9.65%	HLT	-7.02%
21.0	IRM	-9.21%	VFC	-7.02%
21.0	TRGP	-8.77%	AZN	-7.02%
21.0	SPY	-8.33%	WDC	-7.02%
21.0	GT	-8.33%	INTC	-6.58%
21.0	ISRG	-8.33%	TEVA	-5.7%
21.0	FIS	-7.89%	FRA	-5.26%
21.0	COST	-7.89%	LVS	-5.26%
21.0	TEVA	-7.89%	JAZZ	-4.82%
21.0	MSI	-7.46%	CCL	-3.95%
21.0	LEN	-7.46%	JPM	-3.95%
21.0	ABBV	-7.02%	ABBV	-3.95%
21.0	FSUGY	-7.02%	MRK	-3.95%
21.0	AMZN	-6.58%	IRM	-3.95%
21.0	FRA	-6.58%	MU	-3.51%
21.0	PCG	-6.14%	OXY	-3.51%
21.0	PHM	-6.14%	NWL	-3.51%
21.0	MS	-5.7%	ISRG	-3.51%
21.0	HD	-5.7%	LEN	-3.07%
21.0	TMUS	-5.26%	COST	-3.07%
21.0	TFC	-5.26%	AMAT	-3.07%
21.0	MRK	-4.82%	CDNS	-3.07%
21.0	XOM	-4.82%	MSI	-2.63%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	LEN	-29.57%	PCG	-16.67%
63.0	IRM	-17.74%	VFC	-9.68%
63.0	CCL	-11.83%	AZN	-8.06%
63.0	TEVA	-11.83%	UNH	-4.84%
63.0	AZN	-11.83%	IRM	-4.3%
63.0	DHI	-11.29%	HCA	-2.15%
63.0	PCG	-9.68%	LVS	-1.61%
63.0	ACGL	-9.68%	TEVA	-1.61%
63.0	NVS	-9.14%	AAPL	-1.08%
63.0	PHM	-8.06%	FRA	-1.08%
63.0	MSI	-8.06%	SPY	-0.54%
63.0	PWR	-7.53%	CCL	-0.54%
63.0	FIS	-7.53%	NVS	0.0%
63.0	TRGP	-6.99%	ORCL	0.0%
63.0	FRA	-6.99%	NVDA	0.0%
63.0	BAC	-5.91%	NFLX	0.0%
63.0	CMG	-4.84%	MSTR	0.0%
63.0	SPY	-4.84%	NEM	0.0%
63.0	CYH	-3.76%	NAVI	0.0%
63.0	MUB	-2.7%	MUB	0.0%
63.0	QQQ	-2.69%	MU	0.0%
63.0	HCA	-2.69%	NWL	0.0%
63.0	ORCL	-2.15%	KHC	0.0%
63.0	LVS	-2.15%	MSFT	0.0%
63.0	UNH	-2.15%	KEY	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 2025-06-27 through 2024-07-02

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	LEN	-45.53%	UNH	-5.69%
126.0	IRM	-31.71%	IRM	-4.88%
126.0	PCG	-20.33%	PCG	-4.88%
126.0	PHM	-9.76%	LEN	-0.81%
126.0	LVS	-8.94%	JAZZ	0.0%
126.0	BBY	-8.94%	ORCL	0.0%
126.0	UNH	-8.13%	NWL	0.0%
126.0	CSTM	-6.5%	NVS	0.0%
126.0	MUB	-4.1%	NVDA	0.0%
126.0	ACGL	-2.44%	NFLX	0.0%
126.0	TRGP	-1.63%	NEM	0.0%
126.0	BHP	-1.63%	NAVI	0.0%
126.0	FCX	-0.81%	MUB	0.0%
126.0	TXN	-0.81%	MU	0.0%
126.0	NFLX	0.0%	MSTR	0.0%
126.0	MSTR	0.0%	MSI	0.0%
126.0	MSI	0.0%	MSFT	0.0%
126.0	NVDA	0.0%	MS	0.0%
126.0	NVS	0.0%	MOS	0.0%
126.0	ORCL	0.0%	MNST	0.0%
126.0	NEM	0.0%	ORLY	0.0%
126.0	MS	0.0%	LW	0.0%
126.0	ZION	0.0%	LVS	0.0%
126.0	MNST	0.0%	ZION	0.0%
126.0	INTU	0.0%	LUMN	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 2025-06-27

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	GME	0.26%	GME	0.32%
1.0	MSTR	0.26%	NWL	0.2%
1.0	NWL	0.16%	UAA	0.17%
1.0	META	0.14%	GNRC	0.11%
1.0	NFLX	0.13%	INTU	0.1%
1.0	INTU	0.13%	BALL	0.1%
1.0	AAPL	0.11%	AAPL	0.09%
1.0	AA	0.09%	CZR	0.09%
1.0	HD	0.08%	AMC	0.08%
1.0	ZTS	0.07%	MSTR	0.07%
1.0	XOM	0.07%	QCOM	0.06%
1.0	UAA	0.07%	CTLT	0.06%
1.0	CZR	0.07%	IEP	0.06%
1.0	BHP	0.06%	ZTS	0.06%
1.0	AMZN	0.06%	HD	0.05%
1.0	ORCL	0.06%	UNH	0.04%
1.0	B	0.06%	CMA	0.04%
1.0	WDC	0.05%	AA	0.04%
1.0	BA	0.05%	SBUX	0.04%
1.0	VFC	0.05%	BHP	0.04%
1.0	GWW	0.05%	XOM	0.03%
1.0	GNRC	0.04%	ON	0.03%
1.0	ADBE	0.04%	FRA	0.03%
1.0	TFC	0.04%	MU	0.03%
1.0	CLF	0.04%	META	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 2025-06-27

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	GME	4.64%	MSTR	3.48%
10.0	MSTR	3.87%	GME	3.29%
10.0	META	1.35%	CTLT	1.11%
10.0	CTLT	1.13%	GNRC	0.96%
10.0	UAA	1.09%	CMA	0.7%
10.0	CZR	1.09%	AAPL	0.69%
10.0	NFLX	0.93%	UAA	0.67%
10.0	MU	0.85%	MU	0.67%
10.0	SLV	0.77%	CZR	0.6%
10.0	OXY	0.74%	WDC	0.56%
10.0	AAPL	0.73%	AA	0.54%
10.0	TEVA	0.7%	INTU	0.54%
10.0	ORCL	0.67%	IEP	0.45%
10.0	INTU	0.64%	XOM	0.44%
10.0	BA	0.6%	INTC	0.43%
10.0	HD	0.58%	META	0.37%
10.0	INTC	0.58%	SLV	0.35%
10.0	AA	0.55%	ZTS	0.34%
10.0	XOM	0.5%	ABBV	0.33%
10.0	SNY	0.46%	LNC	0.33%
10.0	GOOGL	0.45%	KEY	0.32%
10.0	GNRC	0.43%	CSTM	0.32%
10.0	AMZN	0.4%	CVS	0.32%
10.0	ABBV	0.37%	KALU	0.3%
10.0	GWW	0.36%	OXY	0.28%

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 2025-06-27

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	MSTR	10.87%	MSTR	8.43%
21.0	GME	7.34%	GME	6.41%
21.0	META	4.5%	CTLT	2.74%
21.0	CTLT	2.68%	META	1.9%
21.0	NFLX	2.57%	AA	1.67%
21.0	TEVA	2.22%	GNRC	1.58%
21.0	UAA	2.0%	UAA	1.5%
21.0	MU	1.72%	NFLX	1.39%
21.0	ORCL	1.53%	CLF	1.27%
21.0	CZR	1.5%	CMA	1.25%
21.0	AA	1.32%	XOM	1.19%
21.0	SLV	1.27%	IEP	1.11%
21.0	INTU	1.22%	KALU	1.08%
21.0	AMZN	1.16%	INTC	1.02%
21.0	OXY	1.1%	ZTS	0.95%
21.0	INTC	1.06%	CZR	0.9%
21.0	AAPL	1.0%	INTU	0.89%
21.0	HD	1.0%	MU	0.85%
21.0	WDC	1.0%	CSTM	0.83%
21.0	XOM	0.98%	FSUGY	0.8%
21.0	KALU	0.96%	LUMN	0.75%
21.0	BA	0.95%	CVS	0.73%
21.0	GNRC	0.94%	WDC	0.71%
21.0	KEY	0.89%	SBUX	0.58%
21.0	GOOGL	0.86%	ABBV	0.57%

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 2025-06-27

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
63.0	MSTR	21.43%	CTLT	10.61%
63.0	META	13.93%	META	10.05%
63.0	CTLT	11.29%	MSTR	8.48%
63.0	NFLX	10.78%	GME	5.02%
63.0	GME	5.99%	CMA	4.51%
63.0	CMA	4.81%	IEP	3.16%
63.0	ORCL	3.48%	AMZN	2.7%
63.0	UAA	3.09%	KALU	2.62%
63.0	GNRC	3.06%	INTC	2.54%
63.0	TEVA	2.99%	CZR	2.25%
63.0	INTU	2.95%	NFLX	2.07%
63.0	SLV	2.85%	NEM	2.05%
63.0	WDC	2.84%	CVS	2.05%
63.0	XOM	2.77%	WRK	2.02%
63.0	HD	2.57%	GNRC	1.95%
63.0	WRK	2.52%	XOM	1.94%
63.0	GILD	2.5%	GILD	1.9%
63.0	CZR	2.42%	BXP	1.81%
63.0	GOOGL	2.18%	UAA	1.78%
63.0	SBUX	2.14%	ZTS	1.74%
63.0	BA	2.09%	GOOGL	1.69%
63.0	AAPL	2.07%	USB	1.55%
63.0	AMD	1.9%	SNY	1.54%
63.0	LVS	1.87%	LVS	1.51%
63.0	SNY	1.84%	CYH	1.51%

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 2025-06-27

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
126.0	MSTR	69.87%	META	31.06%
126.0	META	40.32%	MSTR	23.05%
126.0	NFLX	28.61%	AMZN	8.59%
126.0	ORCL	10.05%	NFLX	8.26%
126.0	AVGO	8.72%	AVGO	7.33%
126.0	INTU	8.71%	GILD	7.27%
126.0	GME	8.66%	GOOGL	6.68%
126.0	GILD	7.68%	IEP	5.96%
126.0	AMD	7.46%	BA	5.81%
126.0	TEVA	7.27%	LLY	5.59%
126.0	BA	7.18%	INTU	5.41%
126.0	LVS	6.92%	WRK	5.32%
126.0	CTLT	6.59%	TEVA	4.89%
126.0	XOM	6.27%	GME	4.78%
126.0	LEN	6.2%	ISRG	4.65%
126.0	ISRG	5.71%	LVS	4.55%
126.0	AMZN	5.56%	TSLA	4.09%
126.0	GOOGL	5.26%	ORCL	4.05%
126.0	WRK	5.06%	AMD	3.98%
126.0	AAPL	5.03%	XOM	3.91%
126.0	SLV	4.58%	CSTM	3.65%
126.0	GNRC	4.52%	CTLT	3.44%
126.0	WDC	4.5%	KALU	3.26%
126.0	ADBE	3.86%	TMUS	3.22%
126.0	SBUX	3.72%	SNY	3.0%

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 2025-06-27

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
252.0	MSTR	208.03%	META	52.84%
252.0	META	103.02%	MSTR	40.61%
252.0	NFLX	70.35%	AMZN	36.18%
252.0	AVGO	37.43%	AVGO	34.3%
252.0	AMZN	36.98%	VST	30.86%
252.0	INTU	32.93%	INTU	30.0%
252.0	ORCL	31.76%	ISRG	26.87%
252.0	VST	28.43%	NFLX	23.3%
252.0	ISRG	27.37%	ORCL	22.41%
252.0	TEVA	24.39%	GOOGL	21.39%
252.0	AMD	20.68%	TDG	14.98%
252.0	LLY	20.29%	GILD	14.5%
252.0	GOOGL	20.04%	COST	13.1%
252.0	WDC	19.76%	TEVA	12.79%
252.0	LEN	18.79%	IEP	12.33%
252.0	GNRC	18.48%	TMUS	12.07%
252.0	CTLT	18.05%	LEN	11.49%
252.0	GME	17.64%	MSI	11.38%
252.0	MSI	17.46%	LW	10.28%
252.0	GILD	16.79%	QQQ	10.01%
252.0	BA	16.57%	CAH	9.17%
252.0	EXPE	16.23%	THC	9.03%
252.0	TDG	15.36%	HD	8.56%
252.0	TSLA	13.83%	GWW	8.45%
252.0	AMAT	11.87%	WRK	8.43%

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 2025-06-27 through 2025-06-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	BHC	1.57%	TXN	0.61%
1.0	VST	1.25%	LLY	0.55%
1.0	MU	1.03%	PCG	0.5%
1.0	TXN	0.69%	CYH	0.46%
1.0	LLY	0.61%	CDNS	0.42%
1.0	SBUX	0.6%	QCOM	0.35%
1.0	CYH	0.55%	SBUX	0.32%
1.0	QQQ	0.54%	BHC	0.32%
1.0	ON	0.49%	VST	0.3%
1.0	TDG	0.49%	TDG	0.27%
1.0	CDNS	0.47%	CMCSA	0.26%
1.0	AMZN	0.44%	GSK	0.25%
1.0	META	0.39%	GT	0.23%
1.0	B	0.31%	QQQ	0.2%
1.0	WFC	0.3%	UNH	0.18%
1.0	QCOM	0.29%	B	0.15%
1.0	MSFT	0.28%	BIIB	0.15%
1.0	SLV	0.28%	COST	0.15%
1.0	PCG	0.27%	INTC	0.14%
1.0	FCX	0.22%	AMZN	0.14%
1.0	VFC	0.22%	IEP	0.13%
1.0	CMCSA	0.21%	CZR	0.13%
1.0	CZR	0.21%	VFC	0.12%
1.0	PWR	0.2%	CPRT	0.12%
1.0	AA	0.19%	BA	0.11%

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 2025-06-27 through 2025-06-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	ORCL	9.98%	PWR	5.31%
10.0	WDC	7.74%	GT	4.82%
10.0	MU	6.97%	BHC	4.73%
10.0	PWR	6.47%	CZR	4.28%
10.0	TSLA	5.17%	CYH	3.59%
10.0	VST	4.99%	NEM	3.32%
10.0	CYH	4.13%	BIIB	2.8%
10.0	NEM	4.12%	GSK	2.77%
10.0	GT	4.02%	WDC	2.6%
10.0	MSFT	3.91%	TSLA	2.51%
10.0	BHC	3.76%	PCG	2.2%
10.0	CZR	3.27%	BBY	2.13%
10.0	QQQ	3.24%	ON	2.07%
10.0	SBUX	3.16%	AZN	1.95%
10.0	ON	2.96%	CPRT	1.86%
10.0	TXN	2.76%	BA	1.73%
10.0	INTC	2.58%	TMUS	1.7%
10.0	META	2.4%	ISRG	1.68%
10.0	AMZN	1.93%	RIO	1.59%
10.0	GNRC	1.87%	MU	1.52%
10.0	BA	1.85%	QCOM	1.47%
10.0	QCOM	1.62%	KHC	1.39%
10.0	TDG	1.43%	COST	1.34%
10.0	AZN	1.21%	VNO	1.31%
10.0	WFC	1.11%	SBUX	1.11%

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 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	AAP	1.35%	MU	1.0%
1.0	MU	1.2%	AMC	0.79%
1.0	AMC	0.74%	CMCSA	0.39%
1.0	PWR	0.71%	QCOM	0.31%
1.0	BHC	0.65%	ORCL	0.3%
1.0	META	0.64%	BHC	0.29%
1.0	WDC	0.61%	PRGO	0.28%
1.0	CLF	0.58%	TEVA	0.26%
1.0	AMZN	0.55%	PWR	0.26%
1.0	QCOM	0.53%	META	0.25%
1.0	ORCL	0.51%	AMZN	0.24%
1.0	TXN	0.47%	QQQ	0.21%
1.0	CDNS	0.44%	PCG	0.2%
1.0	BA	0.4%	ABBV	0.2%
1.0	CMCSA	0.38%	ON	0.2%
1.0	QQQ	0.37%	KHC	0.19%
1.0	ADBE	0.28%	UNH	0.18%
1.0	B	0.27%	ELAN	0.17%
1.0	ON	0.27%	PEP	0.14%
1.0	ELAN	0.25%	SNY	0.14%
1.0	LW	0.25%	ADBE	0.14%
1.0	MSTR	0.25%	LW	0.14%
1.0	GME	0.24%	VZ	0.13%
1.0	TDG	0.23%	AMGN	0.13%
1.0	LLY	0.21%	LLY	0.13%

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 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	MU	17.16%	MU	13.38%
10.0	WDC	13.67%	ELAN	5.22%
10.0	ELAN	11.07%	AMC	4.55%
10.0	META	6.91%	PWR	3.35%
10.0	TSLA	6.77%	WDC	3.34%
10.0	PWR	5.92%	TEVA	3.31%
10.0	ORCL	5.76%	ON	2.71%
10.0	TXN	5.68%	QCOM	2.65%
10.0	TEVA	5.11%	EXPE	2.57%
10.0	MSTR	4.6%	META	2.41%
10.0	AMC	4.55%	ABBV	2.37%
10.0	AA	3.92%	CZR	2.35%
10.0	AAP	3.87%	KALU	2.29%
10.0	ON	3.49%	ZTS	2.15%
10.0	MSFT	3.2%	NAVI	2.11%
10.0	GME	3.18%	CPRT	1.78%
10.0	QQQ	3.15%	GE	1.71%
10.0	AMZN	2.95%	GME	1.4%
10.0	QCOM	2.83%	BHC	1.36%
10.0	KALU	2.73%	PEP	1.31%
10.0	EXPE	2.55%	KHC	1.19%
10.0	SBUX	2.55%	CLF	1.16%
10.0	GE	2.53%	TMUS	1.14%
10.0	GNRC	2.29%	GNRC	1.1%
10.0	BHC	2.17%	NEM	1.01%

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 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	MU	44.4%	MU	26.19%
21.0	WDC	34.8%	AMC	18.82%
21.0	ELAN	33.93%	WDC	10.49%
21.0	META	22.18%	META	9.82%
21.0	AMC	18.81%	ON	8.51%
21.0	PWR	15.93%	PWR	7.91%
21.0	ON	14.35%	ZTS	7.83%
21.0	TXN	12.07%	KALU	7.58%
21.0	TEVA	12.03%	CPRT	5.3%
21.0	KALU	11.69%	GE	4.85%
21.0	ORCL	11.62%	BXP	4.48%
21.0	TSLA	10.01%	TEVA	3.71%
21.0	SBUX	7.22%	QCOM	3.63%
21.0	AA	7.14%	EXPE	3.58%
21.0	ZTS	6.54%	CHTR	3.39%
21.0	GNRC	6.24%	BUD	3.24%
21.0	GS	6.16%	GNRC	3.02%
21.0	GE	6.0%	CMCSA	2.97%
21.0	MSFT	5.82%	CSTM	2.85%
21.0	EXPE	5.66%	IRM	2.52%
21.0	QCOM	5.32%	MSTR	2.51%
21.0	CHTR	5.2%	VNO	2.45%
21.0	MSTR	4.81%	THC	2.16%
21.0	SLV	4.58%	FSUGY	2.08%
21.0	AAP	4.49%	PEP	2.01%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	NWL	0.5%	NWL	0.46%
1.0	MSTR	0.38%	MU	0.31%
1.0	VFC	0.32%	MSTR	0.23%
1.0	PRGO	0.31%	QCOM	0.18%
1.0	AMZN	0.27%	ADBE	0.17%
1.0	GME	0.24%	AMZN	0.17%
1.0	BHC	0.21%	PRGO	0.14%
1.0	CHTR	0.21%	BIIB	0.13%
1.0	MU	0.2%	IEP	0.12%
1.0	PWR	0.19%	UNH	0.12%
1.0	AAP	0.18%	MSFT	0.12%
1.0	WDC	0.18%	LW	0.11%
1.0	META	0.17%	CMCSA	0.09%
1.0	B	0.17%	META	0.09%
1.0	ADBE	0.15%	MRK	0.09%
1.0	QCOM	0.13%	AMAT	0.08%
1.0	ORCL	0.13%	PCG	0.08%
1.0	LNC	0.12%	ORCL	0.08%
1.0	QQQ	0.11%	WDC	0.08%
1.0	CNC	0.1%	VFC	0.08%
1.0	BA	0.09%	ON	0.08%
1.0	TXN	0.09%	FSUGY	0.08%
1.0	ELAN	0.09%	LNC	0.08%
1.0	SLV	0.08%	ELAN	0.07%
1.0	FSUGY	0.08%	ABBV	0.07%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	MSTR	5.3%	MSTR	6.01%
10.0	MU	4.26%	MU	4.1%
10.0	GME	2.39%	WDC	2.11%
10.0	META	1.98%	QCOM	1.37%
10.0	WDC	1.87%	IEP	1.32%
10.0	NWL	1.86%	CVS	1.13%
10.0	UAA	1.59%	ABBV	1.11%
10.0	B	1.53%	MRK	0.98%
10.0	VFC	1.47%	AMAT	0.93%
10.0	AMZN	1.38%	FSUGY	0.91%
10.0	INTC	1.35%	GME	0.88%
10.0	ORCL	1.22%	UAA	0.87%
10.0	PWR	1.21%	FCX	0.81%
10.0	ABBV	1.19%	ELAN	0.8%
10.0	MSFT	1.15%	LEN	0.76%
10.0	TXN	1.15%	CSTM	0.73%
10.0	UNH	1.1%	AMD	0.69%
10.0	AMAT	1.07%	ADBE	0.68%
10.0	EXPE	1.05%	META	0.67%
10.0	TEVA	0.92%	PEP	0.64%
10.0	ELAN	0.91%	PWR	0.64%
10.0	SLV	0.91%	UNH	0.64%
10.0	NEM	0.88%	VFC	0.56%
10.0	QQQ	0.87%	CHTR	0.55%
10.0	SNY	0.77%	B	0.55%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	MSTR	12.68%	MSTR	13.24%
21.0	MU	8.02%	MU	6.31%
21.0	WDC	4.9%	WDC	3.4%
21.0	GME	4.74%	GME	2.67%
21.0	META	4.16%	IEP	2.64%
21.0	UAA	4.11%	UAA	2.43%
21.0	PWR	2.81%	LEN	2.12%
21.0	VFC	2.61%	META	2.1%
21.0	AMZN	2.51%	TSLA	2.06%
21.0	B	2.36%	CVS	2.06%
21.0	AMAT	2.29%	AMAT	1.98%
21.0	ELAN	2.27%	FSUGY	1.89%
21.0	EXPE	2.2%	ABBV	1.83%
21.0	TEVA	1.96%	BXP	1.79%
21.0	CHTR	1.89%	CSTM	1.79%
21.0	TSLA	1.75%	ADBE	1.66%
21.0	BXP	1.69%	QCOM	1.51%
21.0	ORCL	1.64%	BUD	1.4%
21.0	LEN	1.61%	AMC	1.36%
21.0	IEP	1.52%	PWR	1.26%
21.0	TXN	1.43%	B	1.25%
21.0	SLV	1.38%	BBY	1.24%
21.0	GILD	1.32%	DHI	1.22%
21.0	AMGN	1.3%	AMGN	1.22%
21.0	NEM	1.3%	VFC	1.19%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
63.0	MSTR	26.53%	UAA	7.56%
63.0	TSLA	17.22%	LEN	7.51%
63.0	UAA	9.95%	CVS	6.27%
63.0	CVS	9.25%	B	6.04%
63.0	B	8.04%	BXP	4.83%
63.0	GME	7.48%	MSTR	4.78%
63.0	LEN	6.56%	AMAT	3.98%
63.0	WDC	6.45%	VFC	3.82%
63.0	BXP	5.46%	CYH	3.82%
63.0	BUD	5.22%	CSTM	3.63%
63.0	AMAT	4.36%	CZR	3.6%
63.0	IEP	4.15%	PHM	3.43%
63.0	NEM	4.08%	THC	3.2%
63.0	PHM	3.8%	DHI	3.13%
63.0	EXPE	3.73%	ADBE	3.12%
63.0	GILD	3.58%	ABBV	3.06%
63.0	AA	3.55%	NEM	2.74%
63.0	CHTR	3.4%	PCG	2.58%
63.0	META	3.29%	CMA	2.47%
63.0	THC	3.25%	BHC	2.43%
63.0	GE	3.24%	BBY	2.34%
63.0	ABBV	3.16%	FSUGY	2.32%
63.0	DHI	3.08%	BIIB	2.31%
63.0	IRM	2.95%	MRK	2.26%
63.0	BA	2.4%	NWL	2.26%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
126.0	MSTR	46.29%	TSLA	16.89%
126.0	TSLA	32.27%	LEN	14.4%
126.0	GILD	12.6%	META	10.22%
126.0	LEN	11.35%	B	9.72%
126.0	CVS	10.94%	CVS	9.57%
126.0	META	9.82%	MSTR	9.41%
126.0	AZO	8.6%	NFLX	8.08%
126.0	PHM	7.82%	GILD	8.07%
126.0	NEM	7.37%	PCG	7.95%
126.0	EXPE	7.14%	PHM	6.52%
126.0	BA	7.11%	AZO	6.5%
126.0	GME	6.86%	IRM	6.48%
126.0	CHTR	6.81%	BBY	6.45%
126.0	B	6.76%	ADBE	6.04%
126.0	PCG	6.75%	CSTM	5.75%
126.0	ADBE	6.63%	LVS	4.91%
126.0	IRM	5.95%	AMAT	4.68%
126.0	UNH	4.98%	DHI	4.65%
126.0	AMAT	4.58%	XOM	3.54%
126.0	DHI	4.51%	CHTR	3.44%
126.0	ACGL	4.11%	AMD	3.3%
126.0	XOM	3.84%	UNH	3.29%
126.0	CTLT	3.77%	CMA	3.11%
126.0	CSTM	3.26%	NEM	2.95%
126.0	SLV	3.23%	AZN	2.91%

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 2025-06-27

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	CYH	-0.17%	NVDA	-0.16%
1.0	TSLA	-0.16%	VST	-0.15%
1.0	FRCB	-0.16%	GBTC	-0.14%
1.0	VST	-0.15%	TSLA	-0.09%
1.0	NVDA	-0.14%	GE	-0.08%
1.0	GBTC	-0.12%	CAH	-0.08%
1.0	T	-0.09%	CCL	-0.07%
1.0	ETRN	-0.09%	TRGP	-0.07%
1.0	FIS	-0.09%	LLY	-0.07%
1.0	CSTM	-0.09%	AAP	-0.07%
1.0	LUMN	-0.09%	X	-0.07%
1.0	CCL	-0.08%	ETRN	-0.07%
1.0	CHTR	-0.07%	PWR	-0.07%
1.0	ELAN	-0.07%	B	-0.06%
1.0	GE	-0.07%	ACGL	-0.06%
1.0	LLY	-0.07%	AVGO	-0.06%
1.0	TRGP	-0.06%	CMG	-0.06%
1.0	GILD	-0.06%	PHM	-0.06%
1.0	GSK	-0.05%	FRCB	-0.06%
1.0	X	-0.05%	FIS	-0.05%
1.0	PHM	-0.05%	THC	-0.05%
1.0	WFC	-0.05%	T	-0.05%
1.0	CAH	-0.05%	LUMN	-0.05%

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 2025-06-27

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	-1.67%	VST	-1.07%
10.0	TSLA	-1.08%	NVDA	-0.92%
10.0	AAP	-1.02%	TSLA	-0.83%
10.0	FRCB	-0.93%	AAP	-0.81%
10.0	VST	-0.9%	AVGO	-0.8%
10.0	NVDA	-0.85%	GBTC	-0.73%
10.0	GSK	-0.74%	AMC	-0.72%
10.0	CHTR	-0.67%	X	-0.68%
10.0	CCL	-0.65%	TRGP	-0.6%
10.0	FIS	-0.56%	CMG	-0.54%
10.0	LLY	-0.56%	PWR	-0.54%
10.0	GBTC	-0.56%	PHM	-0.53%
10.0	TRGP	-0.52%	LLY	-0.53%
10.0	TDG	-0.49%	GE	-0.48%
10.0	PHM	-0.46%	GSK	-0.45%
10.0	PRGO	-0.4%	COST	-0.45%
10.0	CYH	-0.38%	ISRG	-0.43%
10.0	X	-0.37%	CCL	-0.43%
10.0	BIIB	-0.37%	THC	-0.43%
10.0	CPRT	-0.36%	ACGL	-0.43%
10.0	BXP	-0.36%	CPRT	-0.42%
10.0	VFC	-0.34%	TDG	-0.41%
10.0	ISRG	-0.34%	CAH	-0.38%

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 2025-06-27

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	-4.18%
21.0	AMC	-3.03%	NVDA	-1.96%
21.0	AAP	-2.56%	VST	-1.76%
21.0	VST	-1.81%	COST	-1.23%
21.0	GSK	-1.52%	PHM	-1.23%
21.0	NVDA	-1.51%	X	-1.22%
21.0	CCL	-1.38%	ELAN	-1.14%
21.0	X	-1.07%	TRGP	-1.13%
21.0	TDG	-1.01%	AVGO	-1.13%
21.0	FIS	-0.96%	PWR	-1.07%
21.0	LLY	-0.91%	LLY	-1.06%
21.0	VFC	-0.89%	CDNS	-1.05%
21.0	CYH	-0.85%	ETRN	-0.97%
21.0	CHTR	-0.76%	FRCB	-0.96%
21.0	PHM	-0.71%	CMG	-0.92%
21.0	CPRT	-0.7%	GE	-0.91%
21.0	IRM	-0.68%	ORLY	-0.9%
21.0	ACGL	-0.67%	TDG	-0.88%
21.0	TRGP	-0.67%	ACGL	-0.87%
21.0	VNO	-0.66%	HSBC	-0.81%
21.0	TSLA	-0.66%	TSLA	-0.8%
21.0	LW	-0.64%	CPRT	-0.77%
21.0	PRGO	-0.64%	GWW	-0.74%

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 2025-06-27

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	-12.12%
63.0	AAP	-8.32%	PHM	-4.17%
63.0	VFC	-5.96%	NVDA	-3.59%
63.0	NVDA	-4.77%	VST	-3.44%
63.0	ON	-4.44%	TRGP	-3.14%
63.0	VNO	-3.2%	CPRT	-3.03%
63.0	PWR	-2.87%	GE	-2.97%
63.0	GSK	-2.65%	PWR	-2.93%
63.0	ELAN	-2.6%	CDNS	-2.78%
63.0	TSLA	-2.55%	DHI	-2.59%
63.0	BHC	-2.44%	GBTC	-2.56%
63.0	PHM	-2.35%	COST	-2.41%
63.0	VST	-2.29%	JPM	-2.32%
63.0	CPRT	-2.23%	CHTR	-2.25%
63.0	FIS	-2.22%	ORLY	-1.98%
63.0	CHTR	-2.2%	ON	-1.92%
63.0	UNH	-1.94%	GWW	-1.84%
63.0	GBTC	-1.93%	PCG	-1.83%
63.0	CCL	-1.8%	IRM	-1.82%
63.0	TLT	-1.77%	GLD	-1.69%
63.0	TRGP	-1.48%	MNST	-1.64%
63.0	BIIB	-1.47%	ACGL	-1.64%

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 2025-06-27

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	-25.66%	AMC	-14.76%
126.0	VFC	-15.3%	AAP	-8.73%
126.0	AAP	-13.08%	CHTR	-7.43%
126.0	BHC	-7.27%	PHM	-7.11%
126.0	PHM	-6.98%	CPRT	-5.75%
126.0	PWR	-6.04%	TRGP	-5.67%
126.0	ELAN	-5.06%	GE	-5.55%
126.0	CPRT	-4.87%	JPM	-5.32%
126.0	CCL	-4.85%	CDNS	-4.46%
126.0	JPM	-4.43%	VFC	-4.45%
126.0	TRGP	-4.2%	PWR	-4.36%
126.0	THC	-4.07%	AA	-4.23%
126.0	CHTR	-3.93%	ACGL	-4.17%
126.0	JAZZ	-3.4%	MS	-4.15%
126.0	GSK	-3.36%	THC	-3.77%
126.0	IEP	-3.33%	NVDA	-3.39%
126.0	MS	-3.25%	VST	-3.39%
126.0	TLT	-2.87%	PCG	-3.04%
126.0	LNC	-2.56%	FIS	-3.03%
126.0	NVDA	-2.55%	ELAN	-2.9%
126.0	HLT	-2.42%	GS	-2.88%
126.0	MOS	-2.42%	DHI	-2.63%

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 2025-06-27

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	-48.88%	AAP	-32.03%
252.0	AAP	-38.92%	AMC	-19.27%
252.0	VFC	-19.56%	BIIB	-13.57%
252.0	BIIB	-15.41%	VFC	-11.58%
252.0	AA	-13.62%	AA	-10.81%
252.0	PHM	-13.28%	CHTR	-10.14%
252.0	IEP	-12.49%	OXY	-8.74%
252.0	OXY	-10.62%	FIS	-7.99%
252.0	NWL	-9.76%	CPRT	-7.27%
252.0	UAA	-9.65%	JPM	-7.14%
252.0	CHTR	-9.28%	LLY	-6.95%
252.0	BHC	-9.0%	JAZZ	-6.62%
252.0	MOS	-8.44%	PHM	-6.14%
252.0	PRGO	-7.73%	ACGL	-5.62%
252.0	PWR	-7.72%	MS	-5.62%
252.0	JPM	-7.29%	KEY	-5.47%
252.0	CVS	-7.24%	PWR	-5.3%
252.0	TLT	-6.27%	TRGP	-5.02%
252.0	JAZZ	-6.19%	ELAN	-4.88%
252.0	MS	-5.97%	GS	-4.61%
252.0	CLF	-5.8%	ZION	-4.54%
252.0	CCL	-5.63%	NWL	-4.5%

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 2025-06-27 through 2025-06-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	TSLA	-1.24%	TSLA	-1.13%
1.0	GME	-1.14%	AMC	-0.87%
1.0	ZTS	-1.02%	ZTS	-0.86%
1.0	AMC	-0.91%	ORCL	-0.65%
1.0	AAP	-0.45%	CCL	-0.47%
1.0	AVGO	-0.35%	CMG	-0.46%
1.0	NVDA	-0.31%	LUMN	-0.45%
1.0	MS	-0.27%	NVDA	-0.44%
1.0	PHM	-0.26%	GME	-0.41%
1.0	GS	-0.24%	AMD	-0.4%
1.0	CAH	-0.24%	AVGO	-0.37%
1.0	TRGP	-0.24%	NAVI	-0.29%
1.0	WYNN	-0.2%	GS	-0.29%
1.0	TFC	-0.2%	CAH	-0.28%
1.0	PRGO	-0.2%	PHM	-0.27%
1.0	ELAN	-0.19%	TFC	-0.26%
1.0	VZ	-0.18%	BALL	-0.26%
1.0	CSCO	-0.18%	TRGP	-0.26%
1.0	CCL	-0.17%	MS	-0.25%
1.0	BALL	-0.15%	DHI	-0.24%
1.0	UAA	-0.14%	KEY	-0.24%
1.0	KALU	-0.12%	CSCO	-0.23%
1.0	ISRG	-0.12%	JPM	-0.22%
1.0	GBTC	-0.12%	NWL	-0.22%
1.0	LVS	-0.12%	UAA	-0.21%

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 2025-06-27 through 2025-06-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	AMC	-17.31%	AMC	-17.31%
10.0	AAP	-12.76%	AAP	-11.22%
10.0	ZTS	-8.28%	ADBE	-6.35%
10.0	ADBE	-6.88%	ZTS	-6.17%
10.0	GME	-5.81%	ORCL	-6.02%
10.0	VFC	-3.2%	AMD	-4.96%
10.0	VZ	-3.2%	VST	-4.73%
10.0	CAH	-2.59%	GME	-4.55%
10.0	CMG	-2.1%	XOM	-3.29%
10.0	AMGN	-1.76%	CAH	-2.88%
10.0	CSCO	-1.74%	CMG	-2.73%
10.0	NVDA	-1.68%	AMAT	-2.72%
10.0	BHP	-1.67%	GS	-2.66%
10.0	BALL	-1.63%	CSCO	-1.74%
10.0	MS	-1.51%	NFLX	-1.65%
10.0	AMAT	-1.5%	TFC	-1.61%
10.0	TRGP	-1.43%	TRGP	-1.59%
10.0	JAZZ	-1.36%	ZION	-1.46%
10.0	LVS	-1.14%	LVS	-1.43%
10.0	NFLX	-1.07%	BALL	-1.43%
10.0	LW	-1.06%	MS	-1.43%
10.0	AVGO	-1.01%	NVDA	-1.27%
10.0	CCL	-0.94%	LW	-1.14%
10.0	BXP	-0.94%	JPM	-1.09%
10.0	LUMN	-0.93%	LUMN	-1.09%

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 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	CYH	-0.6%	CYH	-0.57%
1.0	CCL	-0.41%	CCL	-0.52%
1.0	NAVI	-0.4%	NVDA	-0.48%
1.0	TSLA	-0.37%	VST	-0.43%
1.0	AMD	-0.36%	AMD	-0.4%
1.0	CVS	-0.36%	X	-0.39%
1.0	X	-0.35%	MOS	-0.38%
1.0	NVDA	-0.32%	AAP	-0.36%
1.0	MOS	-0.31%	GBTC	-0.32%
1.0	INTC	-0.25%	NAVI	-0.31%
1.0	WYNN	-0.24%	INTU	-0.29%
1.0	ZTS	-0.21%	LUMN	-0.25%
1.0	GBTC	-0.2%	WYNN	-0.24%
1.0	MS	-0.19%	ZTS	-0.24%
1.0	UNH	-0.18%	KEY	-0.23%
1.0	CAH	-0.18%	TSLA	-0.22%
1.0	USB	-0.17%	CAH	-0.22%
1.0	GE	-0.15%	LVS	-0.22%
1.0	THC	-0.15%	THC	-0.21%
1.0	ISRG	-0.14%	UAA	-0.21%
1.0	HSBC	-0.14%	BA	-0.2%
1.0	CMG	-0.13%	MS	-0.2%
1.0	FIS	-0.13%	AVGO	-0.19%
1.0	ACGL	-0.13%	NFLX	-0.19%
1.0	GT	-0.12%	USB	-0.19%

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 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	MOS	-3.0%	VST	-4.82%
10.0	GBTC	-2.64%	AAP	-4.62%
10.0	VST	-2.18%	MOS	-4.5%
10.0	UNH	-2.12%	LVS	-3.6%
10.0	NFLX	-1.99%	GBTC	-3.29%
10.0	NVDA	-1.98%	INTU	-3.16%
10.0	CVS	-1.96%	NFLX	-2.24%
10.0	CYH	-1.75%	CYH	-2.12%
10.0	CSCO	-1.62%	CSCO	-2.08%
10.0	HSBC	-1.51%	AMD	-2.04%
10.0	WYNN	-1.42%	CCL	-2.01%
10.0	LUMN	-1.36%	CDNS	-1.98%
10.0	GT	-1.35%	UAA	-1.76%
10.0	LVS	-1.28%	AVGO	-1.66%
10.0	CCL	-1.22%	HON	-1.63%
10.0	FIS	-1.22%	GT	-1.54%
10.0	LLY	-1.14%	FIS	-1.47%
10.0	CAH	-1.11%	BA	-1.45%
10.0	NWL	-1.06%	ADBE	-1.44%
10.0	USB	-0.96%	HSBC	-1.35%
10.0	ISRG	-0.96%	USB	-1.35%
10.0	GLD	-0.9%	XOM	-1.28%
10.0	CMG	-0.81%	CAH	-1.25%
10.0	MNST	-0.65%	MSFT	-1.23%
10.0	VZ	-0.65%	VFC	-1.2%

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 2025-06-27 through 2025-04-03

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	MOS	-6.79%	MOS	-9.36%
21.0	VST	-5.95%	AAP	-7.48%
21.0	CYH	-5.76%	LVS	-7.47%
21.0	CDNS	-4.97%	INTU	-6.5%
21.0	GBTC	-3.84%	MSFT	-6.43%
21.0	CVS	-3.71%	NFLX	-6.1%
21.0	CSCO	-3.4%	VST	-5.76%
21.0	LVS	-3.27%	GBTC	-5.72%
21.0	UNH	-2.93%	CSCO	-5.71%
21.0	GT	-2.47%	CYH	-5.41%
21.0	HSBC	-2.42%	WFC	-4.85%
21.0	USB	-2.24%	QQQ	-4.23%
21.0	WYNN	-2.13%	HSBC	-3.99%
21.0	MNST	-1.6%	HON	-3.8%
21.0	FIS	-1.5%	WYNN	-3.67%
21.0	BMY	-1.46%	CAH	-3.61%
21.0	CAH	-1.46%	AMD	-3.51%
21.0	UAA	-1.4%	GME	-3.5%
21.0	LLY	-1.4%	CDNS	-2.86%
21.0	CMG	-1.36%	BIIB	-2.8%
21.0	GLD	-1.22%	GT	-2.8%
21.0	LUMN	-1.12%	UAA	-2.75%
21.0	NFLX	-1.11%	TSLA	-2.54%
21.0	RIO	-1.04%	ISRG	-2.44%
21.0	NVDA	-1.03%	HLT	-2.43%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	WRK	-1.76%	WRK	-1.6%
1.0	VST	-0.31%	LUMN	-0.32%
1.0	LUMN	-0.28%	VST	-0.19%
1.0	CSTM	-0.26%	CCL	-0.16%
1.0	AVGO	-0.25%	AAP	-0.16%
1.0	CYH	-0.24%	CYH	-0.14%
1.0	AMC	-0.16%	CAH	-0.14%
1.0	CMA	-0.16%	AVGO	-0.13%
1.0	NAVI	-0.15%	GBTC	-0.11%
1.0	UAA	-0.14%	NAVI	-0.11%
1.0	CAH	-0.13%	T	-0.11%
1.0	ISRG	-0.12%	ETRN	-0.11%
1.0	TSLA	-0.12%	HSBC	-0.1%
1.0	CCL	-0.12%	NFLX	-0.1%
1.0	VNO	-0.11%	NVDA	-0.1%
1.0	ETRN	-0.11%	VNO	-0.1%
1.0	CVS	-0.1%	TSLA	-0.1%
1.0	TRGP	-0.09%	TRGP	-0.09%
1.0	HSBC	-0.09%	X	-0.09%
1.0	TMUS	-0.09%	GLD	-0.09%
1.0	GLD	-0.09%	GE	-0.09%
1.0	MS	-0.08%	MOS	-0.09%
1.0	USB	-0.08%	KEY	-0.09%
1.0	MOS	-0.08%	USB	-0.09%
1.0	PEP	-0.07%	BMY	-0.08%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	LUMN	-2.64%	LUMN	-2.61%
10.0	AMC	-2.23%	AAP	-2.07%
10.0	VST	-1.63%	VST	-1.52%
10.0	AAP	-1.01%	T	-1.18%
10.0	BIIB	-0.89%	NFLX	-1.08%
10.0	CLF	-0.89%	BMY	-1.08%
10.0	NFLX	-0.85%	CSCO	-0.97%
10.0	TRGP	-0.78%	AVGO	-0.95%
10.0	GLD	-0.75%	GBTC	-0.95%
10.0	T	-0.75%	CAH	-0.89%
10.0	CSTM	-0.74%	CCL	-0.84%
10.0	TSLA	-0.72%	TRGP	-0.81%
10.0	TMUS	-0.7%	CMA	-0.74%
10.0	CSCO	-0.66%	GLD	-0.74%
10.0	BMY	-0.62%	ORLY	-0.72%
10.0	CAH	-0.6%	MOS	-0.71%
10.0	CYH	-0.58%	TMUS	-0.64%
10.0	BALL	-0.57%	WFC	-0.61%
10.0	ISRG	-0.55%	HSBC	-0.59%
10.0	GBTC	-0.53%	CLF	-0.59%
10.0	VZ	-0.53%	ISRG	-0.54%
10.0	GSK	-0.51%	MNST	-0.54%
10.0	MOS	-0.51%	HCA	-0.52%
10.0	HSBC	-0.51%	INTU	-0.5%
10.0	ON	-0.51%	TSLA	-0.49%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	VST	-4.56%	NFLX	-3.04%
21.0	LUMN	-3.13%	VST	-2.64%
21.0	AAP	-3.11%	T	-2.54%
21.0	CSTM	-2.14%	ELAN	-2.37%
21.0	ON	-2.1%	AAP	-2.17%
21.0	BIIB	-1.77%	CSCO	-2.1%
21.0	CZR	-1.65%	CAH	-1.95%
21.0	CLF	-1.61%	HSBC	-1.88%
21.0	NFLX	-1.61%	WFC	-1.82%
21.0	T	-1.57%	CCL	-1.54%
21.0	GLD	-1.42%	WYNN	-1.43%
21.0	TMUS	-1.39%	TRGP	-1.4%
21.0	TRGP	-1.37%	VNO	-1.34%
21.0	GSK	-1.3%	ORLY	-1.32%
21.0	HSBC	-1.26%	GLD	-1.29%
21.0	CSCO	-1.18%	LUMN	-1.29%
21.0	CAH	-1.14%	BMY	-1.28%
21.0	CYH	-1.07%	TMUS	-1.26%
21.0	MOS	-1.07%	ISRG	-1.24%
21.0	COST	-1.03%	MOS	-1.22%
21.0	MNST	-1.02%	AVGO	-1.2%
21.0	LW	-1.01%	COST	-1.16%
21.0	CMA	-1.0%	MNST	-1.13%
21.0	BMY	-0.92%	GBTC	-1.08%
21.0	ORLY	-0.77%	HCA	-1.05%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
63.0	ON	-15.4%	T	-6.37%
63.0	AAP	-11.49%	ON	-6.32%
63.0	VST	-7.39%	GNRC	-5.63%
63.0	UNH	-7.16%	CCL	-5.2%
63.0	CLF	-6.72%	WFC	-5.16%
63.0	GBTC	-4.65%	CSCO	-5.15%
63.0	T	-4.61%	HSBC	-4.46%
63.0	VNO	-4.25%	GBTC	-3.93%
63.0	CSCO	-4.23%	VNO	-3.68%
63.0	MNST	-3.8%	JPM	-3.65%
63.0	GOOGL	-3.69%	ORLY	-3.46%
63.0	BIIB	-3.65%	ZION	-3.43%
63.0	TMUS	-3.5%	NFLX	-3.23%
63.0	NFLX	-3.33%	CAH	-3.15%
63.0	MS	-2.98%	MNST	-3.03%
63.0	GLD	-2.91%	GLD	-2.93%
63.0	AMZN	-2.9%	TRGP	-2.91%
63.0	HSBC	-2.87%	MS	-2.71%
63.0	LW	-2.63%	COST	-2.7%
63.0	GT	-2.62%	ELAN	-2.61%
63.0	ORLY	-2.55%	MOS	-2.49%
63.0	TRGP	-2.35%	X	-2.48%
63.0	LUMN	-2.29%	TMUS	-2.39%
63.0	OXY	-2.23%	CLF	-2.3%
63.0	AVGO	-2.22%	GWW	-2.24%

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 2025-06-27 through 2024-07-02

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
126.0	CLF	-16.49%	CLF	-9.68%
126.0	GNRC	-15.87%	T	-9.66%
126.0	AAP	-11.24%	GNRC	-9.27%
126.0	CZR	-9.78%	CSCO	-9.13%
126.0	BIIB	-9.72%	JPM	-8.77%
126.0	ON	-9.46%	TRGP	-8.1%
126.0	VFC	-8.79%	MS	-7.7%
126.0	UAA	-8.68%	ELAN	-7.29%
126.0	CSCO	-8.46%	ON	-6.56%
126.0	JPM	-8.46%	WFC	-6.22%
126.0	ELAN	-8.09%	AA	-5.98%
126.0	T	-7.9%	LUMN	-5.98%
126.0	LUMN	-7.55%	HSBC	-5.57%
126.0	LW	-7.36%	LW	-5.57%
126.0	TRGP	-7.22%	KALU	-5.13%
126.0	BHC	-7.13%	COST	-4.95%
126.0	GBTC	-6.92%	CCL	-4.67%
126.0	OXY	-6.36%	CAH	-4.13%
126.0	WFC	-6.11%	ZTS	-4.13%
126.0	MS	-5.98%	BUD	-3.89%
126.0	NWL	-5.25%	ZION	-3.39%
126.0	TMUS	-5.22%	VFC	-3.38%
126.0	KALU	-4.12%	OXY	-3.27%
126.0	NAVI	-4.06%	ORLY	-3.23%
126.0	ISRG	-3.85%	MOS	-2.87%

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 probabilty of the Kupiec statistic occuring is obtained from the chi-squared distribution. The lower the statitic, the higher the p-Value, and the more likely that Sigma's VaR breakage is consistent with expectations.

The Christoferson VaR Violation Indepence test statistic (listed as VaR_chrStat in the table below) and its probabilty (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 expecataion given the specified probability level. The probabilty of the Christoferson statistic occuring is obtained from the chi-squared distribution. The lower the statitic, the higher the p-Value, and the more likely that Sigma 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 2025-06-27. 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	2.71	0.1	11.21	0
Sigma	95	10	8.1	0	0.45	0.5
Sigma	95	21	9.78	0	0	0.98
Sigma	95	63	3.87	0.05	nan	0
Sigma	95	126	11.33	0	nan	0
Sigma	95	252	8.57	0	nan	0
Sigma	99	1	1561.61	0	20.9	0
Sigma	99	10	170.97	0	1.65	0.2
Sigma	99	21	26.7	0	0.44	0.51
Sigma	99	63	6.4	0.01	0.75	0.39
Sigma	99	126	1.78	0.18	nan	0
Sigma	99	252	0.53	0.47	nan	0