

# VecViz Value At Risk (VaR) Performance Report

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29 May 2026

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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.



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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.



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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.



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## 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](http://vecviz.com).



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## 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



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## 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/) (<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



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listed equities, that assumption is likely appropriate. However, if the Vector Model were applied to commodities or perhaps other potentially illiquid securities we would likely have to remove that floor for such tickers, and the resulting impact on model performance for such tickers has not yet been researched.

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

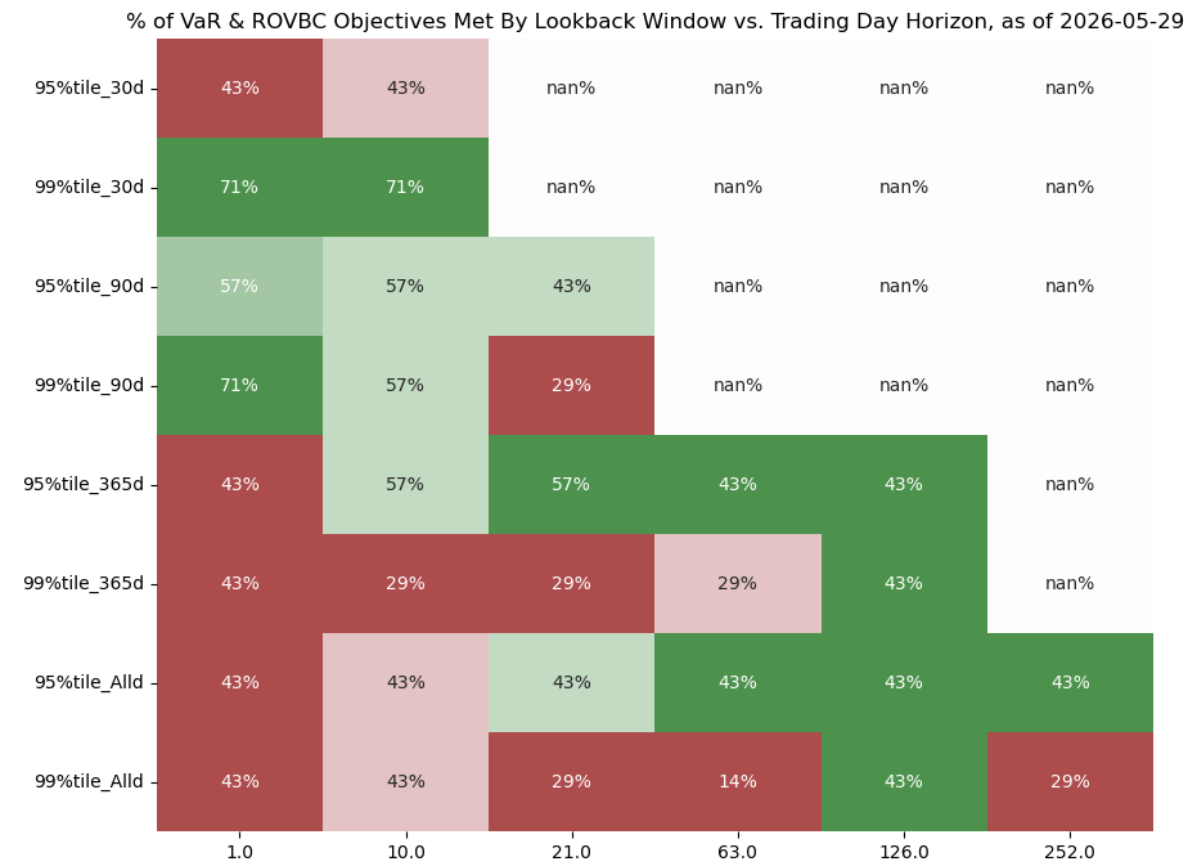
Thus, in summary, with the exception of the Kupiec and Christoferson tests, all metrics presented in this report are presented and are to be considered on a comparative basis. Are Vector Model VaR breakage rates closer to target than Sigma's? Does Vector Model ROVBC outperform Sigma ROVBC? Is the relative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



## Value at Risk (VaR) Report Cards

Period examined: AllD = 2022-01-31 through 2026-05-28 while 365D /90D/ 30D include the 365/90/30 days ended 2026-05-28, respectively.

### Sigma Comparison Report Card:



### Vector Model Statistical Testing Report Card:

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



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

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

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

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

Model	Pctile	Horizon	VaR_kStat	VaR_pValK	VaR_chrStat	VaR_pValChr
Vector	95	1	0.49	0.49	9.87	0
Vector	95	10	16.57	0	0.01	0.92
Vector	95	21	4.39	0.04	0	0.97
Vector	95	63	1.3	0.25	0.8	0.37
Vector	95	126	0.32	0.57	0.17	0.68
Vector	95	252	0.16	0.69	-0	1
Vector	99	1	98.1	0	29.3	0
Vector	99	10	25.64	0	0.3	0.58
Vector	99	21	8.44	0	1.94	0.16
Vector	99	63	1.51	0.22	0.01	0.91
Vector	99	126	0.9	0.34	0.54	0.46
Vector	99	252	5.07	0.02	-0	1



## Combined Summary Report Card By Objective:

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

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

Period examined: 2022-01-31 through 2026-05-28.

VaR and ROVBC Criteria	Average Score(%)
1. Closer to Target VaR Breakage Than Sigma (i.e., smaller MAE)	71.88
2. Less Volatile VaR Breakage Across Model Dates Than Sigma	46.88
3. Less Volatile VaR Breakage Across Tickers Than Sigma	0
4. Higher ROVBC Than Sigma	56.25
5. Higher ROVBC Than Sigma, Adj. for Avg. VM-Sigma VaR Diff.	100
6. Alpha of ROVBC vs Sigma $>0$ , Across Tickers and Model Dates	18.75
7. Alpha of ROVBC vs Sigma $>0$ , By Ticker, Across Model Dates	15.62
Overall Comparison to Sigma Average	44.2
Kupiec Test of VaR Proximity to Target	50
Christoferson Test of VaR Date Independence	83.3333

VaR and ROVBC Criteria by Fwd Hzn	1D	10D	21D	63D	126D	252D
1. Closer to Target VaR Breakage Than Sigma	87.5	50	66.67	75	100	50
2. Less Volatile VaR Breakage Across Model Dates Than Sigma	100	50	50	0	0	0
3. Less Volatile VaR Breakage Across Tickers Than Sigma	0	0	0	0	0	0
4. Higher ROVBC Than Sigma	12.5	75	50	50	100	100
5. Higher ROVBC Than Sigma, Adj. for Avg. VM-Sigma VaR Diff.	100	100	100	100	100	100
6. Alpha of ROVBC vs Sigma $>0$ , Across Tickers and Model Dates	37.5	37.5	0	0	0	0
7. Alpha of ROVBC vs Sigma $>0$ , By Ticker, Across Model Dates	25	37.5	0	0	0	0
TotalScore	51.79	50	38.1	32.14	42.86	35.71



VaR and ROVBC Criteria Across Lookback Window	30D	90D	365D	AllD
1. Closer to Target VaR Breakage Than Sigma	100	50	80	66.67
2. Less Volatile VaR Breakage Across Model Dates Than Sigma	50	33.33	60	41.67
3. Less Volatile VaR Breakage Across Tickers Than Sigma	0	0	0	0
4. Higher ROVBC Than Sigma	50	66.67	50	58.33
5. Higher ROVBC Than Sigma, Adj. for Avg. VM-Sigma VaR Diff.	100	100	100	100
6. Alpha of ROVBC vs Sigma >0, Across Tickers and Model Dates	50	66.67	0	0
7. Alpha of ROVBC vs Sigma >0, By Ticker, Across Model Dates	50	50	0	0
TotalScore	57.14	52.38	41.43	38.1



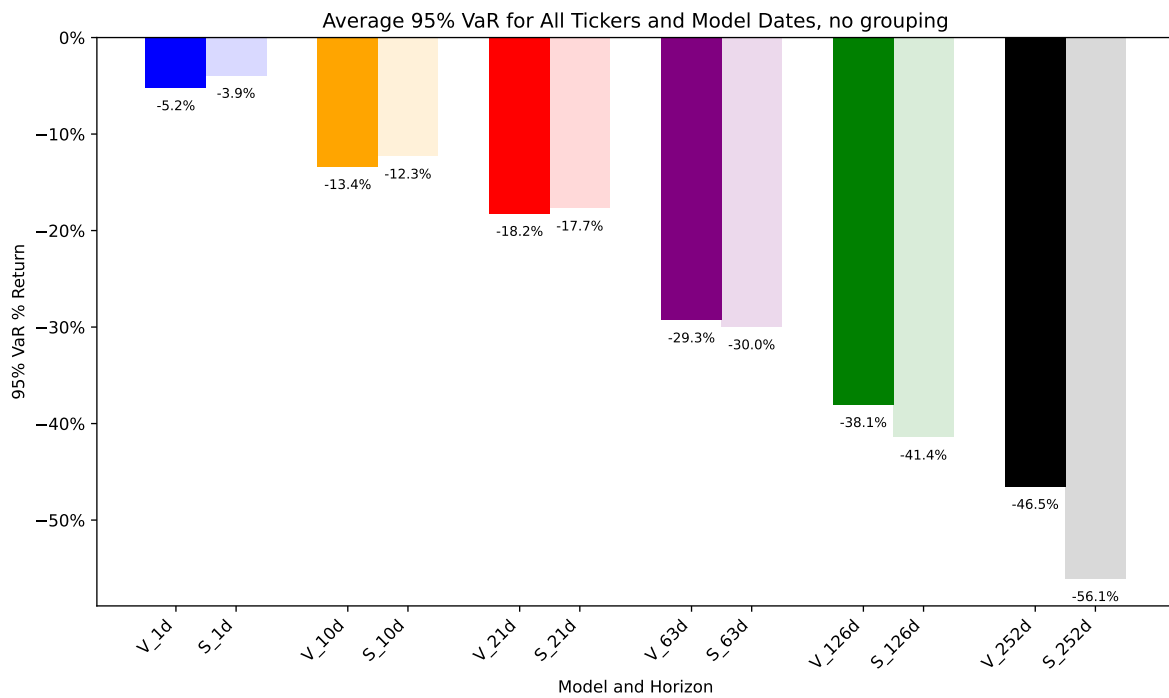
# 95% Value at Risk (VaR)

## Historic Average Levels

Here we compare Vector Model (“V”, dark shading) and Sigma (“S”, light shading) 95% VaR levels by horizon, on average across tickers. We make this comparison on average across tickers for select cohorts of model dates (ex: P30D), and forward horizons (ex: 21d) for all ticker model dates thru the present.

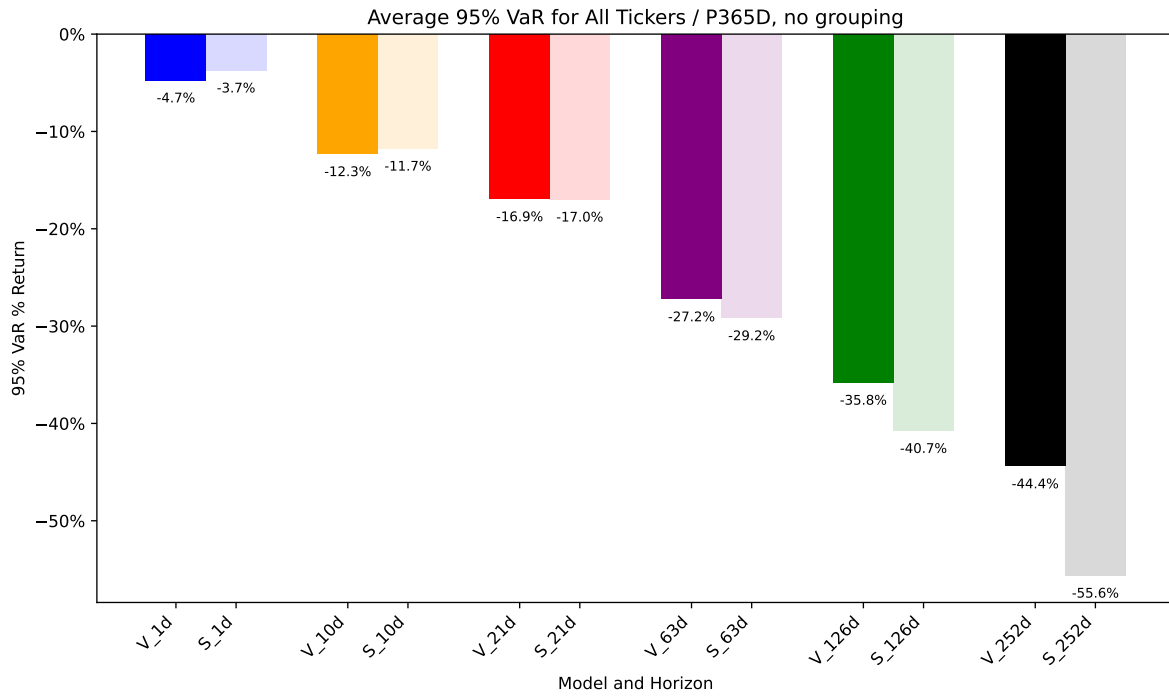
## All Out of Sample Model Dates

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



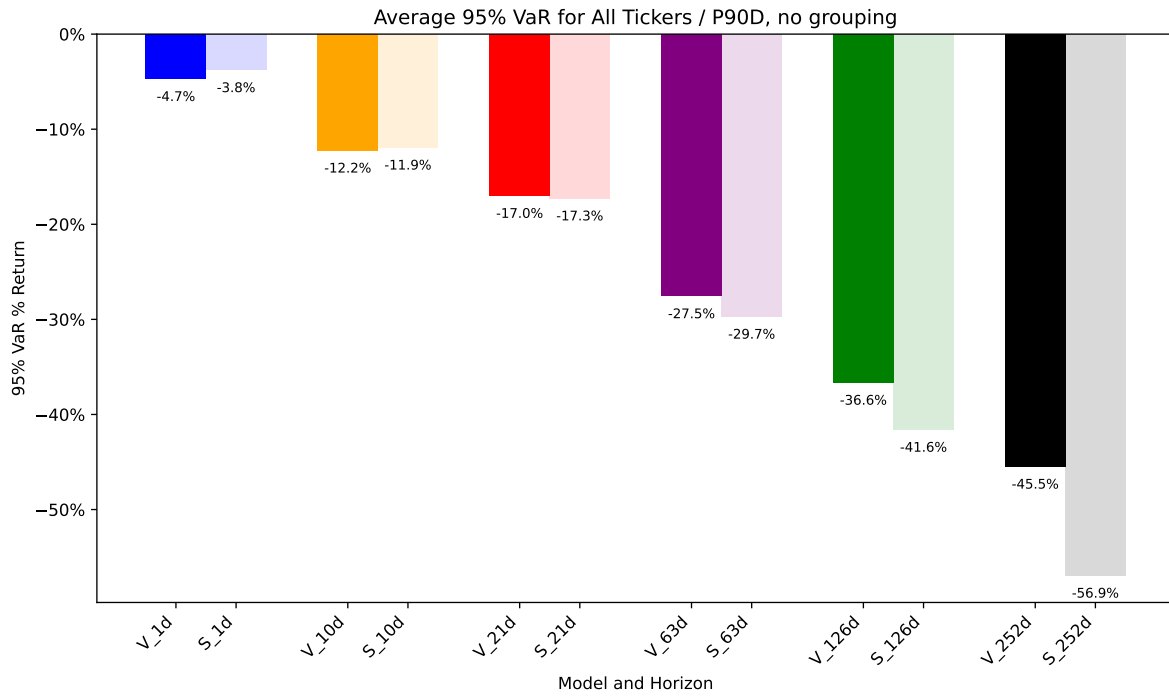
## Prior 365 Calendar Days (P365D)

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



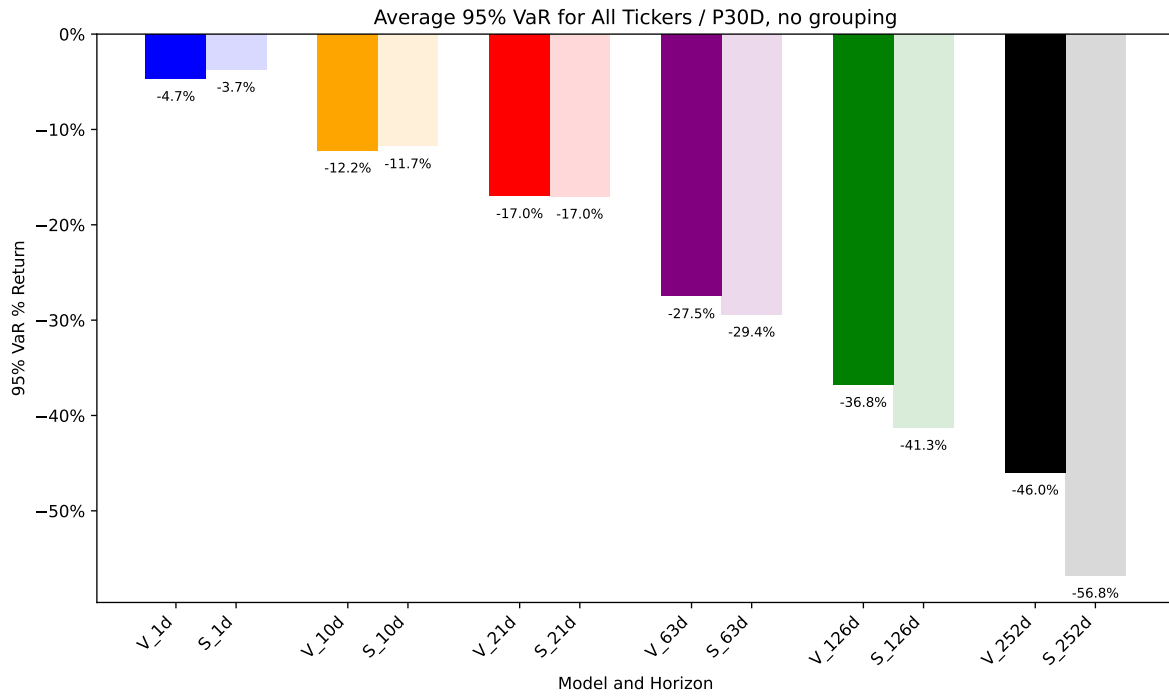
## Prior 90 Calendar Days (P90D)

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



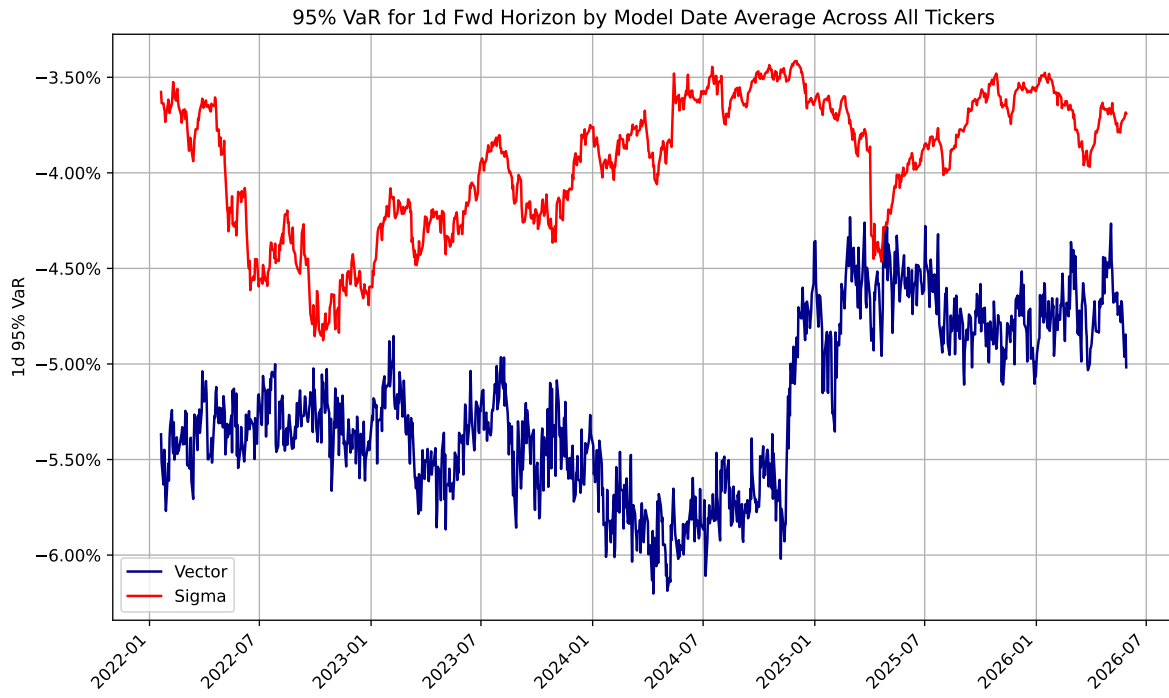
## Prior 30 Calendar Days (P30D)

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

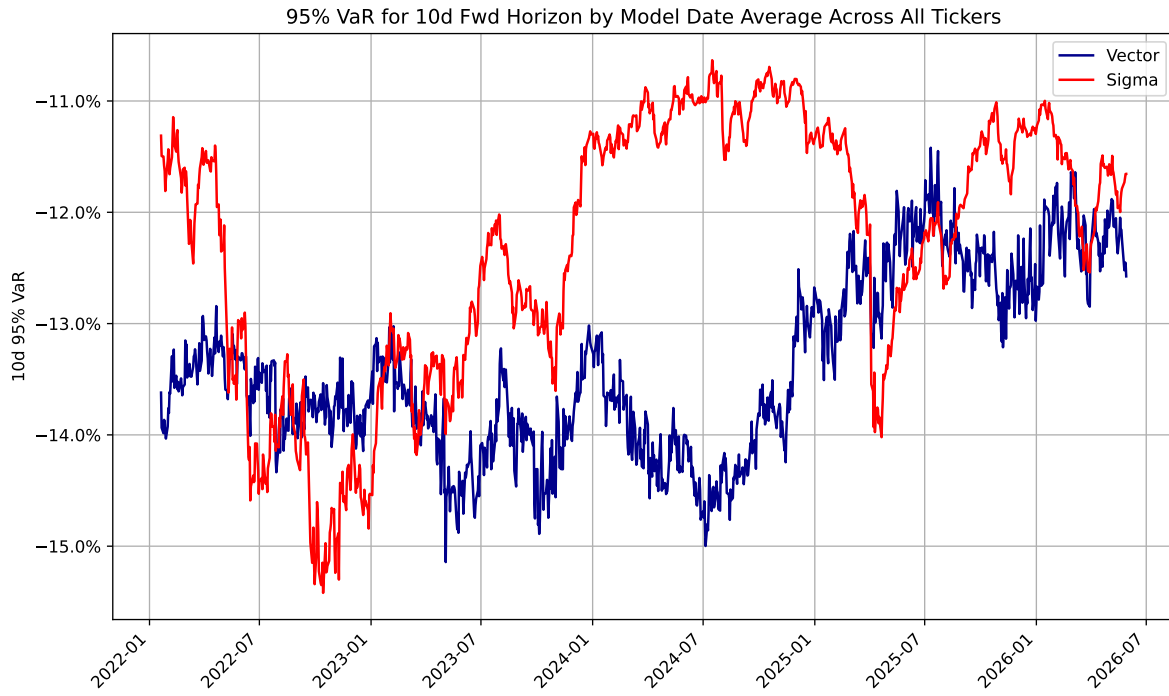


## Daily Levels

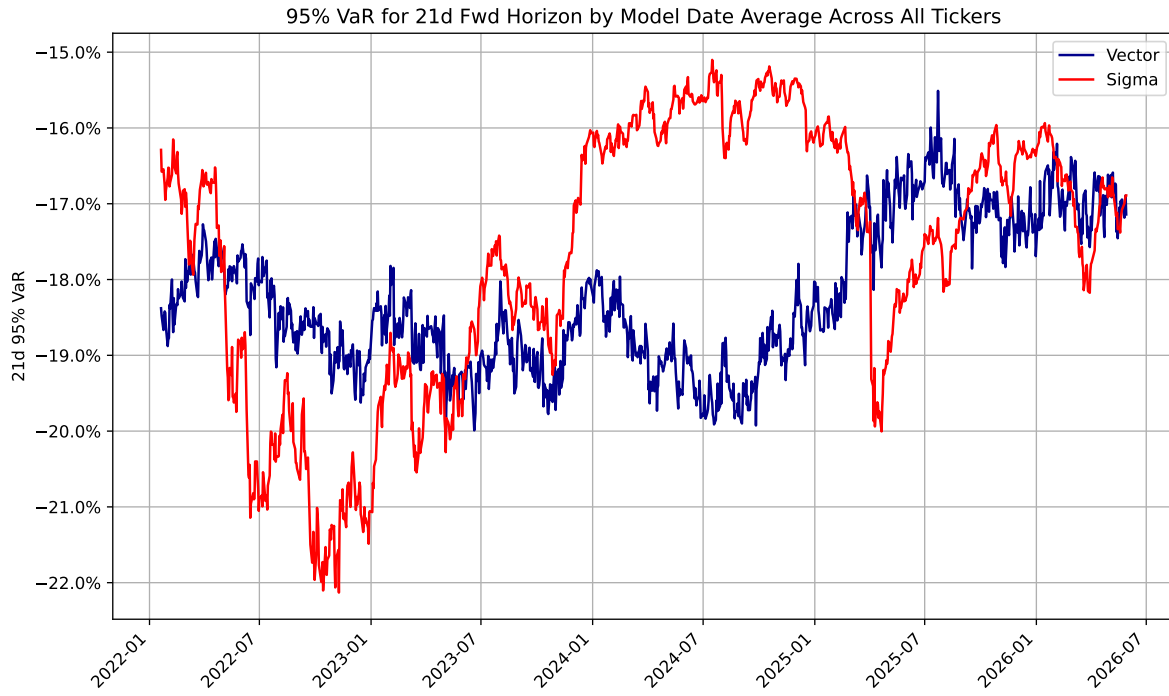
### 1d Horizon



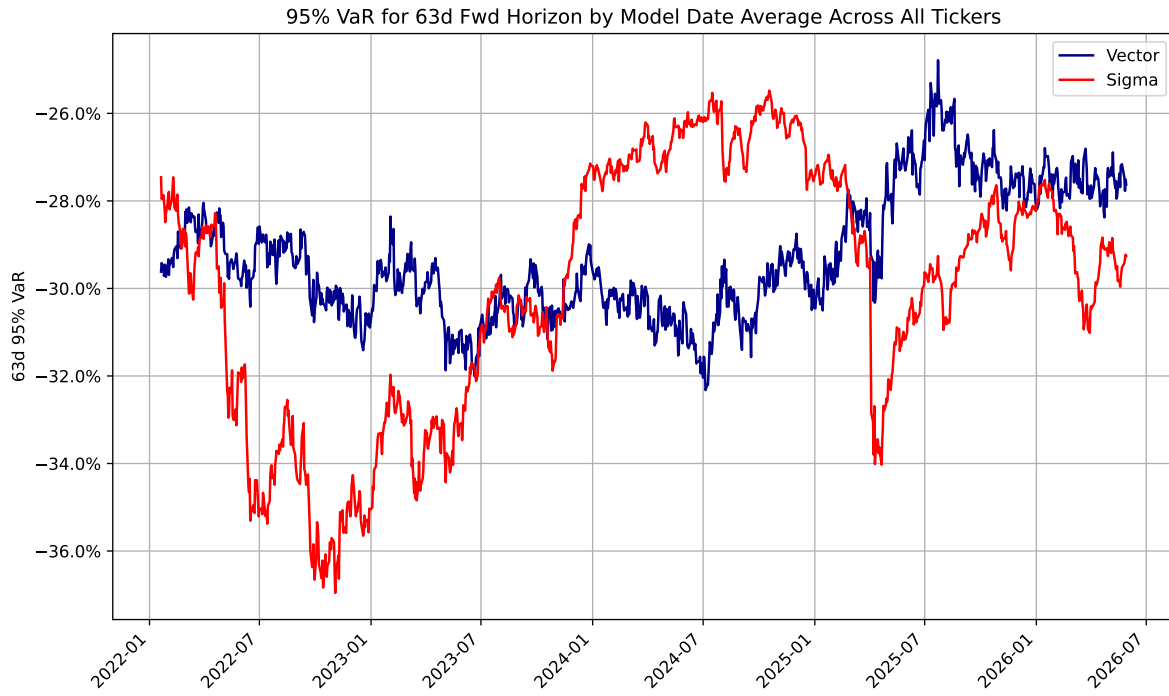
## 10d Horizon



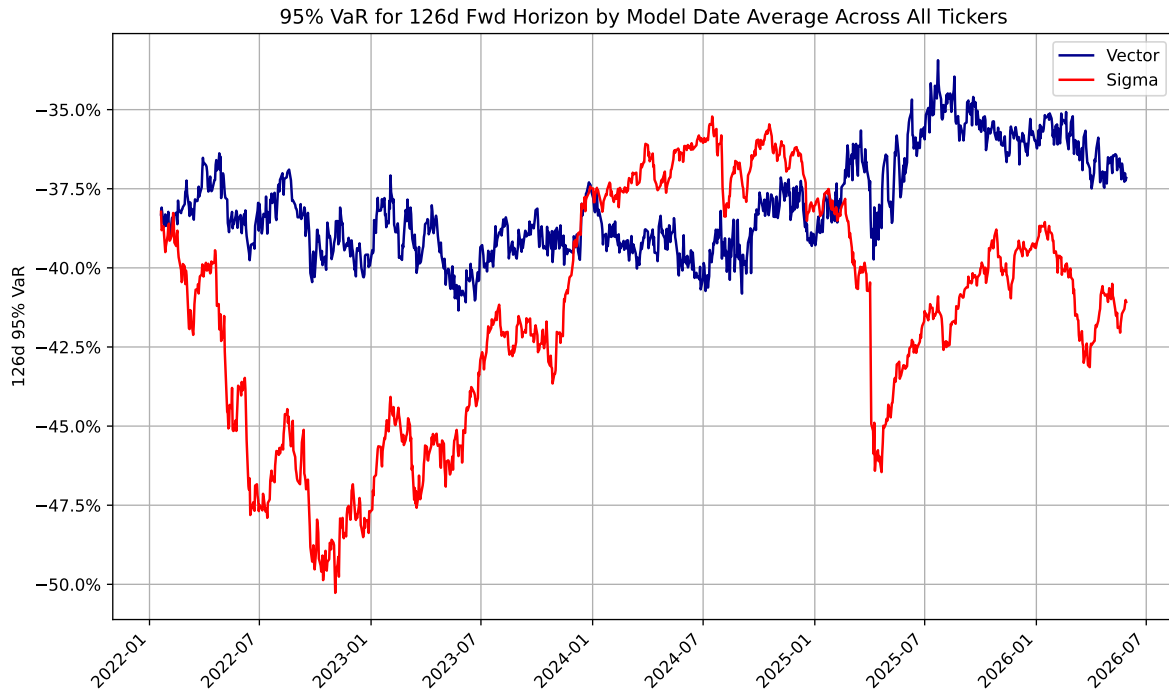
## 21d Horizon



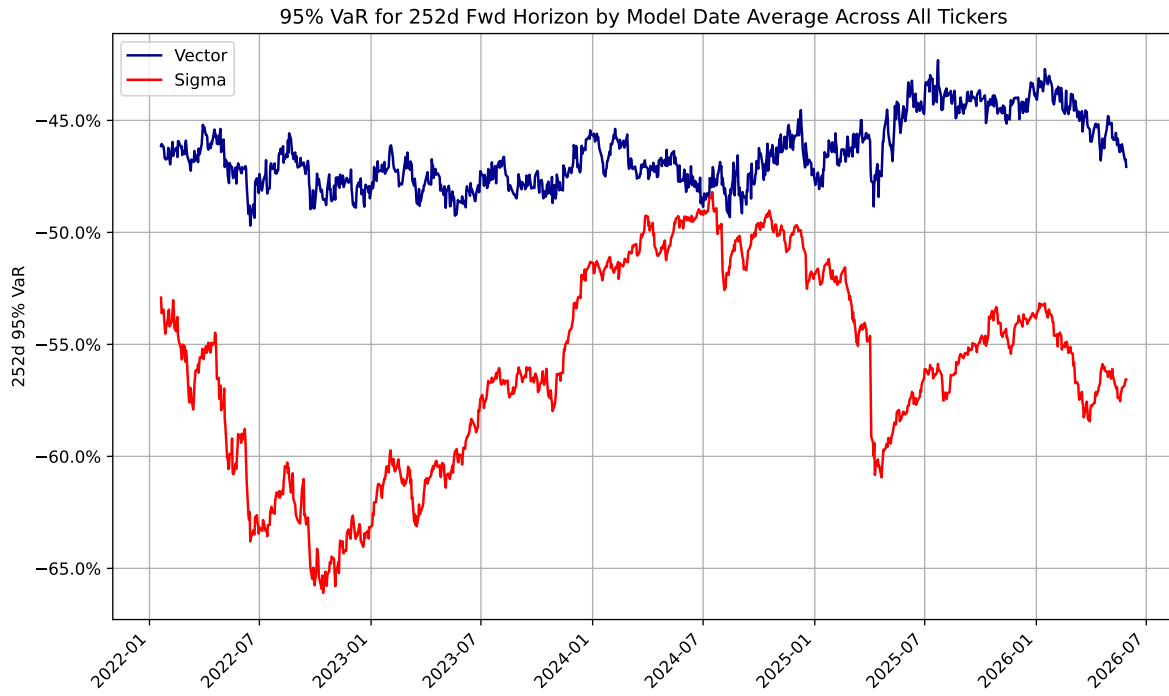
## 63d Horizon



## 126d Horizon



## 252d Horizon



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## Performance Summary

Here we compare the performance of 95% VaR estimates generated by the Vector Model (“V”, presented with dark shading) with those generated by Sigma (“S”, presented with light shading). This comparison is made on the basis of VaR breakage rates and Return on VaR based Capital (ROVBC), presenting the average results across tickers and model dates for model dates in the period indicated.

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

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

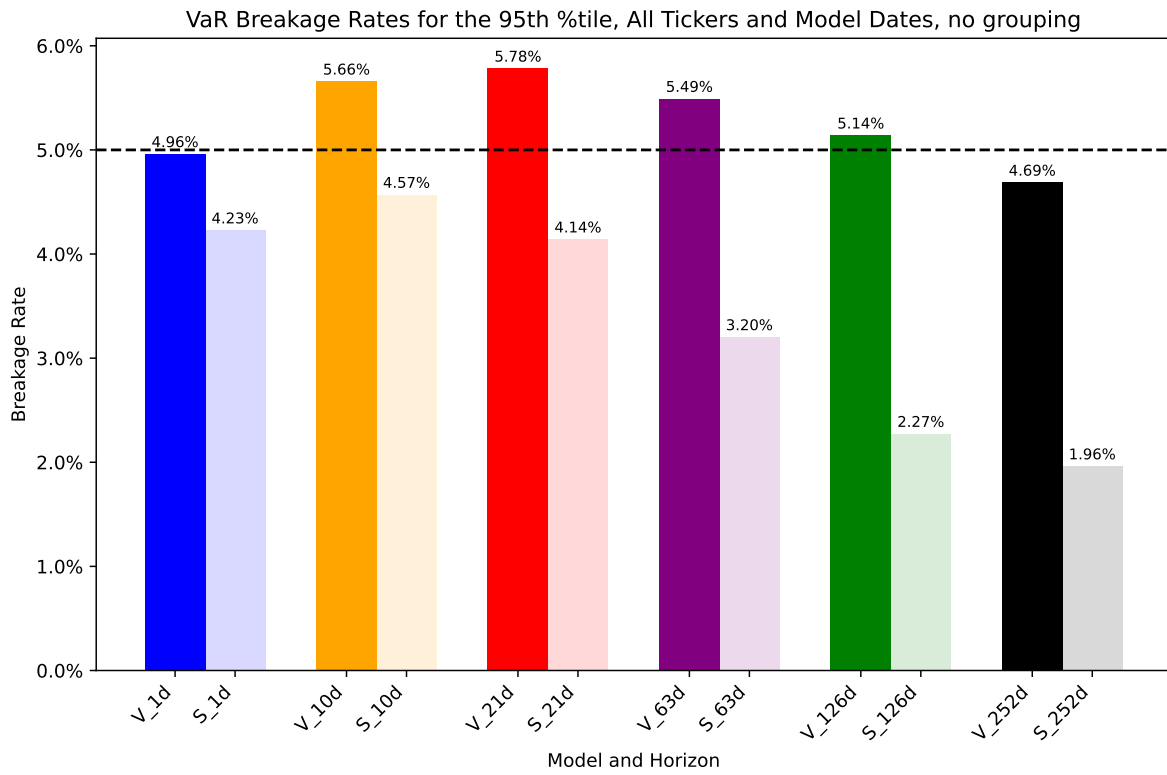
Alpha allows us to isolate ROVBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROVBC multiplier for the Vector Model and 1.00x. Alpha across TMD’s could be driven by VaR differentials between tickers and / or between dates. Thus we also present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

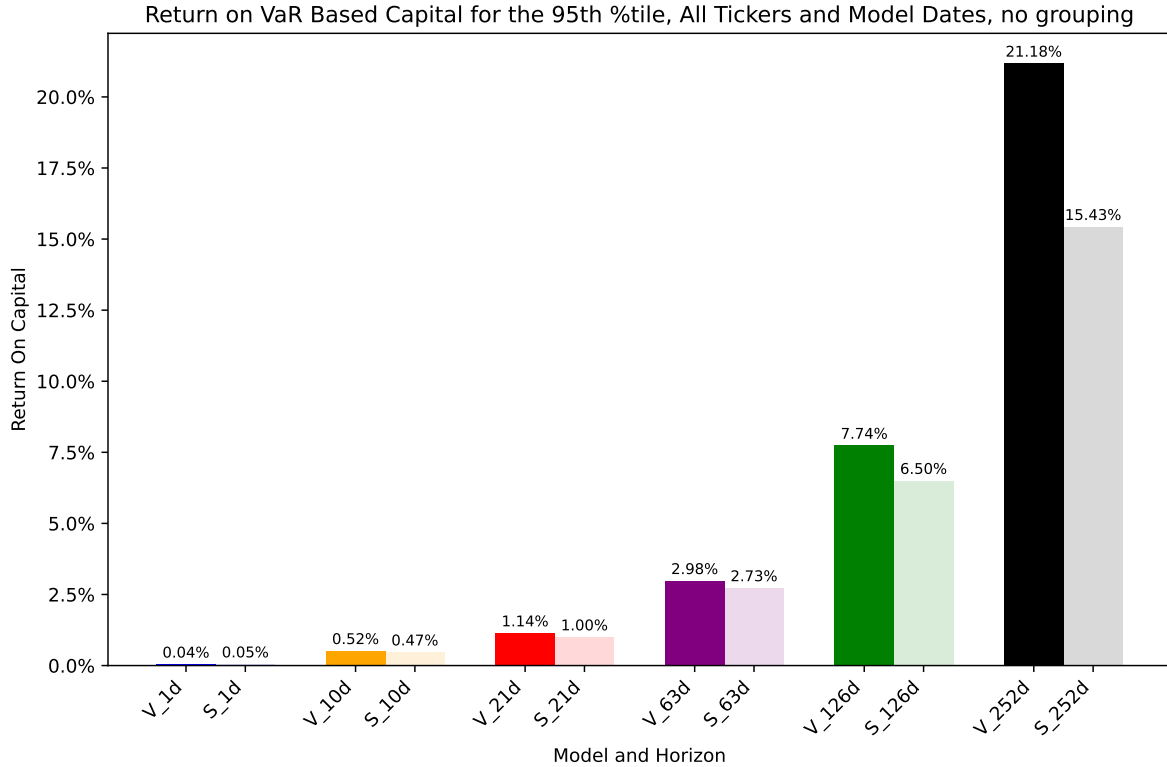
Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons > 1d overlap.



## All Out of Sample Model Dates

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





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

	1d	10d	21d	63d	126d	252d
intercept	-0.01%	-0.08%	-0.18%	-0.64%	-1.46%	-4.21%
intercept_p_value	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%
slope	117.15%	128.08%	131.87%	132.80%	141.48%	164.52%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

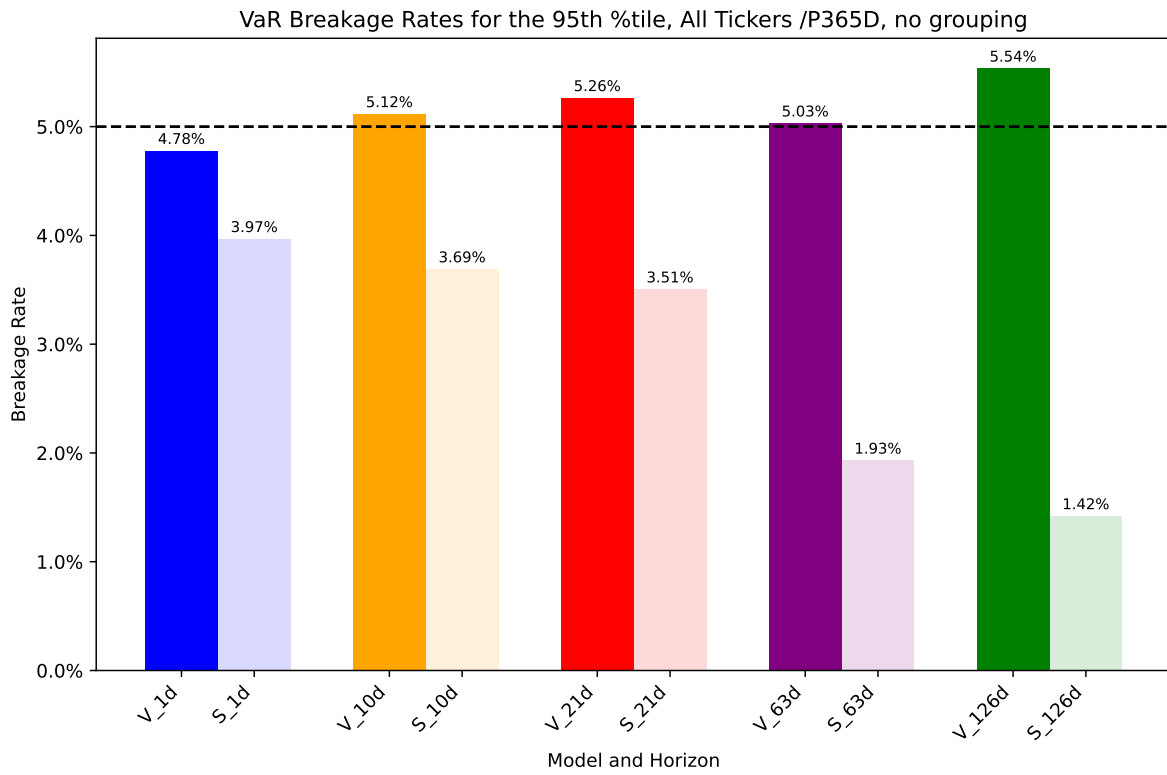
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across Model Dates:

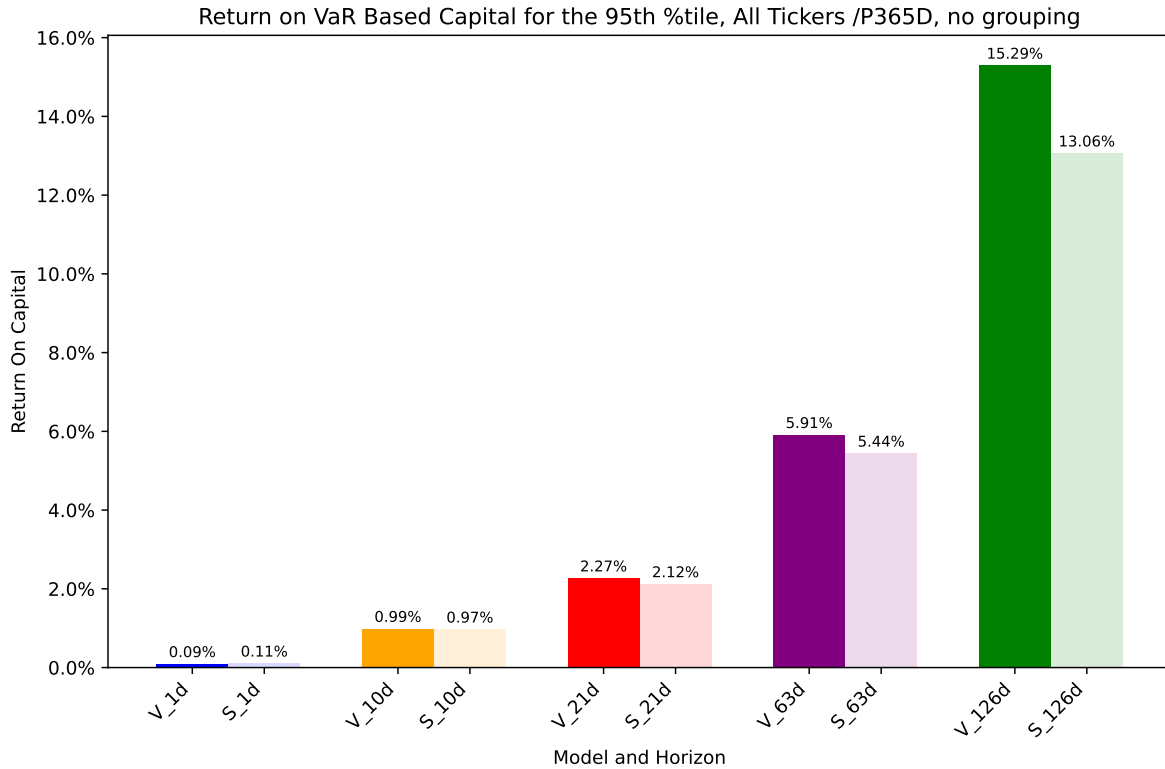
	1d	10d	21d	63d	126d	252d
intercept	-0.04%	-0.21%	-0.57%	-2.21%	-4.42%	-5.41%
intercept_p_value	0.00%	0.10%	0.01%	0.00%	0.00%	0.08%
slope	163.39%	148.18%	165.06%	181.03%	178.37%	166.98%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



## Prior 365 Calendar Days (P365D)

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





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

	1d	10d	21d	63d	126d
intercept	-0.02%	-0.16%	-0.34%	-0.82%	-2.70%
intercept_p_value	1.68%	0.00%	0.00%	0.00%	0.00%
slope	106.63%	117.89%	123.11%	123.80%	137.74%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

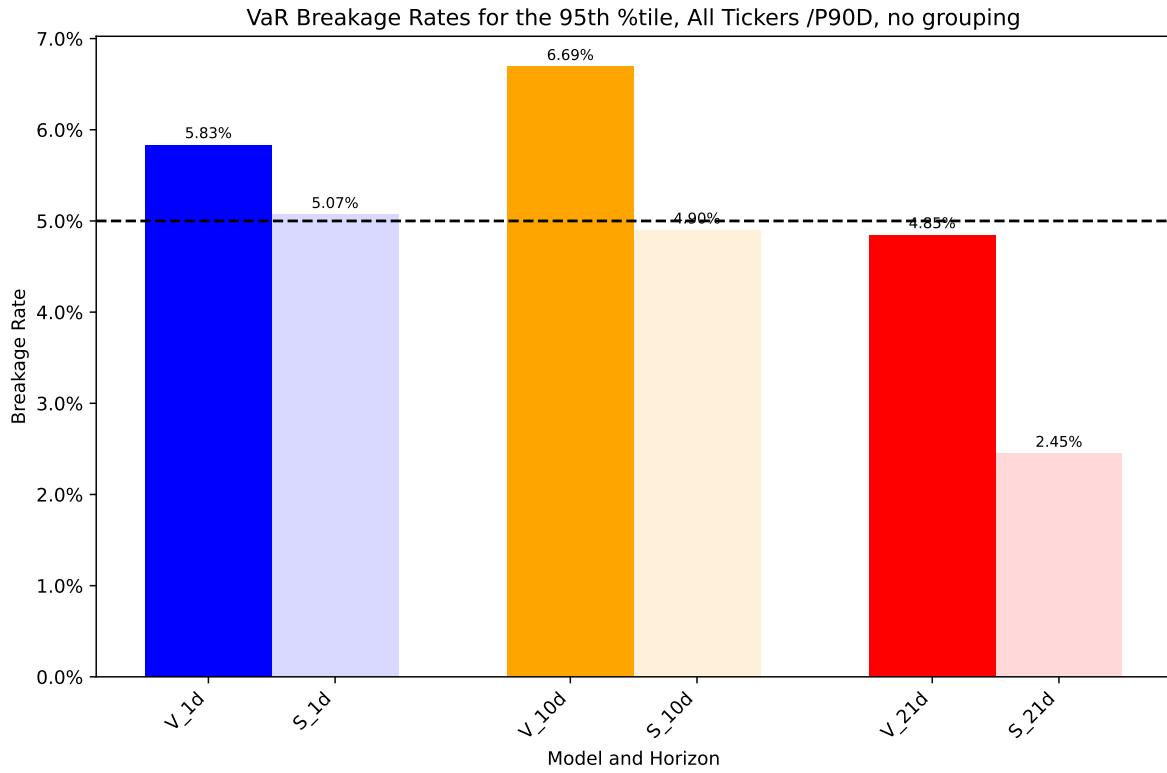
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P365D:

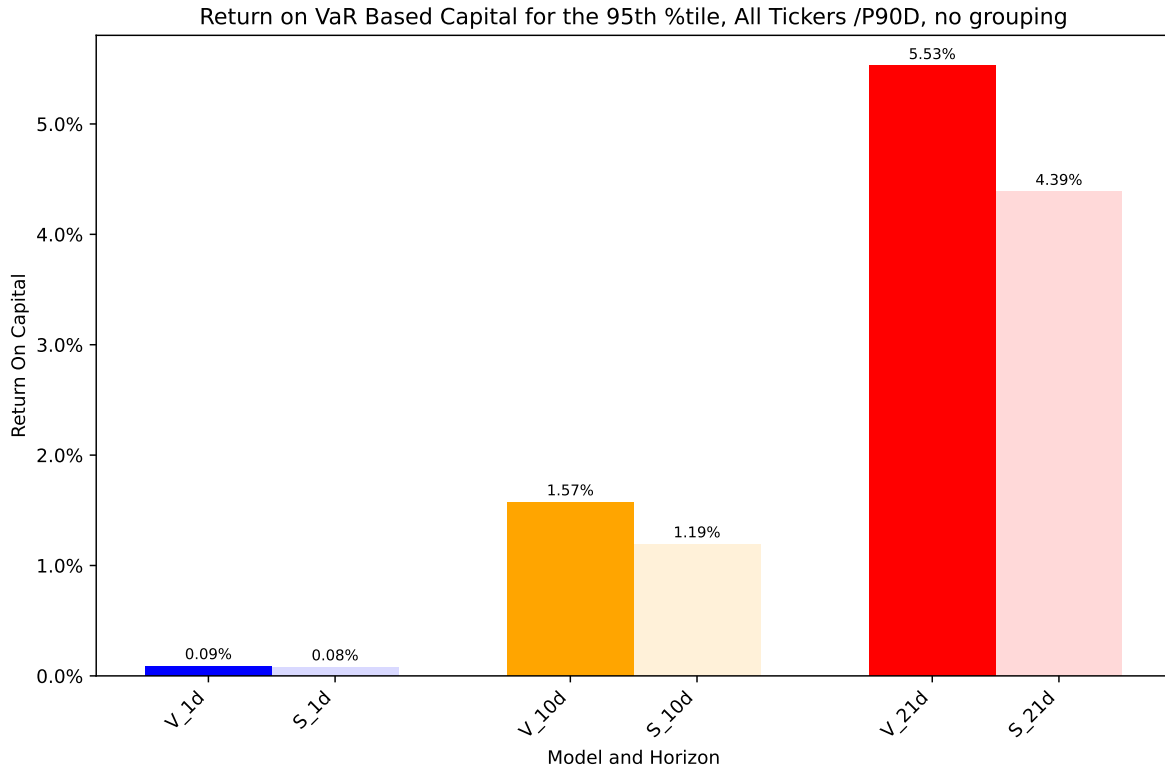
	1d	10d	21d	63d	126d
intercept	-0.02%	-0.09%	-0.22%	-0.80%	-2.72%
intercept_p_value	11.78%	33.56%	20.61%	11.00%	2.64%
slope	102.11%	110.72%	117.15%	123.29%	137.99%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%



## Prior 90 Calendar Days (P90D)

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





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

	1d	10d	21d
intercept	0.00%	0.11%	-0.30%
intercept_p_value	83.12%	8.14%	2.04%
slope	108.62%	122.25%	132.88%
slope_p_value	0.00%	0.00%	0.00%

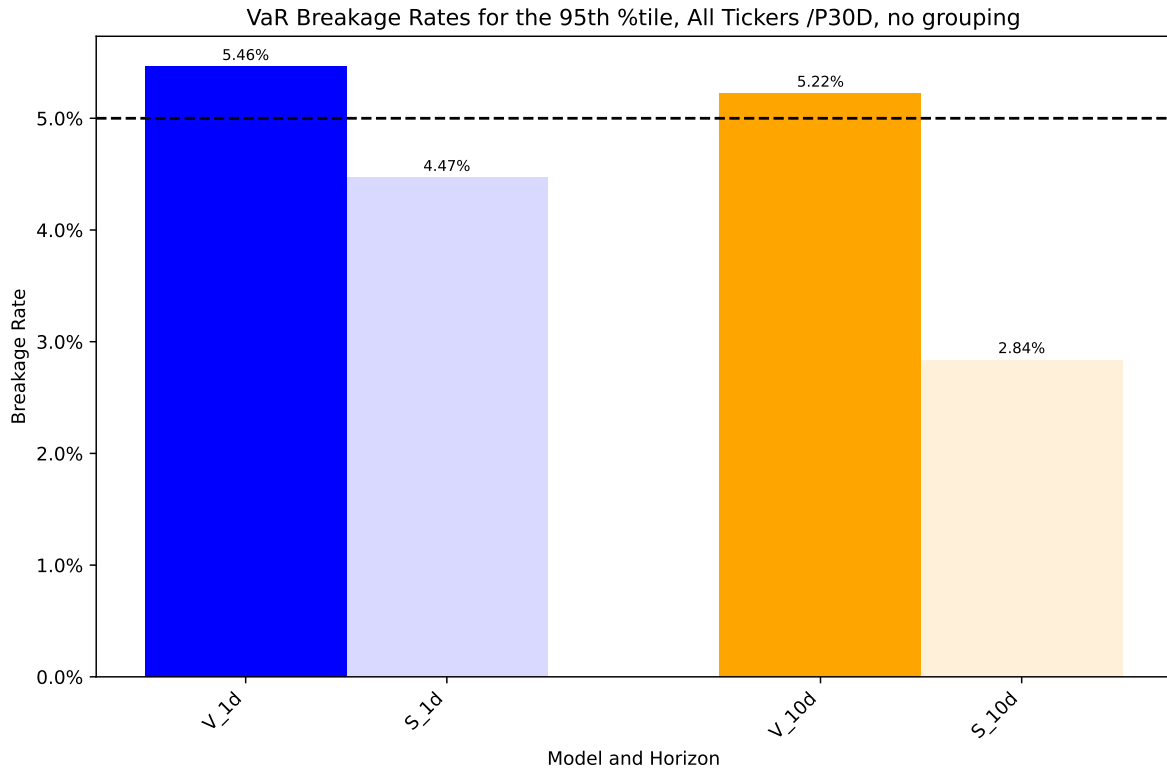
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P90D:

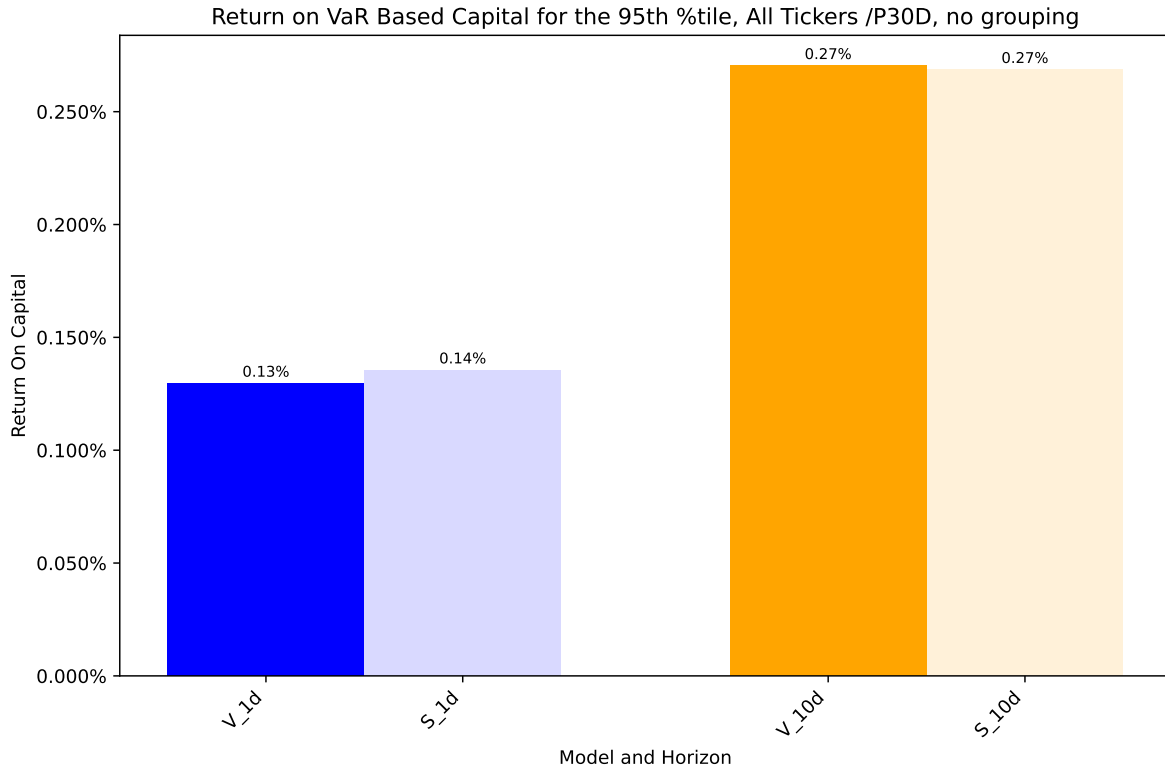
	1d	10d	21d
intercept	-0.00%	0.14%	-0.28%
intercept_p_value	98.14%	41.89%	54.31%
slope	114.03%	120.14%	132.40%
slope_p_value	0.00%	0.00%	0.00%



## Prior 30 Calendar Days (P30D)

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





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

	1d	10d
intercept	-0.02%	-0.03%
intercept_p_value	63.00%	79.10%
slope	107.20%	110.87%
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	-0.03%	-0.01%
intercept_p_value	34.64%	95.08%
slope	119.98%	105.81%
slope_p_value	0.00%	0.00%

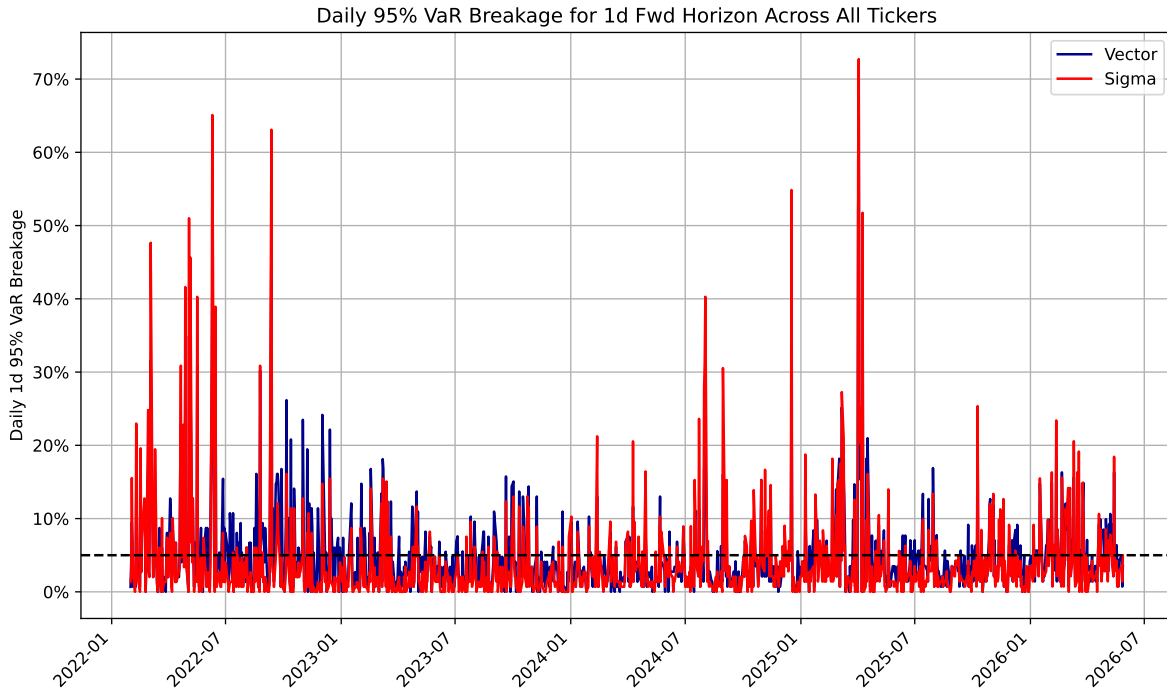


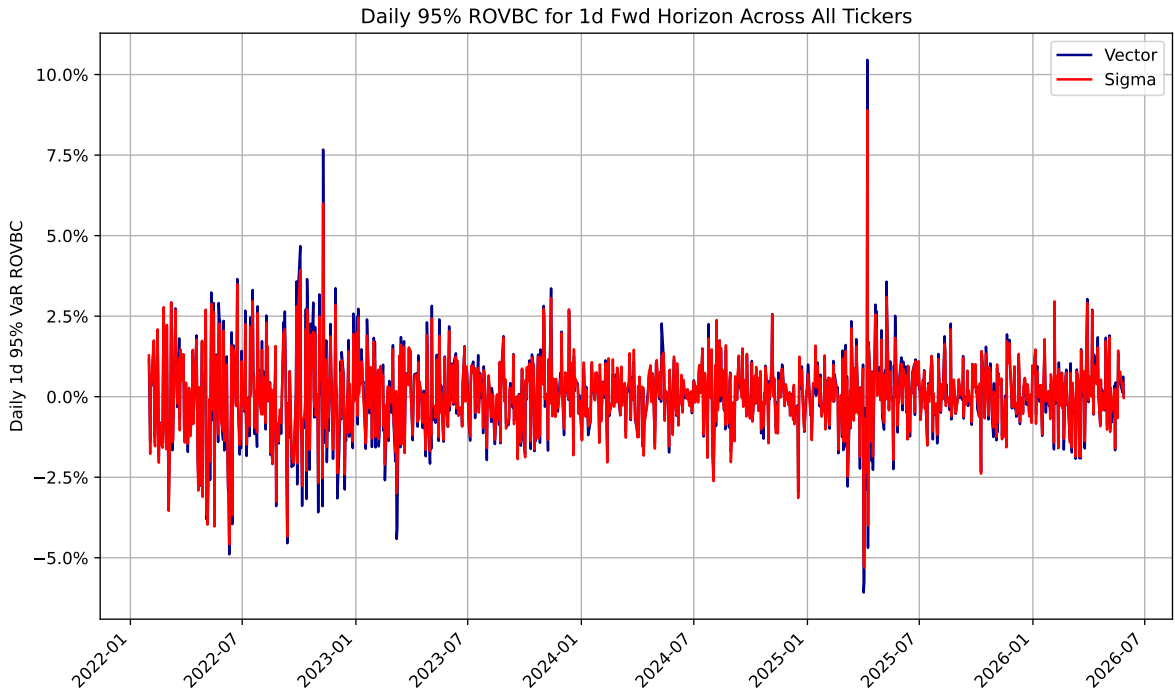
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## Daily Performance

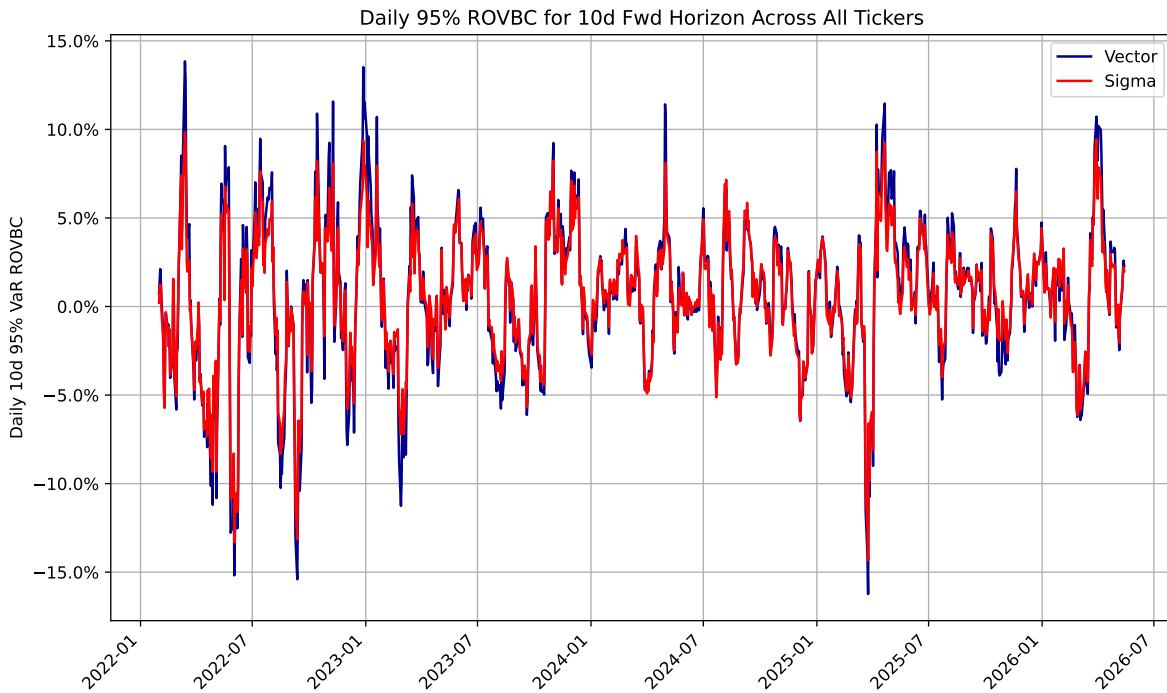
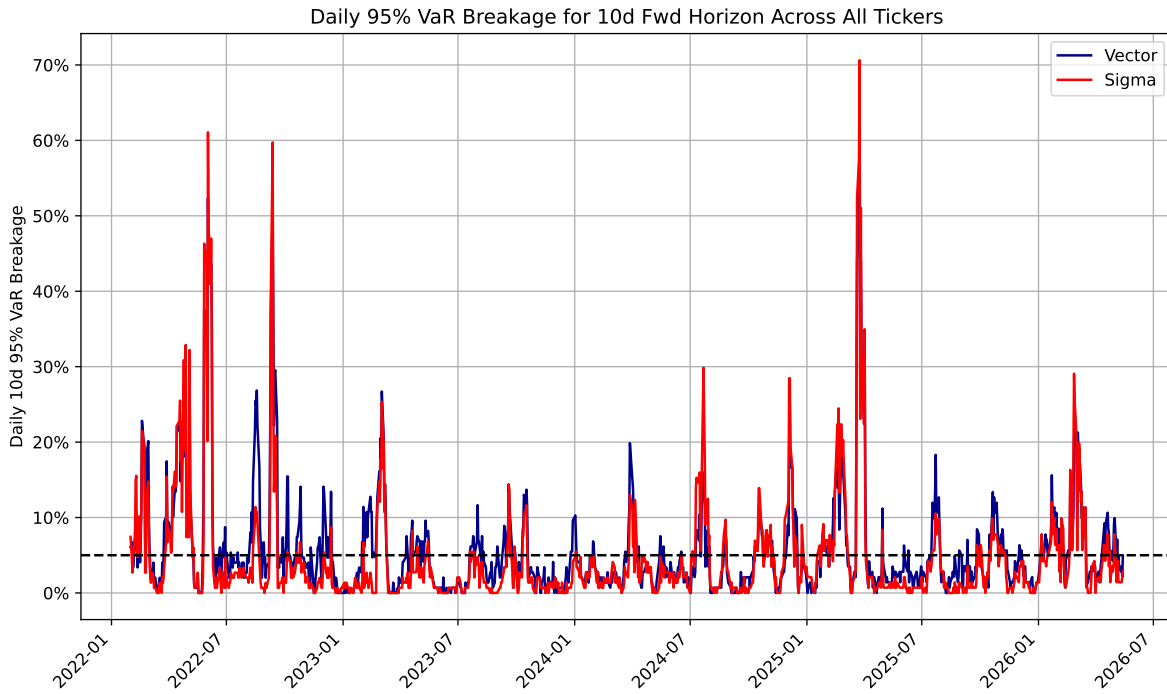
Here we look at the daily breakage and ROVBC statistics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROVBC outliers.

### 1d Horizon

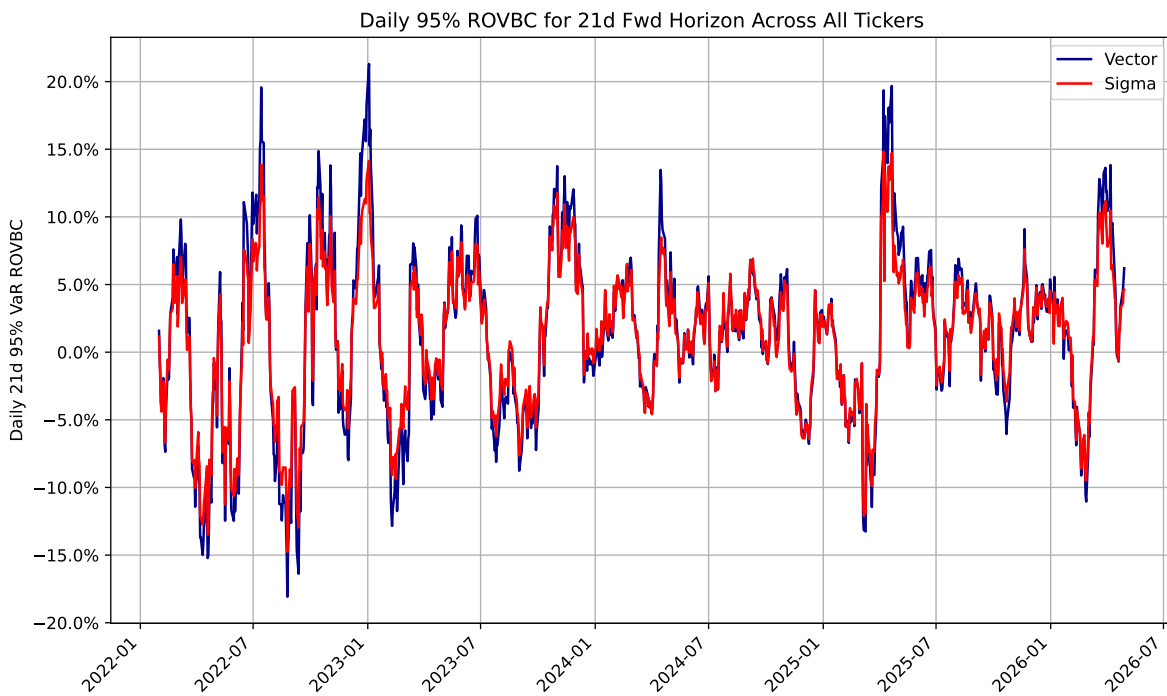
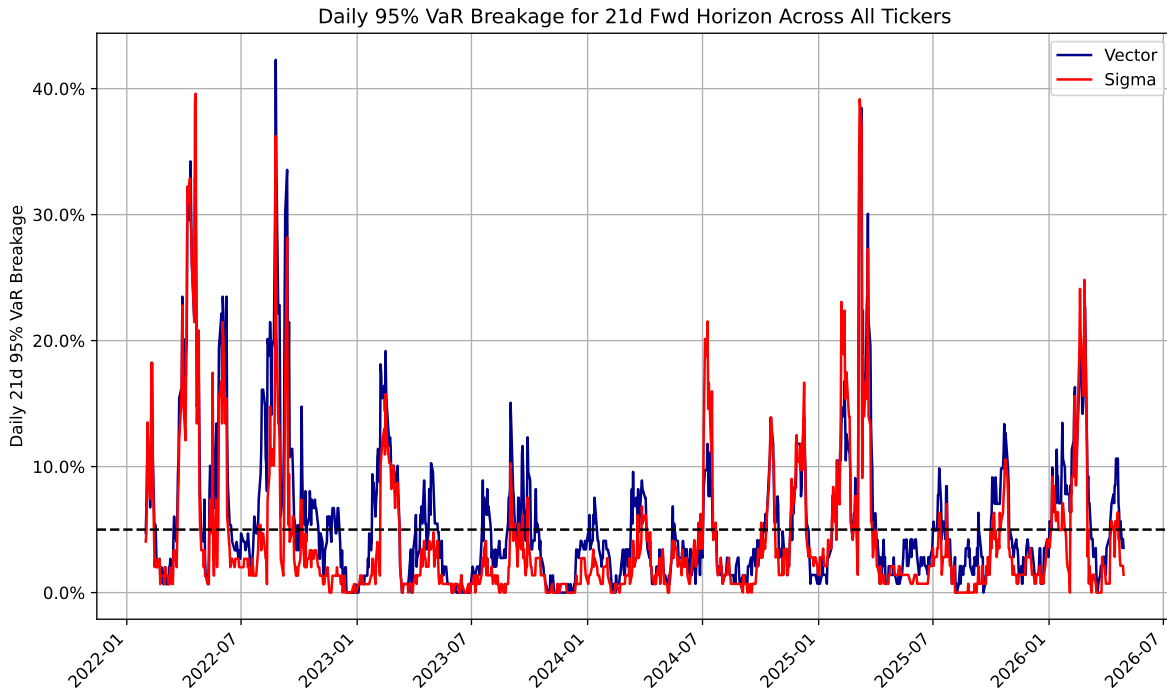




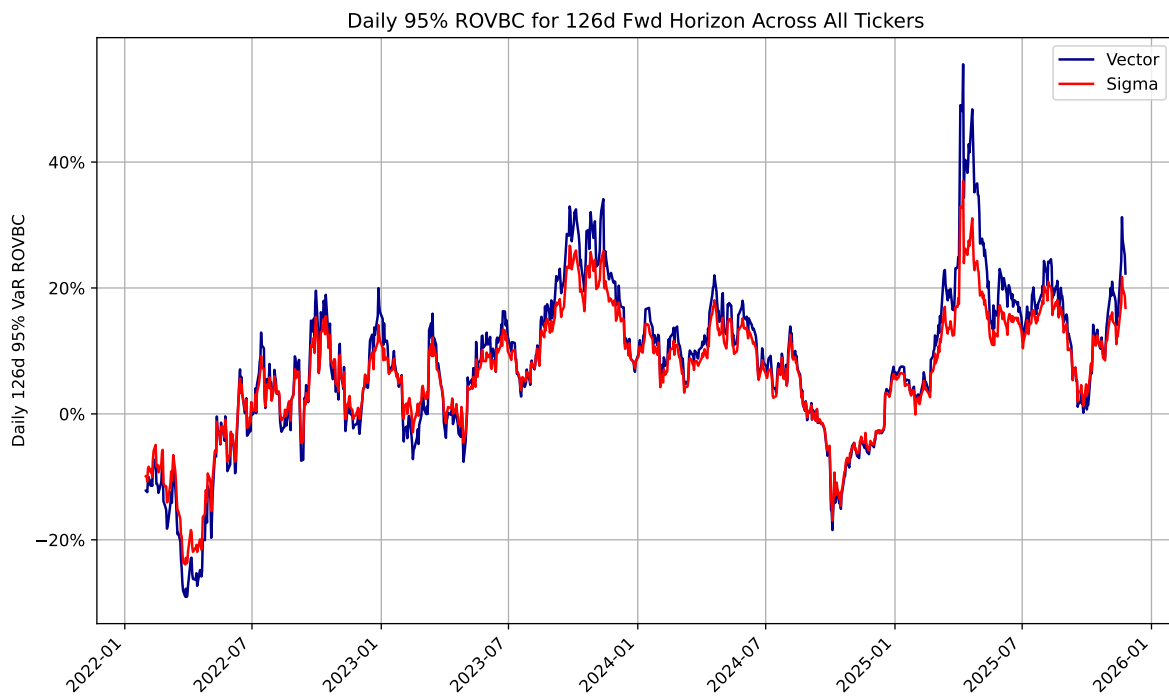
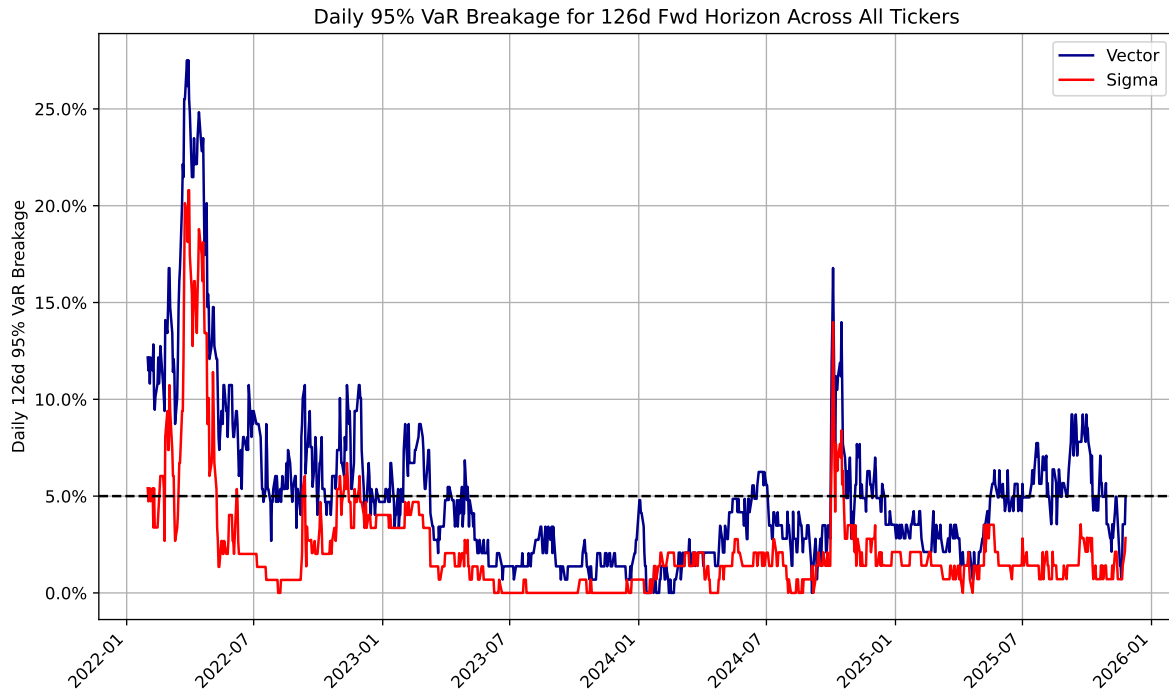
## 10d Horizon



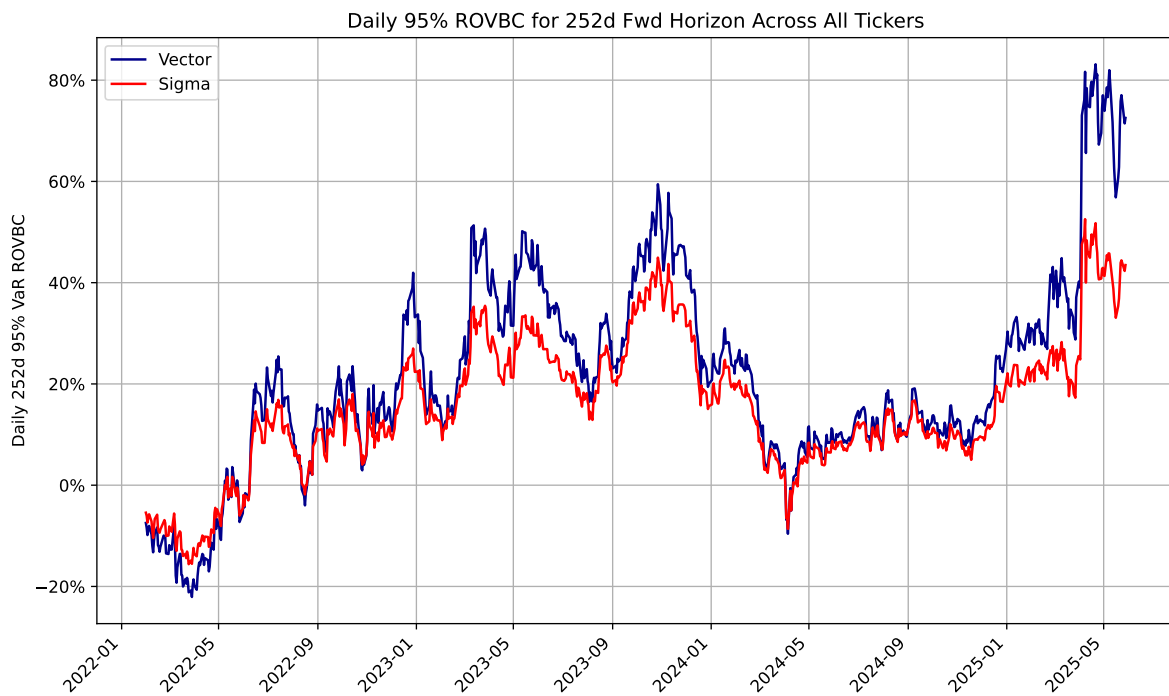
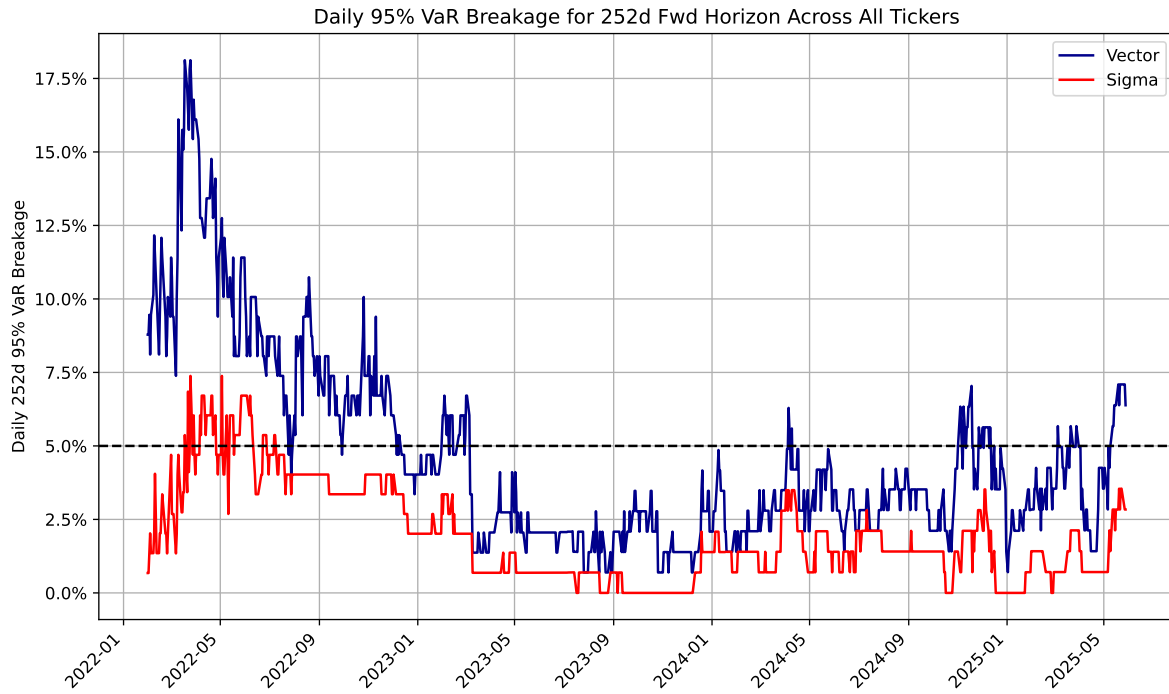
## 21d Horizon



## 63d Horizon



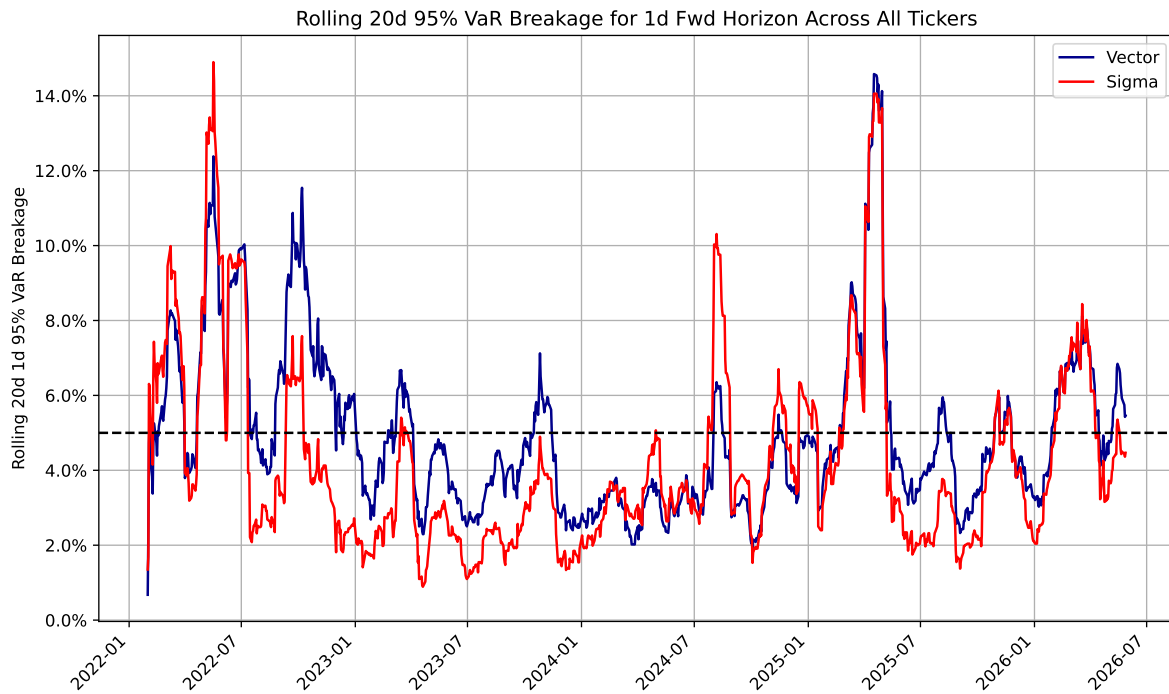
## 252d Horizon

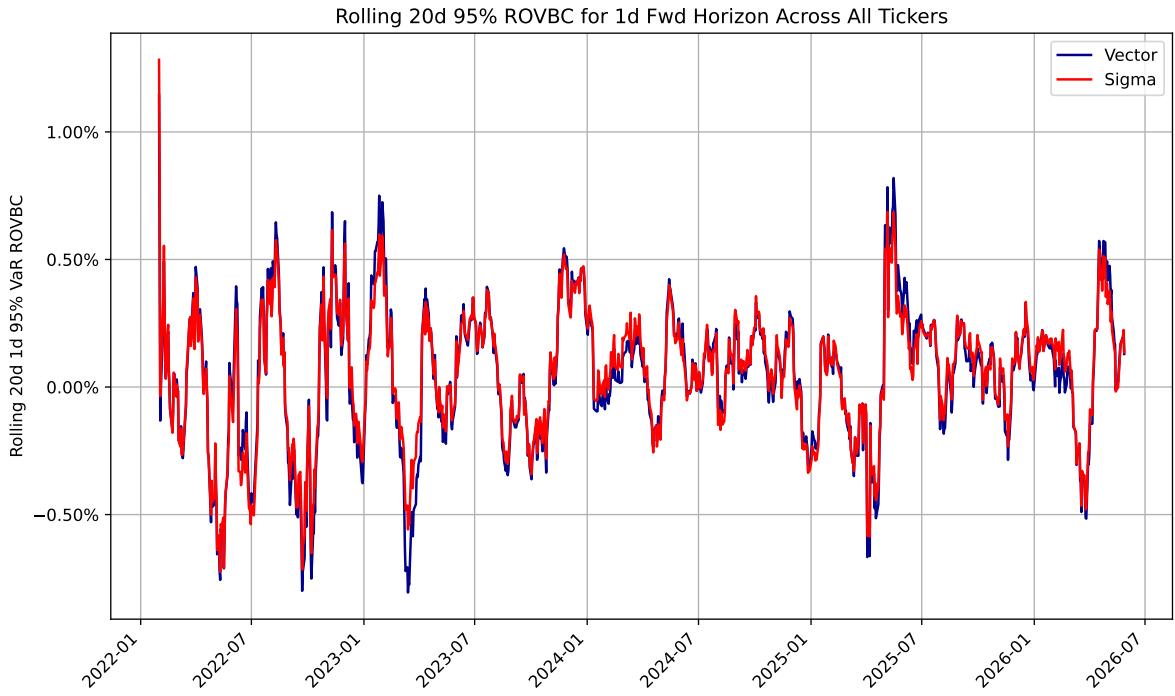


## Rolling 20d Performance

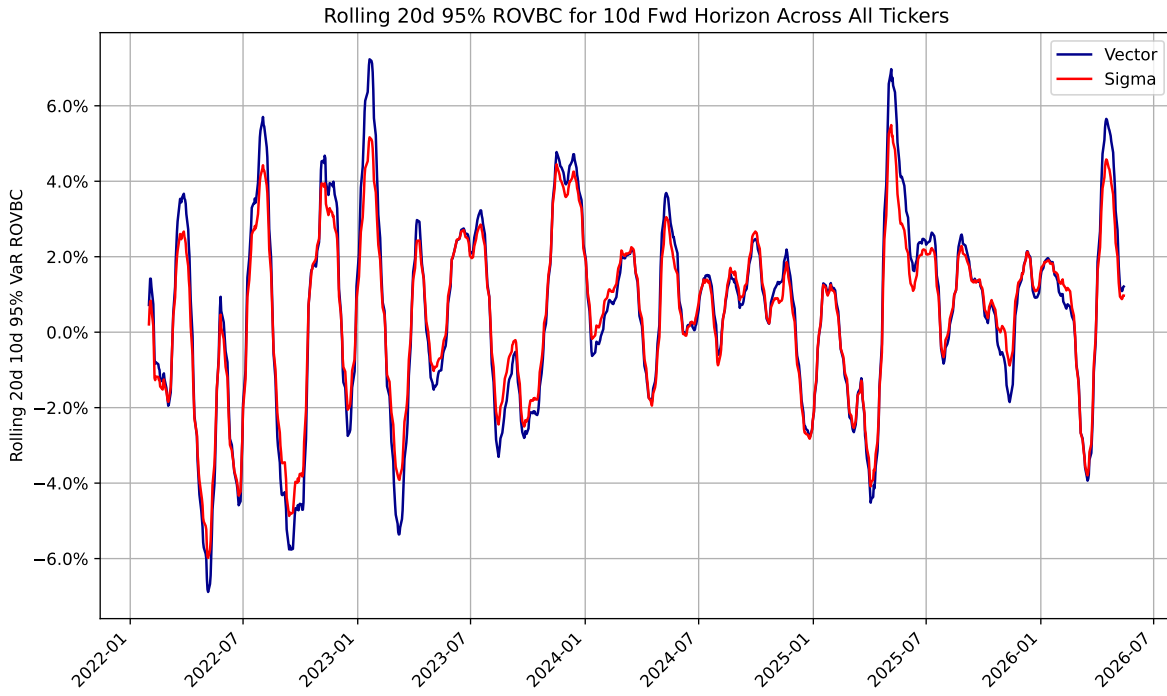
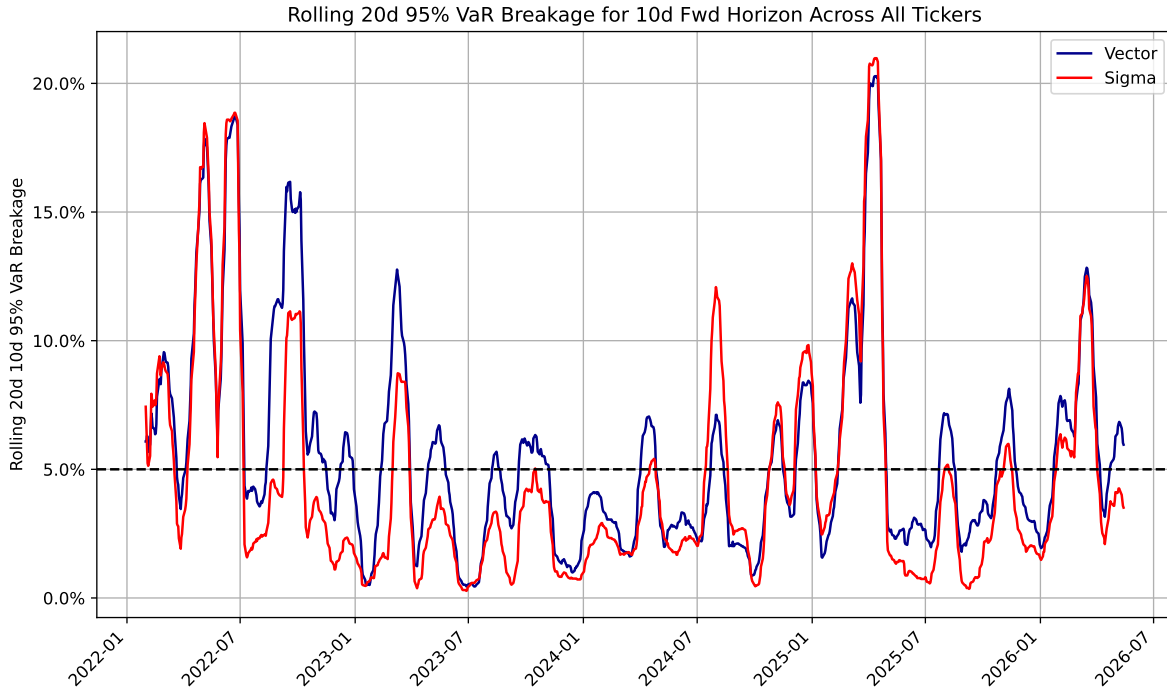
Here we look at 20 day rolling moving averages of the breakage and ROVBC statistics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

### 1d Horizon

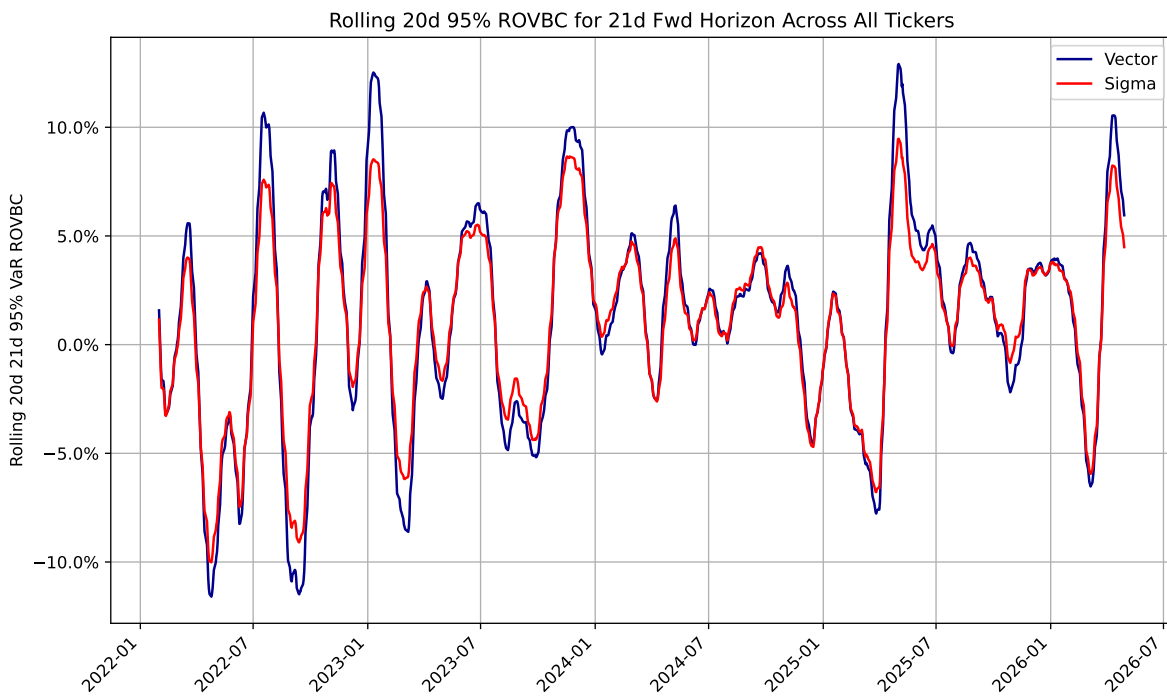
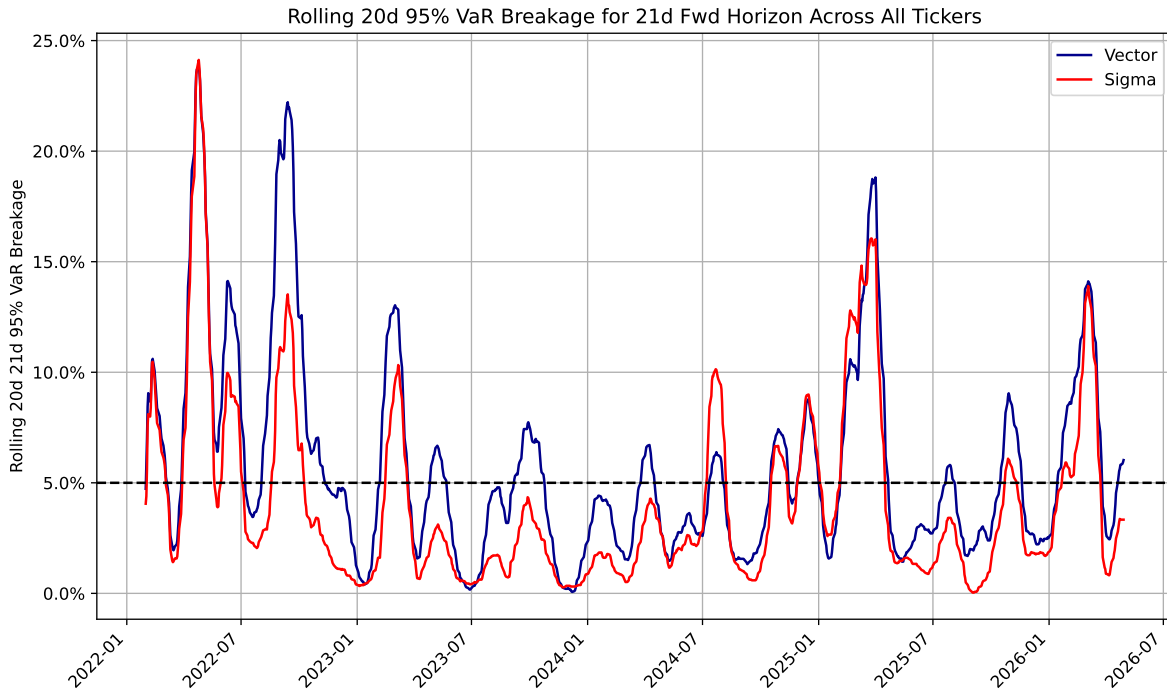




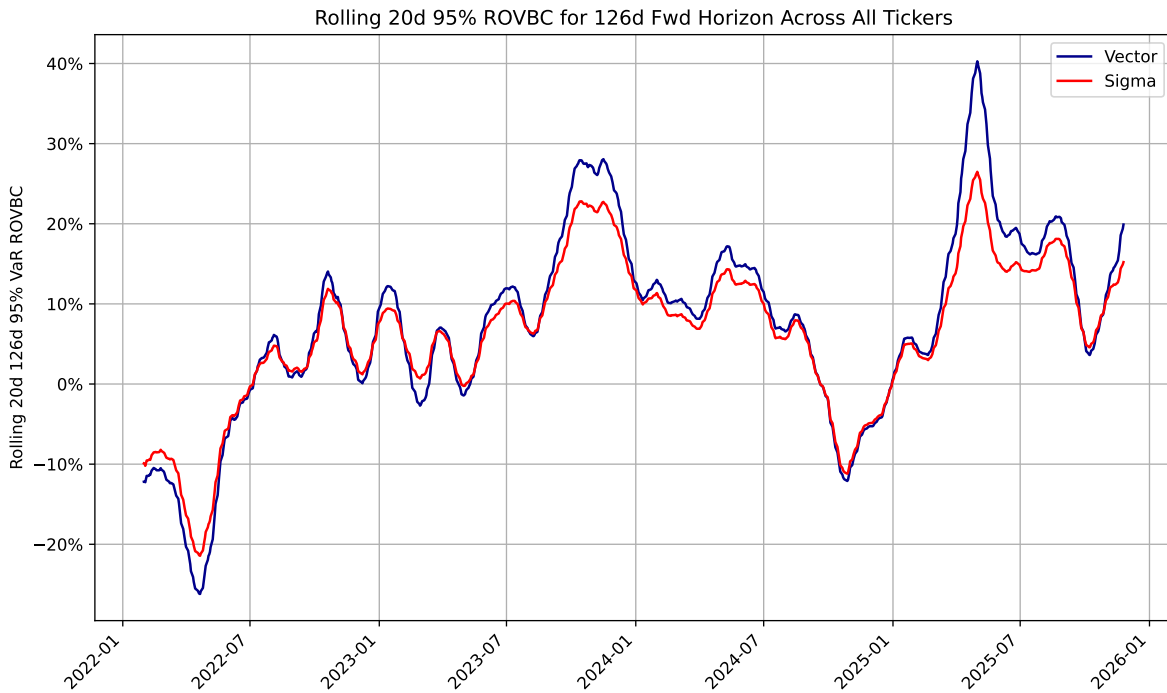
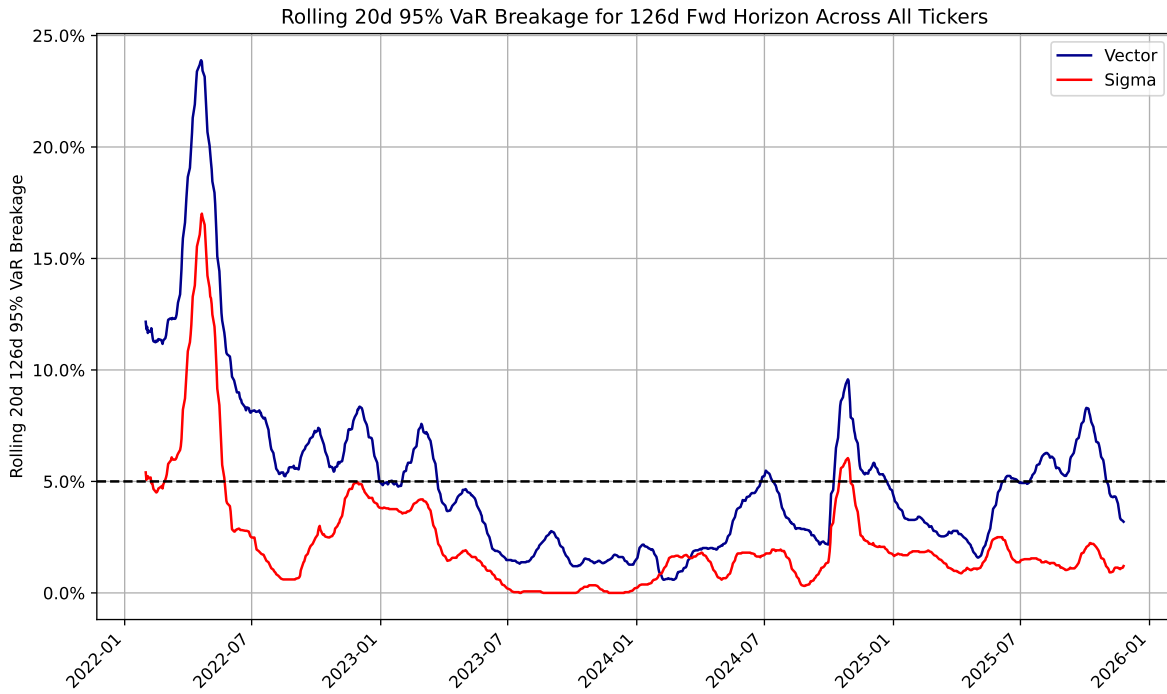
# 10d Horizon



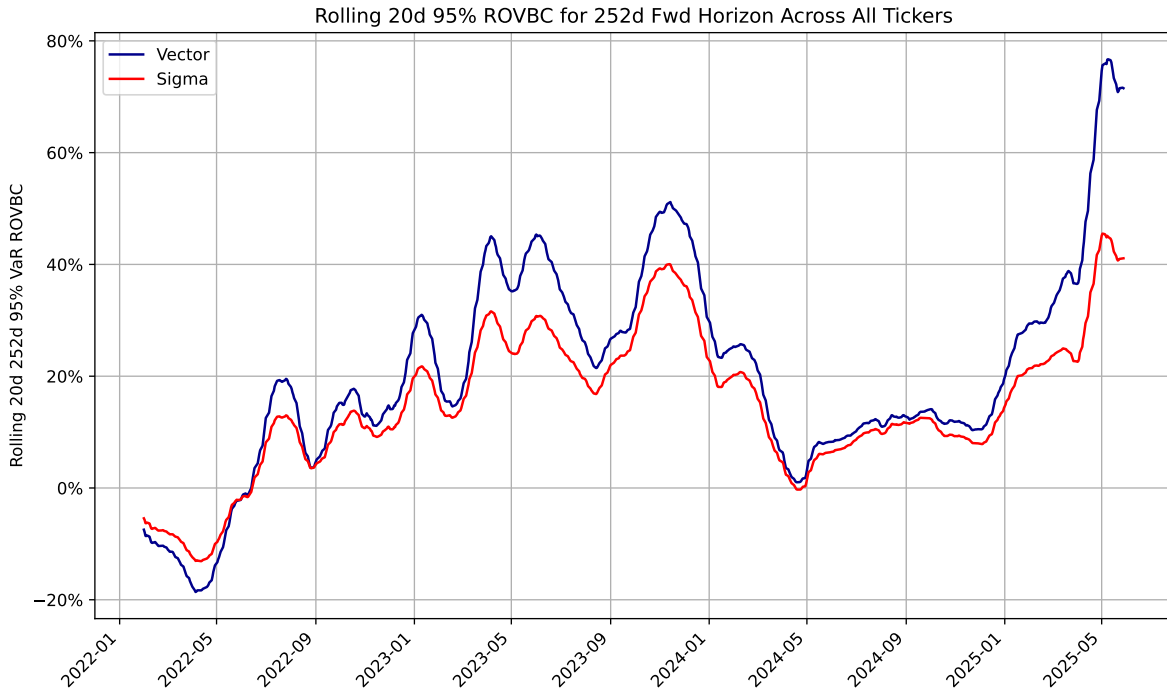
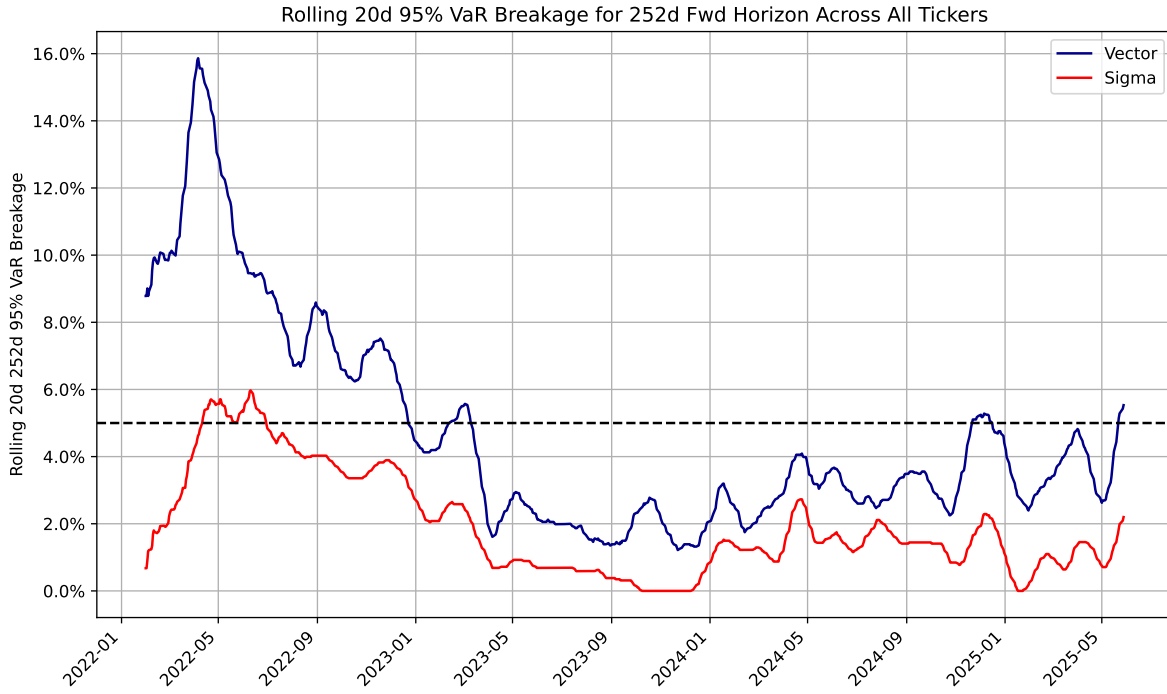
## 21d Horizon



## 63d Horizon



## 252d Horizon



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## Top 30 Tickers By VaR Breakage

### All TMD: 1d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	SBNY	30.22%	SBNY	7.91%
1.0	SIVBQ	19.06%	FRCB	6.47%
1.0	TSLA	16.31%	GLD	5.99%
1.0	CHTR	14.84%	VST	5.81%
1.0	LQD	14.01%	SIVBQ	5.76%
1.0	FRCB	13.67%	NEM	5.71%
1.0	MSTR	11.61%	ACGL	5.62%
1.0	AMZN	11.34%	XOM	5.53%
1.0	ZTS	10.88%	PHM	5.53%
1.0	B	10.88%	NVDA	5.44%
1.0	AAP	10.14%	AAPL	5.44%
1.0	ISRG	10.14%	MUB	5.35%
1.0	SBUX	9.95%	MSFT	5.35%
1.0	UAA	9.95%	NVS	5.35%
1.0	META	9.86%	IRM	5.35%
1.0	GME	9.49%	PEP	5.35%
1.0	CDNS	9.4%	HSBC	5.35%
1.0	HD	9.22%	MOS	5.35%
1.0	GNRC	9.12%	B	5.35%
1.0	PRGO	8.48%	VCSH	5.35%
1.0	SLV	8.39%	AZN	5.25%
1.0	BALL	8.39%	LEN	5.25%
1.0	AMC	8.11%	SLV	5.17%
1.0	BUD	8.02%	INTU	5.16%
1.0	VFC	8.02%	TRGP	5.16%



---

## All TMD: 10d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	SBNY	40.44%	MUB	11.44%
10.0	SIVBQ	22.43%	SIVBQ	10.66%
10.0	CHTR	19.33%	SBNY	9.93%
10.0	AAP	18.77%	FRCB	8.46%
10.0	AMC	17.1%	AAP	7.62%
10.0	TSLA	16.36%	FRA	7.43%
10.0	ZTS	16.26%	BAC	7.25%
10.0	B	14.41%	CHTR	7.25%
10.0	FRCB	13.97%	WFC	7.06%
10.0	META	13.2%	UNH	6.97%
10.0	BUD	12.92%	CTLT	6.94%
10.0	LQD	12.27%	GSK	6.88%
10.0	PRGO	12.17%	FIS	6.69%
10.0	GME	11.8%	CLF	6.69%
10.0	MSTR	11.71%	LW	6.6%
10.0	GNRC	11.62%	ZTS	6.51%
10.0	GSK	11.62%	CVS	6.41%
10.0	CVS	11.52%	AZN	6.32%
10.0	KALU	11.15%	ADBE	6.23%
10.0	AMZN	10.59%	NWL	6.23%
10.0	NEM	10.5%	BALL	6.23%
10.0	SNY	10.32%	NEM	6.23%
10.0	SLV	10.14%	FITB	6.13%
10.0	VFC	10.04%	X	6.09%
10.0	TLT	9.94%	INTU	6.04%



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## All TMD: 21d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	SBNY	56.67%	SIVBQ	12.96%
21.0	CHTR	24.98%	MUB	12.22%
21.0	SIVBQ	23.33%	FRCB	11.48%
21.0	AAP	18.97%	CHTR	9.95%
21.0	ZTS	18.22%	LW	9.48%
21.0	AMC	16.34%	SBNY	8.89%
21.0	PRGO	16.34%	GSK	8.45%
21.0	TSLA	15.77%	AAP	8.45%
21.0	BUD	14.74%	FIS	7.98%
21.0	GSK	14.65%	CTLT	7.73%
21.0	B	14.55%	EMB	7.52%
21.0	FRCB	14.44%	PRGO	6.85%
21.0	CVS	14.18%	CMG	6.76%
21.0	LQD	13.99%	CVS	6.57%
21.0	GNRC	13.52%	FRA	6.38%
21.0	BXP	12.68%	UNH	6.38%
21.0	KALU	12.58%	VCSH	6.29%
21.0	CTLT	12.57%	BMY	6.1%
21.0	VFC	11.74%	BUD	6.1%
21.0	META	11.74%	ABBV	6.1%
21.0	NEM	11.74%	LQD	6.01%
21.0	TLT	11.46%	AZN	5.92%
21.0	MSTR	11.36%	BAC	5.92%
21.0	VCSH	11.27%	INTU	5.92%
21.0	FIS	11.27%	IRM	5.92%



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## All TMD: 63d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
63.0	SBNY	85.56%	SBNY	30.37%
63.0	SIVBQ	41.85%	SIVBQ	30.0%
63.0	CHTR	32.36%	FRCB	24.81%
63.0	AAP	29.52%	CHTR	13.49%
63.0	FRCB	29.26%	CTLT	10.7%
63.0	AMC	19.26%	MUB	10.18%
63.0	PRGO	17.99%	GSK	9.48%
63.0	VFC	17.2%	NEM	9.09%
63.0	GNRC	15.44%	CNC	8.21%
63.0	BXP	15.15%	UNH	7.92%
63.0	CTLT	14.66%	NFLX	7.62%
63.0	FIS	14.17%	BXP	7.33%
63.0	MSTR	14.08%	BMJ	7.23%
63.0	BIIB	14.08%	LW	7.23%
63.0	BHC	13.88%	HCA	6.84%
63.0	B	13.69%	INTU	6.74%
63.0	TSLA	13.59%	VFC	6.74%
63.0	BUD	13.39%	FIS	6.65%
63.0	KALU	13.39%	LQD	6.55%
63.0	GSK	12.71%	CVS	6.55%
63.0	AMZN	12.61%	ZION	6.44%
63.0	TLT	12.51%	KEY	6.35%
63.0	META	12.41%	IEP	6.35%
63.0	NEM	12.22%	BHC	6.35%
63.0	ZTS	12.02%	AAP	6.35%
63.0	LQD	11.73%	CMA	5.94%
63.0	NFLX	11.14%	BALL	5.77%
63.0	CNC	11.05%	LEN	5.77%
63.0	NWL	10.56%	NWL	5.77%
63.0	BMJ	10.46%	VCSH	5.67%



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## All TMD: 126d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
126.0	SBNY	100.0%	SIVBQ	47.78%
126.0	SIVBQ	63.7%	SBNY	44.81%
126.0	FRCB	44.07%	FRCB	43.7%
126.0	CHTR	36.67%	GSK	13.44%
126.0	AMC	30.21%	IEP	13.23%
126.0	AAP	29.9%	AAP	12.81%
126.0	VFC	28.85%	UNH	10.62%
126.0	BXP	17.29%	CTLT	10.5%
126.0	PRGO	16.98%	CNC	9.9%
126.0	GSK	16.04%	PRGO	9.48%
126.0	BMJ	15.73%	CHTR	9.27%
126.0	BIIB	15.62%	VZ	8.44%
126.0	CNC	15.52%	CSTM	7.6%
126.0	GNRC	15.31%	INTC	7.5%
126.0	MSTR	15.0%	MRK	7.4%
126.0	ZTS	14.17%	MUB	7.3%
126.0	TSLA	13.85%	BHC	7.08%
126.0	TLT	13.65%	BALL	6.98%
126.0	IEP	13.33%	INTU	6.88%
126.0	UNH	13.12%	LEN	6.77%
126.0	CTLT	12.76%	NEM	5.73%
126.0	ZION	11.95%	EMB	5.53%
126.0	CVS	11.77%	LW	5.52%
126.0	BHC	11.15%	VCSH	5.31%
126.0	NEM	10.73%	KEY	5.21%
126.0	OXY	10.31%	BIIB	5.0%
126.0	BUD	9.48%	LQD	4.58%
126.0	B	9.27%	ELAN	4.44%
126.0	MRK	9.27%	LUMN	4.38%
126.0	CMCSA	9.27%	BXP	4.38%



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## All TMD: 252d

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

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

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	51.2%	IEP	29.14%
252.0	CHTR	42.93%	UNH	18.11%
252.0	AMC	41.97%	AAP	16.55%
252.0	BIIB	32.61%	MRK	12.71%
252.0	IEP	27.58%	BMY	11.99%
252.0	VFC	23.26%	GSK	11.63%
252.0	CMA	20.32%	LUMN	10.91%
252.0	PRGO	19.78%	LW	10.43%
252.0	UNH	19.54%	CNC	9.23%
252.0	ZION	18.17%	CPRT	8.99%
252.0	FIS	16.91%	BXP	7.43%
252.0	OXY	15.95%	VZ	6.24%
252.0	NWL	15.23%	CTLT	5.27%
252.0	CTLT	13.79%	VNO	4.56%
252.0	GSK	12.59%	INTC	3.84%
252.0	CVS	12.35%	PRGO	3.24%
252.0	CNC	11.87%	CMCSA	2.88%
252.0	MRK	11.75%	CSTM	2.64%
252.0	BXP	11.63%	FIS	2.28%
252.0	BMY	10.55%	CLF	2.16%
252.0	TLT	9.71%	CMG	2.16%
252.0	VNO	9.47%	LNC	1.92%
252.0	UAA	9.23%	ELAN	1.83%
252.0	ELAN	8.28%	ZTS	1.8%
252.0	BHC	8.15%	CVS	1.68%
252.0	MSTR	7.79%	EMB	1.44%
252.0	CLF	7.79%	CHTR	1.44%



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### P30D: 1d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	AZO	40.0%	COST	25.0%
1.0	AVGO	35.0%	QCOM	20.0%
1.0	CDNS	25.0%	ZTS	15.0%
1.0	QCOM	25.0%	XOM	15.0%
1.0	NVDA	25.0%	CSTM	15.0%
1.0	MSTR	25.0%	ELAN	15.0%
1.0	VICI	20.0%	HSBC	15.0%
1.0	TMUS	20.0%	INTC	15.0%
1.0	PEP	20.0%	ORLY	15.0%
1.0	MRK	20.0%	AZO	15.0%
1.0	ZTS	15.0%	MNST	10.0%
1.0	BALL	15.0%	IEP	10.0%
1.0	FRA	15.0%	AAP	10.0%
1.0	GLD	15.0%	JPM	10.0%
1.0	HD	15.0%	MU	10.0%
1.0	LNC	15.0%	MSI	10.0%
1.0	NAVI	15.0%	MUB	10.0%
1.0	COST	15.0%	ON	10.0%
1.0	VFC	15.0%	OXY	10.0%
1.0	XOM	15.0%	PEP	10.0%
1.0	EXPE	15.0%	PWR	10.0%
1.0	NFLX	10.0%	TFC	10.0%
1.0	MSI	10.0%	THC	10.0%
1.0	NWL	10.0%	CSCO	10.0%
1.0	LQD	10.0%	ISRG	10.0%
1.0	SNY	10.0%	BUD	10.0%
1.0	KHC	10.0%	AMD	10.0%
1.0	AAP	10.0%	AMGN	10.0%
1.0	INTU	10.0%	BALL	10.0%
1.0	IEP	10.0%	BA	10.0%



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## P30D: 10d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	NWL	72.73%	ZTS	45.45%
10.0	AZO	63.64%	INTU	45.45%
10.0	MSI	54.55%	MSI	45.45%
10.0	ZTS	45.45%	AZO	45.45%
10.0	HCA	45.45%	GT	27.27%
10.0	INTU	36.36%	HCA	27.27%
10.0	MSTR	27.27%	ELAN	27.27%
10.0	EXPE	27.27%	TFC	18.18%
10.0	CMCSA	27.27%	WFC	18.18%
10.0	UAA	27.27%	BALL	18.18%
10.0	VFC	27.27%	ORLY	18.18%
10.0	LNC	27.27%	HD	9.09%
10.0	AAP	18.18%	UAA	9.09%
10.0	IEP	18.18%	AAP	9.09%
10.0	WYNN	18.18%	COST	9.09%
10.0	BALL	18.18%	VFC	9.09%
10.0	HD	18.18%	T	9.09%
10.0	PEP	18.18%	POST	9.09%
10.0	AVGO	18.18%	MU	0.0%
10.0	SNY	18.18%	NVS	0.0%
10.0	VICI	9.09%	NWL	0.0%
10.0	CHTR	9.09%	NVDA	0.0%
10.0	NVDA	9.09%	ON	0.0%
10.0	GLD	9.09%	NFLX	0.0%
10.0	LQD	9.09%	NEM	0.0%
10.0	CYH	9.09%	NAVI	0.0%
10.0	COST	9.09%	MUB	0.0%
10.0	POST	9.09%	ORCL	0.0%
10.0	TFC	9.09%	LUMN	0.0%
10.0	AMZN	9.09%	MSTR	0.0%



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## P90D: 1d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	AZO	29.03%	GE	16.13%
1.0	TMUS	24.19%	ELAN	14.52%
1.0	HD	22.58%	BHP	12.9%
1.0	GLD	22.58%	FCX	12.9%
1.0	INTU	22.58%	COST	11.29%
1.0	CDNS	19.35%	BUD	11.29%
1.0	VICI	19.35%	CSTM	11.29%
1.0	NFLX	17.74%	HSBC	11.29%
1.0	GE	16.13%	OXY	11.29%
1.0	ISRG	16.13%	NEM	11.29%
1.0	UNH	16.13%	MNST	11.29%
1.0	BALL	14.52%	AZO	11.29%
1.0	AMAT	14.52%	ZTS	9.68%
1.0	AVGO	14.52%	INTC	9.68%
1.0	BBY	14.52%	INTU	9.68%
1.0	LLY	14.52%	BALL	9.68%
1.0	KHC	14.52%	MU	9.68%
1.0	NVDA	12.9%	B	9.68%
1.0	PEP	12.9%	RIO	9.68%
1.0	CMCSA	12.9%	T	9.68%
1.0	TSLA	12.9%	EMB	9.68%
1.0	FRA	11.29%	VCSH	9.68%
1.0	XOM	11.29%	XOM	9.68%
1.0	NWL	9.68%	GLD	9.68%
1.0	MRK	9.68%	HLT	8.06%
1.0	EXPE	9.68%	MOS	8.06%
1.0	ON	9.68%	HON	8.06%
1.0	FCX	9.68%	MSI	8.06%
1.0	SNY	9.68%	MUB	8.06%
1.0	QCOM	9.68%	TEVA	8.06%



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## P90D: 10d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	HD	47.17%	HCA	35.85%
10.0	META	39.62%	AZO	22.64%
10.0	GSK	33.96%	MSI	22.64%
10.0	CMCSA	32.08%	GSK	22.64%
10.0	GE	32.08%	FCX	18.87%
10.0	HCA	32.08%	THC	18.87%
10.0	AZO	32.08%	CHTR	18.87%
10.0	NFLX	30.19%	ZTS	18.87%
10.0	GLD	26.42%	HON	15.09%
10.0	INTU	24.53%	GLD	15.09%
10.0	SNY	24.53%	INTU	15.09%
10.0	HON	22.64%	B	15.09%
10.0	BUD	22.64%	T	15.09%
10.0	CHTR	22.64%	VICI	13.21%
10.0	FCX	22.64%	OXY	13.21%
10.0	TMUS	20.75%	HD	13.21%
10.0	NWL	20.75%	GE	13.21%
10.0	MSI	20.75%	NEM	13.21%
10.0	LLY	18.87%	TFC	13.21%
10.0	ZTS	18.87%	XOM	13.21%
10.0	T	18.87%	NVS	13.21%
10.0	CVS	16.98%	ABBV	11.32%
10.0	B	16.98%	CPRT	11.32%
10.0	VICI	16.98%	MUB	9.43%
10.0	KHC	16.98%	ORLY	9.43%
10.0	BALL	15.09%	GT	9.43%
10.0	MSFT	13.21%	CNC	9.43%
10.0	NEM	13.21%	POST	9.43%
10.0	PCG	13.21%	ADBE	9.43%
10.0	AMC	11.32%	BHP	9.43%



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## P90D: 21d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	CMCSA	57.14%	CHTR	47.62%
21.0	CHTR	52.38%	ZTS	38.1%
21.0	HD	40.48%	HCA	28.57%
21.0	TMUS	40.48%	GSK	19.05%
21.0	ZTS	38.1%	CMCSA	19.05%
21.0	MSI	35.71%	HD	16.67%
21.0	T	35.71%	INTU	14.29%
21.0	INTU	35.71%	MSI	14.29%
21.0	HCA	30.95%	AZO	11.9%
21.0	GSK	30.95%	THC	11.9%
21.0	NFLX	26.19%	CAH	11.9%
21.0	SNY	26.19%	T	9.52%
21.0	GLD	21.43%	NFLX	9.52%
21.0	MSFT	19.05%	BALL	9.52%
21.0	AZO	16.67%	PCG	7.14%
21.0	GE	14.29%	XOM	7.14%
21.0	META	14.29%	VFC	7.14%
21.0	PCG	14.29%	LEN	7.14%
21.0	EXPE	11.9%	VZ	7.14%
21.0	AMC	11.9%	GE	4.76%
21.0	GNRC	11.9%	EMB	4.76%
21.0	VFC	9.52%	WFC	4.76%
21.0	BALL	9.52%	TMUS	4.76%
21.0	CLF	7.14%	VICI	4.76%
21.0	ADBE	7.14%	ADBE	2.38%
21.0	CVS	7.14%	GLD	2.38%
21.0	PEP	7.14%	MUB	2.38%
21.0	FIS	4.76%	BHP	2.38%
21.0	BUD	4.76%	MNST	2.38%
21.0	WYNN	4.76%	CNC	2.38%



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## P365D: 1d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	LLY	16.8%	NEM	9.2%
1.0	AMZN	15.6%	B	7.6%
1.0	ISRG	14.8%	AZO	7.6%
1.0	TDG	14.8%	MOS	7.2%
1.0	CDNS	14.0%	WDC	7.2%
1.0	CMCSA	13.6%	GE	7.2%
1.0	SBUX	12.4%	SLV	6.83%
1.0	AZO	12.0%	GLD	6.8%
1.0	TMUS	12.0%	FCX	6.8%
1.0	PRGO	12.0%	AA	6.8%
1.0	TSLA	11.6%	INTU	6.8%
1.0	HD	11.6%	BHP	6.4%
1.0	ZTS	11.6%	ORLY	6.4%
1.0	MSTR	11.2%	HSEC	6.4%
1.0	INTU	11.2%	XOM	6.4%
1.0	GWV	11.2%	HCA	6.4%
1.0	TXN	11.2%	OXY	6.0%
1.0	GLD	10.4%	COST	6.0%
1.0	META	10.0%	MNST	6.0%
1.0	NAVI	9.6%	POST	6.0%
1.0	NFLX	9.6%	HLT	6.0%
1.0	KHC	9.6%	ELAN	6.0%
1.0	VICI	8.8%	BUD	5.6%
1.0	PEP	8.8%	LEN	5.6%
1.0	AMC	8.8%	WFC	5.6%
1.0	UNH	8.4%	MU	5.6%
1.0	AMD	8.0%	RIO	5.6%
1.0	AMGN	8.0%	INTC	5.6%
1.0	CLF	7.6%	GSK	5.6%
1.0	MSFT	7.6%	MSFT	5.6%



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## P365D: 10d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	AMC	27.39%	INTU	16.18%
10.0	META	22.82%	FIS	12.03%
10.0	CMCSA	21.16%	AZO	11.62%
10.0	ZTS	19.92%	PRGO	11.2%
10.0	PRGO	19.92%	MSI	9.54%
10.0	TDG	18.26%	HCA	9.54%
10.0	INTU	17.84%	ZTS	9.13%
10.0	HD	15.77%	CHTR	9.13%
10.0	CHTR	15.35%	ORLY	9.13%
10.0	NFLX	14.94%	TDG	9.13%
10.0	TXN	14.94%	MOS	8.71%
10.0	GNRC	14.94%	CMG	8.71%
10.0	BUD	14.52%	GBTC	7.88%
10.0	AMZN	14.11%	FCX	7.88%
10.0	CLF	13.69%	T	7.88%
10.0	UNH	13.28%	SLV	7.5%
10.0	MSTR	12.86%	BUD	7.47%
10.0	GWV	12.45%	LEN	7.47%
10.0	AAP	12.45%	CNC	7.47%
10.0	NAVI	11.62%	GSK	7.05%
10.0	GSK	11.2%	POST	7.05%
10.0	LLY	10.79%	ADBE	6.64%
10.0	GE	10.79%	B	6.64%
10.0	TMUS	10.37%	HD	6.64%
10.0	SNY	10.37%	CLF	6.22%
10.0	VZ	9.54%	TFC	6.22%
10.0	AZO	9.54%	GNRC	6.22%
10.0	HCA	9.13%	NAVI	6.22%
10.0	MSI	9.13%	NEM	6.22%
10.0	QCOM	9.13%	FITB	5.81%



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## P365D: 21d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	ZTS	31.3%	CHTR	19.13%
21.0	CMCSA	29.13%	INTU	18.7%
21.0	CHTR	28.7%	PRGO	16.96%
21.0	PRGO	27.83%	CMG	16.96%
21.0	TDG	25.22%	ZTS	14.78%
21.0	AMC	22.17%	FIS	13.04%
21.0	INTU	21.3%	AZO	13.04%
21.0	UNH	19.57%	MSI	11.74%
21.0	CLF	17.83%	HD	11.3%
21.0	MSI	16.09%	NAVI	11.3%
21.0	NAVI	16.09%	GBTC	10.87%
21.0	HD	15.65%	CNC	10.0%
21.0	META	15.65%	MSFT	10.0%
21.0	BUD	14.78%	T	9.13%
21.0	AMZN	14.78%	LEN	9.13%
21.0	TXN	14.35%	IRM	8.7%
21.0	MSTR	13.48%	LW	8.7%
21.0	GNRC	13.04%	BUD	8.7%
21.0	FIS	12.61%	MOS	8.26%
21.0	BXP	12.17%	GT	8.26%
21.0	CNC	11.3%	EXPE	7.83%
21.0	CMG	11.3%	CCL	6.52%
21.0	T	11.3%	ADBE	6.52%
21.0	NWL	10.43%	FITB	6.52%
21.0	LW	10.43%	ORLY	6.09%
21.0	AMD	10.0%	NFLX	6.09%
21.0	NFLX	10.0%	TFC	5.65%
21.0	AZO	10.0%	GSK	5.65%
21.0	TMUS	10.0%	USB	5.65%
21.0	ADBE	9.13%	LNC	5.22%



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## P365D: 63d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
63.0	PRGO	74.47%	INTU	31.91%
63.0	MSTR	39.89%	CHTR	25.53%
63.0	ZTS	36.7%	PRGO	21.28%
63.0	INTU	36.7%	MSFT	20.74%
63.0	CMCSA	35.11%	FIS	19.68%
63.0	TDG	33.51%	NAVI	15.43%
63.0	CHTR	32.45%	NFLX	12.77%
63.0	AMC	30.32%	MSI	12.77%
63.0	NFLX	30.32%	CNC	11.7%
63.0	MSI	29.79%	ZTS	11.17%
63.0	BXP	27.13%	ADBE	10.64%
63.0	NAVI	22.34%	MOS	10.11%
63.0	META	22.34%	AZO	7.45%
63.0	FIS	21.28%	CMG	6.38%
63.0	BUD	20.21%	BUD	5.85%
63.0	CLF	14.36%	BXP	5.32%
63.0	HD	13.83%	FRA	4.79%
63.0	NWL	12.77%	HCA	4.79%
63.0	QCOM	12.77%	HD	4.26%
63.0	LW	11.7%	T	4.26%
63.0	CNC	11.7%	LNC	4.26%
63.0	ADBE	10.64%	ORCL	3.72%
63.0	GNRC	10.11%	VICI	3.72%
63.0	ISRG	10.11%	SLV	2.67%
63.0	IRM	9.04%	LEN	2.13%
63.0	VNO	7.98%	B	1.6%
63.0	BALL	7.45%	QCOM	1.6%
63.0	AMZN	7.45%	GBTC	1.6%
63.0	UNH	6.38%	TDG	1.06%
63.0	CPRT	6.38%	CMCSA	1.06%



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## P365D: 126d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
126.0	PRGO	92.8%	PRGO	60.8%
126.0	MSTR	80.8%	INTU	52.8%
126.0	AMC	74.4%	CHTR	28.8%
126.0	INTU	67.2%	FRA	18.4%
126.0	ZTS	60.0%	MSFT	12.0%
126.0	NFLX	47.2%	FIS	11.2%
126.0	BXP	43.2%	ZTS	4.0%
126.0	CHTR	34.4%	ORCL	3.2%
126.0	ORCL	33.6%	MOS	3.2%
126.0	LEN	31.2%	GBTC	2.4%
126.0	CPRT	31.2%	NFLX	2.4%
126.0	CMCSA	29.6%	CMG	0.8%
126.0	TDG	23.2%	AZO	0.8%
126.0	NAVI	20.8%	MUB	0.0%
126.0	AAP	16.8%	NAVI	0.0%
126.0	UNH	14.4%	NEM	0.0%
126.0	META	14.4%	NVDA	0.0%
126.0	VNO	13.6%	VZ	0.0%
126.0	CNC	13.6%	MSTR	0.0%
126.0	FIS	8.8%	NVS	0.0%
126.0	MSFT	5.6%	WYNN	0.0%
126.0	ISRG	4.8%	NWL	0.0%
126.0	AZO	3.2%	WFC	0.0%
126.0	BUD	3.2%	ON	0.0%
126.0	ADBE	3.2%	MU	0.0%
126.0	CLF	3.2%	MSI	0.0%
126.0	AMZN	2.4%	OXY	0.0%
126.0	BBY	2.4%	XOM	0.0%
126.0	KHC	1.6%	MS	0.0%
126.0	VST	0.8%	MRK	0.0%



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## Top 30 Tickers By ROVBC

### All TMD: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	MSTR	0.44%	MSTR	0.3%
1.0	GME	0.37%	MU	0.29%
1.0	WDC	0.32%	WDC	0.27%
1.0	MU	0.29%	NVDA	0.25%
1.0	NFLX	0.21%	VST	0.23%
1.0	AMD	0.21%	AVGO	0.23%
1.0	META	0.21%	PWR	0.2%
1.0	ORCL	0.2%	AMD	0.2%
1.0	AVGO	0.19%	TEVA	0.17%
1.0	NVDA	0.18%	X	0.17%
1.0	CDNS	0.18%	LLY	0.16%
1.0	LLY	0.17%	GE	0.16%
1.0	PWR	0.17%	TRGP	0.16%
1.0	AAPL	0.16%	GME	0.15%
1.0	GOOGL	0.15%	AMAT	0.15%
1.0	GWV	0.15%	GBTC	0.14%
1.0	INTC	0.14%	SLV	0.14%
1.0	ON	0.14%	INTC	0.14%
1.0	AA	0.13%	CAH	0.14%
1.0	QCOM	0.13%	ORCL	0.13%
1.0	GBTC	0.13%	ON	0.12%
1.0	XOM	0.12%	THC	0.12%
1.0	B	0.12%	ETRN	0.12%
1.0	X	0.12%	GOOGL	0.12%
1.0	AMZN	0.11%	GS	0.11%
1.0	TEVA	0.1%	IRM	0.11%
1.0	GE	0.09%	CDNS	0.11%
1.0	TRGP	0.09%	CSTM	0.11%
1.0	FCX	0.09%	META	0.11%
1.0	VST	0.09%	NFLX	0.1%



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## All TMD: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	5.73%	MSTR	3.09%
10.0	GME	5.05%	MU	2.73%
10.0	MU	3.48%	WDC	2.68%
10.0	WDC	3.42%	NVDA	2.53%
10.0	META	2.27%	VST	2.23%
10.0	INTC	2.23%	AVGO	2.19%
10.0	AMD	2.14%	PWR	2.05%
10.0	TEVA	2.08%	AMD	1.88%
10.0	NFLX	2.07%	TEVA	1.74%
10.0	AVGO	2.05%	LLY	1.59%
10.0	NVDA	1.98%	X	1.58%
10.0	ORCL	1.96%	TRGP	1.57%
10.0	VST	1.77%	INTC	1.5%
10.0	PWR	1.69%	GE	1.49%
10.0	LLY	1.63%	ETRN	1.41%
10.0	SLV	1.55%	AMAT	1.4%
10.0	GOOGL	1.54%	GBTC	1.38%
10.0	KALU	1.51%	CAH	1.38%
10.0	GWG	1.45%	SLV	1.36%
10.0	CDNS	1.36%	GME	1.31%
10.0	OXY	1.3%	META	1.21%
10.0	CAH	1.29%	THC	1.18%
10.0	AAPL	1.28%	IRM	1.15%
10.0	GE	1.28%	GOOGL	1.14%
10.0	GBTC	1.26%	ORCL	1.14%
10.0	ETRN	1.23%	NFLX	1.13%
10.0	X	1.21%	GS	1.09%
10.0	AMZN	1.18%	TSLA	1.07%
10.0	ON	1.18%	ON	1.07%
10.0	GS	1.13%	CDNS	1.05%



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## All TMD: 21d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	MSTR	15.1%	MSTR	7.14%
21.0	GME	7.91%	WDC	5.78%
21.0	WDC	7.54%	MU	5.64%
21.0	MU	7.5%	NVDA	5.45%
21.0	META	6.15%	VST	4.83%
21.0	INTC	5.81%	AVGO	4.61%
21.0	TEVA	5.13%	PWR	4.43%
21.0	AMD	4.95%	AMD	4.15%
21.0	NFLX	4.83%	TEVA	3.8%
21.0	AVGO	4.69%	ETRN	3.5%
21.0	ORCL	4.37%	INTC	3.29%
21.0	NVDA	4.23%	TRGP	3.26%
21.0	PWR	4.01%	LLY	3.25%
21.0	GBTC	3.66%	GE	3.2%
21.0	VST	3.66%	X	3.17%
21.0	ETRN	3.51%	GBTC	3.1%
21.0	GOOGL	3.4%	AMAT	2.95%
21.0	LLY	3.38%	CAH	2.89%
21.0	KALU	3.35%	SLV	2.84%
21.0	TSLA	3.16%	META	2.67%
21.0	SLV	3.13%	NFLX	2.51%
21.0	GWV	3.03%	THC	2.51%
21.0	GE	3.02%	GOOGL	2.49%
21.0	CAH	2.69%	ORCL	2.48%
21.0	CTLT	2.65%	IRM	2.47%
21.0	GS	2.62%	TSLA	2.46%
21.0	GILD	2.61%	GS	2.31%
21.0	AMZN	2.57%	ON	2.21%
21.0	AA	2.56%	CDNS	2.17%
21.0	AMAT	2.5%	GWV	2.14%



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## All TMD: 63d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	MSTR	32.54%	MSTR	20.13%
63.0	WDC	30.66%	WDC	18.41%
63.0	META	20.41%	NVDA	17.68%
63.0	MU	18.55%	MU	16.22%
63.0	NFLX	17.05%	VST	16.04%
63.0	NVDA	14.89%	AVGO	13.64%
63.0	AVGO	14.69%	PWR	11.95%
63.0	VST	14.52%	TEVA	10.46%
63.0	ORCL	12.62%	GE	10.32%
63.0	TEVA	12.37%	ETRN	10.28%
63.0	AMD	11.43%	GBTC	10.28%
63.0	ETRN	11.21%	AMD	10.02%
63.0	GE	11.16%	META	9.5%
63.0	CTLT	11.11%	LLY	9.24%
63.0	SLV	10.38%	TRGP	9.2%
63.0	AMAT	10.35%	CAH	9.06%
63.0	KALU	10.18%	NFLX	9.04%
63.0	PWR	10.03%	AMAT	8.91%
63.0	GBTC	9.15%	SLV	8.83%
63.0	GOOGL	9.13%	THC	8.09%
63.0	CAH	8.98%	PHM	7.46%
63.0	INTC	8.75%	GOOGL	7.19%
63.0	GNRC	8.63%	ORCL	7.04%
63.0	NEM	8.3%	GS	6.87%
63.0	GILD	8.29%	HSBC	6.54%
63.0	LLY	8.21%	INTC	6.33%
63.0	THC	8.18%	CCL	6.19%
63.0	GS	7.97%	IRM	6.17%
63.0	TSLA	7.92%	GLD	5.98%
63.0	GWV	7.86%	X	5.91%



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## All TMD: 126d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	MSTR	90.64%	MSTR	49.65%
126.0	WDC	82.32%	WDC	44.41%
126.0	META	53.89%	NVDA	44.11%
126.0	MU	51.23%	MU	39.78%
126.0	NVDA	44.97%	VST	35.78%
126.0	NFLX	42.13%	AVGO	30.09%
126.0	AVGO	39.72%	GBTC	29.06%
126.0	VST	35.73%	GE	25.34%
126.0	GBTC	29.47%	TEVA	23.22%
126.0	SLV	27.63%	META	23.21%
126.0	TEVA	27.47%	PWR	23.14%
126.0	GE	26.65%	NFLX	22.15%
126.0	AMD	26.46%	SLV	20.9%
126.0	AMAT	25.99%	AMD	20.56%
126.0	ORCL	25.74%	THC	20.24%
126.0	LLY	23.85%	AMAT	20.14%
126.0	B	23.55%	CAH	19.76%
126.0	PWR	22.4%	LLY	19.67%
126.0	GOOGL	21.57%	TRGP	18.93%
126.0	CAH	21.56%	ETRN	18.49%
126.0	NEM	20.48%	PHM	17.21%
126.0	INTC	20.21%	GOOGL	16.69%
126.0	THC	19.51%	ORCL	15.94%
126.0	GILD	18.86%	GS	15.56%
126.0	KALU	17.76%	B	15.31%
126.0	TSLA	17.69%	HSBC	14.1%
126.0	GS	17.09%	CCL	14.04%
126.0	ETRN	16.95%	GLD	13.45%
126.0	ISRG	16.38%	JPM	12.87%
126.0	CSTM	15.85%	INTC	12.77%



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## All TMD: 252d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
252.0	MSTR	317.71%	MSTR	169.5%
252.0	WDC	218.97%	NVDA	119.97%
252.0	META	142.48%	VST	106.7%
252.0	VST	127.8%	WDC	99.68%
252.0	NVDA	122.33%	GBTC	92.97%
252.0	MU	120.09%	MU	84.18%
252.0	NFLX	112.97%	AVGO	77.04%
252.0	AVGO	108.79%	META	63.84%
252.0	GBTC	99.16%	GE	61.17%
252.0	GE	70.57%	NFLX	57.68%
252.0	SLV	63.23%	PWR	49.14%
252.0	AMD	62.36%	THC	48.14%
252.0	ORCL	60.97%	AMD	44.91%
252.0	THC	60.65%	TEVA	42.74%
252.0	LLY	58.61%	PHM	42.61%
252.0	TEVA	58.18%	LLY	42.44%
252.0	AMAT	57.69%	TRGP	40.73%
252.0	B	54.55%	SLV	39.52%
252.0	AMZN	53.94%	CAH	39.25%
252.0	NEM	53.51%	AMAT	38.62%
252.0	PWR	53.41%	CCL	37.5%
252.0	GOOGL	53.32%	ORCL	37.21%
252.0	CAH	48.34%	ETRN	35.78%
252.0	ISRG	47.9%	GOOGL	35.04%
252.0	TSLA	46.33%	GS	33.59%
252.0	INTC	43.26%	JPM	31.05%
252.0	EXPE	42.77%	HSBC	30.96%
252.0	ELAN	41.54%	B	30.09%
252.0	GILD	40.2%	TDG	29.52%
252.0	TDG	39.93%	GLD	29.31%



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## P30D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	ORCL	3.19%	MU	3.39%
1.0	BBY	2.92%	AMD	2.05%
1.0	MU	2.75%	QCOM	1.86%
1.0	AMD	2.6%	ORCL	1.76%
1.0	WDC	2.23%	CLF	1.52%
1.0	LUMN	2.23%	CSCO	1.43%
1.0	QCOM	2.08%	BBY	1.35%
1.0	CDNS	1.96%	LUMN	1.24%
1.0	LLY	1.7%	INTC	1.12%
1.0	AAP	1.57%	WDC	1.07%
1.0	CLF	1.25%	AA	1.03%
1.0	AVGO	1.12%	ON	0.99%
1.0	NVDA	0.97%	LLY	0.86%
1.0	TSLA	0.95%	JAZZ	0.79%
1.0	AMAT	0.95%	AMC	0.79%
1.0	ON	0.93%	MNST	0.72%
1.0	JAZZ	0.92%	AMAT	0.7%
1.0	CNC	0.89%	AAPL	0.7%
1.0	INTC	0.89%	TSLA	0.69%
1.0	VNO	0.84%	FCX	0.69%
1.0	CSCO	0.83%	CDNS	0.66%
1.0	GE	0.82%	VNO	0.63%
1.0	MRK	0.72%	BHP	0.6%
1.0	TDG	0.7%	FSUGY	0.58%
1.0	AMC	0.68%	GE	0.58%
1.0	AA	0.64%	CNC	0.54%
1.0	FCX	0.5%	GS	0.54%
1.0	BHP	0.47%	HON	0.53%
1.0	AAPL	0.45%	MSFT	0.51%
1.0	META	0.43%	CSTM	0.51%



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## P30D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	LLY	16.26%	CSCO	22.22%
10.0	AMD	16.16%	MU	19.36%
10.0	MU	14.96%	AMD	14.06%
10.0	QCOM	14.04%	QCOM	11.41%
10.0	CVS	12.02%	LUMN	10.26%
10.0	JAZZ	11.6%	ON	10.06%
10.0	CSCO	11.49%	BBY	8.93%
10.0	BBY	11.32%	MNST	8.43%
10.0	CNC	10.0%	LLY	7.27%
10.0	WDC	9.87%	JAZZ	7.21%
10.0	ORCL	8.96%	AA	6.86%
10.0	CLF	8.86%	CLF	6.41%
10.0	ON	8.43%	TXN	6.2%
10.0	LUMN	8.14%	CVS	6.18%
10.0	CAH	8.12%	AAPL	6.03%
10.0	TSLA	6.97%	CNC	5.22%
10.0	NVDA	6.59%	TRGP	4.92%
10.0	MNST	6.18%	GS	4.85%
10.0	CDNS	5.84%	CAH	4.83%
10.0	KHC	5.83%	WDC	4.83%
10.0	UNH	5.75%	INTC	4.75%
10.0	VNO	5.61%	ORCL	4.73%
10.0	AA	5.55%	HON	4.37%
10.0	GWG	5.29%	GWG	4.35%
10.0	BUD	5.26%	FSUGY	4.2%
10.0	AAPL	4.79%	NVDA	4.18%
10.0	MRK	4.66%	BUD	4.05%
10.0	TXN	4.38%	AMAT	3.92%
10.0	INTC	4.32%	VNO	3.75%
10.0	FCX	4.02%	MRK	3.75%



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## P90D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	AMD	2.11%	AMD	1.65%
1.0	WDC	1.93%	INTC	1.65%
1.0	INTC	1.69%	MU	1.53%
1.0	ORCL	1.51%	WDC	1.18%
1.0	MU	1.38%	ON	1.04%
1.0	QCOM	1.25%	QCOM	1.02%
1.0	AMC	1.2%	LUMN	0.86%
1.0	UNH	1.07%	AMC	0.78%
1.0	LUMN	1.05%	ORCL	0.73%
1.0	CNC	0.96%	CSCO	0.7%
1.0	CDNS	0.84%	TXN	0.66%
1.0	AAP	0.7%	AVGO	0.58%
1.0	TXN	0.69%	CNC	0.54%
1.0	ON	0.69%	KALU	0.53%
1.0	AMZN	0.66%	CSTM	0.5%
1.0	AVGO	0.58%	AMZN	0.44%
1.0	BBY	0.57%	UNH	0.43%
1.0	LLY	0.54%	BBY	0.42%
1.0	KALU	0.52%	PWR	0.39%
1.0	NVDA	0.46%	GOOGL	0.37%
1.0	JAZZ	0.43%	CDNS	0.37%
1.0	TSLA	0.41%	AA	0.37%
1.0	MSFT	0.39%	MS	0.37%
1.0	CSCO	0.39%	JAZZ	0.37%
1.0	BXP	0.36%	VNO	0.36%
1.0	GBTC	0.36%	AMAT	0.36%
1.0	VNO	0.35%	GNRC	0.36%
1.0	CVS	0.31%	CLF	0.35%
1.0	GOOGL	0.3%	QQQ	0.32%
1.0	AA	0.26%	MSTR	0.32%



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## P90D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	AMD	26.81%	INTC	21.39%
10.0	INTC	26.37%	AMD	18.07%
10.0	WDC	19.47%	MU	15.77%
10.0	QCOM	16.96%	ON	13.84%
10.0	UNH	16.81%	WDC	13.31%
10.0	MU	15.85%	QCOM	10.81%
10.0	ON	14.16%	TXN	9.14%
10.0	ORCL	13.44%	CNC	8.72%
10.0	MSTR	12.95%	CSCO	8.34%
10.0	CNC	11.69%	LUMN	8.16%
10.0	TXN	10.29%	AMC	7.87%
10.0	AMC	9.42%	KALU	7.04%
10.0	KALU	9.33%	UNH	6.11%
10.0	CVS	7.87%	CSTM	5.44%
10.0	LUMN	7.39%	PWR	5.44%
10.0	JAZZ	7.35%	AVGO	5.26%
10.0	CDNS	5.76%	GOOGL	5.08%
10.0	CSCO	5.01%	ORCL	5.08%
10.0	AMZN	5.0%	JAZZ	4.85%
10.0	CLF	4.74%	AMZN	4.68%
10.0	TSLA	4.66%	GNRC	4.6%
10.0	GOOGL	4.62%	AMAT	4.55%
10.0	AMAT	4.4%	MSTR	4.22%
10.0	GBTC	4.4%	MS	4.14%
10.0	AVGO	4.3%	CDNS	4.05%
10.0	LLY	4.24%	CVS	3.73%
10.0	BXP	3.86%	NVDA	3.68%
10.0	BUD	3.8%	CLF	3.52%
10.0	NVDA	3.79%	VNO	3.47%
10.0	PWR	3.41%	QQQ	3.46%



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## P90D: 21d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	INTC	94.06%	INTC	62.66%
21.0	AMD	78.81%	AMD	48.88%
21.0	UNH	49.42%	MU	39.05%
21.0	MU	43.94%	ON	37.19%
21.0	ON	43.16%	WDC	32.6%
21.0	MSTR	42.32%	QCOM	28.91%
21.0	QCOM	37.72%	CNC	27.86%
21.0	WDC	36.63%	TXN	24.94%
21.0	ORCL	35.22%	KALU	22.14%
21.0	TXN	34.74%	AMC	22.07%
21.0	CNC	33.37%	LUMN	19.62%
21.0	AMC	29.8%	UNH	17.57%
21.0	KALU	27.02%	CSCO	16.74%
21.0	CVS	22.71%	CSTM	15.83%
21.0	JAZZ	19.2%	PWR	15.72%
21.0	LUMN	19.03%	AVGO	15.45%
21.0	CLF	18.28%	GOOGL	14.75%
21.0	AMZN	17.9%	GNRC	14.41%
21.0	AVGO	14.34%	MSTR	14.11%
21.0	PWR	12.19%	AMZN	13.54%
21.0	CSCO	12.16%	ORCL	12.93%
21.0	GOOGL	11.25%	CLF	12.09%
21.0	GBTC	11.1%	CDNS	11.49%
21.0	BXP	10.61%	JAZZ	11.34%
21.0	BUD	10.58%	AMAT	10.67%
21.0	CDNS	10.37%	IRM	10.6%
21.0	AMAT	9.78%	CVS	10.45%
21.0	TSLA	9.44%	MS	10.22%
21.0	GNRC	9.38%	NVDA	9.87%
21.0	IRM	9.34%	VNO	9.55%



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## P365D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	WDC	1.08%	MU	1.02%
1.0	MU	1.04%	WDC	1.02%
1.0	AMD	0.75%	INTC	0.81%
1.0	INTC	0.74%	AMD	0.7%
1.0	ON	0.62%	LUMN	0.54%
1.0	LLY	0.53%	AA	0.48%
1.0	CLF	0.52%	ON	0.48%
1.0	AAP	0.47%	AMAT	0.46%
1.0	QCOM	0.44%	CSTM	0.46%
1.0	GOOGL	0.43%	CLF	0.44%
1.0	UNH	0.38%	SLV	0.41%
1.0	AA	0.36%	KALU	0.41%
1.0	CMA	0.35%	GNRC	0.38%
1.0	CDNS	0.35%	B	0.36%
1.0	LUMN	0.35%	JAZZ	0.34%
1.0	ORCL	0.34%	NEM	0.34%
1.0	CVS	0.33%	GOOGL	0.33%
1.0	KALU	0.32%	TEVA	0.33%
1.0	MRK	0.31%	PWR	0.32%
1.0	JAZZ	0.31%	AVGO	0.28%
1.0	NVDA	0.3%	CMA	0.28%
1.0	CSTM	0.3%	CSCO	0.28%
1.0	AMAT	0.3%	ELAN	0.27%
1.0	TXN	0.29%	FCX	0.26%
1.0	B	0.28%	QCOM	0.26%
1.0	FCX	0.28%	BHP	0.26%
1.0	NEM	0.26%	RIO	0.25%
1.0	GNRC	0.22%	TXN	0.24%
1.0	PWR	0.21%	GS	0.23%
1.0	AAPL	0.21%	FSUGY	0.21%



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## P365D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	WDC	12.48%	WDC	10.08%
10.0	MU	10.32%	MU	9.61%
10.0	INTC	10.03%	INTC	8.69%
10.0	AMD	7.28%	AMD	6.74%
10.0	ON	5.13%	LUMN	4.92%
10.0	KALU	5.08%	AMAT	4.43%
10.0	TSLA	4.48%	ON	4.22%
10.0	JAZZ	4.42%	AA	4.19%
10.0	UNH	4.21%	CSTM	4.19%
10.0	AA	4.21%	KALU	3.86%
10.0	GOOGL	3.84%	GNRC	3.79%
10.0	LLY	3.74%	SLV	3.77%
10.0	QCOM	3.48%	GOOGL	3.63%
10.0	CMA	3.46%	JAZZ	3.46%
10.0	CVS	3.45%	B	3.36%
10.0	GNRC	3.31%	NEM	3.24%
10.0	TXN	3.08%	PWR	3.23%
10.0	ORCL	2.98%	TEVA	3.16%
10.0	NEM	2.91%	CMA	3.15%
10.0	PWR	2.81%	CLF	2.75%
10.0	AMAT	2.77%	CSCO	2.71%
10.0	B	2.76%	RIO	2.51%
10.0	LUMN	2.71%	AVGO	2.49%
10.0	FCX	2.67%	BHP	2.44%
10.0	CSTM	2.66%	TXN	2.35%
10.0	CDNS	2.5%	FCX	2.21%
10.0	CLF	2.48%	TRGP	2.2%
10.0	NVDA	2.47%	ELAN	2.15%
10.0	VFC	2.43%	GS	2.11%
10.0	MRK	2.41%	QCOM	2.05%



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## P365D: 21d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	INTC	27.53%	WDC	22.29%
21.0	WDC	26.83%	MU	20.54%
21.0	MU	22.9%	INTC	19.71%
21.0	AMD	17.75%	AMD	14.73%
21.0	ON	11.5%	LUMN	9.91%
21.0	KALU	11.21%	AMAT	9.32%
21.0	AA	11.01%	CSTM	9.18%
21.0	JAZZ	10.33%	AA	8.86%
21.0	GOOGL	9.27%	ON	8.82%
21.0	UNH	9.04%	KALU	8.76%
21.0	GNRC	8.81%	SLV	8.45%
21.0	TSLA	8.58%	GOOGL	8.18%
21.0	TXN	8.57%	GNRC	8.13%
21.0	NEM	7.86%	B	7.39%
21.0	CMA	7.42%	TEVA	7.37%
21.0	CVS	7.37%	JAZZ	7.28%
21.0	CSTM	7.2%	PWR	7.24%
21.0	B	6.88%	CMA	7.0%
21.0	LLY	6.86%	NEM	6.97%
21.0	PWR	6.63%	CLF	5.8%
21.0	AMAT	6.58%	RIO	5.73%
21.0	LUMN	6.44%	BHP	5.45%
21.0	QCOM	6.03%	AVGO	5.22%
21.0	VFC	5.75%	TXN	4.91%
21.0	TEVA	5.51%	ELAN	4.86%
21.0	SLV	5.19%	CSCO	4.82%
21.0	FCX	5.03%	TRGP	4.48%
21.0	AAP	4.91%	FCX	4.47%
21.0	RIO	4.69%	VFC	4.3%
21.0	MRK	4.64%	FSUGY	4.28%



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## P365D: 63d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	WDC	107.3%	WDC	76.96%
63.0	MU	70.96%	MU	66.02%
63.0	INTC	58.08%	INTC	51.51%
63.0	AA	40.73%	AA	32.11%
63.0	KALU	36.78%	SLV	31.48%
63.0	AMAT	32.17%	AMAT	30.51%
63.0	NEM	31.68%	LUMN	30.17%
63.0	JAZZ	31.5%	CSTM	29.3%
63.0	GNRC	31.18%	AMD	28.63%
63.0	ON	30.6%	B	27.65%
63.0	B	30.1%	TEVA	26.26%
63.0	CSTM	29.7%	KALU	24.43%
63.0	AMD	28.56%	NEM	23.76%
63.0	TSLA	27.66%	GOOGL	23.34%
63.0	SLV	24.98%	JAZZ	21.85%
63.0	GOOGL	24.55%	CMA	19.64%
63.0	LUMN	24.3%	PWR	19.18%
63.0	TEVA	23.43%	RIO	17.88%
63.0	VFC	21.29%	ON	17.24%
63.0	OXY	21.24%	ELAN	17.05%
63.0	CMA	21.22%	GNRC	16.02%
63.0	BHP	18.03%	BHP	15.42%
63.0	TXN	17.72%	TRGP	15.23%
63.0	CVS	17.53%	FCX	15.2%
63.0	PWR	17.26%	VFC	14.07%
63.0	BIIB	16.21%	MRK	13.3%
63.0	MRK	15.03%	BIIB	12.88%
63.0	FCX	14.91%	XOM	12.86%
63.0	GSK	14.43%	GLD	12.66%
63.0	ELAN	13.49%	HSBC	12.39%



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## P365D: 126d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	WDC	335.86%	WDC	212.91%
126.0	MU	216.0%	MU	184.09%
126.0	INTC	130.81%	INTC	108.78%
126.0	AA	128.61%	SLV	88.13%
126.0	KALU	113.3%	AA	87.78%
126.0	AMAT	101.69%	AMAT	78.62%
126.0	B	100.5%	TEVA	72.78%
126.0	SLV	95.94%	CSTM	72.6%
126.0	ON	82.6%	B	70.51%
126.0	CSTM	81.81%	KALU	65.72%
126.0	JAZZ	79.44%	NEM	56.61%
126.0	NEM	78.63%	LUMN	52.07%
126.0	VFC	75.71%	GOOGL	51.64%
126.0	CMA	63.26%	JAZZ	48.41%
126.0	TEVA	61.47%	AMD	46.77%
126.0	GOOGL	59.38%	CMA	45.73%
126.0	LUMN	55.08%	RIO	44.25%
126.0	PWR	47.92%	ON	41.68%
126.0	FCX	44.68%	FCX	40.08%
126.0	MRK	43.82%	VFC	38.14%
126.0	AMD	43.26%	PWR	37.81%
126.0	BIIB	41.89%	ELAN	36.06%
126.0	GNRC	41.4%	BHP	35.11%
126.0	TSLA	39.29%	MRK	34.86%
126.0	GSK	38.85%	TRGP	34.85%
126.0	LLY	38.73%	BIIB	31.3%
126.0	TXN	38.02%	GLD	30.03%
126.0	BHP	37.52%	HSBC	29.5%
126.0	CNC	35.68%	CAH	29.43%
126.0	AMGN	35.56%	GSK	29.08%



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## Bottom 30 Tickers By ROVBC

### All TMD: 1d

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

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

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	CHTR	-0.18%	AMC	-0.15%
1.0	AMC	-0.18%	IEP	-0.14%
1.0	FIS	-0.17%	NWL	-0.12%
1.0	IEP	-0.15%	CHTR	-0.1%
1.0	PRGO	-0.13%	PRGO	-0.09%
1.0	CYH	-0.09%	FIS	-0.07%
1.0	LUMN	-0.07%	ZTS	-0.07%
1.0	BHC	-0.07%	AAP	-0.06%
1.0	GT	-0.06%	VFC	-0.06%
1.0	CMCSA	-0.06%	GT	-0.06%
1.0	UAA	-0.06%	BHC	-0.06%
1.0	NAVI	-0.06%	CMCSA	-0.05%
1.0	TLT	-0.05%	UAA	-0.05%
1.0	T	-0.05%	TLT	-0.04%
1.0	BXP	-0.05%	NAVI	-0.04%
1.0	ZTS	-0.05%	ADBE	-0.04%
1.0	ELAN	-0.05%	BXP	-0.04%
1.0	GSK	-0.04%	BALL	-0.03%
1.0	NWL	-0.04%	CZR	-0.03%
1.0	VFC	-0.04%	KHC	-0.03%
1.0	LNC	-0.04%	LNC	-0.02%
1.0	PEP	-0.03%	INTU	-0.02%
1.0	EMB	-0.03%	CTLT	-0.01%
1.0	CTLT	-0.03%	FRA	-0.01%
1.0	USB	-0.03%	LQD	-0.01%
1.0	LQD	-0.02%	MOS	-0.01%
1.0	CMG	-0.02%	PEP	-0.01%



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## All TMD: 10d

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

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

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	-4.12%	FRCB	-2.19%
10.0	FRCB	-3.12%	AMC	-1.65%
10.0	PRGO	-1.87%	IEP	-1.37%
10.0	CHTR	-1.71%	NWL	-1.11%
10.0	IEP	-1.55%	CHTR	-0.94%
10.0	FIS	-1.18%	PRGO	-0.82%
10.0	NWL	-1.08%	AAP	-0.71%
10.0	AAP	-1.04%	FIS	-0.7%
10.0	GT	-0.79%	VFC	-0.69%
10.0	ZTS	-0.76%	ZTS	-0.68%
10.0	VFC	-0.74%	UAA	-0.67%
10.0	BXP	-0.7%	GT	-0.66%
10.0	TLT	-0.66%	CZR	-0.51%
10.0	BHC	-0.59%	CMCSA	-0.51%
10.0	CYH	-0.56%	NAVI	-0.5%
10.0	GSK	-0.51%	BHC	-0.44%
10.0	NAVI	-0.51%	TLT	-0.42%
10.0	CMCSA	-0.4%	ADBE	-0.41%
10.0	LNC	-0.35%	BXP	-0.4%
10.0	ADBE	-0.35%	MOS	-0.31%
10.0	VZ	-0.32%	BALL	-0.3%
10.0	LQD	-0.26%	LNC	-0.29%
10.0	BALL	-0.26%	KHC	-0.28%
10.0	MOS	-0.22%	CYH	-0.26%
10.0	BIIB	-0.21%	BBY	-0.19%
10.0	LUMN	-0.21%	INTU	-0.18%
10.0	ZION	-0.15%	FRA	-0.17%
10.0	BMV	-0.15%	LQD	-0.13%



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## All TMD: 21d

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

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

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	-8.3%	AMC	-3.92%
21.0	PRGO	-3.66%	IEP	-2.89%
21.0	CHTR	-3.35%	NWL	-2.29%
21.0	NWL	-2.88%	CHTR	-1.89%
21.0	AAP	-2.79%	PRGO	-1.68%
21.0	IEP	-2.64%	AAP	-1.42%
21.0	FIS	-2.07%	VFC	-1.36%
21.0	ZTS	-1.77%	FIS	-1.29%
21.0	VFC	-1.74%	ZTS	-1.28%
21.0	BHC	-1.52%	BHC	-1.17%
21.0	TLT	-1.29%	UAA	-1.17%
21.0	BXP	-1.27%	GT	-1.17%
21.0	CMCSA	-1.26%	CZR	-1.16%
21.0	NAVI	-1.25%	NAVI	-1.05%
21.0	GT	-1.14%	CMCSA	-1.0%
21.0	CYH	-1.1%	BXP	-0.89%
21.0	LNC	-0.87%	TLT	-0.87%
21.0	GSK	-0.86%	ADBE	-0.74%
21.0	ADBE	-0.55%	KHC	-0.71%
21.0	MOS	-0.54%	MOS	-0.68%
21.0	LW	-0.53%	LNC	-0.66%
21.0	LQD	-0.43%	BALL	-0.56%
21.0	KHC	-0.42%	BBY	-0.52%
21.0	BMY	-0.4%	CYH	-0.44%
21.0	VNO	-0.38%	FRA	-0.32%
21.0	BBY	-0.37%	LQD	-0.24%
21.0	BALL	-0.36%	LW	-0.2%



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## All TMD: 63d

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

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

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	-32.85%	AMC	-15.64%
63.0	PRGO	-11.58%	IEP	-9.75%
63.0	AAP	-9.72%	NWL	-7.75%
63.0	IEP	-9.71%	PRGO	-6.17%
63.0	NWL	-9.62%	AAP	-4.7%
63.0	CHTR	-8.19%	CHTR	-4.57%
63.0	VFC	-7.3%	CZR	-4.37%
63.0	FIS	-5.33%	VFC	-4.04%
63.0	BHC	-4.57%	BHC	-3.93%
63.0	ZTS	-4.35%	MOS	-3.81%
63.0	MOS	-4.16%	FIS	-3.49%
63.0	CMCSA	-3.74%	NAVI	-3.44%
63.0	NAVI	-3.68%	BXP	-3.33%
63.0	TLT	-3.59%	UAA	-2.97%
63.0	KHC	-3.56%	ZTS	-2.88%
63.0	BXP	-3.51%	KHC	-2.87%
63.0	CLF	-3.13%	GT	-2.78%
63.0	CNC	-2.85%	CLF	-2.56%
63.0	LNC	-2.77%	CMCSA	-2.5%
63.0	VNO	-2.58%	TLT	-2.33%
63.0	GT	-2.44%	ADBE	-2.22%
63.0	CZR	-2.26%	LNC	-2.07%
63.0	UNH	-2.17%	CNC	-2.02%
63.0	ADBE	-1.83%	BBY	-1.68%
63.0	BALL	-1.12%	UNH	-1.36%
63.0	BBY	-1.03%	BALL	-1.29%
63.0	LW	-0.96%	FRA	-0.9%



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## All TMD: 126d

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

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

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	-59.46%	AMC	-29.73%
126.0	IEP	-22.55%	IEP	-19.18%
126.0	NWL	-21.63%	NWL	-17.16%
126.0	PRGO	-21.54%	PRGO	-11.66%
126.0	AAP	-19.88%	AAP	-11.09%
126.0	CHTR	-15.78%	CZR	-8.57%
126.0	VFC	-14.09%	CHTR	-8.47%
126.0	BHC	-10.04%	MOS	-8.05%
126.0	MOS	-9.14%	VFC	-6.61%
126.0	CZR	-8.31%	UAA	-6.02%
126.0	CNC	-7.96%	KHC	-5.92%
126.0	CMCSA	-7.66%	FIS	-5.74%
126.0	KHC	-6.76%	CTLT	-5.69%
126.0	ZTS	-6.58%	CNC	-5.4%
126.0	BXP	-6.37%	NAVI	-5.31%
126.0	FIS	-6.28%	BHC	-5.31%
126.0	TLT	-6.23%	BXP	-5.28%
126.0	NAVI	-5.65%	GT	-4.9%
126.0	UNH	-5.1%	ZTS	-4.78%
126.0	UAA	-4.03%	CMCSA	-4.47%
126.0	LNC	-3.69%	TLT	-4.15%
126.0	CLF	-3.67%	UNH	-3.74%
126.0	GT	-3.27%	CLF	-3.3%
126.0	BMY	-1.95%	ADBE	-2.49%
126.0	BBY	-1.93%	BALL	-2.15%
126.0	BALL	-1.45%	LNC	-2.08%
126.0	LW	-1.22%	BBY	-2.07%



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## All TMD: 252d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
252.0	SBNY	-265.02%	SBNY	-95.75%
252.0	SIVBQ	-218.68%	SIVBQ	-95.29%
252.0	FRCB	-185.83%	FRCB	-91.61%
252.0	AMC	-97.32%	AMC	-54.62%
252.0	IEP	-48.95%	IEP	-39.78%
252.0	AAP	-47.36%	NWL	-30.85%
252.0	NWL	-44.15%	AAP	-23.09%
252.0	VFC	-35.3%	PRGO	-19.33%
252.0	PRGO	-31.67%	VFC	-18.88%
252.0	CHTR	-28.23%	CNC	-17.95%
252.0	UAA	-26.8%	CZR	-17.22%
252.0	CZR	-24.58%	UAA	-14.87%
252.0	CNC	-22.24%	MOS	-14.53%
252.0	MOS	-21.0%	CHTR	-12.52%
252.0	BIIB	-17.03%	KHC	-11.72%
252.0	CLF	-15.86%	CLF	-10.69%
252.0	BHC	-15.55%	UNH	-10.37%
252.0	KHC	-15.15%	GT	-8.95%
252.0	OXY	-14.54%	BMY	-8.45%
252.0	UNH	-12.73%	BHC	-8.38%
252.0	TLT	-12.0%	NAVI	-8.38%
252.0	BXP	-9.36%	TLT	-7.25%
252.0	NAVI	-9.28%	CTLT	-6.24%
252.0	BMY	-9.2%	CYH	-5.81%
252.0	ZTS	-8.86%	CMCSA	-5.76%
252.0	CMCSA	-8.35%	OXY	-5.72%
252.0	GT	-8.29%	ZTS	-5.59%
252.0	CYH	-7.02%	BXP	-5.44%
252.0	PEP	-3.39%	BIIB	-5.37%
252.0	LW	-3.06%	LW	-5.25%



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## P30D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	AZO	-2.83%	ZTS	-1.79%
1.0	NWL	-2.34%	AZO	-1.13%
1.0	ZTS	-2.02%	NWL	-0.82%
1.0	GT	-1.29%	GME	-0.76%
1.0	EXPE	-1.11%	GT	-0.7%
1.0	MSTR	-0.98%	HCA	-0.68%
1.0	CMCSA	-0.97%	ORLY	-0.66%
1.0	BALL	-0.95%	POST	-0.65%
1.0	MSI	-0.89%	CHTR	-0.64%
1.0	UAA	-0.79%	INTU	-0.63%
1.0	HCA	-0.77%	BALL	-0.53%
1.0	VFC	-0.72%	IEP	-0.51%
1.0	PEP	-0.69%	PEP	-0.46%
1.0	CHTR	-0.69%	VFC	-0.44%
1.0	FIS	-0.68%	EXPE	-0.44%
1.0	NAVI	-0.66%	NFLX	-0.41%
1.0	TMUS	-0.63%	CMCSA	-0.41%
1.0	NFLX	-0.63%	MSI	-0.38%
1.0	GME	-0.61%	LVS	-0.37%
1.0	INTU	-0.58%	FIS	-0.36%
1.0	SNY	-0.56%	ISRG	-0.35%
1.0	LNC	-0.51%	NAVI	-0.35%
1.0	BHC	-0.49%	LNC	-0.33%
1.0	POST	-0.47%	TFC	-0.32%
1.0	ORLY	-0.45%	CMG	-0.31%
1.0	IEP	-0.39%	SNY	-0.31%
1.0	FRA	-0.39%	BHC	-0.3%
1.0	WYNN	-0.37%	OXY	-0.3%
1.0	SBUX	-0.36%	PRGO	-0.3%
1.0	CMG	-0.32%	SBUX	-0.3%



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### P30D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	NWL	-30.71%	NWL	-15.5%
10.0	MSTR	-17.86%	ZTS	-13.87%
10.0	AZO	-12.84%	INTU	-11.01%
10.0	VFC	-10.1%	GT	-9.82%
10.0	MSI	-9.92%	MSTR	-9.72%
10.0	ZTS	-8.95%	GME	-7.94%
10.0	INTU	-8.79%	VFC	-7.74%
10.0	CMCSA	-8.7%	UAA	-7.62%
10.0	EXPE	-8.33%	AZO	-7.19%
10.0	GT	-8.16%	CHTR	-7.0%
10.0	HCA	-7.79%	HCA	-6.75%
10.0	GME	-7.69%	EXPE	-6.64%
10.0	UAA	-7.44%	IEP	-6.12%
10.0	IEP	-7.36%	POST	-5.37%
10.0	CHTR	-7.25%	FIS	-4.6%
10.0	NEM	-5.24%	GBTC	-4.46%
10.0	WYNN	-5.13%	NEM	-4.41%
10.0	PEP	-5.02%	LVS	-4.35%
10.0	BALL	-4.93%	BALL	-4.33%
10.0	PRGO	-4.7%	WYNN	-4.26%
10.0	GLD	-4.61%	PRGO	-4.19%
10.0	LNC	-4.53%	ELAN	-4.02%
10.0	POST	-4.44%	PWR	-3.79%
10.0	FIS	-3.99%	BA	-3.72%
10.0	NAVI	-3.92%	PEP	-3.63%
10.0	GBTC	-3.81%	CMCSA	-3.6%
10.0	LVS	-3.73%	ORLY	-3.51%
10.0	CYH	-3.62%	SLV	-3.41%
10.0	BHC	-3.58%	TEVA	-3.36%
10.0	TMUS	-3.42%	NAVI	-3.22%



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## P90D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	NWL	-1.1%	ZTS	-0.75%
1.0	AZO	-0.92%	CHTR	-0.67%
1.0	CHTR	-0.79%	HCA	-0.53%
1.0	ZTS	-0.72%	GT	-0.45%
1.0	INTU	-0.64%	THC	-0.45%
1.0	TMUS	-0.61%	AZO	-0.43%
1.0	CMCSA	-0.57%	NWL	-0.37%
1.0	UAA	-0.52%	CMCSA	-0.32%
1.0	FIS	-0.52%	LEN	-0.31%
1.0	GT	-0.51%	CYH	-0.31%
1.0	BALL	-0.46%	BALL	-0.3%
1.0	HCA	-0.45%	INTU	-0.29%
1.0	GLD	-0.43%	MSI	-0.28%
1.0	PEP	-0.34%	UAA	-0.27%
1.0	PRGO	-0.31%	GLD	-0.24%
1.0	CMG	-0.31%	CPRT	-0.24%
1.0	LEN	-0.3%	PCG	-0.24%
1.0	HD	-0.3%	CAH	-0.24%
1.0	BHC	-0.28%	HD	-0.24%
1.0	ISRG	-0.27%	PEP	-0.23%
1.0	MSI	-0.27%	ISRG	-0.23%
1.0	NFLX	-0.27%	POST	-0.23%
1.0	GNRC	-0.26%	B	-0.23%
1.0	B	-0.25%	SLV	-0.23%
1.0	VFC	-0.23%	FIS	-0.22%
1.0	AMGN	-0.23%	GSK	-0.22%
1.0	POST	-0.23%	TMUS	-0.21%
1.0	GE	-0.23%	AMGN	-0.21%
1.0	ACGL	-0.22%	CMG	-0.21%
1.0	SNY	-0.21%	NEM	-0.2%



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## P90D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	CHTR	-7.41%	CHTR	-7.15%
10.0	CMCSA	-6.61%	ZTS	-6.92%
10.0	CYH	-5.5%	HCA	-5.36%
10.0	MSI	-5.46%	INTU	-4.5%
10.0	HCA	-5.43%	THC	-4.5%
10.0	NFLX	-5.25%	GT	-3.97%
10.0	INTU	-5.23%	CMCSA	-3.86%
10.0	ZTS	-4.91%	MOS	-3.57%
10.0	NWL	-4.87%	UAA	-3.33%
10.0	HD	-4.54%	CYH	-3.11%
10.0	GLD	-4.54%	FIS	-2.94%
10.0	TMUS	-3.9%	MSI	-2.71%
10.0	ISRG	-3.53%	LEN	-2.56%
10.0	AZO	-3.36%	TMUS	-2.49%
10.0	GT	-3.24%	HD	-2.45%
10.0	UAA	-2.91%	AZO	-2.32%
10.0	FIS	-2.9%	NWL	-2.27%
10.0	GE	-2.76%	GLD	-2.25%
10.0	THC	-2.61%	ISRG	-2.25%
10.0	MOS	-2.43%	T	-2.17%
10.0	AMGN	-2.37%	PCG	-2.16%
10.0	LEN	-2.29%	BALL	-2.13%
10.0	T	-2.13%	AMGN	-2.11%
10.0	BALL	-2.12%	GILD	-1.86%
10.0	NEM	-2.04%	CPRT	-1.79%
10.0	PEP	-1.87%	CAH	-1.74%
10.0	PCG	-1.79%	NFLX	-1.63%
10.0	HON	-1.76%	GME	-1.62%
10.0	CMG	-1.65%	PEP	-1.6%
10.0	GSK	-1.36%	PHM	-1.58%



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## P90D: 21d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	CHTR	-21.22%	CHTR	-15.66%
21.0	CMCSA	-16.16%	ZTS	-13.45%
21.0	INTU	-12.96%	HCA	-10.03%
21.0	ZTS	-12.27%	INTU	-8.55%
21.0	MSI	-10.3%	CMCSA	-7.6%
21.0	HCA	-9.77%	MOS	-7.56%
21.0	HD	-9.37%	THC	-7.13%
21.0	NFLX	-9.26%	FIS	-5.85%
21.0	TMUS	-8.86%	MSI	-5.63%
21.0	CYH	-7.98%	T	-5.56%
21.0	T	-7.36%	TMUS	-5.29%
21.0	FIS	-6.64%	CYH	-4.92%
21.0	MOS	-6.42%	CAH	-4.81%
21.0	PCG	-6.07%	LEN	-4.64%
21.0	ISRG	-5.71%	PCG	-4.64%
21.0	GLD	-5.0%	GT	-4.64%
21.0	LEN	-4.53%	UAA	-4.53%
21.0	AMGN	-4.47%	ISRG	-4.38%
21.0	THC	-4.17%	HD	-4.21%
21.0	UAA	-3.64%	AMGN	-4.15%
21.0	GT	-3.6%	ELAN	-3.8%
21.0	GSK	-3.52%	GILD	-3.5%
21.0	BALL	-3.17%	NFLX	-3.22%
21.0	HON	-3.15%	BALL	-3.0%
21.0	CAH	-3.03%	GSK	-2.85%
21.0	BBY	-3.02%	VZ	-2.84%
21.0	BMY	-2.8%	GLD	-2.68%
21.0	GILD	-2.75%	HON	-2.66%
21.0	CMG	-2.7%	LVS	-2.26%
21.0	GE	-2.38%	VST	-2.24%



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## P365D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	MSTR	-0.53%	CHTR	-0.35%
1.0	ZTS	-0.51%	PRGO	-0.31%
1.0	PRGO	-0.5%	INTU	-0.29%
1.0	AMC	-0.49%	ZTS	-0.28%
1.0	CHTR	-0.48%	MSTR	-0.24%
1.0	INTU	-0.41%	FIS	-0.23%
1.0	FIS	-0.34%	AMC	-0.22%
1.0	NWL	-0.32%	GT	-0.21%
1.0	UAA	-0.29%	CPRT	-0.17%
1.0	CMG	-0.25%	ADBE	-0.17%
1.0	AZO	-0.21%	NAVI	-0.15%
1.0	TDG	-0.21%	CMG	-0.15%
1.0	CMCSA	-0.21%	MOS	-0.13%
1.0	ADBE	-0.2%	CMCSA	-0.12%
1.0	NAVI	-0.19%	NFLX	-0.11%
1.0	GT	-0.18%	NWL	-0.11%
1.0	ISRG	-0.15%	GBTC	-0.11%
1.0	GME	-0.15%	GME	-0.1%
1.0	TMUS	-0.12%	TMUS	-0.09%
1.0	POST	-0.11%	ISRG	-0.09%
1.0	CPRT	-0.1%	AZO	-0.08%
1.0	FRA	-0.09%	CYH	-0.07%
1.0	NFLX	-0.09%	POST	-0.06%
1.0	LNC	-0.07%	LW	-0.06%
1.0	ACGL	-0.06%	FRA	-0.05%
1.0	MOS	-0.06%	HD	-0.05%
1.0	LEN	-0.04%	TDG	-0.05%
1.0	IEP	-0.03%	VICI	-0.04%
1.0	MSI	-0.02%	LEN	-0.04%
1.0	HD	-0.02%	T	-0.04%



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## P365D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	AMC	-8.27%	CHTR	-3.45%
10.0	PRGO	-6.26%	PRGO	-2.95%
10.0	CHTR	-4.58%	INTU	-2.88%
10.0	MSTR	-4.5%	ZTS	-2.74%
10.0	ZTS	-4.33%	MSTR	-2.72%
10.0	INTU	-3.5%	FIS	-2.44%
10.0	NAVI	-2.87%	AMC	-2.3%
10.0	FIS	-2.62%	GT	-2.26%
10.0	ADBE	-2.34%	ADBE	-1.94%
10.0	CMG	-2.21%	NAVI	-1.75%
10.0	GT	-1.75%	MOS	-1.64%
10.0	CMCSA	-1.62%	CPRT	-1.63%
10.0	TDG	-1.61%	CMG	-1.46%
10.0	NWL	-1.55%	CMCSA	-1.23%
10.0	CPRT	-1.11%	GBTC	-1.11%
10.0	MOS	-1.08%	NFLX	-1.1%
10.0	HD	-0.84%	NWL	-0.88%
10.0	POST	-0.77%	TMUS	-0.84%
10.0	BXP	-0.7%	GME	-0.81%
10.0	GME	-0.68%	ISRG	-0.74%
10.0	TMUS	-0.68%	VNO	-0.71%
10.0	VNO	-0.56%	LEN	-0.64%
10.0	FRA	-0.51%	LW	-0.6%
10.0	AZO	-0.5%	FRA	-0.59%
10.0	VICI	-0.48%	HD	-0.59%
10.0	T	-0.45%	TDG	-0.59%
10.0	LEN	-0.41%	BXP	-0.58%
10.0	BBY	-0.4%	AZO	-0.44%
10.0	UAA	-0.37%	VICI	-0.43%
10.0	SNY	-0.27%	POST	-0.43%



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## P365D: 21d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	AMC	-14.12%	CHTR	-7.07%
21.0	PRGO	-13.01%	PRGO	-6.15%
21.0	CHTR	-11.05%	INTU	-5.7%
21.0	ZTS	-8.81%	MSTR	-5.32%
21.0	MSTR	-7.94%	ZTS	-5.11%
21.0	INTU	-6.99%	FIS	-5.1%
21.0	NAVI	-5.69%	AMC	-4.85%
21.0	CMG	-5.54%	ADBE	-3.96%
21.0	FIS	-5.23%	GT	-3.96%
21.0	CMCSA	-4.56%	NAVI	-3.68%
21.0	ADBE	-4.54%	MOS	-3.56%
21.0	TDG	-3.93%	CMG	-3.43%
21.0	GT	-3.1%	CPRT	-3.38%
21.0	MOS	-2.71%	NFLX	-2.65%
21.0	CPRT	-2.66%	CMCSA	-2.54%
21.0	NWL	-2.54%	GBTC	-2.2%
21.0	VNO	-1.95%	VNO	-1.63%
21.0	BXP	-1.83%	TMUS	-1.57%
21.0	LEN	-1.44%	LEN	-1.49%
21.0	BBY	-1.38%	TDG	-1.47%
21.0	NFLX	-1.24%	LW	-1.34%
21.0	TMUS	-1.23%	ISRG	-1.3%
21.0	HD	-1.19%	FRA	-1.29%
21.0	VICI	-1.18%	NWL	-1.24%
21.0	T	-1.12%	BXP	-1.24%
21.0	POST	-1.11%	VST	-1.13%
21.0	META	-1.03%	HD	-1.07%
21.0	KHC	-1.0%	BBY	-1.01%
21.0	FRA	-0.94%	VICI	-1.01%
21.0	CYH	-0.82%	MSFT	-0.99%



---

## P365D: 63d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	PRGO	-52.11%	PRGO	-24.36%
63.0	AMC	-48.36%	MSTR	-23.42%
63.0	MSTR	-47.85%	AMC	-21.44%
63.0	CHTR	-22.74%	INTU	-17.8%
63.0	ZTS	-22.61%	CHTR	-15.37%
63.0	INTU	-21.82%	FIS	-15.19%
63.0	NAVI	-17.48%	NAVI	-14.0%
63.0	NWL	-15.76%	GBTC	-12.19%
63.0	FIS	-15.68%	ADBE	-12.17%
63.0	TDG	-15.17%	ZTS	-11.23%
63.0	CMCSA	-12.6%	CMG	-10.88%
63.0	ADBE	-12.56%	CPRT	-10.87%
63.0	BXP	-12.17%	GT	-10.41%
63.0	VNO	-11.83%	MOS	-10.0%
63.0	CPRT	-11.72%	VNO	-8.86%
63.0	META	-11.34%	NWL	-8.17%
63.0	CMG	-9.79%	NFLX	-7.67%
63.0	NFLX	-9.27%	LEN	-6.58%
63.0	KHC	-8.71%	MSFT	-6.46%
63.0	GBTC	-8.67%	TDG	-6.25%
63.0	GT	-8.44%	BXP	-6.1%
63.0	LEN	-8.23%	LW	-5.97%
63.0	MOS	-7.8%	CMCSA	-5.94%
63.0	LW	-6.07%	VST	-5.75%
63.0	TMUS	-5.35%	FRA	-5.57%
63.0	VST	-5.13%	KHC	-5.44%
63.0	HD	-5.12%	ORCL	-5.4%
63.0	VICI	-4.08%	TMUS	-5.33%
63.0	IEP	-4.05%	VICI	-4.54%
63.0	FRA	-3.98%	META	-4.43%



---

## P365D: 126d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	MSTR	-145.67%	MSTR	-52.05%
126.0	AMC	-119.44%	AMC	-48.38%
126.0	PRGO	-96.79%	PRGO	-44.08%
126.0	CHTR	-44.34%	INTU	-32.89%
126.0	INTU	-39.63%	GBTC	-28.99%
126.0	ZTS	-36.93%	CHTR	-28.63%
126.0	NFLX	-36.78%	ORCL	-26.65%
126.0	ORCL	-36.04%	FIS	-26.21%
126.0	BXP	-31.27%	NAVI	-24.41%
126.0	NWL	-30.15%	NFLX	-23.59%
126.0	NAVI	-29.21%	ADBE	-22.45%
126.0	LW	-28.55%	ZTS	-21.54%
126.0	VNO	-27.41%	MOS	-21.11%
126.0	CPRT	-26.23%	CPRT	-21.04%
126.0	FIS	-25.86%	VNO	-20.42%
126.0	CMCSA	-23.63%	LW	-19.28%
126.0	META	-23.14%	NWL	-18.98%
126.0	ADBE	-22.5%	CMG	-16.31%
126.0	VST	-21.45%	VST	-16.14%
126.0	LEN	-21.36%	MSFT	-15.05%
126.0	GBTC	-19.6%	LEN	-14.01%
126.0	TDG	-17.34%	TMUS	-13.74%
126.0	AAP	-17.31%	BXP	-13.48%
126.0	BBY	-15.48%	FRA	-11.86%
126.0	TMUS	-14.92%	GT	-11.56%
126.0	KHC	-14.41%	VICI	-11.18%
126.0	CMG	-14.2%	KHC	-10.6%
126.0	IEP	-13.4%	CMCSA	-10.54%
126.0	MOS	-13.1%	BBY	-10.05%
126.0	MSFT	-12.02%	META	-10.04%



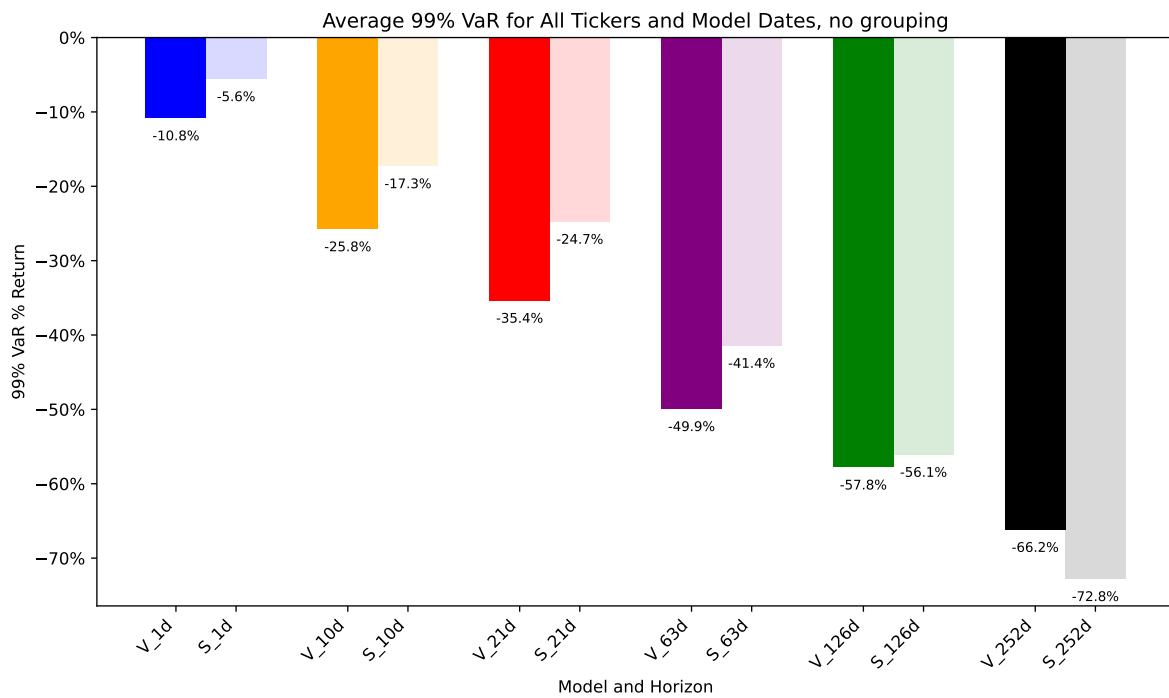
# 99% Value at Risk (VaR)

## Historic Average Levels

Here we compare Vector Model (“V”, dark shading) and Sigma (“S”, light shading) 99% VaR levels by horizon, on average across tickers. We make this comparison on average across tickers for select cohorts of model dates (ex: P30D), and forward horizons (ex: 21d) for all ticker model dates thru the present.

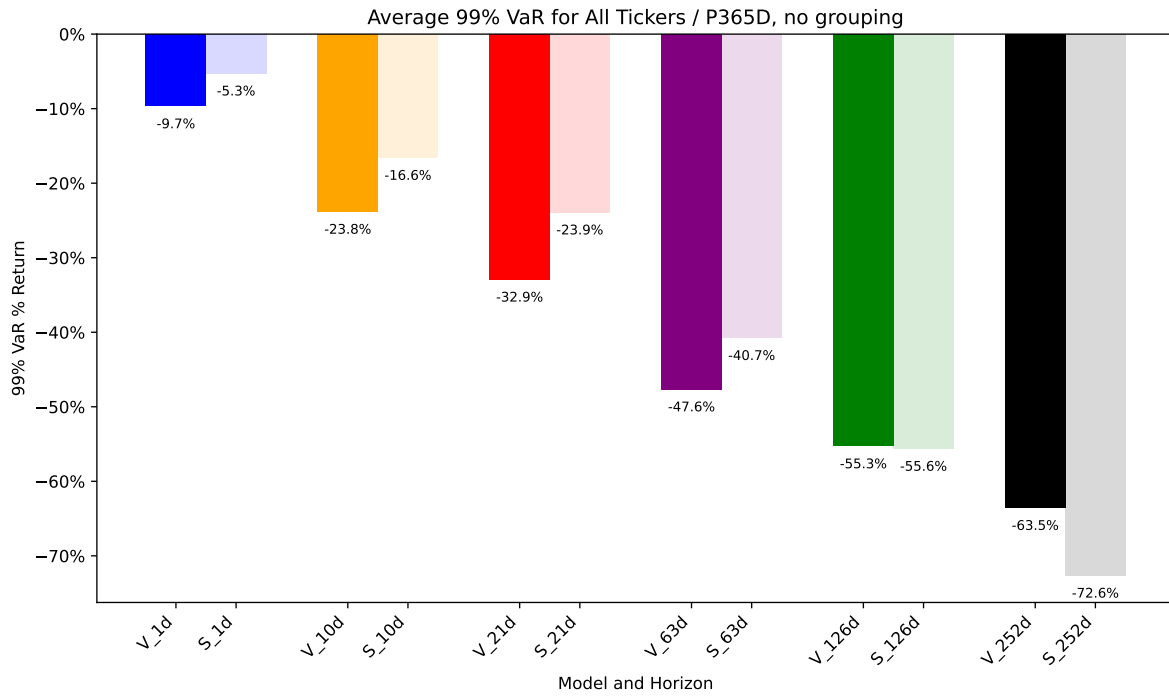
## All Out of Sample Model Dates

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



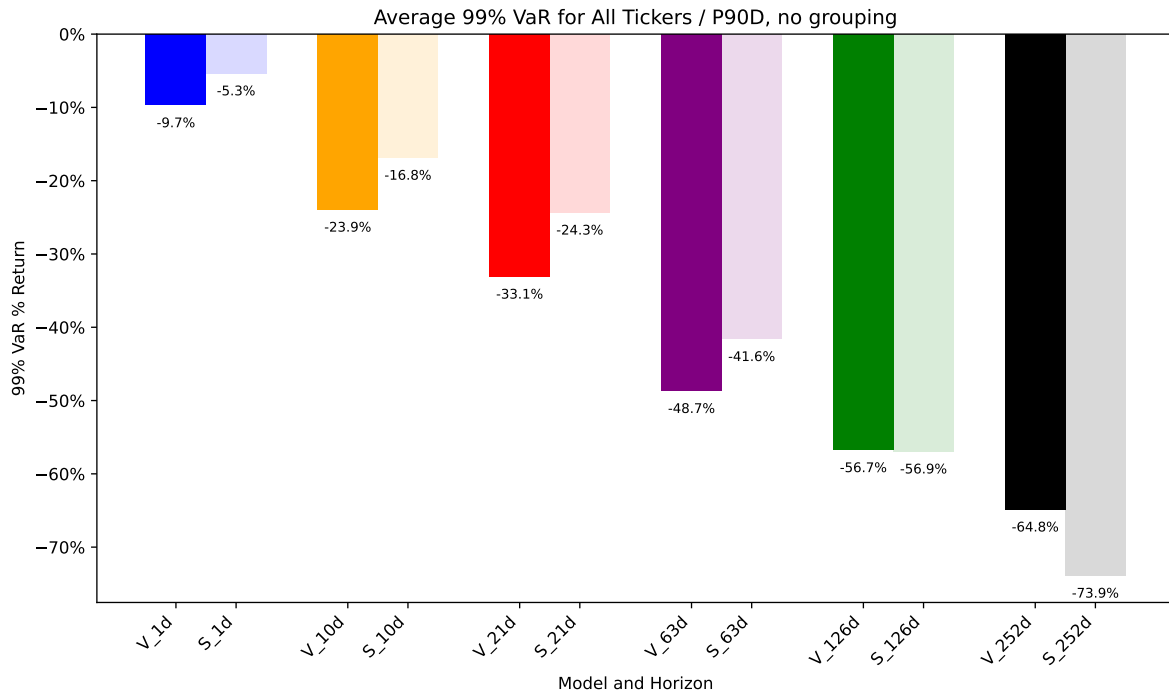
## Prior 365 Calendar Days (P365D)

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



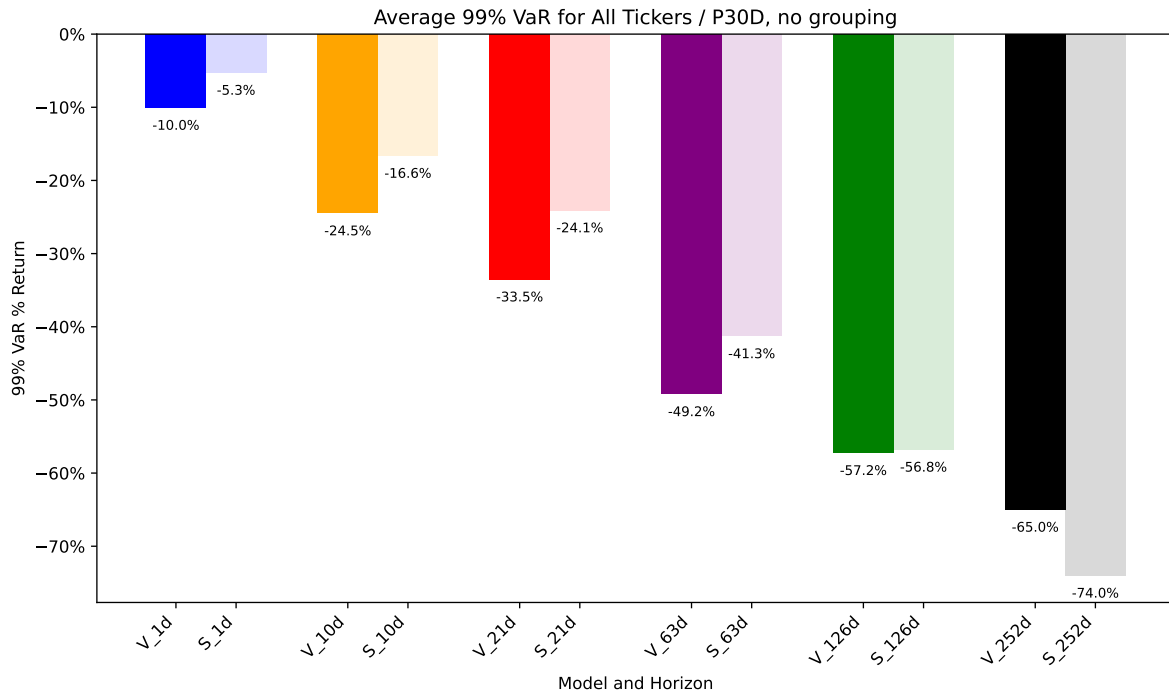
## Prior 90 Calendar Days (P90D)

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



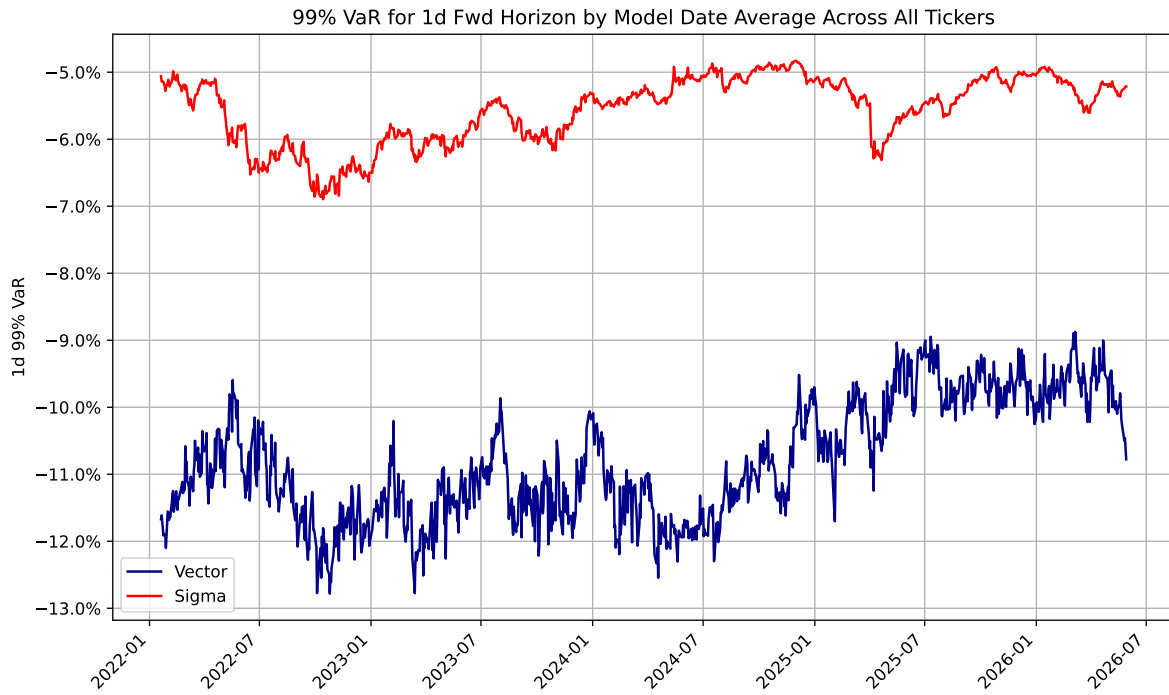
## Prior 30 Calendar Days (P30D)

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

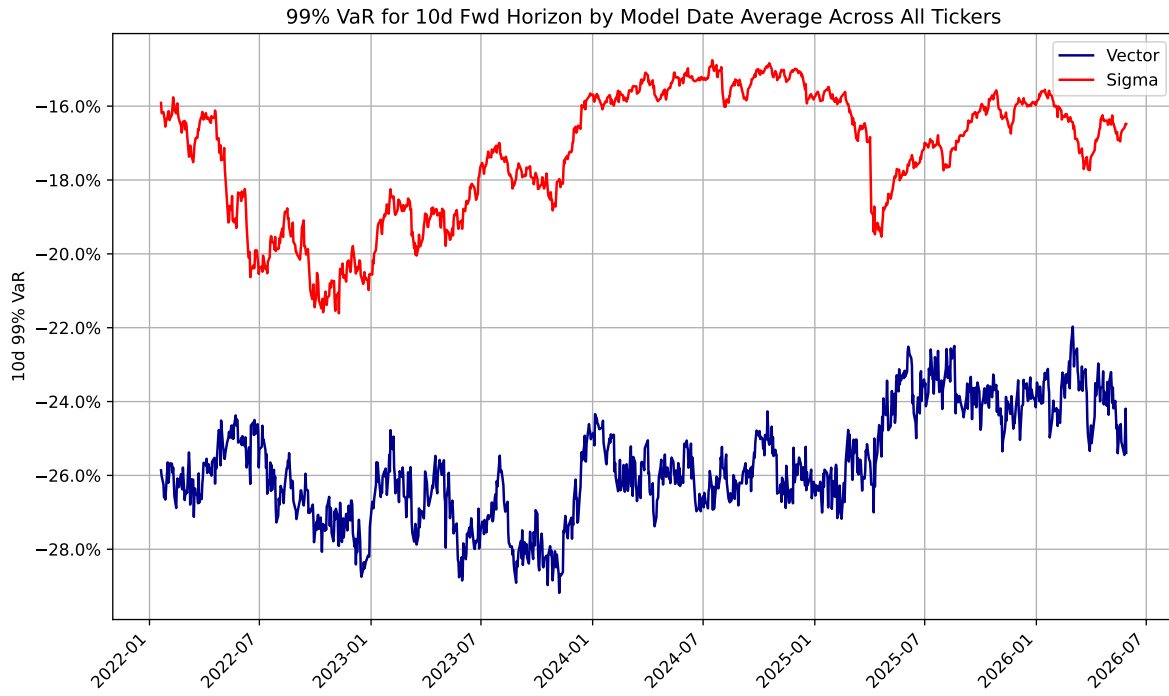


## Daily Levels

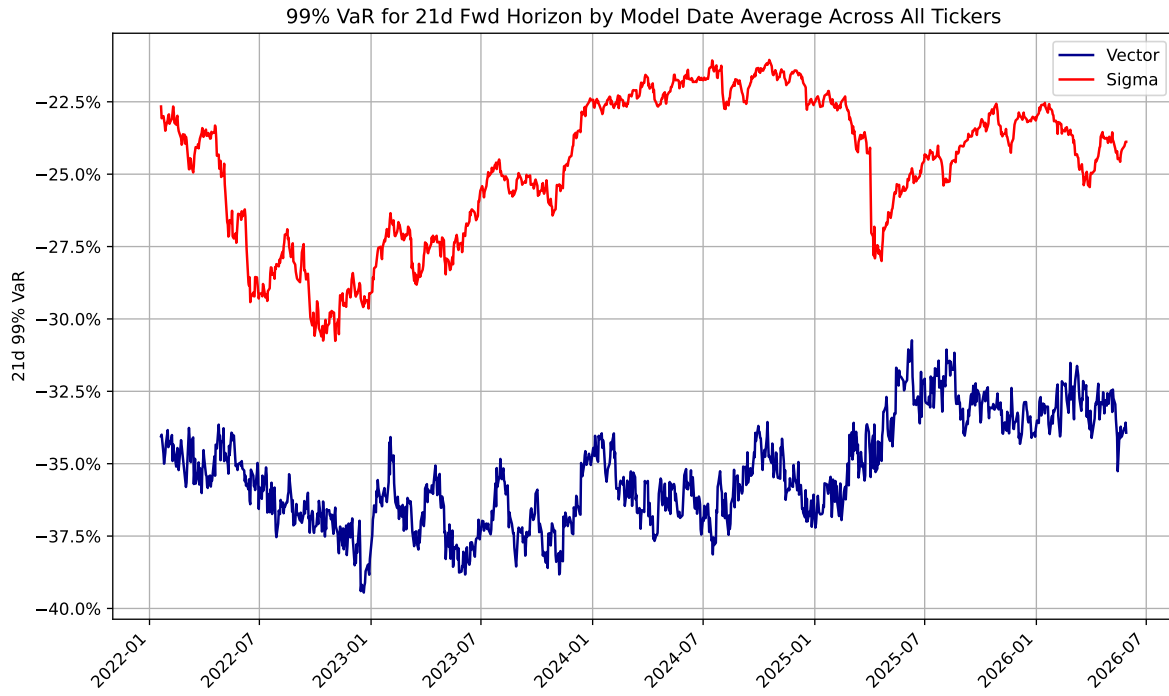
### 1d Horizon



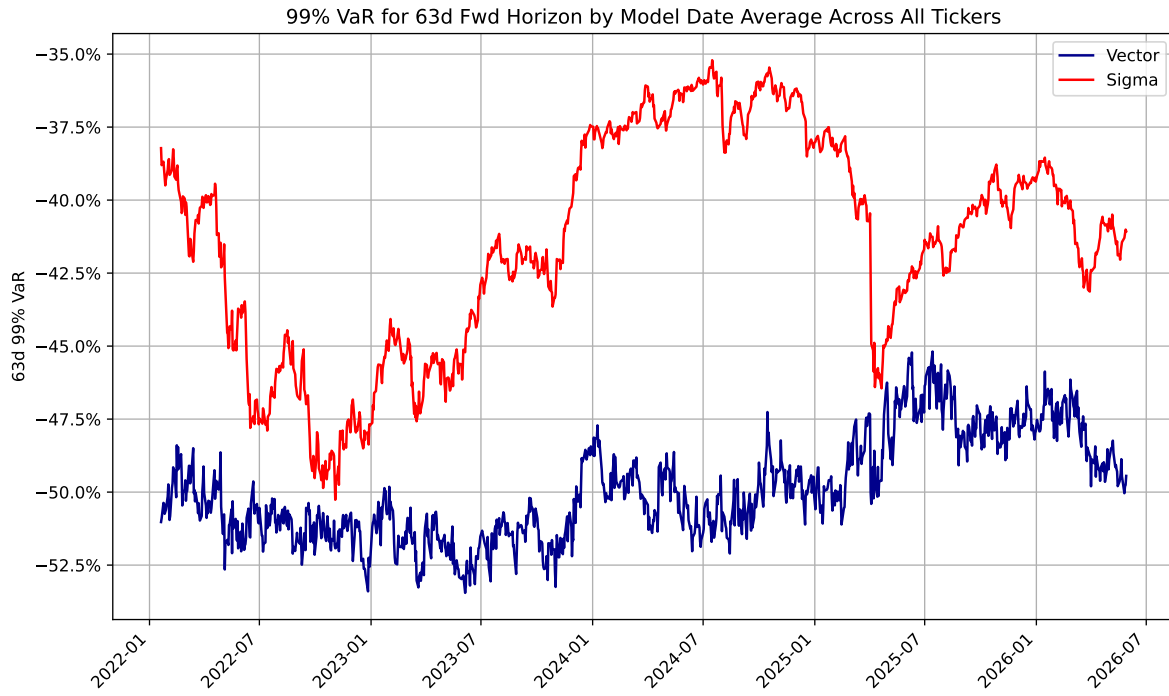
## 10d Horizon



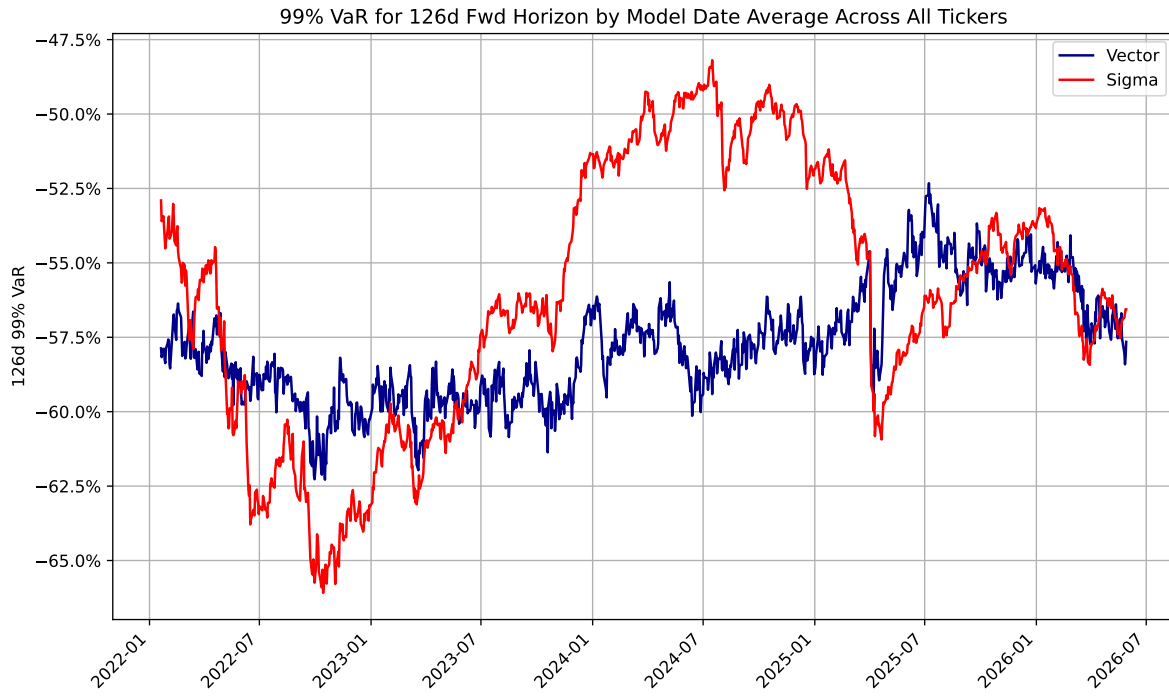
## 21d Horizon



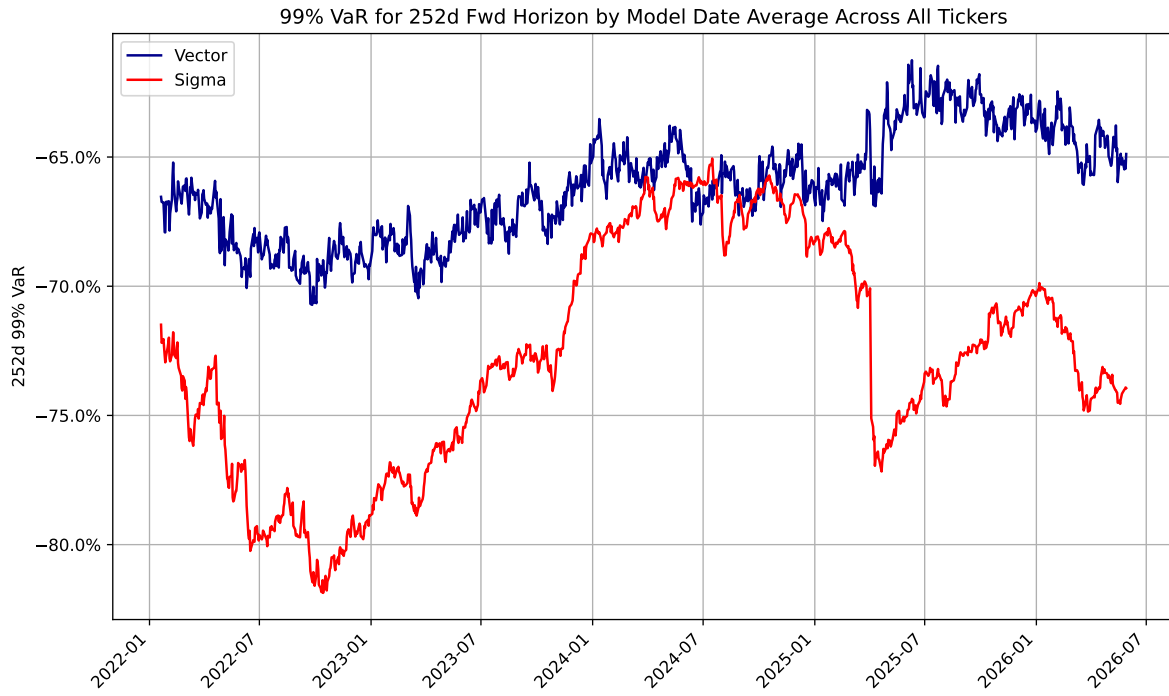
## 63d Horizon



## 126d Horizon



## 252d Horizon



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## Performance Summary

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

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

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

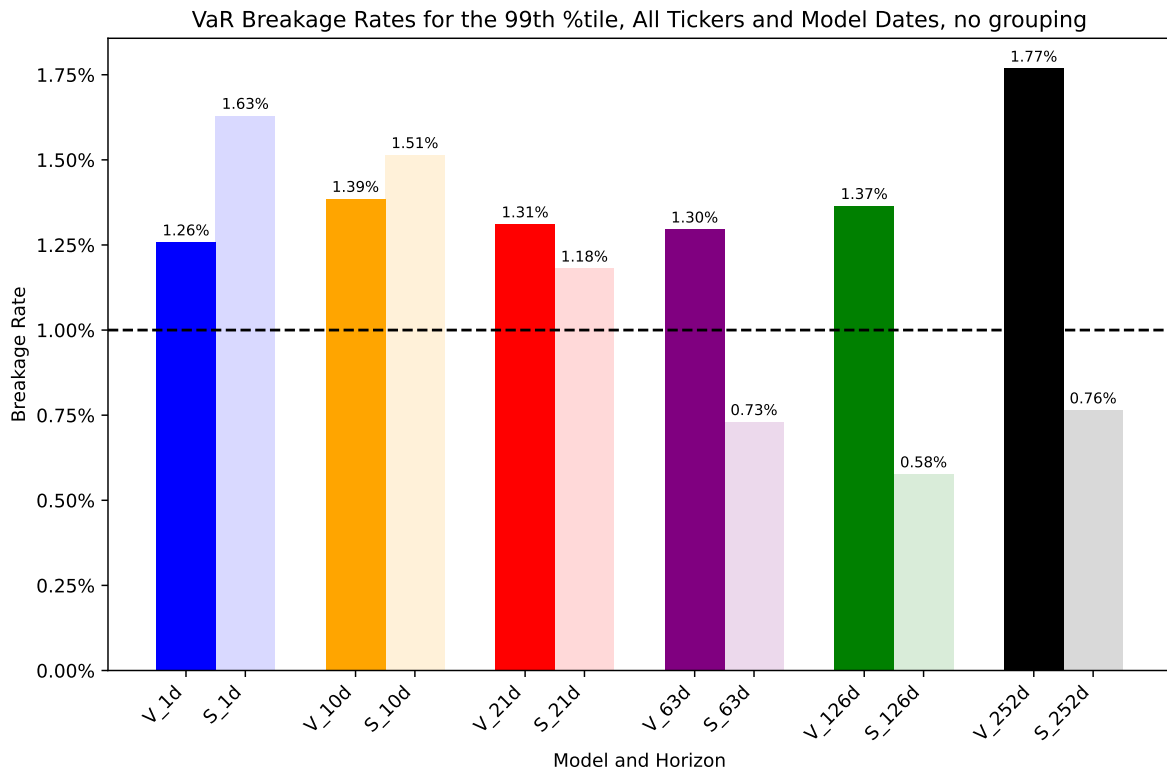
Alpha allows us to isolate ROVBC performance differences between the Vector Model and Sigma apart from any systematic difference between the ROVBC multiplier for the Vector Model and 1.00x. Alpha across TMD’s could be driven by VaR differentials between tickers and / or between dates. Thus we also present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

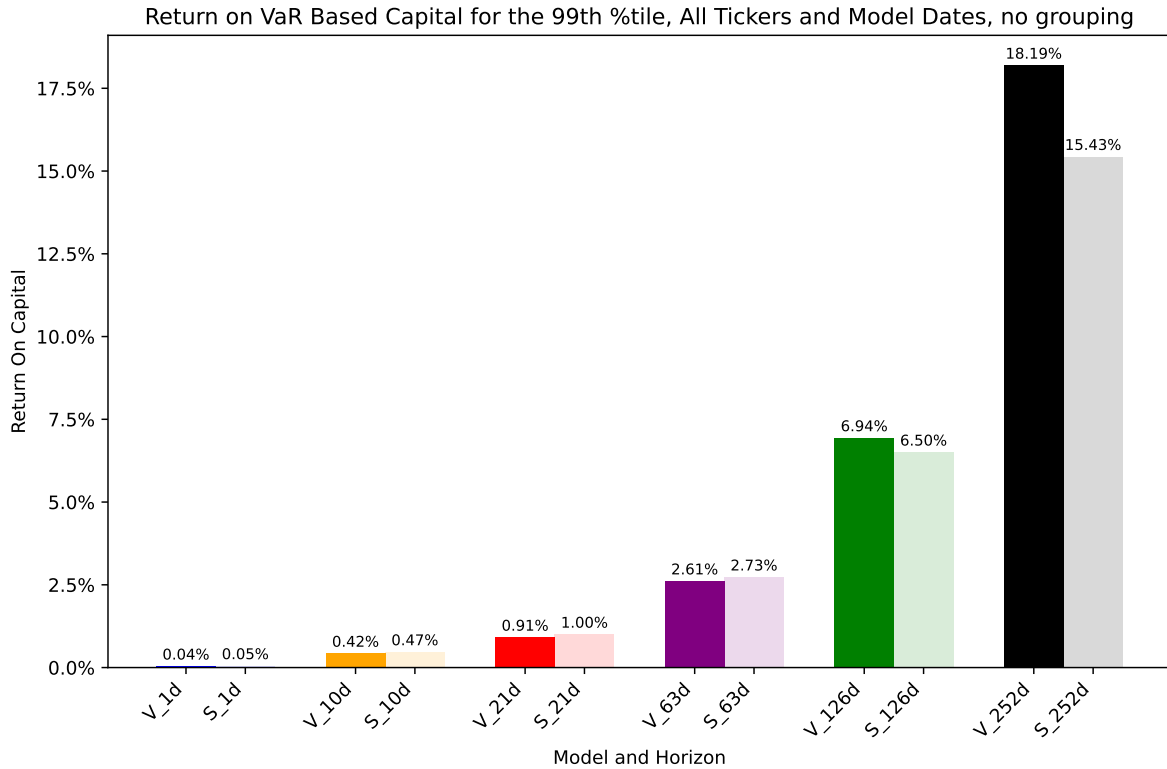
Results for each horizon reflect the average for all model estimates for that horizon from all model dates for which forward performance is known. Note that periods for all horizons > 1d overlap.



## All Out of Sample Model Dates

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





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

	1d	10d	21d	63d	126d	252d
intercept	-0.01%	-0.06%	-0.14%	-0.35%	-0.86%	-1.73%
intercept_p_value	14.09%	0.00%	0.00%	0.00%	0.00%	0.00%
slope	88.28%	102.83%	105.21%	108.58%	119.88%	129.09%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

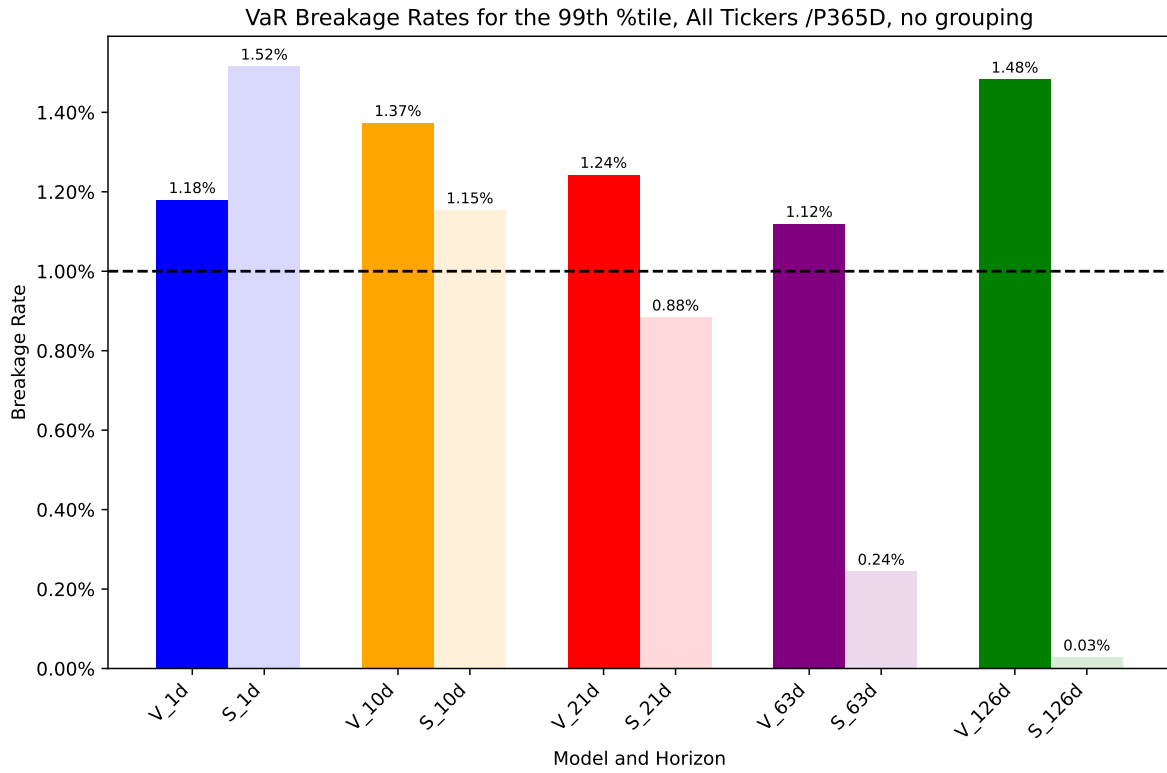
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across Model Dates:

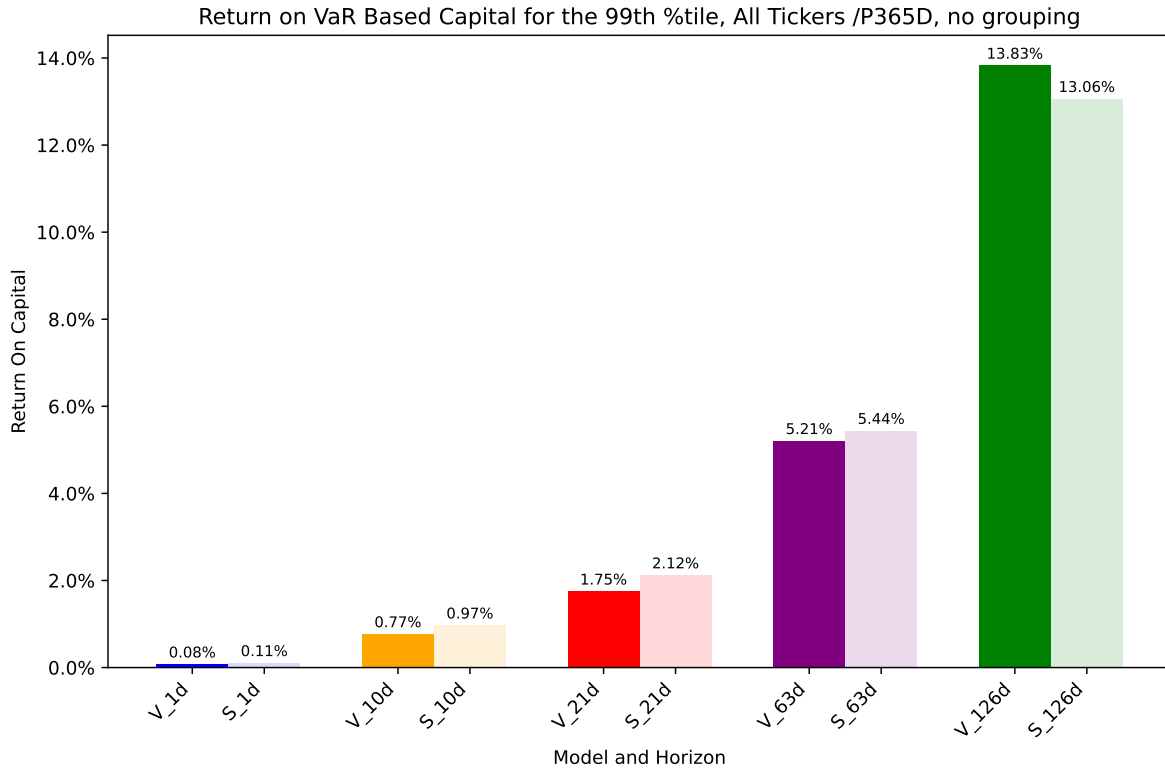
	1d	10d	21d	63d	126d	252d
intercept	-0.04%	-0.21%	-0.57%	-2.21%	-4.42%	-5.41%
intercept_p_value	0.00%	0.10%	0.01%	0.00%	0.00%	0.08%
slope	163.39%	148.18%	165.06%	181.03%	178.37%	166.98%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



## Prior 365 Calendar Days (P365D)

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





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

	1d	10d	21d	63d	126d
intercept	-0.01%	-0.12%	-0.22%	-0.39%	-1.77%
intercept_p_value	20.85%	0.00%	0.00%	0.00%	0.00%
slope	79.23%	92.27%	92.64%	102.97%	119.44%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%

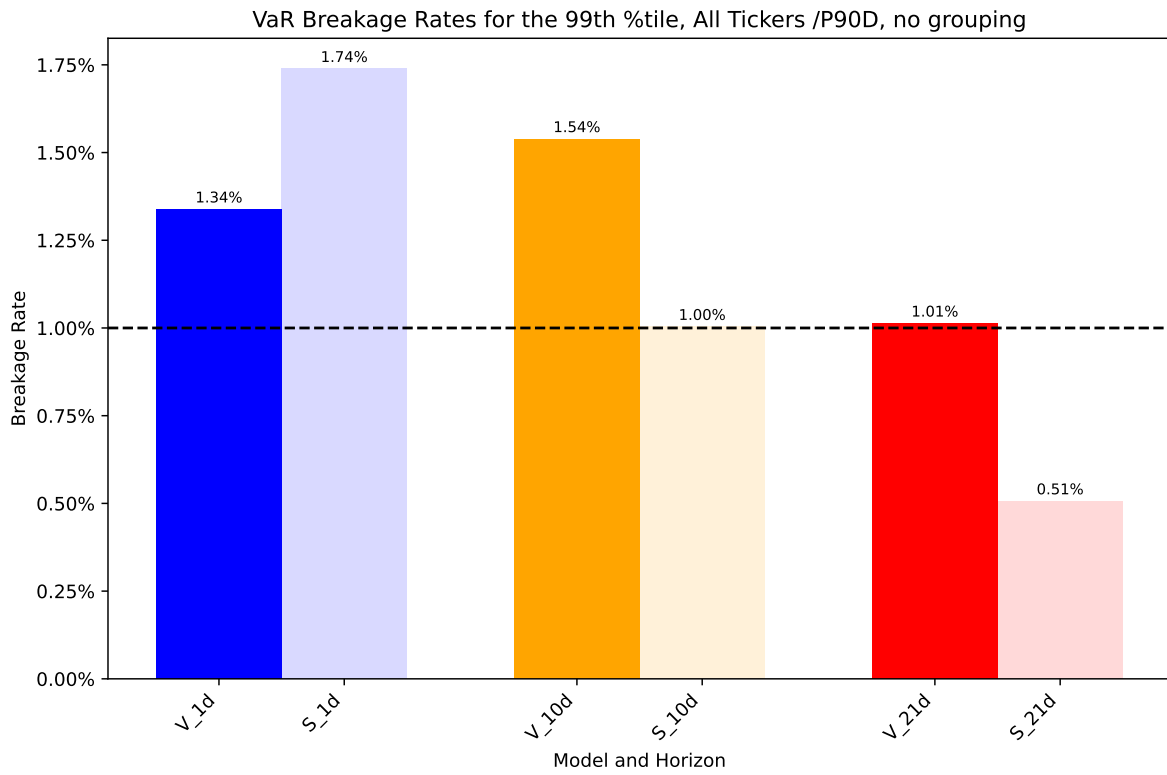
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P365D:

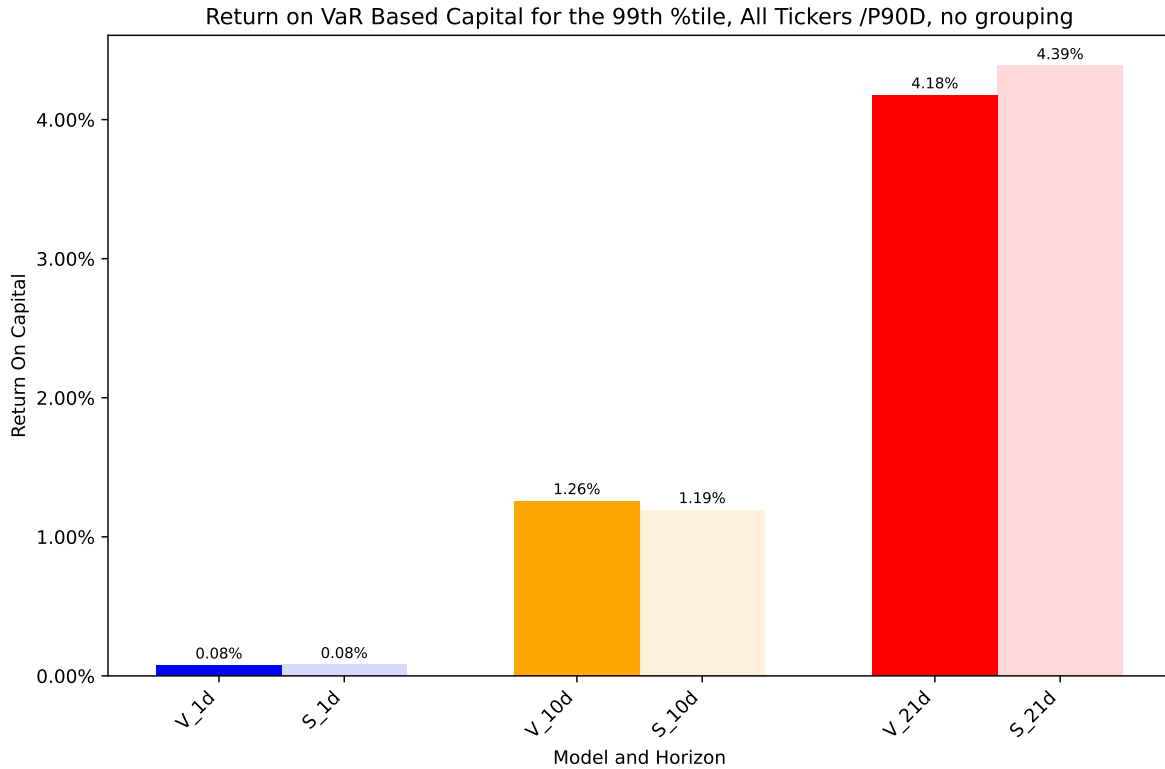
	1d	10d	21d	63d	126d
intercept	-0.02%	-0.09%	-0.22%	-0.80%	-2.72%
intercept_p_value	11.78%	33.56%	20.61%	11.00%	2.64%
slope	102.11%	110.72%	117.15%	123.29%	137.99%
slope_p_value	0.00%	0.00%	0.00%	0.00%	0.00%



## Prior 90 Calendar Days (P90D)

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





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

	1d	10d	21d
intercept	0.01%	0.08%	-0.15%
intercept_p_value	32.96%	16.96%	15.46%
slope	78.51%	98.87%	98.68%
slope_p_value	0.00%	0.00%	0.00%

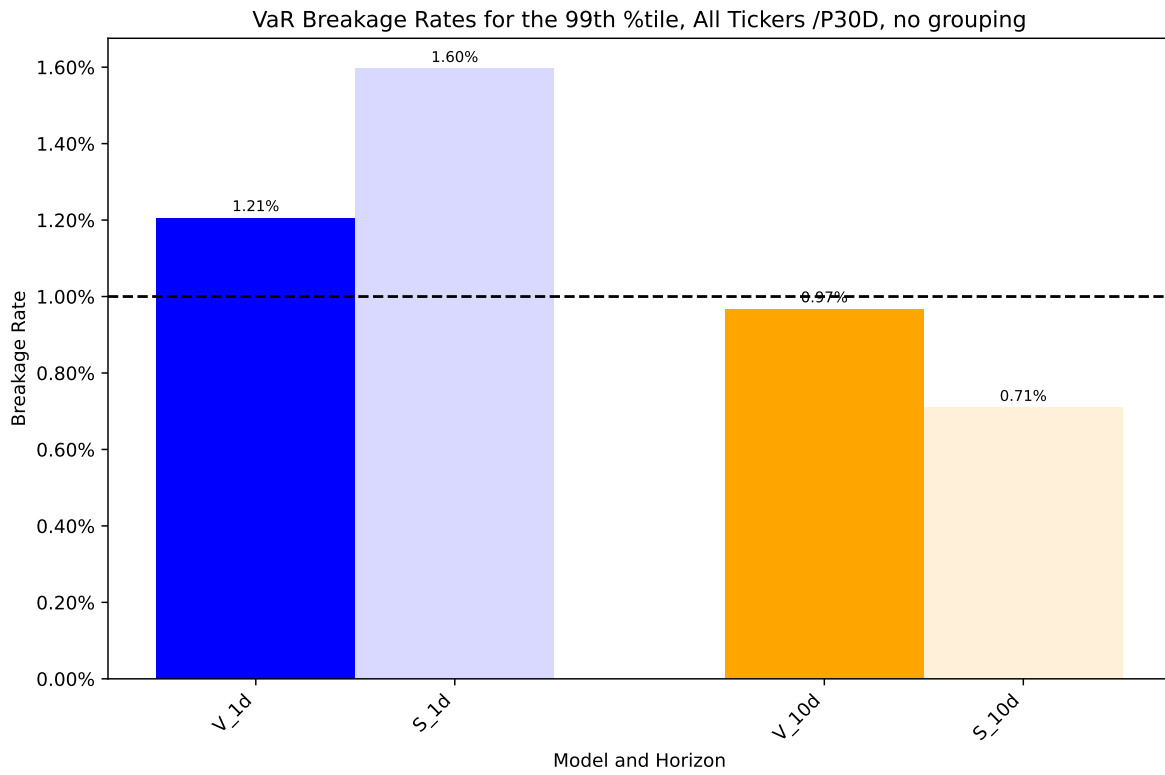
Average Alpha (intercept) and Beta (slope) of Vector Model ROVBC regressed upon corresponding actual returns, by ticker across P90D:

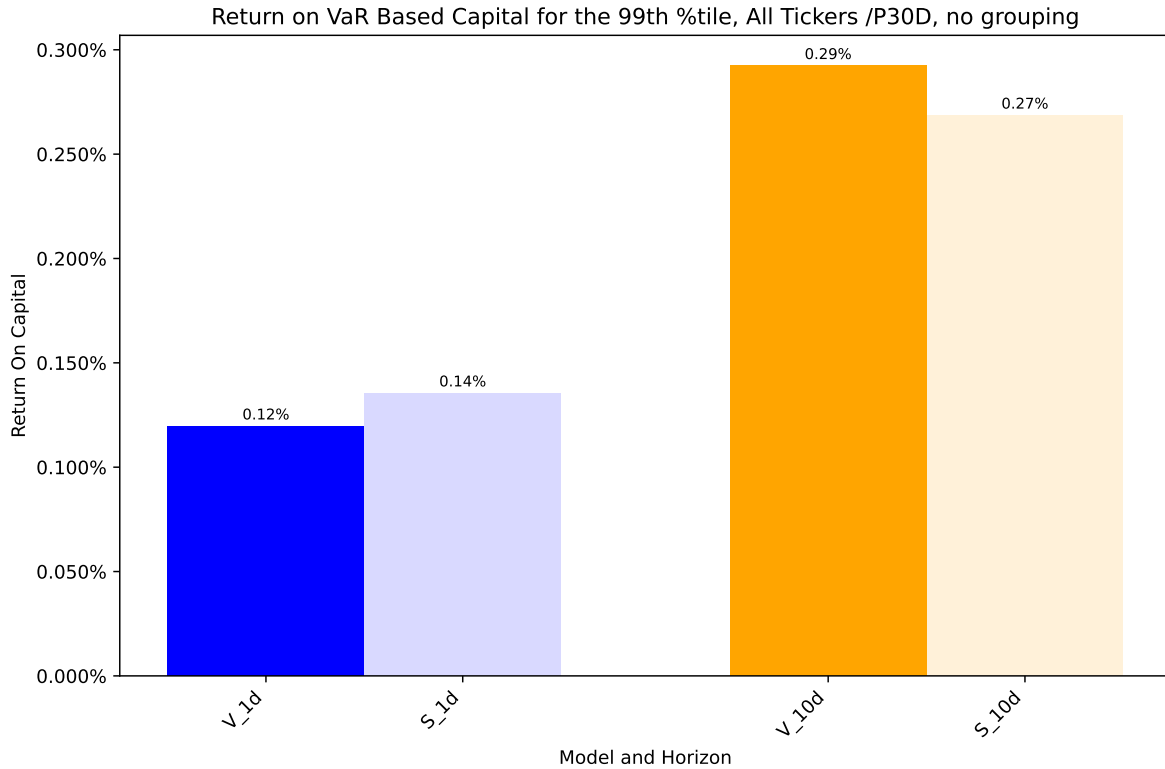
	1d	10d	21d
intercept	-0.00%	0.14%	-0.28%
intercept_p_value	98.14%	41.89%	54.31%
slope	114.03%	120.14%	132.40%
slope_p_value	0.00%	0.00%	0.00%



## Prior 30 Calendar Days (P30D)

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





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

	1d	10d
intercept	0.02%	0.06%
intercept_p_value	34.28%	45.27%
slope	73.39%	86.28%
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	-0.03%	-0.01%
intercept_p_value	34.64%	95.08%
slope	119.98%	105.81%
slope_p_value	0.00%	0.00%

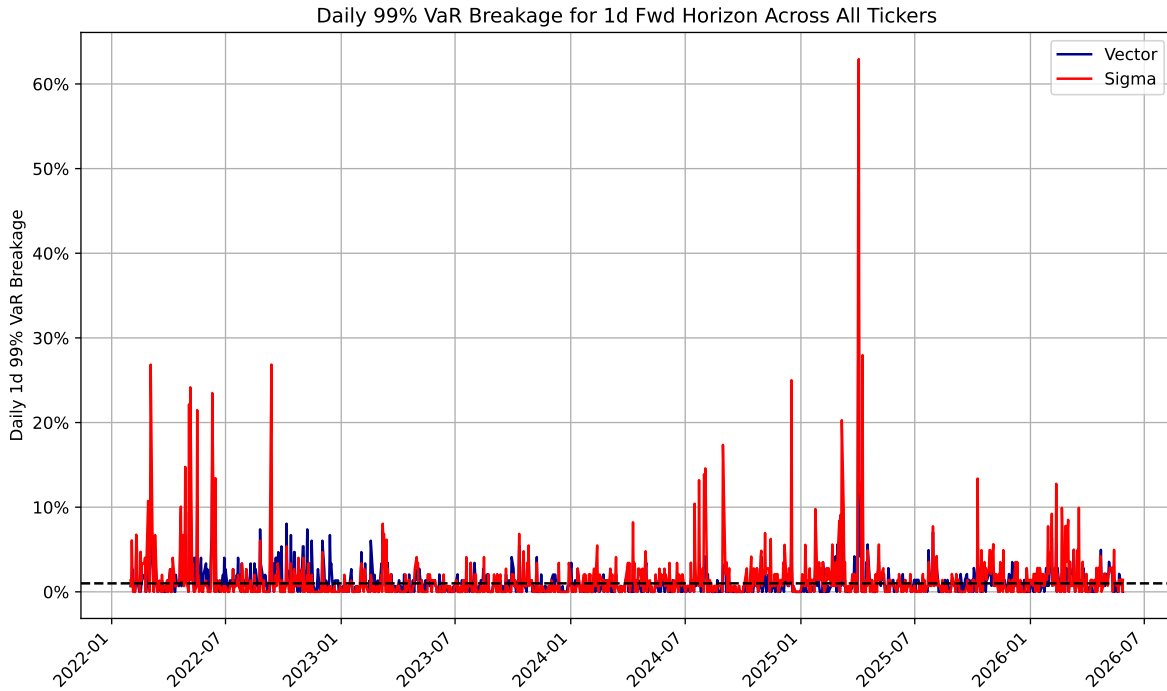


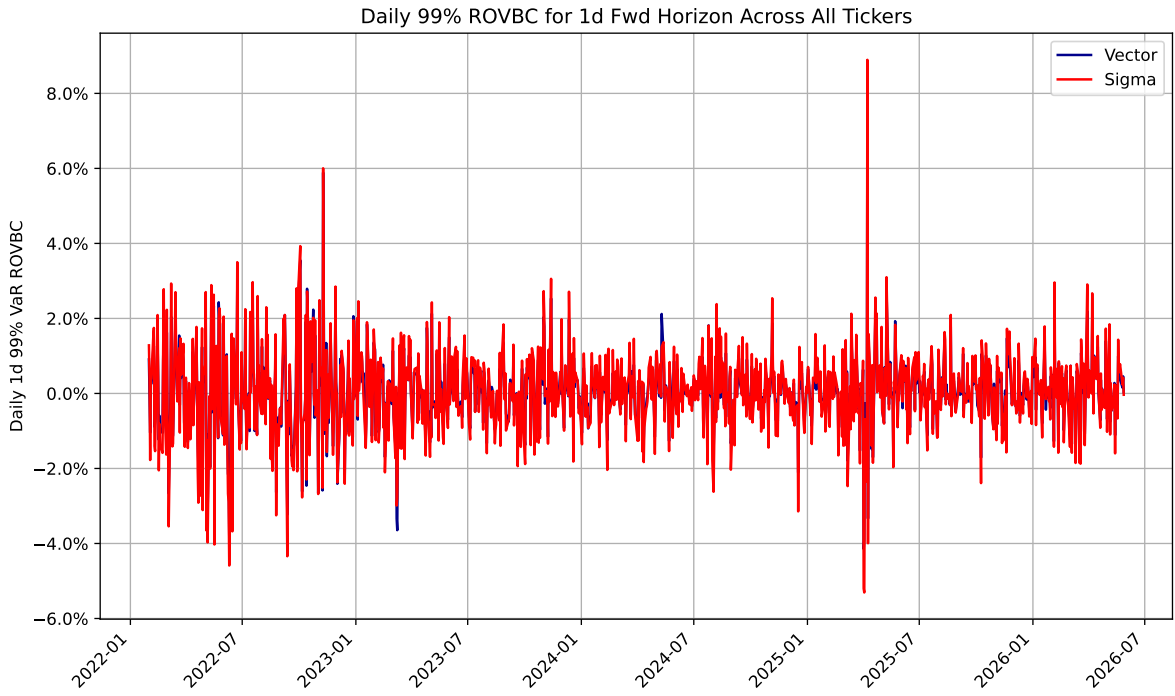
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## Daily Performance

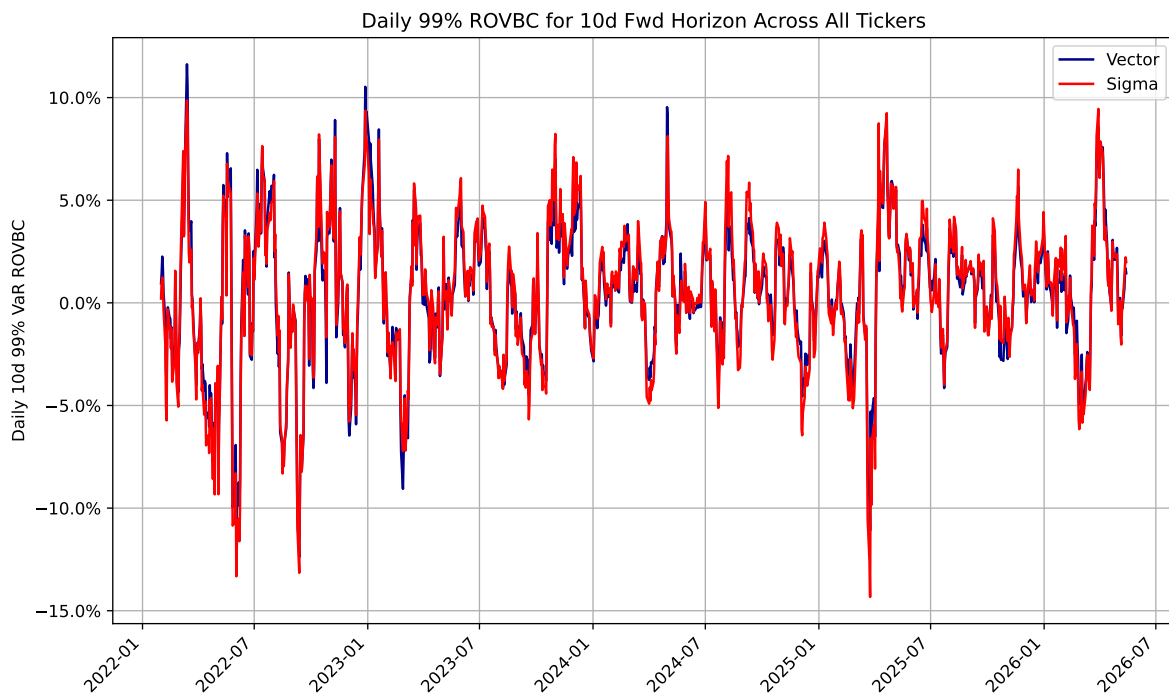
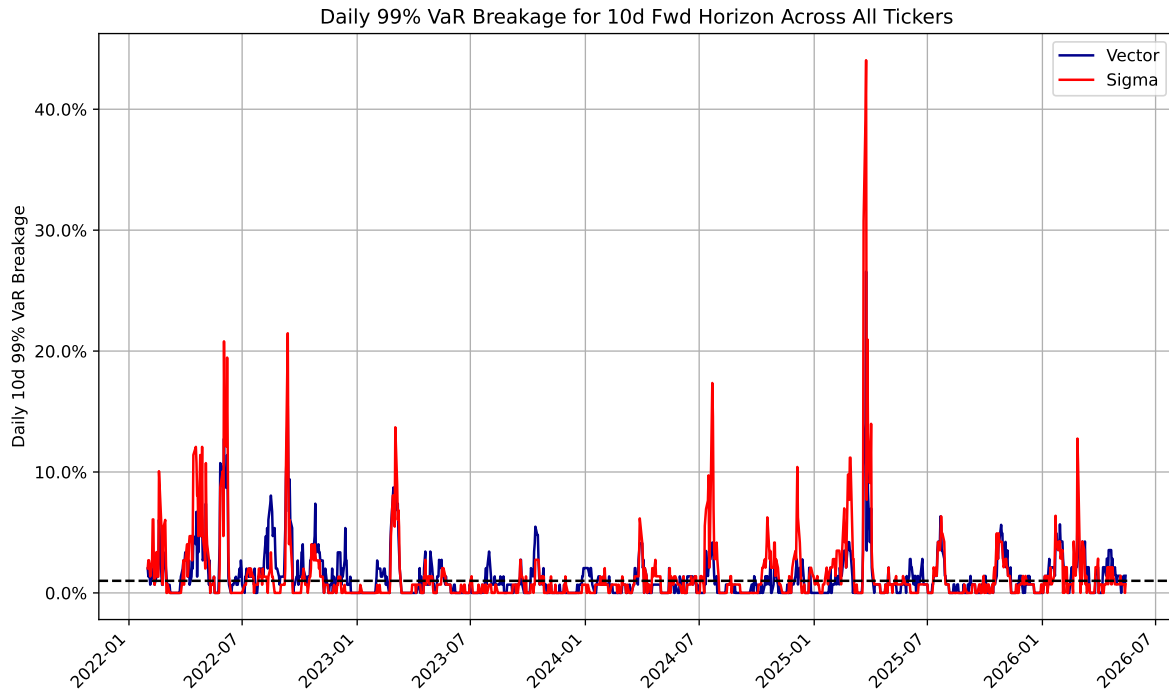
Here we look at the daily breakage and ROVBC statistics summarized in the preceding section. The daily basis of the presentation allows for observation of the magnitude, frequency and proximity of breakage and ROVBC outliers.

### 1d Horizon

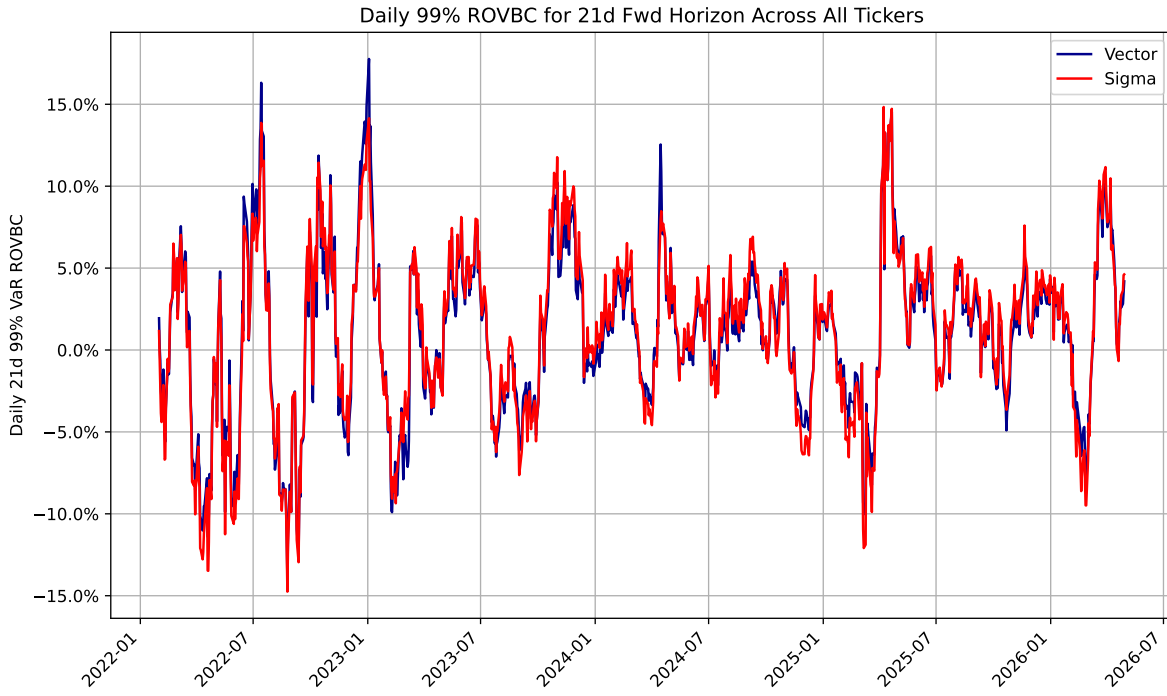
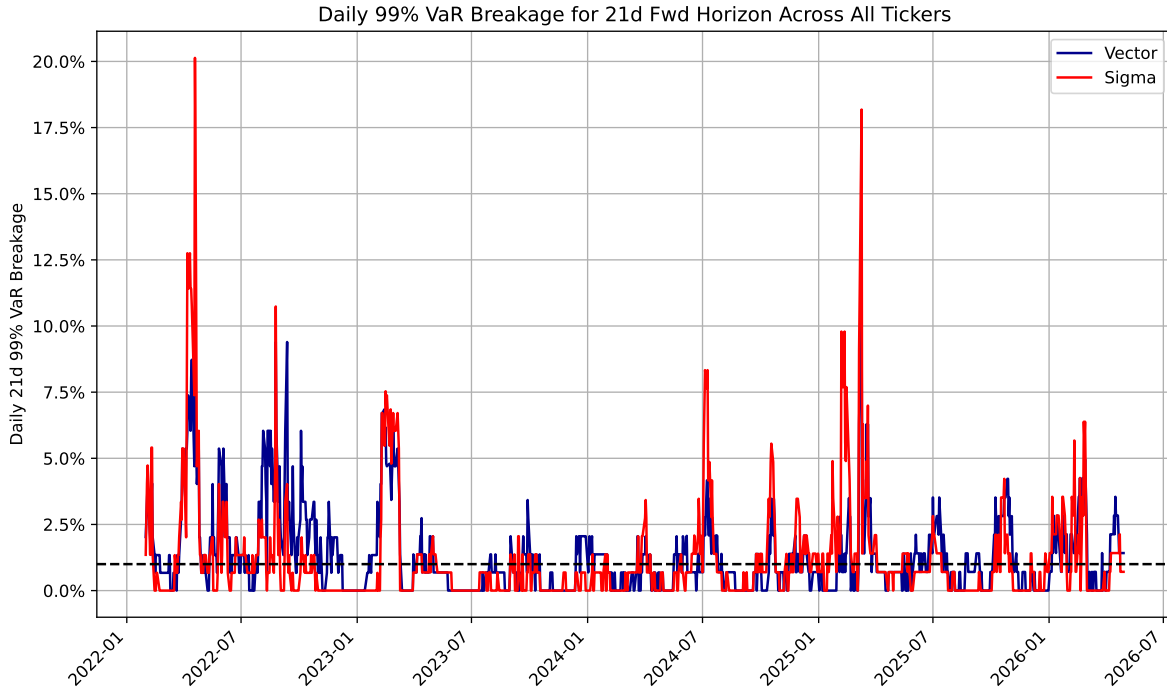




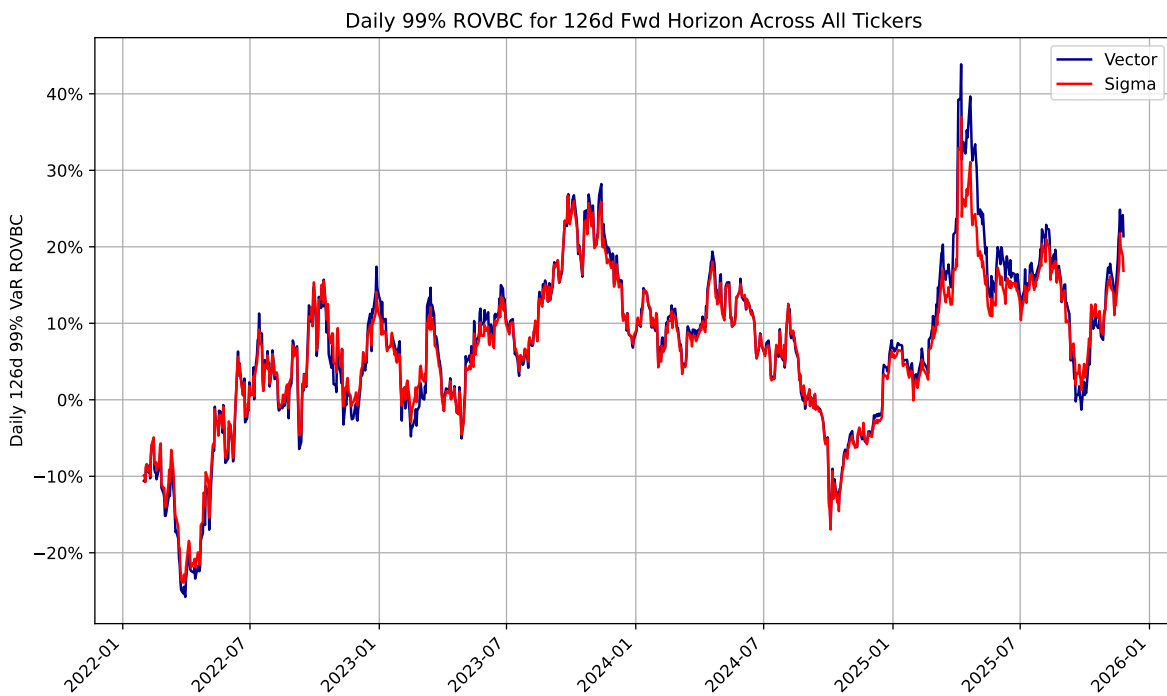
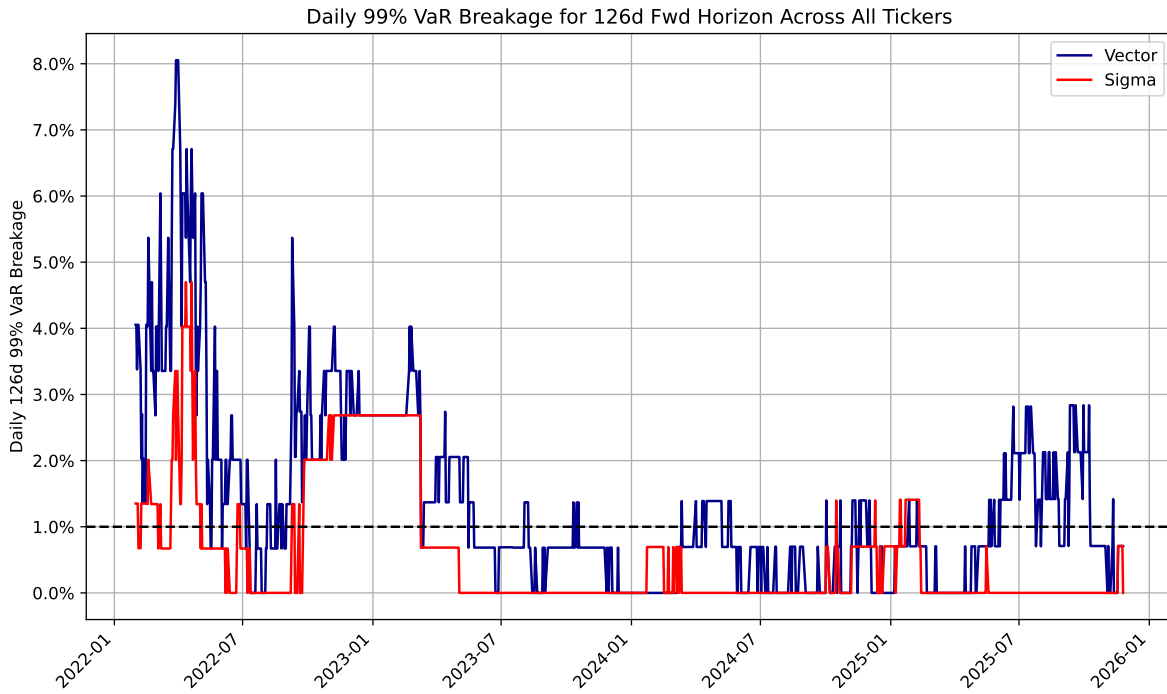
## 10d Horizon



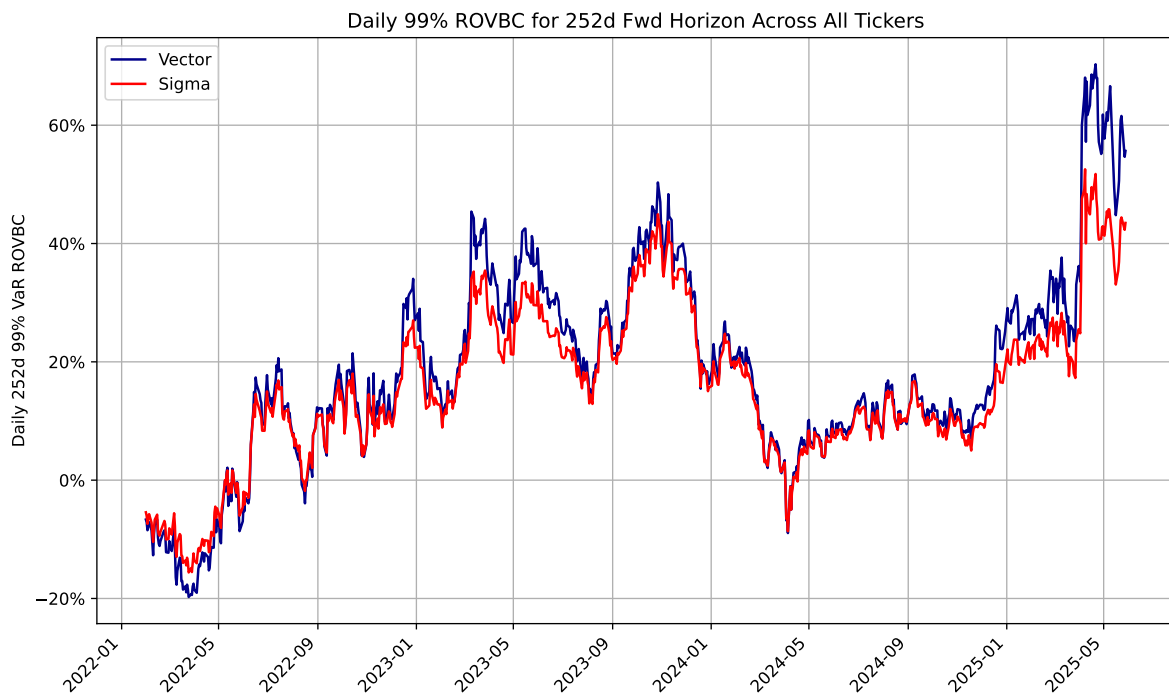
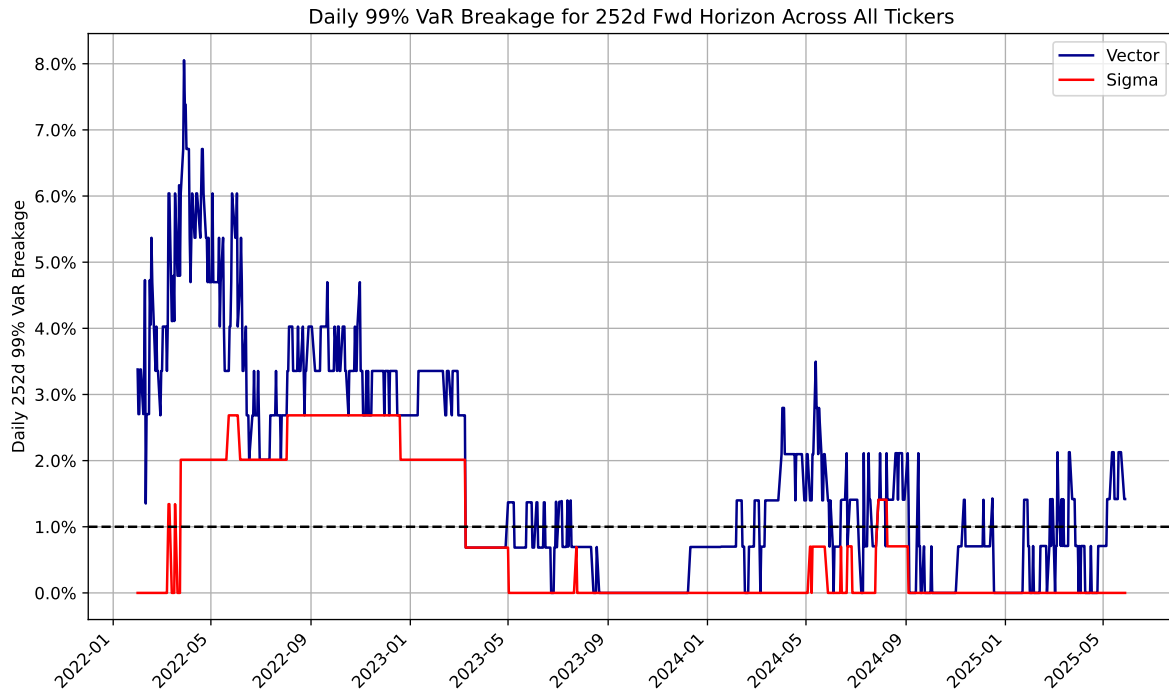
## 21d Horizon



## 63d Horizon



## 252d Horizon

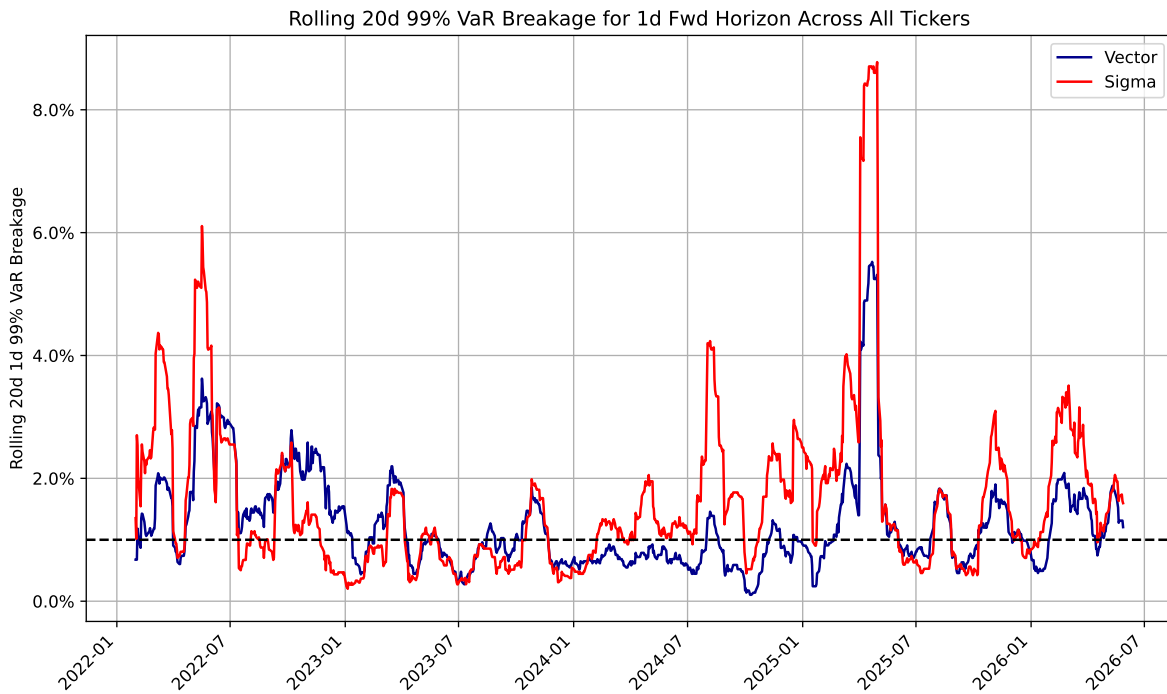


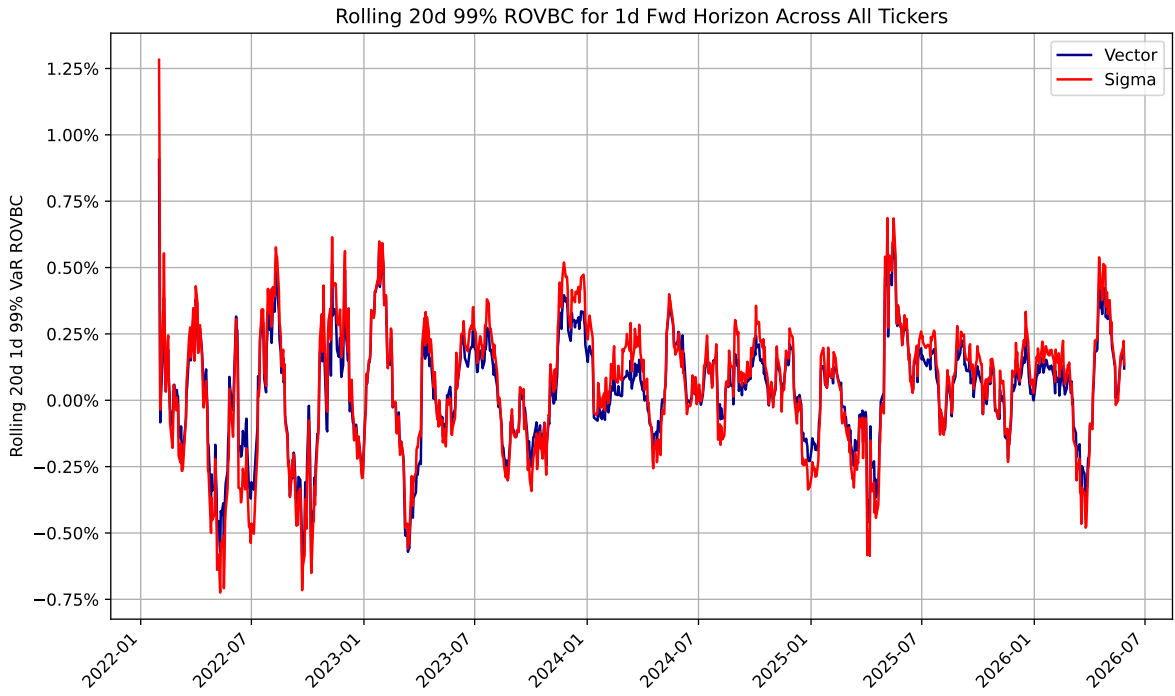
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## Rolling 20d Performance

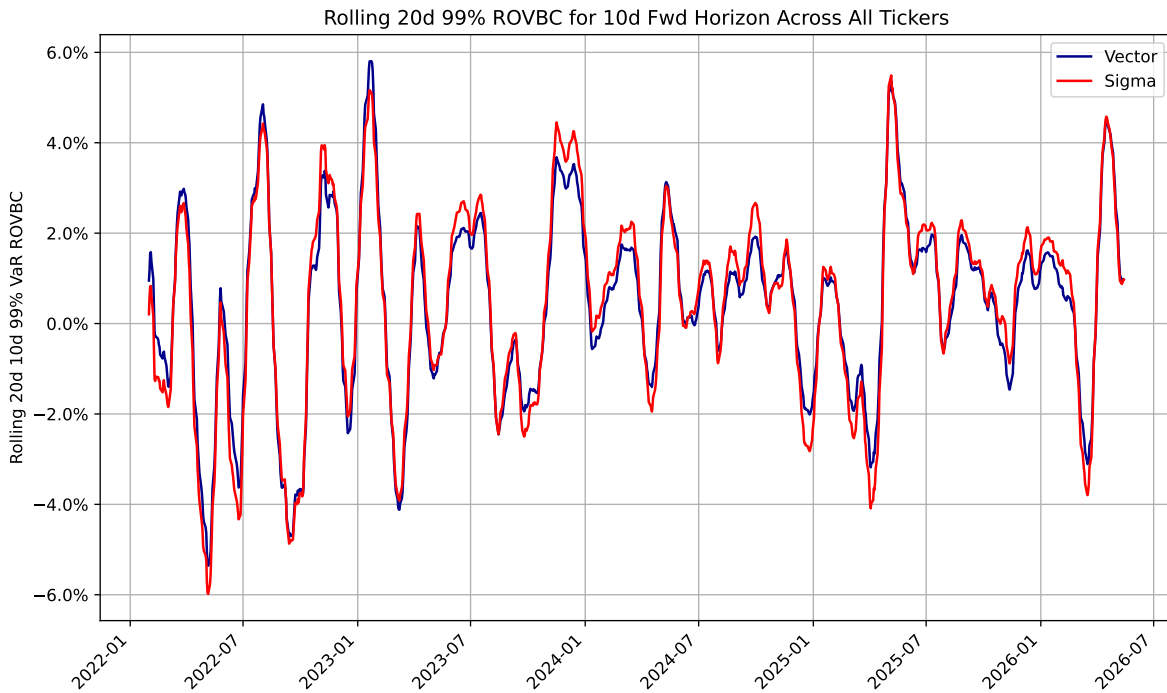
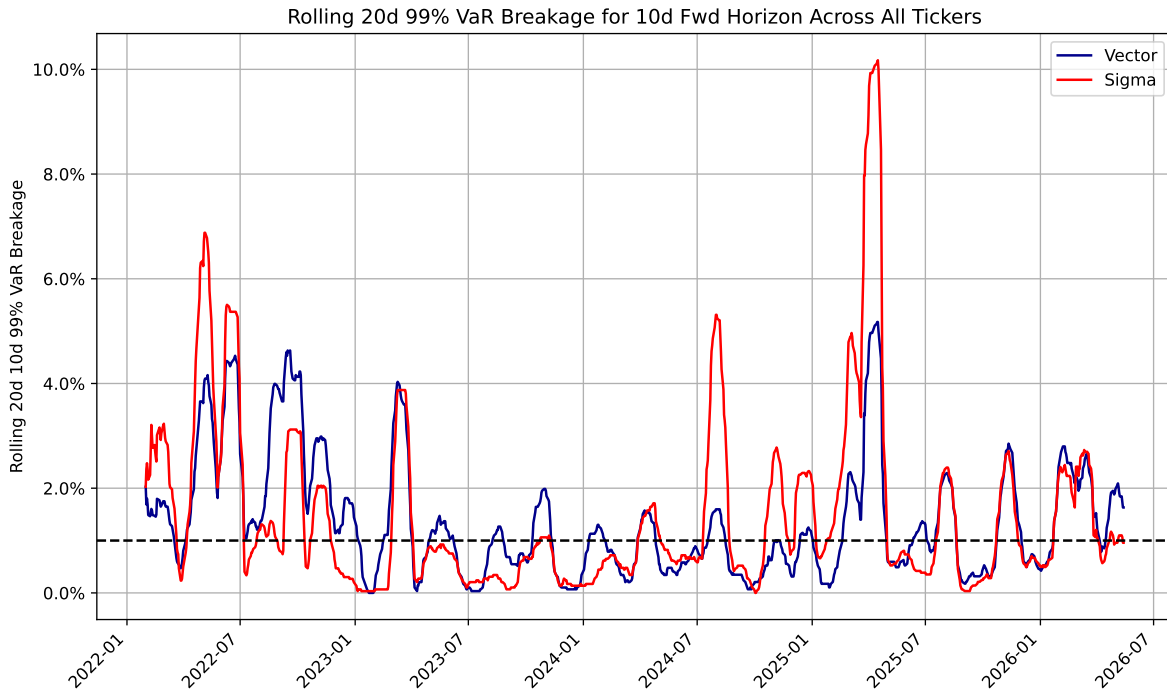
Here we look at 20 day rolling moving averages of the breakage and ROVBC statistics summarized in the preceding section. These 20day moving averages are averages of daily averages across all tickers.

### 1d Horizon

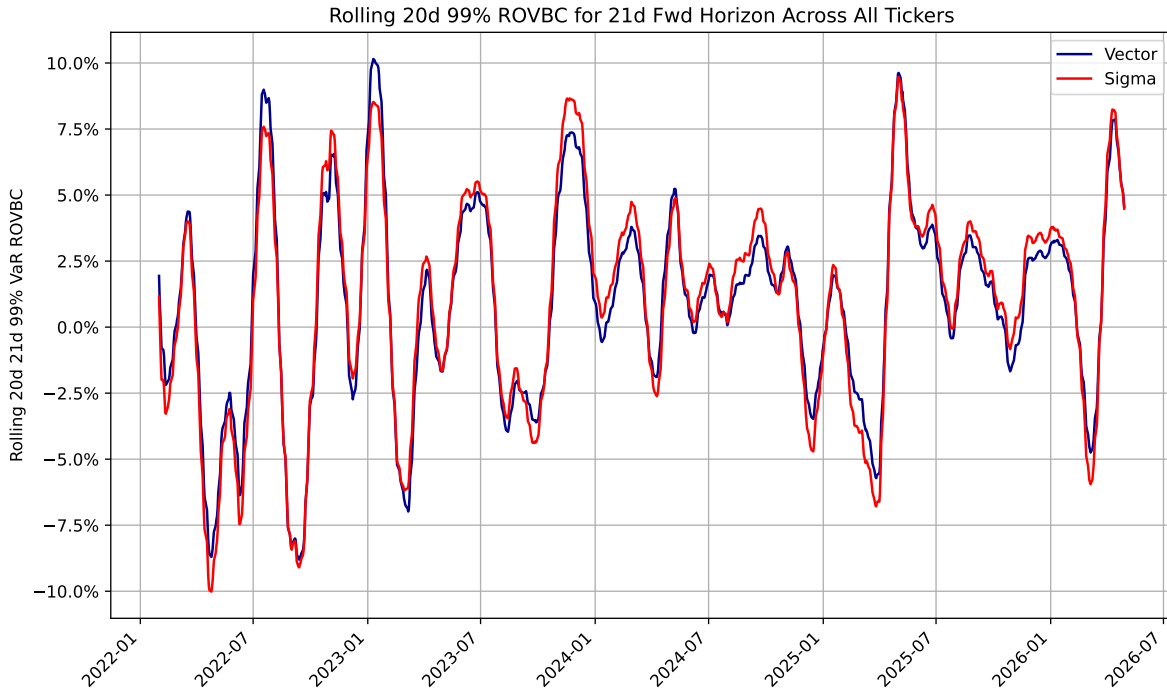
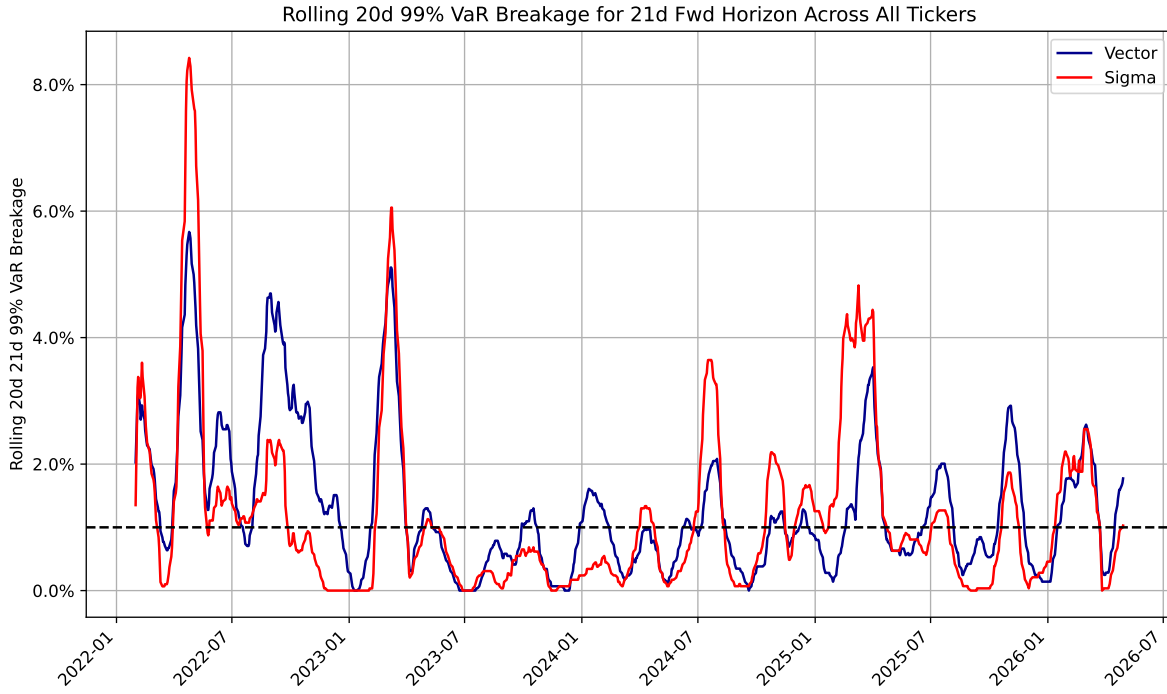




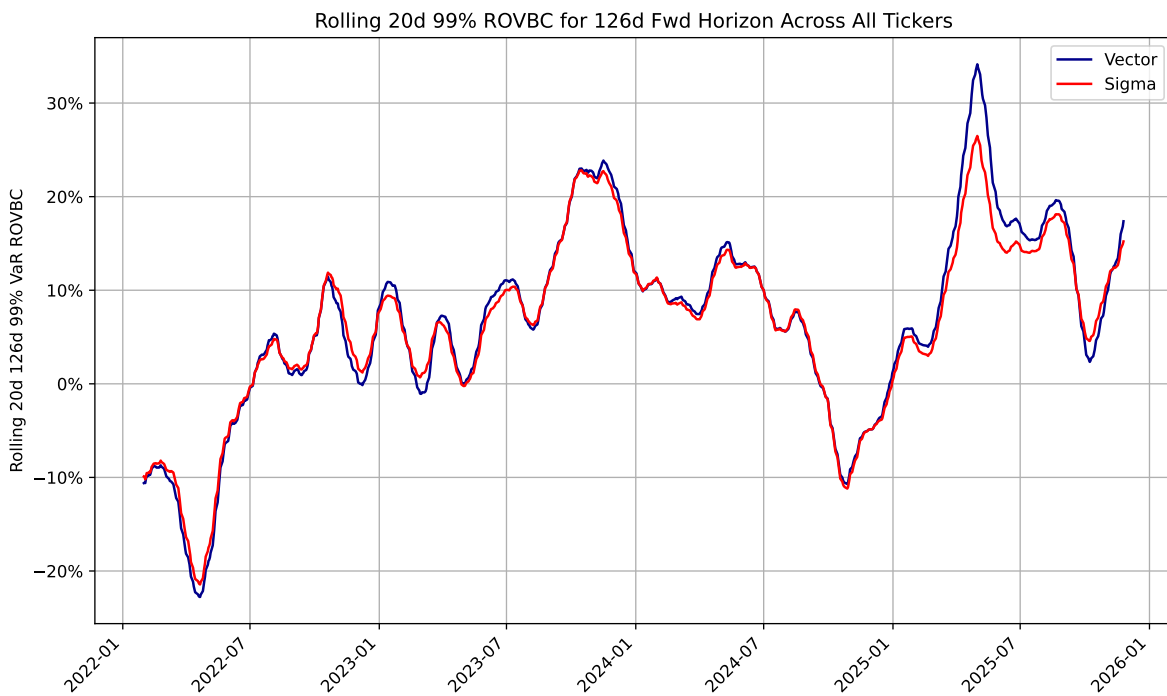
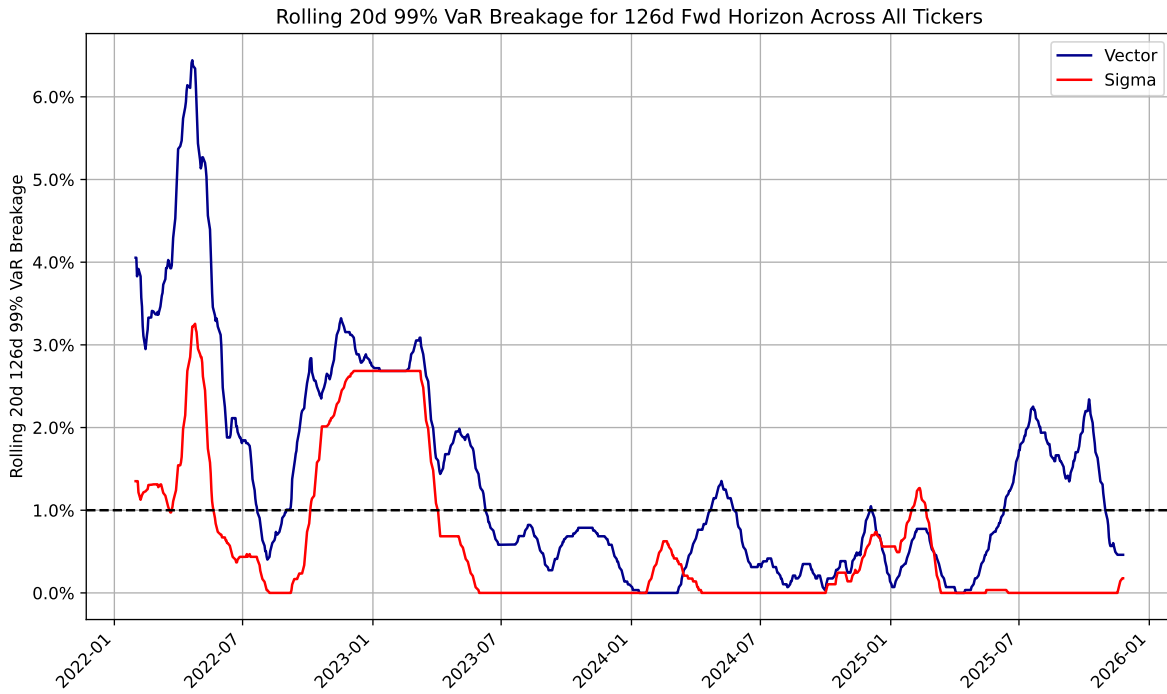
## 10d Horizon



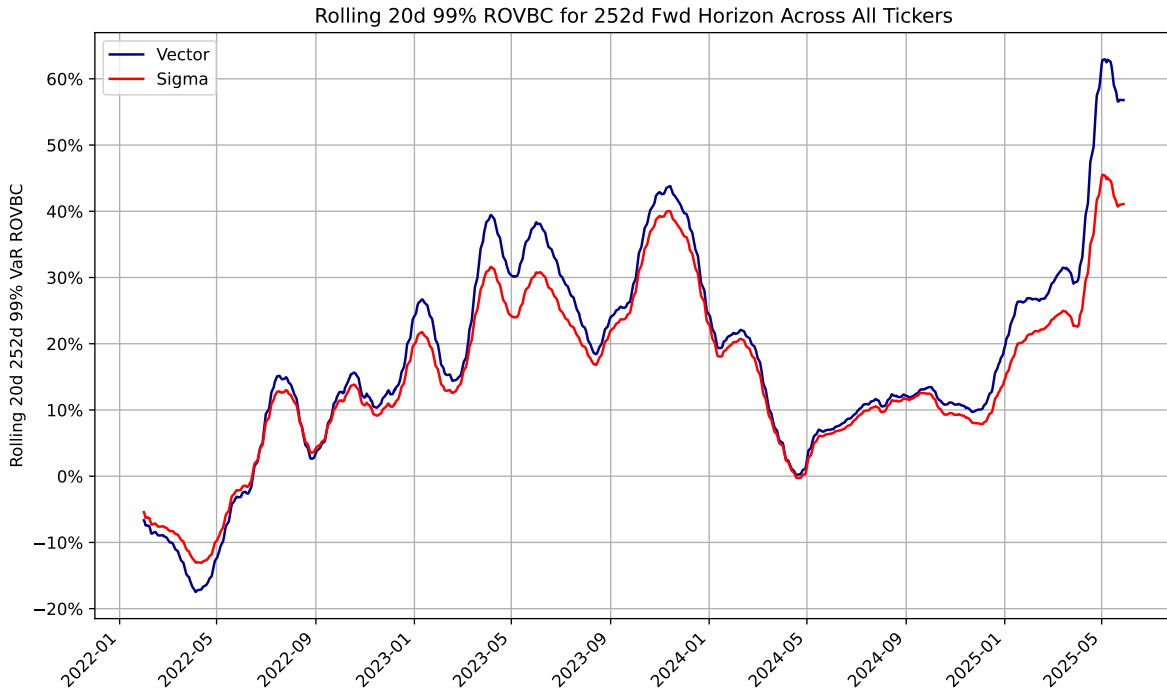
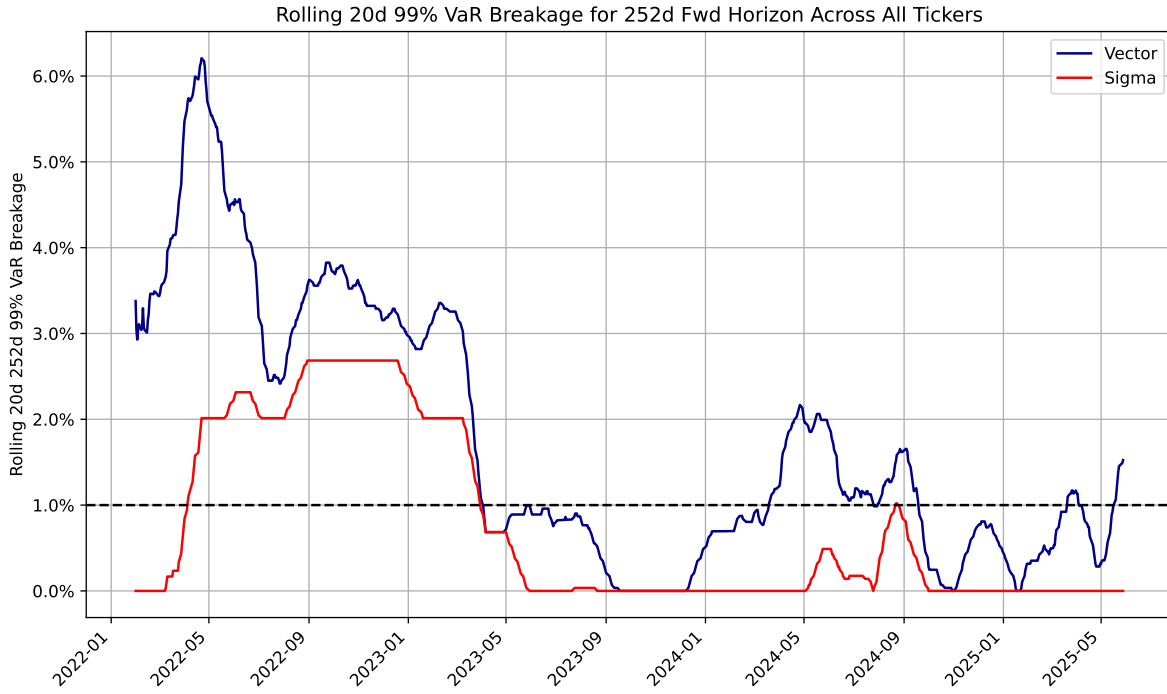
## 21d Horizon



## 63d Horizon



## 252d Horizon



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## Top 30 Tickers By VaR Breakage

### All TMD: 1d

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

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

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	7.0%	QCOM	2.67%
1.0	ZTS	5.9%	INTU	2.67%
1.0	FRCB	5.76%	VCSH	2.58%
1.0	LQD	5.62%	HSBC	2.58%
1.0	B	4.79%	TRGP	2.4%
1.0	GME	3.87%	IRM	2.4%
1.0	AMC	3.69%	WFC	2.4%
1.0	CDNS	3.59%	PWR	2.3%
1.0	MSTR	3.5%	PEP	2.3%
1.0	GNRC	3.23%	NVS	2.3%
1.0	AAP	3.13%	NEM	2.3%
1.0	CHTR	3.13%	PCG	2.21%
1.0	JAZZ	3.04%	ACGL	2.21%
1.0	ISRG	2.86%	ABBV	2.21%
1.0	BUD	2.76%	WDC	2.21%
1.0	CMCSA	2.76%	FRCB	2.16%
1.0	FRA	2.58%	UNH	2.12%
1.0	EXPE	2.4%	KHC	2.12%
1.0	VZ	2.4%	VST	2.12%
1.0	QCOM	2.4%	GLD	2.12%
1.0	SLV	2.21%	SPY	2.12%
1.0	LLY	2.21%	SLV	2.03%
1.0	KALU	2.21%	ZTS	2.03%
1.0	KHC	2.12%	MSFT	2.03%
1.0	INTU	2.03%	B	2.03%
1.0	BXP	2.03%	ORLY	2.03%
1.0	PRGO	2.03%	GOOGL	2.03%
1.0	META	2.03%	GS	2.03%



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## All TMD: 10d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	SBNY	17.65%	SIVBQ	5.51%
10.0	SIVBQ	12.87%	CHTR	4.28%
10.0	AMC	9.29%	MUB	4.09%
10.0	CHTR	8.83%	CTLT	4.08%
10.0	TSLA	7.71%	LW	3.72%
10.0	AAP	6.97%	FIS	3.72%
10.0	ZTS	6.51%	FRCB	3.31%
10.0	LQD	5.3%	SBNY	3.31%
10.0	B	5.2%	PRGO	3.25%
10.0	MSTR	4.74%	UNH	3.16%
10.0	CVS	4.28%	INTU	3.16%
10.0	GNRC	4.18%	AAP	3.07%
10.0	KALU	4.0%	PCG	3.07%
10.0	CTLT	3.67%	CMG	2.79%
10.0	PRGO	3.62%	GSK	2.7%
10.0	GSK	3.44%	BAC	2.7%
10.0	UNH	3.44%	ABBV	2.6%
10.0	FRCB	3.31%	BHC	2.6%
10.0	BHC	3.16%	WDC	2.51%
10.0	SNY	3.07%	FITB	2.32%
10.0	LW	3.07%	FRA	2.32%
10.0	ISRG	2.97%	CVS	2.32%
10.0	VCSH	2.88%	IEP	2.32%
10.0	GME	2.79%	EMB	2.23%
10.0	BUD	2.79%	AMZN	2.23%
10.0	AMZN	2.7%	TRGP	2.23%
10.0	GE	2.51%	IRM	2.23%
10.0	EXPE	2.51%	KALU	2.23%
10.0	BXP	2.51%	WRK	2.17%
10.0	NEM	2.42%	WFC	2.14%



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## All TMD: 21d

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

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

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	13.24%	SBNY	5.56%
21.0	AMC	8.83%	CHTR	5.16%
21.0	ZTS	7.04%	LW	4.6%
21.0	VCSH	6.76%	MUB	4.42%
21.0	TSLA	6.67%	GSK	4.23%
21.0	FRCB	6.67%	CTLT	3.59%
21.0	BUD	4.88%	INTU	2.82%
21.0	AAP	4.6%	WDC	2.72%
21.0	LQD	4.6%	CMG	2.63%
21.0	GNRC	4.6%	CNC	2.63%
21.0	UNH	4.41%	PCG	2.63%
21.0	PRGO	4.32%	TFC	2.63%
21.0	B	4.04%	EMB	2.54%
21.0	GSK	3.76%	SNY	2.54%
21.0	CTLT	3.59%	FITB	2.54%
21.0	BHC	3.47%	AAP	2.54%
21.0	BIIB	3.47%	PRGO	2.44%
21.0	MSTR	3.38%	NEM	2.44%
21.0	KALU	3.29%	UNH	2.44%
21.0	CMA	3.15%	IEP	2.44%
21.0	BXP	3.1%	BUD	2.35%
21.0	NEM	3.1%	FIS	2.35%
21.0	CNC	2.82%	INTC	2.25%
21.0	META	2.72%	COST	2.16%
21.0	AMZN	2.63%	FRA	2.16%
21.0	KEY	2.63%	ZTS	2.16%
21.0	CVS	2.54%	BHC	2.16%
21.0	ZION	2.38%	VFC	2.16%



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## All TMD: 63d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
63.0	SBNY	48.89%	SIVBQ	20.37%
63.0	SIVBQ	25.19%	FRCB	20.0%
63.0	FRCB	20.74%	SBNY	20.0%
63.0	CHTR	19.65%	IEP	6.16%
63.0	AMC	10.07%	GSK	6.06%
63.0	MSTR	8.21%	BHC	5.96%
63.0	AAP	7.92%	CNC	5.18%
63.0	VCSH	7.14%	UNH	4.5%
63.0	ZION	5.55%	CTLT	4.25%
63.0	LQD	5.47%	MUB	3.82%
63.0	CNC	5.28%	INTU	3.03%
63.0	BUD	5.08%	PCG	3.03%
63.0	GNRC	4.99%	EMB	2.64%
63.0	PRGO	4.69%	NEM	2.54%
63.0	UNH	4.5%	KEY	2.54%
63.0	GSK	4.3%	USB	2.35%
63.0	B	4.2%	CMA	2.34%
63.0	NFLX	3.81%	X	2.17%
63.0	CMA	3.72%	VCSH	2.15%
63.0	BHC	3.62%	VZ	2.15%
63.0	META	3.52%	BUD	2.15%
63.0	BMY	3.23%	ZION	2.08%
63.0	BXP	3.13%	VFC	1.76%
63.0	TLT	3.03%	HCA	1.76%
63.0	KEY	2.93%	AZN	1.47%
63.0	ON	2.64%	TFC	1.47%
63.0	CTLT	2.64%	SNY	1.37%
63.0	EMB	2.25%	LQD	1.37%
63.0	BIIB	2.15%	ZTS	1.37%
63.0	NEM	2.15%	WDC	1.27%



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## All TMD: 126d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
126.0	SBNY	68.52%	SIVBQ	43.7%
126.0	SIVBQ	45.19%	FRCB	43.33%
126.0	FRCB	43.33%	SBNY	42.22%
126.0	CHTR	21.88%	IEP	12.92%
126.0	AAP	19.69%	GSK	9.79%
126.0	AMC	18.12%	UNH	4.48%
126.0	MSTR	9.48%	BHC	2.81%
126.0	BXP	8.33%	BALL	2.5%
126.0	GSK	7.71%	LW	2.19%
126.0	CTLT	6.14%	CNC	1.98%
126.0	VCSH	6.04%	EMB	1.88%
126.0	VFC	5.83%	NEM	1.88%
126.0	UNH	4.9%	PCG	1.46%
126.0	GNRC	4.17%	VZ	1.25%
126.0	PRGO	3.96%	VCSH	1.04%
126.0	CMA	3.87%	MUB	0.63%
126.0	BHC	3.65%	IRM	0.62%
126.0	TLT	3.65%	INTU	0.52%
126.0	OXY	3.02%	CHTR	0.52%
126.0	ZION	2.64%	CTLT	0.48%
126.0	B	2.29%	INTC	0.31%
126.0	VNO	1.88%	CPRT	0.1%
126.0	NFLX	1.77%	HYG	0.1%
126.0	NEM	1.67%	LEN	0.1%
126.0	LQD	1.67%	ON	0.0%
126.0	ON	1.46%	ORCL	0.0%
126.0	SNY	1.46%	NVS	0.0%
126.0	META	1.35%	ORLY	0.0%
126.0	BIIB	1.25%	NWL	0.0%
126.0	EMB	1.04%	OXY	0.0%



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## All TMD: 252d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
252.0	SBNY	94.81%	SIVBQ	90.37%
252.0	SIVBQ	90.37%	FRCB	90.0%
252.0	FRCB	89.63%	SBNY	68.89%
252.0	AMC	27.82%	IEP	23.5%
252.0	AAP	25.54%	CNC	3.24%
252.0	CHTR	18.23%	MRK	2.28%
252.0	BIIB	13.07%	UNH	1.08%
252.0	BXP	10.07%	LW	0.12%
252.0	VFC	9.35%	NWL	0.0%
252.0	UNH	8.99%	NEM	0.0%
252.0	CMA	6.91%	NFLX	0.0%
252.0	OXY	6.35%	NVDA	0.0%
252.0	MRK	6.12%	NVS	0.0%
252.0	VNO	4.92%	AA	0.0%
252.0	ZION	4.51%	ON	0.0%
252.0	CTLT	3.85%	MUB	0.0%
252.0	CNC	3.12%	ORCL	0.0%
252.0	BHC	2.64%	ORLY	0.0%
252.0	KEY	2.28%	OXY	0.0%
252.0	GNRC	2.16%	PCG	0.0%
252.0	ZTS	1.92%	PEP	0.0%
252.0	VCSH	1.8%	NAVI	0.0%
252.0	BMY	1.8%	MSTR	0.0%
252.0	UAA	1.56%	MU	0.0%
252.0	EMB	1.08%	LUMN	0.0%
252.0	FIS	1.08%	KEY	0.0%
252.0	GSK	0.84%	KHC	0.0%
252.0	PRGO	0.84%	LEN	0.0%
252.0	ELAN	0.73%	LLY	0.0%
252.0	TLT	0.72%	LNC	0.0%



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### P30D: 1d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	AVGO	20.0%	ELAN	15.0%
1.0	ZTS	15.0%	QCOM	15.0%
1.0	UNH	10.0%	ZTS	10.0%
1.0	CAH	10.0%	XOM	10.0%
1.0	XOM	10.0%	PEP	10.0%
1.0	INTU	5.0%	MSI	5.0%
1.0	IEP	5.0%	CZR	5.0%
1.0	MSI	5.0%	EXPE	5.0%
1.0	HD	5.0%	FIS	5.0%
1.0	PEP	5.0%	GME	5.0%
1.0	FIS	5.0%	HCA	5.0%
1.0	UAA	5.0%	IEP	5.0%
1.0	QCOM	5.0%	INTC	5.0%
1.0	LQD	5.0%	INTU	5.0%
1.0	CYH	5.0%	LUMN	5.0%
1.0	SNY	5.0%	OXY	5.0%
1.0	CMCSA	5.0%	NEM	5.0%
1.0	CDNS	5.0%	COST	5.0%
1.0	KHC	5.0%	PCG	5.0%
1.0	EXPE	5.0%	POST	5.0%
1.0	CZR	5.0%	PWR	5.0%
1.0	LNC	5.0%	RIO	5.0%
1.0	BHC	5.0%	SNY	5.0%
1.0	BALL	5.0%	TRGP	5.0%
1.0	AMGN	5.0%	UAA	5.0%
1.0	AZO	5.0%	VCSH	5.0%
1.0	MSTR	0.0%	WFC	5.0%
1.0	ON	0.0%	CSTM	5.0%
1.0	NWL	0.0%	ISRG	5.0%
1.0	NVS	0.0%	BIIB	5.0%



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### P30D: 10d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	ZTS	45.45%	ZTS	45.45%
10.0	AZO	36.36%	INTU	36.36%
10.0	AVGO	18.18%	ELAN	9.09%
10.0	CMCSA	18.18%	AZO	9.09%
10.0	NVDA	9.09%	NVDA	0.0%
10.0	MSTR	9.09%	MU	0.0%
10.0	MUB	0.0%	MUB	0.0%
10.0	NAVI	0.0%	NAVI	0.0%
10.0	NEM	0.0%	NEM	0.0%
10.0	NFLX	0.0%	NFLX	0.0%
10.0	NWL	0.0%	NWL	0.0%
10.0	NVS	0.0%	NVS	0.0%
10.0	ON	0.0%	MSI	0.0%
10.0	ORCL	0.0%	ON	0.0%
10.0	ORLY	0.0%	ORCL	0.0%
10.0	OXY	0.0%	ORLY	0.0%
10.0	PCG	0.0%	OXY	0.0%
10.0	PEP	0.0%	PCG	0.0%
10.0	MU	0.0%	MSTR	0.0%
10.0	MSFT	0.0%	MSFT	0.0%
10.0	MSI	0.0%	PHM	0.0%
10.0	LUMN	0.0%	MS	0.0%
10.0	KEY	0.0%	MRK	0.0%
10.0	KHC	0.0%	MOS	0.0%
10.0	LEN	0.0%	MNST	0.0%
10.0	LLY	0.0%	META	0.0%
10.0	LNC	0.0%	LW	0.0%
10.0	LQD	0.0%	LVS	0.0%
10.0	LVS	0.0%	LUMN	0.0%
10.0	POST	0.0%	LQD	0.0%



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## P90D: 1d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	NFLX	11.29%	ELAN	9.68%
1.0	UNH	8.06%	XOM	8.06%
1.0	GLD	8.06%	OXY	8.06%
1.0	INTU	8.06%	CSTM	6.45%
1.0	HD	8.06%	PCG	6.45%
1.0	AVGO	8.06%	B	6.45%
1.0	CMCSA	6.45%	GE	4.84%
1.0	TMUS	6.45%	HSBC	4.84%
1.0	PEP	4.84%	INTU	4.84%
1.0	GNRC	4.84%	BHP	4.84%
1.0	KHC	4.84%	AA	4.84%
1.0	CDNS	4.84%	NEM	4.84%
1.0	CAH	4.84%	QCOM	4.84%
1.0	ZTS	4.84%	WDC	4.84%
1.0	XOM	4.84%	VCSH	4.84%
1.0	AMC	4.84%	META	3.23%
1.0	META	4.84%	WFC	3.23%
1.0	AZO	4.84%	EMB	3.23%
1.0	QCOM	3.23%	FSUGY	3.23%
1.0	EXPE	3.23%	GLD	3.23%
1.0	SNY	3.23%	HCA	3.23%
1.0	GE	3.23%	VICI	3.23%
1.0	IEP	3.23%	PEP	3.23%
1.0	TDG	3.23%	POST	3.23%
1.0	LLY	3.23%	SBUX	3.23%
1.0	BHC	3.23%	MSFT	3.23%
1.0	BALL	3.23%	MU	3.23%
1.0	MRK	3.23%	MUB	3.23%
1.0	PCG	1.61%	COST	3.23%
1.0	ABBV	1.61%	NVS	3.23%



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## P90D: 10d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	GE	24.53%	ZTS	18.87%
10.0	NFLX	22.64%	CHTR	16.98%
10.0	ZTS	18.87%	GLD	9.43%
10.0	CHTR	16.98%	INTU	9.43%
10.0	CMCSA	15.09%	B	7.55%
10.0	GLD	11.32%	OXY	7.55%
10.0	GSK	11.32%	FCX	5.66%
10.0	HD	9.43%	XOM	5.66%
10.0	KHC	9.43%	NVS	5.66%
10.0	CVS	7.55%	GSK	5.66%
10.0	AZO	7.55%	T	5.66%
10.0	VZ	5.66%	HCA	3.77%
10.0	PCG	5.66%	BHP	3.77%
10.0	SNY	5.66%	MU	3.77%
10.0	AMC	5.66%	VICI	3.77%
10.0	BUD	5.66%	VZ	3.77%
10.0	GNRC	3.77%	AZO	1.89%
10.0	T	3.77%	THC	1.89%
10.0	HCA	3.77%	ABBV	1.89%
10.0	OXY	3.77%	ELAN	1.89%
10.0	MU	3.77%	KHC	1.89%
10.0	AVGO	3.77%	CPRT	1.89%
10.0	BHP	1.89%	NEM	1.89%
10.0	TMUS	1.89%	BA	1.89%
10.0	MSTR	1.89%	TEVA	1.89%
10.0	PRGO	1.89%	MOS	1.89%
10.0	META	1.89%	CMCSA	1.89%
10.0	NVDA	1.89%	HSBC	1.89%
10.0	MRK	0.0%	MSI	1.89%
10.0	ORLY	0.0%	NAVI	0.0%



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## P90D: 21d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	ZTS	38.1%	ZTS	38.1%
21.0	CHTR	38.1%	CHTR	30.95%
21.0	NFLX	16.67%	CMCSA	2.38%
21.0	HD	11.9%	NWL	0.0%
21.0	AZO	9.52%	MUB	0.0%
21.0	CMCSA	9.52%	NAVI	0.0%
21.0	TMUS	7.14%	NEM	0.0%
21.0	INTU	2.38%	NFLX	0.0%
21.0	GLD	2.38%	NVDA	0.0%
21.0	T	2.38%	NVS	0.0%
21.0	BUD	2.38%	ON	0.0%
21.0	CVS	2.38%	POST	0.0%
21.0	VCSH	0.0%	ORCL	0.0%
21.0	MSI	0.0%	ORLY	0.0%
21.0	ORLY	0.0%	OXY	0.0%
21.0	ORCL	0.0%	PCG	0.0%
21.0	ON	0.0%	PEP	0.0%
21.0	NWL	0.0%	MU	0.0%
21.0	NVS	0.0%	MSTR	0.0%
21.0	NVDA	0.0%	MSI	0.0%
21.0	WFC	0.0%	LUMN	0.0%
21.0	WYNN	0.0%	KEY	0.0%
21.0	NEM	0.0%	KHC	0.0%
21.0	NAVI	0.0%	LEN	0.0%
21.0	MUB	0.0%	LLY	0.0%
21.0	MU	0.0%	LNC	0.0%
21.0	MSTR	0.0%	LQD	0.0%
21.0	MSFT	0.0%	LVS	0.0%
21.0	VFC	0.0%	MSFT	0.0%
21.0	MS	0.0%	LW	0.0%



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## P365D: 1d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
1.0	ZTS	9.2%	NEM	5.2%
1.0	LLY	7.2%	B	4.8%
1.0	AMC	6.4%	INTU	4.4%
1.0	CMCSA	6.0%	VCSH	4.0%
1.0	CDNS	5.6%	WDC	4.0%
1.0	GWV	5.2%	SLV	3.61%
1.0	TDG	4.8%	OXY	3.2%
1.0	GLD	4.8%	HSBC	3.2%
1.0	NFLX	4.0%	GLD	3.2%
1.0	TSLA	4.0%	ELAN	2.8%
1.0	KHC	4.0%	POST	2.8%
1.0	GNRC	3.6%	CLF	2.8%
1.0	TMUS	3.6%	XOM	2.8%
1.0	INTU	3.6%	RIO	2.8%
1.0	UNH	3.6%	MNST	2.4%
1.0	PRGO	2.4%	MU	2.4%
1.0	MSTR	2.4%	LUMN	2.4%
1.0	CVS	2.4%	NVS	2.4%
1.0	QCOM	2.4%	ORLY	2.4%
1.0	SNY	2.4%	GSK	2.4%
1.0	HD	2.4%	PCG	2.4%
1.0	TXN	2.4%	AA	2.4%
1.0	AAP	2.0%	PWR	2.4%
1.0	META	2.0%	ADBE	2.4%
1.0	VZ	2.0%	BHP	2.4%
1.0	AMGN	2.0%	QCOM	2.4%
1.0	AMD	2.0%	TFC	2.4%
1.0	CAH	2.0%	WFC	2.4%
1.0	PCG	2.0%	MSI	2.0%
1.0	AVGO	2.0%	ABBV	2.0%



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## P365D: 10d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
10.0	ZTS	14.52%	INTU	9.96%
10.0	AMC	13.28%	ZTS	8.3%
10.0	PRGO	9.54%	CMG	8.3%
10.0	CHTR	9.13%	PRGO	7.88%
10.0	TDG	8.71%	CHTR	7.88%
10.0	UNH	6.64%	FIS	4.98%
10.0	BUD	6.64%	AZO	4.15%
10.0	CMCSA	6.22%	LW	4.15%
10.0	INTU	6.22%	LUMN	4.15%
10.0	MSTR	6.22%	CNC	4.15%
10.0	GE	6.22%	BUD	4.15%
10.0	NFLX	5.39%	SLV	3.75%
10.0	CLF	4.98%	MSI	3.73%
10.0	AMZN	4.98%	TDG	3.73%
10.0	LW	4.15%	FCX	2.9%
10.0	GNRC	4.15%	GLD	2.9%
10.0	CNC	4.15%	IRM	2.9%
10.0	MSI	4.15%	NAVI	2.9%
10.0	BXP	3.73%	MOS	2.49%
10.0	CZR	3.32%	MNST	2.49%
10.0	TXN	3.32%	B	2.49%
10.0	GSK	2.9%	MSFT	2.07%
10.0	GLD	2.9%	META	2.07%
10.0	QCOM	2.9%	LNC	2.07%
10.0	LLY	2.9%	CYH	2.07%
10.0	PCG	2.49%	T	2.07%
10.0	CVS	2.49%	GBTC	2.07%
10.0	TSLA	2.07%	AMZN	2.07%
10.0	IRM	2.07%	NEM	1.66%
10.0	KHC	2.07%	HD	1.66%



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## P365D: 21d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
21.0	ZTS	20.43%	CHTR	13.91%
21.0	CHTR	16.09%	INTU	10.43%
21.0	PRGO	16.09%	CNC	9.13%
21.0	CMCSA	9.57%	PRGO	9.13%
21.0	BXP	9.13%	ZTS	8.7%
21.0	BUD	9.13%	CMG	6.52%
21.0	CNC	9.13%	MSI	5.65%
21.0	MSI	8.7%	FIS	5.65%
21.0	INTU	8.26%	FITB	3.91%
21.0	UNH	7.39%	MSFT	3.91%
21.0	MSTR	6.96%	BUD	3.91%
21.0	AMC	6.09%	TFC	3.48%
21.0	IRM	5.22%	NAVI	2.61%
21.0	NFLX	4.78%	B	2.61%
21.0	NAVI	3.48%	EXPE	2.61%
21.0	LW	3.04%	SLV	2.18%
21.0	CLF	3.04%	EMB	2.17%
21.0	QCOM	2.61%	MNST	2.17%
21.0	GLD	2.17%	MUB	2.17%
21.0	HD	2.17%	HD	1.74%
21.0	AMZN	2.17%	IRM	1.74%
21.0	LQD	2.17%	GBTC	1.74%
21.0	CZR	1.74%	CCL	1.74%
21.0	TDG	1.74%	LW	1.74%
21.0	GSK	1.74%	MOS	1.74%
21.0	AZO	1.74%	WFC	1.3%
21.0	SLV	1.31%	HSBC	1.3%
21.0	GNRC	1.3%	AZO	1.3%
21.0	GBTC	1.3%	GNRC	0.87%
21.0	META	1.3%	GT	0.87%



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## P365D: 63d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
63.0	PRGO	25.0%	INTU	15.96%
63.0	MSTR	24.47%	ZTS	7.45%
63.0	CHTR	20.21%	CNC	6.38%
63.0	NFLX	12.23%	SLV	1.6%
63.0	INTU	11.7%	MSFT	1.6%
63.0	CNC	11.7%	FIS	1.06%
63.0	TDG	9.57%	PRGO	0.53%
63.0	ZTS	8.51%	NAVI	0.0%
63.0	CMCSA	7.98%	NEM	0.0%
63.0	BUD	7.45%	NFLX	0.0%
63.0	BXP	5.32%	NVDA	0.0%
63.0	META	4.79%	NWL	0.0%
63.0	MSI	2.66%	NVS	0.0%
63.0	HD	2.13%	MU	0.0%
63.0	AMC	2.13%	ON	0.0%
63.0	NWL	1.6%	ORCL	0.0%
63.0	FIS	0.53%	ORLY	0.0%
63.0	AZO	0.53%	OXY	0.0%
63.0	OXY	0.0%	MUB	0.0%
63.0	ORLY	0.0%	MSI	0.0%
63.0	LQD	0.0%	MSTR	0.0%
63.0	ORCL	0.0%	LUMN	0.0%
63.0	ON	0.0%	KEY	0.0%
63.0	LLY	0.0%	KHC	0.0%
63.0	PCG	0.0%	LEN	0.0%
63.0	PEP	0.0%	LLY	0.0%
63.0	NVS	0.0%	LNC	0.0%
63.0	LNC	0.0%	LQD	0.0%
63.0	NEM	0.0%	LVS	0.0%
63.0	NVDA	0.0%	PEP	0.0%



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## P365D: 126d

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

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

Horizon	Ticker_V	VaRBreak_V	Ticker_S	VaRBreak_S
126.0	MSTR	68.8%	INTU	4.0%
126.0	PRGO	30.4%	AA	0.0%
126.0	CHTR	30.4%	NVDA	0.0%
126.0	AMC	21.6%	MSTR	0.0%
126.0	BXP	16.8%	MU	0.0%
126.0	NFLX	13.6%	MUB	0.0%
126.0	AAP	11.2%	NAVI	0.0%
126.0	INTU	6.4%	NEM	0.0%
126.0	ZTS	4.0%	NFLX	0.0%
126.0	ORCL	2.4%	NVS	0.0%
126.0	LEN	2.4%	MSFT	0.0%
126.0	CLF	0.8%	NWL	0.0%
126.0	TDG	0.8%	ON	0.0%
126.0	LQD	0.0%	ORCL	0.0%
126.0	NEM	0.0%	ORLY	0.0%
126.0	KHC	0.0%	OXY	0.0%
126.0	PCG	0.0%	PCG	0.0%
126.0	OXY	0.0%	MSI	0.0%
126.0	ORLY	0.0%	MS	0.0%
126.0	ON	0.0%	PHM	0.0%
126.0	NWL	0.0%	MRK	0.0%
126.0	NVS	0.0%	MOS	0.0%
126.0	NVDA	0.0%	MNST	0.0%
126.0	LLY	0.0%	META	0.0%
126.0	LNC	0.0%	LW	0.0%
126.0	LUMN	0.0%	LVS	0.0%
126.0	NAVI	0.0%	LUMN	0.0%
126.0	MUB	0.0%	LQD	0.0%
126.0	MU	0.0%	LNC	0.0%
126.0	PHM	0.0%	LLY	0.0%



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## Top 30 Tickers By ROVBC

### All TMD: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	GME	0.41%	MSTR	0.3%
1.0	MSTR	0.34%	MU	0.29%
1.0	MU	0.26%	WDC	0.27%
1.0	WDC	0.22%	NVDA	0.25%
1.0	ORCL	0.2%	VST	0.23%
1.0	ON	0.16%	AVGO	0.23%
1.0	LLY	0.16%	PWR	0.2%
1.0	AVGO	0.15%	AMD	0.2%
1.0	AMD	0.15%	TEVA	0.17%
1.0	QCOM	0.15%	X	0.17%
1.0	NVDA	0.14%	LLY	0.16%
1.0	META	0.14%	GE	0.16%
1.0	AAPL	0.13%	TRGP	0.16%
1.0	PWR	0.12%	GME	0.15%
1.0	GOOGL	0.12%	AMAT	0.15%
1.0	NFLX	0.12%	GBTC	0.14%
1.0	GWW	0.12%	SLV	0.14%
1.0	VST	0.11%	INTC	0.14%
1.0	X	0.1%	CAH	0.14%
1.0	GNRC	0.1%	ORCL	0.13%
1.0	TEVA	0.09%	ON	0.12%
1.0	UNH	0.09%	THC	0.12%
1.0	AA	0.08%	ETRN	0.12%
1.0	CDNS	0.08%	GOOGL	0.12%
1.0	AMZN	0.08%	GS	0.11%
1.0	XOM	0.08%	IRM	0.11%
1.0	GE	0.08%	CDNS	0.11%
1.0	AMAT	0.08%	CSTM	0.11%
1.0	THC	0.08%	META	0.11%
1.0	UAA	0.07%	NFLX	0.1%



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## All TMD: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	5.5%	MSTR	3.09%
10.0	GME	3.98%	MU	2.73%
10.0	MU	3.37%	WDC	2.68%
10.0	WDC	2.86%	NVDA	2.53%
10.0	NVDA	1.92%	VST	2.23%
10.0	INTC	1.87%	AVGO	2.19%
10.0	AMD	1.66%	PWR	2.05%
10.0	META	1.62%	AMD	1.88%
10.0	TEVA	1.57%	TEVA	1.74%
10.0	AVGO	1.52%	LLY	1.59%
10.0	PWR	1.51%	X	1.58%
10.0	NFLX	1.51%	TRGP	1.57%
10.0	ORCL	1.5%	INTC	1.5%
10.0	VST	1.48%	GE	1.49%
10.0	LLY	1.38%	ETRN	1.41%
10.0	KALU	1.35%	AMAT	1.4%
10.0	ETRN	1.26%	GBTC	1.38%
10.0	SLV	1.22%	CAH	1.38%
10.0	AAPL	1.14%	SLV	1.36%
10.0	GOOGL	1.09%	GME	1.31%
10.0	CTLT	1.06%	META	1.21%
10.0	GBTC	1.04%	THC	1.18%
10.0	GE	1.04%	IRM	1.15%
10.0	FCX	1.01%	GOOGL	1.14%
10.0	GNRC	1.0%	ORCL	1.14%
10.0	CAH	1.0%	NFLX	1.13%
10.0	AMAT	0.98%	GS	1.09%
10.0	AA	0.95%	TSLA	1.07%
10.0	XOM	0.95%	ON	1.07%
10.0	X	0.9%	CDNS	1.05%



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## All TMD: 21d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	MSTR	12.95%	MSTR	7.14%
21.0	GME	7.09%	WDC	5.78%
21.0	WDC	6.13%	MU	5.64%
21.0	MU	5.49%	NVDA	5.45%
21.0	INTC	4.67%	VST	4.83%
21.0	META	4.16%	AVGO	4.61%
21.0	NVDA	3.86%	PWR	4.43%
21.0	NFLX	3.84%	AMD	4.15%
21.0	TEVA	3.66%	TEVA	3.8%
21.0	VST	3.6%	ETRN	3.5%
21.0	AVGO	3.48%	INTC	3.29%
21.0	AMD	3.43%	TRGP	3.26%
21.0	PWR	3.13%	LLY	3.25%
21.0	ORCL	3.05%	GE	3.2%
21.0	GBTC	3.0%	X	3.17%
21.0	KALU	2.91%	GBTC	3.1%
21.0	CTLT	2.71%	AMAT	2.95%
21.0	AA	2.62%	CAH	2.89%
21.0	ETRN	2.53%	SLV	2.84%
21.0	GE	2.4%	META	2.67%
21.0	AMAT	2.39%	NFLX	2.51%
21.0	LLY	2.34%	THC	2.51%
21.0	TSLA	2.28%	GOOGL	2.49%
21.0	SLV	2.28%	ORCL	2.48%
21.0	XOM	2.22%	IRM	2.47%
21.0	GNRC	2.16%	TSLA	2.46%
21.0	CAH	2.15%	GS	2.31%
21.0	THC	2.07%	ON	2.21%
21.0	GOOGL	2.06%	CDNS	2.17%
21.0	X	1.96%	GWV	2.14%



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## All TMD: 63d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	WDC	23.5%	MSTR	20.13%
63.0	MSTR	20.89%	WDC	18.41%
63.0	META	17.49%	NVDA	17.68%
63.0	NVDA	16.32%	MU	16.22%
63.0	MU	15.39%	VST	16.04%
63.0	AVGO	14.61%	AVGO	13.64%
63.0	VST	14.12%	PWR	11.95%
63.0	NFLX	10.52%	TEVA	10.46%
63.0	TEVA	10.49%	GE	10.32%
63.0	CTLT	10.43%	ETRN	10.28%
63.0	ETRN	10.07%	GBTC	10.28%
63.0	PWR	9.97%	AMD	10.02%
63.0	KALU	9.62%	META	9.5%
63.0	INTC	9.15%	LLY	9.24%
63.0	GBTC	8.86%	TRGP	9.2%
63.0	LLY	8.8%	CAH	9.06%
63.0	AMAT	8.67%	NFLX	9.04%
63.0	SLV	8.56%	AMAT	8.91%
63.0	ORCL	8.48%	SLV	8.83%
63.0	AMD	8.3%	THC	8.09%
63.0	CAH	8.15%	PHM	7.46%
63.0	GE	7.96%	GOOGL	7.19%
63.0	GILD	7.21%	ORCL	7.04%
63.0	NEM	7.01%	GS	6.87%
63.0	GNRC	6.9%	HSBC	6.54%
63.0	GOOGL	6.86%	INTC	6.33%
63.0	THC	6.76%	CCL	6.19%
63.0	TSLA	6.72%	IRM	6.17%
63.0	AMZN	6.54%	GLD	5.98%
63.0	GME	6.42%	X	5.91%



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## All TMD: 126d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	WDC	66.88%	MSTR	49.65%
126.0	MSTR	56.48%	WDC	44.41%
126.0	META	47.32%	NVDA	44.11%
126.0	NVDA	46.25%	MU	39.78%
126.0	MU	44.43%	VST	35.78%
126.0	AVGO	41.54%	AVGO	30.09%
126.0	VST	34.2%	GBTC	29.06%
126.0	GBTC	30.14%	GE	25.34%
126.0	TEVA	27.42%	TEVA	23.22%
126.0	NFLX	27.04%	META	23.21%
126.0	LLY	25.71%	PWR	23.14%
126.0	SLV	25.56%	NFLX	22.15%
126.0	PWR	24.49%	SLV	20.9%
126.0	AMAT	23.33%	AMD	20.56%
126.0	AMD	22.78%	THC	20.24%
126.0	GE	20.99%	AMAT	20.14%
126.0	GOOGL	20.57%	CAH	19.76%
126.0	CAH	20.25%	LLY	19.67%
126.0	KALU	20.21%	TRGP	18.93%
126.0	INTC	19.59%	ETRN	18.49%
126.0	THC	19.27%	PHM	17.21%
126.0	NEM	18.75%	GOOGL	16.69%
126.0	GILD	18.19%	ORCL	15.94%
126.0	ETRN	18.14%	GS	15.56%
126.0	B	17.97%	B	15.31%
126.0	ORCL	17.89%	HSBC	14.1%
126.0	AMZN	16.78%	CCL	14.04%
126.0	TSLA	16.75%	GLD	13.45%
126.0	ISRG	15.39%	JPM	12.87%
126.0	GS	14.31%	INTC	12.77%



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## All TMD: 252d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
252.0	MSTR	198.78%	MSTR	169.5%
252.0	WDC	157.72%	NVDA	119.97%
252.0	VST	129.74%	VST	106.7%
252.0	NVDA	118.68%	WDC	99.68%
252.0	META	105.74%	GBTC	92.97%
252.0	MU	104.36%	MU	84.18%
252.0	AVGO	101.23%	AVGO	77.04%
252.0	GBTC	93.26%	META	63.84%
252.0	NFLX	79.67%	GE	61.17%
252.0	GE	67.14%	NFLX	57.68%
252.0	THC	60.08%	PWR	49.14%
252.0	SLV	57.4%	THC	48.14%
252.0	AMZN	53.7%	AMD	44.91%
252.0	ORCL	52.88%	TEVA	42.74%
252.0	B	52.06%	PHM	42.61%
252.0	GOOGL	51.54%	LLY	42.44%
252.0	TEVA	51.33%	TRGP	40.73%
252.0	NEM	50.22%	SLV	39.52%
252.0	AMD	49.6%	CAH	39.25%
252.0	ISRG	47.46%	AMAT	38.62%
252.0	AMAT	47.24%	CCL	37.5%
252.0	CAH	45.6%	ORCL	37.21%
252.0	PWR	44.79%	ETRN	35.78%
252.0	TDG	39.68%	GOOGL	35.04%
252.0	LLY	39.62%	GS	33.59%
252.0	PHM	39.5%	JPM	31.05%
252.0	GILD	37.27%	HSBC	30.96%
252.0	CCL	36.72%	B	30.09%
252.0	TRGP	36.11%	TDG	29.52%
252.0	KALU	35.91%	GLD	29.31%



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### P30D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	WDC	2.06%	MU	3.39%
1.0	ORCL	1.95%	AMD	2.05%
1.0	LLY	1.79%	QCOM	1.86%
1.0	AMD	1.71%	ORCL	1.76%
1.0	MU	1.68%	CLF	1.52%
1.0	QCOM	1.65%	CSCO	1.43%
1.0	BBY	1.64%	BBY	1.35%
1.0	LUMN	1.48%	LUMN	1.24%
1.0	CLF	1.16%	INTC	1.12%
1.0	AAP	1.06%	WDC	1.07%
1.0	CDNS	0.98%	AA	1.03%
1.0	JAZZ	0.85%	ON	0.99%
1.0	AVGO	0.8%	LLY	0.86%
1.0	ON	0.64%	JAZZ	0.79%
1.0	TDG	0.63%	AMC	0.79%
1.0	AMC	0.62%	MNST	0.72%
1.0	INTC	0.58%	AMAT	0.7%
1.0	FCX	0.58%	AAPL	0.7%
1.0	NVDA	0.56%	TSLA	0.69%
1.0	CSCO	0.55%	FCX	0.69%
1.0	AA	0.55%	CDNS	0.66%
1.0	MRK	0.54%	VNO	0.63%
1.0	AMAT	0.46%	BHP	0.6%
1.0	CNC	0.43%	FSUGY	0.58%
1.0	VNO	0.43%	GE	0.58%
1.0	AAPL	0.42%	CNC	0.54%
1.0	B	0.4%	GS	0.54%
1.0	BHP	0.39%	HON	0.53%
1.0	TSLA	0.39%	MSFT	0.51%
1.0	MSFT	0.37%	CSTM	0.51%



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### P30D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MU	17.75%	CSCO	22.22%
10.0	AMD	13.6%	MU	19.36%
10.0	QCOM	12.03%	AMD	14.06%
10.0	JAZZ	11.84%	QCOM	11.41%
10.0	LLY	11.52%	LUMN	10.26%
10.0	CVS	11.46%	ON	10.06%
10.0	BBY	10.41%	BBY	8.93%
10.0	CSCO	9.27%	MNST	8.43%
10.0	WDC	8.78%	LLY	7.27%
10.0	LUMN	8.28%	JAZZ	7.21%
10.0	ORCL	7.2%	AA	6.86%
10.0	NVDA	6.45%	CLF	6.41%
10.0	MNST	6.03%	TXN	6.2%
10.0	CLF	5.39%	CVS	6.18%
10.0	AA	5.06%	AAPL	6.03%
10.0	CNC	5.04%	CNC	5.22%
10.0	CAH	4.86%	TRGP	4.92%
10.0	ON	4.78%	GS	4.85%
10.0	AMAT	4.73%	CAH	4.83%
10.0	GWG	4.45%	WDC	4.83%
10.0	BUD	4.24%	INTC	4.75%
10.0	UNH	3.74%	ORCL	4.73%
10.0	MRK	3.71%	HON	4.37%
10.0	CZR	3.67%	GWG	4.35%
10.0	INTC	3.62%	FSUGY	4.2%
10.0	ABBV	3.52%	NVDA	4.18%
10.0	FCX	3.29%	BUD	4.05%
10.0	TXN	2.94%	AMAT	3.92%
10.0	BXP	2.59%	VNO	3.75%
10.0	GE	2.57%	MRK	3.75%



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## P90D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	WDC	1.61%	AMD	1.65%
1.0	AMD	1.6%	INTC	1.65%
1.0	INTC	1.41%	MU	1.53%
1.0	ORCL	1.22%	WDC	1.18%
1.0	AMC	1.07%	ON	1.04%
1.0	QCOM	1.0%	QCOM	1.02%
1.0	MU	0.95%	LUMN	0.86%
1.0	UNH	0.95%	AMC	0.78%
1.0	CNC	0.75%	ORCL	0.73%
1.0	LUMN	0.71%	CSCO	0.7%
1.0	ON	0.6%	TXN	0.66%
1.0	KALU	0.53%	AVGO	0.58%
1.0	AAP	0.49%	CNC	0.54%
1.0	LLY	0.47%	KALU	0.53%
1.0	TXN	0.44%	CSTM	0.5%
1.0	BBY	0.41%	AMZN	0.44%
1.0	MSTR	0.4%	UNH	0.43%
1.0	CDNS	0.36%	BBY	0.42%
1.0	JAZZ	0.34%	PWR	0.39%
1.0	AVGO	0.32%	GOOGL	0.37%
1.0	CSCO	0.29%	CDNS	0.37%
1.0	META	0.28%	AA	0.37%
1.0	CZR	0.26%	MS	0.37%
1.0	TSLA	0.26%	JAZZ	0.37%
1.0	AMAT	0.25%	VNO	0.36%
1.0	CLF	0.23%	AMAT	0.36%
1.0	NVDA	0.22%	GNRC	0.36%
1.0	AMZN	0.22%	CLF	0.35%
1.0	GOOGL	0.22%	QQQ	0.32%
1.0	MSFT	0.2%	MSTR	0.32%



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## P90D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	INTC	26.17%	INTC	21.39%
10.0	AMD	19.34%	AMD	18.07%
10.0	MU	18.4%	MU	15.77%
10.0	ORCL	13.13%	ON	13.84%
10.0	UNH	12.65%	WDC	13.31%
10.0	QCOM	12.0%	QCOM	10.81%
10.0	WDC	11.06%	TXN	9.14%
10.0	ON	10.04%	CNC	8.72%
10.0	MSTR	9.25%	CSCO	8.34%
10.0	AMC	8.82%	LUMN	8.16%
10.0	KALU	8.3%	AMC	7.87%
10.0	CNC	8.04%	KALU	7.04%
10.0	CVS	7.37%	UNH	6.11%
10.0	JAZZ	7.03%	CSTM	5.44%
10.0	LUMN	6.93%	PWR	5.44%
10.0	TXN	6.24%	AVGO	5.26%
10.0	AVGO	5.01%	GOOGL	5.08%
10.0	PWR	4.51%	ORCL	5.08%
10.0	CSCO	4.12%	JAZZ	4.85%
10.0	AMAT	3.84%	AMZN	4.68%
10.0	NVDA	3.75%	GNRC	4.6%
10.0	GOOGL	3.52%	AMAT	4.55%
10.0	VFC	3.41%	MSTR	4.22%
10.0	GBTC	3.07%	MS	4.14%
10.0	BXP	3.03%	CDNS	4.05%
10.0	BUD	3.03%	CVS	3.73%
10.0	AMZN	2.98%	NVDA	3.68%
10.0	CLF	2.68%	CLF	3.52%
10.0	AA	2.53%	VNO	3.47%
10.0	META	2.44%	QQQ	3.46%



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## P90D: 21d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	INTC	83.97%	INTC	62.66%
21.0	AMD	40.18%	AMD	48.88%
21.0	ORCL	34.69%	MU	39.05%
21.0	MU	33.82%	ON	37.19%
21.0	QCOM	33.37%	WDC	32.6%
21.0	ON	30.61%	QCOM	28.91%
21.0	CNC	30.44%	CNC	27.86%
21.0	WDC	28.54%	TXN	24.94%
21.0	UNH	26.9%	KALU	22.14%
21.0	MSTR	24.5%	AMC	22.07%
21.0	AMC	20.81%	LUMN	19.62%
21.0	KALU	20.76%	UNH	17.57%
21.0	TXN	20.41%	CSCO	16.74%
21.0	LUMN	19.42%	CSTM	15.83%
21.0	CVS	18.72%	PWR	15.72%
21.0	AMZN	14.02%	AVGO	15.45%
21.0	JAZZ	13.24%	GOOGL	14.75%
21.0	AVGO	12.26%	GNRC	14.41%
21.0	CLF	12.12%	MSTR	14.11%
21.0	BXP	10.88%	AMZN	13.54%
21.0	GBTC	10.72%	ORCL	12.93%
21.0	PWR	9.9%	CLF	12.09%
21.0	GOOGL	8.6%	CDNS	11.49%
21.0	GNRC	7.16%	JAZZ	11.34%
21.0	AMAT	7.14%	AMAT	10.67%
21.0	CDNS	7.01%	IRM	10.6%
21.0	MS	6.91%	CVS	10.45%
21.0	PRGO	6.8%	MS	10.22%
21.0	CSCO	6.76%	NVDA	9.87%
21.0	CSTM	6.75%	VNO	9.55%



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## P365D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	WDC	0.92%	MU	1.02%
1.0	MU	0.8%	WDC	1.02%
1.0	ON	0.55%	INTC	0.81%
1.0	AMD	0.53%	AMD	0.7%
1.0	INTC	0.52%	LUMN	0.54%
1.0	LLY	0.47%	AA	0.48%
1.0	QCOM	0.42%	ON	0.48%
1.0	ORCL	0.39%	AMAT	0.46%
1.0	GOOGL	0.36%	CSTM	0.46%
1.0	UNH	0.36%	CLF	0.44%
1.0	CLF	0.33%	SLV	0.41%
1.0	KALU	0.33%	KALU	0.41%
1.0	AAP	0.32%	GNRC	0.38%
1.0	AA	0.3%	B	0.36%
1.0	CMA	0.26%	JAZZ	0.34%
1.0	AMAT	0.25%	NEM	0.34%
1.0	TXN	0.25%	GOOGL	0.33%
1.0	B	0.24%	TEVA	0.33%
1.0	MRK	0.24%	PWR	0.32%
1.0	NEM	0.24%	AVGO	0.28%
1.0	JAZZ	0.24%	CMA	0.28%
1.0	FCX	0.24%	CSCO	0.28%
1.0	CSTM	0.23%	ELAN	0.27%
1.0	CDNS	0.23%	FCX	0.26%
1.0	CVS	0.22%	QCOM	0.26%
1.0	NVDA	0.22%	BHP	0.26%
1.0	LUMN	0.21%	RIO	0.25%
1.0	PWR	0.19%	TXN	0.24%
1.0	GNRC	0.19%	GS	0.23%
1.0	PCG	0.17%	FSUGY	0.21%



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## P365D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MU	10.19%	WDC	10.08%
10.0	WDC	9.04%	MU	9.61%
10.0	INTC	8.79%	INTC	8.69%
10.0	AMD	5.65%	AMD	6.74%
10.0	KALU	4.41%	LUMN	4.92%
10.0	JAZZ	3.94%	AMAT	4.43%
10.0	AA	3.75%	ON	4.22%
10.0	TSLA	3.35%	AA	4.19%
10.0	ON	3.21%	CSTM	4.19%
10.0	CVS	3.18%	KALU	3.86%
10.0	UNH	3.07%	GNRC	3.79%
10.0	PWR	2.99%	SLV	3.77%
10.0	CMA	2.96%	GOOGL	3.63%
10.0	GOOGL	2.79%	JAZZ	3.46%
10.0	FCX	2.69%	B	3.36%
10.0	B	2.67%	NEM	3.24%
10.0	LUMN	2.61%	PWR	3.23%
10.0	GNRC	2.58%	TEVA	3.16%
10.0	AMAT	2.53%	CMA	3.15%
10.0	QCOM	2.52%	CLF	2.75%
10.0	NVDA	2.48%	CSCO	2.71%
10.0	LLY	2.42%	RIO	2.51%
10.0	ORCL	2.4%	AVGO	2.49%
10.0	NEM	2.32%	BHP	2.44%
10.0	AVGO	2.29%	TXN	2.35%
10.0	VFC	2.14%	FCX	2.21%
10.0	TXN	2.04%	TRGP	2.2%
10.0	TEVA	1.94%	ELAN	2.15%
10.0	CSTM	1.91%	GS	2.11%
10.0	BHP	1.86%	QCOM	2.05%



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## P365D: 21d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	INTC	22.37%	WDC	22.29%
21.0	WDC	21.31%	MU	20.54%
21.0	MU	16.75%	INTC	19.71%
21.0	AA	10.02%	AMD	14.73%
21.0	AMD	9.85%	LUMN	9.91%
21.0	KALU	8.76%	AMAT	9.32%
21.0	ON	8.72%	CSTM	9.18%
21.0	JAZZ	8.06%	AA	8.86%
21.0	GNRC	7.45%	ON	8.82%
21.0	AMAT	6.71%	KALU	8.76%
21.0	CVS	6.6%	SLV	8.45%
21.0	CMA	6.42%	GOOGL	8.18%
21.0	LUMN	6.27%	GNRC	8.13%
21.0	NEM	6.27%	B	7.39%
21.0	B	5.8%	TEVA	7.37%
21.0	AAP	5.56%	JAZZ	7.28%
21.0	VFC	5.36%	PWR	7.24%
21.0	PWR	5.12%	CMA	7.0%
21.0	TSLA	5.02%	NEM	6.97%
21.0	TEVA	4.92%	CLF	5.8%
21.0	QCOM	4.86%	RIO	5.73%
21.0	UNH	4.78%	BHP	5.45%
21.0	CSTM	4.75%	AVGO	5.22%
21.0	TXN	4.73%	TXN	4.91%
21.0	GOOGL	4.67%	ELAN	4.86%
21.0	BHP	4.3%	CSCO	4.82%
21.0	SLV	4.23%	TRGP	4.48%
21.0	AVGO	4.07%	FCX	4.47%
21.0	FCX	4.0%	VFC	4.3%
21.0	ORCL	3.92%	FSUGY	4.28%



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## P365D: 63d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	WDC	86.97%	WDC	76.96%
63.0	MU	58.64%	MU	66.02%
63.0	INTC	55.57%	INTC	51.51%
63.0	AA	38.53%	AA	32.11%
63.0	KALU	32.76%	SLV	31.48%
63.0	LUMN	29.14%	AMAT	30.51%
63.0	AMAT	29.05%	LUMN	30.17%
63.0	JAZZ	28.9%	CSTM	29.3%
63.0	GNRC	28.74%	AMD	28.63%
63.0	NEM	24.19%	B	27.65%
63.0	SLV	23.46%	TEVA	26.26%
63.0	TEVA	22.9%	KALU	24.43%
63.0	B	22.81%	NEM	23.76%
63.0	CSTM	22.16%	GOOGL	23.34%
63.0	OXY	20.04%	JAZZ	21.85%
63.0	ON	19.81%	CMA	19.64%
63.0	PWR	18.76%	PWR	19.18%
63.0	AMD	18.66%	RIO	17.88%
63.0	VFC	17.94%	ON	17.24%
63.0	TSLA	17.31%	ELAN	17.05%
63.0	GOOGL	16.44%	GNRC	16.02%
63.0	CMA	16.11%	BHP	15.42%
63.0	CVS	16.01%	TRGP	15.23%
63.0	GSK	14.08%	FCX	15.2%
63.0	FCX	14.05%	VFC	14.07%
63.0	BHP	13.98%	MRK	13.3%
63.0	AVGO	13.54%	BIIB	12.88%
63.0	LLY	11.84%	XOM	12.86%
63.0	ELAN	11.48%	GLD	12.66%
63.0	AAPL	11.38%	HSBC	12.39%



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## P365D: 126d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	WDC	280.94%	WDC	212.91%
126.0	MU	185.75%	MU	184.09%
126.0	INTC	128.19%	INTC	108.78%
126.0	AA	116.62%	SLV	88.13%
126.0	KALU	113.57%	AA	87.78%
126.0	SLV	96.92%	AMAT	78.62%
126.0	AMAT	89.84%	TEVA	72.78%
126.0	TEVA	75.03%	CSTM	72.6%
126.0	B	72.51%	B	70.51%
126.0	NEM	70.0%	KALU	65.72%
126.0	JAZZ	68.38%	NEM	56.61%
126.0	ON	66.99%	LUMN	52.07%
126.0	CSTM	59.33%	GOOGL	51.64%
126.0	CMA	53.93%	JAZZ	48.41%
126.0	PWR	53.63%	AMD	46.77%
126.0	LUMN	52.28%	CMA	45.73%
126.0	VFC	50.76%	RIO	44.25%
126.0	GOOGL	49.13%	ON	41.68%
126.0	LLY	40.01%	FCX	40.08%
126.0	GSK	39.04%	VFC	38.14%
126.0	FCX	38.34%	PWR	37.81%
126.0	AMD	38.12%	ELAN	36.06%
126.0	BUD	37.25%	BHP	35.11%
126.0	GNRC	36.71%	MRK	34.86%
126.0	MRK	36.22%	TRGP	34.85%
126.0	ELAN	33.8%	BIIB	31.3%
126.0	BHP	33.09%	GLD	30.03%
126.0	BMY	31.53%	HSBC	29.5%
126.0	BIIB	31.34%	CAH	29.43%
126.0	AZN	29.06%	GSK	29.08%



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## Bottom 30 Tickers By ROVBC

### All TMD: 1d

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

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

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	AMC	-0.12%	AMC	-0.15%
1.0	FIS	-0.11%	IEP	-0.14%
1.0	CHTR	-0.1%	NWL	-0.12%
1.0	PRGO	-0.1%	CHTR	-0.1%
1.0	IEP	-0.1%	PRGO	-0.09%
1.0	BHC	-0.1%	FIS	-0.07%
1.0	AAP	-0.08%	ZTS	-0.07%
1.0	LUMN	-0.06%	AAP	-0.06%
1.0	BXP	-0.06%	VFC	-0.06%
1.0	VFC	-0.06%	GT	-0.06%
1.0	TLT	-0.05%	BHC	-0.06%
1.0	NAVI	-0.05%	CMCSA	-0.05%
1.0	CMCSA	-0.04%	UAA	-0.05%
1.0	ZTS	-0.04%	TLT	-0.04%
1.0	CNC	-0.03%	NAVI	-0.04%
1.0	GT	-0.03%	ADBE	-0.04%
1.0	LQD	-0.02%	BXP	-0.04%
1.0	GSK	-0.02%	BALL	-0.03%
1.0	T	-0.02%	CZR	-0.03%
1.0	VZ	-0.02%	KHC	-0.03%
1.0	ELAN	-0.02%	LNC	-0.02%
1.0	BMY	-0.02%	INTU	-0.02%
1.0	PEP	-0.02%	CTLT	-0.01%
1.0	ADBE	-0.01%	FRA	-0.01%
1.0	CMG	-0.01%	LQD	-0.01%
1.0	TFC	-0.01%	MOS	-0.01%
1.0	BBY	-0.01%	PEP	-0.01%



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## All TMD: 10d

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

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

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	-2.97%	FRCB	-2.19%
10.0	FRCB	-2.21%	AMC	-1.65%
10.0	PRGO	-1.16%	IEP	-1.37%
10.0	AAP	-1.09%	NWL	-1.11%
10.0	CHTR	-1.05%	CHTR	-0.94%
10.0	IEP	-0.93%	PRGO	-0.82%
10.0	BHC	-0.91%	AAP	-0.71%
10.0	NWL	-0.81%	FIS	-0.7%
10.0	FIS	-0.7%	VFC	-0.69%
10.0	ZTS	-0.66%	ZTS	-0.68%
10.0	CMCSA	-0.57%	UAA	-0.67%
10.0	BXP	-0.53%	GT	-0.66%
10.0	GT	-0.51%	CZR	-0.51%
10.0	ADBE	-0.47%	CMCSA	-0.51%
10.0	TLT	-0.41%	NAVI	-0.5%
10.0	VFC	-0.41%	BHC	-0.44%
10.0	TFC	-0.41%	TLT	-0.42%
10.0	GSK	-0.36%	ADBE	-0.41%
10.0	CYH	-0.34%	BXP	-0.4%
10.0	LQD	-0.3%	MOS	-0.31%
10.0	MOS	-0.29%	BALL	-0.3%
10.0	NAVI	-0.27%	LNC	-0.29%
10.0	CNC	-0.25%	KHC	-0.28%
10.0	BMY	-0.16%	CYH	-0.26%
10.0	UAA	-0.16%	BBY	-0.19%
10.0	EMB	-0.14%	INTU	-0.18%
10.0	LW	-0.14%	FRA	-0.17%
10.0	KHC	-0.13%	LQD	-0.13%



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## All TMD: 21d

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

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

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	-8.21%	FRCB	-6.02%
21.0	FRCB	-6.98%	AMC	-3.92%
21.0	PRGO	-2.79%	IEP	-2.89%
21.0	CHTR	-2.12%	NWL	-2.29%
21.0	BHC	-1.95%	CHTR	-1.89%
21.0	IEP	-1.78%	PRGO	-1.68%
21.0	NWL	-1.71%	AAP	-1.42%
21.0	FIS	-1.23%	VFC	-1.36%
21.0	CMCSA	-1.18%	FIS	-1.29%
21.0	ZTS	-1.13%	ZTS	-1.28%
21.0	GT	-1.06%	BHC	-1.17%
21.0	VFC	-1.02%	UAA	-1.17%
21.0	AAP	-0.99%	GT	-1.17%
21.0	TLT	-0.9%	CZR	-1.16%
21.0	BXP	-0.89%	NAVI	-1.05%
21.0	ADBE	-0.76%	CMCSA	-1.0%
21.0	ELAN	-0.63%	BXP	-0.89%
21.0	NAVI	-0.57%	TLT	-0.87%
21.0	ZION	-0.57%	ADBE	-0.74%
21.0	LQD	-0.52%	KHC	-0.71%
21.0	BALL	-0.51%	MOS	-0.68%
21.0	CZR	-0.46%	LNC	-0.66%
21.0	KHC	-0.45%	BALL	-0.56%
21.0	TFC	-0.37%	BBY	-0.52%
21.0	LW	-0.37%	CYH	-0.44%
21.0	CNC	-0.36%	FRA	-0.32%
21.0	BMY	-0.26%	LQD	-0.24%
21.0	MOS	-0.26%	LW	-0.2%



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## All TMD: 63d

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

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

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	-26.41%	AMC	-15.64%
63.0	PRGO	-8.78%	IEP	-9.75%
63.0	NWL	-7.59%	NWL	-7.75%
63.0	IEP	-7.44%	PRGO	-6.17%
63.0	CHTR	-7.23%	AAP	-4.7%
63.0	VFC	-4.06%	CHTR	-4.57%
63.0	AAP	-3.93%	CZR	-4.37%
63.0	MOS	-3.84%	VFC	-4.04%
63.0	BHC	-3.44%	BHC	-3.93%
63.0	CMCSA	-3.3%	MOS	-3.81%
63.0	KHC	-2.93%	FIS	-3.49%
63.0	FIS	-2.62%	NAVI	-3.44%
63.0	TLT	-2.52%	BXP	-3.33%
63.0	CZR	-2.48%	UAA	-2.97%
63.0	BXP	-2.41%	ZTS	-2.88%
63.0	ADBE	-2.28%	KHC	-2.87%
63.0	NAVI	-2.25%	GT	-2.78%
63.0	CLF	-2.14%	CLF	-2.56%
63.0	LNC	-1.95%	CMCSA	-2.5%
63.0	GT	-1.87%	TLT	-2.33%
63.0	ZTS	-1.68%	ADBE	-2.22%
63.0	CNC	-1.49%	LNC	-2.07%
63.0	UNH	-1.45%	CNC	-2.02%
63.0	UAA	-0.89%	BBY	-1.68%
63.0	FRA	-0.87%	UNH	-1.36%
63.0	BALL	-0.86%	BALL	-1.29%
63.0	BBY	-0.79%	FRA	-0.9%



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## All TMD: 126d

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

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

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	-44.69%	AMC	-29.73%
126.0	AAP	-18.77%	IEP	-19.18%
126.0	NWL	-18.65%	NWL	-17.16%
126.0	CHTR	-17.81%	PRGO	-11.66%
126.0	PRGO	-14.83%	AAP	-11.09%
126.0	IEP	-14.8%	CZR	-8.57%
126.0	MOS	-9.03%	CHTR	-8.47%
126.0	CZR	-8.96%	MOS	-8.05%
126.0	VFC	-8.41%	VFC	-6.61%
126.0	FIS	-6.6%	UAA	-6.02%
126.0	BHC	-6.24%	KHC	-5.92%
126.0	CMCSA	-6.06%	FIS	-5.74%
126.0	ZTS	-6.03%	CTLT	-5.69%
126.0	KHC	-5.63%	CNC	-5.4%
126.0	UAA	-5.57%	NAVI	-5.31%
126.0	TLT	-5.15%	BHC	-5.31%
126.0	UNH	-4.65%	BXP	-5.28%
126.0	CNC	-4.53%	GT	-4.9%
126.0	BXP	-4.42%	ZTS	-4.78%
126.0	GT	-4.16%	CMCSA	-4.47%
126.0	NAVI	-4.03%	TLT	-4.15%
126.0	CLF	-3.7%	UNH	-3.74%
126.0	CTLT	-2.25%	CLF	-3.3%
126.0	ADBE	-2.04%	ADBE	-2.49%
126.0	BALL	-1.89%	BALL	-2.15%
126.0	BBY	-1.35%	LNC	-2.08%
126.0	FRA	-1.23%	BBY	-2.07%



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## All TMD: 252d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
252.0	SBNY	-189.18%	SBNY	-95.75%
252.0	SIVBQ	-167.74%	SIVBQ	-95.29%
252.0	FRCB	-141.18%	FRCB	-91.61%
252.0	AMC	-70.08%	AMC	-54.62%
252.0	AAP	-46.09%	IEP	-39.78%
252.0	NWL	-34.48%	NWL	-30.85%
252.0	IEP	-30.85%	AAP	-23.09%
252.0	CHTR	-29.09%	PRGO	-19.33%
252.0	VFC	-28.55%	VFC	-18.88%
252.0	PRGO	-25.3%	CNC	-17.95%
252.0	CZR	-21.36%	CZR	-17.22%
252.0	CNC	-19.53%	UAA	-14.87%
252.0	UAA	-18.12%	MOS	-14.53%
252.0	BIIB	-15.34%	CHTR	-12.52%
252.0	MOS	-14.99%	KHC	-11.72%
252.0	UNH	-13.49%	CLF	-10.69%
252.0	CLF	-13.48%	UNH	-10.37%
252.0	OXY	-12.74%	GT	-8.95%
252.0	KHC	-12.38%	BMY	-8.45%
252.0	ZTS	-10.47%	BHC	-8.38%
252.0	BHC	-10.07%	NAVI	-8.38%
252.0	BMY	-9.92%	TLT	-7.25%
252.0	TLT	-9.42%	CTLT	-6.24%
252.0	FIS	-9.32%	CYH	-5.81%
252.0	GT	-9.19%	CMCSA	-5.76%
252.0	CMCSA	-8.34%	OXY	-5.72%
252.0	BXP	-7.09%	ZTS	-5.59%
252.0	CTLT	-6.82%	BXP	-5.44%
252.0	CYH	-5.94%	BIIB	-5.37%
252.0	NAVI	-5.32%	LW	-5.25%



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### P30D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	NWL	-1.53%	ZTS	-1.79%
1.0	AZO	-1.18%	AZO	-1.13%
1.0	ZTS	-1.14%	NWL	-0.82%
1.0	PEP	-0.67%	GME	-0.76%
1.0	CMCSA	-0.62%	GT	-0.7%
1.0	BALL	-0.56%	HCA	-0.68%
1.0	VFC	-0.47%	ORLY	-0.66%
1.0	POST	-0.47%	POST	-0.65%
1.0	MSTR	-0.46%	CHTR	-0.64%
1.0	EXPE	-0.46%	INTU	-0.63%
1.0	TMUS	-0.46%	BALL	-0.53%
1.0	INTU	-0.44%	IEP	-0.51%
1.0	SNY	-0.41%	PEP	-0.46%
1.0	HD	-0.4%	VFC	-0.44%
1.0	LNC	-0.4%	EXPE	-0.44%
1.0	NFLX	-0.38%	NFLX	-0.41%
1.0	GME	-0.38%	CMCSA	-0.41%
1.0	NAVI	-0.37%	MSI	-0.38%
1.0	HCA	-0.35%	LVS	-0.37%
1.0	CHTR	-0.35%	FIS	-0.36%
1.0	FIS	-0.31%	ISRG	-0.35%
1.0	BHC	-0.31%	NAVI	-0.35%
1.0	GT	-0.3%	LNC	-0.33%
1.0	WYNN	-0.3%	TFC	-0.32%
1.0	CMG	-0.29%	CMG	-0.31%
1.0	BMY	-0.28%	SNY	-0.31%
1.0	PHM	-0.27%	BHC	-0.3%
1.0	IEP	-0.27%	OXY	-0.3%
1.0	TFC	-0.23%	PRGO	-0.3%
1.0	ORLY	-0.22%	SBUX	-0.3%



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### P30D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	MSTR	-17.47%	NWL	-15.5%
10.0	NWL	-16.58%	ZTS	-13.87%
10.0	AZO	-10.77%	INTU	-11.01%
10.0	ZTS	-8.15%	GT	-9.82%
10.0	INTU	-8.03%	MSTR	-9.72%
10.0	GME	-7.48%	GME	-7.94%
10.0	CMCSA	-7.48%	VFC	-7.74%
10.0	GT	-6.74%	UAA	-7.62%
10.0	VFC	-5.86%	AZO	-7.19%
10.0	UAA	-5.62%	CHTR	-7.0%
10.0	EXPE	-5.57%	HCA	-6.75%
10.0	HCA	-5.42%	EXPE	-6.64%
10.0	IEP	-4.92%	IEP	-6.12%
10.0	GBTC	-4.37%	POST	-5.37%
10.0	NEM	-4.16%	FIS	-4.6%
10.0	CHTR	-4.15%	GBTC	-4.46%
10.0	POST	-4.01%	NEM	-4.41%
10.0	WYNN	-3.9%	LVS	-4.35%
10.0	NAVI	-3.8%	BALL	-4.33%
10.0	BALL	-3.74%	WYNN	-4.26%
10.0	PRGO	-3.73%	PRGO	-4.19%
10.0	GLD	-3.31%	ELAN	-4.02%
10.0	SLV	-3.23%	PWR	-3.79%
10.0	FIS	-3.03%	BA	-3.72%
10.0	BHC	-3.01%	PEP	-3.63%
10.0	TMUS	-2.9%	CMCSA	-3.6%
10.0	PEP	-2.87%	ORLY	-3.51%
10.0	THC	-2.65%	SLV	-3.41%
10.0	TEVA	-2.55%	TEVA	-3.36%
10.0	CYH	-2.46%	NAVI	-3.22%



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## P90D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	NWL	-0.64%	ZTS	-0.75%
1.0	ZTS	-0.46%	CHTR	-0.67%
1.0	INTU	-0.42%	HCA	-0.53%
1.0	CMCSA	-0.4%	GT	-0.45%
1.0	CHTR	-0.4%	THC	-0.45%
1.0	AZO	-0.35%	AZO	-0.43%
1.0	GLD	-0.34%	NWL	-0.37%
1.0	HCA	-0.34%	CMCSA	-0.32%
1.0	TMUS	-0.34%	LEN	-0.31%
1.0	BALL	-0.32%	CYH	-0.31%
1.0	LEN	-0.28%	BALL	-0.3%
1.0	GNRC	-0.27%	INTU	-0.29%
1.0	ISRG	-0.27%	MSI	-0.28%
1.0	PEP	-0.26%	UAA	-0.27%
1.0	HD	-0.26%	GLD	-0.24%
1.0	CMG	-0.25%	CPRT	-0.24%
1.0	SNY	-0.22%	PCG	-0.24%
1.0	PRGO	-0.22%	CAH	-0.24%
1.0	FIS	-0.21%	HD	-0.24%
1.0	CAH	-0.21%	PEP	-0.23%
1.0	POST	-0.2%	ISRG	-0.23%
1.0	THC	-0.2%	POST	-0.23%
1.0	GE	-0.18%	B	-0.23%
1.0	BHC	-0.18%	SLV	-0.23%
1.0	ACGL	-0.17%	FIS	-0.22%
1.0	NFLX	-0.17%	GSK	-0.22%
1.0	PHM	-0.17%	TMUS	-0.21%
1.0	AMGN	-0.17%	AMGN	-0.21%
1.0	GT	-0.16%	CMG	-0.21%
1.0	UAA	-0.14%	NEM	-0.2%



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## P90D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	CHTR	-6.62%	CHTR	-7.15%
10.0	CMCSA	-5.79%	ZTS	-6.92%
10.0	CYH	-4.76%	HCA	-5.36%
10.0	NFLX	-4.61%	INTU	-4.5%
10.0	HCA	-4.26%	THC	-4.5%
10.0	ZTS	-4.25%	GT	-3.97%
10.0	INTU	-3.61%	CMCSA	-3.86%
10.0	GLD	-3.45%	MOS	-3.57%
10.0	GE	-3.17%	UAA	-3.33%
10.0	TMUS	-3.03%	CYH	-3.11%
10.0	ISRG	-3.01%	FIS	-2.94%
10.0	HD	-2.97%	MSI	-2.71%
10.0	NWL	-2.97%	LEN	-2.56%
10.0	UAA	-2.85%	TMUS	-2.49%
10.0	AZO	-2.7%	HD	-2.45%
10.0	GT	-2.69%	AZO	-2.32%
10.0	MOS	-2.64%	NWL	-2.27%
10.0	THC	-2.44%	GLD	-2.25%
10.0	FIS	-2.19%	ISRG	-2.25%
10.0	PCG	-2.17%	T	-2.17%
10.0	AMGN	-2.15%	PCG	-2.16%
10.0	GSK	-2.11%	BALL	-2.13%
10.0	BHC	-1.86%	AMGN	-2.11%
10.0	MSI	-1.85%	GILD	-1.86%
10.0	BALL	-1.65%	CPRT	-1.79%
10.0	LEN	-1.65%	CAH	-1.74%
10.0	ADBE	-1.46%	NFLX	-1.63%
10.0	POST	-1.33%	GME	-1.62%
10.0	NEM	-1.31%	PEP	-1.6%
10.0	GME	-1.27%	PHM	-1.58%



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## P90D: 21d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	CHTR	-16.23%	CHTR	-15.66%
21.0	ZTS	-10.84%	ZTS	-13.45%
21.0	CMCSA	-9.94%	HCA	-10.03%
21.0	NFLX	-8.77%	INTU	-8.55%
21.0	HCA	-8.71%	CMCSA	-7.6%
21.0	TMUS	-8.23%	MOS	-7.56%
21.0	INTU	-7.94%	THC	-7.13%
21.0	T	-5.79%	FIS	-5.85%
21.0	MOS	-5.64%	MSI	-5.63%
21.0	HD	-5.59%	T	-5.56%
21.0	CYH	-5.47%	TMUS	-5.29%
21.0	FIS	-5.27%	CYH	-4.92%
21.0	ISRG	-4.91%	CAH	-4.81%
21.0	GT	-4.26%	LEN	-4.64%
21.0	AMGN	-4.12%	PCG	-4.64%
21.0	MSI	-4.08%	GT	-4.64%
21.0	LEN	-3.6%	UAA	-4.53%
21.0	THC	-3.56%	ISRG	-4.38%
21.0	GLD	-3.45%	HD	-4.21%
21.0	UAA	-3.33%	AMGN	-4.15%
21.0	GILD	-2.58%	ELAN	-3.8%
21.0	PCG	-2.44%	GILD	-3.5%
21.0	VZ	-2.34%	NFLX	-3.22%
21.0	AZO	-2.25%	BALL	-3.0%
21.0	BMY	-2.17%	GSK	-2.85%
21.0	GSK	-2.12%	VZ	-2.84%
21.0	HON	-1.8%	GLD	-2.68%
21.0	BBY	-1.76%	HON	-2.66%
21.0	CAH	-1.76%	LVS	-2.26%
21.0	CPRT	-1.53%	VST	-2.24%



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## P365D: 1d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
1.0	AMC	-0.44%	CHTR	-0.35%
1.0	ZTS	-0.42%	PRGO	-0.31%
1.0	MSTR	-0.33%	INTU	-0.29%
1.0	INTU	-0.33%	ZTS	-0.28%
1.0	PRGO	-0.3%	MSTR	-0.24%
1.0	CHTR	-0.27%	FIS	-0.23%
1.0	NWL	-0.25%	AMC	-0.22%
1.0	FIS	-0.22%	GT	-0.21%
1.0	NAVI	-0.19%	CPRT	-0.17%
1.0	TDG	-0.15%	ADBE	-0.17%
1.0	CMG	-0.15%	NAVI	-0.15%
1.0	CMCSA	-0.14%	CMG	-0.15%
1.0	ADBE	-0.13%	MOS	-0.13%
1.0	GME	-0.1%	CMCSA	-0.12%
1.0	ISRG	-0.1%	NFLX	-0.11%
1.0	TMUS	-0.08%	NWL	-0.11%
1.0	CPRT	-0.08%	GBTC	-0.11%
1.0	POST	-0.07%	GME	-0.1%
1.0	GT	-0.07%	TMUS	-0.09%
1.0	MOS	-0.07%	ISRG	-0.09%
1.0	UAA	-0.07%	AZO	-0.08%
1.0	AZO	-0.06%	CYH	-0.07%
1.0	HD	-0.06%	POST	-0.06%
1.0	CNC	-0.05%	LW	-0.06%
1.0	NFLX	-0.04%	FRA	-0.05%
1.0	ACGL	-0.04%	HD	-0.05%
1.0	IEP	-0.04%	TDG	-0.05%
1.0	LEN	-0.04%	VICI	-0.04%
1.0	PEP	-0.03%	LEN	-0.04%
1.0	FRA	-0.03%	T	-0.04%



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## P365D: 10d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
10.0	AMC	-6.49%	CHTR	-3.45%
10.0	MSTR	-4.17%	PRGO	-2.95%
10.0	ZTS	-4.12%	INTU	-2.88%
10.0	CHTR	-3.89%	ZTS	-2.74%
10.0	PRGO	-3.75%	MSTR	-2.72%
10.0	INTU	-2.5%	FIS	-2.44%
10.0	ADBE	-2.22%	AMC	-2.3%
10.0	FIS	-1.92%	GT	-2.26%
10.0	CMCSA	-1.85%	ADBE	-1.94%
10.0	NAVI	-1.46%	NAVI	-1.75%
10.0	GT	-1.35%	MOS	-1.64%
10.0	TDG	-1.28%	CPRT	-1.63%
10.0	CMG	-1.21%	CMG	-1.46%
10.0	CPRT	-1.01%	CMCSA	-1.23%
10.0	BXP	-0.86%	GBTC	-1.11%
10.0	MOS	-0.81%	NFLX	-1.1%
10.0	VNO	-0.71%	NWL	-0.88%
10.0	GME	-0.67%	TMUS	-0.84%
10.0	POST	-0.64%	GME	-0.81%
10.0	LEN	-0.63%	ISRG	-0.74%
10.0	TMUS	-0.49%	VNO	-0.71%
10.0	CYH	-0.44%	LEN	-0.64%
10.0	FRA	-0.42%	LW	-0.6%
10.0	BHC	-0.42%	FRA	-0.59%
10.0	KHC	-0.38%	HD	-0.59%
10.0	UAA	-0.37%	TDG	-0.59%
10.0	HD	-0.34%	BXP	-0.58%
10.0	AZO	-0.33%	AZO	-0.44%
10.0	VICI	-0.29%	VICI	-0.43%
10.0	NWL	-0.15%	POST	-0.43%



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## P365D: 21d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
21.0	AMC	-9.53%	CHTR	-7.07%
21.0	PRGO	-9.4%	PRGO	-6.15%
21.0	CHTR	-9.05%	INTU	-5.7%
21.0	MSTR	-9.0%	MSTR	-5.32%
21.0	ZTS	-7.84%	ZTS	-5.11%
21.0	CMCSA	-4.89%	FIS	-5.1%
21.0	INTU	-3.92%	AMC	-4.85%
21.0	FIS	-3.64%	ADBE	-3.96%
21.0	ADBE	-3.4%	GT	-3.96%
21.0	GT	-3.03%	NAVI	-3.68%
21.0	NAVI	-3.0%	MOS	-3.56%
21.0	CPRT	-2.53%	CMG	-3.43%
21.0	CMG	-2.05%	CPRT	-3.38%
21.0	BXP	-2.03%	NFLX	-2.65%
21.0	TDG	-1.67%	CMCSA	-2.54%
21.0	NFLX	-1.53%	GBTC	-2.2%
21.0	MOS	-1.42%	VNO	-1.63%
21.0	KHC	-1.25%	TMUS	-1.57%
21.0	TMUS	-1.24%	LEN	-1.49%
21.0	T	-1.24%	TDG	-1.47%
21.0	VNO	-1.06%	LW	-1.34%
21.0	LEN	-0.94%	ISRG	-1.3%
21.0	META	-0.81%	FRA	-1.29%
21.0	GME	-0.78%	NWL	-1.24%
21.0	FRA	-0.71%	BXP	-1.24%
21.0	SNY	-0.59%	VST	-1.13%
21.0	POST	-0.55%	HD	-1.07%
21.0	BBY	-0.45%	BBY	-1.01%
21.0	VICI	-0.45%	VICI	-1.01%
21.0	HD	-0.43%	MSFT	-0.99%



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## P365D: 63d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
63.0	MSTR	-56.6%	PRGO	-24.36%
63.0	PRGO	-42.52%	MSTR	-23.42%
63.0	AMC	-29.45%	AMC	-21.44%
63.0	CHTR	-18.67%	INTU	-17.8%
63.0	INTU	-16.22%	CHTR	-15.37%
63.0	CMCSA	-12.48%	FIS	-15.19%
63.0	ZTS	-11.97%	NAVI	-14.0%
63.0	NAVI	-10.94%	GBTC	-12.19%
63.0	CPRT	-10.9%	ADBE	-12.17%
63.0	NWL	-10.47%	ZTS	-11.23%
63.0	ADBE	-10.43%	CMG	-10.88%
63.0	FIS	-9.91%	CPRT	-10.87%
63.0	BXP	-9.57%	GT	-10.41%
63.0	TDG	-8.49%	MOS	-10.0%
63.0	META	-8.44%	VNO	-8.86%
63.0	GT	-8.37%	NWL	-8.17%
63.0	NFLX	-7.79%	NFLX	-7.67%
63.0	KHC	-7.74%	LEN	-6.58%
63.0	LEN	-7.09%	MSFT	-6.46%
63.0	GBTC	-6.9%	TDG	-6.25%
63.0	CMG	-6.2%	BXP	-6.1%
63.0	VNO	-5.47%	LW	-5.97%
63.0	MOS	-5.27%	CMCSA	-5.94%
63.0	TMUS	-4.83%	VST	-5.75%
63.0	IEP	-4.31%	FRA	-5.57%
63.0	HD	-4.14%	KHC	-5.44%
63.0	LW	-4.07%	ORCL	-5.4%
63.0	MSFT	-3.64%	TMUS	-5.33%
63.0	VST	-3.56%	VICI	-4.54%
63.0	BBY	-3.22%	META	-4.43%



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## P365D: 126d

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

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

Horizon	Ticker_V	ROVBC_V	Ticker_S	ROVBC_S
126.0	MSTR	-134.64%	MSTR	-52.05%
126.0	AMC	-73.16%	AMC	-48.38%
126.0	PRGO	-69.08%	PRGO	-44.08%
126.0	CHTR	-42.71%	INTU	-32.89%
126.0	ORCL	-37.05%	GBTC	-28.99%
126.0	INTU	-35.5%	CHTR	-28.63%
126.0	NFLX	-35.34%	ORCL	-26.65%
126.0	ZTS	-27.05%	FIS	-26.21%
126.0	LW	-26.5%	NAVI	-24.41%
126.0	BXP	-24.43%	NFLX	-23.59%
126.0	NAVI	-23.79%	ADBE	-22.45%
126.0	NWL	-22.74%	ZTS	-21.54%
126.0	ADBE	-22.23%	MOS	-21.11%
126.0	CPRT	-19.99%	CPRT	-21.04%
126.0	GBTC	-19.12%	VNO	-20.42%
126.0	META	-19.03%	LW	-19.28%
126.0	VNO	-18.91%	NWL	-18.98%
126.0	AAP	-17.87%	CMG	-16.31%
126.0	FIS	-17.02%	VST	-16.14%
126.0	LEN	-16.95%	MSFT	-15.05%
126.0	TMUS	-16.91%	LEN	-14.01%
126.0	CMCSA	-16.02%	TMUS	-13.74%
126.0	VST	-15.45%	BXP	-13.48%
126.0	BBY	-14.81%	FRA	-11.86%
126.0	TDG	-13.07%	GT	-11.56%
126.0	CMG	-13.05%	VICI	-11.18%
126.0	MSFT	-12.12%	KHC	-10.6%
126.0	KHC	-12.01%	CMCSA	-10.54%
126.0	MOS	-11.7%	BBY	-10.05%
126.0	AZO	-11.52%	META	-10.04%



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

### All TMD: 1d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	SBNY	22.3%	SBNY	11.87%
1.0	SIVBQ	13.31%	SIVBQ	7.55%
1.0	TSLA	12.35%	TSLA	5.62%
1.0	CHTR	10.51%	LQD	4.24%
1.0	LQD	9.03%	ZTS	3.87%
1.0	GME	8.39%	FRCB	3.6%
1.0	MSTR	8.02%	AMC	3.41%
1.0	AMC	7.47%	GME	3.04%
1.0	FRCB	7.19%	B	2.76%
1.0	UAA	7.19%	MSTR	2.3%
1.0	SBUX	6.73%	GNRC	1.94%
1.0	META	6.64%	CDNS	1.84%
1.0	AMZN	6.54%	AAP	1.75%
1.0	PRGO	6.36%	BUD	1.57%
1.0	ZTS	6.08%	JAZZ	1.57%
1.0	AAP	5.9%	ISRG	1.47%
1.0	B	5.53%	CHTR	1.38%
1.0	ISRG	5.44%	KALU	1.29%
1.0	HD	5.07%	PRGO	1.2%
1.0	BALL	4.88%	EXPE	1.01%
1.0	GNRC	4.79%	CMCSA	1.01%
1.0	NFLX	4.61%	FRA	0.83%
1.0	KEY	4.61%	TLT	0.74%
1.0	CDNS	4.42%	LLY	0.65%
1.0	VFC	4.33%	NFLX	0.65%



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## All TMD: 10d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	SBNY	30.51%	SBNY	14.34%
10.0	AMC	16.17%	AMC	9.11%
10.0	TSLA	12.55%	TSLA	7.53%
10.0	CHTR	12.08%	SIVBQ	7.35%
10.0	SIVBQ	11.76%	CHTR	4.55%
10.0	GME	11.52%	ZTS	4.46%
10.0	AAP	11.15%	LQD	4.46%
10.0	ZTS	9.76%	B	4.37%
10.0	B	9.2%	MSTR	4.09%
10.0	MSTR	8.64%	AAP	3.9%
10.0	BUD	8.55%	GNRC	3.25%
10.0	META	8.55%	GME	2.51%
10.0	PRGO	7.25%	CVS	1.95%
10.0	TLT	7.25%	KALU	1.77%
10.0	LQD	7.16%	ISRG	1.77%
10.0	KALU	6.51%	BIIB	1.49%
10.0	JAZZ	6.23%	SNY	1.39%
10.0	GNRC	6.04%	VCSH	1.3%
10.0	FRCB	5.51%	CZR	1.21%
10.0	AMZN	5.48%	NFLX	1.02%
10.0	VFC	5.48%	BXP	1.02%
10.0	SNY	5.11%	META	0.93%
10.0	CVS	5.11%	GE	0.93%
10.0	ISRG	4.93%	TLT	0.93%
10.0	SLV	4.84%	CMA	0.9%



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## All TMD: 21d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	SBNY	47.78%	SBNY	15.93%
21.0	CHTR	15.02%	AMC	8.73%
21.0	AMC	14.84%	CHTR	8.08%
21.0	ZTS	12.49%	SIVBQ	7.04%
21.0	TSLA	12.21%	TSLA	6.57%
21.0	AAP	10.52%	ZTS	4.88%
21.0	SIVBQ	10.37%	VCSH	4.69%
21.0	B	9.58%	GNRC	4.41%
21.0	PRGO	9.48%	LQD	3.66%
21.0	MSTR	9.48%	B	3.19%
21.0	TLT	8.73%	MSTR	3.1%
21.0	GNRC	8.73%	BIIB	3.1%
21.0	BUD	8.64%	BUD	2.54%
21.0	META	8.45%	META	2.35%
21.0	GME	8.26%	KALU	2.16%
21.0	TDG	8.26%	AAP	2.07%
21.0	LQD	7.98%	UNH	1.97%
21.0	CVS	7.61%	CMCSA	1.97%
21.0	KALU	7.61%	PRGO	1.88%
21.0	BXP	7.04%	BXP	1.88%
21.0	JAZZ	6.76%	ORCL	1.6%
21.0	VFC	6.38%	GME	1.5%
21.0	GSK	6.2%	BHC	1.31%
21.0	BIIB	6.2%	CMA	1.12%
21.0	NEM	6.1%	FRCB	1.11%



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## All TMD: 63d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	SBNY	55.19%	SBNY	28.89%
63.0	AAP	23.17%	CHTR	19.55%
63.0	AMC	19.26%	AMC	10.07%
63.0	CHTR	18.87%	MSTR	8.21%
63.0	MSTR	14.08%	AAP	7.14%
63.0	PRGO	13.2%	VCSH	4.99%
63.0	BIIB	12.81%	GNRC	4.99%
63.0	KALU	12.41%	SIVBQ	4.81%
63.0	META	12.12%	PRGO	4.59%
63.0	SIVBQ	11.85%	LQD	4.11%
63.0	TSLA	11.63%	META	3.52%
63.0	GNRC	10.65%	ZION	3.47%
63.0	VFC	10.46%	BMJ	3.23%
63.0	B	10.07%	B	3.23%
63.0	ZTS	8.99%	BXP	3.13%
63.0	TDG	8.5%	BUD	2.93%
63.0	BUD	8.5%	TLT	2.83%
63.0	AMZN	8.41%	NFLX	2.74%
63.0	BXP	7.82%	ON	2.64%
63.0	FIS	7.53%	BIIB	2.15%
63.0	BHC	7.53%	VNO	2.05%
63.0	TLT	6.84%	NWL	1.96%
63.0	CMCSA	5.38%	TDG	1.96%
63.0	LQD	5.18%	CMCSA	1.56%
63.0	NWL	4.79%	CMA	1.38%



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## All TMD: 126d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	SBNY	55.19%	SBNY	26.3%
126.0	AMC	30.21%	CHTR	21.35%
126.0	CHTR	27.4%	AAP	19.69%
126.0	VFC	25.0%	AMC	18.12%
126.0	AAP	17.08%	MSTR	9.48%
126.0	SIVBQ	15.93%	BXP	8.33%
126.0	MSTR	15.0%	VFC	5.83%
126.0	GNRC	14.79%	CTLT	5.65%
126.0	TSLA	13.85%	VCSH	5.0%
126.0	ZTS	13.65%	GNRC	4.17%
126.0	BMJ	13.33%	PRGO	3.96%
126.0	BXP	12.92%	CMA	3.87%
126.0	TLT	10.94%	TLT	3.65%
126.0	BIIB	10.62%	OXY	3.02%
126.0	OXY	9.9%	ZION	2.64%
126.0	BUD	9.27%	B	2.29%
126.0	CVS	9.17%	VNO	1.88%
126.0	AMZN	8.85%	NFLX	1.77%
126.0	ZION	8.56%	LQD	1.67%
126.0	META	7.6%	SIVBQ	1.48%
126.0	NFLX	7.6%	SNY	1.46%
126.0	PRGO	7.5%	ON	1.46%
126.0	CMCSA	6.98%	META	1.35%
126.0	NWL	6.67%	BIIB	1.25%
126.0	ORCL	6.56%	FIS	0.83%



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## All TMD: 252d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
252.0	AMC	41.97%	AMC	27.82%
252.0	CHTR	41.49%	SBNY	25.93%
252.0	AAP	34.65%	AAP	25.54%
252.0	BIIB	32.49%	CHTR	18.23%
252.0	VFC	23.26%	BIIB	13.07%
252.0	SBNY	20.37%	BXP	10.07%
252.0	CMA	20.05%	VFC	9.35%
252.0	ZION	17.44%	UNH	7.91%
252.0	PRGO	16.55%	CMA	6.91%
252.0	OXY	15.35%	OXY	6.35%
252.0	FIS	14.63%	VNO	4.92%
252.0	NWL	14.39%	ZION	4.51%
252.0	CVS	10.67%	CTLT	3.85%
252.0	UAA	9.23%	MRK	3.84%
252.0	TLT	9.11%	BHC	2.64%
252.0	CTLT	8.52%	KEY	2.28%
252.0	MSTR	7.79%	GNRC	2.16%
252.0	BHC	7.67%	ZTS	1.92%
252.0	KHC	6.95%	VCSH	1.8%
252.0	ELAN	6.46%	BMY	1.8%
252.0	EXPE	6.0%	UAA	1.56%
252.0	GNRC	5.76%	EMB	1.08%
252.0	CLF	5.64%	FIS	1.08%
252.0	ZTS	5.64%	GSK	0.84%
252.0	AMZN	5.28%	PRGO	0.84%



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### P30D: 1d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	AVGO	35.0%	AVGO	20.0%
1.0	MSTR	25.0%	CAH	10.0%
1.0	AZO	25.0%	UNH	10.0%
1.0	CDNS	25.0%	ZTS	5.0%
1.0	MRK	20.0%	CMCSA	5.0%
1.0	NVDA	20.0%	CDNS	5.0%
1.0	TMUS	20.0%	BHC	5.0%
1.0	NAVI	15.0%	LQD	5.0%
1.0	VICI	15.0%	LNC	5.0%
1.0	GLD	15.0%	CYH	5.0%
1.0	HD	10.0%	KHC	5.0%
1.0	PEP	10.0%	HD	5.0%
1.0	LQD	10.0%	LLY	0.0%
1.0	UNH	10.0%	JPM	0.0%
1.0	VFC	10.0%	NWL	0.0%
1.0	AMZN	10.0%	NVS	0.0%
1.0	EXPE	10.0%	NVDA	0.0%
1.0	LNC	10.0%	NFLX	0.0%
1.0	NFLX	10.0%	NAVI	0.0%
1.0	FRA	10.0%	AAP	0.0%
1.0	CMCSA	10.0%	MUB	0.0%
1.0	CLF	5.0%	MU	0.0%
1.0	NWL	5.0%	JAZZ	0.0%
1.0	CYH	5.0%	MSTR	0.0%
1.0	FCX	5.0%	MSFT	0.0%



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### P30D: 10d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	NWL	72.73%	AZO	27.27%
10.0	MSTR	27.27%	AVGO	18.18%
10.0	EXPE	27.27%	CMCSA	18.18%
10.0	LNC	27.27%	NVDA	9.09%
10.0	CMCSA	27.27%	MSTR	9.09%
10.0	IEP	18.18%	AA	0.0%
10.0	WYNN	18.18%	MUB	0.0%
10.0	SNY	18.18%	NAVI	0.0%
10.0	PEP	18.18%	NEM	0.0%
10.0	UAA	18.18%	NFLX	0.0%
10.0	AVGO	18.18%	NWL	0.0%
10.0	VFC	18.18%	NVS	0.0%
10.0	AZO	18.18%	ON	0.0%
10.0	HCA	18.18%	ORCL	0.0%
10.0	HD	9.09%	ORLY	0.0%
10.0	CHTR	9.09%	OXY	0.0%
10.0	MSI	9.09%	PCG	0.0%
10.0	TMUS	9.09%	PEP	0.0%
10.0	GLD	9.09%	MU	0.0%
10.0	BMJ	9.09%	MSFT	0.0%
10.0	CYH	9.09%	MSI	0.0%
10.0	AMZN	9.09%	LUMN	0.0%
10.0	VICI	9.09%	KEY	0.0%
10.0	AAP	9.09%	KHC	0.0%
10.0	LQD	9.09%	LEN	0.0%



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## P90D: 1d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	TMUS	17.74%	NFLX	9.68%
1.0	HD	17.74%	AVGO	8.06%
1.0	AZO	17.74%	UNH	8.06%
1.0	UNH	16.13%	HD	6.45%
1.0	NFLX	16.13%	TMUS	6.45%
1.0	CDNS	16.13%	AMC	4.84%
1.0	AVGO	14.52%	CDNS	4.84%
1.0	INTU	12.9%	GLD	4.84%
1.0	LLY	12.9%	KHC	4.84%
1.0	BBY	12.9%	INTU	3.23%
1.0	VICI	12.9%	BHC	3.23%
1.0	GLD	12.9%	CAH	3.23%
1.0	TSLA	12.9%	CMCSA	3.23%
1.0	ISRG	11.29%	GNRC	3.23%
1.0	CMCSA	9.68%	EXPE	1.61%
1.0	NWL	8.06%	NAVI	1.61%
1.0	SNY	8.06%	TDG	1.61%
1.0	KHC	8.06%	NVDA	1.61%
1.0	NVDA	8.06%	SNY	1.61%
1.0	NAVI	8.06%	ORCL	1.61%
1.0	MSTR	8.06%	MRK	1.61%
1.0	PEP	8.06%	META	1.61%
1.0	EXPE	6.45%	IEP	1.61%
1.0	ORCL	6.45%	PRGO	1.61%
1.0	PRGO	6.45%	LEN	1.61%



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## P90D: 10d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	HD	33.96%	GE	24.53%
10.0	META	33.96%	NFLX	22.64%
10.0	CMCSA	24.53%	CMCSA	13.21%
10.0	NFLX	22.64%	HD	9.43%
10.0	SNY	20.75%	KHC	7.55%
10.0	NWL	20.75%	CVS	7.55%
10.0	GE	18.87%	AZO	5.66%
10.0	LLY	18.87%	PCG	5.66%
10.0	CVS	16.98%	BUD	5.66%
10.0	BUD	16.98%	AMC	5.66%
10.0	TMUS	15.09%	SNY	5.66%
10.0	AMC	11.32%	GSK	5.66%
10.0	GSK	11.32%	GNRC	3.77%
10.0	GNRC	11.32%	AVGO	3.77%
10.0	GLD	11.32%	META	1.89%
10.0	UNH	11.32%	MSTR	1.89%
10.0	ORCL	9.43%	TMUS	1.89%
10.0	PEP	9.43%	PRGO	1.89%
10.0	EXPE	9.43%	NVDA	1.89%
10.0	INTU	9.43%	VZ	1.89%
10.0	AZO	9.43%	GLD	1.89%
10.0	KHC	9.43%	MU	0.0%
10.0	PCG	7.55%	MUB	0.0%
10.0	HON	7.55%	NAVI	0.0%
10.0	CYH	7.55%	NWL	0.0%



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## P90D: 21d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	CMCSA	38.1%	NFLX	16.67%
21.0	TMUS	35.71%	HD	11.9%
21.0	T	26.19%	AZO	9.52%
21.0	SNY	26.19%	TMUS	7.14%
21.0	HD	23.81%	CMCSA	7.14%
21.0	INTU	21.43%	CHTR	7.14%
21.0	MSI	21.43%	T	2.38%
21.0	GLD	19.05%	GLD	2.38%
21.0	MSFT	19.05%	BUD	2.38%
21.0	NFLX	16.67%	CVS	2.38%
21.0	META	14.29%	INTU	2.38%
21.0	GNRC	11.9%	MOS	0.0%
21.0	AMC	11.9%	PEP	0.0%
21.0	GSK	11.9%	PCG	0.0%
21.0	EXPE	11.9%	OXY	0.0%
21.0	GE	9.52%	ORLY	0.0%
21.0	CVS	7.14%	ORCL	0.0%
21.0	CLF	7.14%	ON	0.0%
21.0	PEP	7.14%	NWL	0.0%
21.0	PCG	7.14%	NVS	0.0%
21.0	AZO	4.76%	LLY	0.0%
21.0	FIS	4.76%	NVDA	0.0%
21.0	ADBE	4.76%	LNC	0.0%
21.0	KHC	4.76%	LQD	0.0%
21.0	WYNN	4.76%	LUMN	0.0%



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### P365D: 1d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	LLY	14.8%	ZTS	7.6%
1.0	TDG	12.0%	AMC	6.4%
1.0	AMZN	12.0%	LLY	5.6%
1.0	CMCSA	11.2%	GWV	4.4%
1.0	ISRG	10.8%	CMCSA	4.4%
1.0	CDNS	10.4%	CDNS	4.0%
1.0	TSLA	10.4%	TSLA	3.6%
1.0	SBUX	10.4%	UNH	3.2%
1.0	PRGO	10.4%	TDG	2.8%
1.0	MSTR	9.2%	KHC	2.4%
1.0	AMC	8.8%	TMUS	2.4%
1.0	TXN	8.4%	NFLX	2.4%
1.0	HD	8.4%	MSTR	2.0%
1.0	GWV	8.4%	PRGO	1.6%
1.0	META	7.6%	GNRC	1.6%
1.0	ZTS	7.6%	HD	1.6%
1.0	TMUS	7.2%	GLD	1.6%
1.0	UNH	6.8%	AVGO	1.6%
1.0	NAVI	6.8%	TXN	1.6%
1.0	VICI	5.6%	BHC	1.2%
1.0	PEP	4.8%	SBUX	1.2%
1.0	NFLX	4.4%	CVS	1.2%
1.0	CLF	4.4%	AAP	1.2%
1.0	AMGN	4.4%	AMGN	0.8%
1.0	AZO	4.4%	VZ	0.8%



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### P365D: 10d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	AMC	27.39%	AMC	13.28%
10.0	CMCSA	18.67%	ZTS	6.22%
10.0	META	17.84%	GE	6.22%
10.0	MSTR	11.2%	MSTR	6.22%
10.0	ZTS	10.79%	CMCSA	5.81%
10.0	UNH	10.37%	TDG	4.98%
10.0	AAP	9.96%	UNH	4.98%
10.0	TXN	9.96%	NFLX	4.98%
10.0	NFLX	9.54%	BXP	3.73%
10.0	AMZN	9.13%	CZR	3.32%
10.0	TDG	9.13%	CLF	3.32%
10.0	HD	9.13%	AMZN	2.9%
10.0	LLY	8.71%	QCOM	2.9%
10.0	PRGO	8.71%	CVS	2.49%
10.0	GNRC	8.71%	BUD	2.49%
10.0	SNY	7.88%	GNRC	2.49%
10.0	CVS	7.88%	TXN	2.07%
10.0	GWV	7.47%	TSLA	2.07%
10.0	CLF	7.47%	PRGO	1.66%
10.0	BUD	7.05%	ADBE	1.66%
10.0	TSLA	6.64%	KHC	1.66%
10.0	QCOM	6.64%	GSK	1.66%
10.0	AMGN	6.64%	LLY	1.66%
10.0	TMUS	6.22%	PCG	1.24%
10.0	AMD	6.22%	SNY	1.24%



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### P365D: 21d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	CMCSA	25.65%	ZTS	11.74%
21.0	AMC	22.17%	CMCSA	9.13%
21.0	TDG	20.43%	BXP	8.7%
21.0	UNH	16.96%	UNH	7.39%
21.0	ZTS	16.52%	PRGO	6.96%
21.0	TXN	13.91%	MSTR	6.96%
21.0	CLF	13.04%	AMC	6.09%
21.0	META	11.74%	BUD	5.22%
21.0	AMZN	11.74%	NFLX	4.78%
21.0	MSTR	11.3%	IRM	3.48%
21.0	PRGO	10.87%	MSI	3.04%
21.0	AMD	10.0%	CLF	3.04%
21.0	CHTR	9.57%	AMZN	2.17%
21.0	NWL	9.57%	LQD	2.17%
21.0	TMUS	9.13%	QCOM	2.17%
21.0	GNRC	8.7%	CHTR	2.17%
21.0	BXP	8.26%	GLD	2.17%
21.0	CVS	8.26%	CZR	1.74%
21.0	SNY	7.83%	GSK	1.3%
21.0	BUD	6.09%	META	1.3%
21.0	LLY	5.22%	LW	1.3%
21.0	NAVI	4.78%	TMUS	1.3%
21.0	AAP	4.78%	NAVI	0.87%
21.0	KHC	4.78%	TDG	0.87%
21.0	MSI	4.35%	KHC	0.87%



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### P365D: 63d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	PRGO	53.19%	PRGO	24.47%
63.0	MSTR	39.89%	MSTR	24.47%
63.0	CMCSA	34.04%	CHTR	20.21%
63.0	TDG	32.45%	NFLX	12.23%
63.0	AMC	30.32%	TDG	9.57%
63.0	ZTS	25.53%	CMCSA	7.98%
63.0	META	22.34%	BUD	7.45%
63.0	BXP	21.81%	CNC	5.32%
63.0	NFLX	17.55%	BXP	5.32%
63.0	MSI	17.02%	META	4.79%
63.0	BUD	14.36%	MSI	2.66%
63.0	CLF	14.36%	HD	2.13%
63.0	NWL	12.77%	AMC	2.13%
63.0	LW	11.7%	NWL	1.6%
63.0	QCOM	11.17%	ZTS	1.06%
63.0	GNRC	10.11%	AZO	0.53%
63.0	ISRG	10.11%	MOS	0.0%
63.0	HD	9.57%	LNC	0.0%
63.0	IRM	9.04%	PEP	0.0%
63.0	VNO	7.98%	PCG	0.0%
63.0	BALL	7.45%	OXY	0.0%
63.0	AMZN	7.45%	ORLY	0.0%
63.0	NAVI	6.91%	ORCL	0.0%
63.0	CHTR	6.91%	ON	0.0%
63.0	AAP	6.38%	KHC	0.0%



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### P365D: 126d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	MSTR	80.8%	MSTR	68.8%
126.0	AMC	74.4%	PRGO	30.4%
126.0	ZTS	56.0%	CHTR	30.4%
126.0	NFLX	44.8%	AMC	21.6%
126.0	BXP	43.2%	BXP	16.8%
126.0	PRGO	32.0%	NFLX	13.6%
126.0	LEN	31.2%	AAP	11.2%
126.0	CPRT	31.2%	ZTS	4.0%
126.0	ORCL	30.4%	ORCL	2.4%
126.0	CMCSA	29.6%	LEN	2.4%
126.0	TDG	23.2%	INTU	2.4%
126.0	NAVI	20.8%	CLF	0.8%
126.0	AAP	16.8%	TDG	0.8%
126.0	META	14.4%	LNC	0.0%
126.0	INTU	14.4%	LQD	0.0%
126.0	UNH	14.4%	KHC	0.0%
126.0	CNC	13.6%	PCG	0.0%
126.0	VNO	13.6%	OXY	0.0%
126.0	CHTR	5.6%	ORLY	0.0%
126.0	ISRG	4.8%	ON	0.0%
126.0	CLF	3.2%	NWL	0.0%
126.0	BUD	3.2%	NVS	0.0%
126.0	ADBE	3.2%	NVDA	0.0%
126.0	AMZN	2.4%	NEM	0.0%
126.0	BBY	2.4%	LLY	0.0%



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

### All TMD: 1d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	PHM	-4.79%	TRGP	-2.12%
1.0	MOS	-4.42%	HSBC	-2.12%
1.0	MS	-4.33%	QQQ	-2.03%
1.0	TRGP	-4.15%	IRM	-1.94%
1.0	THC	-3.87%	PWR	-1.84%
1.0	NVDA	-3.69%	GS	-1.84%
1.0	HYG	-3.59%	THC	-1.84%
1.0	VNO	-3.41%	MS	-1.75%
1.0	MNST	-3.41%	ORLY	-1.75%
1.0	PCG	-3.32%	VST	-1.75%
1.0	FSUGY	-3.23%	MNST	-1.75%
1.0	CSCO	-3.23%	AMAT	-1.75%
1.0	IRM	-3.23%	CMG	-1.75%
1.0	QQQ	-3.23%	PCG	-1.75%
1.0	CAH	-3.23%	NVDA	-1.75%
1.0	CCL	-3.13%	EMB	-1.57%
1.0	VST	-3.13%	RIO	-1.57%
1.0	X	-2.95%	NVS	-1.57%
1.0	AMAT	-2.86%	PHM	-1.57%
1.0	HSBC	-2.86%	PEP	-1.57%
1.0	CPRT	-2.86%	SPY	-1.57%
1.0	WRK	-2.79%	ACGL	-1.57%
1.0	GS	-2.67%	LVS	-1.47%
1.0	HLT	-2.67%	COST	-1.47%
1.0	PWR	-2.49%	HYG	-1.47%



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## All TMD: 10d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	MS	-5.11%	MUB	-3.81%
10.0	MUB	-4.84%	BAC	-2.6%
10.0	X	-3.94%	PCG	-2.51%
10.0	CSCO	-3.9%	ABBV	-2.51%
10.0	NVDA	-3.9%	CMG	-2.42%
10.0	THC	-3.62%	TRGP	-2.23%
10.0	AZN	-3.53%	WRK	-2.17%
10.0	BAC	-3.53%	COST	-2.04%
10.0	TRGP	-3.44%	WDC	-2.04%
10.0	MNST	-3.35%	X	-1.91%
10.0	WRK	-3.17%	VST	-1.77%
10.0	HLT	-3.16%	JPM	-1.77%
10.0	MOS	-3.16%	MS	-1.77%
10.0	PHM	-3.07%	MRK	-1.77%
10.0	CPRT	-3.07%	IRM	-1.77%
10.0	QQQ	-3.07%	SBUX	-1.77%
10.0	ORLY	-2.97%	AZN	-1.67%
10.0	COST	-2.88%	WFC	-1.67%
10.0	HSBC	-2.88%	HCA	-1.58%
10.0	IRM	-2.88%	LNC	-1.58%
10.0	JPM	-2.79%	BBY	-1.58%
10.0	ABBV	-2.79%	FIS	-1.58%
10.0	MU	-2.79%	USB	-1.58%
10.0	VST	-2.7%	INTU	-1.58%
10.0	CMG	-2.6%	FCX	-1.49%



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## All TMD: 21d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	MUB	-7.99%	MUB	-4.14%
21.0	TEVA	-4.23%	LW	-2.91%
21.0	ABBV	-4.13%	CMG	-2.63%
21.0	MS	-4.04%	PCG	-2.35%
21.0	QQQ	-3.85%	COST	-2.07%
21.0	COST	-3.57%	USB	-1.97%
21.0	WRK	-3.57%	TFC	-1.88%
21.0	CPRT	-3.47%	AZN	-1.78%
21.0	TRGP	-3.38%	CPRT	-1.69%
21.0	CMG	-3.38%	HLT	-1.6%
21.0	THC	-3.1%	WDC	-1.6%
21.0	MNST	-3.1%	INTC	-1.5%
21.0	USB	-3.0%	TEVA	-1.5%
21.0	IRM	-2.91%	HSBC	-1.31%
21.0	SPY	-2.82%	FITB	-1.31%
21.0	FSUGY	-2.72%	FRA	-1.31%
21.0	ORLY	-2.72%	LVS	-1.22%
21.0	AZN	-2.54%	ADBE	-1.22%
21.0	CSCO	-2.54%	ABBV	-1.22%
21.0	GT	-2.44%	X	-1.21%
21.0	EMB	-2.35%	TRGP	-1.13%
21.0	PEP	-2.25%	MSFT	-1.03%
21.0	NVDA	-2.16%	CCL	-1.03%
21.0	HLT	-2.07%	BAC	-1.03%
21.0	LVS	-1.97%	FCX	-1.03%



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## All TMD: 63d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	MUB	-5.09%	IEP	-6.16%
63.0	USB	-3.91%	MUB	-3.82%
63.0	LEN	-3.52%	PCG	-3.03%
63.0	MSFT	-3.52%	BHC	-2.35%
63.0	X	-3.44%	USB	-2.35%
63.0	CMG	-3.23%	X	-2.17%
63.0	CSCO	-2.93%	GSK	-1.76%
63.0	TRGP	-2.74%	VFC	-1.76%
63.0	FSUGY	-2.25%	HCA	-1.66%
63.0	SPY	-2.15%	VZ	-1.66%
63.0	AZN	-2.15%	CTLT	-1.61%
63.0	DHI	-2.05%	AZN	-1.47%
63.0	CPRT	-1.96%	TFC	-1.37%
63.0	GE	-1.86%	AA	-1.27%
63.0	THC	-1.76%	CLF	-1.17%
63.0	ACGL	-1.76%	INTU	-0.88%
63.0	QQQ	-1.56%	IRM	-0.78%
63.0	IRM	-1.56%	HYG	-0.68%
63.0	MS	-1.47%	SNY	-0.68%
63.0	NVDA	-1.47%	LW	-0.49%
63.0	PWR	-1.37%	MU	-0.49%
63.0	PHM	-1.37%	EMB	-0.39%
63.0	LUMN	-1.37%	NEM	-0.39%
63.0	SLV	-1.27%	SLV	-0.29%
63.0	TEVA	-1.08%	MSFT	-0.29%



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## All TMD: 126d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	MUB	-6.15%	IEP	-12.92%
126.0	LW	-4.06%	BALL	-2.5%
126.0	IRM	-4.06%	LW	-2.19%
126.0	PCG	-3.54%	GSK	-2.08%
126.0	VZ	-2.6%	PCG	-1.46%
126.0	LUMN	-2.5%	VZ	-1.25%
126.0	BALL	-2.5%	CNC	-1.15%
126.0	LEN	-1.77%	EMB	-0.83%
126.0	INTC	-1.67%	MUB	-0.63%
126.0	FSUGY	-1.35%	IRM	-0.62%
126.0	CMG	-1.25%	INTC	-0.31%
126.0	PHM	-1.25%	NEM	-0.21%
126.0	LVS	-1.15%	CPRT	-0.1%
126.0	CSTM	-1.15%	NAVI	0.0%
126.0	WRK	-1.03%	MU	0.0%
126.0	X	-0.97%	MSI	0.0%
126.0	BBY	-0.83%	MSFT	0.0%
126.0	NVDA	-0.62%	MS	0.0%
126.0	MSFT	-0.52%	MOS	0.0%
126.0	CSCO	-0.42%	MNST	0.0%
126.0	GOOGL	-0.42%	AA	0.0%
126.0	GBTC	-0.31%	LNC	0.0%
126.0	ACGL	-0.31%	LLY	0.0%
126.0	EMB	-0.21%	KHC	0.0%
126.0	SPY	-0.21%	KALU	0.0%



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## All TMD: 252d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
252.0	LUMN	-10.67%	IEP	-23.5%
252.0	LW	-10.19%	FRCB	-0.37%
252.0	CPRT	-7.79%	CNC	-0.12%
252.0	VZ	-5.52%	LW	-0.12%
252.0	CMG	-1.8%	MS	0.0%
252.0	CSTM	-1.68%	MSFT	0.0%
252.0	IEP	-1.56%	MSI	0.0%
252.0	BMJ	-1.44%	MSTR	0.0%
252.0	PEP	-1.08%	MU	0.0%
252.0	MRK	-0.96%	MUB	0.0%
252.0	INTC	-0.6%	NFLX	0.0%
252.0	PCG	-0.36%	NVDA	0.0%
252.0	HLT	0.0%	NVS	0.0%
252.0	JPM	0.0%	NWL	0.0%
252.0	HD	0.0%	ORCL	0.0%
252.0	HCA	0.0%	NAVI	0.0%
252.0	GWG	0.0%	MOS	0.0%
252.0	GS	0.0%	META	0.0%
252.0	GOOGL	0.0%	ORLY	0.0%
252.0	SNY	0.0%	LVS	0.0%
252.0	GLD	0.0%	LUMN	0.0%
252.0	IRM	0.0%	LQD	0.0%
252.0	GILD	0.0%	LNC	0.0%
252.0	SLV	0.0%	LLY	0.0%
252.0	JAZZ	0.0%	LEN	0.0%



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### P30D: 1d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	HSBC	-15.0%	ELAN	-15.0%
1.0	ELAN	-15.0%	QCOM	-10.0%
1.0	CSTM	-15.0%	ISRG	-5.0%
1.0	ORLY	-15.0%	BMY	-5.0%
1.0	COST	-10.0%	COST	-5.0%
1.0	JPM	-10.0%	RIO	-5.0%
1.0	MNST	-10.0%	PWR	-5.0%
1.0	MUB	-10.0%	POST	-5.0%
1.0	CSCO	-10.0%	PEP	-5.0%
1.0	PWR	-10.0%	PCG	-5.0%
1.0	BUD	-10.0%	OXY	-5.0%
1.0	THC	-10.0%	GME	-5.0%
1.0	BA	-10.0%	NEM	-5.0%
1.0	INTC	-10.0%	HCA	-5.0%
1.0	DHI	-5.0%	INTC	-5.0%
1.0	HLT	-5.0%	LUMN	-5.0%
1.0	GOOGL	-5.0%	BIIB	-5.0%
1.0	GNRC	-5.0%	BHP	-5.0%
1.0	GE	-5.0%	CSTM	-5.0%
1.0	FITB	-5.0%	B	-5.0%
1.0	MU	-5.0%	BA	-5.0%
1.0	EMB	-5.0%	ACGL	-5.0%
1.0	WDC	-5.0%	VCSH	-5.0%
1.0	TRGP	-5.0%	WFC	-5.0%
1.0	NEM	-5.0%	TRGP	-5.0%



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### P30D: 10d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	ELAN	-27.27%	INTU	-36.36%
10.0	GT	-27.27%	ELAN	-9.09%
10.0	ORLY	-18.18%	MSI	0.0%
10.0	WFC	-18.18%	MU	0.0%
10.0	TFC	-9.09%	MUB	0.0%
10.0	T	-9.09%	NAVI	0.0%
10.0	INTU	-9.09%	NEM	0.0%
10.0	NAVI	0.0%	NFLX	0.0%
10.0	MUB	0.0%	NVS	0.0%
10.0	META	0.0%	NWL	0.0%
10.0	MSFT	0.0%	ON	0.0%
10.0	MS	0.0%	ORCL	0.0%
10.0	MRK	0.0%	ORLY	0.0%
10.0	MOS	0.0%	OXY	0.0%
10.0	MNST	0.0%	PCG	0.0%
10.0	NFLX	0.0%	MSFT	0.0%
10.0	NEM	0.0%	PEP	0.0%
10.0	MU	0.0%	AA	0.0%
10.0	LVS	0.0%	MOS	0.0%
10.0	NVS	0.0%	JAZZ	0.0%
10.0	LUMN	0.0%	JPM	0.0%
10.0	LLY	0.0%	KALU	0.0%
10.0	LEN	0.0%	KEY	0.0%
10.0	KHC	0.0%	KHC	0.0%
10.0	KEY	0.0%	LEN	0.0%



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## P90D: 1d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	ELAN	-14.52%	ELAN	-9.68%
1.0	CSTM	-11.29%	OXY	-8.06%
1.0	HSBC	-11.29%	CSTM	-6.45%
1.0	MNST	-11.29%	B	-6.45%
1.0	NEM	-9.68%	AA	-4.84%
1.0	RIO	-9.68%	HSBC	-4.84%
1.0	BHP	-9.68%	NEM	-4.84%
1.0	VCSH	-9.68%	BHP	-4.84%
1.0	HLT	-8.06%	VCSH	-4.84%
1.0	CSCO	-8.06%	PCG	-4.84%
1.0	THC	-8.06%	WDC	-4.84%
1.0	MUB	-8.06%	ADBE	-3.23%
1.0	FITB	-6.45%	FSUGY	-3.23%
1.0	BUD	-6.45%	POST	-3.23%
1.0	MOS	-6.45%	COST	-3.23%
1.0	OXY	-6.45%	MUB	-3.23%
1.0	ORLY	-6.45%	AMAT	-3.23%
1.0	TEVA	-6.45%	RIO	-3.23%
1.0	JPM	-4.84%	SBUX	-3.23%
1.0	INTC	-4.84%	WFC	-3.23%
1.0	T	-4.84%	EMB	-3.23%
1.0	COST	-4.84%	XOM	-3.23%
1.0	GOOGL	-4.84%	VICI	-3.23%
1.0	FSUGY	-4.84%	MSFT	-3.23%
1.0	HYG	-4.84%	NVS	-3.23%



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## P90D: 10d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	THC	-18.87%	INTU	-9.43%
10.0	XOM	-13.21%	B	-7.55%
10.0	NVS	-13.21%	XOM	-5.66%
10.0	ABBV	-11.32%	FCX	-5.66%
10.0	CPRT	-11.32%	NVS	-5.66%
10.0	CNC	-9.43%	VICI	-3.77%
10.0	MUB	-9.43%	OXY	-3.77%
10.0	ORLY	-9.43%	HSBC	-1.89%
10.0	CAH	-9.43%	MOS	-1.89%
10.0	GT	-7.55%	MSI	-1.89%
10.0	EMB	-7.55%	NEM	-1.89%
10.0	ELAN	-7.55%	ELAN	-1.89%
10.0	SLV	-7.55%	T	-1.89%
10.0	TFC	-7.55%	TEVA	-1.89%
10.0	HSBC	-7.55%	THC	-1.89%
10.0	AZN	-7.55%	BHP	-1.89%
10.0	WFC	-7.55%	CPRT	-1.89%
10.0	BA	-5.66%	BA	-1.89%
10.0	BHP	-5.66%	ABBV	-1.89%
10.0	LQD	-5.66%	TSLA	0.0%
10.0	RIO	-5.66%	WDC	0.0%
10.0	HLT	-3.77%	NAVI	0.0%
10.0	HCA	-3.77%	MUB	0.0%
10.0	GOOGL	-3.77%	MU	0.0%
10.0	FITB	-3.77%	WFC	0.0%



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## P90D: 21d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	CAH	-11.9%	AA	0.0%
21.0	THC	-11.9%	ORLY	0.0%
21.0	XOM	-7.14%	ORCL	0.0%
21.0	LEN	-7.14%	ON	0.0%
21.0	EMB	-4.76%	NWL	0.0%
21.0	BHP	-2.38%	NVS	0.0%
21.0	WFC	-2.38%	NVDA	0.0%
21.0	CNC	-2.38%	NEM	0.0%
21.0	VZ	-2.38%	NAVI	0.0%
21.0	MOS	-2.38%	MUB	0.0%
21.0	MUB	-2.38%	MU	0.0%
21.0	ELAN	-2.38%	MSTR	0.0%
21.0	MNST	-2.38%	MSI	0.0%
21.0	B	-2.38%	MSFT	0.0%
21.0	MRK	0.0%	MS	0.0%
21.0	AA	0.0%	OXY	0.0%
21.0	MSTR	0.0%	MRK	0.0%
21.0	NAVI	0.0%	MNST	0.0%
21.0	NVDA	0.0%	META	0.0%
21.0	MS	0.0%	LW	0.0%
21.0	MU	0.0%	LVS	0.0%
21.0	LVS	0.0%	LUMN	0.0%
21.0	NVS	0.0%	LQD	0.0%
21.0	LUMN	0.0%	LNC	0.0%
21.0	LNC	0.0%	LLY	0.0%



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### P365D: 1d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
1.0	HLT	-6.0%	NEM	-4.8%
1.0	MOS	-6.0%	VCSH	-4.0%
1.0	MNST	-6.0%	B	-4.0%
1.0	ELAN	-6.0%	SLV	-3.21%
1.0	HSEC	-5.6%	HSEC	-3.2%
1.0	VCSH	-5.2%	ELAN	-2.8%
1.0	ORLY	-5.2%	OXY	-2.8%
1.0	BHP	-5.2%	RIO	-2.8%
1.0	SLV	-4.82%	BHP	-2.4%
1.0	THC	-4.8%	TFC	-2.4%
1.0	NEM	-4.8%	GSK	-2.4%
1.0	RIO	-4.4%	AA	-2.4%
1.0	AA	-4.4%	WFC	-2.4%
1.0	CSCO	-4.0%	PWR	-2.4%
1.0	MS	-3.6%	ORLY	-2.4%
1.0	OXY	-3.6%	MNST	-2.4%
1.0	CSTM	-3.6%	WDC	-2.4%
1.0	FSUGY	-3.2%	KEY	-2.0%
1.0	MUB	-3.2%	FSUGY	-2.0%
1.0	NVS	-3.2%	LUMN	-2.0%
1.0	EMB	-2.8%	LVS	-2.0%
1.0	AZN	-2.8%	THC	-2.0%
1.0	GILD	-2.8%	CSTM	-2.0%
1.0	JPM	-2.8%	NVS	-2.0%
1.0	PWR	-2.8%	ADBE	-2.0%



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## P365D: 10d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
10.0	ORLY	-9.13%	CMG	-7.05%
10.0	MOS	-5.81%	LUMN	-3.73%
10.0	SLV	-5.0%	INTU	-3.73%
10.0	GBTC	-4.98%	FIS	-3.32%
10.0	LEN	-4.98%	SLV	-2.5%
10.0	THC	-4.98%	FCX	-2.49%
10.0	CPRT	-4.56%	MNST	-2.49%
10.0	GT	-4.56%	MOS	-2.49%
10.0	HSBC	-4.56%	B	-2.49%
10.0	FIS	-4.15%	AZO	-2.49%
10.0	WFC	-3.73%	CYH	-2.07%
10.0	MNST	-3.73%	MSFT	-2.07%
10.0	ELAN	-3.73%	LNC	-2.07%
10.0	LUMN	-3.32%	FITB	-1.66%
10.0	FITB	-3.32%	NVS	-1.66%
10.0	NVS	-3.32%	NAVI	-1.66%
10.0	MUB	-3.32%	XOM	-1.24%
10.0	CNC	-2.9%	HSBC	-1.24%
10.0	JPM	-2.9%	BHP	-1.24%
10.0	CAH	-2.9%	TFC	-1.24%
10.0	LVS	-2.9%	TEVA	-1.24%
10.0	EMB	-2.9%	T	-1.24%
10.0	BA	-2.9%	NEM	-1.24%
10.0	XOM	-2.9%	ELAN	-0.83%
10.0	USB	-2.49%	EMB	-0.83%



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### P365D: 21d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
21.0	ORLY	-6.09%	CMG	-6.52%
21.0	MOS	-6.09%	FIS	-5.65%
21.0	CMG	-5.65%	MSFT	-3.91%
21.0	BA	-5.22%	FITB	-3.91%
21.0	GT	-5.22%	TFC	-3.48%
21.0	TEVA	-4.78%	EXPE	-2.61%
21.0	EMB	-4.78%	B	-2.61%
21.0	GBTC	-4.78%	MNST	-2.17%
21.0	USB	-4.35%	EMB	-2.17%
21.0	WFC	-3.91%	MUB	-2.17%
21.0	RIO	-3.91%	INTU	-2.17%
21.0	NVS	-3.91%	MOS	-1.74%
21.0	VCSH	-3.48%	WFC	-1.3%
21.0	FRA	-3.48%	HSBC	-1.3%
21.0	THC	-3.48%	SLV	-0.87%
21.0	AZO	-3.04%	GT	-0.87%
21.0	UAA	-3.04%	USB	-0.87%
21.0	MNST	-3.04%	VCSH	-0.87%
21.0	SLV	-2.62%	CCL	-0.87%
21.0	KEY	-2.61%	KEY	-0.87%
21.0	PHM	-2.61%	BHP	-0.43%
21.0	MUB	-2.61%	GE	-0.43%
21.0	CAH	-2.61%	GBTC	-0.43%
21.0	HSBC	-2.61%	FRA	-0.43%
21.0	ZION	-2.61%	RIO	-0.43%



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### P365D: 63d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
63.0	MSFT	-20.74%	INTU	-4.26%
63.0	MOS	-10.11%	SLV	-1.6%
63.0	CMG	-5.85%	MSFT	-1.6%
63.0	AZO	-4.79%	FIS	-0.53%
63.0	FRA	-4.79%	OXY	0.0%
63.0	VICI	-2.66%	ORLY	0.0%
63.0	GBTC	-1.6%	ORCL	0.0%
63.0	B	-1.6%	ON	0.0%
63.0	SLV	-1.07%	NVS	0.0%
63.0	LNC	-1.06%	NVDA	0.0%
63.0	LUMN	-0.53%	NEM	0.0%
63.0	IEP	0.0%	NAVI	0.0%
63.0	THC	0.0%	MUB	0.0%
63.0	HLT	0.0%	MU	0.0%
63.0	MNST	0.0%	MS	0.0%
63.0	VCSH	0.0%	MRK	0.0%
63.0	VFC	0.0%	AA	0.0%
63.0	LVS	0.0%	MNST	0.0%
63.0	LQD	0.0%	ZION	0.0%
63.0	KEY	0.0%	ISRG	0.0%
63.0	KALU	0.0%	JAZZ	0.0%
63.0	JPM	0.0%	JPM	0.0%
63.0	JAZZ	0.0%	KALU	0.0%
63.0	MRK	0.0%	KEY	0.0%
63.0	HON	0.0%	PCG	0.0%



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## P365D: 126d

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

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

Hzn	Ticker	95VaRBreak_VmS	Ticker	99VaRBreak_VmS
126.0	FRA	-18.4%	AA	0.0%
126.0	MSFT	-6.4%	OXY	0.0%
126.0	MOS	-3.2%	ORLY	0.0%
126.0	FIS	-2.4%	ON	0.0%
126.0	GBTC	-2.4%	NWL	0.0%
126.0	CMG	-0.8%	NVS	0.0%
126.0	KEY	0.0%	NVDA	0.0%
126.0	ORLY	0.0%	NEM	0.0%
126.0	ON	0.0%	NAVI	0.0%
126.0	NWL	0.0%	MUB	0.0%
126.0	NVS	0.0%	MU	0.0%
126.0	NVDA	0.0%	MSI	0.0%
126.0	NEM	0.0%	MSFT	0.0%
126.0	MUB	0.0%	MS	0.0%
126.0	MU	0.0%	MRK	0.0%
126.0	MSI	0.0%	PCG	0.0%
126.0	INTC	0.0%	MOS	0.0%
126.0	MS	0.0%	META	0.0%
126.0	MRK	0.0%	LW	0.0%
126.0	ZION	0.0%	LVS	0.0%
126.0	JAZZ	0.0%	LUMN	0.0%
126.0	OXY	0.0%	LQD	0.0%
126.0	MNST	0.0%	LNC	0.0%
126.0	JPM	0.0%	LLY	0.0%
126.0	LW	0.0%	KHC	0.0%



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

### All TMD: 1d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	GME	0.22%	GME	0.26%
1.0	MSTR	0.13%	NWL	0.13%
1.0	NFLX	0.11%	UAA	0.12%
1.0	META	0.11%	UNH	0.08%
1.0	AAPL	0.09%	QCOM	0.08%
1.0	UNH	0.08%	ORCL	0.07%
1.0	AAP	0.08%	INTU	0.07%
1.0	ORCL	0.07%	CZR	0.07%
1.0	NWL	0.07%	BALL	0.07%
1.0	HD	0.07%	AAPL	0.07%
1.0	INTU	0.07%	CTLT	0.06%
1.0	CDNS	0.07%	IEP	0.04%
1.0	QCOM	0.06%	GNRC	0.04%
1.0	WDC	0.06%	ON	0.04%
1.0	GWW	0.05%	LW	0.04%
1.0	XOM	0.05%	SBUX	0.04%
1.0	BAC	0.05%	CMA	0.03%
1.0	CZR	0.05%	SNY	0.03%
1.0	AA	0.04%	HD	0.03%
1.0	PCG	0.04%	CYH	0.03%
1.0	LW	0.04%	AMC	0.03%
1.0	SNY	0.04%	GT	0.03%
1.0	CLF	0.04%	MSTR	0.03%
1.0	BA	0.04%	FRA	0.03%
1.0	KHC	0.04%	KHC	0.03%



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## All TMD: 10d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	GME	3.74%	GME	2.67%
10.0	MSTR	2.64%	MSTR	2.41%
10.0	CTLT	1.13%	CTLT	1.11%
10.0	META	1.06%	MU	0.63%
10.0	CZR	0.96%	CVS	0.58%
10.0	NFLX	0.94%	CMA	0.57%
10.0	UAA	0.84%	UAA	0.51%
10.0	UNH	0.84%	INTU	0.51%
10.0	ORCL	0.82%	CZR	0.48%
10.0	MU	0.74%	GNRC	0.48%
10.0	WDC	0.74%	AAPL	0.47%
10.0	INTC	0.73%	UNH	0.45%
10.0	OXY	0.7%	IEP	0.44%
10.0	AAPL	0.61%	META	0.41%
10.0	KALU	0.52%	NFLX	0.37%
10.0	LW	0.45%	INTC	0.37%
10.0	BA	0.45%	ORCL	0.36%
10.0	GWW	0.44%	KALU	0.36%
10.0	AA	0.42%	LNC	0.33%
10.0	AMZN	0.41%	AA	0.32%
10.0	SNY	0.41%	QCOM	0.31%
10.0	GOOGL	0.4%	NWL	0.3%
10.0	HD	0.4%	VFC	0.28%
10.0	QCOM	0.39%	WRK	0.26%
10.0	INTU	0.36%	BBY	0.26%



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## All TMD: 21d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	MSTR	7.96%	MSTR	5.82%
21.0	GME	5.81%	GME	4.98%
21.0	META	3.48%	CTLT	2.74%
21.0	CTLT	2.68%	AA	1.56%
21.0	INTC	2.52%	META	1.49%
21.0	NFLX	2.32%	INTC	1.38%
21.0	UAA	1.91%	NFLX	1.33%
21.0	ORCL	1.9%	CVS	1.28%
21.0	MU	1.86%	UAA	1.16%
21.0	WDC	1.76%	IEP	1.11%
21.0	AA	1.5%	GNRC	1.09%
21.0	UNH	1.38%	INTU	1.08%
21.0	TEVA	1.34%	CMA	0.97%
21.0	KALU	1.28%	KALU	0.84%
21.0	CZR	1.24%	CZR	0.7%
21.0	OXY	1.05%	XOM	0.69%
21.0	AMZN	0.94%	NWL	0.58%
21.0	GOOGL	0.91%	ORCL	0.57%
21.0	TXN	0.9%	CYH	0.49%
21.0	GWV	0.89%	NAVI	0.48%
21.0	AMGN	0.89%	SBUX	0.43%
21.0	GNRC	0.88%	AAP	0.43%
21.0	GILD	0.88%	MOS	0.42%
21.0	AAPL	0.84%	ABBV	0.42%
21.0	SBUX	0.82%	LNC	0.41%



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## All TMD: 63d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
63.0	MSTR	12.42%	CTLT	10.61%
63.0	WDC	12.25%	META	7.99%
63.0	CTLT	11.29%	WDC	5.09%
63.0	META	10.91%	GNRC	4.63%
63.0	NFLX	8.01%	KALU	4.5%
63.0	GNRC	6.35%	GME	3.77%
63.0	ORCL	5.59%	CMA	3.44%
63.0	KALU	5.05%	CVS	3.21%
63.0	GME	4.55%	INTC	2.82%
63.0	CMA	4.48%	AMZN	2.33%
63.0	NEM	3.38%	IEP	2.31%
63.0	UAA	3.17%	NEM	2.08%
63.0	CVS	2.86%	UAA	2.08%
63.0	AA	2.8%	WRK	2.02%
63.0	SBUX	2.76%	CZR	1.89%
63.0	OXY	2.62%	AA	1.82%
63.0	WRK	2.52%	OXY	1.52%
63.0	GILD	2.52%	NFLX	1.48%
63.0	ISRG	2.46%	ORCL	1.45%
63.0	INTC	2.42%	GILD	1.43%
63.0	AAPL	2.35%	SBUX	1.3%
63.0	MU	2.33%	CYH	1.27%
63.0	XOM	2.21%	ZTS	1.19%
63.0	AMGN	2.15%	NAVI	1.19%
63.0	CZR	2.12%	USB	1.15%



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## All TMD: 126d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
126.0	MSTR	40.98%	META	24.11%
126.0	WDC	37.91%	WDC	22.47%
126.0	META	30.68%	AVGO	11.44%
126.0	NFLX	19.98%	KALU	11.01%
126.0	MU	11.45%	AMZN	7.16%
126.0	GNRC	9.86%	MSTR	6.83%
126.0	ORCL	9.8%	INTC	6.81%
126.0	AVGO	9.63%	NEM	6.43%
126.0	KALU	8.56%	LLY	6.04%
126.0	B	8.24%	GILD	6.0%
126.0	NEM	8.16%	GNRC	5.56%
126.0	INTC	7.44%	WRK	5.32%
126.0	BA	6.74%	CVS	4.93%
126.0	SLV	6.73%	NFLX	4.89%
126.0	GILD	6.67%	BA	4.82%
126.0	CTLT	6.59%	SLV	4.66%
126.0	AMD	5.9%	MU	4.66%
126.0	AMAT	5.85%	IEP	4.38%
126.0	GME	5.85%	TSLA	4.27%
126.0	INTU	5.81%	TEVA	4.2%
126.0	XOM	5.35%	ISRG	3.99%
126.0	TSLA	5.21%	GOOGL	3.88%
126.0	AAPL	5.15%	INTU	3.76%
126.0	WRK	5.06%	GME	3.59%
126.0	ISRG	4.98%	CTLT	3.44%



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## All TMD: 252d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
252.0	MSTR	148.2%	WDC	58.04%
252.0	WDC	119.3%	META	41.9%
252.0	META	78.64%	MSTR	29.28%
252.0	NFLX	55.29%	AMZN	28.13%
252.0	MU	35.91%	AVGO	24.2%
252.0	AVGO	31.76%	VST	23.04%
252.0	AMZN	28.37%	NEM	22.95%
252.0	NEM	26.23%	KALU	22.04%
252.0	GNRC	25.0%	NFLX	21.99%
252.0	B	24.46%	B	21.97%
252.0	ORCL	23.76%	INTU	20.75%
252.0	SLV	23.71%	MU	20.18%
252.0	TSLA	23.42%	ISRG	19.45%
252.0	INTU	23.24%	SLV	17.88%
252.0	ELAN	22.78%	GOOGL	16.5%
252.0	VST	21.11%	ORCL	15.67%
252.0	INTC	20.45%	GILD	14.66%
252.0	KALU	20.09%	THC	11.94%
252.0	ISRG	19.89%	INTC	10.86%
252.0	AMAT	19.07%	TDG	10.16%
252.0	GOOGL	18.28%	EXPE	9.43%
252.0	CTLT	18.05%	LEN	9.43%
252.0	GILD	17.59%	COST	9.3%
252.0	EXPE	17.54%	TMUS	9.14%
252.0	AMD	17.44%	GNRC	9.1%



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### P30D: 1d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	BBY	1.57%	WDC	0.99%
1.0	ORCL	1.43%	LLY	0.93%
1.0	AAP	1.39%	AAP	0.88%
1.0	CDNS	1.3%	ZTS	0.65%
1.0	WDC	1.16%	ORLY	0.45%
1.0	LUMN	0.99%	AVGO	0.44%
1.0	LLY	0.84%	CYH	0.44%
1.0	AVGO	0.76%	GT	0.4%
1.0	NVDA	0.66%	GME	0.38%
1.0	AMD	0.55%	MSI	0.35%
1.0	ISRG	0.47%	HCA	0.32%
1.0	CNC	0.35%	CDNS	0.31%
1.0	CYH	0.33%	ISRG	0.3%
1.0	OXY	0.29%	CHTR	0.3%
1.0	MRK	0.29%	BBY	0.29%
1.0	TDG	0.28%	NVDA	0.25%
1.0	TSLA	0.26%	LVS	0.25%
1.0	META	0.26%	IEP	0.24%
1.0	LW	0.26%	LUMN	0.24%
1.0	AMAT	0.24%	OXY	0.23%
1.0	GE	0.24%	TDG	0.21%
1.0	BXP	0.22%	SBUX	0.2%
1.0	QCOM	0.22%	ORCL	0.19%
1.0	VICI	0.21%	INTU	0.19%
1.0	ORLY	0.21%	ACGL	0.18%



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### P30D: 10d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	LLY	8.99%	ZTS	5.72%
10.0	CVS	5.84%	CVS	5.28%
10.0	WDC	5.04%	JAZZ	4.63%
10.0	ZTS	4.92%	LLY	4.25%
10.0	CNC	4.78%	WDC	3.95%
10.0	JAZZ	4.39%	GT	3.07%
10.0	ORCL	4.23%	INTU	2.98%
10.0	TSLA	3.83%	CHTR	2.85%
10.0	UNH	3.7%	ELAN	2.68%
10.0	CDNS	3.41%	ORCL	2.47%
10.0	CAH	3.28%	NVDA	2.27%
10.0	KHC	3.23%	BA	2.2%
10.0	ELAN	2.69%	UAA	2.0%
10.0	QCOM	2.63%	LVS	1.95%
10.0	CLF	2.45%	ORLY	1.89%
10.0	NVDA	2.41%	VFC	1.88%
10.0	BBY	2.39%	UNH	1.69%
10.0	AAP	2.32%	DHI	1.62%
10.0	INTU	2.22%	FIS	1.57%
10.0	AMD	2.11%	PWR	1.55%
10.0	ORLY	2.05%	BBY	1.48%
10.0	PWR	2.0%	POST	1.36%
10.0	BA	1.88%	HCA	1.33%
10.0	VNO	1.85%	B	1.3%
10.0	META	1.83%	MSI	1.25%



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## P90D: 1d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	ORCL	0.78%	UNH	0.52%
1.0	WDC	0.74%	ORCL	0.49%
1.0	UNH	0.64%	WDC	0.43%
1.0	CDNS	0.47%	LLY	0.31%
1.0	AMD	0.46%	META	0.3%
1.0	AAP	0.44%	ZTS	0.29%
1.0	CNC	0.42%	AMC	0.29%
1.0	AMC	0.42%	GT	0.29%
1.0	LLY	0.38%	CHTR	0.27%
1.0	META	0.27%	CYH	0.25%
1.0	TSLA	0.25%	THC	0.24%
1.0	BXP	0.25%	AAP	0.22%
1.0	GBTC	0.25%	CNC	0.21%
1.0	THC	0.24%	HCA	0.19%
1.0	CYH	0.23%	B	0.18%
1.0	QCOM	0.22%	NEM	0.18%
1.0	AMZN	0.22%	PCG	0.16%
1.0	MRK	0.21%	MSI	0.16%
1.0	NVDA	0.2%	UAA	0.14%
1.0	LUMN	0.19%	CPRT	0.13%
1.0	BUD	0.18%	GILD	0.12%
1.0	MSFT	0.18%	AZN	0.12%
1.0	VZ	0.17%	GME	0.12%
1.0	VICI	0.15%	BUD	0.11%
1.0	BBY	0.14%	NVS	0.11%



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## P90D: 10d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	UNH	10.7%	ORCL	8.05%
10.0	AMD	8.73%	UNH	6.54%
10.0	MSTR	8.73%	MSTR	5.02%
10.0	ORCL	8.36%	INTC	4.78%
10.0	WDC	6.16%	CVS	3.64%
10.0	QCOM	6.15%	VFC	3.41%
10.0	INTC	4.99%	META	2.93%
10.0	CVS	4.14%	ZTS	2.67%
10.0	TSLA	3.21%	MU	2.63%
10.0	META	3.08%	JAZZ	2.18%
10.0	LLY	2.99%	B	2.17%
10.0	CNC	2.97%	THC	2.06%
10.0	GBTC	2.7%	GBTC	1.38%
10.0	JAZZ	2.5%	GT	1.29%
10.0	KALU	2.29%	AMD	1.27%
10.0	ZTS	2.02%	KALU	1.27%
10.0	THC	1.88%	QCOM	1.19%
10.0	BXP	1.73%	ABBV	1.15%
10.0	CDNS	1.72%	HCA	1.1%
10.0	BUD	1.63%	CAH	1.04%
10.0	CAH	1.62%	ELAN	1.03%
10.0	AMC	1.55%	BBY	0.96%
10.0	AAP	1.29%	AMC	0.95%
10.0	CLF	1.22%	T	0.93%
10.0	VFC	1.2%	MOS	0.93%



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## P90D: 21d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	UNH	31.85%	ORCL	21.75%
21.0	INTC	31.4%	INTC	21.31%
21.0	AMD	29.92%	MSTR	10.39%
21.0	MSTR	28.21%	UNH	9.33%
21.0	ORCL	22.29%	CVS	8.27%
21.0	CVS	12.26%	GBTC	5.02%
21.0	TXN	9.8%	BXP	5.02%
21.0	QCOM	8.82%	QCOM	4.46%
21.0	JAZZ	7.86%	THC	3.57%
21.0	AMC	7.73%	VFC	3.48%
21.0	CLF	6.19%	CAH	3.05%
21.0	ON	5.98%	META	2.81%
21.0	CNC	5.51%	ZTS	2.61%
21.0	GBTC	5.4%	CNC	2.58%
21.0	TSLA	5.01%	ELAN	2.54%
21.0	MU	4.89%	PCG	2.19%
21.0	KALU	4.88%	TSLA	2.16%
21.0	LLY	4.85%	WFC	2.05%
21.0	BXP	4.75%	MOS	1.92%
21.0	BUD	4.36%	JAZZ	1.9%
21.0	AMZN	4.35%	GME	1.72%
21.0	META	4.31%	MSI	1.56%
21.0	VFC	4.11%	BALL	1.48%
21.0	WDC	4.03%	HCA	1.31%
21.0	THC	2.96%	BIIB	1.3%



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### P365D: 1d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	LLY	0.34%	LLY	0.28%
1.0	GBTC	0.32%	UNH	0.23%
1.0	AAP	0.32%	ORCL	0.19%
1.0	CYH	0.27%	AAP	0.17%
1.0	UNH	0.26%	CYH	0.17%
1.0	CDNS	0.21%	PCG	0.16%
1.0	QCOM	0.18%	QCOM	0.16%
1.0	CVS	0.17%	GBTC	0.15%
1.0	PCG	0.17%	GT	0.14%
1.0	LW	0.14%	CDNS	0.1%
1.0	ORCL	0.14%	LW	0.1%
1.0	ON	0.14%	CPRT	0.09%
1.0	MRK	0.12%	CHTR	0.09%
1.0	NVDA	0.1%	GWW	0.08%
1.0	SBUX	0.1%	KHC	0.07%
1.0	GOOGL	0.09%	NFLX	0.07%
1.0	BAC	0.09%	ON	0.07%
1.0	SNY	0.08%	CVS	0.06%
1.0	CLF	0.08%	MOS	0.06%
1.0	MOS	0.07%	SNY	0.06%
1.0	KHC	0.07%	MRK	0.05%
1.0	CPRT	0.07%	SBUX	0.05%
1.0	CMA	0.07%	WFC	0.04%
1.0	BXP	0.07%	T	0.04%
1.0	WDC	0.06%	ADBE	0.04%



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## P365D: 10d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	TSLA	3.02%	TSLA	1.89%
10.0	UNH	2.84%	UNH	1.69%
10.0	WDC	2.4%	CVS	1.45%
10.0	LLY	2.19%	ORCL	1.25%
10.0	ORCL	1.82%	NFLX	1.12%
10.0	CVS	1.72%	GBTC	1.06%
10.0	AAP	1.55%	GT	0.91%
10.0	LW	1.55%	LLY	0.88%
10.0	CDNS	1.5%	ISRG	0.83%
10.0	GBTC	1.44%	MOS	0.82%
10.0	QCOM	1.43%	NWL	0.74%
10.0	INTC	1.33%	MSFT	0.72%
10.0	VST	1.31%	AAP	0.65%
10.0	KALU	1.22%	CPRT	0.63%
10.0	JAZZ	0.96%	MU	0.57%
10.0	ON	0.91%	KALU	0.55%
10.0	ISRG	0.89%	MSI	0.53%
10.0	NFLX	0.88%	LW	0.52%
10.0	VFC	0.8%	WFC	0.52%
10.0	TXN	0.73%	FIS	0.52%
10.0	MU	0.71%	META	0.52%
10.0	GWW	0.69%	VFC	0.51%
10.0	AMGN	0.64%	NVDA	0.5%
10.0	MRK	0.63%	FCX	0.49%
10.0	EXPE	0.6%	JAZZ	0.48%



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## P365D: 21d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	INTC	7.82%	AAP	3.62%
21.0	UNH	6.03%	CVS	3.29%
21.0	TSLA	5.62%	ISRG	2.74%
21.0	WDC	4.54%	INTC	2.66%
21.0	CVS	4.06%	ORCL	2.6%
21.0	LLY	3.94%	NWL	2.22%
21.0	TXN	3.66%	GBTC	2.14%
21.0	ORCL	3.23%	MOS	2.14%
21.0	JAZZ	3.05%	TSLA	2.07%
21.0	AMD	3.02%	INTU	1.77%
21.0	AAP	2.97%	UNH	1.77%
21.0	ON	2.68%	FIS	1.46%
21.0	KALU	2.45%	CMG	1.38%
21.0	MU	2.36%	AMGN	1.27%
21.0	GBTC	2.26%	LW	1.22%
21.0	AA	2.14%	AA	1.16%
21.0	ISRG	2.1%	NFLX	1.12%
21.0	DHI	1.93%	IEP	1.08%
21.0	AMGN	1.85%	VFC	1.07%
21.0	QCOM	1.85%	WFC	0.96%
21.0	UAA	1.55%	GT	0.93%
21.0	BUD	1.49%	CPRT	0.85%
21.0	MSFT	1.49%	MSFT	0.85%
21.0	VFC	1.46%	LNC	0.81%
21.0	NFLX	1.41%	MSI	0.78%



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### P365D: 63d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
63.0	WDC	30.34%	GNRC	12.73%
63.0	TSLA	19.09%	WDC	10.01%
63.0	GNRC	15.16%	OXY	8.74%
63.0	ON	13.36%	TSLA	8.74%
63.0	KALU	12.36%	KALU	8.34%
63.0	TXN	10.06%	CVS	8.21%
63.0	OXY	9.94%	JAZZ	7.04%
63.0	CVS	9.74%	AA	6.42%
63.0	JAZZ	9.65%	BUD	5.94%
63.0	AA	8.62%	GBTC	5.28%
63.0	NEM	7.92%	FIS	5.28%
63.0	ISRG	7.82%	MOS	4.73%
63.0	VFC	7.22%	CMG	4.68%
63.0	UNH	7.13%	ORCL	4.49%
63.0	AMGN	7.02%	AAP	4.44%
63.0	INTC	6.57%	MSI	4.3%
63.0	ORCL	6.2%	AMGN	4.15%
63.0	MU	4.94%	INTC	4.06%
63.0	UAA	4.83%	QCOM	3.94%
63.0	MSFT	4.03%	VFC	3.87%
63.0	BUD	3.99%	ISRG	3.73%
63.0	AAPL	3.68%	NVDA	3.7%
63.0	SBUX	3.68%	UAA	3.58%
63.0	QCOM	3.65%	VNO	3.4%
63.0	GBTC	3.52%	NAVI	3.06%



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## P365D: 126d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
126.0	WDC	122.94%	WDC	68.03%
126.0	KALU	47.58%	KALU	47.85%
126.0	ON	40.92%	AA	28.84%
126.0	AA	40.83%	ON	25.31%
126.0	VFC	37.57%	BUD	23.12%
126.0	MU	31.91%	JAZZ	19.97%
126.0	JAZZ	31.03%	INTC	19.41%
126.0	B	29.99%	PWR	15.83%
126.0	TSLA	23.97%	GNRC	14.93%
126.0	AMAT	23.07%	NEM	13.39%
126.0	NEM	22.03%	LLY	13.02%
126.0	INTC	22.03%	VFC	12.62%
126.0	BUD	21.18%	AVGO	12.13%
126.0	GNRC	19.62%	AMAT	11.22%
126.0	TXN	18.47%	CVS	10.38%
126.0	AMGN	18.14%	GSK	9.96%
126.0	CMA	17.53%	GBTC	9.87%
126.0	AZN	13.16%	MOS	9.41%
126.0	CVS	12.13%	FIS	9.19%
126.0	LLY	11.74%	AAPL	8.8%
126.0	BMJ	11.49%	SLV	8.79%
126.0	OXY	11.43%	AMGN	8.71%
126.0	BIIB	10.58%	BMJ	8.38%
126.0	PWR	10.12%	CMA	8.2%
126.0	UAA	9.78%	NVDA	7.73%



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

### All TMD: 1d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	SIVBQ	-1.1%	SIVBQ	-1.19%
1.0	SBNY	-0.61%	SBNY	-0.3%
1.0	FRCB	-0.16%	VST	-0.13%
1.0	VST	-0.14%	NVDA	-0.11%
1.0	TSLA	-0.12%	LUMN	-0.11%
1.0	LUMN	-0.11%	TRGP	-0.08%
1.0	CSTM	-0.11%	PWR	-0.08%
1.0	FIS	-0.1%	GE	-0.08%
1.0	ETRN	-0.09%	B	-0.08%
1.0	CHTR	-0.09%	GBTC	-0.08%
1.0	ELAN	-0.08%	TEVA	-0.07%
1.0	CYH	-0.08%	AVGO	-0.07%
1.0	CCL	-0.08%	SLV	-0.07%
1.0	NVDA	-0.08%	CCL	-0.07%
1.0	TEVA	-0.07%	CAH	-0.07%
1.0	GE	-0.06%	AMAT	-0.07%
1.0	T	-0.06%	X	-0.07%
1.0	TRGP	-0.06%	INTC	-0.07%
1.0	AMAT	-0.06%	ETRN	-0.07%
1.0	SLV	-0.06%	CSTM	-0.06%
1.0	X	-0.05%	GLD	-0.06%
1.0	PHM	-0.05%	TSLA	-0.06%
1.0	GLD	-0.05%	FRCB	-0.06%
1.0	GILD	-0.05%	GS	-0.06%
1.0	TDG	-0.05%	PHM	-0.06%



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## All TMD: 10d

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

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

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	-2.47%	AMC	-1.32%
10.0	PRGO	-1.05%	TRGP	-0.76%
10.0	FRCB	-0.93%	VST	-0.75%
10.0	CHTR	-0.77%	X	-0.68%
10.0	LUMN	-0.73%	AVGO	-0.67%
10.0	TDG	-0.62%	NVDA	-0.6%
10.0	CCL	-0.61%	PWR	-0.53%
10.0	TRGP	-0.6%	GLD	-0.49%
10.0	GSK	-0.57%	TDG	-0.48%
10.0	NVDA	-0.54%	BHC	-0.46%
10.0	FIS	-0.48%	PHM	-0.46%
10.0	VST	-0.46%	GE	-0.45%
10.0	GLD	-0.42%	CCL	-0.44%
10.0	PHM	-0.39%	CSCO	-0.44%
10.0	CSTM	-0.38%	GSK	-0.42%
10.0	X	-0.37%	LUMN	-0.42%
10.0	AMAT	-0.37%	AMAT	-0.42%
10.0	PWR	-0.36%	CDNS	-0.4%
10.0	CMG	-0.35%	MNST	-0.4%
10.0	AAP	-0.34%	ACGL	-0.39%
10.0	VZ	-0.32%	IRM	-0.39%
10.0	MNST	-0.31%	AAP	-0.39%
10.0	ACGL	-0.3%	CAH	-0.38%



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## All TMD: 21d

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

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

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	AMC	-4.38%	AMC	-4.29%
21.0	FRCB	-4.08%	NVDA	-1.59%
21.0	PRGO	-1.98%	TRGP	-1.38%
21.0	CHTR	-1.45%	PWR	-1.3%
21.0	AAP	-1.37%	ELAN	-1.28%
21.0	TDG	-1.32%	VST	-1.23%
21.0	NVDA	-1.22%	X	-1.22%
21.0	VST	-1.17%	AVGO	-1.13%
21.0	CCL	-1.08%	PRGO	-1.11%
21.0	LUMN	-1.08%	HSBC	-1.01%
21.0	X	-1.07%	COST	-1.0%
21.0	GSK	-1.07%	CDNS	-0.99%
21.0	TRGP	-0.92%	ETRN	-0.97%
21.0	GLD	-0.89%	FRCB	-0.96%
21.0	CMG	-0.86%	PHM	-0.96%
21.0	FIS	-0.78%	GLD	-0.91%
21.0	IRM	-0.72%	LLY	-0.91%
21.0	CYH	-0.66%	CSCO	-0.9%
21.0	ACGL	-0.64%	MNST	-0.83%
21.0	ELAN	-0.63%	GE	-0.8%
21.0	CSTM	-0.62%	BHC	-0.77%
21.0	HSBC	-0.61%	ORLY	-0.75%
21.0	PHM	-0.61%	PCG	-0.74%



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## All TMD: 63d

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

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

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	-17.2%	AMC	-10.77%
63.0	PRGO	-5.41%	TRGP	-3.52%
63.0	AAP	-5.01%	PHM	-3.07%
63.0	CHTR	-3.62%	GLD	-2.66%
63.0	VFC	-3.26%	CHTR	-2.66%
63.0	VNO	-2.81%	PRGO	-2.61%
63.0	NVDA	-2.79%	GE	-2.36%
63.0	GLD	-2.13%	MNST	-2.28%
63.0	MNST	-1.99%	CDNS	-2.13%
63.0	PWR	-1.92%	CSCO	-2.06%
63.0	NWL	-1.87%	HSBC	-2.0%
63.0	TRGP	-1.87%	PWR	-1.98%
63.0	FIS	-1.85%	COST	-1.93%
63.0	PHM	-1.79%	VST	-1.93%
63.0	CSCO	-1.67%	CPRT	-1.91%
63.0	GSK	-1.62%	IRM	-1.73%
63.0	VST	-1.52%	AMD	-1.72%
63.0	CPRT	-1.49%	GWW	-1.71%
63.0	ZTS	-1.47%	JPM	-1.61%
63.0	HSBC	-1.46%	ORLY	-1.55%
63.0	X	-1.32%	PCG	-1.49%
63.0	MS	-1.3%	DHI	-1.48%



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## All TMD: 126d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
126.0	SBNY	-117.09%	SBNY	-87.54%
126.0	SIVBQ	-87.07%	SIVBQ	-68.1%
126.0	FRCB	-66.29%	FRCB	-52.98%
126.0	AMC	-29.73%	AMC	-14.96%
126.0	PRGO	-9.88%	CHTR	-9.34%
126.0	AAP	-8.79%	AAP	-7.68%
126.0	VFC	-7.48%	TRGP	-5.42%
126.0	CHTR	-7.3%	PHM	-4.54%
126.0	BHC	-4.73%	GE	-4.35%
126.0	PHM	-4.7%	MS	-3.83%
126.0	NWL	-4.46%	CDNS	-3.73%
126.0	TRGP	-4.19%	JPM	-3.53%
126.0	GLD	-3.55%	CSCO	-3.46%
126.0	CCL	-3.52%	GLD	-3.34%
126.0	CPRT	-3.4%	CPRT	-3.33%
126.0	IEP	-3.37%	ACGL	-3.25%
126.0	CMCSA	-3.2%	PRGO	-3.17%
126.0	CSCO	-3.14%	MNST	-3.02%
126.0	MNST	-2.91%	HSBC	-2.98%
126.0	MS	-2.73%	CCL	-2.06%
126.0	JPM	-2.57%	DHI	-1.84%
126.0	CNC	-2.56%	VFC	-1.8%
126.0	TLT	-2.08%	WYNN	-1.71%
126.0	X	-1.88%	PCG	-1.68%
126.0	HLT	-1.88%	CMCSA	-1.59%



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## All TMD: 252d

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

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

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	-42.7%	AAP	-23.0%
252.0	AAP	-24.27%	CHTR	-16.58%
252.0	VFC	-16.42%	AMC	-15.46%
252.0	CHTR	-15.72%	BIIB	-9.97%
252.0	NWL	-13.3%	VFC	-9.67%
252.0	PRGO	-12.34%	AA	-7.15%
252.0	UAA	-11.93%	OXY	-7.02%
252.0	BIIB	-11.65%	JPM	-6.89%
252.0	IEP	-9.17%	MS	-5.98%
252.0	OXY	-8.83%	PRGO	-5.97%
252.0	PHM	-8.52%	CSCO	-5.53%
252.0	CZR	-7.36%	ZTS	-4.88%
252.0	BHC	-7.17%	FIS	-4.77%
252.0	MOS	-6.46%	TRGP	-4.63%
252.0	JPM	-6.31%	PWR	-4.35%
252.0	MS	-5.64%	CZR	-4.13%
252.0	CCL	-5.39%	ACGL	-3.87%
252.0	CLF	-5.18%	NWL	-3.63%
252.0	CSCO	-5.07%	CPRT	-3.42%
252.0	TLT	-4.75%	UAA	-3.25%
252.0	CNC	-4.29%	UNH	-3.12%
252.0	BXP	-3.92%	PHM	-3.1%



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### P30D: 1d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	AZO	-1.7%	MU	-1.72%
1.0	NWL	-1.52%	CSCO	-0.89%
1.0	MSTR	-0.87%	NWL	-0.7%
1.0	EXPE	-0.67%	INTC	-0.54%
1.0	MU	-0.65%	AA	-0.48%
1.0	CSCO	-0.61%	MNST	-0.43%
1.0	GT	-0.59%	KHC	-0.43%
1.0	UAA	-0.56%	CLF	-0.36%
1.0	CMCSA	-0.56%	ON	-0.35%
1.0	MSI	-0.51%	MSTR	-0.35%
1.0	MNST	-0.43%	HON	-0.35%
1.0	TMUS	-0.43%	AMD	-0.34%
1.0	BALL	-0.41%	QQQ	-0.33%
1.0	AA	-0.39%	GS	-0.32%
1.0	FRA	-0.34%	CVS	-0.3%
1.0	NAVI	-0.32%	FSUGY	-0.3%
1.0	FSUGY	-0.32%	TSLA	-0.3%
1.0	GS	-0.31%	MS	-0.3%
1.0	FIS	-0.31%	GE	-0.29%
1.0	CAH	-0.31%	CSTM	-0.28%
1.0	B	-0.3%	AAPL	-0.28%
1.0	MS	-0.3%	CAH	-0.27%
1.0	VFC	-0.28%	TMUS	-0.26%
1.0	CLF	-0.27%	AMAT	-0.24%
1.0	SNY	-0.26%	HD	-0.24%



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### P30D: 10d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	NWL	-15.21%	CSCO	-12.96%
10.0	CSCO	-10.73%	MSTR	-7.75%
10.0	MSTR	-8.14%	ON	-5.27%
10.0	MSI	-7.05%	CMCSA	-3.88%
10.0	AZO	-5.65%	AAPL	-3.75%
10.0	CMCSA	-5.1%	AZO	-3.58%
10.0	MU	-4.39%	TRGP	-3.28%
10.0	TRGP	-3.0%	TXN	-3.27%
10.0	GS	-2.55%	GS	-2.97%
10.0	VFC	-2.36%	FSUGY	-2.52%
10.0	MS	-2.28%	AMC	-2.44%
10.0	MNST	-2.25%	MNST	-2.4%
10.0	LUMN	-2.12%	HON	-2.33%
10.0	LNC	-1.96%	VNO	-2.29%
10.0	GLD	-1.95%	MS	-2.02%
10.0	FSUGY	-1.91%	LUMN	-1.99%
10.0	TXN	-1.82%	AA	-1.8%
10.0	TMUS	-1.77%	MU	-1.61%
10.0	EXPE	-1.69%	QQQ	-1.53%
10.0	ON	-1.62%	SPY	-1.24%
10.0	CYH	-1.41%	TMUS	-1.24%
10.0	PEP	-1.39%	XOM	-1.23%
10.0	AA	-1.31%	INTC	-1.14%
10.0	IEP	-1.24%	MSFT	-1.1%
10.0	AAPL	-1.24%	NWL	-1.08%



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## P90D: 1d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	NWL	-0.73%	GNRC	-0.63%
1.0	GNRC	-0.61%	MU	-0.58%
1.0	AZO	-0.49%	ON	-0.44%
1.0	TMUS	-0.39%	CSCO	-0.41%
1.0	ON	-0.36%	CSTM	-0.32%
1.0	INTU	-0.34%	NWL	-0.27%
1.0	CSCO	-0.31%	EXPE	-0.27%
1.0	FIS	-0.3%	AVGO	-0.26%
1.0	CMCSA	-0.26%	PWR	-0.26%
1.0	CLF	-0.25%	MS	-0.25%
1.0	UAA	-0.25%	INTC	-0.24%
1.0	CSTM	-0.25%	AMZN	-0.22%
1.0	MS	-0.24%	TXN	-0.21%
1.0	PWR	-0.2%	QQQ	-0.21%
1.0	AMAT	-0.2%	AA	-0.2%
1.0	GLD	-0.19%	GS	-0.18%
1.0	PRGO	-0.19%	VNO	-0.18%
1.0	GS	-0.18%	GOOGL	-0.15%
1.0	EXPE	-0.17%	LUMN	-0.15%
1.0	BALL	-0.16%	INTU	-0.13%
1.0	FRA	-0.16%	IRM	-0.12%
1.0	MU	-0.16%	CLF	-0.12%
1.0	GE	-0.16%	TMUS	-0.12%
1.0	HON	-0.14%	AAPL	-0.12%
1.0	MSTR	-0.14%	AMAT	-0.11%



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## P90D: 10d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	NFLX	-3.62%	CSCO	-4.22%
10.0	GNRC	-3.47%	ON	-3.79%
10.0	CSCO	-3.33%	GNRC	-3.61%
10.0	CSTM	-2.77%	CSTM	-3.52%
10.0	MSI	-2.75%	NFLX	-2.98%
10.0	CMCSA	-2.75%	TXN	-2.9%
10.0	NWL	-2.6%	VNO	-2.26%
10.0	CYH	-2.39%	WDC	-2.26%
10.0	GLD	-2.28%	GE	-2.15%
10.0	MS	-2.25%	CDNS	-1.96%
10.0	HD	-2.09%	BHC	-1.95%
10.0	PWR	-2.03%	CMCSA	-1.93%
10.0	GE	-1.74%	MS	-1.92%
10.0	QQQ	-1.52%	QQQ	-1.88%
10.0	GS	-1.46%	GS	-1.86%
10.0	TMUS	-1.42%	IRM	-1.77%
10.0	ISRG	-1.28%	AMZN	-1.7%
10.0	TRGP	-1.18%	CYH	-1.65%
10.0	SPY	-1.13%	TRGP	-1.6%
10.0	TEVA	-1.13%	GOOGL	-1.56%
10.0	BHC	-1.1%	AAPL	-1.47%
10.0	RIO	-1.07%	FSUGY	-1.39%
10.0	AZO	-1.04%	LUMN	-1.22%
10.0	FSUGY	-1.03%	GLD	-1.2%
10.0	BHP	-1.03%	SPY	-1.17%



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## P90D: 21d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	CMCSA	-8.55%	CSCO	-9.97%
21.0	CSTM	-7.85%	CSTM	-9.08%
21.0	NFLX	-6.05%	AMD	-8.7%
21.0	CHTR	-5.56%	GNRC	-7.25%
21.0	HD	-5.16%	ON	-6.58%
21.0	GNRC	-5.03%	GOOGL	-6.15%
21.0	QQQ	-4.94%	PWR	-5.83%
21.0	MSI	-4.67%	NFLX	-5.55%
21.0	CSCO	-4.57%	MU	-5.23%
21.0	INTU	-4.41%	VNO	-4.94%
21.0	MS	-3.75%	QQQ	-4.7%
21.0	TMUS	-3.58%	TXN	-4.53%
21.0	PWR	-3.53%	CDNS	-4.47%
21.0	GOOGL	-3.5%	IRM	-4.11%
21.0	GS	-3.3%	WDC	-4.05%
21.0	SPY	-3.29%	NVDA	-4.03%
21.0	BHP	-3.27%	GS	-3.79%
21.0	CYH	-3.06%	TEVA	-3.76%
21.0	TEVA	-2.95%	RIO	-3.54%
21.0	FSUGY	-2.87%	AMAT	-3.53%
21.0	NVDA	-2.79%	SPY	-3.47%
21.0	RIO	-2.79%	FSUGY	-3.43%
21.0	GLD	-2.32%	BHP	-3.31%
21.0	TRGP	-2.08%	MS	-3.31%
21.0	AAPL	-1.94%	AVGO	-3.19%



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### P365D: 1d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
1.0	UAA	-0.29%	LUMN	-0.33%
1.0	MSTR	-0.29%	INTC	-0.29%
1.0	AMC	-0.27%	SLV	-0.25%
1.0	ZTS	-0.23%	CSTM	-0.22%
1.0	SLV	-0.2%	MU	-0.22%
1.0	NWL	-0.2%	AMC	-0.21%
1.0	PRGO	-0.19%	AMAT	-0.21%
1.0	LUMN	-0.19%	GNRC	-0.19%
1.0	AMAT	-0.16%	AA	-0.18%
1.0	GNRC	-0.16%	TEVA	-0.18%
1.0	TDG	-0.16%	CNC	-0.17%
1.0	CSTM	-0.16%	AMD	-0.17%
1.0	TEVA	-0.14%	CSCO	-0.16%
1.0	ELAN	-0.13%	AVGO	-0.15%
1.0	MS	-0.13%	ELAN	-0.15%
1.0	AZO	-0.13%	TRGP	-0.14%
1.0	CHTR	-0.13%	RIO	-0.13%
1.0	CSCO	-0.12%	NWL	-0.13%
1.0	HSBC	-0.12%	ZTS	-0.13%
1.0	GS	-0.12%	PWR	-0.13%
1.0	INTU	-0.12%	GS	-0.13%
1.0	AA	-0.12%	MS	-0.13%
1.0	LNC	-0.11%	BBY	-0.12%
1.0	FIS	-0.11%	B	-0.11%
1.0	PWR	-0.1%	BHP	-0.11%



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### P365D: 10d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
10.0	AMC	-5.97%	AMC	-4.19%
10.0	PRGO	-3.31%	LUMN	-2.31%
10.0	LUMN	-2.21%	CSTM	-2.28%
10.0	SLV	-1.89%	SLV	-1.94%
10.0	MSTR	-1.78%	AMAT	-1.9%
10.0	AMAT	-1.66%	CLF	-1.66%
10.0	ZTS	-1.59%	BHC	-1.54%
10.0	CSTM	-1.53%	MSTR	-1.45%
10.0	CHTR	-1.13%	ZTS	-1.38%
10.0	NAVI	-1.12%	TRGP	-1.37%
10.0	TDG	-1.02%	CSCO	-1.29%
10.0	CSCO	-1.01%	TEVA	-1.22%
10.0	TRGP	-0.94%	GNRC	-1.21%
10.0	GLD	-0.94%	AMD	-1.09%
10.0	TEVA	-0.93%	ELAN	-1.08%
10.0	MS	-0.88%	WDC	-1.04%
10.0	CMG	-0.75%	ON	-1.01%
10.0	RIO	-0.73%	CNC	-1.01%
10.0	GS	-0.73%	RIO	-0.94%
10.0	NWL	-0.66%	NEM	-0.92%
10.0	HSBC	-0.65%	GS	-0.91%
10.0	INTU	-0.62%	GLD	-0.9%
10.0	B	-0.59%	MS	-0.86%
10.0	AVGO	-0.58%	GOOGL	-0.84%
10.0	MNST	-0.56%	PRGO	-0.8%



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## P365D: 21d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
21.0	AMC	-9.27%	AMD	-4.87%
21.0	PRGO	-6.86%	AMC	-4.68%
21.0	CHTR	-3.98%	CSTM	-4.43%
21.0	ZTS	-3.71%	SLV	-4.22%
21.0	LUMN	-3.47%	MU	-3.79%
21.0	SLV	-3.26%	MSTR	-3.68%
21.0	AMAT	-2.74%	LUMN	-3.64%
21.0	MSTR	-2.62%	GOOGL	-3.51%
21.0	CLF	-2.47%	PRGO	-3.26%
21.0	TDG	-2.46%	CLF	-2.88%
21.0	CMG	-2.11%	CNC	-2.79%
21.0	CMCSA	-2.01%	ZTS	-2.73%
21.0	NAVI	-2.01%	CSCO	-2.65%
21.0	CSTM	-1.98%	AMAT	-2.61%
21.0	TEVA	-1.87%	TEVA	-2.45%
21.0	TRGP	-1.83%	RIO	-2.41%
21.0	GLD	-1.81%	CMCSA	-2.35%
21.0	ELAN	-1.69%	TRGP	-2.26%
21.0	CSCO	-1.42%	PWR	-2.12%
21.0	MS	-1.34%	CHTR	-1.99%
21.0	NWL	-1.3%	FSUGY	-1.81%
21.0	INTU	-1.29%	ELAN	-1.8%
21.0	HSBC	-1.27%	HSBC	-1.73%
21.0	MNST	-1.06%	GLD	-1.64%
21.0	RIO	-1.03%	MNST	-1.62%



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### P365D: 63d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
63.0	PRGO	-27.76%	MSTR	-33.18%
63.0	AMC	-26.93%	PRGO	-18.16%
63.0	MSTR	-24.43%	AMD	-9.97%
63.0	ZTS	-11.38%	SLV	-8.03%
63.0	TDG	-8.92%	AMC	-8.01%
63.0	NWL	-7.58%	RIO	-7.54%
63.0	CHTR	-7.37%	MU	-7.38%
63.0	GLD	-7.25%	CSTM	-7.13%
63.0	META	-6.91%	GLD	-7.04%
63.0	CMCSA	-6.66%	GOOGL	-6.9%
63.0	SLV	-6.51%	CMCSA	-6.54%
63.0	BXP	-6.06%	TRGP	-6.05%
63.0	LUMN	-5.87%	ELAN	-5.58%
63.0	MNST	-5.26%	MNST	-5.24%
63.0	RIO	-4.65%	B	-4.84%
63.0	CLF	-4.38%	CSCO	-4.5%
63.0	INTU	-4.03%	META	-4.01%
63.0	TRGP	-4.03%	HSBC	-3.91%
63.0	CSCO	-3.93%	MS	-3.8%
63.0	ELAN	-3.57%	LVS	-3.74%
63.0	NAVI	-3.48%	CMA	-3.53%
63.0	KHC	-3.27%	BXP	-3.47%
63.0	HSBC	-3.16%	TEVA	-3.37%
63.0	VNO	-2.97%	CHTR	-3.3%
63.0	IRM	-2.89%	THC	-2.86%



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## P365D: 126d

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

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

Hzn	Ticker	95ROVBC_VmS	Ticker	99ROVBC_VmS
126.0	MSTR	-93.61%	MSTR	-82.59%
126.0	AMC	-71.06%	PRGO	-24.99%
126.0	PRGO	-52.71%	AMC	-24.77%
126.0	BXP	-17.8%	RIO	-18.37%
126.0	CHTR	-15.71%	CHTR	-14.08%
126.0	ZTS	-15.38%	CSTM	-13.28%
126.0	RIO	-13.89%	TRGP	-12.9%
126.0	NFLX	-13.2%	NFLX	-11.76%
126.0	META	-13.1%	BXP	-10.95%
126.0	CMCSA	-13.09%	AAP	-10.75%
126.0	TRGP	-12.61%	MNST	-10.43%
126.0	MNST	-11.71%	ORCL	-10.4%
126.0	GLD	-11.35%	GLD	-9.91%
126.0	TEVA	-11.31%	META	-8.99%
126.0	NWL	-11.18%	FSUGY	-8.65%
126.0	AAP	-10.19%	AMD	-8.65%
126.0	ORCL	-9.39%	MS	-8.2%
126.0	LW	-9.27%	CSCO	-7.62%
126.0	FSUGY	-9.14%	LW	-7.22%
126.0	TDG	-9.0%	HSBC	-5.78%
126.0	HSBC	-8.32%	ZTS	-5.51%
126.0	LEN	-7.34%	CMCSA	-5.48%
126.0	VNO	-6.99%	LVS	-5.37%
126.0	INTU	-6.74%	FITB	-5.36%
126.0	MS	-6.72%	BBY	-4.75%



## Appendix 5: Kupiec and Christoferson Tests for Sigma

The Kupiec Proportion of Failures test statistic (listed as VaR\_kStat in the table below), and its probability (VaR\_pValK) are used to test the null hypothesis that the VaR model breakage is consistent with expectations. The test statistic is calculated by comparing the number of VaR breaks experienced to the expected number of breaks given the total number of observations and the specified probability level. Breakage was measured at the individual ticker-model date level. The probability of the Kupiec statistic occurring is obtained from the chi-squared distribution. The lower the statistic, the higher the p-Value, and the more likely that Sigma's VaR breakage is consistent with expectations.

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

Kupiec and Christoferson results for the Vector Model can be found in the Report Card section.

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

Model	Pctile	Horizon	VaR_kStat	VaR_pValK	VaR_chrStat	VaR_pValChr
Sigma	95	1	207.72	0	9.31	0
Sigma	95	10	9.77	0	0.06	0.81
Sigma	95	21	36.42	0	0.32	0.57
Sigma	95	63	28.68	0	nan	0
Sigma	95	126	30.7	0	nan	0
Sigma	95	252	22.33	0	nan	0
Sigma	99	1	530.82	0	27.65	0
Sigma	99	10	35.6	0	0.33	0.56
Sigma	99	21	0.54	0.46	1.38	0.24
Sigma	99	63	1.44	0.23	1.84	0.17
Sigma	99	126	0.65	0.42	nan	0
Sigma	99	252	1.68	0.2	nan	0

